



COUNTY OF UNION

DEPARTMENT OF ENGINEERING, PUBLIC WORKS & FACILITIES MANAGEMENT

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RICARDO S. MATIAS
PE, CME, CFM
County Engineer
Director, Division of Engineering

MEMORANDUM

TO: All Potential Bidders

FROM: Ricardo S. Matias, PE, CME, CFM, 
County Engineer
Director / Division of Engineering

DATE: August 30, 2023

RE: **ADDENDUM NUMBER 1**
New Annex Courthouse Roof Replacement
City of Elizabeth, County of Union, New Jersey
BA# 10-2023,
Union County Engineering Project # 2022-003

Attached is Addendum Number 1 dated August 30, 2023 for the above referenced project.

Please note that the attached "Addendum Number 1" form must be completed and submitted in addition to the Addendum form included in the project specifications.

DIVISION OF ENGINEERING

2325 South Avenue

Scotch Plains, NJ 07076

(908)789-3675

fax(908)789-3674

www.ucnj.org

We're Connected to You!

BIDDER'S NAME: _____

ACKNOWLEDGMENT OF ADDENDUM

ADDENDUM NUMBER 1

DATED: August 30, 2023

COUNTY OF UNION

**New Annex Courthouse Roof Replacement
City of Elizabeth, County of Union,
Union County Engineering Project# 2022-003**

**UC Engineering Project# 2022-003
BA# 10-2023**

Pursuant to N.J.S.A. 40A:11-23.1a., the undersigned bidder, hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the County of Union's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid.

Union County is issuing Addendum #1 for the above mentioned project as described below:

Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick-up, etc.)	Date Received
<u>ADDENDUM NUMBER 1:</u>		
See the attached Addendum #1 (11 page) from Netta Architects dated August 29, 2023.		

ACKNOWLEDGMENT BY BIDDER:

NAME OF BIDDER: _____

ORIGINAL SIGNATURE: _____

PRINTED NAME AND TITLE: _____

DATE: _____

UC NEW ANNEX COURTHOUSE – ROOF REPLACEMENT:

9 Elizabethtown Plaza
Elizabeth, NJ

ADDENDUM NO. 1

Project No. 2221736

Date: August 29, 2023

The Following Additions, Deletions And Modifications Are Hereby Made A Part Of The Contract Documents.

REFERENCED GENERAL QUESTIONS:

The following is a question pertaining to the Issued for project documents dated **August 10, 2023**, and is as indicated below:

1. Question: What is the overall approximate height of the building to the top of the penthouse roof?
Response: the overall building height from the rear parking area to the top of the penthouse roof is approximately 92'-0".

THE FOLLOWING PROJECT SPECIFICATION SECTION WAS REVISED:

The following Bid Specification Section dated **August 10, 2023**, was revised as indicated below:

1. Specification Section 011000- Summary of Work:
 - A. A note was added to this Specification Section in 1.3.D, regarding the requirement of the County of Union that ALL contractors (both General Contractors and their Sub-Contractors) and their personnel be vetted through a fingerprinting based background check prior to permitted entry into the County Facility.

THE FOLLOWING PROJECT DRAWINGS WERE REVISED:

The following Bid Drawings dated **August 10, 2023**, were revised as indicated below:

1. Drawing #G.001:
 - B. The note regarding the Personnel/Material Transport Platform was revised to include a model number and manufacturer for the transport platform. In addition, a temporary code compliant access platform, stairs and railings was added to provide access from the transport platform across the top of the coping and down to the main roof.
2. Drawing #D.101:
 - A. The following information was added to this drawing: The removal of the abandoned electrical conduit located under the inboard side of the overhang of the main roof coping, and the temporary removal and support of the electrical conduits located on the inboard side face of the main roof copings. Temporarily remove and store the lighting



fixtures and associated conduits attached to the top of the main roof coping as indicated on the drawings.

3. Drawing #A.101:
 - A. The following information was added to this drawing: the reinstallation of the temporarily removed electrical conduits located on the inboard side face of the main roof copings. Reinstallation of the temporarily removed and stored lighting fixtures and associated conduits to the top of the main roof coping as indicated on the drawings. Scraping and painting of the existing steel dunnage located on the penthouse roof in its entirety.

ATTACHMENTS:

1. Pre-Bid Sign in Sheet.
2. Revised Specification Section 011000-Summary of Work.
2. Revised Drawings Dated 8.29.23; G.001, D.101 and A.101.

Netta Architects

George Tortora, Project Manager



NETTAR PROJECTS

ATTENDANCE SHEET

JOB NAME: UC-New Annex Courthouse Roof Replacement Project Pre-Bid Meeting, August 22, 2023
JOB NO.: NA-2221736

NAME	COMPANY / ADDRESS	TELEPHONE/FAX	E-MAIL
Michael Urban	D.A. NOEL, INC. 53 CROSS KEYS RD, BERLIN NJ	(856) 755-9333	Math@DANOEL.COM
Mike Ruth	JPRATH 365 Teetseman Saddlebrook	973 478 6200	MRuth@Teetseman.com
Mike Duesied	U.S. 9th east Roof Maintenance 6th Coleraine St Saddlebrook	732-742-2120	info@NERM-INC.COM

1084 Route 22 West, Mountainside, NJ, 07092
Tel: 973.379.0006 Fax: 973.379.1061 Email: info@nettaarchitects.com
Z:\C_NETTA PROJECTS ADMIN AND DRAWING\2022 PROJECTS\2221736 UC New Annex Courthouse Roof Replacement 08.19.22\DWG\Attendance Sheet UC-Courthouse Roof Pre-Bid Mtg.docx

August 10, 2023
Issued for Bid
(Revised 8.29.23-Addendum No. 1)

Roof Replacement
at the Union County
New Annex Courthouse,
Elizabeth, NJ

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Access to site and roof.
4. Work restrictions and Employee Screening and Identification.
5. Specification and drawing conventions.

B. Related Requirements:

1. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

A. Project Identification: Roof Replacement at the Union County New Annex Courthouse:

1. Project Location: 9 Elizabeth Plaza, Elizabeth, New Jersey 07201.

B. Owner: Union County, Department of Engineering & PW, 2325 South Avenue, Scotch Plains, New Jersey 07076.

1. Owner's Representative: Matthew Ferraro, LEED AP, Project Manager.

C. Architect: Netta Architects, 1084 Route 22 West, Mountainside, New Jersey 07092.

D. *"Due to the level of importance, the County of Union would like to highlight the following requirement for all bidders and the Contractor awarded the project: It is the requirement of the County of Union that ALL contractors (both General Contractors and their Sub-Contractors) and their personnel be vetted through a fingerprinting based background check process prior to being permitted entry into the County facility(s) and the commencement of the proposed work. This includes access to the site for any exterior work scheduled. Please see Specification Section 011000.1.8 Work Restrictions for more information."* (Addendum No. 1)

SUMMARY

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1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the removal and replacement of roofing. Scope of work includes, but is not necessarily limited to the following:
1. Roofing demolition and removal;
 2. Patching of existing abandoned roof openings;
 3. Replacement of roof drains and sump flashing, and flush out the roof leaders;
 4. Installation of new roof scuppers and downspouts on the penthouse roof;
 5. Insulated SBS modified bituminous roofing system;
 6. Sheet metal flashings;
 7. Associated joint sealant and miscellaneous carpentry work.
 8. Remove and provide sealant in the transverse joints at the precast concrete copings.
 9. Remove and replace the fixed roof ladder.
 10. Raise the penthouse base flashings and provide reglet type counter flashings.
 11. Remove all abandoned pitch pockets and replace the existing pitch pockets.
- B. Provide a Temporary Personnel/Material Transport Platform at the rear of the Building, as indicated on contract drawing G-001. This Transport Platform shall be used for providing Construction Workers access to the roof due to security requirements within the building. The Contractor shall determine if they will also use it for bringing material to the roof; or if they will be utilizing a temporary crane for bringing the material to the roof.
- C. The Contractor's Construction Vehicles can park within their Staging Area, and/or on the Church's Paved parking areas. The exact locations are to be coordinated with the Owner and the Church. The Contractor's personnel vehicles can park within the nearby public parking deck.
- D. The Roofing Work shall not commence until the Contractor has all approved roofing materials on site.
- E. The Contractor's staging area, dumpster and crane if they decide to utilize a crane for bringing materials to the roof, will be located on the adjacent First Presbyterian Church property, as indicated on Dwg G-001. Therefore the Contractor shall include on their Certificate of Insurance Statement that the First Presbyterian Church is Additionally Insured. The following wording shall be added to the Certificate of Insurance Statement for the Church:
"Siloam-Hope First Presbyterian Church, Snyder Academy and Old First Historic Trust".

1.5 ITEMS REQUIRING PROJECT COORDINATION:

1. Union County will retain an Air Monitoring Company to conduct air sampling while the roofing materials are being abated. The Contractor shall coordinate the roof abatement work with the Air Monitoring Company.
2. The Contractor shall coordinate with Union County and the Courthouse Building Personnel to temporary cover all air intake ducts, fans, etc. Provide a (7) day minimum notice to Union County prior to commencing the roof abatement work.

1.6 TYPE OF CONTRACT:

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

1.7 ACCESS TO SITE AND ROOF

- A. General: The building will be fully occupied during construction. The Contractor shall have use of Project site for construction operations during construction period. The Contractor shall coordinate their access with the Owner's representative.

SUMMARY

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August 10, 2023
Issued for Bid
(Revised 8.29.23-Addendum No. 1)

Roof Replacement
at the Union County
New Annex Courthouse,
Elizabeth, NJ

- B. Access to roof shall be from the exterior only as noted in Section 1.4.B above.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.8 WORK RESTRICTIONS

A. **Employee Screening and Identification:**

- 1. It is the requirement of the County of Union that ALL contractors (both General Contractors and their sub-contractors) and their personnel be vetted through a fingerprint based background check process prior to being permitted entry into the County facility(s) and the commencement of the proposed work.
- 2. It is the responsibility of the General Contractor or vendor in charge, to make sure that all personnel who will be working in and around the County facility contact the State of New Jersey, Department of Law & Public Safety, Division of State Police Criminal Information Unit at (609) 822-2000, Ext. 2918 or visit their website at <https://njsp.org/criminal-history-records/>, and follow the instructions to obtain a copy of each person's "Individual Criminal History Record".

PLEASE NOTE: ALL FEES & TIME ASSOCIATED IN COMPLETING THIS PROCESS ARE THE SOLE RESPONSIBILITY OF THE APPLICANT AND/OR THEIR AFFILIATES (E.G. GENERAL CONTRACTOR AND/OR SUBCONTRACTORS).

Once obtained, original sealed records (no copies) shall be sent/delivered to the Union County Sheriff's Office at the following address:

Union County Sheriff's Office
2 Broad Street, Control Center
Elizabeth, NJ 07207
908-527-4440

- 3. Upon completion of the review and processing of the information received, the Union County Sheriff's Office will issue identification cards to all contractors' personnel authorized in to the County facility to conduct work activities. It is the responsibility of the General Contractor or vendor in charge of the proposed work to maintain a current and accurate list of any and all screened and approved personnel with the Union County Sheriff's Office.
 - 4. **THE COUNTY OF UNION SHALL NOT BE RESPONSIBLE FOR ANY DELAYS AND/OR DAMAGES EITHER DIRECTLY OR INDIRECTLY RESULTING FROM THE FAILURE TO COMPLY WITH THESE REQUIREMENTS BY ANY GENERAL CONTRACTOR OR VENDOR IN CHARGE.**
- B. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
 - C. On-Site Work Hours: Limit work in the existing building to normal business working hours as outlined in the General Conditions, unless otherwise indicated.

