



# The School of Business Waterproofing and Miscellaneous Exterior Repairs

TCNJ Advertised Bid # AB230002

**COVER SHEET**

**INVITATION TO BID**

**MILESTONE SCHEDULE**

**CONSTRUCTION BID PROPOSAL FORM**

**GENERAL WORK DESCRIPTION**

**CONTRACT**

**MANDATORY DOCUMENTS**

**GENERAL CONDITIONS**

**August 29, 2022**



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 **August 29, 2022 in the Trentonian**. Contact person regarding placement of ad is Lauren Manning (609) 771-2894.

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**THE COLLEGE OF NEW JERSEY  
ADVERTISEMENT FOR BIDS  
BID #AB230002**

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 School of Business Waterproofing and Miscellaneous Exterior Repairs project until **2:00 P.M. on the 16<sup>th</sup> day of September, 2022** 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 **August 29, 2022 via our website**  
(<https://bids.tcnj.edu/home/construction-projects>).

Bidders are encouraged to attend the **pre-bid conference/on-site inspection on September 1, 2022** at 10:00 a.m. at the College's Administrative Services Building, Room 103.

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); Executive Order 117 and P.L. 2005 Chapter 51 (N.J.S.A. 19:44a-1 et seq.) and all amendments thereto

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.

**Bidders must have a New Jersey Department of Treasury, Division of Property Management and Construction (DPMC) C008 or C009 at time of bid submission. No bids will be accepted without this classification.**

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.



# **The School of Business Waterproofing and Misc. Exterior Repairs**

## **MILESTONE SCHEDULE**

**August 2022**

Request for Proposal Released	August 29, 2022
Pre-Bid Meeting, 10:00am, Admin. Svcs. Bldg, Rm. 103	September 1, 2022
Cut Off for Questions	September 6, 2022
Addendum Issued (If Needed)	September 8, 2022
Proposals are Due (2:00 PM)	September 16, 2022
Notice of Intent to Award Issued	September 22, 2022
End of Protest Period	September 26, 2022
Notice to Proceed Issued	September 30, 2022
Preconstruction and Submittals	October 3, 2022
Contractor Work Performed in Field	October 10, 2022
Substantial Completion	November 18, 2022
Project Closeout By	December 18, 2022

**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: AB230002  
Bid Due Date: September 16, 2022**

**Project Name: The School of Business Waterproofing and Miscellaneous Exterior Repairs**

**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.
    - (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 excavation of the foundation and installation of new waterproofing at the School of Business.
  - A. See Specifications and Drawings for Details (included in RFP package).
  - B. 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”.
- B. Prevailing wage rates apply (Mercer County).
- C. Bid is to remain good for sixty (60) days after the Bid Due Date.

### **2. 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.

### **3. 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.

N/A

- 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.

### **4. 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.

5. 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.

#### **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.

State entities are required to report to the Division the ethnic and gender composition of the vendors with which those state entities do business.

6. Bidder completes and submits the Statement of Ownership Disclosure form and the Non-Collusion Affidavit form along with bid proposal.
7. **Bidders are required to be registered with the New Jersey Department of Property Management and Construction (DPMC) and possess a DPMC C008 or C009 classification at the time of bid submission.**
8. **SET ASIDE PROGRAM FOR SMALL BUSINESS ENTERPRISE (SBE) – CONSTRUCTION**

In accordance to N.J.A.C., 17:14-1.2 et seq. and Executive Order 71, signed by Governor James E. McGreevey in 2003, the College requires bidders to make a good faith effort to provide opportunities for Small Business Enterprises (SBE) to participate in the performance of this contract as subcontractors consistent with the overall goals established for construction services by the New Jersey Commerce and Economic Growth Commission (NJ Commerce).

SBE subcontracting goals are not applicable if the bidder is currently registered with NJ Commerce as an SBE firm.

## **9. PREVAILING WAGE AND PUBLIC WORKS CONTRACTOR REGISTRATION ACTS**

- 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.
- 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.
- 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. As required by N.J.S.A. 34:11-56.27 and 56.28, this 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. The Contractor and its subcontractors must be registered with the New Jersey Department of Labor and Workforce Development (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 Workforce development, and that, if it intends to pay apprentice rates, it must comply with the Department of Labor and Workforce Development regulations at N.J.A.C. 12:60.
- Please refer to [http://lwd.dol.state.nj.us/labor/wagehour/wagerate/wage\\_rates.html](http://lwd.dol.state.nj.us/labor/wagehour/wagerate/wage_rates.html) for official wage rate determinations for Mercer County, NJ.

## 10. NEW JERSEY EQUAL PAY ACT

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.

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.

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](mailto:equalpayact@dol.nj.gov)**

11. In order for your proposal to be accepted and deemed valid, your company/firm will be required to comply with the requirements of N.J.S.A. 19:44A-1 et seq/P.L. 2005 Ch. 51 ("Chapter 51") and Executive Order 117. Enclosed are the requirements of Chapter 51 and Executive Order 117, the forms for Certification and Disclosure. The contract that will be generated based on this bid proposal cannot be awarded without approval of the Certification and Disclosure forms by the State of New Jersey, Department of Treasury. **A completed copy of your Certification form is not required at time of bid; however, it will be required from the bidder who receives the notice of intent to award from the College prior to the execution of the contract.**
12. 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.

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).



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.

During the course of contract performance:

- (1) 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.
- (2) 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.
- (3) 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>.

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.

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.

- 13. 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.
- 14. 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.

## **15. 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](mailto:manningl@tcnj.edu) and must be received **prior to 4:00 PM on September 6, 2022.**

- B.** Should any questions be received, a notice will be placed in the newspaper and the addendum or clarification will be available on **September 8, 2022 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.**

## **16. 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., September 16, 2022**, 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.
- 17.** 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
- 18.** 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.
- 19.** Bids shall include all costs of any nature necessary to complete the project in the manner and within the time required by the contract.
- 20.** The College reserves the right to require bidders to provide a schedule of values of their lump sum bid price upon request.

21. 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.
22. Before submitting his 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.
23. 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.
24. It is understood and agreed that all prices quoted are firm and not subject to any increase during the life of the contract.
25. 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.
26. 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.

**27. 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.

## **28. 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.

## **29. 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.

## **30. APPLICABLE LAWS:**

- A. 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) New Jersey Statutes and Regulations
    - N.J.S.A. 10:5-31 *et seq.* and N.J.A.C. 17:27-1 *et seq.*, Affirmative Action
    - Prevailing Wage Act, N.J.S.A. 34:11-56.25 *et seq.*
    - N.J.S.A. 52:32-44, Business Registration Certificate
    - N.J.S.A. 34:11-56.48 *et seq.*, Public Works Contractor Registration Act
  - (2) 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

## **31. 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.

### **32. 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.

### **33. 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.

### **34. 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.

### **35. 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.

**36. DOCUMENTS/SUBMISSIONS THAT MUST BE PROVIDED BEFORE CONTRACT AWARD:**

- **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.
- **CERTIFICATE OF INSURANCE:** The bidder is required to submit proof of liability insurance in accordance with The College's contract.
- **PUBLIC WORKS CONTRACTOR REGISTRATION CERTIFICATES**
- **P.L. 2005, Chapter 51 / Executive Order 117 - Contractor Certification and Disclosure of Political Contributions:**

In order for your proposal to be accepted and deemed valid, your company/firm will be required to comply with the requirements of Chapter 51 and Executive Order 117. Enclosed are the requirements of Ch. 51 and EO 117, the forms for Certification and Disclosure. The contract that will be generated based on this bid cannot be awarded without approval of the Certification and Disclosure forms by the State of New Jersey, Department of Treasury.

- **New Jersey Business Registration Certificate**
- **All applicable licenses, certificates, and requirements specified in the scope of work, contract documents and specifications.**

**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.**

- a. \_\_\_\_\_ Bidder has completed the Bidder Information section and General Agreement section and filled out the receipt of addendum and clarifications.
- b. \_\_\_\_\_ Bidder has completed the form of proposal and indicated base bid for either Separate Bid or Single Bid (Lump Sum all trades), prices for Alternate Proposals, and Unit Prices.
- c. \_\_\_\_\_ Bidder for Single Bid (Lump Sum) has listed and has disclosed the subcontractors on the Subcontractor Information form.
- d. \_\_\_\_\_ Bidder has enclosed a certified check or bid bond for ten percent (10%) of the amount of the bid.
- e. \_\_\_\_\_ Bidder has completed and enclosed the Non-Collusion Statement.
- f. \_\_\_\_\_ Bidder and each disclosed subcontractor has enclosed a copy of its **registration certificate** in accordance with the requirement of the Public Works Contractor Registration Act. (NJ Dept. of Labor and Workforce Development). **A completed copy of your Certification form is not required at time of bid; however, will be required from the bidder who receives the intent to award from the College.**
- g. \_\_\_\_\_ Bidder has acknowledged the **Affirmative Action Language** in accordance with the requirements P.L. 1975 C.127. (NJAC 17:27-1.1 et seq).
- h. \_\_\_\_\_ Bidder has enclosed its MWBE information.
- i. \_\_\_\_\_ Bidder has enclosed its licenses, certifications, certifications, and qualifications.
- j. \_\_\_\_\_ Bidder has enclosed its Vendor Qualification Statement
- ~~k. \_\_\_\_\_ Bidder has included a copy of its latest Experience Modification Rating (EMR Safety Rating). The College requires an average rating over the last 5 years of 1.25 or less.~~
- l. \_\_\_\_\_ Bidder has included a copy of its DPMC Notice of Classification and Total Amount of Uncompleted Contracts.
- m. \_\_\_\_\_ Bidder has enclosed a copy of its Chapter 51 & EO117 Certification form. **A completed copy of your Certification form is not required at time of bid; however, will be required from the bidder who receives the intent to award from the College.**
- n. \_\_\_\_\_ Bidder has enclosed a copy of its New Jersey Business Registration Certificate in accordance with the requirements of the New Jersey Division of Revenue. **A completed copy of your Certificate is not required at time of**

**bid; however, will be required from the bidder who receives the intent to award from the College.**

- o.** \_\_\_\_\_ Bidder has completed and enclosed the Statement of Ownership Disclosure (N.J.S.A. 52:25-24.2).
- p.** \_\_\_\_\_ Disclosure of Investment Activities in Iran (N.J.S.A. 52:32-58).



## 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](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. Upon conclusion of the 5 business day protest period, Bidder will execute the formal contract 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.
6. 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)

**PRICES FOR SINGLE BID (LUMP SUM): Base Bid, Alternate Proposals, and Unit  
Prices  
FORM OF PROPOSAL**

To: **The College of New Jersey**

for: **The School of Business Waterproofing and Miscellaneous Exterior Repairs**

Date \_\_\_\_\_

**A. BID:**

1. **Base:** 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:

\_\_\_\_\_ Dollars \$ \_\_\_\_\_  
(words)

**General Construction (Single overall Prime Contract)**

**2. Add /Deduct Alternate: None**

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.

C. **AGREEMENT:** We, the Undersigned, agree, if awarded the Contract, to execute an agreement for the above stated work and compensation on the Standard Form of Agreement Between Owner and Contractor.

D. **SURETY:** We, the Undersigned, agree, if awarded the Contract, to execute and deliver to the Owner, prior to the signing of the Contract, the Performance and Payment Bonds as required.

- Contractor shall provide a Maintenance Bond at job completion for a period of one year for 100% of the final contract price.

E. **BID SECURITY:** 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.

Certified Check	\$ _____
Bid Bond	\$ _____

**F. STATEMENT:**

1. 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, which offer shall be irrevocable for sixty (60) calendar days from the date

of opening hereof and that the Owner may accept this offer at any time during said period by notifying the Undersigned of the acceptance of said offer.

2. We, the Undersigned, acknowledge receipt of the following Addenda/Clarifications:

Addenda Number

Dated

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The undersigned further agrees to comply with the requirements as to conditions of employment, wage rates, and hours of labor set forth in the Contract Documents.

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

\_\_\_\_\_  
Tit

## **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: \_\_\_\_\_  
License Number: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Telephone: \_\_\_\_\_  
Fax: \_\_\_\_\_

\_\_\_\_\_  
Bidder Name

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name of Signing Individual

\_\_\_\_\_  
Date

## SMALL BUSINESS, MINORITY AND/OR FEMALE-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 as a:

\_\_\_\_\_ small business \_\_\_\_\_ minority-owned business \_\_\_\_\_ female-owned business

B. My company is certified by the NJ Department of Transportation as a:

\_\_\_\_\_ small business \_\_\_\_\_ minority-owned business \_\_\_\_\_ female-owned business

C. My company is a \_\_\_\_\_ small business \_\_\_\_\_ minority-owned or \_\_\_\_\_ female-owned but is not certified by either NJ Department.

C. \_\_\_\_\_ My company is not a small business, minority-owned or female-owned.

\_\_\_\_\_  
**Signed**

\_\_\_\_\_  
**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

NOTE: General Power of Attorney and the current

this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_

BY: \_\_\_\_\_

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)

**SCHOOL OF BUSINESS  
WATERPROOFING AND MISC. EXTERIOR REPAIRS**

**PROJECT MANUAL**



For  
The Office of Campus Planning  
Ewing, NJ 08628

TBS Project No. 2204008

**Volume 1 of 1**

**Architect:**

TBS Services, Inc.  
617 Station Avenue  
Haddon Heights, NJ 08035  
P: 856.547.6250  
F: 856.547.6254

**VOLUME 1 of 1**

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NOT APPLICABLE

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NOT APPLICABLE

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NOT APPLICABLE

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NOT APPLICABLE

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## **SECTION 01010 SUMMARY OF WORK**

### **PART 1- GENERAL**

#### **1.01 RELATED DOCUMENTS**

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

#### **1.02 WORK COVERED BY CONTRACT DOCUMENTS**

A. The Project consists of all work noted on the drawings and in these specifications

1. Project Location: The College of New Jersey, Ewing New Jersey
2. Owner: The College of New Jersey, State of New Jersey

#### **1.03 CONTRACTS**

A. The project contract is between The College of New Jersey and the single prime contractor performing the work specified.

B. Definition of Extent of Contract Work: The contract documents, specifications, project drawings, manufacturer's installation handbooks, TCNJ form of agreement, and the contractors response to the RFP represent the extent of the construction contract.

#### **1.04 CONTRACTORS USE OF PREMISES**

A. General: During the construction period the Contractor shall have full use of the premises for construction operations, including use of the site. The contractor's use of the premises is limited only by the Owner's right to perform work, retain other contractors on portions of associated projects, or to access the building for the occupants.

1. Contractor is to coordinate their work with the activities for each work location.

B. Use of the Site: Limit use of the premises to areas required for equipment and material storage and access to the roof area. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas immediately adjacent to the building where the work is being performed.

1. Owner Occupancy: Allow for Owner occupancy and use by the public.
2. Driveways and Entrances: Keep driveways and entrances serving the premises clear and available to the Owner, the Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials unless previously approved by the owner. Schedule deliveries to minimize space and time requirements or storage of materials and equipment on -site.
3. Burial of Waste Materials: Disposal of organic and hazardous materials on-site either by burial or burning, will not be permitted.
3. Parking is allowed with in the construction fence only. If more parking is needed, there is additional parking provided at the colleges Carlton Avenue parking lot. The contractor is responsible to shuttle workers back and forth as needed.

C. Use of the Existing Building: Maintain any existing building in a weathertight condition

throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building, its contents, components, and systems and its occupants during the construction period.

PART 2 - PRODUCTS (Not Applicable)

PART 3- EXECUTION (Not Applicable)

END OF SECTION 01010

## **SECTION 01025 – MEASUREMENT AND PAYMENT**

### **PART 1 - GENERAL**

#### **1.01 SCHEDULE OF VALUES**

- A. Each Contractor shall prepare a schedule of values in coordination with the preparation of progress 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 Owner and Architect for review and approval.
- **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 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, punchlist/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. Each 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.

#### **1.02 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 the 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 for overhead and profit not to exceed 15% of the net cost, plus the Prime Contractor's overhead and profit not to exceed 5% of the Subcontractor's cost.
- 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.

1 4. Power and consumable supplies for the operation of power equipment, pro-rated for the time necessary for the  
2 Work.

3  
4 5. Insurance and Bonds.

5  
6 F. Gross costs shall be net costs plus the mark up allowances described above, such mark up allowances being  
7 inclusive, of all cost of superintendence, supervision, engineering, overhead, profit, administrative and site office  
8 expenses and all other general expenses.  
9

10 1.03 APPLICATIONS FOR PAYMENT

11  
12 A. Except as otherwise indicated, sequence of progress payments for the Contractor shall be regular, and each shall be  
13 consistent with previous applications and payments. It is recognized that certain applications involve extra  
14 requirements, including initial applications, applications at times of substantial completion, and final payment  
15 applications.  
16

17 B. Payment Application Forms: Use AIA Document G702 and G703 Continuation Sheets; available from  
18 Publications Distribution Div., The American Institute of Architects, 1735 New York Ave., N.W., Washington,  
19 D.C. 20006 (also available at most local AIA chapter offices).  
20

21 C. Except as otherwise indicated, complete every entry provided on the form, including notarization and execution by  
22 authorized persons. Incomplete applications will be returned by Architect and Owner without action. Entries shall  
23 match current data of schedule of values, progress schedules and reports. Listing shall include amounts of fully  
24 executed change orders issued prior to first day of the period of construction covered by application. Applications  
25 for payment shall include weekly payroll report. Contractor shall furnish to the Owner certified payroll reports for  
26 each payroll period with pay request, indicating name craft, social security number and actual hourly rate of wages  
27 paid to each workman employed on the project. A certified payroll record is defined as "a payroll record which is  
28 attested to by the employer, or corporate officer of such company, or an authorized agent of the employer." A  
29 payment request will not be paid until the Owner receives the certified payrolls.  
30

31 D. Submit one "pencil" copy of each proposed payment application to the architect and owner, for review, not less  
32 than seven days prior to formal submissions of application.  
33

34 E. Submit 4 executed copies of each payment application. Transmit with a transmittal form listing attachments, and  
35 recording appropriate information related to application.  
36

37 F. Breakdown may include a line item for General Conditions. General Conditions shall include the cost of general  
38 supervision, trailers, temporary utilities and other general expenses directly related to the project and not  
39 considered overhead. The general conditions item shall be billed on monthly progress payments on a percentage  
40 of work completed.  
41

42 1.04 INITIAL PAYMENT APPLICATION

43  
44 A. The principal administrative actions and submittals which shall precede or coincide with submittal of the  
45 Contractor's first payment application can be summarized as follows, but not necessarily by way of limitation.  
46

47 1. Listing of subcontractors and principal suppliers and fabricators.

48 2. Schedule of values.

49 3. Schedule of principal products.

50 4. Schedule of submittals (preliminary if not final).

51 5. Copies of acquired building permits and similar authorizations and licenses from governing authorities for  
52  
53  
54  
55

current performance of the work.

6. Data needed by Owner to secure related insurance coverages.

7. Performance and Payment Bond.

8. Insurance Certificates.

#### 1.05 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 20th 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. 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.

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.

b. 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 section 1.

c. 1. With respect to any contract entered into by a State college pursuant to section 2 for which the contractor shall agree to the withholding of payments pursuant to section 1, 2% of the amount due on each partial payment shall be withheld by the State college pending completion of the contract.

2. Upon acceptance of the work performed pursuant to the contract for which the contractor has agreed to the withholding of payments pursuant to subsection a. of this section, 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.

d. 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 et seq.).

3. Upon substantial completion, the retainage shall, upon the Architect/Owner's approval, remain at 2% of the value of work completed. 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.
4. 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.
5. Owner shall make payments within 30 days of receipt of said monthly pay requisition.

#### 1.06 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. Application for reduction (if any) of retainage, with consent of surety.
6. Advice to Owner on coordination of shifting insurance coverages, including proof of extended coverage as required.

- 1 7. Listing of Contractor's incomplete work, recognized as exceptions to certificate of substantial completion.
- 2
- 3 1.07 FINAL PAYMENT APPLICATION
- 4
- 5 A. The administrative actions and submittals which shall precede or coincide with submittal of the Contractor's final
- 6 payment application can be summarized as follows, but not necessarily by way of limitation.
- 7
- 8 1. Completion of project closeout requirements.
- 9
- 10 2. Completion of items specified for completion beyond time of substantial completion, regardless of whether
- 11 special payment application was previously made.
- 12
- 13 3. Assurance, satisfactory to Owner and Owner, that unsettled claims will be settled and that work not actually
- 14 completed and accepted will be completed without undue delay.
- 15
- 16 4. Transmittal of required project construction records to Owner via the Owner.
- 17
- 18 5. Proof, satisfactory to Owner and Owner, that taxes, fees and similar obligations of Contractor have been paid.
- 19
- 20 6. Removal of temporary facilities, services, surplus materials, rubbish and similar elements.
- 21
- 22 7. Notarized consent of surety for final payment.
- 23
- 24 1.08 WAIVER OF LIENS
- 25
- 26 A. Each Contractor, for himself, and for all Subcontractors and material men, agrees that no mechanic's lien or other
- 27 claim shall be filed or maintained by the Contractor or by any Subcontractor, materialmen, laborer or any other
- 28 person whatsoever for, or on account of any work performed or materials furnished under this Contract. This
- 29 agreement shall be an independent contract, and the Contractor shall execute and deliver a separate Waiver of
- 30 Liens in form and substance satisfactory to the Architect and Owner contemporaneously with the execution of the
- 31 Owner-Contractor Agreement and before any work is begun at the site.
- 32
- 33 B. In every subcontract entered into by each Contractor after execution of this Contract or in connection herewith, the
- 34 Contractor shall incorporate a provision, similar to the foregoing paragraph, to the effect that neither the
- 35 Subcontractor nor any party acting through or under him shall file or maintain any mechanic's lien or other claim
- 36 against the Architect or Owner in connection with the Work.
- 37
- 38 **END OF SECTION 01025**

## SECTION 01100 - PROJECT PROCEDURES

### PART 1 - GENERAL

#### 1.01 SPECIAL REQUIREMENTS

- A. Schedule: Contractor shall provide a master schedule showing sequencing of work utilizing the CPM method. The Contractor shall supply a schedule with all subcontractor activities, relationships, and durations, utilizing the CPM method via SureTrak/Primavera, Version 3.0, or a Microsoft scheduling software to the Owner on a working version CDrom and coordinate their schedule with the Owner.
- The Contractor is required to update at the end of each month the CPM Schedule based on the percentage completed for each activity on the approved schedule (in concert with the submission of the percentage completed in the monthly proposed schedule of values).
  - **The contractor in their bid includes a cost of \$500.00 per month for this schedule submission, for the duration of construction (per the milestone schedule in the bidding documents). This only applies to projects in excess of 2 million dollars in base price price. The contractors schedule of values shall include this cost, and can only be billed for upon TCNJ's successful receipt of said schedule. Should any schedule not be received at the end of any month during construction, TCNJ will issue a deduct change order in the amount of \$500.00 to the contractor.**
- B. 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.
- C. 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.
- D. Routes of ingress and egress to areas where work is being performed shall be subject to the restrictions and instructions of the Owner.
- E. 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.
- F. 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.
- G. Any damage to the new building 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.
- H. 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.
- I. No work shall start before 8:30am.unless agreed to in advance with the College.

### PART 2 - PRODUCTS

NOT APPLICABLE

### PART 3 - EXECUTION

#### 3.01 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 State Fire Marshal and the National Board of Fire Underwriters.
- C. The 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 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 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 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 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 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.
- K. Limited staging and on site parking will be provided by General Contractor. The Contractor will coordinate parking areas with all the subcontractors and TCNJ.
  - 1. Parking will be available at Carlton Avenue. Contractor will provide shuttle service to and from the site.
  - 2. Contractor will be permitted to have vehicles on site with in the construction fencing only. Contractor is to provide stone in all parking areas on site to prevent the buildup of ruts and mud, thus minimizing the amount of mud leaving the site and being left behind on TCNJ roads.
- L. Site Utilities: Electric power and water are available on site. Toilet facilities will be made available by the Contractor. These facilities shall remain clean by the Contractors throughout the course of the project. The Contractors shall repair and/or replace any damaged fixtures, partitions, etc. The Electrical Sub-Contractor shall tie in a temporary power panel (or panels as required) for all trades to use during construction. Interruption of building services shall not occur without prior consent and coordination by the Owner and Owner.

1  
2 1. Provide portable toilets for all construction personnel.  
3

4 M. Construction Lighting: The Electrical Sub-Contractor shall run sufficient strings and fixtures to maintain a 50 foot-  
5 candle/sq.ft.intensity of light throughout the project areas.  
6

7 N. Dumpster Location and Cleanup: The Architect and Owner shall coordinate the dumpster location with the  
8 Contractors. The Contractor shall be responsible for obtaining, maintaining, and disposing of dumpsters, and shall  
9 maintain clean work areas throughout the course of the project.

- 10 • Contractor is to provide adequate manpower during the entire course of the project to maintain the site in a  
11 clean, neat and professional manner. At a minimum the contractor is to clean the entire site twice per week  
12 (on different days) by picking up all debris in and around the site. Sweeping the entire building daily is  
13 required once the floor slabs are in place. Contractor is to place garbage cans on each floor minimum 3 per  
14 floor in designated locations to assist in keeping the site clean. The owner will not tolerate a building  
15 project that is not maintained in a professional manner at all times.  
16

17  
18  
19 3.02 PROGRESS MEETINGS  
20

21 A. Progress Meetings shall be held bi-weekly at the job site at a regular time and day mutually agreed upon. The  
22 frequency may be changed by the Architect or Owner to reflect current conditions. The Contractors, those of  
23 his/their subcontractors concerned with current progress or with scheduling of future progress, the Architect, the  
24 Owner, and the Owner shall each be represented at these job meetings by persons familiar with the details of the work  
25 and authorized to conclude matters relative to work progress, establishment of progress schedules, etc., as may be  
26 necessary to expedite completion of the work.  
27

28 B. The Contractors and his/their subcontractors attending these meetings shall present complete and definite reports as  
29 to the status of their respective work, conditions of product and equipment manufacturer, labor availability,  
30 productivity and cooperation, shipping data, time of completion, sequence of the work, safety program, and any other  
31 information bearing upon the execution of the Contract or subcontract. For the Owner's convenience the Owner will  
32 chair the meetings.  
33

34 3.03 MONTHLY REPORTS

35 A. The Contractor is to provide TCNJ a brief monthly status report on the last working day of each month dividing the  
36 status of the project into the following categories (report must be complete in all respects, piece meal submissions will  
37 not be accepted):

- 38 a. Project overview
- 39 b. Financial status
- 40 c. Updated project schedule
- 41 d. Change order request log
- 42 e. Submittal log
- 43 f. RFI log
- 44 g. Owner/Architect issues that need immediate resolution
- 45 h. Order/delivery issues  
46

47  
48 B. The Contractor is to provide TCNJ with this monthly report, and include in their bid a cost of \$500.00 per  
49 month for all projects in excess of 2 million dollars base bid price for the duration of the construction period as  
50 noted in the bidding milestone schedule. This total cost will be listed in the contractor's schedule of values and  
51 can be billed for on a monthly basis only if said report is received in whole as noted above. Should TCNJ not  
52 receive said complete report a deduct change order will be issued to the contractor for \$500.00 for that month.  
53  
54

1     **END OF SECTION 01100**

## SECTION 01300 – SUBMITTALS AND SUBSTITUTIONS

### PART 1 – GENERAL

#### 1.1 PROGRESS SCHEDULE / COORDINATION DRAWINGS

- A. The Contractor's schedule, shall coordinate with all trades to produce a coordinated CPM via Suretrak/Primavera version 3.0 or a Microsoft scheduling program schedule indicating the start and completion dates for each portion of the work as defined by the schedule of values, with the total time as defined by the contract time and milestone dates as set forth in these specifications. The Contractor's CPM schedule shall be submitted in electronic format (Suretrak 3.0 or a Microsoft Scheduling program) to and reviewed by the Owner and Architect prior to first application for payment. Any revisions or additional information requested by the Owner or Architect shall be provided. (No payment shall be made to any Contractor not providing a schedule that reflects their entire work).
- Also refer to Section 01100-1 – Project Procedures.
- B. The Contractor shall revise the progress schedule on a monthly basis as the work progresses reflecting therein any delays, including those not within the Contractor's control, or accelerations in the progress of the work. The progress schedule, as revised for any weekly period, shall be discussed at the bi-weekly job meetings with the, Owner, the Architect, and the Contractor and the major trades in order to insure that the percentage of actual completion of any portion of the work as called for in the progress schedule for that bi-weekly period is attained. Monthly updates to the progress schedule shall be made prior to application for payment.
- C. Should any delay occur in the progress of the work or any portion thereof, the Contractor shall be required to implement all necessary measures to accelerate the construction, to meet the percentages of completion dictated by the progress schedule on the applicable dates, without additional cost to the Owner.

#### 1.2 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 as required under Paragraph 3.12 of the General Conditions.
- The successful Contractor shall submit their list of proposed substitutions within 20 calendar days of the Contract Award.
  - 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 contractor's contract via a deduct change order, or other means that both parties agree to.
- B. Coordinate preparation and processing of submittals with performance of the work so that work will not be delayed by submittals. Allow two weeks for review/approval by the Architect for the approval process, one additional week for TCNJ staff to review the submittal before it is returned to the contractor. Allow additional time if processing must be delayed to permit coordination with subsequent submittals with others.
- a. **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.**
- C. Provide permanent marking on each submittal to identify Project, date, Contractor, subcontractor, submittal name, Specification section, drawing reference, and similar information to distinguish it from other submittals. Show Contractor's executed review and approval marking and provide space (5" x 7") for Architect's Action marking and space for Owner's review marking. Package each submittal appropriately for transmittal and handling. Submittals received, which are lacking the above information, will be returned without action. Submittals, which are received from sources other than through Contractor's office, will be returned without action.

- 1 D. Each submission shall be complete, with all options clearly marked and with all components required for the  
2 assembly fully described and detailed. Submissions missing important information will be returned unchecked.  
3
- 4 E. Transmittal Form: Submittals shall be accompanied by a transmittal form. Provide Contractor's certification on  
5 form, ready for execution, stating that information submitted complies with requirements of contract documents.  
6 • Transmit all submittals and shop drawings to the Architect or Engineer with a copy of the transmittal to the  
7 Owner.  
8
- 9 F. Except as otherwise indicated in individual work sections, comply with requirements specified herein for each  
10 indicated category of submittal. Provide and process intermediate submittals, where required between initial and  
11 final, similar to initial submittals.  
12
- 13 G. Maintain returned final set of samples at project site, in suitable condition and available for quality control  
14 comparisons by Architect, and by Owner.  
15
- 16 H. Do not proceed with installation of materials, products or systems until final copy of applicable shop drawings,  
17 product data and samples are in possession of Installer.  
18
- 19 I. Provide newly prepared shop drawings, on reproducible sheets, with graphic information at accurate scale, with  
20 company name of preparer indicated. Show dimensions and note which are based on field measurement. Identify  
21 materials and products in the work shown. Indicate compliance with standards, and special coordination  
22 requirements. Do not allow shop drawing copies without appropriate final Action markings by Architect to be  
23 used in connection with the work.  
24
- 25 1. Initial and Intermediate Submittals: One correctable translucent reproducible print and 5 blue line or  
26 black line prints; reproducible will be returned.  
27 2. Final Submittal: 6 prints, plus 3 additional prints where required for maintenance manuals; 4 will be  
28 retained and remainder will be returned, one of which shall be marked up and maintained by Contractor as  
29 "Record Document".  
30 3. Electronic submittals are acceptable in AutoCad format only. Contractor shall be responsible for printing  
31 and distribution of multiple copies as required.  
32
- 33 J. Collect required product data into one submittal for each unit of work or system; and mark each copy to show  
34 which choices and options are applicable to the project. Include manufacturer's standard printed  
35 recommendations for application and use, compliance with standards, application of labels and seals, notation of  
36 field measurements that have been checked, and special coordination requirements. Maintain one set of product  
37 data for each submittal at project site, available for reference by Architect and others.  
38
- 39 K. Submittals will be accepted from the Contractor only. Submittals received from other entities will be returned  
40 without review or action.  
41 1. Submittals received without a transmittal form will be returned without review or action.  
42 2. Transmittal form: Use a form matching the sample form attached to this section. Include the following:  
43 a. List of deviations.  
44 b. The Contractor's certification signature.  
45 3. Fill out a separate transmittal form for each submittal; also include the following:  
46 a. Other relevant information.  
47 b. Request for additional information.  
48
- 49 L. Do not submit product data, or allow its use on the project, until compliance with requirements of Contract  
50 Documents has been confirmed by Contractor. Submittal is for information and record unless otherwise  
51 indicated. Initial submittal is final submittal unless returned promptly by Architect marked with an Action that  
52 indicates and observed noncompliance. Submit 6 copies, plus 3 additional copies, which will be returned, where  
53 required for maintenance manuals.