SUMMARY

011000 - 3

- D. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 - 1. Notify Architect and Owner not less than two days in advance of proposed utility interruptions.
 - 2. Obtain Architect's or Owner's written permission before proceeding with utility interruptions.
 - E. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 - 1. Notify Architect and Owner not less than two days in advance of proposed disruptive operations.
 - F. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.
 - G. Controlled Substances: Use of tobacco products and other controlled substances within the existing building and on Project site is not permitted.
 - H. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.
- 1.9 SPECIFICATION AND DRAWING CONVENTIONS
- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
 - B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
 - C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
 - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 - 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
 - 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

August 10, 2023
Issued for Bid
(Revised 8.29.23-Addendum No. 1)

Roof Replacement
at the Union County
New Annex Courthouse,
Elizabeth, NJ

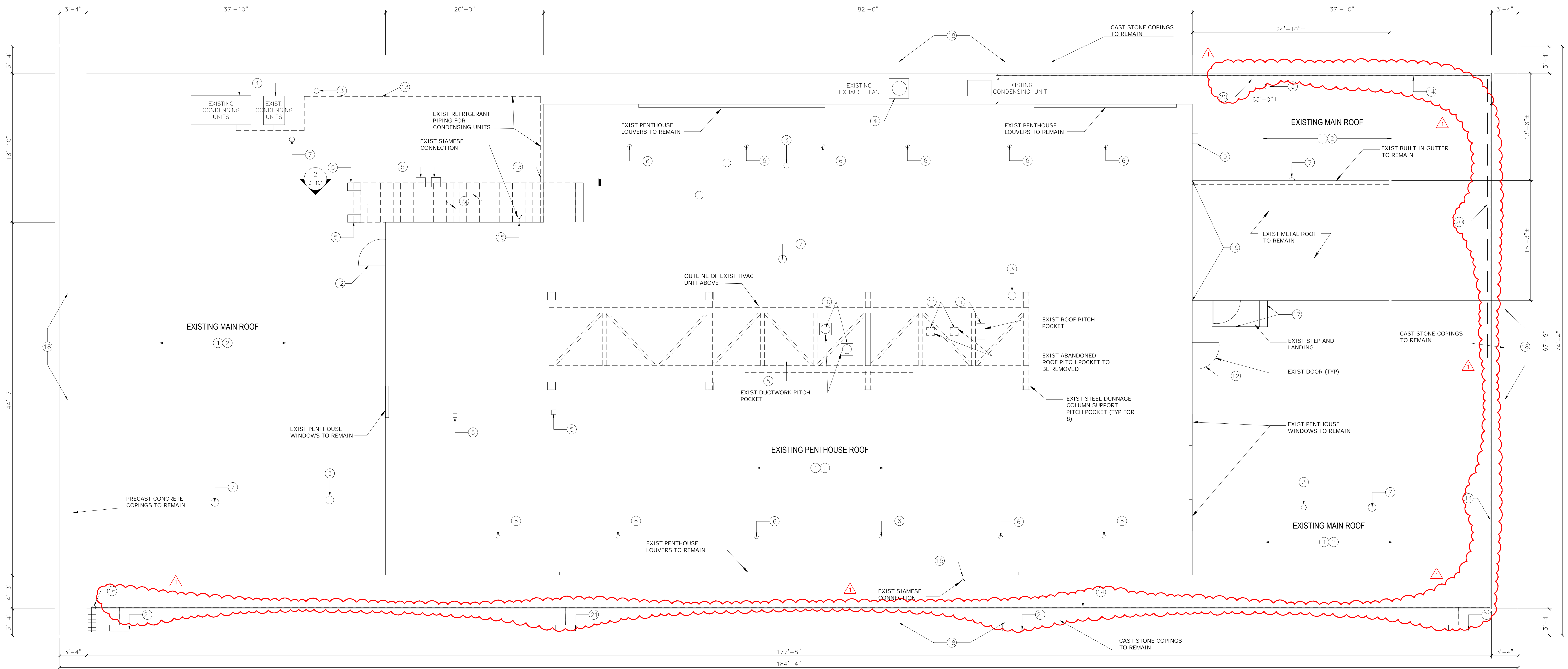
PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SUMMARY

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1 ROOF DEMOLITION PLAN
 D.101 SCALE: 3/16"=1'-0"

GENERAL DEMOLITION NOTES:

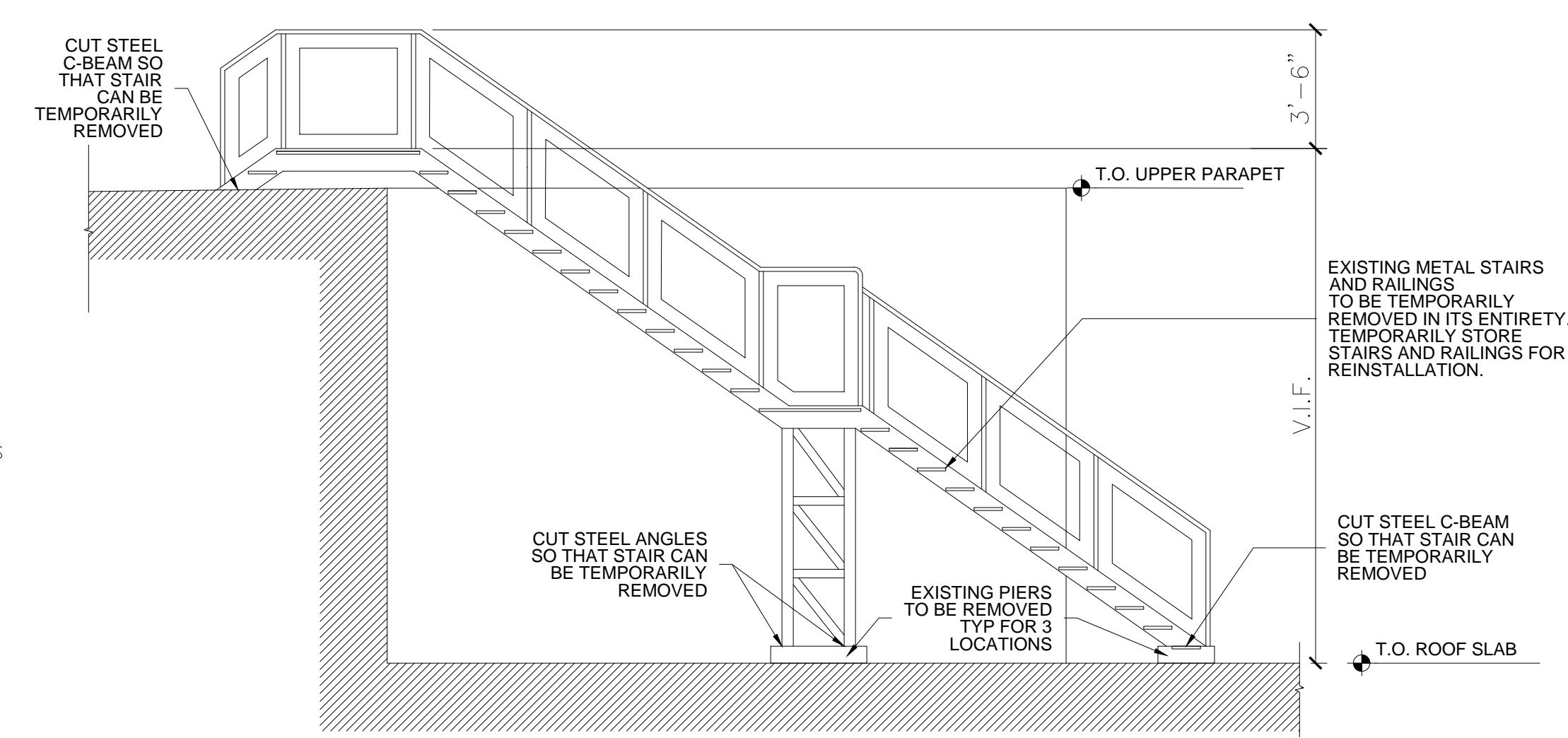
- ALL DAMAGES DURING DEMOLITION WORK TO THE EXISTING FACILITY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND ALL DAMAGES TO BE REPAIRED AT THEIR OWN EXPENSES.
- BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL SET UP A SCHEDULE OF OPERATIONS WITH THE DIRECTOR OF FACILITIES, COORDINATING PERFORMANCE OF ALL WORK WITHIN THE OPERATION SCHEDULE OF THE FACILITY.
- THERE SHALL BE NO INTERRUPTION OF THE EXISTING PLUMBING, MECHANICAL, ELECTRICAL SERVICES WITHOUT PRIOR CONSENT OF THE OWNER'S REPRESENTATIVE. SUCH INTERRUPTION SHALL BE KEPT TO A MINIMUM AND SHALL BE CLOSELY SCHEDULED WITH THE FACILITY.
- ALL DEMOLITION OPERATIONS SHALL BE COORDINATED WITH APPLICABLE UTILITY COMPANIES WHERE REQUIRED.
- SELECTIVE DEMOLITION TAGS ARE KEPT ON THIS DRAWINGS TO INDICATE THE DEMOLITION SCOPE OF WORK AND REPRESENT AREAS OF SIGNIFICANT WORK. HOWEVER, THEY DO NOT RELIEVE THE CONTRACTOR OF ANY ADDITIONAL WORK OF SIMILAR SCOPE AND NATURE IDENTIFIED THROUGH FIELD INVESTIGATIONS.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED DEMOLITION PERMITS PRIOR TO BEGINNING ANY WORK.
- DEMOLITION PERMITS ARE REQUIRED PRIOR TO BEGINNING OF ANY REMOVAL OR RELOCATION OF EXISTING EQUIPMENT, MATERIALS, APPURTENANCES, ETC. AS INDICATED ON THE DRAWINGS OR AS HEREIN SPECIFIED OR REQUIRED. THESE CONDITIONS MAY OCCUR DURING THE PHASING OF THE RE-ROOFING SCOPE OF WORK.
- THE CONTRACTOR SHALL KEEP THE SITE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY THE WORK. UPON COMPLETION OF THE CONTRACT, THE CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE THE SITE IN THE SAME CONDITION AS BEFORE COMMENCEMENT OF THE WORK.
- THE CONTRACTOR SHALL CAREFULLY MAKE ALL INVESTIGATIONS IN THE FIELD PRIOR TO SUBMITTING THEIR BID. THEIR BID SHALL REFLECT ALL WORK NECESSARY FOR THE COMPLETE ROOF REPLACEMENT AT THE EXISTING BUILDING.
- ANY ITEMS NOT SPECIFICALLY IDENTIFIED BUT REQUIRED TO BE REMOVED OR REPAIRED TO PREPARE THE BUILDING FOR NEW WORK OR TO OTHERWISE PRODUCE THE FINISHED PRODUCT SHOWN IN THE CONTRACT DOCUMENTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SCOPE OF DEMOLITION WORKS:

- REMOVE EXISTING ROOF SYSTEM AND BASE FLASHINGS TO EXPOSE EXISTING CONCRETE DECKING, SUBSTRATE AND WALL SUBSTRATE.
- EXAMINE EXISTING SUBSTRATE AND NOTIFY ARCHITECT OF ANY DAMAGE, DETERIORATION, OR DEFICIENCIES. REPLACE ANY AND ALL UNSUITABLE SUBSTRATE IN ACCORDANCE WITH THE UNIT PRICE SCHEDULE AND REQUIREMENTS INDICATED WITHIN THE PROJECT MANUAL.
- REMOVE EXISTING METAL FLASHINGS, COUNTER FLASHINGS AND TRIM.
- REMOVE EXISTING METAL ROOF EDGE SYSTEM, METAL TERMINATION BARS, COUNTER FLASHINGS, PITCH POCKETS, WALL FLASHINGS, SEALANTS AND ADHESIVES.
- REMOVE EXISTING PERIMETER CANTS AND TAPERED EDGE STRIPS.
- REMOVE ALL EXISTING ROOF CURBS, CURB FLASHINGS AND CAPS.
- RAISE HEIGHT OF ALL EXISTING ROOF CURB FLASHINGS TO A MINIMUM OF 8-INCHES ABOVE THE TOP SURFACE OF THE ROOFING SYSTEM AS INDICATED ON DRAWINGS.
- REMOVE EXISTING WOOD NAILERS AND BLOCKING.
- CLEAN EXISTING SUBSTRATE OF DUST, DEBRIS, SHARP PROJECTIONS AND / OR OTHER SUBSTANCES DETRIMENTAL TO THE ROOFING SYSTEM.
- SEAL ALL PENETRATIONS THROUGH EXISTING SUBSTRATES WITH SPRAY FOAM INSULATION.
- PROVIDE WEATHER PROTECTION DURING ALL PHASES OF CONSTRUCTION TO EXISTING BUILDING.
- REMOVE EXISTING METAL GRAVEL STOP, AND FLASHINGS.
- REMOVE EXISTING ROOF DRAINS ON PENTHOUSE ONLY. REMOVE CLAMPING RINGS, STRAINER AND BOLTS AT THE MAIN ROOF. REMOVE ENTIRE ROOD DRAIN AT THE WALL OF THE METAL BUILDING.
- REMOVE ALL EXISTING WOOD NAILERS.
- REMOVE ALL EXISTING FASTENERS IN THE ROOF DECK.
- REMOVE ALL EXISTING PITCH POCKETS.
- RAISE ALL EQUIPMENT CURBS TO A MINIMUM OF 8" ABOVE THE TOP SURFACE OF THE NEW BUILT UP ROOFING SYSTEM.
- EXISTING ROOF MOUNTED EQUIPMENT SHALL BE TEMPORARILY REMOVED TO FACILITATE THE INSTALLATION OF THE NEW ROOFING SYSTEM AND FLASHINGS. OPENINGS SHALL BE MAINTAINED WEATHERTIGHT AT ALL TIMES. COORDINATE SHUTDOWN AND REINSTALLATION OF ALL EQUIPMENT WITH FACILITY. VERIFY PROPER OPERATION OF EQUIPMENT AFTER REINSTALLATION.
- THE CONTRACTOR SHALL REMOVE EXISTING ABANDONED DUCTS, CURBS, ETC. INCLUDING ALL ASSOCIATED APPURTENANCES AND SHALL PROVIDE NEW FRAMING TO CLOSE ROOF OPENINGS AND ROOF OVER EXISTING OPENING WITH NEW SPECIFIED ROOFING SYSTEM.

DEMOLITION KEYNOTES:

- COMPLETELY REMOVE ROOFING SYSTEM IN ITS ENTIRETY DOWN TO THE STRUCTURAL CONCRETE ROOF DECK. PATCH DAMAGED AREAS OF CONCRETE DECK AS REQUIRED. NOTIFY THE ARCHITECT PRIOR TO REPAIRING THE DAMAGED CONCRETE DECK AND PHOTOGRAPH THE DAMAGED AREAS SO THE ARCHITECT CAN VERIFY ITS CONDITION AND DETERMINE THE EXTENT OF THE REQUIRED REPAIR. PROVIDE A UNIT PRICE FOR THE PATCHING OF THE CONCRETE ROOF DECK IN ACCORDANCE WITH THE PROJECT MANUAL.
- COMPLETELY REMOVE ALL WALL & ROOF MEMBRANE AND METAL FLASHING, FORMED FASCIA COVER & ASSEMBLY AND ROOF & BUILDING EXPANSION JOINTS, AND PREPARE ROOF AS REQUIRED TO RECEIVE NEW ROOFING SYSTEM AND ALL ASSOCIATED FLASHING TYPICAL.
- EXISTING VENT PIPES TO REMAIN. CONTRACTOR TO CLEAN AND PREPARE VENT PIPES AS REQUIRED TO RECEIVE NEW FLASHING AND SEALING.
- TEMPORARILY DISCONNECT AND REMOVE EXISTING EQUIPMENT AND STORE IN A SAFE LOCATION FOR REINSTALLATION. (REFER TO GENERAL DEMOLITION NOTE 18).
- TEMPORARILY REMOVE EXISTING PITCH POCKETS TO FACILITATE THE INSTALLATION OF THE NEW ROOFING SYSTEM.
- EXISTING ONE WAY ROOFING SYSTEM VENTS SHALL BE REMOVED WITH THE ROOFING SYSTEM.
- REMOVE EXISTING ROOF DRAINS, REFER TO DEMO NOTE #13
- TEMPORARILY REMOVE AND STORE EXISTING METAL STAIR TO FACILITATE ROOFING WORK. MODIFY EXISTING STAIR ROOF CURB DUE TO THE INCREASED HEIGHT OF NEW ROOFING SYSTEM. MODIFY THE STAIR AND TREADS AS REQUIRED.
- REMOVE THE EXISTING METAL LADDER TO THE PENTHOUSE.
- TEMPORARILY REMOVE AND REINSTALL EXISTING HVAC DUCTS TO FACILITATE THE INSTALLATION OF THE NEW ROOFING SYSTEM.
- REMOVE ABANDONED PITCH POCKETS
- EXISTING DOOR AND FRAME TO BE REMOVED. THE DOOR AND FRAME MUST BE RAISED AS REQUIRED, DUE TO THE INCREASED HEIGHT OF THE NEW ROOFING SYSTEM.
- REMOVE THE EXISTING ROOF AND WALL MOUNTED REFRIGERANT PIPING CONNECTED FOR THE A/C CONDENSING UNITS. REMOVE SUPPORTS.
- TEMPORARILY REMOVE AND SUPPORT EXISTING CONDUITS ATTACHED TO THE INBOARD SIDE FACE OF THE MAIN ROOF COPINGS TO FACILITATE THE ROOFING WORK.
- EXISTING SIAMESE CONNECTION TO REMAIN.
- TEMPORARILY REMOVE EXISTING ANTENNA TO FACILITATE THE ROOFING WORK AND STORE IN A SAFE PLACE. REINSTALL AT THE END OF CONSTRUCTION WORK AT THE SAME LOCATION. (REFER TO GENERAL DEMOLITION NOTE 18)
- CAREFULLY REMOVE AND STORE EXISTING METAL RAILINGS, STEPS AND LANDING PLATFORM AND SUPPORT POSTS ADJACENT TO THE METAL BUILDING TO FACILITATE ROOFING WORK AND DUE TO THE INCREASED HEIGHT OF THE ROOFING SYSTEM. RE-INSTALL IN ORIGINAL LOCATION
- REMOVE SEALANT FROM THE TRANSVERSE HORIZONTAL AND VERTICAL JOINTS AT THE PRECAST CONCRETE COPINGS AROUND THE PERIMETER OF THE MAIN ROOF (TYP). REMOVE APPROXIMATELY 260 L.F. TOTAL OF SEALANT FROM THE TRANSVERSE JOINTS. PROVIDE AN UNIT PRICE FOR SEALING THE TRANSVERSE JOINTS. REFER TO SPECIFICATION SECTION 012200-UNIT PRICES.
- REMOVE EXISTING JOINT, FLASHING AND BLOCKING FROM EXISTING DECK
- REMOVE THE DISCONNECTED AND ABANDONED CONDUIT LOCATED UNDER THE INBOARD SIDE OF THE OVERHANG OF THE MAIN ROOF COPING.
- TEMPORARILY REMOVE AND STORE THE EXISTING LIGHT FIXTURES AND ASSOCIATED CONDUITS ATTACHED TO THE TOP OF THE MAIN ROOF COPING.



2 EXISTING STEEL STAIRS - REMOVAL
 D.101 SCALE: 1/4"=1'-0"

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 NETTA ARCHITECTS, LLC.

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 LAURENCE K. UHER, AIA, LEED, AP
 NJ License No. AI 14394

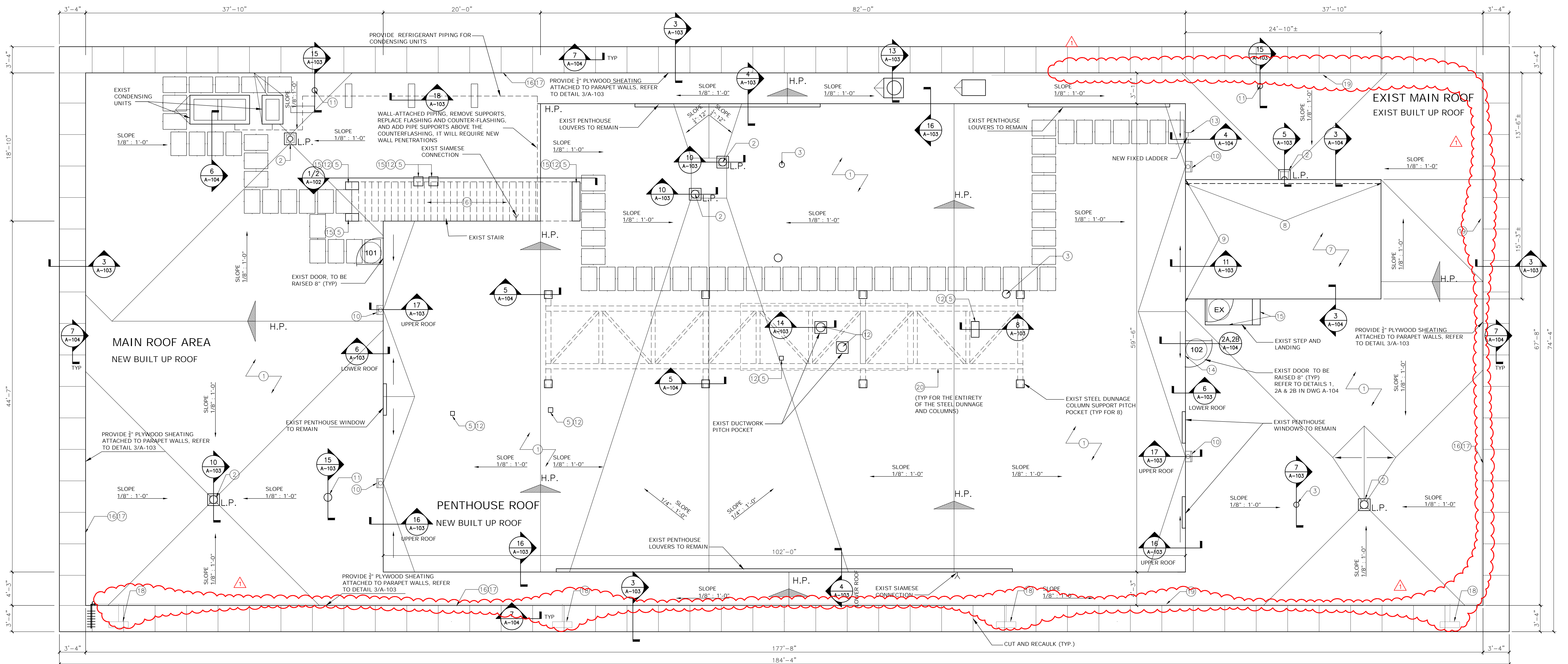
NETTA ARCHITECTS
 ARCHITECTURE - PLANNING - INTERIOR DESIGN
 1064 ROUTE 22 WEST, MOUNTAINSIDE, NEW JERSEY 07092
 TEL: 973.379.0096 FAX: 973.379.1061
 CERTIFICATE OF AUTHORIZATION AC-438

PROJECT:
UNION COUNTY ROOF REPLACEMENT
 NEW ANNEX COURTHOUSE
 9 ELIZABETHTOWN PLAZA, ELIZABETH, NJ 07201

SHEET CONTENTS:
ROOF DEMOLITION PLAN AND
TEMPORARY REMOVAL OF EXISTING
STAIR AND RAILINGS

SUBMISSIONS				REVISIONS				DATE
DATE	DESCRIPTION	BY	CHKD	DATE	DESCRIPTION	BY	CHKD	SCALE
08.10.23	ISSUED FOR BID	CC	GT	08.29.23	ADDENDUM NO. 1	CC	GT	09-09-22
								AS SHOWN
								DRWN BY SSA, CC
								CHKD BY GT
								JOB NO 2221736
								SHEET: 1 OF: 5
								DWG. NO.

D.101



1 ROOF PLAN
 A-101 SCALE: 3/16"=1'-0"
 N

CONSTRUCTION NOTES:

- PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING AT PERIMETER OF ROOF AND OTHER CONDITIONS AS INDICATED ON DRAWINGS.
- PROVIDE ROOF CURBS AND FLASHINGS AS INDICATED ON DRAWINGS TO A MINIMUM OF 12-INCHES ABOVE THE TOP SURFACE OF THE ROOFING SYSTEM. REPLACE ALL EXISTING SUPPORT RAILS. SECURE BOTTOM OF ROOF CURBS & RAILS DIRECTLY TO EXISTING SUBSTRATE ON WOOD BLOCKING TO NEW REQUIRED INSULATION HEIGHT.
- PRIME EXISTING DECK SUBSTRATE. PROVIDE A 1-PLY APPLICATION OF A TRI-LAMINATE BASE SHEET VAPOR BARRIER TORCH APPLIED OVER PRIMED CONCRETE DECK SUBSTRATE. LOWER ALL DRAINS AS REQUIRED TO CREATE A SUMP.
- PROVIDE 1 LAYER OF 2.0' ISO-CYANURATE BOARD AS AN INSULATION BASE LAYER AND A 1/8-INCH PER FOOT TAPERED POLYISOCYANURATE INSULATION (w/ 1/2-INCH LEADING EDGE), AS INDICATED ON DRAWINGS, SET-IN LOW-RISE URETHANE FOAM ADHESIVE w/ STAGGERED JOINTS. PROVIDE MINIMUM 2'-0" OVERLAP OVER ALL LAYERS OF INSULATION.
- PROVIDE 1/4-INCH PER FOOT SLOPED CRICKETS AT HIGH SIDE OF ROOF CURBS, PENETRATIONS, BETWEEN ROOF DRAINS AND AS INDICATED ON DRAWINGS, SET-IN LOW-RISE URETHANE ADHESIVE.
- PROVIDE 1/8-INCH-THICK COVER BOARD OVER INSULATION, SET-IN LOW-RISE URETHANE ADHESIVE.
- PROVIDE 2 BASE PLY TRI-LAMINATE SHEETS SET IN COLD PROCESS ADHESIVE OVER COVER BOARD AND CANT STRIPS. EXTEND MEMBRANE PLY SHEETS UP VERTICAL SURFACE OF WALL A OF MINIMUM 4-INCHES ABOVE TOP OF THE CANT.
- PROVIDE MINERAL SURFACE FIRE RATED CAP SHEET SET IN COLD PROCESS ADHESIVE. EXTEND MEMBRANE SHEET UP VERTICAL SURFACE. MINIMUM 4-INCHES ABOVE TOP OF THE CANT.
- PROVIDE FIRE RATED SBS CAP SHEET FLASHING MEMBRANE SET IN COLD PROCESS ADHESIVE OVER BASE PLY FLASHING SET IN COLD PROCESS ADHESIVE AT ALL INTERIOR AND EXTERIOR FLASHING CONDITIONS AND OTHER CONDITIONS AS INDICATED ON DRAWINGS.
- PROVIDE METAL TERMINATION BARS AND METAL COUNTER FLASHING AT WALL FLASHINGS AS INDICATED ON DRAWINGS. PROVIDE THE SAME DETAIL FOR ALL EXPOSED VERTICAL EDGE OF FLASHING CONDITIONS.
- PROVIDE PRE-MANUFACTURED CANT DAM EDGE METAL SYSTEM AS INDICATED ON DRAWINGS WITH EXTENDERS AND SCUPPERS AT PENTHOUSE ELEVATION ROOF.
- PROVIDE ROOF EXPANSION JOINT SYSTEMS, AND ANY AND ALL ACCESSORIES, AS INDICATED ON DRAWINGS.
- PROVIDE SHEET METAL FLASHING AND TRIM AS INDICATED ON DRAWINGS.
- PROVIDE ROLLED LEAD STACK FLASHING SLEEVE AT ALL EXISTING PIPING PENETRATIONS.
- PROVIDE WALKWAY PADS AS INDICATED ON DRAWINGS, SET IN FLASHING ADHESIVE.
- PROVIDE PRE-MANUFACTURED ADJUSTABLE PIPE SUPPORTS AT 5'-0" O.C. MAXIMUM.
- PROVIDE A 25 YEAR NDL ROOF SYSTEM EDGE TO EDGE WARRANTY.
- PROVIDE SHOP DRAWINGS FOR ALL DETAILS. DO NOT PROCEED WITH WORK WITH OUT WRITTEN APPROVAL OF ALL SUBMITTALS.
- REMOVE AND REPLACE BRICK AS NOTED ON THE DRAWINGS. PROVIDE NEW STAINLESS-STEEL COUNTER FLASHING.
- ALL METAL SHALL BE A MINIMUM OF .050 GAUGE KYNAR FINISH AT ALL LOCATIONS OR STAINLESS STEEL AS NOTED.
- PROVIDE NEW PITCH POCKETS FOR ACC UNITS AS INDICATED ON DRAWINGS. MODIFY REFRIGERANT PIPING, CONDUIT AND WIRING AS REQUIRED FOR PROPER INSTALLATION OF PITCH POCKETS.
- PROVIDE NEW CRICKETS AS INDICATED ON DRAWINGS. CRICKETS SHALL BE CONSTRUCTED TO DIVERT WATER AROUND CURBS AND TO PROMOTE POSITIVE DRAINAGE OFF THE ROOF. CRICKETS LOCATED AT FLAT SECTION OF ROOF SHALL CONSIST OF PRE-MANUFACTURED INSULATION, OF THE TYPE SPECIFIED AS PART OF THE ROOF ASSEMBLY SYSTEM, TO A SLOPE OF NOT LESS THAN 1/4" PER FOOT, UNLESS OTHERWISE NOTED.