1. Electronic submittals are acceptable in 8 ½" x 11" format only.

M. Provide three (3) samples identical with final condition of proposed materials or products for the work. Include range samples, not less than 3 units, where unavoidable variations between units of each set. Provide full set of optional samples where Architect's selection is required. Prepare samples to match Architect's sample where so indicated. Include information with sample to show generic description, source or products name and manufacturer, limitations, and compliance with standards. Samples are submitted for review and confirmation of color, pattern, texture and kind by Architect. Architect will not test samples, except as otherwise indicated, for compliance with other requirements, which are therefore the exclusive responsibility of the Contractor.

N. Upon receipt of a signed copy of the Architects' Waiver form, electronic copies of CAD drawings of the Contract Documents will be provided by the Architect for Contractor's use in preparing submittals. Copy of Waiver form is attached.

O. Product Selection Procedures: Procedures for product selection include the following:

1. Product: Where Specification paragraphs or subparagraphs titled "Product" name a single product and manufacturer, provide the named product or an equivalent.
2. Manufacturer/Source: Where Specification paragraphs or subparagraphs titled "Manufacturer" or "Source" name single manufacturers or sources, provide a product of the manufacturer or source that complies with requirements, or an equivalent.
3. Products: Where Specification paragraphs or subparagraphs titled "Products" introduce a list of names of both products and manufacturers, provide one of the products listed that complies with requirements, or an equivalent. Comply with provisions of "Product Options and Substitutions," Section 1.4 of Division 1300 of these specifications when submitting an equivalent product.
4. Manufacturers: Where specification paragraphs or subparagraphs titled "Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed, or an equivalent, that complies with requirements. Comply with provisions of "Product Options and Substitutions," Section 1.4 of Division 1300 of these specifications when submitting an equivalent product.
5. Product Options: Where Specification paragraphs or subparagraphs refer to "Product Options and Substitutions," indicate that size, profiles, and dimensional requirements on Drawings are based on a specific product or system; provide the specific product or system or an equivalent product or system by another manufacturer. Comply with provisions of "Product Options and Substitutions," Section 1.4 of Division 1300 of these specifications when submitting an equivalent product.
6. Basis of Design Products: Where Specification paragraphs or subparagraphs titled "Basis-of-Design Products" introduce or refer to a list of manufacturers' names, provide either the specified product or an equivalent. Drawings and Specifications indicate sizes, profiles, dimensions and other characteristics that are based on the product names. Comply with the provisions of "Product Options and Substitutions," Section 1.4 of Division 1300 of these specifications when submitting an equivalent product.

### 1.3 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 2 executed copies, except furnish 3 additional copies where required for 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.

#### 1.4 PRODUCT OPTIONS AND SUBSTITUTIONS

##### A. DEFINITIONS

1. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

a. 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.

b. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.

c. Equivalent Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

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

3. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

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

5. 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.

6. **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 prohibits the use by the Contractor or subcontractors of materials or farm products produced and manufactured outside of the United States on any public work.**

##### B. General Requirements:

1. 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.

2. To the greatest extent possible, provide products, materials and equipment of a singular generic kind and from a single source.
  3. Where more than one choice is available as options for Contractor's selection of a product or material, select an option that is compatible with other products and materials already selected. Total compatibility among options is not assured by limitations within Contract Documents, but shall be provided by Contractor. Compatibility is a basic general requirement of product/material selections.
  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.
- C. Submittals: Submit 6 copies, utilizing Substitution Request Form, CSI Form 13.1.A, fully identified for product or method being requested for substitution, including related specification section and drawing numbers, and fully documented to show compliance with requirements for substitutions. Include product data/drawings, description of methods, samples where applicable, Contractor's details comparison of significant qualities between specified item and proposed substitution, statement of effect on construction time and coordination with other affected work and contractors, cost information or proposal, warranty information, compatibility with other work, approval of all authorities having jurisdiction, and Contractor's statement to the effect that proposed substitution will result in overall work equal to or better than work originally indicated.
- D. Contractor's options for selecting products are limited by Contract Documents requirements, and governing regulations. Required procedures include, but are not necessarily limited to, the following for various indicated methods or specifying:
1. Single product/manufacture name; provide product indicated or equivalent, except advise Architect before proceeding, where known that named product is not a feasible or acceptable selection.
  2. Two or more product/manufacture names; provide one of the named products or equivalent, at Contractor's option; but excluding products which do not comply with requirements. Advise Architect before proceeding.
  3. Equivalent; where named products in Specifications text are accompanied by the term "or equivalent", or other language of similar effect, comply with those Contract Documents provisions concerning substitutions for obtaining Architect's approval of equivalent product.
  4. Named, except as otherwise indicated, is defined to mean manufacturer's name for product, as recorded in published product literature, of latest issue as of date of Contract Documents. Refer requests to use products of a later or earlier model to Architect for acceptance before proceeding.
  5. Where compliance with an imposed standard, code or regulation is required, selection from among products that comply with requirements including those standards, codes and regulations, is Contractor's option.
  6. 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.
  7. Provide products that have been produced in accordance with prescriptive requirements, using specified ingredients and components, and complying with specified requirements for mixing, fabricating, curing, finishing, testing and similar operations in manufacturing process.
  8. Where matching of an established sample is required, final judgment of whether a product proposed by Contractor matches sample satisfactorily is Architect's judgment. Where no product within specified cost category is available, which matches sample satisfactorily and complies with requirements, comply with Contract Document provisions concerning substitutions for selection of a matching product outside established cost category or not complying with requirements.
  9. Where specified product requirements include "...as selected from manufacturer's full range of colors, patterns, textures..." or words of similar effect, the selection of manufacturer and basic product data is to comply with requirements of the Contract, and selection shall be from the full range of products

1 within the requirements. Where specified product requirements include "... as the industry...", or words to  
2 that effect, selection of product complying with requirements, is Architect's selection, including  
3 designation of manufacturer, where necessary to obtain desired color, pattern or texture.  
4

5 E. Substitutions may be permitted by the Architect, if, in his opinion, the requirements of the proposed substitution  
6 comply with the requirements specified for the material, article or piece of equipment; however, the Architect is  
7 not required to permit substitution pursuant to the case of Whitten Corporation vs. Paddock, Incorporated, United  
8 States District Court, Massachusetts, April 12, 1974, affirmed by the Federal First Circuit Court, December 14,  
9 1974.

10  
11 F. After award of contract, the Contractor may submit substitutes to the Architect for review, fully documented and  
12 certified, and accompanied by a proposal for a reduction in the Contract Sum.  
13

14 G. Contractor's request for substitution will be received and considered when extensive revisions to Contract  
15 Documents are not required and changes are in keeping with general intent of Contract Documents; when timely,  
16 fully documented and properly submitted; and when one or more of following conditions is satisfied, all as judged  
17 by Architect. Otherwise, requests will be returned without action except to record noncompliance with these  
18 requirements.  
19

- 20 1. Where request is directly related to an "equivalent" clause or other language of same effect in Contract  
21 Documents.
- 22 2. Where required product, material or method cannot be provided within Contract Time, but not as a result  
23 of Contractor's failure to pursue the work promptly or coordinate various activities properly.
- 24 3. Where required product, material or method cannot be provided in a manner which is compatible with  
25 other materials of the work, or cannot be properly coordinated therewith, or cannot be warranted  
26 (guaranteed) as required, or cannot be used without adversely affecting Owner's insurance coverage on  
27 completed work, or will encounter other substantial noncompliances which are not possible to otherwise  
28 overcome except by making requested substitution, which Contractor thereby certifies to overcome such  
29 incompatibility, uncoordination, nonwarranty, noninsurability or other noncompliance as claimed.
- 30 4. Where substantial advantage is offered Owner, in terms of cost, time or other valuable considerations,  
31 after deducting offsetting responsibilities Owner may be required to bear, including additional  
32 compensation to Architect for redesign and evaluation services, increased cost of other work by Owner or  
33 separate Contractors, and similar considerations.  
34

35 H. Contractor's submittal of, and Architect's acceptance of, shop drawings, product data or samples which indicate  
36 work not complying with requirements of Contract Documents, does not constitute an acceptable and valid  
37 request for, nor approval of, a substitution.  
38

#### 39 I. QUALITY ASSURANCE

40  
41 Compatibility of Options: If Contractor is given option of selecting between two or more products for use on  
42 Project, product selected shall be compatible with products previously selected, even if previously selected  
43 products were also options.  
44

- 45 1. Each contractor is responsible for providing products and construction methods compatible with products  
46 and construction methods of other contractors.
- 47 2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect  
48 will determine which products shall be used.  
49

#### 50 J. EQUIVALENT PRODUCTS

51  
52 Where products or manufacturers are specified by name, Contractor must submit the following, in addition to  
53 other required submittals, to obtain approval of an unnamed product proposed as an equivalent:  
54

- 55 1. Evidence that the proposed product does not require extensive revisions to the Contract Documents,

- 1 that it is consistent with the Contract Documents and will produce the indicated results, and that it is  
2 compatible with other portions of the Work.
- 3 2. Detailed comparison of significant qualities of proposed product with those named in the specifications.  
4 Significant qualities include attributes such as performance, weight, size, durability, visual effect, and  
5 specific features and requirements indicated.
- 6 3. Evidence that proposed product provides specified warranty.
- 7 4. List of similar installations for completed projects with project names and addresses and names and  
8 addresses of architects and owners, if requested.
- 9 5. Samples, if requested.
- 10
- 11 1.5 OPERATION AND MAINTENANCE INSTRUCTIONS AND EQUIPMENT WARRANTIES
- 12
- 13 A. The Contractor shall orient and instruct the responsible maintenance personnel designated by the Owner in the  
14 Operation of all equipment and shall provide the maintenance personnel with pertinent literature and operational  
15 manuals for all equipment. Date and time of demonstrations shall be mutually agreed upon with the Owner.  
16 Provide qualified personnel for as long as necessary to fully orient and instruct the Owner. Contractor shall  
17 videotape instruction session and provide owner with completed video.
- 18
- 19 B. The manuals shall be submitted in (quadruplicate) 3-ring loose-leaf type binders **and electronically in PDF**  
20 **format and be able to be TEXT SEARCHABLE** to the Architect for approval with all additional information  
21 that the Architect may request and considers necessary for the proper servicing and maintenance of all equipment.  
22 Manuals are to include plain paper copies of approved shop drawings and catalog cuts. The quality of the copies  
23 may be subject to approval by the Architect. Upon completion and approval, 3 copies will be forwarded to the  
24 Owner and one copy retained by the Architect.
- 25
- 26 C. Manuals shall include no less than the following:
- 27 1. Operating Procedures:
- 28 a. Typewritten procedures indicating each mode of operation of each piece of equipment or system.  
29 Procedures shall indicate the status of each component of a system in each operating mode.
- 30 b. Procedures shall indicate names, symbol numbers, valve tags, circuit numbers, schematic control  
31 and wiring diagrams, locations of thermostats, manual starters, control cabinets, and other controls  
32 of each system.
- 33 c. Emergency shutdown procedures for each piece of equipment or system, both automatic and  
34 manual as appropriate.
- 35 2. Maintenance Schedule: Typewritten schedule describing manufacturer's recommended schedule of  
36 maintenance and maintenance procedures.
- 37 3. Catalog cuts and shop drawings:
- 38 a. Catalog cuts shall clearly indicate the exact model and type of each piece of equipment installed in  
39 the Project, including all options provided.
- 40 b. Catalog cuts shall fully describe equipment including physical, electrical, mechanical and other  
41 characteristics, performance characteristics and installation or erection diagrams.
- 42 c. Catalog cuts shall indicate spare part numbers and name, address and telephone number of local  
43 representative or service department.
- 44 4. Typewritten list of all subcontractors on the Project including name, address, telephone number and  
45 responsibility on the Project.
- 46 5. Manuals shall be indexed with dividers indicating each system or piece of equipment.
- 47 6. Warranties, permits, inspection stickers/approvals and Certificate of Occupancy are to be included.
- 48
- 49 D. Required equipment warranties shall be submitted in three copies **and electronically in PDF format** to the  
50 Architect.
- 51
- 52 E. The Contractor shall video tape all instructional sessions and demonstrations and provide the Owner with a copy  
53 of the videotape at the end of all demonstrations.

PART 2 - PRODUCTS

NOT APPLICABLE

PART 3 - EXECUTION

3.1 ACTION ON SUBMITTALS

- A. One copy of all submissions will be returned to the Contractor for his files. The Contractor shall mark up other copies so as to conform with the copy returned to him and forward them to all interested Contractors, Subcontractors, and Suppliers.
- B. The Architect will review and stamp submitted shop drawings in one of the following ways (the actual stamp may be different; below language is shown for an example only)
  - 1. "No Exceptions Taken": Approved.
  - 2. "Make Corrections Noted": Approved, provided the work complies with corrections marked on the submittal.
  - 3. "Revise and Resubmit": Do not commence work of this submittal. Revise and resubmit or prepare a new submittal; comply with notations marked on submittal.
  - 4. "Rejected": Fundamentally not in compliance. Prepare a new submittal. No notations or comments made.
- C. Work shall be executed in accordance with "Approved", "Approved As Noted", or "Resubmit for Record" stamp only.
- D. Architect's review of shop drawings/submittals will constitute checking for general arrangement only, and shall not relieve the Contractor of responsibility for complete compliance with Drawings and Specifications. Contractor shall be responsible for quantities and dimensions to assure a proper fit under field conditions.

3.2 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 distributions on transmittal forms.

3.3 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.
- C. The Contractors are reminded of the requirement to declare all substitutions within 20 days of execution of their Contract as specified.

**END OF SECTION 01300**

1 **SECTION 01310 - QUALITY CONTROL**

2  
3 **PART 1 - GENERAL**

4  
5 1.01 TRADESMEN AND WORKMANSHIP

- 6  
7 A. Each Contractor shall ensure that tradesmen performing work at site are skilled and knowledgeable in methods  
8 and craftsmanship needed to produce required quality levels for workmanship in completed work. Remove and  
9 replace work which does not comply with workmanship standards as specified and as recognized in the con-  
10 struction industry for applications indicated. Remove and replace other work damaged or deteriorated by faulty  
11 workmanship or its replacement.  
12  
13 B. In certain instances, specification text requires that specific work be assigned to specialists or expert entities,  
14 who shall be engaged for performance of those units of work. These shall be recognized as special requirements  
15 over which Contractor has no choice or option. These assignments shall not be confused with, and are not  
16 intended to interfere with, normal application of regulations, union jurisdictions and similar conventions. One  
17 purpose of such assignments is to establish which party or entity involved in a specific unit of work is  
18 recognized as "expert" for indicated construction processes or operations. Nevertheless, final responsibility for  
19 fulfillment of entire set of requirements remains with Contractor.  
20

21 1.02 INSPECTION, TESTS AND REPORTS

- 22  
23 A. Required inspection and testing services are intended to assist in determination of probable compliances of the  
24 work with requirements, but do not relieve any Contractor of responsibility for those compliances, or for general  
25 fulfillment of requirements of Contract Documents. Specified inspections and tests are not intended to limit any  
26 Contractor's quality control program. Afford reasonable access to agencies performing tests and inspections.  
27  
28 B. Contractors are responsible for all testing associated with their work (foundations, soils compaction, concrete,  
29 steel, roof material testing etc.) and shall submit the name of their proposed testing agency within 15 days of  
30 Notice-to-Proceed. Each Contractor is responsible to coordinate the activities of the testing agency to assure that  
31 work is tested prior to being covered up or other activities associated to the work begin.  
32

33 1.03 ROOF DRAIN TESTING

- 34 A. Pre-Construction Testing: Prior to the start of any work on the roof, the Contractor shall water-flow test all  
35 roof drains (5 minutes at each drain), to determine if any full or partial drain clogs exist in the drainage  
36 system.  
37  
38 1. The Owner shall have a representative at the test.  
39 2. The results of the testing shall be reported to the Owner, in writing, prior to the start of work.  
40 3. The Owner will be responsible for correction of any drain-age problems reported by the Contractor prior  
41 to the start of work.  
42 4. Any drains, piping or other components, whether exposed, concealed, below grade, etc., found to be  
43 clogged after the start of construction, and not reported to the Owner prior to the start of construction,  
44 shall be cleared, repaired or replaced as required to restore full drainage capacity. All work shall be  
45 performed by the Contractor at no additional cost to the Owner, including patching, repair or re-  
46 placement of any materials, finishes, landscaping, etc., disturbed in gaining access to drainage  
47 components.

B. Post-Construction Testing: When all work reaches substantial completion, the Contractor shall water-flow test all roof drains (5 minutes at each drain), to determine if any full or partial drain clogs exist in the drainage

system.

1. The Owner shall have a representative at the test.

2. Report the results of testing to the Owner in writing prior to preparation of the final punchlist inspection.

3. Any drains, piping or other components, whether exposed, concealed, below grade, etc., found to be clogged shall be cleared, repaired or replaced as required to restore full drainage capacity. All work shall be performed by the Contractor at no additional cost to the Owner, including patching, repair or replacement of any materials, finishes, landscaping, etc., disturbed in gaining access to drainage components.

#### 1.04 ROOF DRAIN PROTECTION

A. Contractor is to make every effort to prevent materials from entering roof drains. Contractor is to install roof rain filters prior to removal of any roof materials.

B. All debris is to be cleaned away from drains at the end of each day.

### PART 2 - PRODUCTS

#### 2.01 ROOF DRAIN FILTERS

A. Tiddy Gutter DF100001 Roof Drain Foam Filter or Equal.

### PART 3 - EXECUTION

#### 3.01 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 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.



3.02 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.

3.03 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 two days in advance of proposed utility interruptions.
  2. Do not proceed with utility interruptions without Owner's/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.

- 1 D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.  
2  
3 E. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of  
4 the Contract Documents, submit a request for information to Architect. Include a detailed description of  
5 problem encountered, together with recommendations for changing the Contract Documents.  
6

7 3.04 CONSTRUCTION LAYOUT  
8

- 9 A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation  
10 to existing conditions and dimensions. If discrepancies are discovered, notify Architect and Owner promptly.  
11

12 3.05 INSTALLATION  
13

- 14 A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as  
15 indicated.  
16

- 17 1. Make vertical work plumb and make horizontal work level.  
18 2. Where space is limited, install components to maximize space available for maintenance and ease of  
19 removal for replacement.  
20

- 21 B. Comply with manufacturer's written instructions and recommendations for installing products in applications  
22 indicated.  
23

- 24 C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions  
25 required for product performance until Substantial Completion.  
26

- 27 D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess  
28 of that expected during normal conditions of occupancy.  
29

- 30 E. Tools and Equipment: Only use the best quality tools and equipment with proper attenuations for the latest  
31 acceptable sound levels.  
32

- 33 F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place,  
34 accurately located and aligned with other portions of the Work.  
35

- 36 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by  
37 Architect.  
38 2. Allow for building movement, including thermal expansion and contraction.  
39

- 40 G. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints  
41 for the best visual effect. Fit exposed connections together to form hairline joints.  
42

- 43 H. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.  
44

45 **END OF SECTION 01310**

1 **SECTION 01320 - TEMPORARY FACILITIES**

2  
3 **PART 1 - GENERAL**

4  
5 **1.01 DESCRIPTION OF REQUIREMENTS**

- 6  
7 A. Specific administrative and procedural minimum actions are specified in this section, as extensions of provisions  
8 in General Conditions and other Contract Documents. Nothing in this section is intended to limit types and  
9 amounts of temporary work required, and no omission from this section will be recognized as an indication that  
10 such temporary activity is not required for successful completion of the work and compliance with requirements  
11 of Contract Documents.  
12  
13 B. Each Contractor is specifically assigned certain responsibilities for temporary facilities to be used by all  
14 Contractors, other entities at the site, the Owner's work forces and other personnel including occupants of the  
15 project, the Owner, the Architect, test agencies, personnel of governing authorities, and similar entities and  
16 personnel authorized to be at the project site during construction. In general, each Contractor is assigned the  
17 responsibilities for installation, operation and removal of each temporary facility which is related by recognized  
18 trades to its scope of contract work; and, except as otherwise indicated, each is responsible for costs and use  
19 charges associated therewith, including fuel, power usage, water usage and similar usage costs. The Contractor is  
20 responsible for temporary facilities not related to any other Contractor's scope of contract work and not otherwise  
21 specifically assigned, as designated by the Architect.  
22  
23 C. No costs or usage charges for temporary facilities are chargeable to the Owner, nor can any Contractor's cost or  
24 usage charges for temporary facilities be accepted as the basis for a change order extra. The total costs and usage  
25 charges for temporary facilities are included, collectively, in the Contract Amounts.  
26

27 **1.02 GENERAL REQUIREMENTS**

- 28  
29 A. Each Contractor shall provide and operate all hoists, cranes, helicopters and furnish and erect all ladders and  
30 scaffolding required by him and his subcontractors, constructed to afford proper protection to craftsmen, their  
31 Work and other Work in progress and previously executed.  
32

33 **1.03 JOB CONDITIONS**

- 34  
35 A. Each Contractor shall establish and initiate use of each temporary facility at time first reasonably required for  
36 proper performance of the total work of project. Terminate use and remove facilities at earliest reasonable time,  
37 when no longer needed or when permanent facilities have, with authorized use, replaced the need.  
38  
39 B. Each Contractor shall install, operate, maintain and protect temporary facilities in a manner and at locations that  
40 will be safe, nonhazardous, sanitary, protective of persons and property, and free of deleterious effects.  
41

42 **1.04 ENVIRONMENTAL PROTECTION**

- 43  
44 A. Each Contractor shall provide facilities, establish procedures, and conduct construction activities in a manner that  
45 will ensure compliance with environmental and other regulations controlling construction activities at project site.  
46 The Contractor shall designate one person, the Construction Superintendent or other, to enforce strict discipline  
47 on activities related to generation of wastes, pollution of air/water/soil, generation of noise, and similar harmful or  
48 deleterious effects which might violate regulations or reasonably irritate persons at or in vicinity of project site.  
49 Anti-pollution measures required by D.E.P., as applicable are to be followed.  
50

51 **1.05 SECURITY**

- 52  
53 A. The Contractor shall maintain complete security on the site at all times during and outside of normal working  
54 hours to protect the Work and all field offices, and to secure the area of construction by restricting all trespassers.  
55 • This means locking the doors and/or gates. A guard is not required.

- 1 B. Provide a six foot chain link fence around any compounds and/or dumpsters related to this project.
- 2
- 3 1.06 TEMPORARY CONSTRUCTION FACILITIES
- 4
- 5 A. Where mud, snow, ice or other hazardous conditions exist in the purview (Scope of Work) of any Sub Contractor,
- 6 the Contractor shall remove the hazards immediately and replace with suitable material for the other contractors
- 7 use. If the Owner is compelled to remove the hazards with their own forces due to inaction by the Contractor,
- 8 then that Contractor will be back-charged for the work performed by the Owner.
- 9
- 10 B. No welding, cutting by torch, or Work utilizing or causing flammable waste shall be done unless adequate fire
- 11 protection is provided and maintained for the duration of the Work in the area of operations.
- 12
- 13 C. **Contractor is to provide road safety and traffic controls when working on or near any roadway or**
- 14 **sidewalk on campus. Including flag personnel, signage, cones and all necessary safety measures to assure**
- 15 **the safety of the pedestrians and vehicles at all times. This includes escorting deliveries using equipment**
- 16 **other than a truck or car on roadways and walkways with a flag person. Backhoes can be run without an**
- 17 **escort.**
- 18
- 19 1.07 DEBRIS CONTROL (Refer to Section 01524 for further delineation)
- 20
- 21 A. The Contractor shall be responsible for daily cleaning up of spillages and debris resulting from his operations and
- 22 from those of his Subcontractors; and shall be responsible for complete removal and disposition of hazardous and
- 23 toxic waste materials. The Contractor shall provide containers at grade, sufficient for the depositing of
- 24 nonhazardous/nontoxic waste materials, and shall remove such waste materials from project site at least weekly
- 25 during cold weather (daily high temperatures below 50°F) and at least twice weekly during mild and warm
- 26 weather.
- 27 • Contractor is responsible to provide and pay for all dumpsters.
- 28
- 29 B. The Contractor shall daily clean all mud, dirt and debris resulting from all trades operations from the adjacent
- 30 streets, sidewalks, drives and parking areas and shall repair all damage caused by the cleaning to the satisfaction
- 31 of the Owner.
- 32
- 33 C. The Contractor is to provide and maintain appropriate means of trash disposal (i.e., chutes) to grade/dumpster.
- 34 Multiple units may be required and shall be figured for in the bid.
- 35

36 PART 2 - EXECUTION

37

38 2.01 ENCLOSURES

39

- 40 A. At earliest possible date, the Contractor shall secure project area against unauthorized entrance at times when
- 41 personnel are not working. Provide secure temporary enclosure at ground floor and other locations of possible
- 42 entry, with locked entrances.
- 43
- 44 B. Where any form of demolition will expose the interior of the building to weather, demolition shall follow the
- 45 erection of weatherproof walls by the Contractor installed inside the demolition line, sealed and flashed, as
- 46 required, to keep all water from the building interior. Keep temporary weatherproofing in place until new con-
- 47 struction has been completed to the stage where water will not enter the building.
- 48
- 49 C. The Contractor shall provide constant protection against rain, wind, storms, frost or heat to maintain the work,
- 50 materials, apparatus and fixtures free from damage. At the end of each day's work, cover work likely to be
- 51 damaged. During cold weather, protect work from damage by freezing and provide such enclosures and heating
- 52 apparatus as may be necessary diligently to prosecute the Work without stoppage for reason of unfavorable
- 53 weather.
- 54

D. 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.

E. Install an 8 foot high fence around the entire site with wind screening. Provide gates as needed to properly access the site to complete the work. Remove the fence once the project is substantially completed. Fence is to have poles into the ground where the fence will be untouched per a period of time, and can have feet with sand bags in areas that the fence may have to be moved occasionally to not interfere with the work.

F. **For renovation projects: Contractor is to maintain the building in a water tight condition during all construction activities by whatever means necessary. Contractor is to never do any more removal work during any given day than that contractor can replace in the same day in order to make sure the occupants of the building will be protected from the possibility of water leakage into the building. Should any leakage occur, the contractor is to immediately make the building water tight (on a 24 hour basis) and repair any damage caused by the leakage or replace any equipment damaged by the leakage.**

#### 2.02 TEMPORARY ELECTRICITY

A. Power is available on site.

#### 2.03 TEMPORARY VENTILATION

A. A trade requiring ventilation for Work shall provide fans to induce circulation of air.

#### 2.04 TEMPORARY TELEPHONES

A. Each Contractor is responsible for their own telephone service and for payment of all charges relating to that service.

#### 2.05 TEMPORARY WATER

A. Water is available on site.

#### 2.06 TEMPORARY SANITARY FACILITIES

A. Starting at time of start of work at project site, the 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. Facilities shall remain in use until completion of project. Use of permanent facilities will not be permitted.

#### 2.07 REMOVAL AND RESTORATION

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

#### 2.08 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 he deems proper for the protection and conduct of the Work, and to deduct the cost thereof from the amount due the Contractor at fault.

B. Extended work days, hours, shifts, weekend work, etc. may be allowed upon coordination and approval by Architect, Owner at no additional cost to the Owner.

- 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. Should there be a cost to the College for this overtime work, the contractor will be required to reimburse the owner for said costs.

2.09 Parking: parking is allowed for two vehicles only. All other parking is to be at the TCNJ Carlton Avenue parking lot. The contractor is responsible to shuttle workers back and forth as needed.

**END OF SECTION 01320**

1 **SECTION 01322 – PHOTOGRAPHIC DOCUMENTATION**

2  
3 **PART 1 – GENERAL**

4  
5 **1.01 RELATED DOCUMENTS**

- 6  
7 A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and  
8 other Division 1 Specification Sections, apply to this Section.  
9

10 **1.02 SUMMARY**

- 11  
12 A. This Section includes administrative and procedural requirements for the following work by the General  
13 Contractor (other primes are encouraged to document the site and construction, but not required):  
14

15 1. Preconstruction video or photographs

- 16  
17 B. Related Sections include the following:

18 1. All of Division 1.  
19  
20

21 **1.03 SUBMITTALS**

- 22  
23 A. Qualification Data: For photographer.

- 24  
25 B. Videotapes: video the existing conditions prior to start of the project and provide TCNJ with a copy of  
26 the video.  
27

28 **1.04 QUALITY ASSURANCE**

- 29  
30 A. Job Project Manager or Superintendent  
31

32 **1.05 Not used.**

33  
34 **1.06 USAGE RIGHTS**

- 35  
36 A. Obtain and transfer copyright usage rights to the Owner for unlimited reproduction of photographic  
37 documentation.  
38

39 **PART 2 – PRODUCTS**

40  
41 **2.01 PHOTOGRAPHIC MEDIA**

- 42  
43 A. Digital format as agreed to at the project kick off meeting.  
44

45 **PART 3 – EXECUTION**

46  
47 **3.01 CONSTRUCTION VIDEOTAPES**

- 48  
49 A. Preconstruction: Before starting demolition or construction record, videotape (digital) of Project site,  
50 interior and exterior.  
51

52 1. Show protection efforts by the Contractor.

53 2. Show as many existing conditions as possible prior to the start of the work.  
54

55 **END OF SECTION 01322**

## SECTION 01330 – CONTRACT CLOSEOUT

### PART 1 – GENERAL

#### 1.01 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 16. 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.

#### 1.02 PREREQUISITES TO SUBSTANTIAL COMPLETION

A. 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. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents.
6. All fire sprinklers, devices, alarm system, roofing system, doors, insulation, etc. requiring FM Research approval to submit certification from Factory Mutual.
7. Obtain and submit releases enabling Owner's full and unrestricted use of the work and access to services and utilities, including occupancy permits, operating certificates, and similar releases.
8. Deliver tools, spare parts, extra stocks of materials, and similar physical items to Owner 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.
9. Complete start up testing of systems, and instructions of Owner's operating/maintenance personnel. Discontinue, or change over, and remove from project site temporary facilities and services, along with construction tools and facilities, mockups, and similar elements.
10. Complete final clean up requirements.
11. Touch up and otherwise repair and restore marred exposed finishes.
12. Inspection: Submit a written request for inspection for Substantial Completion to Project Manager. On receipt of request, Architect and Project Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection, the Project Manager will notify Contractor of items, either on Contractor's list or additional items identified by Architect that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as



incomplete is completed or corrected.

2. Results of completed inspection will form the basis of requirements for Final Completion.

- B. Upon receipt of Contractor's request, the Project Manager and Architect will proceed with substantial completion inspection. Following inspection, the Architect will either prepare the certificate of substantial completion, or advise the Contractor of work which shall be performed prior to issuance of certificate. The work remaining to be performed shall be completed prior to the punch list for final acceptance.
- C. 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 Project Manager and Architect, the Project Manager 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.
- D. In the event that the work is not completed or obligations are not fulfilled as required for final acceptance and the Architect/CM is required to reinspect the work more often than the two inspections described, the Contractor shall compensate the Architect and/or the Project Manager at the rate of \$500.00 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 or Project Manager by the Owner, through a change order as an addition to the Architect's or Project Manager's Contract Sum.
- E. **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, are installed and the building 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 building, or site work associated with this contract are not installed, the project cannot be deemed substantially completed.**

#### 1.03 PREREQUISITES TO FINAL ACCEPTANCE

- A. Prior to requesting Project Manager 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. Include certificates of insurance for products and completed operations where required.
  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 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.
  7. Complete final clean up requirements.
  8. Touch up and otherwise repair and restore marred exposed finishes.
  9. Submit notarized consent of surety to final payment.
  10. Submit final liquidated damages settlement statement, if required, acceptable to Project Manager and the Owner.
  11. Revise and submit evidence of final, continuing insurance coverage complying with insurance requirements.
  12. A letter from the Owner's representative certifying that he has been properly instructed in the operation and maintenance of equipment by the Contractor.

13. 10% one year Maintenance Bond.
14. Underwriter's Certificate or Electrical Sub Code Official's Approval.
15. Fire Alarm Certification and Description - NFPA form 72C including local County of Chester.
16. HVAC Contractor to submit certified balancing report.
17. Final acceptance by Architect of record documents

- B. Except as otherwise indicated or requested by Project Manager/Architect, remove temporary protection devices and facilities that were installed during course of the work to protect previously completed work during remainder of construction period.

#### 1.04 CLEAN UP

- A. Remove waste materials from site and dispose of in a lawful manner.

#### PART 2 - PRODUCTS

NOT APPLICABLE

#### PART 3 - EXECUTION

##### 3.01 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. Clean exposed exterior and interior hard surfaced finishes, to a dirt free condition, free of dust, stains, films and similar noticeable distracting substances. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective conditions.
  4. Wipe surfaces of mechanical and electrical equipment clean, including elevator equipment and similar equipment; remove excess lubrication and other substances.
  5. Remove debris and surface dust from limited access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics and similar spaces.
  6. Vacuum and clean carpeted surfaces and similar soft surfaces.
  7. Clean light fixtures and lamps to function with full efficiency.
  8. Clean and wax or polish all hard floors following manufacturer's instructions.
  9. Clean all window surfaces inside and outside.
  10. Perform final cleaning in, on and around all casework, sinks, toilets fixtures, etc.
  11. 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.
  12. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
  13. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
  14. Remove tools, construction equipment, machinery, and surplus material from Project site.
  15. Remove snow and ice to provide safe access to building.

16. 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.
  17. Sweep concrete floors broom clean.
  18. Replace parts subject to unusual operating conditions.
  19. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
  20. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
  21. Clean ducts, blowers, and coils if units were operated without filters during construction.
  22. 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.
  23. 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.
- 3.02 RECORD DOCUMENTS (Refer to Section 01340, project requirements for submitting Record Documents)
- 3.03 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.
- END OF SECTION 01330**

1 **SECTION 01340 - PROJECT RECORD DOCUMENTS**

2  
3 **PART 1 - GENERAL**

4  
5 **1.01 SUMMARY**

6  
7 **A. Section Includes:**

- 8  
9 1. Project record documents consisting of:  
10 a. Record drawings.  
11 b. Record project manual (specifications).  
12

13 **1.02 SUBMITTALS**

14  
15 **A. Project Record Documents: Submit after substantial completion, but prior to final completion.**

- 16  
17 1. Record drawings: Submit in form of opaque prints.  
18 a. Sets shall include all drawings, whether changed or not.  
19 2. Other record documents: Submit originals or good quality photocopies.  
20 3. Each Sub contractor is responsible for their respective trade, record documents and record drawings.  
21 Combine with General Contractor record drawing documents for a complete set.  
22

23 **PART 2 - PRODUCTS**

24  
25 (NOT USED)

26  
27 **PART 3 - EXECUTION**

28  
29 **3.01 MAINTENANCE OF PROJECT RECORD DOCUMENTS**

- 30  
31 **A. Do not use record documents of any type for construction purposes.**  
32  
33 **B. Maintain record documents in a secure location at the site while providing for access by the contractor and the**  
34 **architect during normal working hours; store in a fire-resistive room or container outside of normal working hours.**  
35  
36 **C. Record information as soon as possible after it is obtained.**  
37  
38 **D. Assign a person or persons responsible for maintaining record documents.**  
39  
40 **E. Record the following types of information on all applicable record documents:**  
41  
42 1. Dimensional changes.  
43 2. New and revised details.  
44 3. Revisions to electrical circuits.  
45 4. Locations of utilities concealed in construction.  
46 5. Particulars on concealed products which will not be easy to identify later.  
47 6. Changes made by modifications to the contract; note identification numbers if applicable.  
48 7. New information which may be useful to the owner, but which was not shown in either the contract  
49 documents or submittals.  
50

51 **3.02 RECORD DRAWINGS**

- 52  
53 **A. Maintain a complete set of opaque prints of the contract drawings, marked to show changes.**  
54 **B. Where the actual work differs from that shown on the drawings, mark this set to show the actual work.**  
55

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.

### 3.03 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.

### 3.04 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 Project Manager for transmittal to the Architect, unless otherwise indicated.
- C. Submit to the Architect four (4) sets of Operation and Maintenance Manuals in three-ring binders, by volume, and indexed per binder (with one master index) to be transmitted to the Architect/Engineer for approval: All to be submitted at one time, not piece meal. Indexing should follow the specification section numbers.
- Include all inspection/approvals/certifications
  - All approved submittals and cut sheets as well as manufacturer's operation and maintenance manuals for each section.
  - Manuals are to be completed in volumes, three ring binders, starting with Division 1 and continuing through the last projects Division. The number of volumes is determined by the number of spec section the projects has and by the amount of paper/copies for complete sets of three ring binders.
  - List of all contractors and vendors for the project with names, addresses and phone numbers.

1  
2    **END OF SECTION 01340**

1 **SECTION 01524 – CONSTRUCTION WASTE MANAGEMENT**

2  
3 **PART 1 – GENERAL**

4  
5 **1.1 RELATED DOCUMENTS**

- 6  
7 A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1  
8 Specification Sections, apply to this Section.  
9

10 **1.2 SUMMARY**

- 11  
12 A. This Section includes administrative and procedural requirements for the following:

- 13  
14 1. Salvaging nonhazardous demolition and construction waste.  
15 2. Recycling nonhazardous demolition and construction waste.  
16 3. Disposing of nonhazardous demolition and construction waste.  
17

- 18 B. Related Sections include the following:

- 19  
20 1. All of Division 1 and attached specifications and drawings that make a part of this contract.  
21  
22

23 **1.3 DEFINITIONS**

- 24  
25 A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction,  
26 remodeling, renovation, or repair operations. Construction waste includes packaging.  
27

- 28 B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.  
29

- 30 C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in  
31 landfill or incinerator acceptable to authorities having jurisdiction.  
32

- 33 D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.  
34

- 35 E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.  
36

37 **1.4 SUBMITTALS**

- 38  
39 A. Waste Management Plan: Submit 4 copies of plan within 30 days of date established for the Notice to Proceed.  
40

- 41 B. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations.  
42 Indicate whether organization is tax exempt.  
43

- 44 C. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate  
45 whether organization is tax exempt.  
46

- 47 D. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and  
48 processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.  
49

- 50 E. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities  
51 licensed to accept them. Include manifests, weight tickets, receipts, and invoices.  
52  
53  
54

55 **1.5 QUALITY ASSURANCE**

- A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 1. 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. 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 Project Manager. 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 1 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 1 Section "Temporary Facilities and Controls" 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 the 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 metal products from the building before demolition (aluminum, steel etc)

D. Recycle as much product as possible and provide a complete report to TCNJ to confirm the percentage recycled on the project.

### 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.

1  
2 3.6 DISPOSAL OF WASTE  
3

4 A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project  
5 site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.  
6

- 7 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.  
8 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.  
9

10 B. Burning: Do not burn waste materials on site.  
11

12 C. Burying: Do not bury waste materials on site.  
13

14 D. Disposal: Transport waste materials off Owner's property and legally dispose of them.  
15

16 E. Washing waste materials into sewers or drains is not permitted.  
17

18 **END OF SECTION 01524**

## SECTION 020400 - ENVIRONMENTAL PROTECTION

### PART 1 – GENERAL

#### 1.1 SCOPE OF WORK

The Contractor shall furnish all labor, materials, and equipment necessary and shall take all measures necessary to preserve and protect the site from environmental impact due to construction activities at the site during all phases of the project construction.

The required measures shall include, but are not necessary limited to confining the activities of his and his subcontractor's equipment and workmen to the actual construction area except as may be required for site ingress and egress; taking effective measures to minimize and control noise due to construction operations; complying with all municipal, State, and Federal regulations regarding open burning, air pollution control, and water pollution control, disposing of all surplus, unusable, and unsuitable excavated material, brush, trees, debris, and rubbish to State approved landfill areas outside the sites or to other approved offsite locations providing approved sanitary facilities in sufficient numbers for all workmen and visitors to the site, including the Engineer, their representatives, and representatives of all agencies authorized to visit the site; protection of all surface and groundwaters at the site, and in proximity to the site; and all else as described hereinafter and as required to fulfill the intent of this Section of the Specifications.

### PART 2 – PRODUCTS

### PART 3 – EXECUTION

#### 3.1 METHODS OF CONSTRUCTION

Excavated soil material shall not be placed adjacent to any stream or body of water in a manner that will cause it to be washed away by high water or runoff.

Fording of any stream with construction equipment will not be permitted. Therefore, temporary bridges, culverts or other structures shall be used wherever stream crossings are necessary. Unless otherwise approved in writing by the Engineer, mechanized equipment shall not be operated in or near any stream.

Pollutants such as chemicals, fuels, lubricants, bitumen, raw sewage, and other harmful waste shall not be discharged into or alongside of any body of water or into natural or man-made chemicals leading thereto.

The Contractor is advised that all storage and access areas must avoid environmentally sensitive areas and must be protected against erosion. The areas must be restored to a condition at least equal to that prior to use.

In addition, the prohibited construction procedures shall include, but are not limited to:

- a. dumping of spoil material into any stream corridor, any wetlands, any surface waters, or at unspecified locations,
- b. indiscriminate, arbitrary, or capricious operation of equipment in any stream corridors, any wetlands, or any surface waters,
- c. pumping of silt-laden water from trenches or other excavations into any surface waters, any stream corridors, or any wetlands,

- d. damaging vegetation adjacent to or outside of the project site or the adjacent rights-of-way,
- e. disposal of trees, brush, and other debris in any stream corridors, any wetlands, any surface waters, or at unspecified locations.,
- f. permanent or unspecified alteration of the flow line of the stream, and
- g. open burning of project debris

and all other aspects of Guidelines as indicated in NJDEP "Environmental Guidelines for Planning, Designing, and Constructing Interceptor Sewers" shall be adhered to.

### 3.2 REGULATIONS AND PERMITS

The Contractor shall comply with all applicable Federal, State and local regulations governing the control of air, water pollution, and solid wastes and shall obtain, at no additional compensation, all permits as may be required.

### 3.3 DUST CONTROL

It is the obligation of the Contractor to keep all working areas free from dust during construction. The Contractor shall take effective measures including daily sweeping and watering of streets as required, and covered trucks, etc. to minimize dust production and spreading as a result of construction activities on the site and hauling operations off the site.

The Contractor shall sweep the paved street and sprinkle with water as necessary to control dust in unpaved streets, trench areas or excavation areas.

Pavement areas shall be swept clean to the trench at the end of each day's work.

If, in the opinion of the Engineer, the Contractor is not maintaining adequate dust control, the Engineer will notify the Contractor who shall promptly provide whatever methods and means are necessary to bring the dust under control.

Dust Control shall, in all respects, be the obligation of the Contractor and the costs thereof shall be included in the price bid for the various items in the Proposal.

### 3.4 NOISE CONTROL

It is the responsibility of the Contractor to control noise levels resulting from construction activities. The Contractor shall take effective measures to minimize noise produced by all construction operations, including the use of properly maintained and operating exhaust mufflers on his construction vehicles whether used on-site or off-site. Only adequately muffled machinery will be used and the number of equipment in operation at a given time shall be limited to only those needed for the immediate job.

The Contractor shall control the noise generated by his construction operations.

Noise caused by construction activities shall not exceed the levels permitted by applicable Federal, State or local regulations.

All construction equipment powered by an internal combustion engine shall be equipped with a properly maintained muffler.

Air compressors shall be operated in accordance with the manufacturer's instructions for proper noise abatement.

Air-powered equipment shall be fitted with pneumatic exhaust silencers.

The Contractor shall fully comply with all municipal ordinances regarding operation of powered construction equipment.

All requirements for noise control in N.J.A.C. 7:22-10.11 (n) and adopted changes shall be adhered to.

### 3.5 SITE RESTORATION

Final restoration shall be undertaken as soon as areas are no longer needed for construction, stockpile or access. Excavated stones and boulders shall be removed from the site to a specified location. Care shall be taken to avoid damage to adjacent vegetation and to prevent the formation of depressions which would serve as mosquito breeding areas.

### 3.6 WASTE MATERIALS DISPOSAL

The Contractor shall collect and dispose of waste materials encountered in or resulting from the work. The waste materials shall include but not be limited to the following:

- a. Solid Waste: Equipment and materials resulting from demolition or restoration work, large pieces of asphalt or concrete, trees, stumps, bricks, wire, fences, drums, rubbish and construction debris generated by construction activities and rubble.
- b. Liquid or Semi-Liquid Waste: Cleanings from basins, manholes, sewer mains, and channels including grit, sludge, scum and miscellaneous debris.

The Contractor shall collect and promptly dispose of all waste materials in the area of the work. Clean-up shall be done on a regular basis.

All materials and equipment which are not designated as reusable or salvageable by the Owner shall become the property of the Contractor. However, all materials and equipment designated as re-usable or salvageable by the Owner shall be carefully removed so as to cause minimum damages and stored at a designated area as directed by the Engineer or the Owner.

On contained work sites such as treatment plants or pumping station, containers suitable for the collection and disposal of waste shall be provided. On transport piping contracts, collection and disposal shall be a continuous function. The Contractor shall remove all waste materials before moving to other sections of the work.

Waste materials shall be disposed of at sites approved by the NJDEP's Office of Solid Waste Administration, which are compatible with the nature of materials being disposed. All waste types 10, 13, 23, 25 and 27 as defined in NJDEP's Non-Hazardous Wastes Regulations, generated by the Contractor during construction shall be disposed of at a NJDEP authorized site. A complete listing of sites currently authorized by the NJDEP may be obtained from the Office of Solid Waste

Administration, NJDEP, 32 East Hanover St., Trenton, N.J. 08625 (609) 984-4083.

Waste materials shall be transported by vehicles properly licensed to transport solid waste by the NJDEP, Office of Solid Waste Administration.

### 3.7 NJDEP REGULATIONS FOR ENVIRONMENTAL PROTECTION

The Contractor shall comply with all applicable local, State and Federal regulations.

END OF SECTION 020400

## SECTION 021000 – SOIL EROSION AND SEDIMENT CONTROL

### PART 1 – GENERAL

#### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and the General Requirements, apply to work of this section.

#### 1.02 SECTION INCLUDES

- A. Installation of silt fence and hay bales.
- B. Installation of gravel tracking pad.
- C. Installation of construction barrier fence.
- D. Temporary seeding.
- E. Dust control.

#### 1.03 RELATED SECTIONS

- A. Section 2300 – Earthwork

#### 1.04 REGULATORY REQUIREMENTS

- A. All work shall comply with the requirements of the County Soil Conservation District and Standards for Soil Erosion and Sediment Control in New Jersey.

#### 1.05 PRODUCT HANDLING

- A. Protection
  - 1. Use all means necessary to protect the materials of this Section before, during and after installation and to protect the installed work of others.
- B. Replacements
  - 1. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Engineer and at no additional cost.

### PART 2 – PRODUCTS

#### 2.01 MATERIALS

- A. Seed: Temporary seed shall be annual ryegrass.  
Permanent seed shall be as specified in Section 2900-Landscaping.
- B. Mulch: Mulch shall be salt hay or small grain straw.
- C. Mulch Binder: Shall be emulsified asphalt or cutback asphalt.

- D. Tracking Pad: Road filter pads shall be washed gravel or crushed stone, 2 ½" in size.
- E. Filter Fabric Fence: Filter fabric fence shall be "Envirofence" with included posts as supplied by Cedar Hill, Inc. Somerset, New Jersey, or an approved equal.
- F. Hay or straw bales shall conform to NJDOTSS Section 919.13 and shall be bound with wire or baling twine. The twine shall be polypropylene that has a knot strength of 170 pounds and straight break strength of 300 pounds, minimum.
- G. Water for dust control shall be water with mineral content not exceeding potable water standards.
- H. Silt fence may be commercially available silt fence systems, consisting of synthetic geotextile fabrics and hardwood stakes. The height of the fence shall be a minimum of two feet and the fabric shall be wide enough to allow for a minimum embedment in the ground of one foot of fabric. Sections shall be joined in such a manner that the fence shall function as a continuous unit.
- I. Stakes for securing bales may either be steel or wood and shall conform to the Plans.
- J. Miscellaneous materials shall conform to NJDOTSS sections 909.09 and 909.11
- K. All other materials shall conform to the Plans as indicated on the details for Soil Erosion and Sediment Control and the NJDOT SS Supplemental Specifications, Section 111.

## PART 3 – EXECUTION

### 3.01 GENERAL

- A. The Engineer shall have the authority to limit the surface area of erodible earth material exposed and to direct the Contractor to provide immediate permanent or temporary soil erosion or sediment control measures to prevent contamination of adjacent watercourses and wetlands. Such work may involve the construction of temporary berms, dikes, dams, sediment basins, pipes, slope drains and use of temporary mulches, mats, seeding or other control devices or methods as necessary to control erosion.

### 3.02 INSTALLATION

- A. All sediment and erosion control practices shall be installed prior to any soil disturbance in their proper sequence and maintained until permanent protection is established.
- B. Any disturbed areas that will be left exposed more than thirty days and not subject to construction traffic shall immediately receive a temporary seeding.
- C. Immediately following initial disturbance or rough grading, all critical areas subject to erosion (i.e. steep slopes) shall receive a temporary seeding in combination with straw mulch or a suitable equivalent at a rate of 2 tons per acre according to State standards.
- D. All silt fences and construction barrier fencing shall be in place prior to grading operations and installation of utilities.
- E. All silt fences shall be left in place until construction is completed or areas are stabilized.



- F. All disturbed areas shall be limed and fertilized prior to both temporary and permanent seeding. If temporary seeding occurs during winter months, no lime and fertilizer is required.
- G. Disturbed areas including road banks shall be maintained in a rough graded condition and temporarily seeded and/or mulched until proper weather conditions exist for establishment of permanent vegetative cover.
- H. All soil to be stockpiled for a period of greater than thirty days shall be temporarily seeded and protected by a berm at the base of the pile, if necessary.
- I. Temporary Seeding:
  - 1. Lime 2 tons per acre ground limestone.
  - 2. Fertilizer 600 pounds per acre 10-20-10.
  - 3. Seed 2 pounds per 1000 sf of annual ryegrass.
  - 4. Hay 115 pounds per 1000 sf.
- J. Permanent seeding shall be as specified in Section 02900.
- K. All areas disturbed by on-site grading on which permanent or semi-permanent seeding (after October 15) or temporary seeding (after November 15) cannot be made, shall be treated by mulching at the rate of 70-90 pounds per square feet.
- L. Inspection of all soil erosion control measures shall be frequent and repair or replacement shall be made promptly as needed.
- M. To prevent blowing and movement of dust from exposed dry soil surfaces, when ordered by the Engineer, the Contractor shall spray water on the exposed areas in quantity as required.

END OF SECTION 021000

## SECTION 022300 - SITE CLEARING

### PART 1 - GENERAL

### PART 2 - RELATED DOCUMENTS

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

### 2.2 SUMMARY

- A. This Section includes the following:
  - 1. Protecting existing trees and vegetation to remain.
  - 2. Removing trees and other vegetation.
  - 3. Clearing and grubbing.
  - 4. Topsoil stripping.
  - 5. Removing above-grade site improvements.
  - 6. Disconnecting, capping or sealing, and abandoning site utilities in place.
  - 7. Disconnecting, capping or sealing, and removing site utilities.
- B. Related Sections include the following:
  - 1. Division 1 Section "Construction Facilities and Temporary Controls" for temporary utilities, temporary construction and support facilities, temporary security and protection facilities, and environmental protection measures during site operations.
  - 2. Division 2 Section "Tree Protection and Trimming" for protecting trees remaining on-site that are affected by site operations.
  - 3. Division 2 Section "Earthwork" for soil materials, excavating, backfilling, and site grading.
  - 4. Division 2 Section "Landscaping" for finish grading, including placing and preparing topsoil for lawns and planting.

### 2.3 MATERIALS OWNERSHIP

- A. Except for materials indicated to be stockpiled or to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from the site.

### 2.4 SUBMITTALS

- A. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.

### 2.5 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
  - 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing indicated removal and alteration work on property adjoining Owner's property will be obtained by Owner before award of Contract.
- C. Salvageable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.
- D. Notify utility locator service for area where Project is located before site clearing.

### PART 3 - PRODUCTS

#### 3.1 SOIL MATERIALS

- A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 2 Section "Earthwork."
  - 1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

### PART 4 - EXECUTION

#### 4.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly flag trees and vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.
  - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

#### 4.2 TREE PROTECTION

- A. Erect and maintain a temporary fence around drip line of individual trees or around perimeter drip line of groups of trees to remain. Remove fence when construction is complete.
  - 1. Do not store construction materials, debris, or excavated material within drip line of remaining trees.
  - 2. Do not permit vehicles, equipment, or foot traffic within drip line of remaining trees.

- B. Do not excavate within drip line of trees, unless otherwise indicated.
- C. Where excavation for new construction is required within drip line of trees, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
  - 1. Cover exposed roots with burlap and water regularly.
  - 2. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.
  - 3. Coat cut faces of roots more than 1-1/2 inches (38 mm) in diameter with an emulsified asphalt or other approved coating formulated for use on damaged plant tissues.
  - 4. Cover exposed roots with wet burlap to prevent roots from drying out. Backfill with soil as soon as possible.
- D. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by Architect.
  - 1. Employ a qualified arborist, licensed in jurisdiction where Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.
  - 2. Replace trees that cannot be repaired and restored to full-growth status, as determined by the qualified arborist.

#### 4.3 UTILITIES

- A. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
  - 1. Owner will arrange to shut off indicated utilities when requested by Contractor.
  - 2. Arrange to shut off indicated utilities with utility companies.
- B. Existing Utilities: 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 Architect not less than two days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Architect's written permission.
- C. Excavate for and remove underground utilities indicated to be removed.

#### 4.4 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
  - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
  - 2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
  - 3. Completely remove stumps, roots, obstructions, and debris extending to a depth of 18 inches (450 mm) below exposed subgrade.
  - 4. Use only hand methods for grubbing within drip line of remaining trees.

- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.

- 1. Place fill material in horizontal layers not exceeding 6-inch (150-mm) loose depth, and compact each layer to a density equal to adjacent original ground.

#### 4.5 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
  - 1. Strip surface soil of unsuitable topsoil, including trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
  - 1. Limit height of topsoil stockpiles to 72 inches (1800 mm).
  - 2. Do not stockpile topsoil within drip line of remaining trees.
  - 3. Dispose of excess topsoil as specified for waste material disposal.

#### 4.6 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
  - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.

#### 4.7 DISPOSAL

- A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials, including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 02230

## SECTION 022400 - DEWATERING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes construction dewatering.
- B. Related Sections include the following:
  - 1. Division 2 Section "Earthwork" for excavating, backfilling, and site grading.

#### 1.3 PERFORMANCE REQUIREMENTS

- A. Dewatering Performance: Design, provide, test, operate, monitor, and maintain a dewatering system of sufficient scope, size, and capacity to control ground-water flow into excavations and permit construction to proceed on dry, stable subgrades.
  - 1. Work includes removing dewatering system when no longer needed.
  - 2. Maintain dewatering operations to ensure erosion is controlled, stability of excavations and constructed slopes is maintained, and flooding of excavation and damage to structures are prevented.
  - 3. Prevent surface water from entering excavations by grading, dikes, or other means.
  - 4. Accomplish dewatering without damaging existing buildings adjacent to excavation.

#### 1.4 SUBMITTALS

- A. Shop Drawings: For dewatering system. Show arrangement, locations, and details of wells and well points; locations of headers and discharge lines; and means of discharge and disposal of water.
  - 1. Include layouts of piezometers and flow-measuring devices for monitoring performance of dewatering system.
  - 2. Include a written report outlining control procedures to be adopted if dewatering problems arise.
  - 3. Include Shop Drawings signed and sealed by the qualified professional engineer responsible for their preparation.
- B. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

- C. Photographs or videotape, sufficiently detailed, of existing conditions of adjoining construction and site improvements that might be misconstrued as damage caused by dewatering operations.
- D. Record drawings at Project closeout identifying and locating capped utilities and other subsurface structural, electrical, or mechanical conditions.
- E. Field Test Reports: Before starting excavation, submit test results and computations demonstrating that dewatering system is capable of meeting performance requirements.

## 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer to assume engineering responsibility and perform dewatering who has specialized in installing dewatering systems similar to those required for this Project and with a record of successful in-service performance.
- B. Regulatory Requirements: Comply with water disposal requirements of authorities having jurisdiction.

## 1.6 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by the Owner or others unless permitted in writing by the Architect and then only after arranging to provide temporary utility services according to requirements indicated.
- B. Survey adjacent structures and improvements, employing a qualified professional engineer or surveyor, establishing exact elevations at fixed points to act as benchmarks. Clearly identify benchmarks and record existing elevations.
  - 1. During dewatering, resurvey benchmarks weekly, maintaining an accurate log of surveyed elevations for comparison with original elevations. Promptly notify Architect if changes in elevations occur or if cracks, sags, or other damage is evident in adjacent construction.

## PART 2 - PRODUCTS (Not Applicable)

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
  - 1. Prevent surface water and subsurface or ground water from entering excavations, from ponding on prepared subgrades, and from flooding site and surrounding area.
  - 2. Protect subgrades and foundation soils from softening and damage by rain or water accumulation.

- B. Install dewatering system to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

### 3.2 DEWATERING

- A. Install dewatering system utilizing wells, well points, or similar methods complete with pump equipment, standby power and pumps, filter material gradation, valves, appurtenances, water disposal, and surface-water controls.
- B. Before excavation below ground-water level, place system into operation to lower water to specified levels and then operate it continuously until drains, sewers, and structures have been constructed and fill materials have been placed, or until dewatering is no longer required.
- C. Provide an adequate system to lower and control ground water to permit excavation, construction of structures, and placement of fill materials on dry subgrades. Install sufficient dewatering equipment to drain water-bearing strata above and below bottom of foundations, drains, sewers, and other excavations.
  - 1. Do not permit open-sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability.
- D. Dispose of water removed from excavations in a manner to avoid endangering public health, property, and portions of work under construction or completed. Dispose of water in a manner to avoid inconvenience to others. Provide sumps, sedimentation tanks, and other flow-control devices as required by authorities having jurisdiction.
- E. Provide standby equipment on-site, installed and available for immediate operation, to maintain dewatering on a continuous basis if any part of system becomes inadequate or fails. If dewatering requirements are not satisfied due to inadequacy or failure of dewatering system, restore damaged structures and foundation soils at no additional expense to the Owner.
- F. Damages: Promptly repair damages to adjacent facilities caused by dewatering operations.

### 3.3 OBSERVATION WELLS

- A. Provide, take measurements, and maintain at least the minimum number of observation wells or piezometers recommended by the engineer who prepared Shop Drawings as required in Paragraph 1.4 above.
- B. Observe and record daily elevation of ground water and piezometric water levels in observation wells.
- C. Repair or replace, within 24 hours, observation wells that become inactive, damaged, or destroyed. Suspend construction activities in areas where observation wells are not functioning properly until reliable observations can be made. Add or remove water from observation-well risers to demonstrate that observation wells are functioning properly.



1. Fill observation wells, remove piezometers, and fill holes when dewatering is completed.

END OF SECTION 022400

## SECTION 023000 - EARTHWORK

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Preparing subgrades for lawns, and plantings.
  - 2. Excavating and backfilling for buildings and structures.
  - 3. Subsurface drainage backfill for walls and trenches.
  - 4. Excavating and backfilling trenches within building lines.
- B. Related Sections include the following:
  - 1. Division 2 Section "Site Clearing" for site stripping, grubbing, removing topsoil, and protecting trees to remain.
  - 2. Division 2 Section "Dewatering" for lowering and disposing of ground water during construction.
  - 3. Division 2 Section "Landscaping" for finish grading, including placing and preparing topsoil for lawns and plantings.

#### 1.3 DEFINITIONS

- A. Backfill: Soil materials used to fill an excavation.
- B. Base Course: Layer placed between the subbase course and asphalt paving.
- C. Bedding Course: Layer placed over the excavated subgrade in a trench before laying pipe.
- D. Borrow: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Drainage Course: Layer supporting slab-on-grade used to minimize capillary flow of pore water.
- F. Excavation: Removal of material encountered above subgrade elevations.
  - 1. Additional Excavation: Excavation below subgrade elevations as directed by Architect. Additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
  - 2. Bulk Excavation: Excavations more than 10 feet (3 m) in width and pits more than 30 feet (9 m) in either length or width.
  - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.
- G. Fill: Soil materials used to raise existing grades.

- H. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material exceeding 1 cu. yd. (0.76 cu. m) for bulk excavation or 3/4 cu. yd. (0.57 cu. m) for footing, trench, and pit excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:
- I. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- J. Subbase Course: Layer placed between the subgrade and base course for asphalt paving, or layer placed between the subgrade and a concrete pavement or walk.
- K. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- L. Utilities include on-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

#### 1.4 SUBMITTALS

- A. Product Data: For the following:
  - 1. Each type of plastic warning tape.
  - 2. Drainage fabric.
- B. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
  - 1. Classification according to ASTM D 2487 of each on-site or borrow soil material proposed for fill and backfill.

#### 1.5 QUALITY ASSURANCE

- A. Geotechnical Testing Agency Qualifications: An independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock-definition testing, as documented according to ASTM D 3740 and ASTM E 548.
- B. Preexcavation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

#### 1.6 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Architect and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify Architect not less than two days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Architect's written permission.
  - 3. Contact utility locator service for area where Project is located before excavating.

- B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.

## PART 2 - PRODUCTS

### 2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: ASTM D 2487 soil classification groups GW, GP, GM, SW, SP, and SM, or a combination of these group symbols; free of rock or gravel larger than 3 inches (75 mm) in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils: ASTM D 2487 soil classification groups GC, SC, ML, MH, CL, CH, OL, OH, and PT, or a combination of these group symbols.
- D. Backfill and Fill: Satisfactory soil materials.
- E. Subbase: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch (38-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.
- F. Base: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent passing a 1-1/2-inch (38-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
- G. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch (38-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.
- H. Bedding: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch (25-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
- I. Drainage Fill: Washed, narrowly graded mixture of crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch (38-mm) sieve and 0 to 5 percent passing a No. 8 (2.36-mm) sieve.
- J. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch (25-mm) sieve and 0 to 5 percent passing a No. 4 (4.75-mm) sieve.
- K. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

### 2.2 ACCESSORIES

- A. Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches (150 mm) wide and 4 mils (0.1 mm) thick, continuously inscribed with a description of the utility; colored as follows:
  - 1. Red: Electric.

2. Yellow: Gas, oil, steam, and dangerous materials.
  3. Orange: Telephone and other communications.
  4. Blue: Water systems.
  5. Green: Sewer systems.
- B. Drainage Fabric: Nonwoven geotextile, specifically manufactured as a drainage geotextile; made from polyolefins, polyesters, or polyamides; and with the following minimum properties determined according to ASTM D 4759 and referenced standard test methods:
1. Grab Tensile Strength: 110 lbf (490 N); ASTM D 4632.
  2. Tear Strength: 40 lbf (178 N); ASTM D 4533.
  3. Puncture Resistance: 50 lbf (222 N); ASTM D 4833.
  4. Water Flow Rate: 150 gpm per sq. ft. (100 L/s per sq. m); ASTM D 4491.
  5. Apparent Opening Size: No. 50 (0.3 mm); ASTM D 4751.

### PART 3 - EXECUTION

#### 3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Protect subgrades and foundation soils against freezing temperatures or frost. Provide protective insulating materials as necessary.
- C. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

#### 3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
  1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
  2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

#### 3.3 EXPLOSIVES

- A. Explosives: Do not use explosives.

#### 3.4 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavation to subgrade elevations regardless of the character of surface and subsurface conditions encountered, including rock, soil materials, and obstructions.

1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
2. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; together with soil, boulders, and other materials not classified as rock or unauthorized excavation.
  - a. Intermittent drilling; blasting, if permitted; ram hammering; or ripping of material not classified as rock excavation is earth excavation.
3. Rock excavation includes removal and disposal of rock.