PLAN LEGEND:

	NEW ROOF DRAIN
	NEW 2'x3' WALKING PAD
	NEW CRICKET/DIVERTER
H.P.	ROOF HIGH POINT
L.P.	ROOF LOW POINT

CONSTRUCTION KEYNOTES:

- PROVIDE AND INSTALL NEW SBS ROOF SYSTEM OVER TAPERED POLY-ISO INSULATION OVER VAPOR BARRIER TORCH APPLIED ON PRIMED CONCRETE ROOF DECK. REFER TO ROOF DETAILS ON DRAWING A-103 AND A-104 FOR ADDITIONAL INFORMATION. COORDINATE WITH SPECIFICATION SECTION 075114.
- PENTHOUSE ROOF - PROVIDE SUMP PAN TO MATCH CAST IRON DRAIN BODY HUB ASSEMBLY ALONG WITH CLAMPING RING AND CAST IRON DOME STRAINER, INCLUDING BOLTS. AT EXISTING ROOF DRAIN LOCATIONS, BASED OF DESIGN JR SMITH 1015 OR AN APPROVED EQUAL. SECURE NEW DRAIN HUB ASSEMBLY BODY TO EXISTING DRAIN PIPES. THE EXISTING ROOF DRAIN IS JOSAM 4414-4.
- 2A MAIN ROOF - PROVIDE CLAMPING RING, STRAINER AND BOLTS AT ALL EXISTING ROOF DRAINS LOCATIONS. EXCEPT AT THE METAL BUILDING EXISTING ROOF DRAINS LOCATIONS. EXCEPT AT THE METAL BUILDING EXISTING ROOF DRAINS LOCATIONS. EXCEPT AT THE METAL BUILDING EXISTING ROOF DRAINS LOCATIONS.
- PROVIDE AND INSTALL NEW VENT FLASHING AT ALL EXISTING PLUMBING SANITARY VENTS. REFER TO ROOF DETAIL 7/A-103 FOR ADDITIONAL INFORMATION.
- PROVIDE AND INSTALL NEW FLASHING AT ALL EXISTING ELECTRICAL CONDUIT, WATER LINE AND CHILLER LINES PIPES. REFER TO ROOF DETAILS ON DRAWING A-103 AND A-104 FOR ADDITIONAL INFORMATION.
- PROVIDE AND INSTALL FIELD FORMED PITCH POCKET AT EXISTING EQUIPMENT DUNNAGE SUPPORTS. REFER TO DETAIL 5/A104 FOR ADDITIONAL INFORMATION.
- RAISE THE HEIGHT OF THE EXISTING STAIR CONCRETE PIER SUPPORTS BY PROVIDING ADDITIONAL CONCRETE. REFER TO DETAIL 12 ON DWG A-103. SCRAPE AND PAINT STAIR AND RAILINGS AND MODIFY THEM ACCORDINGLY, AND REINSTALL.
- PROVIDE NEW ELASTOMERIC ACRYLIC COATING OVER THE ENTIRE METAL STANDING SEAM ROOFING ASSEMBLY TO SEAL OPENINGS WITHIN THE ROOF.
- MODIFY AND SEAL COAT THE ENTIRE EXISTING INTEGRAL GUTTER, FLUSH OUT THE ROOF DOWNSPOUTS.
- REPLACE THE EXISTING FLASHING AT THE CONNECTION BETWEEN THE METAL BUILDING AND THE ORIGINAL PENTHOUSE.
- NEW SCUPPER AND DOWNSPOUT, CONCRETE SPLASH BLOCK AT THE BOTTOM.
- GOOSE-NECK PIPE, PROVIDE TYPICAL PITCH POCKET. REFER TO DETAIL 15/A-103.
- APPLY LIQUID FLASHING ON EXISTING PITCH POCKETS AND ROOF PIERS.
- PROVIDE FIXED ROOF ACCESS LADDER FROM MAIN ROOF TO PENTHOUSE. REFER TO DETAIL 4 ON DWG A-104.
- RAISE THE HEIGHT OF THE EXISTING DOOR SILL APPROXIMATELY 4" HIGHER. PROVIDE NEW STEEL LINTELS AND INSTALL ADDITIONAL CONCRETE TO RAISE THE SILL HEIGHT. REFER TO DETAILS 2A AND 2B ON DWG A-104.
- RAISE THE HEIGHT OF THE EXISTING LANDING SUPPORTS BY WELDING ADDITIONAL SUPPORT MEMBERS TO MATCH THE EXISTING SUPPORTS. MODIFY THE LANDING, STEPS AND RAILINGS ACCORDINGLY. SCRAPE AND PAINT THE ENTIRE ASSEMBLY AND REINSTALL. REFER TO PITCH POCKET DETAIL 8 ON DWG A-103.
- RESEAL THE TRANSVERSE JOINTS WITHIN THE PRECAST CONCRETE COPINGS. REFER TO DEMOLITION KEYNOTE 18 ON DWG D.101.
- PROVIDE AN ELASTOMERIC COATING OVER THE ENTIRE SURFACE OF THE PRECAST CONCRETE COPINGS AROUND THE ENTIRE PERIMETER OF THE MAIN ROOF (TYP).
- REINSTALL THE EXISTING LIGHT FIXTURES AND ASSOCIATED CONDUITS TO THE TOP OF THE MAIN ROOF COPING.
- REINSTALL AND ATTACH EXISTING CONDUITS TO THE INBOARD SIDE FACE OF THE MAIN ROOF COPINGS.
- SCRAPE AND PAINT EXISTING STEEL DUNNAGE AND COLUMNS LOCATED ON THE PENTHOUSE ROOF IN ITS ENTIRETY.

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 NETTA ARCHITECTS, LLC.

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LAURENCE K. UHER, AIA, LEED, AP
 NJ License No. AI 14394

These drawings shall be used for the specific project location indicated within the Title Block, and shall not be used at any other location without prior consent from the ARCHITECT.



PROJECT:
UNION COUNTY ROOF REPLACEMENT
 NEW ANNEX COURTHOUSE
 9 ELIZABETHTOWN PLAZA, ELIZABETH, NJ 07201

SHEET CONTENTS:
ROOF CONSTRUCTION PLAN

SUBMISSIONS				REVISIONS				DATE	SCALE
DATE	DESCRIPTION	BY	CHKD	DATE	DESCRIPTION	BY	CHKD	SCALE	
08.10.23	ISSUED FOR BD	CC	GT	08.29.23	ADDENDUM NO. 1	CC	GT	DRWN BY SSSA, CC	
								CHKD BY GT	
								JOB NO 2221736	
								SHEET: 2 OF: 5	
								DWG. NO	



COUNTY OF UNION

DEPARTMENT OF ENGINEERING, PUBLIC WORKS & FACILITIES MANAGEMENT

Joseph A. Graziano Sr., Director

**BOARD OF
COUNTY COMMISSIONERS**

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EDWARD T. OATMAN
County Manager

AMY CRISP WAGNER
Deputy County Manager

BRUCE H. BERGEN, ESQ.
County Counsel

JAMES E. PELLETTIERE
Clerk of the Board

RICARDO S. MATIAS
PE, CME, CFM
County Engineer
Director, Division of Engineering

DATE: August 18, 2023

FROM: Ricardo S. Matias, PE, CME, CFM
County Engineer



TO: All Potential Bidders

RE: CLARIFICATION 1
New Annex Courthouse Roof Replacement,
City of Elizabeth, County of Union, New Jersey
BA# 10-2023;
Union County Engineering Project #2022-003

Per the New Jersey State Department of Treasury, the enforcement of the Prohibited Russia-Belarus Activities certification form has been temporarily suspended. Accordingly, all bidders should replace the Russia-Belarus certification form with the attached Disclosure of Investment Activities in Iran Form, along with the updated Checklist.

DIVISION OF ENGINEERING

2325 South Avenue

Scotch Plains, NJ 07076

(908)789-3675

fax(908)789-3674

www.ucnj.org

We're Connected to You!

COUNTY OF UNION NEW JERSEY
Division of Purchasing
DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN FORM

Solicitation Number: _____ Vendor/Bidder: _____

PART 1

CERTIFICATION

VENDOR/BIDDER MUST COMPLETE PART 1 BY CHECKING ONE OF THE BOXES

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

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person nor entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of 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 Department's website at <http://www.state.nj.us/treasury/pdf/Chapter25List.pdf>. Vendors/Bidders must review this list prior to completing the below certification. **Failure to complete the certification will render a Vendor's/Bidder's proposal non-responsive.** 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

A. I certify, pursuant to Public Law 2012, c.25, that neither the Vendor/Bidder listed above nor any of its parents, subsidiaries, or affiliates is listed on the N.J. Department of Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). Disregard Part 2 and complete and sign the Certification below.

OR

B. 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 Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such information will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2

PLEASE PROVIDE ADDITIONAL INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

If you checked Box "B" above, provide a detailed, accurate and precise description of the activities of the Vendor/Bidder, or one of its parents, subsidiaries or affiliates, engaged in investment activities in Iran by completing the information below.

ENTITY NAME: _____
RELATIONSHIP TO VENDOR/BIDDER: _____
DESCRIPTION OF ACTIVITIES: _____
DURATION OF ENGAGEMENT: _____
ANTICIPATED CESSATION DATE: _____
VENDOR/BIDDER CONTACT NAME: _____
VENDOR/BIDDER CONTACT PHONE#: _____

Attach Additional Sheets If Necessary

CERTIFICATION

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

Signature

Date

Print Name and Title

BID DOCUMENT SUBMISSION CHECKLIST

**ALL SIGNATURES AND SEALS SHALL BE ORIGINALS UNLESS OTHERWISE SPECIFIED
BID SHEETS SHOULD NOT BE SUBMITTED DOUBLE SIDED PAGES, (SINGLE SIDE ONLY)**

EACH BIDDER SHOULD COMPLETE THIS FORM AND INITIAL EACH ENTRY.

DATE COMPLETED: _____

**PLEASE SUBMIT BID DOCUMENTS ON SINGLE SIDED PAPER ONLY, WITH THE EXCEPTION OF THE SURETY
AND BID BOND DOCUMENTS.**

**IN ACCORDANCE WITH THE BID SPECIFICATIONS I HAVE REVIEWED, COMPLETED / EXECUTED AND
INCLUDED THE FOLLOWING FORMS:**

_____ Bid Form Page (**Signed, Dated and Bid on all alternatives applicable to the Work**).

_____ Security in the form of:

_____ Bid bond in an amount equal to 10% of the total amount of this bid not to exceed \$20,000.00; or

_____ Certified check or cashier's check in the amount of 10% of this bid not to exceed \$20,000.00

_____ Consent of Surety form signed by a Surety Company if the total amount of your Bid is over \$36,000.00.
If your bid is accepted, the Surety Company that provided the Consent shall be required to furnish a Performance,
Labor and Materials Bond in the amount of 100% of the award of the contract.

The County of Union has provided its Consent of Surety form for your use. The use of this form by your Surety Company will expedite the bid review process and eliminate the possibility of having your bid rejected. If, however, you should need to use another form, please use language similar to that used on the Union County form and avoid making any additions or deletions to the Union County form language. In lieu of the Consent of Surety you may submit a Certified Check in the full amount of the bid.

_____ STATEMENT OF BIDDER OWNERSHIP. Pursuant to N.J.S.A. 52:25-24.2, which includes **BOTH** of the following documents:

- Bidder Signature Page
- Bidder Disclosure Statement (**Fill out 2 pages completely**)

_____ SUBCONTRACTOR IDENTIFICATION. Pursuant to N.J.S.A. 40A:11-16, which includes **BOTH** of the following documents:

- Subcontractor Identification Statement: List of Subcontractors (**only for certain types of work**)
- Subcontractor Identification Certification

_____ Acknowledgement of Addendum form: (**This form is to be used only when an addendum has been added to the specifications**).

_____ A copy of the State of New Jersey Department of the Treasury, Division of Revenue, **Business Registration Certificate ("BRC")** should be included with the bids as it must be received by the County prior to the award of the contract. The BRC provided must show that the Bidder was registered at the time of receipt of bids or the bid will be rejected.

_____ A copy of the State of New Jersey Department of the Treasury, Division of Revenue, **Business Registration Certificate ("BRC")** of all named or listed subcontractors (List of Subcontractors) in a

Construction bid should be included with the bid as the BRC(s) must be received by the County prior to the award of the contract. Each subcontractor's certificate provided must show that the subcontractor was registered at the time of the receipt of bids or the bid will be rejected.

- Affirmative Action Requirement
- Experience Statement
- Certificate of Bidder showing ability to perform Contract
- Non-Collusion Affidavit – Fill out completely and notarize
- Certificates from New Jersey Department of Labor and Workforce and Workforce Development – Public Works Contractor Registration Act. (**Only for certain types of work**)
- Federal Attachments (**If applicable**)
- NJDPMC Certificate / Notice of Classification (**If applicable**)
- Americans with Disabilities Act
- Statement of Bidder's Qualifications
- Contractor Performance Record
- Affidavit Regarding List of Debarred, Suspended or Disqualified Bidders
- Prior Negative Experience Questionnaire
- Contractor's Certification of Compliance – New Jersey Prevailing Wage Act
- Uncompleted Contracts Affidavit (**For Bidder, if applicable**) **MUST ALSO PROVIDE DPMC FORM 701**
- Certificate of Insurance Statement
- Collection of Use Tax on Sales to Local Government Statement
- Time of Completion
- Disclosure of Investment Activities in Iran
- Federal Non-Debarment Certification
- BYRD Anti-Lobbying Amendment Certification
- Certification Regarding Lobbying
- Disclosure of Lobbying Activities (LLL Form)

I HAVE TAKEN THE FOLLOWING ACTIONS:

- Visited the site and attended the Pre-Bid Meeting (**Where applicable**)
- Reviewed the Contract Documents (including any permits the County or its professionals may have obtained), Work, Site, Locality, and Local Conditions and Laws and Regulations that in any manner may affect Cost, Progress, Performance or Furnishing of Work.
- Reviewed Bond Requirements
- Provided Proof of Compliance with New Jersey Prevailing Wage Act
- Reviewed Form of Owner/Contractor Agreement and General Conditions to the Contract

NOTE: QUESTIONS PERTAINING TO THIS BID ARE TO BE DIRECTED TO THE DIVISION OF PURCHASING AT ucbids@ucnj.org.

BIDDING DOCUMENTS

The Bidding Documents consist of the following items:

- **ADDENDA, if issued**
- **CLARIFICATIONS, if issued**
- **INSTRUCTION TO BIDDERS**
- **BID FORM**
- **OWNER-CONTRACTOR AGREEMENT (AIA 101) AND GENERAL CONDITIONS (AIA 201)**
- **SPECIFICATIONS: As outlined in the Table of Contents and included in the Project Manual.**
- **DRAWINGS: As per List of Drawings, indicated on the Project Title Sheet.**

SPECIFICATIONS
FOR
New Annex Courthouse Roof Replacement, City of
Elizabeth, County of Union, New Jersey

BA#10-2023; UNION COUNTY ENGINEERING PROJECT #2022-003

August 10, 2023

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CLERK OF THE BOARD
James E. Pellettiere, RMC

COUNTY MANAGER
Edward T. Oatman

DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND
FACILITIES MANAGEMENT

Joseph A. Graziano, Sr., CPWM
Director, Department of Engineering, Public Works and
Facilities Management

COUNTY ENGINEER
DIVISION OF ENGINEERING
Ricardo Matias, PE, CME, CFM

Prepared by:
Netta Architects and Design

**COUNTY OF UNION
NOTICE TO BIDDERS**

Sealed bids will be received by the assistant director of the Division of Purchasing, or her designee, at the County of Union, New Jersey on September 12, 2023 at 10:30 a.m., prevailing time, in the 3rd Floor Conference Room, U.C. Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey for:

**New Annex Courthouse Roof Replacement,
City of Elizabeth, County of Union, New Jersey
BA# 10-2023; Union County Engineering Project #2022-003**

Bid Packages may be obtained at no charge by registering and downloading at <http://ucnj.org/bid-specs>. Bid Packages may also be obtained in person from the Division of Engineering at 2325 South Avenue, Scotch Plains, New Jersey 07076 between 8:30 a.m. and 4:00 p.m. weekdays upon payment of a non-refundable money order or bank check in the amount of \$275.00 made payable to the County of Union. No Personal / Company checks will be accepted. Requests for mailing of specifications will not be honored. For further information please call 908-789-3675.

Bidders on this project are required to be pre-classified by the State of NJ, Division of Property Management and Construction (DPMC) under classifications #C009 (General Construction/Alterations & Additions), #C030 (Plumbing), #C032 (HVAC/R), #C047 (Electrical), #C068 (Roofing-Membrane Modified Bitumen), #C070 (Roofing-Built Up) and #C092 (Asbestos Removal/Treatment) and as well as other documentary requirements in the INSTRUCTION TO BIDDERS found in the bid specification. If the Bidder himself does not have the required classification(s) as stated above, the Bidder must include and identify a subcontractor(s), of any tier, who has the required classification(s) in the List of Subcontractors.

A pre-bid meeting will be held on August 22, 2023 at 10:00 am. Those attending shall meet at the 1st floor lobby of the New Annex Courthouse Building, 9 Elizabethtown Plaza, Elizabeth, NJ; no late arrivals will be permitted. The County reserves the right to reject any and all bids and to waive any and all informalities in the bid in accordance with the New Jersey Local Public Contracts Law.

Bids shall be submitted in a sealed envelope and clearly marked with the subject of the bid, name and address of the bidder, phone & fax number, and date of the bid opening. Each bid must be delivered to reach the Division of Purchasing prior to the stated time of the opening of the bids. The County will not be responsible for late delivery by the U.S. Mail or any other carrier. If hand delivered, please note that parking and security access at the County Complex may cause delays and bidders should take them into consideration in order to submit a timely bid. **No** late bids will be accepted.

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

MICHELE HAGOPIAN, ASSISTANT DIRECTOR OF PURCHASING

**UNION COUNTY BOARD
OF CHOSEN FREEHOLDERS**

We're Connected to You!

**New Annex Courthouse Roof Replacement,
City of Elizabeth, County of Union, New Jersey
BA# 10-2023; Union County Engineering Project #2022-003**

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Non-Collusion Affidavit
Contractor Registration Advisement
Americans with Disabilities Act
Statement of Bidder's Qualifications
Contractor Performance Record-Certification
Affidavit Regarding List of Disbarred, Suspended or Disqualified Bidders
Prior Negative Experience Questionnaire-Certification
Contractor's Certification of Compliance - New Jersey Prevailing Wage Act
Uncompleted Contracts Affidavit
Certificate of Insurance Statement
Collection of Use Tax on Sales to Local Governments Statement
Time of Completion
Certification: Prohibited Russia-Belarus Activities & Iran Investment Activities
Certification of Non-Debarment for Federal Government Contracts
Byrd Anti-Lobbying Amendment Certification
Certification Regarding lobbying
Disclosure of Lobbying Activities (LLL Form)

SS - STANDARD SPECIFICATIONS SS-1

STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR AIA DOCUMENT A-101/2017

(Sample form until contract is awarded)

INSURANCE AND BONDS AIA DOCUMENT A-101/2017 EXHIBIT A

(Sample form until contract is awarded)

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION AIA DOCUMENT A-201/2017

(Sample form until contract is awarded)

NEW JERSEY PREVAILING WAGE DETERMINATION DOCUMENTS

General Requirements Subgroup

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012600	CONTRACT MODIFICATION PROCEDURES
012900	PAYMENT PROCEDURES
013100	PROJECT MANAGEMENT AND COORDINATION
013200	CONSTRUCTION PROGRESS DOCUMENTATION
013300	SUBMITTAL PROCEDURES
014000	QUALITY REQUIREMENTS
014200	REFERENCES
015000	TEMPORARY FACILITIES AND CONTROLS
016000	PRODUCT REQUIREMENTS
017419	CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
017700	CLOSEOUT PROCEDURES
017839	PROJECT RECORD DOCUMENTS

Facility Construction Subgroup

DIVISION 02 - EXISTING CONDITIONS

028213	REMOVAL OF ASBESTOS CONTAINING ROOFING MATERIALS
024119	SELECTIVE DEMOLITION

DIVISION 03 – CONCRETE

030150	MAINTENANCE OF CAST DECKS AND UNDERLAYMENT
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DIVISION 6 - WOOD AND PLASTICS

061053	MISCELLANEOUS ROUGH CARPENTRY
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DIVISION 7 - THERMAL AND MOISTURE PROTECTION

070150	PREPARATION FOR RE-ROOFING
072113	ROOF AND DECK INSULATION
075105	ROOF WARRANTY
075216	STYRENE-BUTADIENE-STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING

076200	SHEET METAL FLASHING AND TRIM
077119	MANUFACTURED GRAVEL STOP AND FASICA
079200	JOINT SEALANTS
079200.1	JOINT SEALANTS-COPING JOINTS

DIVISION 9- PAINTING

099123	PAINTING
099653	ELASTOMERIC COATINGS-EXISTING COPINGS

DIVISION 22- PLUMBING

221426	ROOF DRAINS
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ATTACHMENTS

ATTACHMENT A
ENVIRIOMENTAL ROOF CORE DRAWING LOCATIONS & TEST REPORT

**UNION COUNTY BOARD OF COUNTY COMMISSIONERS
INSTRUCTIONS TO BIDDERS AND FORMS**

DEFINITIONS

Wherever reference is made to the County, Title of Project, Bidder, or Vendor/Contractor they shall be as follows:

OWNER/COUNTY:

Union County Board of County Commissioners
UC Administration Building, 6th Floor
10 Elizabethtown Plaza
Elizabeth, New Jersey 07207

ADDRESS INQUIRIES TO:

Union County Division of Purchasing
UC Administration Building, 3rd Floor
10 Elizabethtown Plaza
Elizabeth, NJ 07207
Attn: Michelle Hagopian, Assistant Director, Division of Purchasing
Telephone: 908-527-4130
Facsimile: 908-558-2548
ucbids@ucnj.org

ADDRESS BIDS AND SUBMIT TO:

Union County Division of Purchasing
UC Administration Building, 3rd Floor
10 Elizabethtown Plaza
Elizabeth, NJ 07207
Attn: Michelle Hagopian, Assistant Director, Division of Purchasing
Telephone: 908-527-4130
Facsimile: 908-558-2548
ucbids@ucnj.org

TITLE OF PROJECT:

New Annex Courthouse Roof Replacement,
City of Elizabeth, County of Union, New Jersey
BA#10-2023; Union County Engineering Project #2022-003

BIDDER: Bidder shall be a single overall contract bidder

ARCHITECT: Netta Architects

1084 Route 22 West

Mountainside, New Jersey 07092

COUNTY ENGINEER AND/OR CONSTRUCTION MANAGER (as applicable):

COUNTY ENGINEER: Ricardo S. Matias, PE, CME, CFM

GENERAL SPECIFICATIONS

G-1

Revised: 2023.01.12

1. BID FORM

Bids for this Work will be enclosed in a sealed envelope addressed to the Purchasing Division, County of Union, New Jersey, Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey 07207, with the full name of the Project clearly marked on the outside. Refer to the sheet marked "Notice of Bid (Advertisement)" for the correct name of the Project. Bidders must submit their bids on the attached pricing sheet (Bid Form), in a sealed envelope addressed to the County and bearing on the outside: the name of the Bidder, Bidder's business address, and the title of the Project.

The Division of Purchasing will receive the bids for this Work at the Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey on the date and time noted on the sheet marked "**Notice of Bid (Advertisement)**".

The County will not assume responsibility for bids forwarded by mail. It is the individual's responsibility to see that the bids are presented to the Purchasing Division at the time and at the place designated.

Bids will be accepted only on the Bid Form supplied. Bids on forms other than the original supplied herein will be rejected. The "complete" Bid Documents includes the Bid Bond, Bid Form, Bidder's Checklist, Consent of Surety, Ownership Disclosure Certification, Non-Collusion Affidavit, and any other documents noted in these Instructions to Bidders or Contract Document to be submitted with this Bid.

The bidder will state in the bidding sheet the price per unit of measure for each scheduled Item of Work for which he will agree to carry out the Work, and the Total Bid Price for the construction of the Project.

The prices in the Bid Form shall be typed or written in pen and ink. Erasures or alterations must be initialed by the bidder in ink.

The bidding sheet for this Project may include a fixed amount as a Bid Allowance. If applicable, all bidders are required to add this fixed amount to their base bid and to include this additional amount in their Bid Bond. This sum will be included in the Contract as well as the performance, labor and materials bond. Payment by the County will be made to the Contractor from these funds only upon the completion of extra Work pursuant to a written Change Order(s) signed by the County's Engineer or his designee and the Contractor, prior to the commencement of such Work. Work commenced prior to written approval by the County shall be done at Contractor's risk. Such payment will only be in the amount agreed to by the parties, in writing in the Change Order(s). See Section 37, Change Orders, of these general specifications for further details.

Refer to Bid Document Submission Checklist for all required documents.

In the event there is a discrepancy between the unit price given and the extended total, the unit price will govern. Any discrepancies will be mathematically adjusted.