### 3.5 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 3 inches (75 mm). Extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
  1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
  2. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch (25 mm). Do not disturb bottom of excavations intended for bearing surface.

### 3.6 APPROVAL OF SUBGRADE

- A. Notify Architect when excavations have reached required subgrade.
- B. If Architect determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
  1. Additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
- C. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Architect.

### 3.7 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill may be used when approved by Architect.
  1. Fill unauthorized excavations under other construction or utility pipe as directed by Architect.
- B. Where indicated widths of utility trenches are exceeded, provide stronger pipe, or special installation procedures, as required by the Engineer.

### 3.8 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow materials and satisfactory excavated soil materials. Stockpile soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.

- 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

### 3.9 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
  - 1. Construction below finish grade including, where applicable, dampproofing, waterproofing, and perimeter insulation.
  - 2. Surveying locations of underground utilities for record documents.
  - 3. Inspecting and testing underground utilities.
  - 4. Removing concrete formwork.
  - 5. Removing trash and debris.
  - 6. Removing temporary shoring and bracing, and sheeting.
  - 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Preparation: Remove vegetation, topsoil, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface before placing fills.
- C. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- D. Place and compact fill material in layers to required elevations as follows:
  - 1. Under grass and planted areas, use satisfactory soil material.
  - 2. Under walks and pavements, use satisfactory soil material.
  - 3. Under steps and ramps, use engineered fill.
  - 4. Under building slabs, use engineered fill.
  - 5. Under footings and foundations, use engineered fill.

### 3.10 MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer before compaction to within 2 percent of optimum moisture content.
  - 1. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
  - 2. Remove and replace, or scarify and air-dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

### 3.11 COMPACTION OF BACKFILLS AND FILLS

- A. Place backfill and fill materials in layers not more than 12 inches (300 mm) in loose depth for material compacted by heavy compaction equipment, and not more than 6 inches (150 mm) in loose depth for material compacted by hand-operated tampers.

- B. Place backfill and fill materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:
  - 1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches (300 mm) of existing subgrade and each layer of backfill or fill material at 95 percent.
  - 2. Under walkways, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill material at 95 percent.
  - 3. Under lawn or unpaved areas, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill material at 90 percent.

### 3.12 GRADING

- A. General: Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
  - 1. Provide a smooth transition between adjacent existing grades and new grades.
  - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
  - 1. Lawn or Unpaved Areas: Plus or minus 1 inch (25 mm).
  - 2. Walks: Plus or minus 1 inch (25 mm).
  - 3. Pavements: Plus or minus 1/2 inch (13 mm).
- C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch (13 mm) when tested with a 10-foot (3-m) straightedge.

### 3.13 SUBSURFACE DRAINAGE

- A. Subsurface Drain: Place a layer of drainage fabric around perimeter of drainage trench as indicated. Place a 6-inch (150-mm) course of filter material on drainage fabric to support drainage pipe. Encase drainage pipe in a minimum of 6 inches (300 mm) of filter material and wrap in drainage fabric, overlapping sides and ends at least 6 inches (150 mm).
  - 1. Compact each course of filter material to 95 percent of maximum dry unit weight according to ASTM D 698.
- B. Drainage Backfill: Place and compact filter material over subsurface drain, in width indicated, to within 12 inches (300 mm) of final subgrade. Overlay drainage backfill with one layer of drainage fabric, overlapping sides and ends at least 6 inches (150 mm).
  - 1. Compact each course of filter material to 95 percent of maximum dry density according to ASTM D 698.
  - 2. Place and compact impervious fill material over drainage backfill to final subgrade.

### 3.14 SUBBASE AND BASE COURSES



- A. Under pavements and walks, place subbase course on prepared subgrade and as follows:
1. Place base course material over subbase.
  2. Compact subbase and base courses at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.
  3. Shape subbase and base to required crown elevations and cross-slope grades.
  4. When thickness of compacted subbase or base course is 6 inches (150 mm) or less, place materials in a single layer.
  5. When thickness of compacted subbase or base course exceeds 6 inches (150 mm), place materials in equal layers, with no layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick when compacted.

### 3.15 DRAINAGE COURSE

- A. Under slabs-on-grade, place drainage course on prepared subgrade and as follows:
1. Compact drainage course to required cross sections and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.
  2. When compacted thickness of drainage course is 6 inches (150 mm) or less, place materials in a single layer.
  3. When compacted thickness of drainage course exceeds 6 inches (150 mm), place materials in equal layers, with no layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick when compacted.

### 3.16 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified independent geotechnical engineering testing agency to perform field quality control testing.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Architect.
- D. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 2000 sq. ft. (186 sq. m) or less of paved area or building slab, but in no case fewer than three tests.
  2. Foundation Wall Backfill: At each compacted backfill layer, at least one test for each 100 feet (30 m) or less of wall length, but no fewer than two tests.
  3. Trench Backfill: At each compacted initial and final backfill layer, at least one test for each 150 feet (46 m) or less of trench length, but no fewer than two tests.

- E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

### 3.17 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
  - 1. Scarify or remove and replace soil material to depth as directed by Architect; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
  - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.

### 3.18 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION 023000

## SECTION 029000 - LANDSCAPING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Trees.
  - 2. Shrubs.
  - 3. Ground covers.
  - 4. Plants.
  - 5. Lawns.
  - 6. Topsoil and soil amendments.
  - 7. Fertilizers and mulches.
  - 8. Stakes and guys.
  - 9. Landscape edgings.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
  - 1. Division 2 Section "Site Clearing" for protection of existing trees and planting, topsoil stripping and stockpiling, and site clearing.
  - 2. Division 2 Section "Earthwork" for excavation, filling, rough grading, and subsurface aggregate drainage and drainage backfill.

#### 1.3 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product certificates signed by manufacturers certifying that their products comply with specified requirements.
  - 1. Manufacturer's certified analysis for standard products.
  - 2. Analysis for other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
  - 3. Label data substantiating that plants, trees, shrubs, and planting materials comply with specified requirements.
- C. Certification of grass seed from seed vendor for each grass-seed mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

1. Certification of each seed mixture for sod, identifying sod source, including name and telephone number of supplier.
- D. Qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and address of architects and owners, and other information specified.
- E. Material test reports from qualified independent testing agency indicating and interpreting test results relative to compliance of the following materials with requirements indicated.
  1. Analysis of existing surface soil.
  2. Analysis of imported topsoil.
- F. Planting schedule indicating anticipated dates and locations for each type of planting.

#### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed landscaping work similar in material, design, and extent to that indicated for this Project and with a record of successful landscape establishment.
  1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on the Project site during times that landscaping is in progress.
- B. Testing Agency Qualifications: To qualify for acceptance, an independent testing agency must demonstrate to Architect's satisfaction, based on evaluation of agency-submitted criteria conforming to ASTM E 699, that it has the experience and capability to satisfactorily conduct the testing indicated without delaying the Work.
- C. Provide quality, size, genus, species, and variety of trees and shrubs indicated, complying with applicable requirements of ANSI Z60.1 "American Standard for Nursery Stock."
  1. Selection of trees and shrubs purchased under allowances will be made by Architect, who will tag stock at their place of growth before they are prepared for transplanting.
- D. Topsoil Analysis: Furnish a soil analysis made by a qualified independent soil-testing agency stating percentages of organic matter, inorganic matter (silt, clay, and sand), deleterious material, pH, and mineral and plant-nutrient content of topsoil.
  1. Report suitability of topsoil for growth of applicable planting material. State recommended quantities of nitrogen, phosphorus, and potash nutrients and any limestone, aluminum sulfate, or other soil amendments to be added to produce a satisfactory topsoil.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery and while stored at site.
- B. Seed: Deliver seed in original sealed, labeled, and undamaged containers.

- C. Sod: Harvest, deliver, store, and handle sod according to the requirements of the American Sod Producers Association's (ASPA) "Specifications for Turfgrass Sod Materials and Transplanting/Installing."
- D. Trees and Shrubs: Deliver freshly dug trees and shrubs. Do not prune before delivery, except as approved by Architect. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy natural shape. Provide protective covering during delivery. Do not drop trees and shrubs during delivery.
  - 1. Immediately after digging bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.
- E. Handle balled and burlapped stock by the root ball.
- F. Deliver trees, shrubs, ground covers, and plants after preparations for planting have been completed and install immediately. If planting is delayed more than 6 hours after delivery, set planting materials in shade, protect from weather and mechanical damage, and keep roots moist.
  - 1. Heel-in bare-root stock. Soak roots in water for 2 hours if dried out.
  - 2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
  - 3. Do not remove container-grown stock from containers before time of planting.
  - 4. Water root systems of trees and shrubs stored on site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.

#### 1.6 PROJECT CONDITIONS

- A. Utilities: Determine location of above grade and underground utilities and perform work in a manner which will avoid damage. Hand excavate, as required. Maintain grade stakes until removal is mutually agreed upon by parties concerned.
- B. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Architect before planting.

#### 1.7 COORDINATION AND SCHEDULING

- A. Coordinate installation of planting materials during normal planting seasons for each type of plant material required.

#### 1.8 WARRANTY

- A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.
- B. Special Warranty: Warrant the following living planting materials for a period of one year after date of Substantial Completion, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner, abnormal weather conditions unusual for warranty period, or incidents that are beyond Contractor's control.
  - 1. Trees.
  - 2. Shrubs.

3. Ground covers.
  4. Plants.
- C. Remove and replace dead planting materials immediately unless required to plant in the succeeding planting season.
  - D. Replace planting materials that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
  - E. A limit of one replacement of each plant material will be required, except for losses or replacements due to failure to comply with requirements.

#### 1.9 TREE AND SHRUB MAINTENANCE

- A. Maintain trees and shrubs by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, tightening and repairing stakes and guy supports, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray as required to keep trees and shrubs free of insects and disease. Restore or replace damaged tree wrappings. Maintain trees and shrubs for the following period:

1. Maintenance Period: 12 months following Substantial Completion.

#### 1.10 GROUND COVER AND PLANT MAINTENANCE

- A. Maintain ground cover and plants by watering, weeding, fertilizing, and other operations as required to establish healthy, viable plantings for the following period:

1. Maintenance Period: 6 months following Substantial Completion.

#### 1.11 LAWN MAINTENANCE

- A. Begin maintenance of lawns immediately after each area is planted and continue until acceptable lawn is established, but for not less than the following periods:

1. Seeded Lawns: 60 days after date of Substantial Completion.

- a. When full maintenance period has not elapsed before end of planting season, or if lawn is not fully established at that time, continue maintenance during next planting season.

2. Sodded Lawns: 30 days after date of Substantial Completion.

- B. Maintain and establish lawns by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and mulch to produce a uniformly smooth lawn.

- C. Watering: Provide and maintain temporary piping, hoses, and lawn-watering equipment to convey water from sources and to keep lawns uniformly moist to a depth of 4 inches (100 mm).
  - 1. Water lawn at the minimum rate of 1 inch (25 mm) per week.
- D. Mow lawns as soon as there is enough top growth to cut with mower set at specified height for principal species planted. Repeat mowing as required to maintain specified height without cutting more than 40 percent of the grass height. Remove no more than 40 percent of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet.
- E. Postfertilization: Apply fertilizer to lawn after first mowing and when grass is dry.
  - 1. Use fertilizer that will provide actual nitrogen of at least 1 lb per 1000 sq. ft. (0.5 kg per 100 sq. m) of lawn area.

## PART 2 - PRODUCTS

### 2.1 TREE AND SHRUB MATERIAL

- A. General: Furnish nursery-grown trees and shrubs conforming to ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully-branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Grade: Provide trees and shrubs of sizes and grades conforming to ANSI Z60.1 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to Architect, with a proportionate increase in size of roots or balls.
- C. Label each tree and shrub with securely attached, waterproof tag bearing legible designation of botanical and common name.
- D. Label at least 1 tree and 1 shrub of each variety and caliper with a securely attached, waterproof tag bearing legible designation of botanical and common name.

### 2.2 SHADE AND FLOWERING TREES

- A. Shade Trees: Single-stem trees with straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, conforming to ANSI Z60.1 for type of trees required.
  - 1. Branching Height: 1/2 of tree height.
- B. Small Trees: Small upright or spreading type, branched or pruned naturally according to species and type, and with relationship of caliper, height, and branching recommended by ANSI Z60.1, and stem form as follows:
  - 1. Form: Multistem, clump, with 2 or more main stems.
- C. Provide balled and burlapped trees except where bare-root trees are indicated.
  - 1. Container-grown trees will be acceptable in lieu of balled and burlapped trees subject to meeting ANSI Z60.1 limitations for container stock.

## 2.3 DECIDUOUS SHRUBS

- A. Form and Size: Deciduous shrubs with not less than the minimum number of canes required by and measured according to ANSI Z60.1 for type, shape, and height of shrub.
- B. Provide balled and burlapped deciduous shrubs except where bare-root deciduous shrubs are indicated.
  - 1. Container-grown deciduous shrubs will be acceptable in lieu of balled and burlapped deciduous shrubs subject to meeting ANSI Z60.1 limitations for container stock.

## 2.4 CONIFEROUS EVERGREENS

- A. Form and Size: Normal-quality, well-balanced, coniferous evergreens, of type, height, spread, and shape required, conforming to ANSI Z60.1.
- B. Provide balled and burlapped coniferous evergreens.
  - 1. Container-grown coniferous evergreens will be acceptable in lieu of balled and burlapped coniferous evergreens subject to meeting ANSI Z60.1 limitations for container stock.

## 2.5 BROADLEAF EVERGREENS

- A. Form and Size: Normal-quality, well-balanced, broadleaf evergreens, of type, height, spread, and shape required, conforming to ANSI Z60.1.
- B. Provide balled and burlapped broadleaf evergreens.
  - 1. Container-grown broadleaf evergreens will be acceptable in lieu of balled and burlapped broadleaf evergreens subject to meeting ANSI Z60.1 limitations for container stock.

## 2.6 GROUND COVERS AND PLANTS

- A. Provide ground covers and plants established and well rooted in removable containers or integral peat pots and with not less than the minimum number and length of runners required by ANSI Z60.1 for the pot size indicated.

## 2.7 GRASS MATERIALS

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with the Association of Official Seed Analysts' "Rules for Testing Seeds" for purity and germination tolerances.
  - 1. Seed Mixture: Provide seed of grass species and varieties, proportions by weight, and minimum percentages of purity, germination, and maximum percentage of weed seed as indicated on the plans.
- B. Sod: Certified turfgrass sod complying with ASPA specifications for machine-cut thickness, size, strength, moisture content, and mowed height, and free of weeds and undesirable native grasses. Provide viable sod of uniform density, color, and texture of the following turfgrass species, strongly rooted, and capable of vigorous growth and development when planted.



1. Species: Provide sod of grass species and varieties, proportions by weight, and minimum percentages of purity, germination, and maximum percentage of weed seed as indicated on Schedules at the end of this Section.

## 2.8 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, 4 percent organic material minimum, free of stones 1 inch (25 mm) or larger in any dimension, and other extraneous materials harmful to plant growth.
  1. Topsoil Source: Reuse surface soil stockpiled on the site. Verify suitability of surface soil to produce topsoil meeting requirements and amend when necessary. Supplement with imported topsoil when quantities are insufficient. Clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful to plant growth.

## 2.9 SOIL AMENDMENTS

- A. Lime: ASTM C 602, Class T, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent, with a minimum 99 percent passing a No. 8 (2.36 mm) sieve and a minimum 75 percent passing a No. 60 (250 micrometer) sieve.
  1. Provide lime in the form of dolomitic limestone.
- B. Aluminum Sulfate: Commercial grade, unadulterated.
- C. Sand: Clean, washed, natural or manufactured sand, free of toxic materials.
- D. Perlite: Horticultural perlite, soil amendment grade.
- E. Peat Humus: Finely divided or granular texture, with a pH range of 6 to 7.5, composed of partially decomposed moss peat (other than sphagnum), peat humus, or reed-sedge peat.
- F. Peat Humus: For acid-tolerant trees and shrubs, provide moss peat, with a pH range of 3.2 to 4.5, coarse fibrous texture, medium-divided sphagnum moss peat or reed-sedge peat.
- G. Sawdust or Ground-Bark Humus: Decomposed, nitrogen-treated, of uniform texture, free of chips, stones, sticks, soil, or toxic materials.
  1. When site treated, mix with at least 0.15 lb (2.4 kg) of ammonium nitrate or 0.25 lb (4 kg) of ammonium sulfate per cu. ft. (cu. m) of loose sawdust or ground bark.
- H. Manure: Well-rotted, unleached stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.
- I. Herbicides: EPA registered and approved, of type recommended by manufacturer.
- J. Water: Potable.

## 2.10 FERTILIZER

- A. Slow-Release Fertilizer: Granular fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
  - 1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

## 2.11 MULCHES

- A. Organic Mulch: Organic mulch, free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
  - 1. Type: Unrotted pine straw, salt hay or threshed straw.
- B. Peat Mulch: Provide peat moss in natural, shredded, or granulated form, of fine texture, with a pH range of 4 to 6 and a water-absorbing capacity of 1100 to 2000 percent.
- C. Asphalt Emulsion Tackifier: Asphalt emulsion, ASTM D 977, Grade SS-1, nontoxic and free of plant growth- or germination-inhibitors.
- D. Nonasphaltic Tackifier: Colloidal tackifier recommended by fiber-mulch manufacturer for slurry application, nontoxic and free of plant growth- or germination-inhibitors.

## 2.12 WEED-CONTROL BARRIERS

- A. Sheet Polyethylene: Black, 0.006-inch (0.15-mm) minimum thickness.

## 2.13 EROSION-CONTROL MATERIALS

- A. Blankets: Biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer's recommended steel wire staples, 6 inches (150 mm) long.
- B. Fiber Mesh: Biodegradable twisted jute or spun-coir mesh, 0.92 lb per sq. yd. (0.5 kg per sq. m) minimum, with 50 to 65 percent open area. Include manufacturer's recommended steel wire staples, 6 inches (150 mm) long.

## 2.14 STAKES AND GUYS

- A. Upright and Guy Stakes: Rough-sawn, sound, new hardwood, redwood, or pressure-preservative-treated softwood, free of knots, holes, cross grain, and other defects, 2 by 2 inches (50 by 50 mm) by length indicated, pointed at one end.
- B. Guy and Tie Wire: ASTM A 641 (ASTM A 641M), Class 1, galvanized-steel wire, 2-strand, twisted, 0.106 inch (2.7 mm) in diameter.
- C. Guy Cable: 5-strand, 3/16-inch (4.8-mm) diameter, galvanized-steel cable, with zinc-coated turn buckles, 3-inch- (75-mm-) long minimum, with two 3/8-inch- (10-mm-) galvanized eyebolts.
- D. Hose Chafing Guard: Reinforced rubber or plastic hose at least 1/2 inch (13 mm) in diameter, black, cut to lengths required to protect tree trunks from damage.
- E. Flags: Standard surveyor's plastic flagging tape, white, 6 inches (150 mm) long.

## 2.15 MISCELLANEOUS MATERIALS

- A. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's instructions.
- B. Trunk-Wrap Tape: Two layers of crinkled paper cemented together with bituminous material, 4 inches (102 mm) wide minimum, with stretch factor of 33 percent.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas to receive landscaping for compliance with requirements and for conditions affecting performance of work of this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, and secure Architect's acceptance before the start of planting work. Make minor adjustments as may be required.

### 3.3 PLANTING SOIL PREPARATION

- A. Before mixing, clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful to plant growth.
- B. Mix soil amendments and fertilizers with topsoil at rates indicated. Delay mixing fertilizer if planting does not follow placing of planting soil within a few days.
  - 1. A "Planting Soil Amendments Schedule" is included at the end of this Section.
- C. For tree pit or trench backfill, mix planting soil before backfilling and stockpile at site.
- D. For planting beds and lawns, mix planting soil either prior to planting or apply on surface of topsoil and mix thoroughly before planting.
  - 1. Mix lime with dry soil prior to mixing fertilizer. Prevent lime from contacting roots of acid-tolerant plants.

### 3.4 LAWN PLANTING PREPARATION

- A. Limit subgrade preparation to areas that will be planted in the immediate future.
- B. Loosen subgrade to a minimum depth of 4 inches (100 mm). Remove stones larger than 1-1/2 inches (38 mm) in any dimension and sticks, roots, rubbish, and other extraneous materials.

- C. Spread planting soil mixture to depth required to meet thickness, grades, and elevations shown, after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen.
  - 1. Place approximately 1/2 the thickness of planting soil mixture required. Work into top of loosened subgrade to create a transition layer and then place remainder of planting soil mixture.
  - 2. Allow for sod thickness in areas to be sodded.
- D. Preparation of Unchanged Grades: Where lawns are to be planted in areas unaltered or undisturbed by excavating, grading, or surface soil stripping operations, prepare soil as follows:
  - 1. Remove and dispose of existing grass, vegetation, and turf. Do not turn over into soil being prepared for lawns.
  - 2. Till surface soil to a depth of at least **6 inches (150 mm)**. Apply required soil amendments and initial fertilizers and mix thoroughly into top **4 inches (100 mm)** of soil. Trim high areas and fill in depressions. Till soil to a homogenous mixture of fine texture.
  - 3. Clean surface soil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful to plant growth.
  - 4. Remove waste material, including grass, vegetation, and turf, and legally dispose of it off the Owner's property.
- E. Grade lawn and grass areas to a smooth, even surface with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit fine grading to areas that can be planted in the immediate future. Remove trash, debris, stones larger than **1-1/2 inches (38 mm)** in any dimension, and other objects that may interfere with planting or maintenance operations.
- F. Moisten prepared lawn areas before planting when soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- G. Restore prepared areas if eroded or otherwise disturbed after fine grading and before planting.

### 3.5 GROUND COVER AND PLANT BED PREPARATION

- A. Loosen subgrade of planting bed areas to a minimum depth of **6 inches (150 mm)**. Remove stones larger than **1-1/2 inches (38 mm)** in any dimension and sticks, roots, rubbish, and other extraneous materials.
- B. Spread planting soil mixture to depth required to meet thickness, grades, and elevations shown, after light rolling and natural settlement. Place approximately 1/2 the thickness of planting soil mixture required. Work into top of loosened subgrade to create a transition layer and then place remainder of planting soil mixture.
- C. Till soil in beds to a minimum depth of **8 inches (200 mm)** and mix with specified soil amendments and fertilizers.
- D. Remove soil to a minimum depth of **8 inches (200 mm)** and replace with prepared planting soil mixture.

### 3.6 EXCAVATION FOR TREES AND SHRUBS

- A. Pits and Trenches: Excavate with vertical sides and with bottom of excavation slightly raised at center to assist drainage. Loosen hard subsoil in bottom of excavation.
  - 1. Balled and Burlapped Trees and Shrubs: Excavate approximately 1-1/2 times as wide as ball diameter and equal to ball depth, plus the following setting layer depth:
    - a. Setting Layer: Allow **3 inches (75 mm)** of planting soil.
    - b. Setting Layer: Allow **9 inches (225 mm)** of planting soil.
- B. Dispose of subsoil removed from landscape excavations. Do not mix with planting soil or use as backfill.
- C. Obstructions: Notify Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
  - 1. Hardpan Layer: Drill **6-inch- (150-mm-)** diameter holes into free-draining strata or to a depth of **10 feet (3 m)**, whichever is less, and backfill with free-draining material.
- D. Drainage: Notify Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub pits.
- E. Fill excavations with water and allow to percolate out, before placing setting layer and positioning trees and shrubs.

### 3.7 PLANTING TREES AND SHRUBS

- A. Set balled and burlapped stock plumb and in center of pit or trench with top of ball raised above adjacent finish grades as indicated.
  - 1. Place stock on setting layer of compacted planting soil.
  - 2. Remove burlap and wire baskets from tops of balls and partially from sides, but do not remove from under balls. Remove pallets, if any, before setting. Do not use planting stock if ball is cracked or broken before or during planting operation.
  - 3. Place backfill around ball in layers, tamping to settle backfill and eliminate voids and air pockets. When pit is approximately 1/2 backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again after placing and tamping final layer of backfill.
- B. Dish and tamp top of backfill to form a **3-inch- (75-mm-)** high mound around the rim of the pit. Do not cover top of root ball with backfill.
- C. Wrap trees of **2-inch (50-mm)** caliper and larger with trunk-wrap tape. Start at base of trunk and spiral cover trunk to height of first branches. Overlap wrap, exposing half the width, and securely attach without causing girdling. Inspect tree trunks for injury, improper pruning, and insect infestation and take corrective measures required before wrapping.

### 3.8 TREE AND SHRUB PRUNING

- A. Prune, thin, and shape trees and shrubs as directed by Architect.
- B. Prune, thin, and shape trees and shrubs according to standard horticultural practice. Prune trees to retain required height and spread. Unless otherwise directed by Architect, do not cut tree leaders; remove only

injured or dead branches from flowering trees. Prune shrubs to retain natural character. Shrub sizes indicated are size after pruning.

### 3.9 TREE AND SHRUB GUYING AND STAKING

- A. Upright Staking and Tying: Stake trees of 2- through 5-inch (50- through 125-mm) caliper. Stake trees of less than 2-inch (50-mm) caliper only as required to prevent wind tip-out. Use a minimum of 2 stakes of length required to penetrate at least 18 inches (450 mm) below bottom of backfilled excavation and to extend at least 72 inches (1800 mm) above grade. Set vertical stakes and space to avoid penetrating balls or root masses. Support trees with 2 strands of tie wire encased in hose sections at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree.
- B. Guying and Staking: Guy and stake trees exceeding 14 feet (4.2 m) and more than 3-inch (75-mm) caliper unless otherwise indicated. Securely attach no fewer than 3 guys to stakes 30 inches (760 mm) long, driven to grade. Attach flags to each guy wire, 30 inches (760 mm) above finish grade.

### 3.10 PLANTING GROUND COVER AND PLANTS

- A. Space ground cover and plants as indicated.
- B. Space ground cover and plants not more than 24 inches (600 mm) apart.
- C. Dig holes large enough to allow spreading of roots, and backfill with planting soil. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.

### 3.11 SEEDING NEW LAWNS

- A. Sow seed with a spreader or a seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph (8 km/h). Evenly distribute seed by sowing equal quantities in 2 directions at right angles to each other.
  - 1. Do not use wet seed or seed that is moldy or otherwise damaged in transit or storage.
- B. Sow seed at the rates indicated on the plans.
- C. Rake seed lightly into top 1/8 inch (3 mm) of topsoil, roll lightly, and water with fine spray.
- D. Protect seeded slopes exceeding 1:4 against erosion with erosion-control blankets installed and stapled according to manufacturer's recommendations.
- E. Protect seeded slopes exceeding 1:6 against erosion with jute or coir-fiber erosion-control mesh installed and stapled according to manufacturer's recommendations.
- F. Protect seeded areas with slopes less than 1:6 against erosion by spreading straw mulch after completion of seeding operations. Spread uniformly at a minimum rate of 2 tons per acre (45 kg per 100 sq. m) to form a continuous blanket 1-1/2 inches (38 mm) loose depth over seeded areas. Spread by hand, blower, or other suitable equipment.

1. Anchor straw mulch by crimping into topsoil by suitable mechanical equipment.
  2. Anchor straw mulch by spraying with asphalt-emulsion tackifier at the rate of **10 to 13 gal. per 1000 sq. ft. (41 to 53 L per 100 sq. m)**. Take precautions to prevent damage or staining of structures or other plantings adjacent to mulched areas. Immediately clean damaged or stained areas.
- G. Protect seeded areas against hot, dry weather or drying winds by applying peat mulch within 24 hours after completion of seeding operations. Soak and scatter uniformly to a depth of **3/16 inch (4.8 mm)** thick and roll to a smooth surface.

### 3.12 HYDROSEEDING NEW LAWNS

- A. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogenous slurry suitable for hydraulic application.
1. Mix slurry with nonasphaltic tackifier.
  2. Apply slurry uniformly to all areas to be seeded in a 1-step process. Apply mulch at the minimum rate of **1500 lb per acre (16.5 kg per 100 sq. m)** dry weight but not less than the rate required to obtain specified seed-sowing rate.
  3. Apply slurry uniformly to all areas to be seeded in a 2-step process. Apply first slurry application at the minimum rate of **500 lb per acre (5.5 kg per 100 sq. m)** dry weight but not less than the rate required to obtain specified seed-sowing rate. Apply slurry cover coat of fiber mulch at a rate of **1000 lb per acre (11 kg per 100 sq. m)**.

### 3.13 SODDING NEW LAWNS

- A. Lay sod within 24 hours of stripping. Do not lay sod if dormant or if ground is frozen.
- B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Tamp and roll lightly to ensure contact with subgrade, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
1. Lay sod across angle of slopes exceeding 1:3.
  2. Anchor sod on slopes exceeding 1:6 with wood pegs spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage.
- C. Saturate sod with fine water spray within 2 hours of planting. During first week, water daily or more frequently as necessary to maintain moist soil to a minimum depth of **1-1/2 inches (38 mm)** below the sod.

### 3.14 RECONDITIONING LAWNS

- A. Recondition existing lawn areas damaged by Contractor's operations, including storage of materials or equipment and movement of vehicles. Also recondition lawn areas where settlement or washouts occur or where minor regrading is required.
- B. Remove sod and vegetation from diseased or unsatisfactory lawn areas; do not bury into soil. Remove topsoil containing foreign materials resulting from Contractor's operations, including oil drippings, fuel spills, stone, gravel, and other construction materials, and replace with new topsoil.

- C. Where substantial lawn remains, mow, dethatch, core aerate, and rake. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.
- D. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of it off the Owner's property.
- E. Till stripped, bare, and compacted areas thoroughly to a depth of 6 inches (150 mm).
- F. Apply required soil amendments and initial fertilizers and mix thoroughly into top 4 inches (100 mm) of soil. Provide new planting soil as required to fill low spots and meet new finish grades.
- G. Apply seed and protect with straw mulch as required for new lawns.
- H. Water newly planted areas and keep moist until new grass is established.

### 3.15 INSTALLATION OF MISCELLANEOUS MATERIALS

- A. Apply antidesiccant using power spray to provide an adequate film over trunks, branches, stems, twigs, and foliage.
  - 1. When deciduous trees or shrubs are moved in full-leaf, spray with antidesiccant at nursery before moving and again 2 weeks after planting.

### 3.16 CLEANUP AND PROTECTION

- A. During landscaping, keep pavements clean and work area in an orderly condition.
- B. Protect landscaping from damage due to landscape operations, operations by other contractors and trades, and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged landscape work as directed.

### 3.17 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of it off the Owner's property.

### 3.18 PLANTING SOIL AMENDMENTS SCHEDULE

- A. Lawns: Provide soil amendments based upon recommendations made by qualified professionals and recognized standards, subject to Owner's approval:

### 3.19 MAINTENANCE OF SEEDED LAWNS

- A. Contractor shall maintain seeded lawns until acceptance by the Landscape Architect and Engineer.



- B. The Contractor's responsibility for maintenance is to be continuous to the time of final acceptance of the work. It is to include, but not be limited to, reseeding of areas that have not rooted properly, watering, mowing, weeding and reworking as follows:
1. Reseeding of any bare areas.
  2. Proper and adequate watering.
  3. Refilling of rain washed gullies and rutted areas.
  4. Refertilization and lime application if recommended by soil tests and weed and pest control.
  5. Reworking and reseeding of any areas which fail to show a uniform stand or grass shall be done at the Contractor's expense with the same seed mixture applied at the rate originally used and repeated until all areas are covered with a satisfactory stand of grass.
  6. Mowing grass and weeds to a height of 1 ½" to 2" when grass attains height of 4" or when growth tends to smother new seedlings. A minimum of three mowings are to be completed before final inspection and a minimum of three mowings are to be completed after grass has been accepted.
  7. If seeded in fall and not given 60 days of maintenance, or if not considered acceptable at that time, continue maintenance the following spring until acceptable lawn is established.

END OF SECTION 029000

## SECTION 029200 - LAWNS AND GRASSES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Seeding.
  - 2. Fertilizing.
  - 3. Mulching.
- B. Related Sections include the following:
  - 1. Division 2 Section "Site Clearing" for topsoil stripping and stockpiling.
  - 2. Division 2 Section "Earthwork" for excavation, filling and backfilling, and rough grading.

#### 1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.

#### 1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
  - 1. Certification of each seed mixture for turfgrass, identifying source, including name and telephone number of supplier.