Insert applicable alternates, if any have been specified, applicable to the Bidder's Work. All alternates MUST be bid upon. Any Bidder's failure to do so will be deemed a material, non-waivable defect and shall render the bid nonresponsive. The Bidder shall clearly designate whether the change in price is an addition or subtraction, by using either a "+" sign or the word "addition", or in the alternative, a "-" sign or the word "minus". If there is no other change in price, the Bidder shall insert "NC" or "No Charge".

When two or more low bids are equal in all respects, awards will be made according to the provisions of N.J.S.A. 40A:11-6.1(d).

Where unit prices have already been established by the Contract Documents, the Bidder agrees that such unit prices shall prevail. All unit prices, whether filled in by the Bidder or established by the Contract Documents, shall become part of the Contract. No bid will be considered or award made, unless applicable unit prices, as required, are filled in.

The County reserves the right to reject any or all bids and also reserves the right to waive any minor informalities or non-material exceptions in the bids.

The County of Union has the right to reject any and all bids from any bidder that is in, or contemplates bankruptcy of any chapter of nature. Said bidder shall notify the County, in writing, of any condition or knowledge of the same.

Conditional bids will not be accepted. Bids may be withdrawn prior to the advertised time for the opening of bids or authorized postponement thereof or in accordance with the provisions of N.J.S.A. 40A:11-23.3 discussed below. Bids received after the advertised time shall not be considered. Bidders shall be solely responsible for premature opening or late delivery of bids not properly marked, addressed, or directed.

2. WITHDRAWAL OF BID DUE TO MISTAKE

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

A bidder claiming a mistake under N.J.S.A. 40A:11-23.3 must submit a request for withdrawal, **in writing**, by certified or registered mail to Michele Hagopian, Assistant Director, Division of Purchasing, County of Union, New Jersey, Union County Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey 07207. The bidder must request withdrawal of a bid due to a mistake, as defined by the law, within five business days after the receipt and opening of the bids. Since the bid withdrawal request shall be effective as of the postmark of the certified or registered mailing, Michele Hagopian, Assistant Director of the Division of Purchasing or his designee may contact all bidders, after bids are opened, to ascertain if any bidders wish to, or already have exercised a request to withdraw their bid pursuant to N.J.S.A. 40A:11-23.3.

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

The County will not consider any written request for a bid withdrawal for a mistake, as defined by N.J.S.A. 40A:11-2(42), by a bidder in the preparation of a bid proposal unless the postmark of the certified or registered mailing is within the five business days following the opening of bids.

3. QUALIFICATIONS OF BIDDERS AND REQUIRED SUBMISSIONS

The County may make such investigation as it deems necessary to determine the ability of the Bidders to perform the Work, which includes investigation of any and all subcontractors listed with the bid. The Bidder shall furnish any information and data for this purpose as the County may request.

4. INTERPRETATIONS AND ADDENDA

Any explanation desired by a bidder regarding the meaning or interpretation of the Contract Documents must be requested in writing to the County Engineer or Design Professional as the case may be and with reasonable time allowed for a reply to reach bidders before submission of their bids. Any interpretation or instruction made by the County Engineer will be in the form of an addendum to the Contract Documents or clarification and will be furnished to all prospective bidders. Oral explanations or instructions given before the award of the Contract will not be binding. Bidders are required to bring to the attention of the County Engineer, the discovery of any apparent ambiguity, inconsistency, error, discrepancy, omission in the Contract Documents for interpretation and correction at least ten (10) working days before opening of bids with the exception of Saturdays, Sundays and holidays.

All Addenda issued through the Offices of the County Engineer are amendments to the Contract Documents and shall be considered in preparing bids. Same shall become part of the Contract Documents.

Addenda take precedence over all earlier documents and over each other according to the latest date. Addenda unless themselves interpretive remain subject to interpretation the same as any other document incorporated in the Contract.

Addenda may be issued by the County Engineer up to seven (7) working days prior to the opening of bids. Failure of any bidder to receive an addendum shall not relieve such bidder from the obligation imposed by such addendum. Bidders are to keep themselves currently acquainted with the Contract Documents during the entire bidding period and make inquiry on their own initiative as to issuance of any Addenda. Receipts of all Addenda shall be acknowledged on the “*Acknowledgement of Receipt of Changes*” included in the bid package and must be submitted with the bid.

5. OBLIGATION OF BIDDER TO INSPECT SITE AND CONTRACT DOCUMENTS

At the time of the opening of bids, each Bidder will be presumed to have inspected the site(s) and to have read, and be thoroughly familiar with the Contract Documents. The failure or neglect of any Bidder to receive or examine any form, instrument, or document shall in no way relieve any Bidder from any obligation in respect to its bid.

The Bidder shall examine the contents of the Project Manual and the set of Drawings and assure itself that all pages of the Specifications, Drawings, and other Contract Documents are included in the documents obtained for bidding purposes. Should the Specifications, Drawings, and other Contract Documents be incomplete, the Bidder shall notify the County Engineer in writing, who will supply the Bidder with any missing pages of Specifications, Drawings, or other Contract Documents. The lack of such written notification by the Bidder will be construed as evidence that the Specifications, Drawings, or other Contract Documents supplied it for bidding purposes are full and complete and as a waiver of any subsequent claim to the contrary.

6. BID AND PERFORMANCE GUARANTEE

Each bidder must furnish a Bid Bond, Certified Check or Bank Cashier’s Check in the amount of ten percent (10%) of the Bid. Checks shall be drawn to the order of the County of Union, New Jersey, not to exceed \$20,000.

Each bidder must furnish with the bid a certificate from a Surety Company, i.e. Consent of Surety, stating that in the event of the contract being awarded to said bidder, such Surety Company will provide the Contractor with bonds guaranteeing the faithful performance of the Work in accordance with the plans and specifications, and the payment for labor, materials, and all other indebtedness which may accrue on the account of this Work. A Performance, Labor and Materials Bond will be furnished by

the Contractor upon an award of Contract, and will be in the amount of 100% of the contract price.

A one-year Maintenance Bond will be required upon acceptance of the Project by the County in the amount as stated in Section 15 of the General Specifications. Bonds will be written by a firm authorized to issue the bonds under the laws of the State of New Jersey and be in a form acceptable to the County Counsel.

N.J.S.A. 40A:11-1 et seq. allows the prime Contractor to furnish the Performance Security for his Subcontractors. The County of Union requires Performance Security to be furnished by the prime contractor for the entire job in the total amount of the contract.

The County will return all certified checks or cashier's checks after the proposals have been opened, tabulated and reviewed except those of the three (3) bidders lowest responsible bidders. The County will return the checks of these bidders when a contract is awarded to the successful bidder within ten (10) days after the award of the contract.

If the successful bidder refuses or neglects to sign an agreement and furnish the required bonds, the Bid Bond will be held and used by the County to offset any damages for such refusal or neglect.

7. COMMENCEMENT AND COMPLETION

Work will not commence until a Notice to Proceed is received from the County Engineer.

Upon substantial completion of the Project, the Contractor must request a joint inspection with the County Engineer. Upon completion of this inspection, the County Engineer will prepare a list of incomplete or incorrect items (punch list) and have Contractor initial and date same. The Contractor shall rectify all deficiencies noted on the punch list within 30 calendar days of receipt of the list. The County Engineer may approve extensions for extenuating circumstances.

8. BIDDER AFFIDAVIT

All Bidders are required to complete, sign, and submit with their Bid, the attached "Affidavit Regarding List of Debarred, Suspended or Disqualified Bidders". (See form enclosed)

9. LABOR AND MATERIALS

The prices will cover all costs of any nature incident to and growing out of the Work, including all labor, material, equipment, transportation, loss by damage or destruction of the Project, settlement of damages, and for replacement of defective work or materials. N.J.S.A. 54:32B-1 et seq. exempts all materials sold to the County of

Union from sales or use taxes and should not be included in the prices provided on the Bidding Sheet.

10. INSURANCE REQUIREMENTS

The County of Union requires all contractors to be able to comply with the following insurance requirements. In the event a bid is accepted by the County, the contractor must accept the applicable insurance requirements, as set forth below, as part of any contract awarded to it by the County.

Contractor shall carry and maintain at all times while the contract is in full force and effect, the following insurance coverage with an insurance company or companies acceptable to the County, with limits not less than those shown below. A Certificate of Insurance shall be filed with the County prior to commencement of any Work indicating the following:

- a) Commercial General Liability (CGL): Coverage for all operations including, but not limited to, contractual, products and completed operations, and personal injury with limits no less than \$5,000,000 per occurrence/\$10,000,000 aggregate. The County of Union, its Board of County Commissioners, officers, employees, agents and servants shall be included as an additional insured. Coverage is provided on a primary and non-contributory basis to the County of Union, et al.
- b) Automobile Liability: Coverage for all owned, non-owned and hired vehicles with limits not less than \$5,000,000 per occurrence, combined single limits (CSL) or its equivalent.
- c) Workers Compensation: As required by the State of New Jersey and Employers Liability with limits not less than \$1,000,000 per accident for bodily injury or disease.
- d) Professional Liability (if design/build): Coverage with limits not less than \$1,000,000 per occurrence or claim, \$2,000,000 aggregate
- e) Contractor's Pollution Legal Liability and/or Asbestos Legal Liability and/or Errors & Omissions (if project involves environmental hazards): Coverage with limits no less than \$1,000,000 per occurrence or claim/\$2,000,000 aggregate.
- f) Builders Risk (for major renovations): During the course of construction utilizing an "All Risk" coverage form with limits equal to the completed value of the project and no coinsurance penalty provisions.

Where applicable, a waiver of subrogation in favor of the County of Union, its Board of County Commissioners, officers, employees, agents, servants and the State of New Jersey is to be included in those policies of insurance where permitted by law.

Notice of Cancellation: Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the Entity.

Special Risks or Circumstances: The County reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

11. INDEMNIFICATION REQUIREMENTS

The County of Union requires all bidders to accept the following indemnification requirements in the event the County accepts their bid. The Contract awarded by the County to the successful bidder will contain the following provision:

“To the fullest extent permitted by law the Contractor shall indemnify, defend, and hold harmless the owner and the owner’s consultants, agents, representatives, and employees from and against any and all claims, damages, losses, costs, and expenses, including, but not limited to attorneys’ fees, legal costs and legal expenses arising out of or resulting from the performance of the Contractor’s work under this contract, provided that such claim, damage, loss, cost, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) caused or alleged to be caused by the negligent acts, negligent omissions, and/or fault of the Contractor, anyone directly or indirectly employed or retained by the Contractor, or anyone for whose acts the Contractor may be liable regardless of whether caused in part by the negligent act or omission of a party indemnified hereunder provided it is not caused by the sole negligence of a party indemnified hereunder. Contractor shall further indemnify and hold harmless the County and the County’s consultants, agents, representative, and employees from and against any and all claims, damages, losses, costs, and expenses, including, but not limited to attorneys’ fees, legal costs and legal expenses, arising out of or resulting from performance of the work, provided that such claim, damage, loss, cost, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) caused or alleged to be caused by the negligent acts, negligent omissions, and/or fault of the County or the County’s consultants, agents, representatives, or employees and arises out of this project and provided such claim, damage, loss, cost, or expense is not caused by the sole negligence of a party indemnified hereunder.”

12. ROYALTIES AND PATENTS

The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall hold the County harmless from loss on account thereof.

13. PLANS AND SPECIFICATIONS

In carrying out the Work, the plan(s) and the specifications will be followed by the Contractor. Minor alterations in the plan may be made or permitted by the County Engineer from time to time and, if no additional Work is necessary, there will be no additional charge for carrying out such minor alterations.

The Contractor shall provide the County Engineer a set of reproducible as-built drawings upon completion of the Project. The Contractor shall maintain an updated construction progress plan in the Project field office at all times.

When applicable, The New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, as amended, and Supplemental Specifications for State Aid Projects, herein after referred to as the "Standard Specifications", are made a part of these specifications and contract for the improvements, and will govern the construction of this Project, the material used and the execution of this Project, except as revised and modified herein. The references to these specifications are given herein for the purpose of aiding in the rapid location of the description of the various items herein specified. The entire Work must be carried on and completed to the satisfaction of the County. The Standard Specifications are amended as follows:

"Any reference to the Commissioner, Department, Department Laboratory, Engineer or Inspector should be redefined to be the County of Union".

14. GUARANTEE AGAINST DEFECTIVE WORK

Prior to final payment being made or before the release of the performance security required by Section 3 above, the Contractor and Surety shall execute and deliver to the County an original Maintenance Bond with an original signature and seal having a penal sum equal to:

- A) One hundred percent (100%) of the final adjusted Contract amount, if such amount is \$50,000.00 or less;
- B) Fifty percent (50%) of the final adjusted Contract amount, if such amount be greater than \$50,000.00 but less than \$250,000.00; and,
- C) Twenty-five percent (25%) of the final adjusted contract amount, if such amount is \$250,000.00 or more.

The Bond and Surety shall be satisfactory to the Union County Counsel. The Surety shall hold a Certificate of Authorization to do business in the State of New Jersey and shall conform to P.L. 1995 c.384, codified as N.J.S.A. 2A:44-143, 144. The Surety Disclosure Statement and Certification required by N.J.S.A. 2A: 44-143, 144, shall be

attached to the Bond. Such Maintenance Bond shall remain in full force and effect for a period of one (1) year from the date of Final Completion. Such Maintenance Bond shall also provide that the Contractor and the Surety guarantee to replace for the said period of one (1) year from the date of Final Completion, all Work performed and/or all materials furnished that were not performed or were not furnished in accordance to the terms and performance requirements of the Contract Documents, and will make good any defects thereof which become apparent before the expiration of one (1) year. If, during that period, any part of the Project, in the judgment of the Engineer, is found defective, the Contractor will repair or replace same within five (5) days of receipt of notice from the County Engineer. If the Contractor refuses or neglects to do such Work in the time specified, the County Engineer may have the Work done by others and the Contractor or his Surety thereof will pay the cost.

The Contractor will furnish the County a Maintenance Bond for a percentage of the final adjusted contract price, as stated above. The one (1) year period will start the day of Final Completion of Project by the County. Final payment is conditional on the receipt of a maintenance bond in a form acceptable to County Counsel.

15. TRAFFIC AND STREET MAINTENANCE

The Work must be started and performed by the Contractor in such a manner as to minimize delays to the traveling public. It must be completed in a timely fashion, with little or no inconvenience to traffic and pedestrians, where such inconvenience may be avoided.

All municipal, county, and state roadways shall remain open to traffic unless otherwise provided for in the technical specifications.

If modified traffic patterns are authorized in order to provide a safe working or traveling environment, the Contractor is responsible for providing all equipment, barrels, cones, signs, and barricades to implement the work zone and detours, unless otherwise specified in the technical specifications. All work zones and detours shall be established in accordance with the technical plans and specifications if provided or in strict compliance with the current version of the Manual for Uniform Traffic Control Devices (MUTCD). The Contractor shall obtain approval for these work zones and detour plans from the Municipal Police or applicable police agency and the Union County Bureau of Traffic Maintenance prior to implementation.

All traffic control plans shall provide for safe movement of vehicular, bicycle, and pedestrian traffic. Particular attention shall be given to requirements of the Americans with Disabilities Act.

No portion of any street or alleyway may be used for the storage of any materials or equipment without the approval of the Municipal Police or other applicable police agency. Sidewalks, gutters, drains, fire hydrants and private drives shall be maintained for their intended use unless specifically approved by the County Engineer.

Upon suspension of Work, at the end of the day or for protracted periods, the Contractor shall remove all rubbish and materials from the Work site to the approved storage/staging location. All road cuts, saw cuts, and trenches that may pose hazard to vehicular, pedestrian, or bicycle traffic, to include handicapped users, shall be filled to the surface of the roadway or sidewalk. At no time will steel plates or settled trenches be allowed at the daily suspension of Work, unless specifically approved by the County Engineer.

Use of Traffic Control Officers shall be determined by the County in accordance with the provisions of N.J.S.A. 40A:11-23.1(c). If applicable to the Project, the County shall have provided an allowance for same as set forth in the Bid Form.

With respect to pedestrian traffic, the Contractor shall install signs restricting access of the general public and, as necessary, Union County employees to the area of construction. The Contractor shall provide safe access to required areas and place physical barriers to restricted areas. These barriers may range from caution tape to actual barriers, at the direction of the County Engineer.

16. CONTRACTOR'S EMPLOYEES

The Contractor must employ only suitable and competent labor in the Work, and must remove from the Work any incompetent, unsuitable, or disorderly person upon complaint from the County Engineer.

The parties to any contract resulting from this proposal do hereby agree that the provisions of N.J.S.A. 10:2-1 through 10:2-4 (discrimination in employment on public works contracts): 34:11-56.25 et seq. (payment of prevailing rate of wages determined pursuant to N.J.S.A. 34:11-56.30 by the Commissioner), and the Rules and Regulations promulgated pursuant thereto, are hereby made a part of any contract and are binding upon them.

There will be no discrimination against any employee who is employed in the Work to be covered by any contract resulting from this bid because of age, race, creed, color, national origin, ancestry, marital status or sex.

Any person, firm, or corporation violating the provisions of this Section will be deemed and judged a disorderly person.

17. OWNERSHIP DISCLOSURES REQUIRED

Pursuant to P.L. 2016, c. 43, codified as N.J.S.A. 52:25-24.2, no corporation, partnership, or limited liability company shall be awarded any contract nor shall any agreement be entered into for the performance of any work or the furnishing of any materials or supplies the County unless prior to the receipt of the bid or accompanying the bid, of said corporation, said partnership, or said limited liability company there is submitted a statement setting forth the names and addresses of all stockholders in the corporation who own ten percent (10%) or more of its stock, of any class, or of all individual partners in the partnership who own a ten percent (10%) or greater interest therein, or of all members in the limited liability company who own a ten percent (10%) or greater interest therein, as the case may be. If one or more such stockholder or partner or member is itself a corporation or partnership or limited liability company, the stockholders holding ten percent (10%) or more of that corporation's stock, or the individual partners owning ten percent (10%) or greater interest in that partnership, or the members owning ten percent (10%) or greater interest in that limited liability company, as the case may be, shall also be listed. The disclosure shall be continued until names and addresses of every non corporate stockholder, and individual partner, and member, exceeding the ten percent (10%) ownership criteria has been listed.

To comply with this section, a bidder 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 ten percent (10%) or greater beneficial interest in the publicly traded entity as of the last annual filing with the federal Securities and Exchange Commission ("SEC") or the foreign equivalent, and, if there is any person that holds a ten percent (10%) or greater beneficial interest, also shall submit links to the websites containing the last annual filings with the federal SEC or the foreign equivalent and the relevant page numbers of the filings that contain the information on each person that holds a ten percent (10%) or greater beneficial interest.

(See forms attached)

18. NON-COLLUSION AFFIDAVIT

The Bidder shall submit with its bid either the attached completed "Non-Collusion Affidavit" or a statement of non-collusion with verbiage similar to same.

19. EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCES

The successful bidder shall be required to complete and submit an Initial Project Workforce Report, New Jersey Department of Treasury Form AA-201, upon notification of award. Failure to submit this completed form may result in the Contract being terminated.

The successful bidder shall also be required to submit a copy of its Monthly Project Workforce Report, New Jersey Department of Treasury Form AA-202, to the New Jersey Department of Treasury's Division of Public Contracts Equal Employment Opportunity Compliance and to the Board.

20. COMPLIANCE WITH NEW JERSEY PREVAILING WAGE ACT

The County of Union, in order to fulfill the requirements of N.J.S.A. 34:11-56.25 et seq., requires that the following additional conditions be strictly followed. The bidders represent that he is not listed or is not on record in the Office of the Commissioner or the Department of Labor and Workforce Development as one who failed to pay prevailing wages in accordance with the provisions of this Act. The bidder agrees to the inclusion of a contract provision upon award which specifically requires said Contractor to fully comply with each and all of the requirements of the aforesaid Act as it relates to prevailing rates of wages on public contracts as set forth in the New Jersey Prevailing Wage Act, P.L. 1963, Chapter 150 and P.L. 1974, Chapter 64.

A Copy of the Prevailing Wage Rates is attached for your reference. Applicable rates are those wages and fringe benefit rates in effect on the date the contract is awarded. All predetermined rate increases listed at the time the contract award must also be paid, beginning on the dates specified. Rates may change between the time of issuance of this determination and the award of the public works contract. Therefore, prior to the award of the contract, verification must be made with the Public Contracts section, to insure that the rates contained in this determination are still prevailing.

The Contractor agrees to abide and be bound by each and all of the said statutory provisions with respect to the payment of prevailing rates of wages, and acknowledges that the County reserves the right to terminate the Contractor's (or his subcontractors') right to proceed with the scope of Work, or such portion thereof that relates to the failure to pay prevailing rates of wages. In such event or under the terms of N.J.S.A. 34:11-56.27, the Contractor and his surety will be liable to the County of Union for any excess costs occasioned by such a violation.

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

The County of Union requires a copy of payroll records from the Contractor and subcontractors. Payroll records shall be submitted with each voucher request for payment. Prevailing wage rates may be obtained from the New Jersey Labor, Division of Workplace Standards, Public Contracts Section, (609-292-2259).

In addition to compliance with the New Jersey Prevailing Wage Act, the County requires compliance with procedures established by Resolution No. 2014-0408 adopted by the Union County Board of County Commissioners on May 8, 2014. The resolution is furnished in Section 56 of these General Specifications.

UNION LABOR IS PREFERRED ON ALL COUNTY WORK

The foregoing reference to specific laws will not be deemed to be a limitation of obligation of the Contractor to perform his obligations in full compliance with the provisions and requirements of all federal and state statutes and local ordinances applicable to the Work to be done under the contract.

It is agreed and understood that any contracts and/or orders placed as a result of this proposal will be governed and construed and the rights and obligations of the parties hereto will be determined in accordance with the laws of the State of New Jersey.

Upon completion of the Work, the Contractor will furnish a Certification of Compliance with the New Jersey Prevailing Wage Act. The certificate in a form acceptable to County Counsel is a condition of the final payment. (See form attached)

21. BRAND NAME OR EQUAL

When the Specifications, Forms, and other Contract Documents use “brand name or equivalent” or similar language, the listed brand name shall serve as a reference or point of comparison for the functional or operational characteristic desired for the goods or services being requested. Where a bidder attempts to submit an equivalent product for a brand name, it shall be the responsibility of the bidder to fully describe and document the product to be provided with the bid in order to establish the equivalence claim.

- A. If the Bidder proposes to offer substitute goods as an equal to those specified herein, the bidder shall so indicate with the Bid Proposal. For the purposes of this paragraph, a proposed item shall be considered equal to goods specified herein if:

1. The County, in its sole discretion, determines that: (i) the goods conform substantially, even with deviations, to the brand name goods specified herein; (ii) the goods are equal to or greater than the brand name goods specified herein in terms of quality, durability, functionality, appearance, strength and design; (iii) the goods are capable, at least as well as the brand name goods specified herein, or performing with existing equipment; and (iv) the goods do not cost the County more than the brand name goods specified herein costs the County.
- B. To offer substitute goods as an equal to those specified herein, it is necessary that:
1. The Bidder submits sufficient information with its bid to permit the County to determine that the goods are equivalent to the brand name goods specified herein, including, but not necessarily limited to the brand, catalog number and specifications/data sheets;
 2. The Bidder fully identifies and describes the variations of the goods from the brand name goods specified herein on a separate sheet that is to be submitted with the bid proposal. Bidder's literature WILL NOT suffice in explaining exceptions to these specifications.
 3. The Bidder certifies that the goods (i) are similar in substance to the brand name goods specified, and (ii) are suited to the same use as the item specified;
- C. The County shall be allowed a reasonable time within which to evaluate the Bidder's proposal to offer substitute goods as an equal to those specified herein. The County shall be the sole judge of acceptability. No "or-equal" goods shall be ordered, delivered, assembled, set-up or utilized until the County's evaluation is complete. The County's determination as to equivalency shall be deemed final and absolute.

In the event the Bidder does not provide sufficient supporting documentation with the bid, it will be presumed and required that the brand name goods and services as described in the specifications will be provided.

22. LINES AND GRADES

Normally, horizontal and vertical control points will be provided in the technical specifications. All other surveying will be the responsibility of the Contractor unless otherwise noted.

23. NUMBER OF WORKING DAYS

In accordance with N.J.S.A. 40A:11-17, the Work for the within Project shall be completed as specified on the Time of Completion Form. See form attached

There shall be taken a deduction from the contract price, or any wages paid by the County, to any inspector(s) necessarily employed by it on the Work, for any number of days in excess of the number allowed in the specifications.

24. PROMPT PAYMENT OF CONSTRUCTION CONTRACTS (NJ Prompt Payment Act)

Pursuant to N.J.S.A. 2A:30A-1 et seq., payment to the Contractor, other than for Work done pursuant to a contact allowance, where applicable, shall be processed and paid as follows:

1. All contractor bills shall be either approved for payment, or notice provided as to why the bill or any portion of it will not be approved by the representative(s) of the governing body no later than the public meeting following 20 calendar days of the billing date as defined in the statute.
2. If the billing is approved, said bill shall be paid in the payment cycle following the meeting.

25. STOPPING WORK ON ACCOUNT OF BAD WEATHER

Work must only be performed in weather suitable for the type of construction planned or underway. Extremes in temperature, humidity, precipitation, evaporation, etc. can detrimentally affect the constructed product. Refer to the Standard and Technical Specifications for specific items.

26. ACCESS FOR OTHER CONTRACTORS

The Contractor for this Work will give proper access to other contractors who may be employed upon the Project and must not hinder or delay unnecessarily any Work that may be progressing under other contracts.

27. CONDEMNED MATERIALS AND WORK

Any materials and or part of the Work that may be condemned by the County Engineer will be removed and replaced by the Contractor or otherwise rectified, as may be directed by the County Engineer. No payment will be made upon the Work until such faulty work has been made good as may be directed. In the event the Contractor refuses or neglects to make good such faulty work, he will be deemed to have abandoned the contract and proceedings may be taken against him as provided herein.

28. STORAGE

In the event that it is necessary for the Contractor to stockpile or store materials or equipment on the job site, the Contractor shall inform the County of such necessity and the County may offer available space, if any, for storage of such materials or equipment. The Contractor shall use said space only for such purpose. Any and all materials which may be stored in such space or which may be brought onto the job site at any time by the Contractor will be at the Contractor's sole risk. The County will not be responsible for loss of or damage to said materials or equipment for any cause whatsoever. The Contractor shall take necessary measures to protect any such storage area and shall be responsible for any and all damages.