- C. Product Certificates: For soil amendments and fertilizers, signed by product manufacturer.
- D. Qualification Data: For landscape Installer.
- E. Material Test Reports: For existing surface soil and imported topsoil.
- F. Planting Schedule: Indicating anticipated planting dates for each type of planting.

#### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful lawn establishment.
  - 1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.
- B. Report suitability of topsoil for lawn growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce a satisfactory topsoil topsoil.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Seed: Deliver seed in original sealed, labeled, and undamaged containers.

#### 1.7 SCHEDULING

- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion. These periods may be extended or reduced according to prevailing weather conditions and growers' recommendations.
  - 1. Spring Planting: April 1-May 31.
  - 2. Fall Planting: August 15-October 15
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

#### 1.8 LAWN MAINTENANCE

- A. Begin maintenance immediately after each area is planted and continue until acceptable lawn is established, but for not less than the following periods:
  - 1. Seeded Lawns: 60 days from date of Substantial Completion.
    - a. When full maintenance period has not elapsed before end of planting season, or if lawn is not fully established, continue maintenance during next planting season.

- B. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth lawn.
  - 1. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch. Anchor as required to prevent displacement.
- C. Watering: Provide and maintain temporary piping, hoses, and lawn-watering equipment to convey water from sources and to keep lawn uniformly moist to a depth of 4 inches (100 mm).
  - 1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
  - 2. Water lawn at a minimum rate of 1 inch (25 mm) per week.
- D. Mow lawn as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 40 percent of grass height. Remove no more than 40 percent of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:
  - 1. Mow grass to 1 ½- 2 inches high.
- E. Lawn Post-fertilization: Apply fertilizer after initial mowing and when grass is dry.
  - 1. Use fertilizer that will provide actual nitrogen of at least 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) to lawn area.

## PART 2 - PRODUCTS

### 2.1 SEED

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances.
- B. Seed Species: Seed of grass species as follows, with not less than 95 percent germination, not less than 85 percent pure seed, and not more than 0.3 percent weed seed.

proportioned by weight as follows:

- a. 60 percent Kentucky bluegrass (*Poa pratensis*).
- b. 20 percent chewings red fescue (*Festuca rubra* variety).
- c. 20 percent perennial ryegrass (*Lolium perenne*).

### 2.2 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 5 percent organic material content; free of stones 1 inch (25 mm) or larger in any dimension and other extraneous materials harmful to plant growth.

1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
  - a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches (100 mm) deep; do not obtain from bogs or marshes.

## 2.3 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:
  1. Class: Class T, with a minimum 99 percent passing through No. 8 (2.36-mm) sieve and a minimum 75 percent passing through No. 60 (0.25-mm) sieve.
- B. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum 99 percent passing through No. 6 (3.35-mm) sieve and a maximum 10 percent passing through No. 40 (0.425-mm) sieve.
- C. Aluminum Sulfate: Commercial grade, unadulterated.
- D. Perlite: Horticultural perlite, soil amendment grade. Conforming to the National Bureau of Standards PS23.
- E. Agricultural Gypsum: Finely ground, containing a minimum of 90 percent calcium sulfate.
- F. Sand: Clean, washed, natural or manufactured, free of toxic materials.
- G. Diatomaceous Earth: Calcined, diatomaceous earth, 90 percent silica, with approximately 140 percent water absorption capacity by weight.
- H. Zeolites: Mineral clinoptilolite with at least 60 percent water absorption by weight.

## 2.4 ORGANIC SOIL AMENDMENTS

- A. Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.
- B. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

## 2.5 PLANTING ACCESSORIES

- A. Selective Herbicides: EPA registered and approved, of type recommended by manufacturer for application.

## 2.6 FERTILIZER

- A. All fertilizer shall be granular pills, packets or pellets with 35-80% of the total nitrogen in a slow release form.
- B. All fertilizers shall be uniform in composition, free flowing and suitable for application with approved equipment. Fertilizers shall be delivered to the site fully labeled according to applicable State laws and shall bear the name, trade mark, and warranty of the producer.
- C. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 4 percent nitrogen and 20 percent phosphoric acid.
- D. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- E. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
  - 1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.
- F. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
  - 1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

## 2.7 PLANTING SOIL MIX

- A. Planting Soil Mix: Mix topsoil with the following soil amendments and fertilizers in the following quantities:
  - 1. Contractor shall fertilize all lawn areas with a 10-20-10 fertilizer or equivalent at the rate specified by the manufacturer. Amendments shall be added appropriately for the types of soils on site. It is the Contractor's responsibility to have the soil acidity and a soil test conducted to establish the soil's amendments and fertilizer rates.

## 2.8 MULCHES

- A. Straw Mulch: Provide air-dry, clean, free of mildew and noxious weeds, and shall be small grained straw such as wheat or barley.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas to receive lawns and grass for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

### 3.3 LAWN PREPARATION

- A. Limit lawn subgrade preparation to areas to be planted.
- B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 4 inches (100 mm). Remove stones larger than 1-1/2 inches (38 mm) in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
  - 1. A minimum of 4" of topsoil shall be spread over prepared subgrade.
  - 2. Thoroughly blend planting soil mix off-site before spreading or spread topsoil, apply soil amendments and fertilizer on surface at a rate determined by soil test analysis, and thoroughly blend planting soil mix.
    - a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
    - b. Mix lime with dry soil before mixing fertilizer.
  - 3. Spread planting soil mix to a depth required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
- C. Unchanged Subgrades: If lawns are to be planted in areas unaltered or undisturbed by excavating, grading, or surface soil stripping operations, prepare surface soil as follows:
  - 1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
  - 2. Loosen surface soil to a depth of at least of 6 inches (150 mm). Apply soil amendments and fertilizers according to planting soil mix proportions and mix thoroughly into top 4 inches (100 mm) of soil. Till soil to a homogeneous mixture of fine texture.
  - 3. Remove stones larger than 1-1/2 inches (38 mm) in any dimension and sticks, roots, trash, and other extraneous matter.
  - 4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.
- D. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch (13 mm) of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit fine grading to areas that can be planted in the immediate future.

- E. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- F. Restore areas if eroded or otherwise disturbed after finish grading and before planting.

### 3.4 SEEDING

- A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds **5 mph (8 km/h)**. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
  - 1. Do not use wet seed or seed that is moldy or otherwise damaged.
- B. Sow seed at the rate of **4 lbs./1000 sq. ft. (1.8 kg/92.9 sq. m)** or **170 lbs./acre**.
- C. Rake seed lightly into top **1/8 inch (3 mm)** of topsoil, roll lightly, and water with fine spray.
- D. Protect seeded areas with slopes exceeding 1:4 with erosion-control blankets installed and stapled according to manufacturer's written instructions.
- E. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of **2 tons/acre (42 kg/92.9 sq. m)** to form a continuous blanket **1-1/2 inches (38 mm)** in loose depth over seeded areas. Spread by hand, blower, or other suitable equipment. Spread mulch uniformly so that 75-95% of the soil surface is covered.
  - 1. Anchor straw mulch by crimping into topsoil with suitable mechanical equipment.
- F. Protect seeded areas from hot, dry weather or drying winds by applying peat mulch within 24 hours after completing seeding operations. Soak and scatter uniformly to a depth of **3/16 inch (4.8 mm)** and roll to a smooth surface.

### 3.5 LAWN RENOVATION

- A. Renovate existing lawn.
- B. Renovate existing lawn damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.
  - 1. Reestablish lawn where settlement or washouts occur or where minor regrading is required.
- C. Remove sod and vegetation from diseased or unsatisfactory lawn areas; do not bury in soil.
- D. Remove topsoil containing foreign materials resulting from Contractor's operations, including oil drippings, fuel spills, stone, gravel, and other construction materials, and replace with new topsoil.
- E. Mow, dethatch, core aerate, and rake existing lawn.
- F. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.



- G. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.
- H. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches (150 mm).
- I. Apply soil amendments and initial fertilizers required for establishing new lawns and mix thoroughly into top 4 inches (100 mm) of existing soil. Provide new planting soil to fill low spots and meet finish grades.
- J. Apply seed and protect with straw mulch as required for new lawns.
- K. Water newly planted areas and keep moist until new lawn is established.

### 3.6 SATISFACTORY LAWNS

- A. Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. (0.92 sq. m) and bare spots not exceeding 5 by 5 inches (125 by 125 mm).
- B. Reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

### 3.7 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by lawn work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout maintenance period and remove after lawn is established.
- C. Remove erosion-control measures after grass establishment period.

END OF SECTION 02920

## SECTION 049010 - MASONRY REHABILITATION AND POINTING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Cleaning of all exposed masonry surfaces indicated to be rebuilt as indicated on drawings.
  - 2. Brick, and limited cast stone, replacement and repointing of mortar joints as indicated on drawings.
- B. Related Sections include the following:
  - 1. Section 076200 "Sheet Metal Flashing and Trim" for sheet metal flashing and weeps installed in masonry joints
  - 2. Division 7 Section 079200 -"Joint Sealants" for sealing joints in masonry at areas indicated.

#### 1.3 DEFINITIONS

- A. Very Low-Pressure Spray: Under 100 psi (690 kPa)].
- B. Low-Pressure Spray: 100 to 400 psi (690 to 2750 kPa); 4 to 6 gpm (0.25 to 0.4 L/s)
- C. Medium-Pressure Spray: 400 to 800 psi (2750 to 5510 kPa); 4 to 6 gpm (0.25 to 0.4 L/s).
- D. High-Pressure Spray: 800 to 1200 psi (5510 to 8250 kPa); 4 to 6 gpm (0.25 to 0.4 L/s)

#### 1.4 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on masonry units as follows.
  - 1. Provide test specimens as directed by Architect and representative of proposed materials and construction.
  - 2. Existing/Original Mortar: Test according to ASTM C 295, modified as agreed by testing service and Architect for Project requirements, to determine proportional composition of original ingredients, sizes and colors of aggregates, and approximate strength. Use X-ray diffraction, infrared spectroscopy, and differential thermal analysis as necessary to supplement microscopical methods and provide a detailed recommendation on the appropriate repointing mortar mixture ratio, aggregates, and strength. Carefully remove existing mortar from within joints at five locations per substrate/application (i.e. brick and stone) designated by Architect.

## 1.5 ACTION SUBMITTALS

- A. Product Data: For each product indicated. Include recommendations for application and use. Include test reports and certifications substantiating that products comply with requirements.
- B. Samples for Initial Selection: For the following:
  - 1. Pointing Mortar: Submit sets of mortar for pointing in the form of sample mortar strips, 6 inches long by 1/2 inch wide, set in aluminum or plastic channels.
    - a. Have each set contain a close color range of at least (6) six Samples of different mixes of colored sands and cements that produce a mortar matching the cleaned masonry when cured and dry.
    - b. Submit with precise measurements on ingredients, proportions, gradations, and sources of colored sands from which each Sample was made.
    - c. Produce samples utilizing sample cleaner/cleaning procedures to be employed in finished work.
  - 2. Sealant Materials: See Section 079200 "Joint Sealants."
  - 3. Replacement Brick: To match full range of existing in size, color, variation and texture
  - 4. Include similar Samples of accessories involving color selection.
  - 5. Patching Compound: Submit sets of patching compound Samples in the form of plugs (patches in drilled holes) in sample units of stone representative of the range of stone colors on the building.
- C. Samples for verification, before erecting the mockup, of the following:
  - 1. Each new exposed masonry material to be used for replacing existing materials. Include in each set of samples the full range of colors and textures to be expected in the completed Work.
    - a. Provide straps or panels containing at least 4 brick units.
  - 2. Each type of mortar for pointing and masonry rebuilding and repair in the form of sample mortar strips, 6 inches long by 1/2 inch wide, set in aluminum or plastic channels.
    - a. Include with each Sample a list of ingredients with proportions of each. Identify sources, both supplier and quarry, of each type of sand and brand names of cementitious materials and pigments if any.
    - b. Produce samples utilizing sample cleaner/cleaning procedures to be employed in finished work.
  - 3. Sealant Materials: See Section 079200 "Joint Sealants."
  - 4. Accessories: Each type of anchor, accessory, and miscellaneous support.

## 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- B. Operation outline for each phase of the work process, including protection of surrounding materials on the building and Project site during operations. Describe in detail the materials, methods, equipment, and sequence of operations to be used for each phase of the restoration work.
  - 1. If alternative materials and methods to those indicated are proposed for any phase of the restoration work, provide a written description, including evidence of successful use on

other comparable projects, and a testing program to demonstrate their effectiveness for this Project.

- C. Cleaning program indicating cleaning process, including protection of surrounding materials on building and Project site, and control of runoff during operations. Describe in detail the materials, methods, and equipment to be used.
  - 1. If materials and methods other than those indicated are proposed for cleaning work, provide a written description, including evidence of successful use on other comparable projects, and a testing program to demonstrate their effectiveness for this Project.

## 1.7 QUALITY ASSURANCE

- A. Rehabilitation Specialist: Engage an experienced masonry restoration and cleaning firm that has completed work similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance. Experience installing standard unit masonry is not sufficient experience for masonry restoration work.
  - 1. At Contractor's option, the work may be divided between 2 specialist firms: 1 for cleaning work and 1 for repair work.
  - 2. Field Supervision: Require restoration specialist firms to maintain an experienced full-time supervisor on the Project site during times that clay masonry restoration and cleaning are in progress. Supervisors shall not be changed during Project except for causes beyond the control of restoration specialist firm.
  - 3. Restoration Worker Qualifications: Persons who are experienced in restoration work of types they will be performing.
- B. Cleaning and Repair Appearance Standard: Cleaned and repaired surfaces are to have a uniform appearance as viewed from 20 feet away by Architect. Perform additional paint and stain removal, general cleaning, and spot cleaning of small areas, etc. that are noticeably different, so that surface blends smoothly into surrounding areas.
- C. Mockups: Prepare field samples for restoration methods and cleaning procedures to demonstrate aesthetic effects and qualities of materials and execution. Use materials and methods proposed for completed Work and prepare samples under same weather conditions to be expected during remainder of Work.
  - 1. Locate mockups on the building where directed by Architect.
  - 2. Masonry Repair: Prepare sample panels of size directed by Architect for each type of masonry material indicated to be patched, rebuilt, or replaced. Erect sample panels into an existing wall to demonstrate the quality of materials and workmanship. Panel to be a minimum of 4 sqft in area
  - 3. Cleaning: Prepare sample approximately 4 sq. ft. in area for each type of clay masonry and surface condition.
    - a. Test cleaners and methods on samples of adjacent materials for possible adverse reactions, unless cleaners and methods are known to have a deleterious effect.
    - b. Allow a waiting period of not less than 7 days after completion of sample cleaning to permit a study of sample panels for negative reactions.
  - 4. Repointing: Prepare 2 separate sample areas approximately 12 inches high by 12 inches wide minimum for each type of repointing required; 1 for demonstrating methods and quality of workmanship expected in removing mortar from joints and the other for demonstrating quality of materials and workmanship expected in pointing mortar joints.

5. Notify Architect 7 days in advance of the dates and times when samples will be prepared.
6. Obtain Architect's approval of mockups before starting the remainder of clay masonry restoration and cleaning.
7. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.

D. Preinstallation Conference: Conduct a preinstallation conference at Project site no later than 14 days prior to the start of the work

1. Attendees: Installer, installers job superintendent and/or foreman and representatives of manufacturers as well as sub-contractors involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including but not limited to requirements for the following:
  - a. Contract Documents.
  - b. Options.
  - c. Submittals.
  - d. Review of mockups.
  - e. Possible conflicts.
  - f. Compatibility problems.
  - g. Time schedules.
  - h. Weather limitations.
  - i. Manufacturer's written recommendations.
  - j. Warranty requirements.
  - k. Compatibility of materials.
  - l. Acceptability of substrates.
  - m. Space and access limitations.
  - n. Testing and inspecting requirements.
  - o. Required performance results.
  - p. Protection of construction and personnel.
3. Record significant conference discussions, agreements, and disagreements.
4. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Carefully pack, handle, and ship masonry units and accessories strapped together in suitable packs or pallets or in heavy-duty cartons.
- B. Deliver other materials to Project site in manufacturer's original and unopened containers, labeled with type and name of products and manufacturers.
- C. Store cementitious materials off the ground, under cover, and in a dry location.
- D. Store aggregates off the ground, covered and in a dry location, where grading and other required characteristics can be maintained and contamination avoided.
- E. Comply with manufacturer's written instructions for minimum and maximum temperature requirements for storage.

## 1.9 PROJECT CONDITIONS

- A. Do not repoint mortar joints or repair masonry unless air temperature is between 40 deg F and 80 deg F and will remain so for at least 48 hours after completion of Work.
- B. Cold-Weather Requirements: Comply with the following procedures for masonry repair and mortar-joint pointing:
  - 1. Comply with the Brick Industry Association (BIA) Technical Documents for Cold and Hot Weather Construction, current edition/publication.
  - 2. When air temperature is below 40 deg F (4 deg C), heat mortar ingredients, masonry repair materials, and existing masonry walls to produce temperatures between 40 and 120 deg F (4 and 49 deg C).
  - 3. When mean daily air temperature is below 40 deg F (4 deg C), provide enclosure and heat to maintain temperatures above 32 deg F (0 deg C) within the enclosure for 7 days after repair and pointing.
- C. Hot-Weather Requirements: Protect restoration work when temperature and humidity conditions produce excessive evaporation of water from mortar and patching materials. Provide artificial shade and wind breaks and use cooled materials as required. Do not apply mortar to substrates with temperatures of 90 deg F and above.
  - 1. Comply with the Brick Industry Association (BIA) Technical Documents for Cold and Hot Weather Construction, current edition/publication.
- D. Prevent grout or mortar used in repointing and repair work from staining face of surrounding masonry and other surfaces. Immediately remove grout and mortar in contact with exposed masonry and other surfaces.
- E. Protect sills, ledges, projections, etc. from mortar droppings.
- F. Immediately clean all surfaces affected by the pointing work.

## 1.10 SEQUENCING AND SCHEDULING

- A. Order replacement materials at the earliest possible date, to avoid delaying completion of the Work.
- B. Perform masonry restoration work in the following sequence:
  - 1. Inspect for open mortar joints and repair before cleaning to prevent the intrusion of water and other cleaning materials into the wall.
  - 2. Clean masonry surfaces.
  - 3. Rake out mortar from joints surrounding masonry to be replaced and from joints adjacent to masonry repairs along joints.
  - 4. Repair masonry, including replacing existing masonry with new masonry materials.
  - 5. Rake out mortar from joints to be repointed.
  - 6. Point mortar and sealant joints.
  - 7. After repairs and repointing have been completed and cured, perform a final cleaning to remove residues from this work.
  - 8. Inspect for open mortar joints and repair before cleaning to prevent the intrusion of water and other cleaning materials into the wall.
  - 9. Clean masonry surfaces.

- C. As scaffolding is removed, patch anchor holes used to attach scaffolding. Patch holes in masonry units to comply with "Masonry Unit Patching" Article. Patch holes in mortar joints to comply with "Repointing Masonry" Article.

## PART 2 - PRODUCTS

### 2.1 MASONRY MATERIALS

- A. General: Provide shapes indicated and as follows, with exposed surfaces matching finish and color of exposed faces of adjacent units:
  - 1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
  - 2. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, and lintels.
  - 3. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.
  - 4. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.
- B. Replacement Face Brick and Accessories: Provide face brick and accessories, including specially molded, ground, cut, or sawed shapes where required to complete masonry restoration work.
  - 1. Provide units with color, surface texture, size, and shape to match existing brick work and with physical properties not less than those determined from preconstruction testing of selected existing units.
    - a. For existing brickwork that exhibits a range of colors, provide brick that matches that range rather than brick that matches an individual color within that range.
- C. Water: Potable.

### 2.2 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150, Type I or Type II, white or gray or both where required for color matching of exposed mortar.
  - 1. Provide cement containing not more than 0.60 percent total alkali when tested according to ASTM C 114.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Mortar Sand: ASTM C 144 unless otherwise indicated.
  - 1. Color: Provide natural sand or ground marble, granite, or other sound stone of color necessary to produce required mortar color.
  - 2. For pointing mortar, provide sand with rounded edges.
  - 3. Match size, texture, and gradation of existing mortar sand as closely as possible. Blend several sands if necessary to achieve suitable match.

- D. Mortar Pigments: Natural and synthetic iron oxides, compounded for mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortars.
- E. Water: Potable.

## 2.3 MORTAR MIXES

- A. Measurement and Mixing: Measure cementitious materials and sand in a dry condition by volume or equivalent weight. Do not measure by shovel; use known measure. Mix materials in a clean, mechanical batch mixer.
  - 1. Mixing Pointing Mortar: Thoroughly mix cementitious materials and sand together before adding any water. Then mix again adding only enough water to produce a damp, unworkable mix that will retain its form when pressed into a ball. Maintain mortar in this dampened condition for 15 to 30 minutes. Add remaining water in small portions until mortar reaches desired consistency. Use mortar within one hour of final mixing; do not retemper or use partially hardened material.
- B. Colored Mortar: Produce mortar of color required to match existing. Do not alter specified proportions without Architect's approval.
  - 1. Mortar Pigments: Where mortar pigments are required to match existing, do not exceed a pigment-to-cement ratio of 1:10 by weight.
- C. Colored-Aggregate mortar: Produce color required by combining colored aggregates with portland cement of selected color.
- D. Do not use admixtures in mortar unless otherwise indicated.
- E. Mortar Proportions: Mix mortar materials in the following proportions:
  - 1. Portland Cement-Lime Mortar for Brick and Stone: Comply with ASTM C 270. Proportion Specification, for Types of N mortar for pointing of brick.
    - a. 1 part portland cement, 1 parts lime, and 6 parts sand
    - b. Add mortar pigments to produce mortar colors required.
    - c. Note: Mortar proportions may be adjusted based upon preconstruction testing report
  - 2. Mortar to match the existing/original, cleaned mortar finish, color and texture.
- F. Joint Sealant Installation: Prepare joints and apply sealants of type and at locations indicated to comply with applicable requirements in Division 7 Section 07920 -"Joint Sealants."
- G. Clean brick no fewer than six days after completion of pointing and sealing, using clean water and stiff-bristle fiber brushes. Do not use wire brushes, acid-type cleaning agents, cleaning agents containing caustic compounds or abrasives, or other materials or methods that could damage masonry.

## 2.4 CLEANING MATERIALS

- A. Water for Cleaning: Potable.
- B. Hot Water: Water heated to a temperature of 140 to 160 deg F.



- C. Job-Mixed Detergent Solution: Solution prepared by mixing 2 cups of tetrasodium polyphosphate, 1/2 cup of laundry detergent (Tide, All, etc.), 5 quarts of 5 percent sodium hypochlorite (bleach), and 15 quarts of warm water for each 5 gal. of solution required, or approved pre-mixed equal.

1. For use at all areas of brick repair/repointing indicated within drawings

## PART 3 - EXECUTION

### 3.1 PROTECTION

- A. Protect persons, motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm resulting from masonry restoration work.
1. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during course of restoration and cleaning work.
- B. Prevent mortar from staining face of surrounding masonry and other surfaces.
1. Cover sills, ledges, and projections to protect from mortar droppings.
  2. Keep wall area wet below rebuilding and pointing work to discourage mortar from adhering.
  3. Immediately remove mortar in contact with exposed masonry and other surfaces.
  4. Clean mortar splatters from scaffolding at end of each day.

### 3.2 BRICK REMOVAL AND REPLACEMENT

- A. Carefully remove by hand, at locations indicated, bricks that are damaged, spalled, or deteriorated or are to be reused/salvaged. Cut out full units from joint to joint and in a manner to permit replacement with full-size units without damaging surrounding masonry.
1. When removing single bricks, remove material from center of brick and work toward outside edges.
- B. Support and protect remaining masonry that surrounds removal area. Maintain flashing, reinforcement, lintels, and adjoining construction in an undamaged condition.
- C. Notify Architect of unforeseen detrimental conditions including voids, cracks, bulges, and loose units in existing masonry backup, rotted wood, rusted metal, and other deteriorated items.
- D. Clean remaining brick at edges of removal areas by removing mortar, dust, and loose particles in preparation for replacement.
- E. Replace removed brick with new brick matching existing brick, including size.
- F. Install new brick to replace removed brick. Fit replacement units into bonding and coursing pattern of existing brick. If cutting is required, use a motor-driven saw designed to cut masonry with clean, sharp, unchipped edges.
1. Maintain joint width for replacement units to match existing joints.
  2. Use setting buttons or shims to set units accurately spaced with uniform joints.
- G. Lay replacement brick with completely filled bed, head, and collar joints. Butter ends with sufficient mortar to fill head joints and shove into place. Wet both replacement and surrounding

bricks that have ASTM C 67 initial rates of absorption (suction) of more than 30 g/30 sq. in. per min. Use wetting methods that ensure that units are nearly saturated but surface is dry when laid.

1. Tool exposed mortar joints in repaired areas to match joints of surrounding existing brickwork.
2. Rake out mortar used for laying brick before mortar sets and point new mortar joints in repaired area to comply with requirements for repointing existing masonry, and at same time as repointing of surrounding area.
3. When mortar is sufficiently hard to support units, remove shims and other devices interfering with pointing of joints.

H. Install new weep vents at head joints of brick 24" on center max, at flashing course(s). Install new weep vents directly on top of flashing.

I. Lay replacement brick with completely filled bed, head, and collar joints. Butter ends with sufficient mortar to fill head joints and shove into place. Wet clay bricks that have ASTM C 67 initial rates of absorption (suction) of more than 30 g per 30 sq. in. per min. (30 g per 194 sq. cm per min.). Use wetting methods that ensure units are nearly saturated but surface dry when laid. Maintain joint width for replacement units to match existing units.

1. Tool exposed mortar joints in repaired areas to match joints of surrounding existing brickwork.
2. Rake out mortar used for laying brick before mortar sets and point new mortar joints in repaired area to comply with requirements for repointing existing masonry.

### 3.3 REPOINTING MASONRY

A. Rake out and repoint joints to the following extent:

1. All joints in areas indicated.
2. Joints indicated as sealant-filled joints.

B. Rake out joints as follows, according to procedures demonstrated in approved mockup:

1. Remove mortar from joints to depth of 2 times joint width, but not less than 3/4 inch or not less than that required to expose sound, unweathered mortar.
2. Remove mortar from masonry surfaces within raked-out joints to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove dirt and loose debris.
3. Do not spall edges of masonry units or widen joints. Replace or patch damaged masonry units as directed by Architect.
  - a. Use of power-operated grinders contingent on Architect's written approval based on submission by Contractor of a satisfactory quality-control program and demonstrated ability of operators to use tools without damaging masonry. Quality-control program shall include provisions for supervising performance.

C. Notify Architect of unforeseen detrimental conditions including voids in mortar joints, cracks, loose masonry units, rotted wood, rusted metal, and other deteriorated items.

D. Pointing with Mortar:

1. Rinse joint surfaces with water to remove dust and mortar particles. Time rinsing application so, at time of pointing, joint surfaces are damp but free of standing water. If rinse water dries, dampen joint surfaces before pointing.
2. Apply pointing mortar first to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 1/4 inch until a uniform depth is

- formed. Fully compact each layer thoroughly and allow it to become thumbprint hard before applying next layer.
3. After low areas have been filled to same depth as remaining joints, point all joints by placing mortar in layers not greater than 1/4 inch. Fully compact each layer and allow to become thumbprint hard before applying next layer. Where existing masonry units have worn or rounded edges, slightly recess finished mortar surface below face of masonry to avoid widened joint faces. Take care not to spread mortar beyond joint edges onto exposed masonry surfaces or to featheredge the mortar.
  4. When mortar is thumbprint hard, tool joints to match original appearance of joints as demonstrated in approved mockup. Remove excess mortar from edge of joint by brushing.
  5. Cure mortar by maintaining in thoroughly damp condition for at least 72 consecutive hours including weekends and holidays.
    - a. Acceptable curing methods include covering with wet burlap and plastic sheeting, periodic hand misting, and periodic mist spraying using system of pipes, mist heads, and timers.
    - b. Adjust curing methods to ensure that pointing mortar is damp throughout its depth without eroding surface mortar.
  6. Hairline cracking within the mortar or mortar separation at edge of a joint is unacceptable. Completely remove such mortar and repoint to the complete satisfaction of the Architect..
- E. Where repointing work precedes cleaning of existing masonry, allow mortar to harden at least 30 days before beginning cleaning work.

### 3.1 CLEANING MASONRY, GENERAL

- F. Proceed with cleaning in an orderly manner; work from top to bottom of each scaffold width and from one end of each elevation to the other. Work from bottom to top of the building for each scaffold drop.
- G. Use only those cleaning methods indicated for each masonry material and location.
1. Use spray equipment that provides controlled application at volume and pressure indicated, measured at spray tip. Adjust pressure and volume to ensure that cleaning methods do not damage masonry.
    - a. Equip units with pressure gages.
- H. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry surfaces.
- I. Water Application Methods: Where water application methods are indicated, comply with the following:
1. Spray Applications: Spray apply water to masonry surfaces to comply with requirements indicated for location, purpose, water temperature, pressure, volume, and equipment. Unless otherwise indicated, hold spray nozzle at least 6 inches (150 mm) from surface of masonry and apply water from side to side in overlapping bands to produce uniform coverage and an even effect.
- J. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting.

- K. Protect all non-masonry components within the wall system and at adjacent systems from damage and exposure to cleaning materials

### 3.2 CLEANING MASONRY

- A. Detergent Cleaning: Clean masonry with a detergent solution applied as follows:
  - 1. Wet masonry with cold water applied by low-pressure spray.
  - 2. Scrub masonry with detergent solution using medium-soft brushes until soil is thoroughly dislodged and can be removed by rinsing. Use small brushes to remove soil from mortar joints and crevices. Dip brush in solution often to ensure that adequate fresh detergent is used and that masonry surface remains wet.
  - 3. Rinse with cold water to remove detergent solution and soil.
    - a. Apply rinse by low-pressure spray.
  - 4. Repeat cleaning procedure above where required to produce the cleaning effect established by mockup.

### 3.3 CLEAN MASONRY AFTER POINTING WORK IS COMPLETED AND CLEANING

- B. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter; use stiff-nylon or -fiber brushes and clean water, spray applied at a low pressure.
- C. Do not use metal scrapers or brushes.
- D. Do not use acidic or alkaline cleaners.

END OF SECTION 049010

## SECTION 071326 - SELF-ADHERING SHEET WATERPROOFING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Rubberized Asphalt sheet membrane waterproofing.
  - 2. Molded sheet drainage panel.
  - 3. Insulation
- B. Related Requirements:
  - 1. Section 040910 "Masonry Rehabilitation and Pointing
  - 2. Section 076200 "Sheet Metal Flashing and Trim".
  - 3. Section 079200 "Joint Sealants".

#### 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
  - 1. Review waterproofing requirements including surface preparation, substrate condition and pretreatment, minimum curing period, forecasted weather conditions, special details and sheet flashings, installation procedures, testing and inspection procedures, and protection and repairs.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, and tested physical and performance properties of waterproofing.
  - 2. Include manufacturer's written instructions for evaluating, preparing, and treating substrate.
- B. Shop Drawings: Show **PROJECT SPECIFIC** locations and extent of waterproofing, keyed to the contract documents. Include details of substrate joints and cracks, expansion joints, sheet flashings, penetrations, inside and outside corners, tie-ins with adjoining waterproofing, and other termination conditions.
  - 1. Show locations and extent of waterproofing.

2. Include details for substrate joints and cracks, sheet flashings, penetrations, inside and outside corners, tie-ins with adjoining waterproofing, and other termination conditions.

- C. Samples: For each exposed product and for each color and texture specified, including the following products:

1. 8-by-8-inch square of waterproofing and flashing sheet.
2. 4-by-4-inch square of prefabricated drainage composite.
3. Drainage panel, 4 by 4 inches

## 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Sample Warranties: For special warranties.

## 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by waterproofing manufacturer.
- B. Mockups: Build mockups to verify selections made under Sample submittals and to set quality standards for installation.
  1. Build for each typical waterproofing installation including accessories to demonstrate surface preparation, crack and joint treatments, inside and outside corner treatments, and protection.
    - a. Size: 18"x18" (minimum)
    - b. Description: Each type of wall installation.
  2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## 1.7 FIELD CONDITIONS

- A. Environmental Limitations: Apply waterproofing within the range of ambient and substrate temperatures recommended in writing by waterproofing manufacturer. Do not apply waterproofing to a damp or wet substrate.
  1. Do not apply waterproofing in snow, rain, fog, or mist or within twenty-four (24) hours of these conditions.
- B. Maintain adequate ventilation during preparation and application of waterproofing materials.

## 1.8 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to furnish replacement waterproofing material for waterproofing that does not comply with requirements or that fails to remain watertight within specified warranty period.
  - 1. Warranty Period: Five years from date of Substantial Completion.
- B. Installer's Special Warranty: Specified form, signed by Installer, covering Work of this Section, for warranty period of two years.
  - 1. Warranty includes removing overburden and reinstalling protection board, drainage panels, insulation, and waterproofing system.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Source Limitations for Waterproofing System: Obtain waterproofing materials and prefabricated drainage composite from single source from single manufacturer.

### 2.2 SHEET MEMBRANE WATERPROOFING

- A. Sheet Membrane Waterproofing: A self-adhesive, cold-applied composite sheet consisting of a thickness of 1.4 mm (0.056 in.) of rubberized asphalt and 0.1 mm (0.004 in.) of cross-laminated, high density polyethylene film. Provide rubberized asphalt membrane covered with a release liner on adhesive side, which is removed during installation; formulated for application with primer or surface conditioner that complies with VOC limits of authorities having jurisdiction.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. **Basis of Design:** Bituthene 3000 membrane as manufactured by GCP Applied Technologies (formerly Grace).
    - b. Tremco Inc.
    - c. Henry Company
  - 2. Physical Properties:
    - a. Tensile Strength, Membrane: 325 psi minimum; ASTM D412, Die C, modified.
    - b. Ultimate Elongation: 300 percent minimum; ASTM D412, Die C, modified.
    - c. Low-Temperature Flexibility: Pass at minus 25 deg F; ASTM D1970/D1970M.
    - d. Crack Cycling: Unaffected after 100 cycles of 1/8-inch movement; ASTM C836/C836M.
    - e. Puncture Resistance: 50 lbf minimum; ASTM E154/E154M.
    - f. Water Absorption: 0.1 percent weight-gain maximum after 48-hour immersion at 70 deg F; ASTM D570.
    - g. Water Vapor Permeance: 0.1 perm maximum; ASTM E96/E96M, Water Method.
    - h. Hydrostatic-Head Resistance: 230 feet minimum; ASTM D5385.

3. Sheet Strips: Self-adhering, rubberized-asphalt strips of same material and thickness as sheet waterproofing.

## 2.3 AUXILIARY MATERIALS

- A. Furnish auxiliary materials recommended by waterproofing manufacturer for intended use and compatible with sheet waterproofing.
  1. Furnish liquid-type auxiliary materials that comply with VOC limits of authorities having jurisdiction.
- B. Primer: Liquid solvent-borne primer recommended for substrate by sheet-waterproofing material manufacturer.
  1. Bituthene Adhesive Primer B2 LVC as manufactured by GCP Applied Technologies (formerly Grace).
- C. Liquid Membrane: Elastomeric, two-component liquid, cold fluid applied, of trowel grade or low viscosity.
  1. Bituthene Liquid Membrane as manufactured by GCP Applied Technologies (formerly Grace).
- D. Metal Termination Bars: Aluminum bars, approximately 1 by 1/8 inch, predrilled at 12-inch centers.

## 2.4 MOLDED-SHEET DRAINAGE PANELS

- A. Nonwoven-Geotextile-Faced, Molded-Sheet Drainage Panel with Polymeric Film: Composite subsurface drainage panel acceptable to waterproofing manufacturer and consisting of a studded, nonbiodegradable, molded-plastic-sheet drainage core; with a nonwoven, needle-punched geotextile facing with an apparent opening size not exceeding No. 80 sieve laminated to one side of the core and a polymeric film bonded to the other side; and with a vertical flow rate through the core of 9 to 21 gpm per ft.
  1. **Basis of Design:** Hydroduct 220 as manufactured by GCP Applied Technologies (formerly Grace).
  2. Tremco Inc.
  3. Henry Company

## 2.5 INSULATION DRAINAGE PANELS

- A. Insulation: 7.5 R-value continuous insulation minimum
  1. Provide new insulation to meet or exceed existing insulation thickness and R-Value
- B. Unfaced, Wall-Insulation Type IV, Drainage Panels: Extruded-polystyrene board insulation in accordance with ASTM C578, Type IV, 40 psi (276 kPa) minimum compressive strength; unfaced; fabricated with shiplap or channel edges and with one side having grooved drainage channels.
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Owens Corning
    - b. Dupont
    - c. Carlisle Company



## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of waterproofing.
  - 1. Verify that substrate is visibly dry and within the moisture limits recommended in writing by manufacturer. Test for capillary moisture by plastic sheet method according to ASTM D4263.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Clean, prepare, and treat substrates according to manufacturer's written instructions. Provide clean, dust-free, and dry substrates for waterproofing application.
  - 1. Remove all existing waterproofing/dampproofings down to bare concrete by abrasive blasting or mechanical grinding, or both to provide a clean substrate acceptable to waterproofing manufacturer.
    - a. No water blasting is permitted
- B. Mask off adjoining surfaces not receiving waterproofing to prevent spillage and overspray affecting other construction.
- C. Remove grease, oil, bitumen, form-release agents, paints, curing compounds, and other penetrating contaminants or film-forming coatings from concrete.
- D. Remove fins, ridges, mortar, and other projections and fill honeycomb, aggregate pockets, holes, and other voids.
- E. Prepare, fill, prime, and treat joints and cracks in substrates. Remove dust and dirt from joints and cracks according to ASTM D4258.
- F. Corners: Prepare, prime, and treat inside and outside corners according to ASTM D6135.
  - 1. Install membrane strips centered over vertical inside corners. Install 3/4-inch fillets of liquid membrane on horizontal inside corners and as follows:
    - a. At footing-to-wall intersections, extend liquid membrane in each direction from corner or install membrane strip centered over corner.
- G. Prepare, treat, and seal vertical and horizontal surfaces at terminations and penetrations through waterproofing and at drains and protrusions according to ASTM D6135.

### 3.3 INSTALLATION OF SHEET MEMBRANE WATERPROOFING

- A. Where the drawings depict or state installation requirements over and above the requirements of the manufacturer, contractor shall follow the drawings.

- B. Install sheet membranes according to waterproofing manufacturer's written instructions and per recommendations in ASTM D6135.
- C. Apply primer to ALL substrates at required rate and allow it to dry. Limit priming to areas that will be covered by sheet waterproofing in same day. Reprime areas exposed for more than 24 hours.
- D. Apply and firmly adhere sheets over area to receive waterproofing. Accurately align sheets and maintain uniform 2-1/2-inch- minimum lap widths and end laps. Overlap and seal seams, and stagger end laps to ensure watertight installation. Seal ALL membrane edges, terminations and lap seams continuously with Liquid Membrane.
  - 1. When ambient and substrate temperatures range between 25 and 40 deg F, install self-adhering, modified bituminous sheets produced for low-temperature application. Do not use low-temperature sheets if ambient or substrate temperature is higher than 60 deg F.
- E. Install sheet-waterproofing and auxiliary materials to tie into adjacent waterproofing.
- F. Repair tears, voids, and lapped seams in waterproofing not complying with requirements. Slit and flatten fishmouths and blisters. Patch with sheet waterproofing extending 6 inches beyond repaired areas in all directions.
- G. Immediately install protection course with butted joints over waterproofing membrane.
  - 1. Molded-sheet drainage panels may be used in place of a separate protection course to vertical applications when approved by waterproofing manufacturer and installed immediately.

### 3.4 INSTALLATION OF MOLDED-SHEET DRAINAGE PANEL

- A. Place and secure molded-sheet drainage panels, with geotextile facing away from wall or deck substrate, according to manufacturer's written instructions. Use adhesive or another method that does not penetrate waterproofing. Lap edges and ends of geotextile to maintain continuity. Protect installed molded-sheet drainage panels during subsequent construction.

### 3.5 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a site representative qualified by waterproofing membrane manufacturer to inspect substrate conditions, surface preparation, membrane application, flashings, protection, and drainage components; and to furnish reports to Architect.
  - 1. Manufacturer shall review the installed waterproofing prior to backfill. Any inspections not arranged/coordinate by the manufacturer shall be credited back to TCNJ at the cost of \$2,000.00 per inspection.
- B. Waterproofing will be considered defective if it does not pass tests and inspections.
- C. Prepare test and inspection reports.

### 3.6 PROTECTION, REPAIR, AND CLEANING

- A. Protect waterproofing from damage and wear during remainder of construction period.

- B. Correct deficiencies in or remove waterproofing that does not comply with requirements; repair substrates, reapply waterproofing, and repair sheet flashings.
- C. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended in writing by manufacturer of affected construction.

END OF SECTION 071326

## SECTION 076200 - SHEET METAL FLASHING AND TRIM

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Formed through-wall flashings and associated weeps
- B. Related Requirements:
  - 1. Division 4 Section 049010 – "Masonry Rehabilitation and Pointer" for installation of flashings within masonry cavity walls
  - 2. Division 7 Section 071326 – "Self-Adhering Sheet Waterproofing" for self-adhering flashing membranes in conjunction with metal flashing systems
  - 3. Division 7 Section 079200 – "Joint Sealants" for field-applied sheet metal flashing and trim sealants.

#### 1.3 COORDINATION

- A. Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.
- B. Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.

#### 1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
  - 1. Meet with Owner, Architect, Installer, and installers whose work interfaces with or affects sheet metal flashing and trim including installers of air barrier membrane systems and joint sealants.
  - 2. Review construction schedule. Verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 3. Review special details and conditions of other construction that affect sheet metal flashing and trim.
  - 4. Review requirements for insurance and certificates if applicable.
  - 5. Review sheet metal flashing observation and repair procedures after flashing installation.

## 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each manufactured product and accessory.
- B. Shop Drawings (**Project Specific**): Show layouts of sheet metal flashing and trim, including plans and elevations. Shop drawings for sheet metal flashing and trim shall be keyed to the contract documents and include the following:
  - 1. Include plans, elevations, sections, and attachment details.
  - 2. Field verified dimensions of existing conditions and configurations
  - 3. Detail fabrication and installation layouts, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work.
  - 4. Include identification of material, thickness, weight, and finish for each item and location in Project.
  - 5. Include details for forming, including profiles, shapes, seams, and dimensions.
  - 6. Include details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
  - 7. Include details of termination points and assemblies.
  - 8. Include details of special conditions.
  - 9. Include details of connections to adjoining work.
  - 10. Detail formed flashing and trim at scale of not less than 6 inches per 12 inches (1:5).
- C. Samples for Initial Selection: For each type of sheet metal and accessory indicated with factory-applied finishes.
- D. Samples for Verification: For each type of exposed finish.
  - 1. Sheet Metal Flashing: 12 inches (300 mm) long by actual width of unit, including finished seam and in required profile. Include fasteners, cleats, clips, closures, and other attachments.

## 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For fabricator.
- B. Product Test Reports: For each product, for tests performed by a qualified testing agency.

## 1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For sheet metal flashing and trim, and its accessories, to include in maintenance manuals.

## 1.8 QUALITY ASSURANCE

- A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual." Conform to dimensions and profiles shown unless more stringent requirements are indicated.
- B. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.
- C. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation.
  - 1. Build mockup of the following:
    - a. Typical through-wall flashing, approximately 10 feet (3.0 m) long, including supporting construction cleats, seams, end dams attachments, air barrier system and sheet membrane flashings and accessories.
    - b. Typical aluminum edging at existing aluminum canopy
    - c. Typical aluminum edging at existing aluminum louver sill edge
  - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- B. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual" and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.
- C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

## 2.2 SHEET METALS

- A. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304, dead soft, fully annealed; with smooth, flat surface.

1. Finish: 2B (bright, cold rolled) or 2D (dull, cold rolled).

## 2.3 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. All aluminum flashings/trim to be fabricated to required profiles and dimensions for installation prior to application of finish. .
  1. All field cutting of aluminum flashing/counterflashing is to be minimized. All cut edges to be properly prepared and finish repaired at cut edge prior to installation.
- D. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## 2.4 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item
  1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
    - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
    - b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
    - c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.

2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
  3. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
- C. Solder:
1. For Stainless Steel: ASTM B 32, Grade Sn60, with acid flux of type recommended by stainless-steel sheet manufacturer.
- D. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
- E. Elastomeric Sealant: ASTM C 920, elastomeric **silicone** polymer sealant (**EJS-1**); of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- F. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.
- G. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.
- H. Bituminous Coating: Cold-applied asphalt emulsion according to ASTM D 1187.
- I. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

## 2.5 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated. Shop fabricate items where practicable. Obtain field measurements for accurate fit before shop fabrication.
1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
  2. Obtain field measurements for accurate fit before shop fabrication.
  3. Form sheet metal flashing and trim to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
  4. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
- C. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with silicone sealant. Rivet joints for additional strength.
- D. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.



- E. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA recommendations.
- F. Expansion Provisions: Where lapped or bayonet-type expansion provisions in the Work cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with elastomeric sealant concealed within joints.
- G. Conceal fasteners and expansion provisions where possible on exposed-to-view sheet metal flashing and trim, unless otherwise indicated.
- H. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
  - 1. Thickness: As recommended by SMACNA's "Architectural Sheet Metal Manual" for application but not less than thickness of metal being secured.

## 2.6 WALL SHEET METAL FABRICATIONS

- A. Through-Wall Flashing: Fabricate continuous flashings in minimum 96-inch- (2400-mm-) long, but not exceeding 12-foot- long, sections, under copings, and at shelf angles. Fabricate discontinuous lintel, sill, and similar flashings to extend 8 inches minimum beyond each side of wall openings; and form with 2-inch- high, end dams or of configuration illustrated within the project drawings. Fabricate from the following materials:
  - 1. Stainless Steel: 26 gage.
  - 2. Miter corners and transitions, and weld/solder watertight all corners, transitions, and end dams.
  - 3. Profile: As indicated within drawings
    - 1) All seams at through-wall flashing receiver inside & outside corners, transitions, etc. to be soldered continuously watertight.

## 2.7 WALL FLASHINGS ACCESSORIES

- A. Mesh Weep/Vent:
  - 1. Provide non-woven polymer mesh weep vents installed within open head joint so exterior face brick at 24" O.C. Max, or minimum two (2), at locations as indicated within drawings.
    - a. Basis of Design: CavClear Weep Vents by Archovations, Inc..
      - 1) Color: To be selected by Architect from manufacturers full range.
    - b. Install weep vents ½" back from exterior face of brick, and set directly on top of flashing.
- B. Self-Adhering Flashing (SAF) Membrane: Modified bituminous, 40-mil- (1.0-mm-) thick, self-adhering sheet consisting of 32 mils (0.8 mm) of rubberized asphalt laminated to an 8-mil- (0.2-mm-) thick, cross-laminated polyethylene film with release liner backing.

1. Provide one of the following (NOTE: SAF to be same manufacturer as self-adhering sheet waterproofing for a singular source):
  - a. GCP Perm-A-Barrier TWF Membrane
  - b. Henry Blueskin SA TWF
  - c. Tremco Incorporated, an RPM company; ExoAir 110 TWF

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, substrate, and other conditions affecting performance of the Work.
  1. Verify compliance with requirements for installation tolerances of substrates.
  2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
  3. Verify that air- or water-resistant barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
  1. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
  2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
  3. Space cleats not more than 12 inches (300 mm) apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
  4. Install exposed sheet metal flashing and trim with limited oil canning, and free of buckling and tool marks.
  5. Torch cutting of sheet metal flashing and trim is not permitted.
  6. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
  1. Coat concealed side of stainless-steel sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.

- C. Fasteners: Use fastener sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
- D. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- E. Seal lap joints as required for watertight construction.
  - 1. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."
- F. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets with solder to width of 1-1/2 inches (38 mm); however, reduce pre-tinning where pre-tinned surface would show in completed Work.
  - 1. Do not use torches for soldering.
  - 2. Heat surfaces to receive solder, and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.
  - 3. Stainless-Steel Soldering: Tin edges of uncoated sheets, using solder for stainless steel and acid flux. Promptly remove acid flux residue from metal after tinning and soldering. Comply with solder manufacturer's recommended methods for cleaning and neutralization.

### 3.3 WALL FLASHING INSTALLATION

- A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to cited sheet metal standard unless otherwise indicated. Coordinate installation of wall flashing with installation of air barrier membrane system and stone cladding reinstallation and as indicated in the project drawings.
- B. Lap Seams: Provide a continuous splice plate at all lap seams within the through-wall flashing system. Set new splice plates on top of metal through-wall flashings, centered on lap seam and bed into two (2) continuous beads of silicone sealant (EJS-1) at each side of splice.
  - 1. Splice plates to be same material and gage as flashings and same profile.
- C. All other seams in through-wall flashings to be soldered watertight.
- D. DO NOT install new joint sealants at brick cladding across top of new through-wall flashings. Seal between bottom of new through-wall flashing and stone cladding below as illustrated within the project drawings.
- E. Strip-in metal flashing with Self-adhering membrane (SAF). Apply primer to ALL substrates, unless manufacturer indicates in writing that priming will provide adverse results, at required rate and allow it to dry. Limit priming to areas that will be covered by SAF material on same day. Reprime areas exposed for more than 24 hours.
- F. Seal ALL exposed edges of SAF at seams, cuts, penetrations, and terminations with system termination mastic and/or liquid membrane.

### 3.4 ERECTION TOLERANCES

- A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

### 3.5 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.
- D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of sheet metal flashing and trim installation, remove unused materials and clean finished surfaces as recommended by sheet metal flashing and trim manufacturer. Maintain sheet metal flashing and trim in clean condition during construction.
- E. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 076200

## SECTION 079200 - JOINT SEALANTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section includes joint sealants for the following applications, including those specified by reference to this Section:
  - 1. Silicone joint sealants in the following vertical surfaces and horizontal nontraffic surfaces:
    - a. All metal to metal through-wall flashing lap joints per Specification Section 076200-"Sheet Metal Flashing and Trim"
    - b. All other exterior joints and conditions indicated.
- B. Related Sections:
  - 1. Division 4 Section 049010 – "Masonry Rehabilitation and Pointer" for sealants within masonry veneer to be reconstructed
  - 2. Division 7 Section 076200 - "Sheet Metal Flashing and Trim" for metal through-wall flashings installed in or on masonry.

#### 1.3 PRECONSTRUCTION TESTING

- A. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates as follows:
  - 1. Locate test joints as follows:
    - a. Metal to metal
    - b. Masonry
  - 2. Conduct field tests for each application indicated below:
    - a. Each kind of sealant and joint substrate indicated.
  - 3. Notify Architect seven days in advance of dates and times when test joints will be erected.
  - 4. Arrange for tests to take place with joint-sealant manufacturer's technical representative present.
    - a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.

- 1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
5. Report whether sealant failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
6. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product indicated including sealant manufacturer's most current installation guidelines/recommendations.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- (13-mm-) wide joints formed between two 6-inch- (150-mm-) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
  1. Where sealants are indicated to be flogged with sand, include a minimum of three (3) samples for each initial sealant color selected with varying sand types/colors for review.
- D. Joint-Sealant Schedule: Include the following information:
  1. Joint-sealant application, joint location, and designation.
  2. Joint-sealant manufacturer and product name.
  3. Joint-sealant formulation.
  4. Joint-sealant color.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Certificates: For each kind of joint sealant and accessory, from manufacturer.
- C. Sealant, Waterproofing, and Restoration Institute (SWRI) Validation Certificate: For each sealant specified to be validated by SWRI's Sealant Validation Program.
- D. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that sealants comply with requirements.
- E. Preconstruction Field-Adhesion Test Reports: Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on testing specified in "Preconstruction Testing" Article.
- F. Field-Adhesion Test Reports: For each sealant application tested.
- G. Warranties: Sample of special warranties.

## 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
  - 1. Installer must have a minimum of ten (10) years experience installing elastomeric joints of same types.
    - a. Provide examples and references of at least five (5) projects within the last five (5) years of similar scale and type.
- B. Source Limitations: Obtain all types of joint sealants from single source from single manufacturer.
- C. Product Testing: Test joint sealants using a qualified testing agency.
  - 1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.
  - 2. Test according to SWRI's Sealant Validation Program for compliance with requirements specified by reference to ASTM C 920 for adhesion and cohesion under cyclic movement, adhesion-in-peel, and indentation hardness.
- D. Mockups: Install sealant in mockups of assemblies specified in other Sections that are indicated to receive joint sealants specified in this Section. Use materials and installation methods specified in this Section. Coordinate size and location with stone cleaning and water repellent mock-up.
- E. Preinstallation Conference: Conduct conference at Project site.

## 1.7 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
  - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F (5 deg C).
  - 2. When joint substrates are wet.
  - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
  - 4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

## 1.8 WARRANTY

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: Two (2) years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint-sealant manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Twenty (20) years from date of Substantial Completion.
- C. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:
1. Movement of the structure caused by structural settlement or errors attributable to design or construction resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
  2. Disintegration of joint substrates from natural causes exceeding design specifications.
  3. Mechanical damage caused by individuals, tools, or other outside agents.
  4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

## PART 2 - PRODUCTS

### 2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.
- B. Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- C. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- D. Stain-Test-Response Characteristics: Where sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- E. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

### 2.2 SILICONE JOINT SEALANTS

- A. Single-Component, Nonsag, Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 50, for Use NT.
  1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Dow Corning Corporation; 795.
    - b. Pecora Corporation; 895 .
    - c. Tremco Incorporated; Spectrem 2.
  2. Joint-Sealant Designation: **EJS-1**.
  3. Joint Locations:
    - a. All metal to metal through-wall flashing lap joints per Specification Section 076200-"Sheet Metal Flashing and Trim"
    - b. Other joints as indicated.
  4. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors



- B. Single-Component, Nonsag, Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 100/50, for Use NT.

1. Products: Subject to compliance with requirements, provide one of the following:

- a. Dow Corning Corporation; 790.
- b. Pecora Corporation; 890.
- c. Tremco Incorporated; Spectrem 3.

2. Joint-Sealant Designation: **EJS-2**.

3. Joint Locations:

- a. Within Masonry
- b. Other joints as indicated.

4. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors

## 2.3 JOINT SEALANT BACKING

- A. General: Provide sealant backings of material that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

## 2.4 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
  - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  - 2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
    - a. Masonry.
  - 3. Remove laitance and form-release agents from concrete.
  - 4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
    - a. Metal.
    - b. Glass.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

- C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  - 1. Do not leave gaps between ends of sealant backings.
  - 2. Do not stretch, twist, puncture, or tear sealant backings.
  - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
  - 1. Place sealants so they directly contact and fully wet joint substrates.
  - 2. Completely fill recesses in each joint configuration.
  - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
  - 1. Remove excess sealant from surfaces adjacent to joints.
  - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  - 3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
    - a. Use masking tape to protect surfaces adjacent to recessed tooled joints.
- G. Installation of Preformed Silicone-Sealant System: Comply with the following requirements:
  - 1. Apply masking tape to each side of joint, outside of area to be covered by sealant system.
  - 2. Apply silicone sealant to each side of joint to produce a bead of size complying with preformed silicone-sealant system manufacturer's written instructions and covering a bonding area of not less than 3/8 inch (10 mm). Hold edge of sealant bead 1/4 inch (6 mm) inside masking tape.
  - 3. Within 10 minutes of sealant application, press silicone extrusion into sealant to wet extrusion and substrate. Use a roller to apply consistent pressure and ensure uniform contact between sealant and both extrusion and substrate.
  - 4. Complete installation of sealant system in horizontal joints before installing in vertical joints. Lap vertical joints over horizontal joints. At ends of joints, cut silicone extrusion with a razor knife.

### 3.4 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

### 3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION 079200





SCHOOL OF BUSINESS  
WATERPROOFING AND MISC.  
EXTERIOR REPAIRS  
CONSTRUCTION ISSUE - 11 JULY 2022

ARCHITECT:

T B S

TBS Services, Inc. 617 STATION AVENUE P 856.547.6250  
www.tbservices.com HADDON HEIGHTS, NJ 08035 F 856.547.6254

SYMBOL LEGEND			
	NORTH ARROW		REVISION NUMBER
	DRAWING TITLE		EXISTING COLUMN LINE
	SCALE		NEW COLUMN LINE
	ELEVATION SYMBOL		FINISH ELEVATION SYMBOL
	SECTION INDICATOR		ROOM IDENTIFIER
	DETAIL INDICATOR		DOOR NUMBER
	MULTIPLE ELEVATION KEY		WINDOW TYPE
	PLAN DETAIL IDENTIFIER		PARTITION TYPE
			EQUIPMENT NUMBER

CONTRACTOR COORDINATION NOTES:

- CONTRACTOR TO COORDINATE WITH COLLEGE PROJECT MANAGER ON ALL BUILDING ACCESS POINTS, CONSTRUCTION ACCESS POINTS, HEAVY EXCAVATION OPERATIONS, ETC. CONTRACTOR TO PROVIDE ALL REQUESTS & NOTIFICATIONS AT LEAST 7 DAYS PRIOR TO BEGINNING OF RELATED WORK.
- CONTRACTOR TO COORDINATE WITH THE COLLEGE PROJECT MANAGER AND GAIN APPROVAL FOR POINTS OF DISCHARGE FOR DEWATERING ALL EXCAVATED AREAS THROUGHOUT THE DURATION OF THE PROJECT. SEE SPECIFICATION SECTION 022400.
- THE CONTRACTOR SHALL ENGAGE THE APPROPRIATE AUTHORITIES TO IDENTIFY AND LOCATE ALL UTILITIES AND BELOW GRADE SERVICES WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL COORDINATE THE PROJECT SCHEDULE TO ALLOW 2 WEEKS FOR NOTIFICATION AND IDENTIFICATION/LOCATION OF UTILITIES AND BELOW GRADE SERVICES, PRIOR TO THE COMMENCEMENT OF WORK.

LANDSCAPING NOTE: PLANTINGS CAREFULLY REMOVE & STOCKPILE ALL PLANTINGS & SOILS, ETC., WITHIN AFFECTED WORK AREA UNLESS OTHERWISE NOTED. STOCKPILE AREA TO BE REVIEWED WITH COLLEGE PROJECT MANAGER PRIOR TO THE COMMENCEMENT OF WORK. CONTRACTOR TO SEPARATE TOP SOIL FROM SUB SOIL WHEN STOCKPILING. TOPSOIL SHALL NOT BE REMOVED FROM COLLEGE PROPERTY. MAINTAIN HEALTH AND INTEGRITY OF ALL SALVAGED MATERIALS TO BE RE-USED/REPLANTED. ANY PLANT MATERIALS DAMAGED DURING CONSTRUCTION SHOULD BE REPLACED IN LIKE KIND TO THE SATISFACTION OF THE COLLEGE PROJECT MANAGER. EXCAVATE ALL AREAS NOTED AS SUCH TO ALLOW FOR INSTALL OF NEW WATERPROOFING SYSTEM, AND PROPERLY BACK FILL AND COMPACT SOIL UPON COMPLETION OF WATER PROOFING SYSTEM. PROVIDE A POSITIVELY SLOPED GRADE AWAY FROM BUILDING. HYDROSEED ALL DAMAGED GRASS AREAS TO THE SATISFACTION OF THE COLLEGE PROJECT MANAGER. REINSTALL ALL PLANTINGS IN ORIGINAL LOCATIONS UPON COMPLETION OF WORK.

SITE WORK NOTE:  
ALL ASSOCIATED SITE WORK IS TO BE INCLUDED WITHIN THIS CONTRACT AND PERFORMED IN ACCORDANCE WITH SPECIFICATIONS, DIVISION 2 - SITE CONSTRUCTION.

ABBREVIATIONS

ABV.	ABOVE	HC	HANDICAP
ALUM.	ALUMINUM	HGT	HEIGHT
APPX	APPROXIMATE	HORZ.	HORIZONTAL
BLDG	BLDG	INSUL.	INSULATION
C.J.	CONTROL JOINT	INT.	INTERIOR
CMU	CONCRETE MASONRY UNIT	JT	JOINT
CONC.	CONCRETE	MAX.	MAXIMUM
CONT.	CONTINUOUS	MANUF.	MANUFACTURER
COORD.	COORDINATE	MECH.	MECHANICAL
DTL	DETAIL	MIN.	MINIMUM
DWG	DRAWING	MTL	METAL
ELEC.	ELECTRIC/ELECTRICAL	N.I.C.	NOT IN CONTRACT
E.J.	EXPANSION JOINT	N.T.S.	NOT TO SCALE
E.O.	EDGE OF	O.C.	ON CENTER
EPDM	ETHYLENE PROPYLENE DIENE MONOMER	PERIM.	PERIMETER
EQUIP.	EQUIPMENT	PT	PRESSURE TREATED
EXIST.	EXISTING	PTD	PAINTED
EXP.	EXPANSION	S.S.	STAINLESS STEEL
EXT.	EXTERIOR	TYP.	TYPICAL
FND.	FOUNDATION	U.N.O.	UNLESS NOTED OTHERWISE
F.O.	FACE OF	VERT.	VERTICAL
FRP	FIBERGLASS REINFORCED PLASTIC	WD	WOOD

GENERAL NOTES:

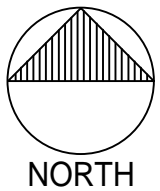
- LIMITED SELECTIVE DEMOLITION WAS PERFORMED TO VERIFY THE EXISTING CONDITIONS. ALL EXISTING CONSTRUCTION, PLAN & ELEVATION INFORMATION CONTAINED HEREIN WAS EXCERPTED FROM THE BERKOWSKY AND ASSOCIATES, INC. CONSTRUCTION DOCUMENTS DATED 1998 PROVIDED BY THE COLLEGE OF NEW JERSEY THESE DRAWINGS ARE INTENDED TO CONVEY A GENERAL UNDERSTANDING OF THE EXISTING CONDITIONS AND ARE NOT NECESSARILY REPRESENTATIVE OF THE AS-BUILT CONDITIONS. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS WITHIN THE CONTRACT LIMITS AND NOTIFY THE ARCHITECT IMMEDIATELY IN WRITING OF ANY DEVIATION FROM CONTRACT DOCUMENTS NECESSITATED BY FIELD CONDITIONS.
- THESE DRAWINGS ARE INTENDED TO CONVEY THE PROJECT SCOPE OF WORK. THE CONTRACTOR SHALL NOT CONSIDER THE REMEDIAL WORK NOTES TO BE ALL INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY, ON SITE, ALL EXISTING CONDITIONS AND DIMENSIONS WITHIN THE CONTRACT LIMITS AND TO INSPECT AND ASSESS THESE EXISTING CONDITIONS IN ORDER TO VERIFY THAT THE WORK DESCRIBED CAN BE COMPLETED. IN SUBMITTING THEIR BID, THE CONTRACTOR ACKNOWLEDGES THAT THEY HAVE VISITED THE SITE AND CONFIRMED COMPATIBILITY OF ALL WORK WITH THE EXISTING CONDITIONS.
- IN THE CASE OF AN INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS, OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM, THE BETTER QUALITY OR GREATER QUANTITY OF WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.
- APPROPRIATE ACCESS TO THE SITE, THE EXTENT AND LOCATION OF PROTECTIVE STAGING AREAS ETC. ARE TO BE REVIEWED AND APPROVED BY THE OWNER AT THE PRE-CONSTRUCTION MEETING PRIOR TO THE COMMENCEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING FOR PROTECTION OF PEDESTRIANS IN ACCORDANCE WITH SECTION 3306 OF THE 2018 INTERNATIONAL BUILDING CODE.
- ACCESS TO THE BUILDING SHALL BE CONTROLLED BY THE OWNER. THE STAGING OF THE WORK IS TO ALLOW FOR THIS AND IS TO BE REVIEWED AND APPROVED BY THE OWNER PRIOR TO THE COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL PROVIDE, THROUGHOUT THE CONSTRUCTION, FOR THE PROTECTION OF THE EXISTING STRUCTURES FROM DAMAGE DURING THE COURSE OF THE WORK. THIS SHALL INCLUDE SUPPLYING AND INSTALLING SHORING, BRACING AND OTHER ITEMS NECESSARY FOR SUCH PROTECTION AND STABILITY.
- CONTRACTOR SHALL STRIP TOPSOIL AND STOCKPILE FOR RE-USE IN TRENCH AREAS AFTER INITIAL BACKFILL AND COMPACTION IS COMPLETE. TOPSOIL AND SUBSOIL SHALL NOT BE MIXED DURING DRAINAGE RECONSTRUCTION WORK.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LONG TERM EFFICACY OF ALL PROTECTION, TEMPORARY TIE-INS, END OF DAY TIE INS, ETC. MADE TO THE EXISTING ROOF SYSTEM/CONSTRUCTION. ANY AND ALL DAMAGE, DIRECT OR CONSEQUENTIAL, TO THE BUILDING OR BUILDING CONTENTS, AS A RESULT OF THE FAILURE OF ANY WEATHER PROTECTION OR TIE-INS SHALL BE BORN IN FULL BY THE CONTRACTOR.
- ALL MATERIALS & ITEMS REMOVED BY CONTRACTOR, UNLESS OTHERWISE NOTED, BECOME HIS PROPERTY AND ARE TO BE REMOVED FROM THE SITE IN CLOSED CONTAINERS ON A DAILY BASIS OR IN A MANNER ACCEPTABLE TO THE OWNER.
- UPON COMPLETION THOROUGHLY CLEAN AFFECTED AREAS OF DUST, DIRT AND DEBRIS CAUSED BY NEW WORK. ALL AREAS TO BE RETURNED TO CONDITION PRIOR TO WORK BEGINNING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL THE NECESSARY APPROVALS AND/OR PERMITS PRIOR TO THE COMMENCEMENT OF WORK. TCNJ SHALL BE RESPONSIBLE FOR PAYING FOR PERMITS.
- THE CONTRACTOR IS TO PROVIDE AND MAINTAIN THROUGHOUT THE CONSTRUCTION EMERGENCY EGRESS AND ACCESSIBILITY IN ACCORDANCE WITH ADA GUIDELINES AND 2018 IBC AT THE BUILDING ENTRANCES AND SIDEWALKS AROUND THE BUILDING PERIMETER THROUGHOUT THE CONSTRUCTION BY MEANS OF PROTECTION, TEMPORARY WALKWAYS, BRIDGES, OVERHEAD/PEDESTRIAN PROTECTIONS ETC.
- PRIOR TO THE START OF WORK THE CONTRACTOR SHALL PROVIDE SUBMITTALS (I.E. PRODUCT DATA, SHOPDRAWINGS, ETC.) FOR ALL NEW SYSTEMS AND COMPONENTS FOR REVIEW BY ARCHITECT AND OWNER.
- COMBUSTIBLES SHOULD NOT BE INTRODUCED INTO A BUILDING UNTIL FULL SPRINKLER PROTECTION IS IN SERVICE. COMBUSTIBLE RUBBISH SHOULD BE DISPOSED OF PROMPTLY AND SAFELY. STRICT RULES AND AN ADEQUATE NUMBER OF CLEAN UP PERSONNEL ARE ESSENTIAL TO FACILITATE THE REMOVAL OF ACCUMULATIONS OF PAPER WRAPPINGS, SCRAP LUMBER, AND OTHER CONSTRUCTION RUBBISH. PROMPT DISPOSAL IS PARTICULARLY NEEDED FOR MATERIAL SUBJECT TO SPONTANEOUS IGNITION, SUCH AS OILY WASTE AND PAINT RAGS.
- PROBABLE IGNITION SOURCES SHOULD BE CONTROLLED. NO SMOKING RULES ARE BE STRICTLY ENFORCED.
- DISTRIBUTING AMPLE HAND-EXTINGUISHING EQUIPMENT THROUGHOUT THE PREMISES SHOULD PROVIDE ADEQUATE SUPPLEMENTARY FIRE PROTECTION. THE 15-20 LB., MULTIPURPOSE DRYCHEMICAL EXTINGUISHER IS RECOMMENDED. UNTIL SPRINKLER PROTECTION CAN BE PLACED IN SERVICE, HOSE LINES SHOULD BE CONNECTED IN AREAS WHERE CONSTRUCTION IS IN PROGRESS. HYDRANTS, HOSE CONNECTIONS, AND OTHER FIRE FIGHTING EQUIPMENT MUST BE READILY ACCESSIBLE AT ALL TIMES - NEVER BLOCKED BY CONSTRUCTION MATERIALS.
- ALL NON-STRUCTURAL COMPONENTS (I.E. ELECTRICAL, MECHANICAL, HVAC, LIGHTING FIXTURES, CAMERAS, MONITORS, ETC.) SHALL BE FASTENED IN ACCORDANCE WITH CHAPTER 13 OF THE ASCE 7-05 FOR APPLICABLE SEISMIC REQUIREMENTS

REMEDIAL WORK NOTES

- REMOVE/EXCAVATE THE EXISTING GRADE DOWN TO THE FOOTING AND PROVIDE A NEW SELF-ADHERING SHEET WATERPROOFING MEMBRANE AND ASSOCIATED SYSTEM COMPONENTS. REMOVE THE EXISTING EXTERIOR FACE BRICK AS INDICATED AND PROVIDE A NEW SELF-ADHERING SHEET WATERPROOFING MEMBRANE AND ASSOCIATED SYSTEM COMPONENTS ACROSS THE FOUNDATION WALL, INTO THE WALL CAVITY AND UP THE WALL. PROVIDE NEW S.S. THROUGH-WALL FLASHING AND WEEPS AND INSTALL NEW BRICK AND MORTAR TO MATCH THE EXISTING SIZE, COLOR/TEXTURE, PATTERN AND CONFIGURATION. SUBSEQUENT TO COMPLETION OF WORK PROPERLY BACKFILL, COMPACT AND REGRADE EXCAVATED AREAS, POSITIVELY SLOPED AWAY FROM BUILDING.  
NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FROM TCNJ AND REVIEW ALL EXISTING CONSTRUCTION DRAWINGS FOR FAMILIARIZATION WITH EXISTING SITE CONDITIONS.
- REMOVE/EXCAVATE THE EXISTING GRADE DOWN TO THE FOOTING, 8-INCHES MINIMUM BELOW THE BOTTOM OF THE FLOOR SLAB AT THE BASEMENT LEVEL. REMOVE THE EXISTING EXTERIOR FACE BRICK AS INDICATED, AS WELL AS LIMESTONE CLADDING AT PIER AND WATERTABLE AND PROVIDE A NEW SELF-ADHERING SHEET WATERPROOFING MEMBRANE AND ASSOCIATED SYSTEM COMPONENTS ACROSS THE FOUNDATION WALL, INTO THE WALL CAVITY AND UP THE EXTERIOR SHEATHING. PROVIDE NEW S.S. THROUGH-WALL FLASHING AND WEEPS AND INSTALL NEW BRICK AND MORTAR TO MATCH THE EXISTING SIZE, COLOR/TEXTURE, PATTERN AND CONFIGURATION. REINSTALL EXISTING LIMESTONE PANEL CLADDING AND WATERTABLE.  
NOTE: EXCAVATION TO BE COMPLETED BY MEANS OF SHEETING AND SHORING DUE TO ROOF DRAINS AND IT DUCT BANK WITHIN THE AREA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FROM TCNJ AND REVIEW ALL EXISTING CONSTRUCTION DRAWINGS FOR FAMILIARIZATION WITH EXISTING SITE CONDITIONS.



LOCATION MAP  
N.T.S.



ROOF/KEY PLAN  
N.T.S.



PROJECT NORTH

Consultant

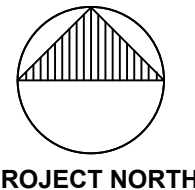
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It is the responsibility of the Construction Manager/General Contractor and all Sub-Contractors to verify all dimensions and accept conditions of prior work by related trades before proceeding with any work.



KEY PLAN  
N.T.S.



PROJECT NORTH

PROJECT DRAWING LIST

Drawing No.	Drawing Title
CS	COVER SHEET
A5.0	DETAILS
SW1.0	SOIL EROSION AND SEDIMENT CONTROL PLAN

Date  
11 JULY 2022

Drawing Issue  
CONSTRUCTION ISSUE

Revisions	Date

Drawn By  
AK

Drawing Scale:  
AS NOTED

T B S

TBS Services, Inc. 617 STATION AVENUE P 856.547.6250  
www.tbservices.com HADDON HEIGHTS, NJ 08035 F 856.547.6254

Project Title

The College of New Jersey

SCHOOL OF BUSINESS

2000 PENNINGTON ROAD  
EWING, N.J. 08628

WATERPROOFING AND MISC.  
EXTERIOR REPAIRS

TBS Project No.  
2204008

Client Project No.  
000000

Drawing Title and  
No.  
COVER SHEET

CS



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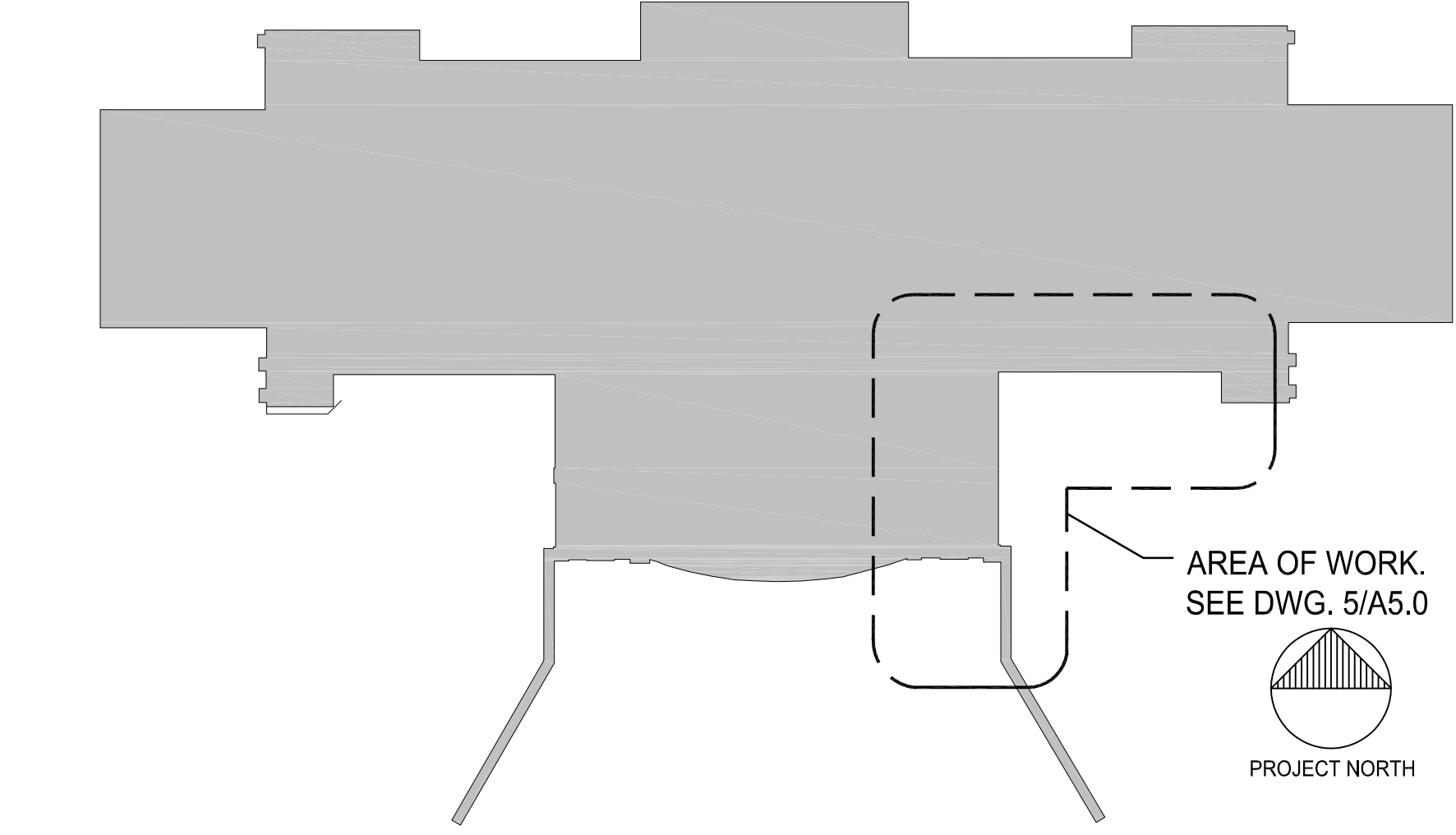
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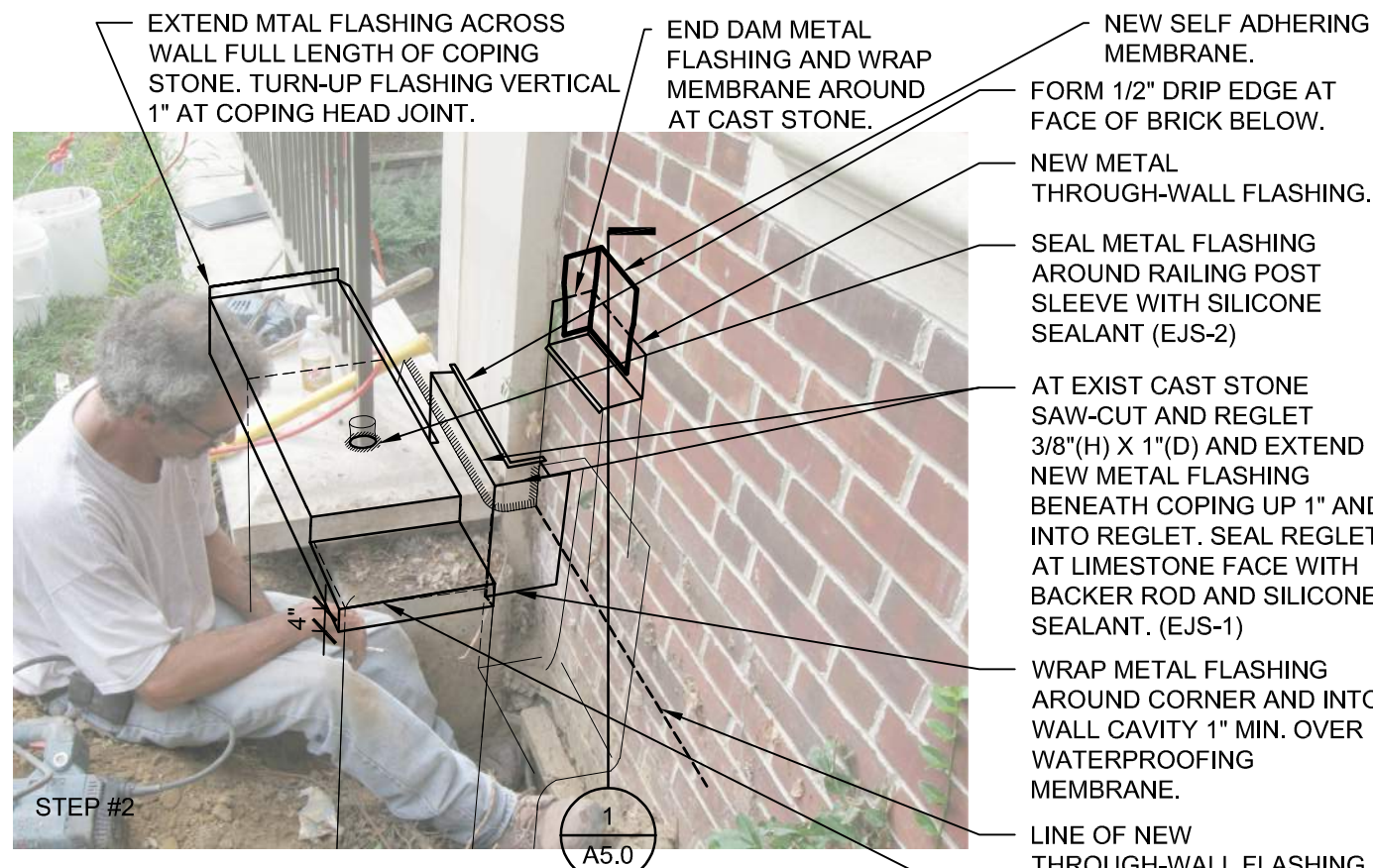
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NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FROM TCNJ AND REVIEW ALL EXISTING CONSTRUCTION DRAWINGS FOR FAMILIARIZATION WITH EXISTING SITE CONDITIONS.

⑤ REMOVE/EXCAVATE THE EXISTING GRADE DOWN TO THE FOOTING, 8-INCHES MINIMUM BELOW THE BOTTOM OF THE FLOOR SLAB AT THE BASEMENT LEVEL. REMOVE THE EXISTING EXTERIOR FACE BRICK AS INDICATED, AS WELL AS LIMESTONE CLADDING AT PIER AND WATERTABLE AND PROVIDE A NEW SELF-ADHERING SHEET WATERPROOFING MEMBRANE AND ASSOCIATED SYSTEM COMPONENTS ACROSS THE FOUNDATION WALL, INTO THE WALL CAVITY AND UP THE EXTERIOR SHEATHING. PROVIDE NEW S.S. THROUGH-WALL FLASHING AND WEEPS AND INSTALL NEW BRICK AND MORTAR TO MATCH THE EXISTING SIZE, COLOR/TEXTURE, PATTERN AND CONFIGURATION. REINSTALL EXISTING LIMESTONE PANEL CLADDING AND WATERTABLE  
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7 KEY PLAN  
A5.0 N.T.S.

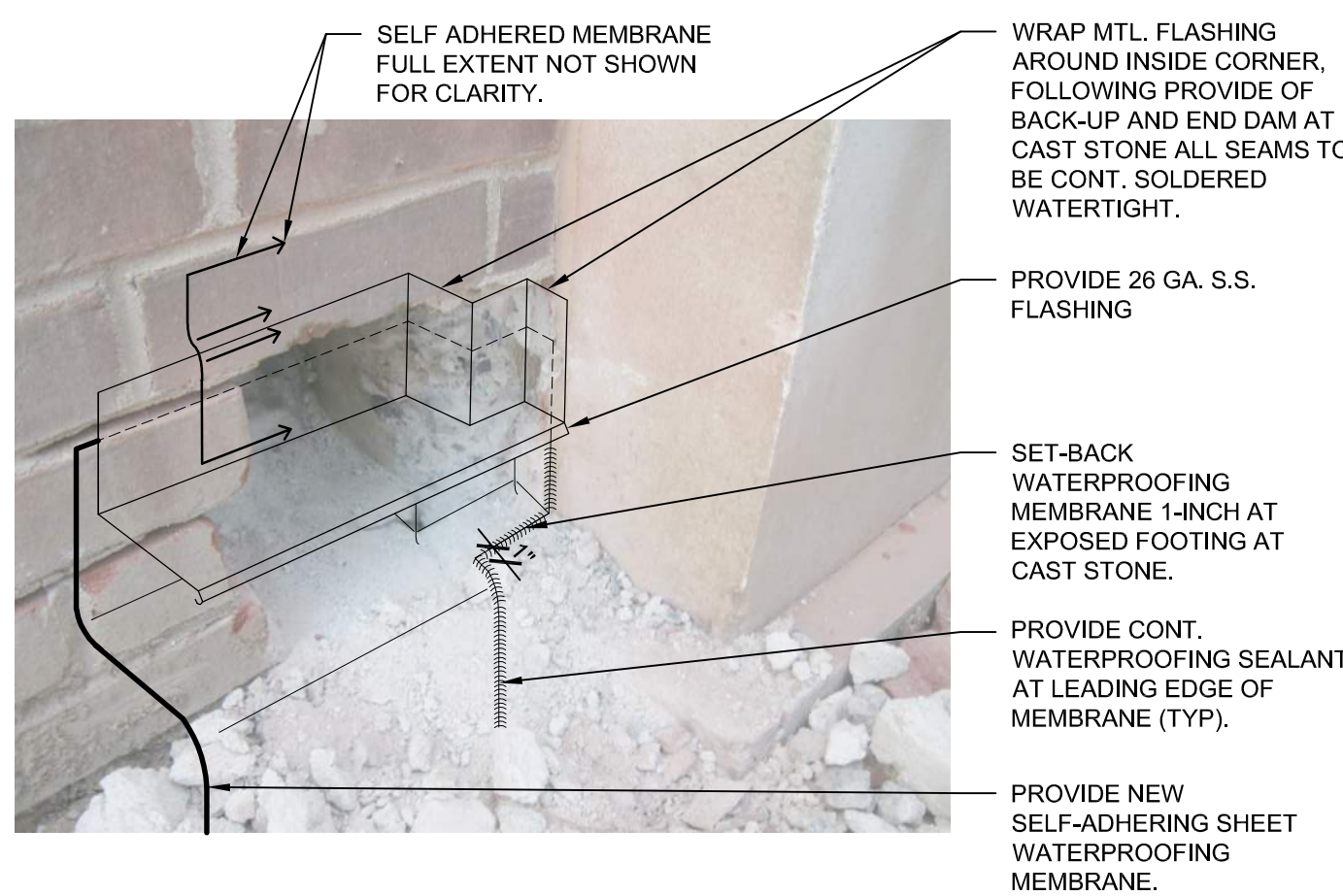
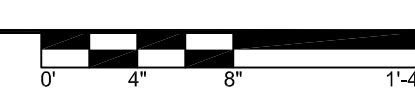


STEP #2

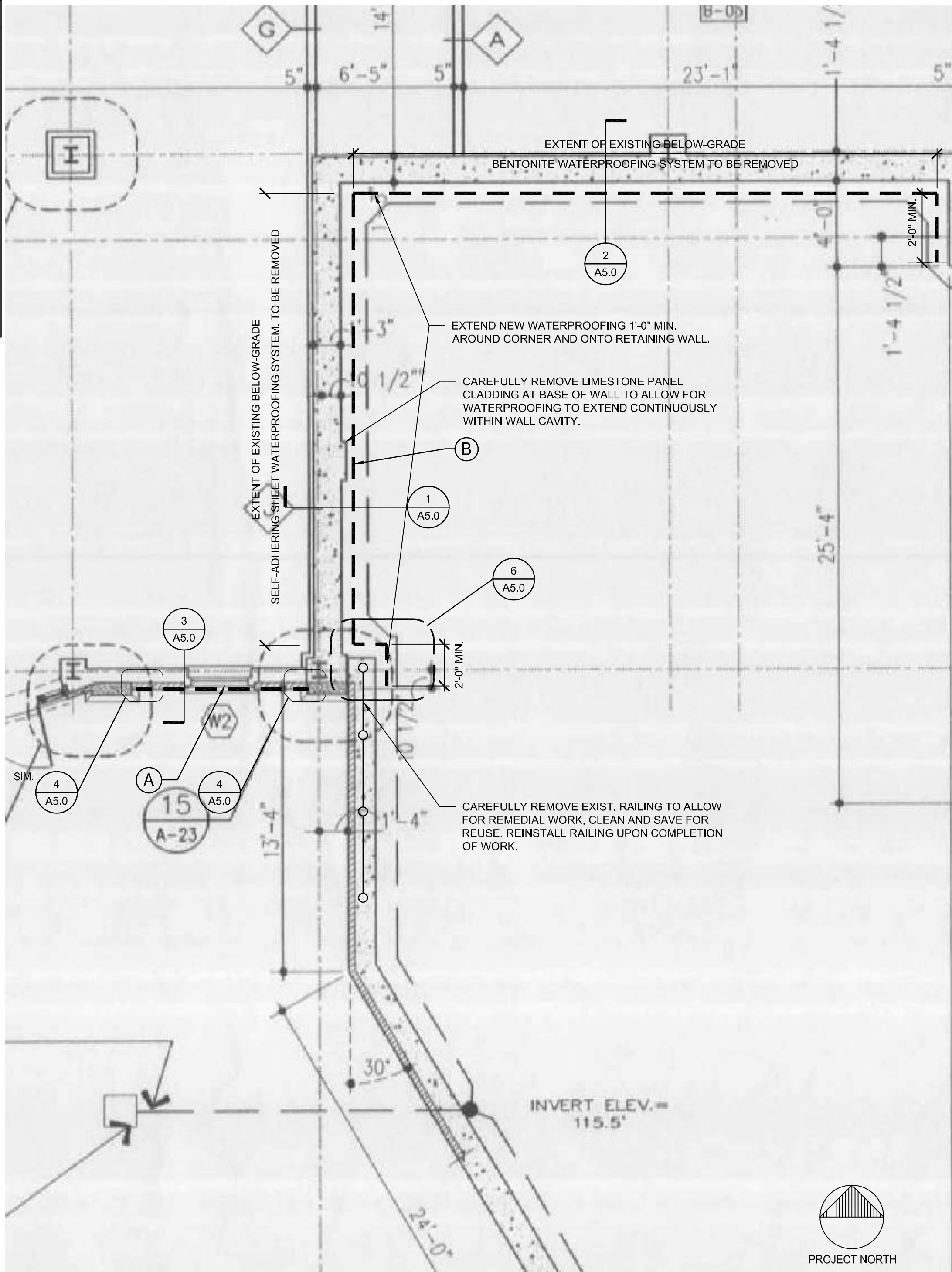
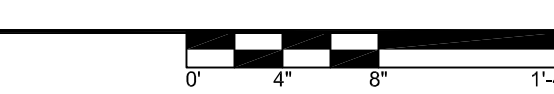


STEP #1

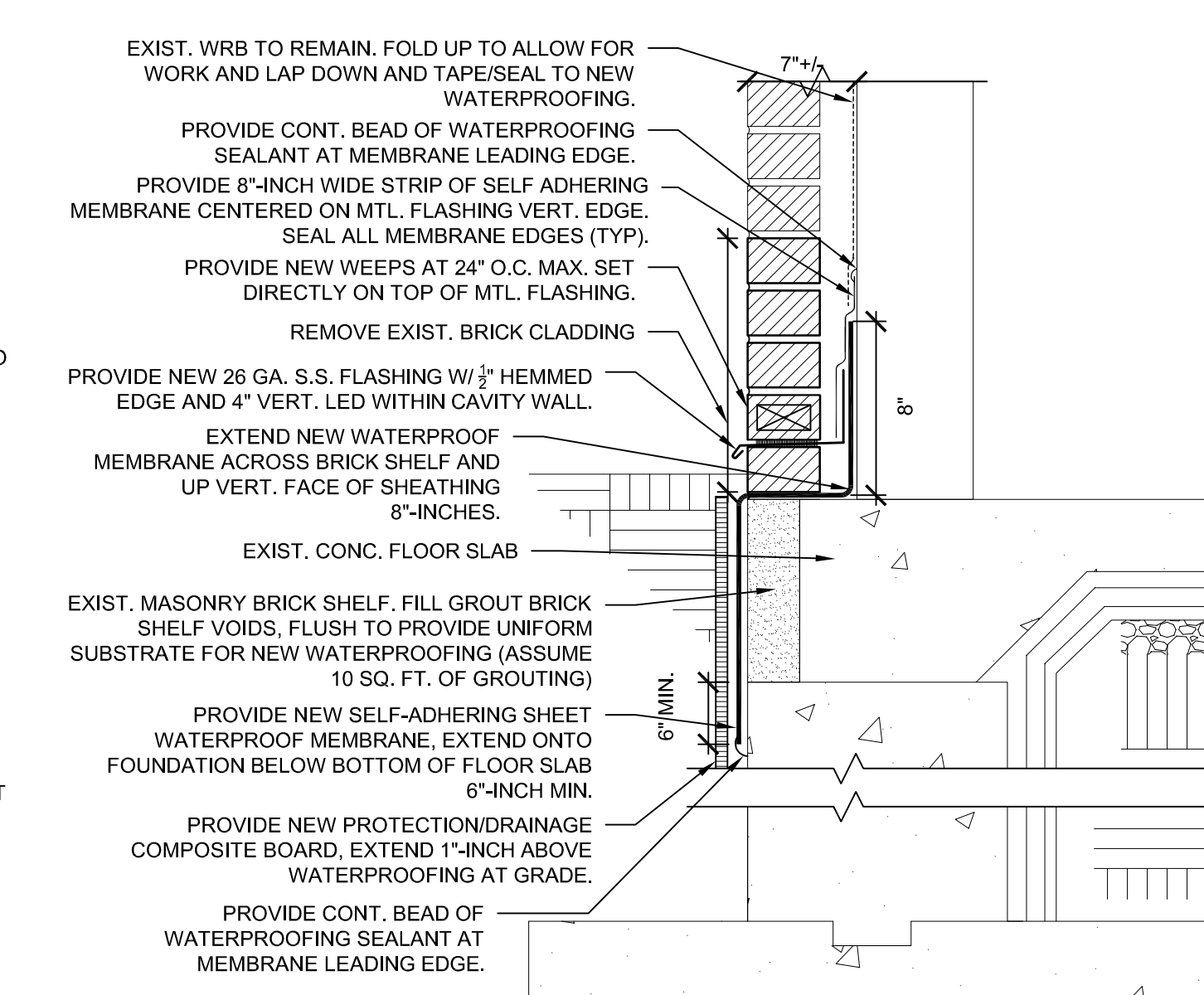
6 DETAIL AT RETAINING WALL  
A5.0 SCALE: 1-1/2"=1'-0"



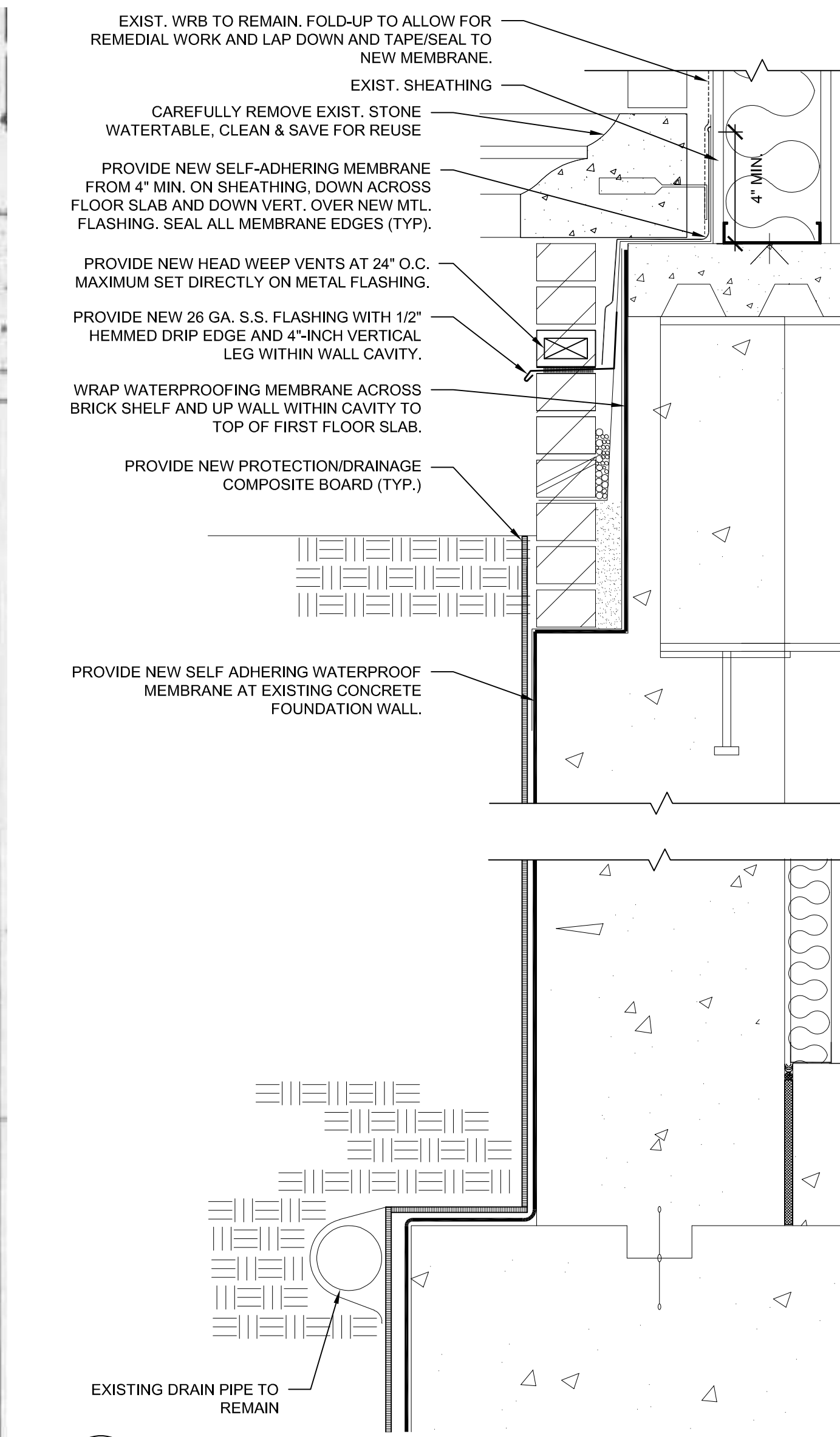
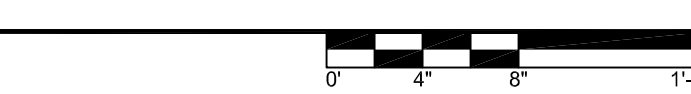
4 DETAIL AT FLASHING/W.P. AT PIERS  
A5.0 SCALE: 1-1/2"=1'-0"



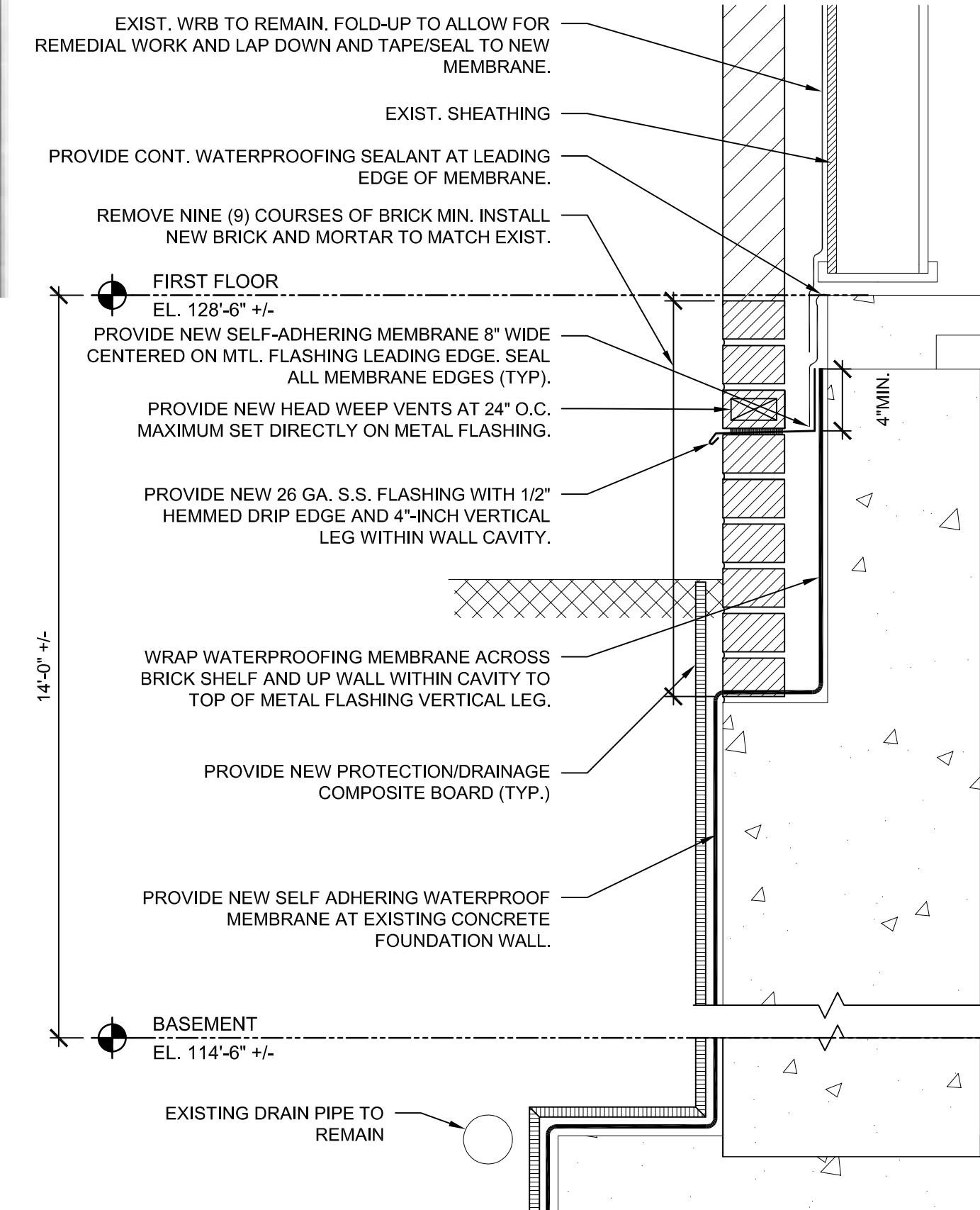
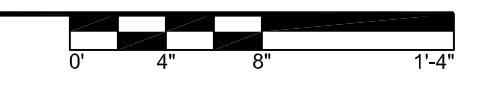
5 ENLARGED PLAN AT BASEMENT  
A5.0 1/4" = 1'-0"



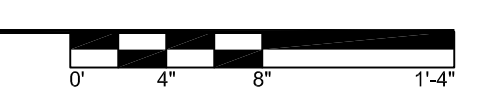
3 DETAIL AT BASEMENT WALL  
A5.0 SCALE: 1-1/2"=1'-0"



2 FOUNDATION WALL DETAIL  
A5.0 SCALE: 1-1/2"=1'-0"



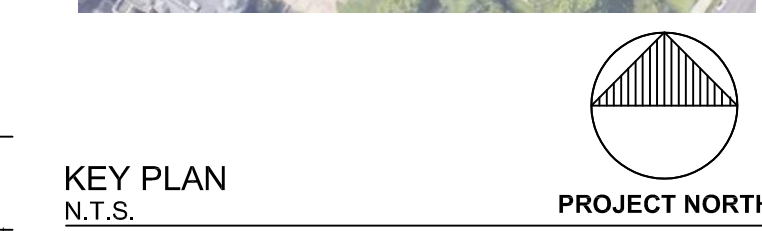
1 FOUNDATION WALL DETAIL  
A5.0 SCALE: 1-1/2"=1'-0"



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KEY PLAN  
N.T.S.

PROJECT DRAWING LIST

Drawing No.	Drawing Title
CS	COVER SHEET
A5.0	DETAILS
SW1.0	SOIL EROSION AND SEDIMENT CONTROL PLAN

Date  
11 JULY 2022

Drawing Issue  
CONSTRUCTION ISSUE

Revisions

Revisions	Date

Drawn By  
AK

Drawing Scale:  
AS NOTED

**T B S**

Project Title  
The College of New Jersey

SCHOOL OF BUSINESS

2000 PENNINGTON ROAD  
EWING, N.J. 08628

WATERPROOFING AND MISC.  
EXTERIOR REPAIRS

TBS Project No.  
2204008

Client Project No.  
000000

Drawing Title and No.  
DETAILS

A5.0



1. Topsoil Stripping and Stockpiling
- A. Field exploration should be made to determine whether quantity and/or quality of surface soil justifies stripping.

B. A 6-inch stripping depth is typical, but may vary depending on the particular soil structure or pre-existing use.

C. Stockpiles should be located so as not to obstruct natural drainage or cause off-site environmental damage, and shall be delineated on the Certified Soil Erosion and Sediment Control Plan and be constructed in accordance with the Topsoil Stockpile Detail.

D. Stockpiles should be Temporarily Stabilized according to the STANDARDS.
2. Site Preparation
- A. Install erosion control measures and facilities such as silt fence, diversions, sediment basins, and channel stabilization.

B. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, tacking, and maintenance. All grading should be done in accordance with the STANDARD for Land Grading, 19-1.
3. Seedbed Preparation
- A.

TOPSOIL REQUIRED

MIN. DEPTH: 5" (UNSETTLED)

pH: 6.0 to 8.0

ORGANIC MATTER CONTENT: 2.75% MIN.

NITRATE N2: 60 LBS/ACRE (50% WATER INSOLUBLE)

PHOSPHOROUS: 100 LBS/ACRE

POTASSIUM: 60 LBS/ACRE

B. THE CONTRACTOR SHOULD BE AWARE OF THE POSSIBILITY, DEPENDING UPON THE SITE CONDITIONS, THAT ALL TOPSOIL MAY HAVE TO BE PROVIDED FROM AN OFF-SITE SOURCE.

C. Topsoil should be handled only when dry enough to work without damaging soil structure.

D. Apply a uniform 5 inches (unsettled) of topsoil on all disturbed areas. Soils with a pH of 4.0 or less or containing iron sulfide shall be covered with a minimum depth of 12 inches of soil having a pH of 5.0 or more and the top 5 inches shall conform to the Topsoil STANDARD and shall be limed according to the specifications.

E. If the topsoil becomes compacted, the surface must be scarified 6" to 12" to provide good seed-to-soil bond.

F. Apply limestone and fertilizer according to soil test recommendations such as those offered by Rutgers University Cooperative Extension. If soil testing is not feasible, fertilizer (10-20-10) with 50% water insoluble nitrogen should be applied at the typical rate of 500 lbs/acre or 11 lbs/1,000 square feet.

G. Apply limestone equivalent to 50% calcium plus magnesium oxides (pulverized dolomitic limestone is preferred for most soils south of the New Brunswick – Trenton Fall Line) as follows:

Soil Texture Tons/Acre lbs/1,000 sq. ft.

Clay, clay loam, high organic 3 135

Sandy loam, loam, silt loam 2 90

Loamy sand, sand 1 45

H. Work lime and fertilizer into the soil to a depth of 4 inches. The final harrowing or disc operation should be on the general contour. Continue tillage until a uniform, fine seedbed is prepared.

I. Remove from the surface all stones 2 inches or larger in any dimension, and other objectionable stones or debris such as wire, tree roots, pieces of concrete, clods, lumps, or other unsuitable material.
4. Seeding
- A. Apply seed uniformly by hand, cyclones, drop seeder, drill cultipacker, or hydroseeder\*. The latter may be justifiable for large, steep areas where conventional applications are not feasible. Hydroseeding shall be a two- step process: MULCH SHALL NOT BE MIXED WITH THE SEED; THE SEED MUST BE APPLIED FIRST to assure proper seed to soil contact. The hydromulch is then sprayed over the seeding. For optimum results, the seed should be incorporated into the soil to a depth of ¼ to ½ inch depending upon species.

\*The use of hydro-mulch, as opposed to straw, is limited to optimum seeding dates as listed in the STANDARDS.

B. After seeding, the soil should be packed with a corrugated roller. When performed on the contour, rolling will minimize sheet erosion and maximize water conservation.
5. Mulching
- A. Unrotted straw, hay free of seeds, or salt hay is REQUIRED on all seeding at a rate of 1.5 to 2 tons/acre, (70 to 90 lbs./1,000 square feet), except where a crimper is used instead of a liquid mulch-binder, then the rate of application is 3 tons per acre.

B. Mulch anchoring should be accomplished immediately after placement to minimize loss due to wind or water. This may be done according to the following methods:

1. Wood-fiber or paper-fiber mulch at the RATE OF 1,500 LBS/ACRE applied by the hydroseeder. Use is limited to only the optimum seeding season.

2. Synthetic or Organic Binders

3. Peg and twine, mulch netting, and mechanical crimping.

4. Crimping requires a higher mulch rate (3 tons/acre).

NOTE: 

1) One bale of hay weighs 40-60 lbs depending on how it was baled.

2) 1,500 gallon tank of hydromulch covers .5 acres.

Please Note: The quality of permanent vegetation rests with the contractor. The timing of seeding, preparing the seedbed, applying nutrients, mulch and other management are essential. The seed application rates in Table 4-3 of the STANDARDS are required when a Report of Compliance is requested prior to actual establishment of permanent vegetation. (Up to 50% reduction is application rates may be used when permanent vegetation is established prior to requesting a Report of Compliance from the District. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% evenly distributed vegetative cover (of the seeded species) and mowed once.)
6. Temporary Seeding Mixes
- Mix: Early Spring/  
Late Summer to Early Fall  
100% Perennial Ryegrass  
Rate: 100 lbs/acre

Mix: Late Fall/Mix:  
100% Cereal Rye  
Rate: 112 lbs/acre

Mix: Mid-Summer  
40% Pearl Millet  
20% Millet (German or Hungarian)  
20% Weeping Lovegrass  
Rate: 100 lbs/acre

7. Recommended Permanent Seeding Mixes

OPTIMUM SEEDING DATES: March 1 to May 15 and August 15 to October 15

Lawns – Rate 200 lbs/acre

Preferred Mix for LAWNS AND DETENTION BASINS

70% Turf type Tall Fescue\*#  
20% Perennial Ryegrass  
10% Kentucky Bluegrass

MIX: LAWNS – Low Maintenance,  
Droughty & Heavy Traffic

80% Tall Fescue turf type (Lowgrowing varieties)\*#  
10% Perennial Ryegrass (Low growing varieties)

MIX: LAWNS – Quality Sun and Shade

20% Perennial Ryegrass  
30% Chewings Fescue  
35% Creeping Red Fescue  
15% Kentucky Bluegrass  
(\*Include at least three varieties in mix)  
#Exclude K-31)

MIX: SHADE

65% Hard, Chewings, or Creeping Red Fescue\*  
20% Kentucky Bluegrass  
15% Perennial Ryegrass

MIX: MOIST DETENTION BASIN BOTTOMS

40% Flat Pea (with proper inoculant)  
25% Perennial Ryegrass  
25% Tall Fescue or Strong Creeping Red Fescue  
10% Redtop  
+ Use the above mix for infrequent mowing. For a regular mowing regime, substitute Rough Bluegrass and/or Tall Fescue for the Flat Pea.

REQUIRED SOIL EROSION AND SEDIMENT CONTROL NOTES

1. All Soil Erosion and Sediment Control practices shall be installed prior to any major soil disturbances, or in their proper sequence and maintained until permanent protection is established.

2. Any Disturbed areas that will be left exposed more than 30 Days and not subject to construction traffic, will immediately receive a temporary seeding. If the season prevents the establishment of a temporary cover, the disturbed areas will be mulched with straw, or equivalent material, at a rate of two (2) tons per Acre.

3. Permanent Vegetation shall be seeded or sodded on all exposed areas within ten (10) days after final grading. Mulch will be used for protection until seeding is established

4. A sub-base course will be applied immediately following rough grading and installation of improvements in order to stabilize streets, roads, driveways and parking areas. In areas where no utilities are present, the sub-base shall be installed within 15 days or preliminary grading.

5. Immediately following initial disturbance or rough grading all critical areas subject to erosion (i.e.: steep slopes, roadway embankments) will receive a temporary seeding in combination with straw mulch or a suitable equivalent, at a rate of two (2) tons per acre

6. Any steep slopes receiving pipeline installation will be backfilled and stabilized daily, as the installation proceeds (i.e.: slopes greater that 3:1)

7. In accordance with the STANDARD for Permanent Vegetative Cover for soil stabilization, any soil having a pH of 4 or less or containing iron sulfides shall be covered with a minimum of 12" of soil having a pH of 5 or more prior to seedbed preparation.

8. At the time when the site preparation for permanent vegetative stabilization is going to be accomplished, any soil that will not provide a suitable environment to support adequate vegetative ground cover, shall be removed or treated in such a way that will permanently adjust the soil conditions and render it suitable for vegetative ground cover. If the removal or treatment of the soil will not provide suitable conditions, non-vegetative means of permanent ground stabilization will have to be employed.

9. Conduit Outlet Protection must be installed at all required outfalls prior to the drainage system becoming operational.

10. Contractor is responsible for keeping all adjacent roads clean during life of construction project.

11. Hydroseeding is a two step process. The first step includes seed, fertilizer, lime, etc., along with minimal amounts of mulch to promote consistency, good seed to soil contact, and give a visual indication of coverage. Upon completion of seeding operation, hydro-mulch should be applied at a rate of 1500 lbs. Per acre in second step. The use of hydro-mulch, as opposed to straw, is limited to optimum seeding dates as listed in the STANDARDS.

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KEY PLAN

N.T.S.

PROJECT DRAWING LIST

Drawing No.

Drawing Title

CS

COVER SHEET

A5.0

DETAILS

SW1.0

SOIL EROSION AND SEDIMENT CONTROL PLAN

Date

11 JULY 2022

Drawing Issue

CONSTRUCTION ISSUE

Revisions

Date

Drawn By

AK

Drawing Scale:

AS NOTED

TBS

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WATERPROOFING AND MISC. EXTERIOR REPAIRS

TBS Project No.

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Client Project No.

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Drawing Title and No.

SOIL EROSION AND SEDIMENT CONTROL PLAN

SW1.0

2

SW1.0

SEDIMENT CONTROL BAG FOR DEWATERING

N.T.S.

1

SW1.0

STOCKPILE STABILIZATION DETAIL

N.T.S.

4

SW1.0

TYPICAL TRENCH RESTORATION DETAILS

N.T.S.

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SW1.0

SILT SACK DETAIL

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STOCKPILE STABILIZATION DETAIL

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TYPICAL TRENCH RESTORATION DETAILS

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SEDIMENT CONTROL BAG FOR DEWATERING

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## 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:           [School of Business Waterproofing and Miscellaneous Exterior Repairs] (the “Project”)

The Architect:       TBS Services, Inc.  
617 Station Avenue  
Haddon Heights, NJ 08035

### **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:

\$ 1/20th of 1% 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:

Thomas Mahoney, Esq.  
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 Construction

By \_\_\_\_\_  
Lloyd Ricketts,  
Vice President and Treasurer

Date \_\_\_\_\_

Date \_\_\_\_\_

By \_\_\_\_\_  
Sharon Blanton,  
Vice President for Operations

Date \_\_\_\_\_

By \_\_\_\_\_  
Anup Kapur,  
Executive Director of Procurement

Date \_\_\_\_\_

By \_\_\_\_\_  
Dave McNamara,  
Associate Vice President for Facilities Management

Date \_\_\_\_\_

**CONTRACTOR:**

By \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_



# Mandatory Documents

FORM #	TITLE OF FORM
1	MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE
2	OWNERSHIP DISCLOSURE FORM
3	NON-COLLUSION STATEMENT
4	TWO-YEAR CHAPTER 51/EXECUTIVE ORDER 117 VENDOR CERTIFICATION AND DISCLOSURE OF POLITICAL CONTRIBUTIONS
5	DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN FORM
6	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 **[Reporting Agency]** that its contracts should create a work- force that reflects the diversity of the State of New Jersey. Therefore, contractors engaged by the **[Reporting Agency]** 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 **[Reporting Agency]**'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 **[Reporting Agency]**'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, avail- able 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 **[Reporting Agency]** 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 **[Reporting Agency]** 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 con- tract.

**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	

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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



**INFORMATION AND INSTRUCTIONS**  
**For Completing the "Two-Year Vendor Certification and Disclosure of**  
**Political Contributions Chapter 51**  
**FORM # 4**

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

**Background Information**

On September 22, 2004, then-Governor James E. McGreevey issued E.O. 134, the purpose of which was to insulate the negotiation and award of State contracts from political contributions that posed a risk of improper influence, purchase of access or the appearance thereof. To this end, E.O. 134 prohibited State departments, agencies and authorities from entering into contracts exceeding \$17,500 with individuals or entities that made certain political contributions. E.O. 134 was superseded by Public Law 2005, c. 51, signed into law on March 22, 2005 ("Chapter 51").

On September 24, 2008, Governor Jon S. Corzine issued E.O. 117 which is designed to enhance New Jersey's efforts to protect the integrity of procurement decisions and increase the public's confidence in government. The Executive Order builds upon the provisions of Chapter 51.

**Two-Year Certification Process**

Upon approval by the State Chapter 51 Review Unit, the Certification and Disclosure of Political Contributions form is valid for a two (2) year period. Thus, if a vendor receives approval on January 1, 2014, the certification expiration date would be December 31, 2015. Any change in the vendor's ownership status and/or political contributions during the two-year period will require the submission of new Chapter 51/Executive Order 117 forms to the State Review Unit. **Please note that it is the vendor's responsibility to file new forms with the State should these changes occur.**

**State Agency Instructions:** Prior to the awarding of a contract, the State Agency should first use NJSTART (<https://www.njstart.gov/bso/>) to check the status of a vendor's Chapter 51 certification before contacting the Review Unit's mailbox at [CD134@treas.nj.gov](mailto:CD134@treas.nj.gov). If the State Agency does not find any Chapter 51 Certification information in NJSTART and/or the vendor is not registered in NJSTART, then the State Agency should send an e-mail to [CD134@treas.nj.gov](mailto:CD134@treas.nj.gov) to verify the certification status of the vendor. If the response is that the vendor is NOT within an approved two-year period, then forms must be obtained from the vendor and forwarded for review. If the response is that the vendor is within an approved two-year period, then the response so stating should be placed with the bid/contract documentation for the subject project.

**Instructions for Completing the Form**

**Part 1: BUSINESS ENTITY INFORMATION**

**Business Name** – Enter the full legal name of the vendor, including trade name if applicable.

**Address, City, State, Zip and Phone Number** -- Enter the vendor's street address, city, state, zip code and telephone number.

**Vendor Email** – Enter the vendor's primary email address.

**Vendor FEIN** – Please enter the vendor's Federal Employment Identification Number.

**Business Type** - Check the appropriate box that represents the vendor's type of business formation.

**Listing of officers, shareholders, partners or members** - Based on the box checked for the business type, provide the corresponding information. (A complete list must be provided.)

## **Part 2: DISCLOSURE OF CONTRIBUTIONS**

Read the three types of political contributions that require disclosure and, if applicable, provide the recipient's information. The definition of "Business Entity/Vendor" and "Contribution" can be found on pages 3 and 4 of this form.

**Name of Recipient** - Enter the full legal name of the recipient.

**Address of Recipient** - Enter the recipient's street address.

**Date of Contribution** - Indicate the date the contribution was given.

**Amount of Contribution** - Enter the dollar amount of the contribution.

**Type of Contribution** - Select the type of contribution from the examples given.

**Contributor's Name** - Enter the full name of the contributor.

**Relationship of the Contributor to the Vendor** - Indicate the relationship of the contributor to the vendor. (e.g. officer or shareholder of the company, partner, member, parent company of the vendor, subsidiary of the vendor, etc.)

**NOTE:** If form is being completed electronically, click "Add a Contribution" to enter additional contributions. Otherwise, please attach additional pages as necessary.

Check the box under the recipient information if no reportable contributions have been solicited or made by the business entity. **This box must be checked if there are no contributions to report.**

## **Part 3: CERTIFICATION**

Check Box A if the representative completing the Certification and Disclosure form is doing so on behalf of the business entity and all individuals and/or entities whose contributions are attributable to the business entity.

**(No additional Certification and Disclosure forms are required if BOX A is checked.)**

Check Box B if the representative completing the Certification and Disclosure form is doing so on behalf of the business entity and all individuals and/or entities whose contributions are attributable to the business entity with the exception of those individuals and/or entities that submit their own separate form. For example, the representative is not signing on behalf of the vice president of a corporation, but all others. The vice president completes a separate Certification and Disclosure form. **(Additional Certification and Disclosure forms are required from those individuals and/or entities that the representative is not signing on behalf of and are included with the business entity's submittal.)**

Check Box C if the representative completing the Certification and Disclosure form is doing so on behalf of the business entity only. **(Additional Certification and Disclosure forms are required from all individuals and/or entities whose contributions are attributable to the business entity and must be included with the business entity submittal.)**

Check Box D when a sole proprietor is completing the Certification and Disclosure form or when an individual or entity whose contributions are attributable to the business entity is completing a separate Certification and Disclosure form.

**Read the five statements of certification prior to signing.**

The representative authorized to complete the Certification and Disclosure form must sign and print her/his name, title or position and enter the date.

### **State Agency Procedure for Submitting Form(s)**

The State Agency should submit the completed and signed Two-Year Vendor Certification and Disclosure forms either electronically to: [cd134@treas.nj.gov](mailto:cd134@treas.nj.gov) or regular mail at: Chapter 51 Review Unit, P.O. Box 230, 33 West State Street, Trenton, NJ 08625-0230. Original forms should remain with the State Agency and copies should be sent to the Chapter 51 Review Unit.

### **Business Entity Procedure for Submitting Form(s)**

The business entity should return this form to the contracting State Agency.

The business entity can submit the Certification and Disclosure form directly to the Chapter 51 Review Unit only when:

- The business entity is approaching its two-year certification expiration date and is seeking certification renewal;
- The business entity had a change in its ownership structure; OR
- The business entity made any contributions during the period in which its last two-year certification was in effect, or during the term of a contract with a State Agency.

### **Questions & Information**

Questions regarding Public Law 2005, Chapter 51 (N.J.S.A. 19:44A-20.13) or E.O. 117 (2008) may be submitted electronically through the Division of Purchase and Property website at: <https://www.state.nj.us/treas/purchase/eo134questions.shtml>.

Reference materials and forms are posted on the Political Contributions Compliance website at: <http://www.state.nj.us/treasury/purchase/execorder134.shtml>.



Two-Year Chapter 51/Executive Order 117 Vendor Certification  
and Disclosure of Political Contributions  
FORM # 4

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

**FOR STATE USE ONLY**

Solicitation, RFP, or Contract No. \_\_\_\_\_ Award Amount \_\_\_\_\_

Description of Services \_\_\_\_\_

State Agency Name \_\_\_\_\_ Contact Person \_\_\_\_\_

Phone Number \_\_\_\_\_ Contact Email \_\_\_\_\_

☐ Check if the Contract / Agreement is Being Funded Using FHWA Funds

**Please check if requesting  
recertification ☐**

**Part 1: Business Entity Information**

Full Legal Business Name \_\_\_\_\_  
(Including trade name if applicable)

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ Phone \_\_\_\_\_

Vendor Email \_\_\_\_\_ Vendor FEIN (SS# if sole proprietor/natural person) \_\_\_\_\_

**Check off the business type and list below the required information for the type of business selected.  
MUST BE COMPLETED IN FULL**

- ☐ Corporation: LIST ALL OFFICERS and any 10% and greater shareholder (If the corporation only has one officer, please write
- ☐ Professional Corporation: LIST ALL OFFICERS and ALL SHAREHOLDERS "sole officer" after the officer's name.)
- ☐ Partnership: LIST ALL PARTNERS with any equity interest
- ☐ Limited Liability Company: LIST ALL MEMBERS with any equity interest
- ☐ Sole Proprietor

Note: "Officers" means President, Vice President with senior management responsibility, Secretary, Treasurer, Chief Executive Officer or Chief Financial Officer of a corporation, or any person routinely performing such functions for a corporation.

Also Note: "N/A will not be accepted as a valid response. Where applicable, indicate "None."

**All Officers of a Corporation or PC**

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**10% and greater shareholders of a corporation  
or all shareholders of a PC**

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**All Equity partners of a Partnership**

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**All Equity members of a LLC**

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If you need additional space for listing of Officers, Shareholders, Partners or Members, please attach separate page.

**Part 2: Disclosure of Contributions by the business entity or any person or entity whose contributions are attributable to the business entity.**

1. **Report below all contributions solicited or made during the 4 years immediately preceding the commencement of negotiations or submission of a proposal to any:**

Political organization organized under Section 527 of the Internal Revenue Code and which also meets the definition of a continuing political committee as defined in N.J.S.A. 19:44A-3(n)

2. **Report below all contributions solicited or made during the 5 ½ years immediately preceding the commencement of negotiations or submission of a proposal to any:**

Candidate Committee for or Election Fund of any Gubernatorial or Lieutenant Gubernatorial candidate  
State Political Party Committee  
County Political Party Committee

3. **Report below all contributions solicited or made during the 18 months immediately preceding the commencement of negotiations or submission of a proposal to any:**

Municipal Political Party Committee  
Legislative Leadership Committee

Full Legal Name of Recipient \_\_\_\_\_

Address of Recipient \_\_\_\_\_

Date of Contribution \_\_\_\_\_ Amount of Contribution \_\_\_\_\_

Type of Contribution (i.e. currency, check, loan, in-kind) \_\_\_\_\_

Contributor Name \_\_\_\_\_

Relationship of Contributor to the Vendor \_\_\_\_\_

**If this form is not being completed electronically, please attach additional contributions on separate page.  
Click the "Add a Contribution" tab to enter additional contributions.**

Remove Contribution

Add a Contribution

☐ **Check this box only if no political contributions have been solicited or made by the business entity or any person or entity whose contributions are attributable to the business entity.**

**Part 3: Certification** (Check one box only)

- (A) ☐ I am certifying on behalf of the business entity and all individuals and/or entities whose contributions are attributable to the business entity as listed on Page 1 under **Part 1: Vendor Information**.
- (B) ☐ I am certifying on behalf of the business entity and all individuals and/or entities whose contributions are attributable to the business entity as listed on Page 1 under **Part 1: Vendor Information**, except for the individuals and/or entities who are submitting separate Certification and Disclosure forms which are included with this submittal.
- (C) ☐ I am certifying on behalf of the business entity only; any remaining persons or entities whose contributions are attributable to the business entity (as listed on Page 1) have completed separate Certification and Disclosure forms which are included with this submittal.
- (D) ☐ I am certifying as an individual or entity whose contributions are attributable to the business entity.

I hereby certify as follows:

1. **I have read the Information and Instructions accompanying this form prior to completing the certification on behalf of the business entity.**
2. **All reportable contributions made by or attributable to the business entity have been listed above.**

**3. The business entity has not knowingly solicited or made any contribution of money, pledge of contribution, including in-kind contributions, that would bar the award of a contract to the business entity unless otherwise disclosed above:**

- a) Within the 18 months immediately preceding the commencement of negotiations or submission of a proposal for the contract or agreement to:
- (i) A candidate committee or election fund of any candidate for the public office of Governor or Lieutenant Governor or to a campaign committee or election fund of holder of public office of Governor or Lieutenant Governor; OR
  - (ii) Any State, County or Municipal political party committee; OR
  - (iii) Any Legislative Leadership committee.
- b) During the term of office of the current Governor or Lieutenant Governor to:
- (i) A candidate committee or election fund of a holder of the public office of Governor or Lieutenant Governor; OR
  - (ii) Any State or County political party committee of the political party that nominated the sitting Governor or Lieutenant Governor in the last gubernatorial election.
- c) Within the 18 months immediately preceding the last day of the sitting Governor or Lieutenant Governor's first term of office to:
- (i) A candidate committee or election fund of the incumbent Governor or Lieutenant Governor; OR
  - (ii) Any State or County political party committee of the political party that nominated the sitting Governor or Lieutenant Governor in the last gubernatorial election.

**4. During the term of the contract/agreement the business entity has a continuing responsibility to report, by submitting a new Certification and Disclosure form, any contribution it solicits or makes to:**

- (a) Any candidate committee or election fund of any candidate or holder of the public office of Governor or Lieutenant Governor; OR
- (b) Any State, County or Municipal political party committee; OR
- (c) Any Legislative Leadership committee.

The business entity further acknowledges that contributions solicited or made during the term of the contract/agreement may be determined to be a material breach of the contract/agreement.

**5. During the two-year certification period the business entity will report any changes in its ownership structure (including the appointment of an officer within a corporation) by submitting a new Certification and Disclosure form indicating the new owner(s) and reporting said owner(s) contributions.**

I certify that the foregoing statements in Parts 1, 2 and 3 are true. I am aware that if any of the statements are willfully false, I may be subject to punishment.

Signed Name \_\_\_\_\_ Print Name \_\_\_\_\_

Title/Position \_\_\_\_\_ Date \_\_\_\_\_

**Procedure for Submitting Form(s)**

**The contracting State Agency should submit this form to the Chapter 51 Review Unit** when it has been required as part of a contracting process. The contracting State Agency should submit a copy of the completed and signed form(s), to the Chapter 51 Unit and retain the original for their records.

**The business entity should return this form to the contracting State Agency.** The business entity can submit this form directly to the Chapter 51 Review Unit only when it -

- Is approaching its two-year certification expiration date and wishes to renew certification;
- Had a change in its ownership structure; OR
- Made any contributions during the period in which its last two-year certification was in effect, or during the term of a contract with a State Agency.

**Forms should be submitted either electronically to: [cd134@treas.nj.gov](mailto:cd134@treas.nj.gov) , or regular mail at: Chapter 51 Review Unit, P.O. Box 230, 33 West State Street, Trenton, NJ 08625.**



DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

FORM # 5

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 # 6**

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: \_\_\_\_\_



# 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' 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.