29. FINAL CLEAN UP

Upon completion of the Work, the Contractor will remove all equipment, unused materials, rubbish, etc., and will repair, or replace in an a manner acceptable to the County Engineer, all areas that may have been damaged in the prosecution of the Work. Same shall be a condition precedent to final payment. Should said Contractor fail to comply with this requirement, the County shall undertake the clean-up with its own forces and charge the cost of same against the Contractor's contract balance.

30. SUB-LETTING OF WORK

Except for the List of Subcontractors, pursuant to N.J.S.A. 40A:11-16 (See form attached), no portion of the Work will be sublet by the Contractor to any other entities, except with the consent of the County Engineer. A complete list of subcontractors must be submitted to the County Engineer at the preconstruction meeting. If the job does not warrant a preconstruction meeting, the Contractor must submit such list prior to the start of Work.

All Subcontractors will be subject to N.J.S.A. 34:11-56 et al.

N.J.S.A. 40A:11-16 requires the bidder to list in the bid sheets the name or names of all subcontractors involved in the following types of Work: plumbing and gas

fitting and all kindred work, steam and hot water heating, ventilating apparatus, steam power plants and kindred work, electrical work, ornamental iron work, and structural steel. In addition, the County may require the identification of specific additional subcontractors. If these trades are expected to be part of the contract, such subcontractors should be listed on the "Subcontractor Identification Statement List of Subcontractors" and Bidder shall certify same on the accompanying sheet titled "Subcontractor Identification Certification". (See forms attached) **Bidder's failure to submit these two forms shall be considered a material defect and result in rejection of Bidder's bid.** Substitutions of any listed subcontractors pursuant to N.J.S.A. 40A:11-16 will not be permitted except with the consent of the County Engineer.

31. SAFETY

The Contractor shall observe all rules and regulations of the Federal, State, and local health officials. Attention is directed to Federal, State, and local laws, rules, and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to the worker's health or safety.

The Contractor shall admit to the site, without delay and without the presentation of an inspection warrant, any inspector of OSHA or other legally responsible agency involved in safety and health administration upon presentation of proper credentials.

The Contractor shall make available to the Contractor's employees, subcontractors, the County Engineer, and the public, all information pursuant to OSHA 29 CFR Part 1926.59 of The Hazard Communication Standard 29 CFR 1910.1200, and shall also maintain a file on each job site containing all Material Safety Data Sheets (MSDS) for products in use at the Project. These Material Safety Data Sheets shall be made available to the Engineer upon request.

The Contractor shall at all times conduct the Work to provide for the safety and convenience of the general public and protection of persons and property. The safety provisions of applicable laws, OSHA regulations, building and construction codes, and the rules and regulations of the New Jersey Department of Labor and Workforce Development shall be observed.

32. QUALITY, SAFETY AND PERFORMANCE STANDARDS

All goods and services must be constructed and provided with the highest quality materials and workmanship. It is the intent of these specifications that only equipment equal to, or exceeding, the standard specified will be acceptable in order to protect the safety of the occupants of the Building.

33. MATTERS NOT MENTIONED IN CONTRACT DOCUMENTS

Any Work, material, or method, not specifically described in these specifications, but shown upon the plans of the Work, will be carried out as shown on said plan.

34. PERMITS

The Contractor will obtain all necessary permits required by law and provide the County with necessary approvals prior to commencement of permitted Work.

35. CONTRACTOR TO PROVIDE PROOF OF PAYMENT

Upon the completion of the Work, the Contractor will furnish a General Release as proof that all claims for labor, materials, etc., have been settled by the Contractor. The General Release, in a form acceptable to County Counsel, is a condition of final payment.

36. CHANGE ORDERS

The applicability of change orders and change order procedures shall comply with *N.J.S.A. 40A:11-16.7* and *N.J.A.C. 5:30-11.1 et seq.*, "Change Orders and Open End Contracts".

37. SUPPLEMENTAL WORK

In case any supplemental work is necessary, it will be performed by the Contractor at a price fixed by agreement between the Contractor and the County Engineer and approved by the County as specified in Section 36. The Contractor will do no supplemental work on any character, for which the Contractor will demand pay, except upon the written order of the County.

38. FORM OF CONTRACT

The Contract will be subject to all statutory provisions on the matter of Public Works, Public Contracts, The Law Against Discrimination, the Laws Governing Affirmative Action and Prevailing Rates of Wages under the laws of New Jersey.

The Agreements shall be executed by both parties not later than twenty-one (21) days from the date of the award by the County (Sundays and holidays excluded); however, such time frame may be extended by agreement of the parties.

39. PROGRESS PAYMENTS

Monthly progress payments will be made based on the value of labor and materials incorporated in the Work and of materials suitably stored at the site. An itemized schedule of values shall be submitted with each Application for Payment.

(Refer to the Owner/Contractor Agreement for Retainage and other conditions pertaining to payment and the application of N.J.S.A. 2A:30A-1 et seq.)

All Applications for Payment shall be accompanied by paid invoices for materials incorporated in the Work and for materials suitably stored at the site, and affidavit(s) by Subcontractors whose Work was included in the next to the last application to the effect such Work and such materials have been paid for.

No payment shall be made without Contractor having provided all submittals set forth in this Section, and the approval of same by the County.

For contracts exceeding \$100,000.00, monthly payments will be made on the Work to the extent of 98% of the value of the Work done which is considered to be retainage.

For contracts less than \$100,000.00, monthly payments will be on the Work to the extent of 90% of the value of the Work done. In lieu of the retainage, the Contractor will, at his option, deposit with the County Counsel negotiable bearer bonds of the State of New Jersey or any political subdivision thereof, equal to the amount otherwise withheld as retainage.

When the Project is completed, the final cost of the Project will be based on actual quantities of authorized Work done under each item scheduled in the bidding sheet and approved Change Orders, if any. The money due to the Contractor as determined by said final certificate after deduction of previous monthly payments on account, will be paid to the Contractor in accordance with the terms of the contract dealing with Prompt Payment, providing, however that before such final payment is made, all outstanding claims against the Contractor must be satisfied. Before final payment is released, the Contractor must furnish: **a)** Maintenance Bond (see Section 6 of these general specifications); **b)** Certification of Compliance, New Jersey Prevailing Wage Act (see Sections 21 and 51); and **c)** General Release (see Section 36) in a form satisfactory to County Counsel; **d)** complete set of as-built plans in the latest AutoCad on compact disc; and **e)** a complete set of in-progress photos in jpg, jpeg, or bmp digital format on a compact disc.

40. INSPECTION

The Work must be done in accordance with the plans and specifications, and will be inspected by the County Engineer. An inspector may be placed upon the Work at

any time by the County Engineer to see that the plans, specifications, and instructions of the County Engineer are carried out. In connection herewith, bidders are referred to N.J.S.A. 40A:11-17.

41. DAMAGES

The Contractor will be held responsible for all damages that may occur to Work, or to persons or property by reason of the nature of the Work or from the elements, or by reason of inadequate protection of the Work, or from any carelessness or negligence on his part or on the part of his employees. The County will withhold payments on the Work until all suits or claims for damages sustained on, or by reason of, this Work will have been settled by the Contractor.

The construction and final completion of this Work will be guaranteed by the Contractor. Any damages that may be done to the Work or any part thereof, by the elements or otherwise, during its construction, will be made good by the Contractor.

42. LIQUIDATED DAMAGES

If the Project is not completed within the time specified herein or within such further time as may have been granted by the County Engineer, then the Contractor hereby agrees to pay to the County as liquidated damages, but not as a penalty, \$1,000.00 per day for each and every calendar day that he is in default on time to complete the Work. The said sum will be deducted from moneys due the Contractor and if the damages exceed this amount, then the Contractor or his Surety Company will pay the excess. These damages may be waived at the option of the County.

43. AFFIRMATIVE ACTION REQUIREMENTS

(REVISED 01/2022)

EXHIBIT B

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE

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

N.J.A.C. 17:27-1.1 et seq.

CONSTRUCTION CONTRACTS

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

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin,

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

The contractor or 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 nondiscrimination 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.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the 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 Dept. of LWD, Construction EEO Monitoring Program, 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 N.J.A.C. 17:27-1.1 et seq.

44. PROHIBITED ACTIVITIES IN RUSSIA AND BELARUS & INVESTMENT ACTIVITIES IN IRAN

P.L. 2022, c. 3 prohibits the award, renewal, amendment, or extension of State and local public contracts for goods or services with persons or entities engaging in prohibited activities in Russia or Belarus. P.L. 2012, c.25 prohibits the award or renewal of State and local public contracts for goods and services with persons or entities engaged in certain investment activities in the energy or finance sectors of Iran.

Before a goods and services contract can be entered into, vendors and contractors must certify that neither they nor any parent entity, subsidiary, or affiliate is listed on the New Jersey Department of the Treasury's list of entities determined to be engaged in prohibited activities in Russia or Belarus pursuant to P.L. 2022, c. 3 ("Russia-Belarus list") or in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 list").

45. COMPLIANCE WITH THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT - (N.J.S.A. 34:11-56.48 et. seq.)

Pursuant to the above-referenced law, Bidders are required to be registered with the New Jersey Department of Labor and Workforce Development and to possess a current certificate by said Department indicating compliance with the Act prior to the time and date that bids are received. Bidders are notified of this requirement of their compliance. Such certificates or applications shall also be provided for each Subcontractor furnishing plumbing and gas fitting, steam and hot water heating and ventilating apparatus, and all kindred work, steam power plants and kindred work, electrical work, structural steel and ornamental iron work, and such other subcontractors as the specifications require relative to prior identification.

46. UTILITIES

Attention of the bidder is directed to the fact that the approximate locations of known utility structures and facilities that may be encountered within and adjacent to the limits of the Work are shown on the plans and described herein. The accuracy and completeness of this information is not guaranteed by the County Engineer and the bidder is advised to ascertain for himself all the facts concerning the location of these and other utilities.

The Contractor will not proceed with his Work until he has made diligent inquiries of all public utility and municipal officials to determine the exact location of all underground structures and pipes within the site of the Project. The Contractor will notify utility owners not less than ten (10) days in advance of the time he proposes to perform any Work that will endanger or affect their facilities in compliance with **New Jersey One-Call**. In excavating in any part of the Work, care must be taken not to remove or damage any gas, water, sewer, or other pipe, conduit, or structure, - public or private - without the concurrence of the owner and the County Engineer. The Contractor will, at his own expense, shore up, secure and maintain a continuous flow in such structures, and will keep them in repair until final acceptance of the Work.

When pipes or other structures are encountered or when the removal, relocation or protection of these utilities are necessary in carrying out the Project as planned, the Contractor will cooperate with the owner of said utilities and will permit the owners or their agents access to the site of the Work in order to relocate or protect their facilities and not hinder or delay unnecessarily the Work of the owners in moving same. No extra allowance of payment will be made to the Contractor for the use of any materials, equipment, etc., or for the performance of any Work in connection with the moving of said structures unless the Contractor is specifically ordered by the County Engineer to furnish such materials, equipment, or services. If directed by the County Engineer to do any Work or furnish any materials or equipment, payment will be allowed the Contractor in accordance with the unit prices bid for such Work, or, if such items are not scheduled in the proposal, such Work shall be allowed "Supplemental Work" as provided in Section 39 of these general specifications. The corporations, companies, agencies or municipalities owning or controlling the utilities, and the name, and telephone numbers are listed in the beginning of the Technical Specifications.

47. MATERIAL COMPLIANCE AND SHOP DRAWINGS

The Contractor will require the manufacturer or supplier to furnish three (3) copies of Certification of Compliance with each delivery of materials, components and manufactured items for the Project. Two (2) copies will be furnished to the County Engineer; one copy will be retained by the Contractor. Certificates of Compliance will contain the following information:

1. Project to which material is consigned;
2. Name of the Contractor to which the material is supplied;
3. Kind of material supplied;
4. Quantity of material represented by the Certificate;
5. Means of identifying the consignment, such as label marking, seal number, etc.;
6. Date and method of shipment;
7. That the material is in conformity with the pertinent specifications stated in the certificate; and

8. Signature of a person having legal authority to bind the supplier.

The Contractor will submit to the County Engineer for his approval five (5) copies of complete and fully detailed shop or working drawings for those items listed in the beginning of the technical specifications.

Each drawing will identify the name of the job, location and Contractor.

All drawings will be approved in accordance with the standard specifications. Refer to the Technical Specifications for specific items.

All materials or articles used in the Work will be of American manufacture, insofar as same are available, in conformance with N.J.S.A. 40A:11-18.

48. PRECONSTRUCTION

In order to provide full coordination of this Project among the parties concerned, the County Engineer will arrange for a preconstruction meeting between the Contractor, County Engineer and other interested parties as soon as possible after the contract is executed. At this meeting the Contractor will present his proposed schedule of Work which shall be subject to review and approval of the County through its designated representatives.

49. DISPUTES UNDER THE CONTRACT

A dispute arising under the Contract shall be submitted in writing to the County Engineer with all facts and supporting data. The County Engineer will review the dispute and issue his decision or request additional facts or documentation after which he will render his decision.

In the event the dispute is not then resolved, the matter shall, pursuant to law, be submitted to mediation before being submitted to a court of competent jurisdiction venued in Union County.

The County Engineer will notify the County Counsel when a matter is to be submitted to mediation. The County Counsel will communicate with the parties and inform them of the procedures to be followed in making such a submission.

50. CONTRACTOR BUSINESS REGISTRATION CERTIFICATE

Pursuant to N.J.S.A. 52:32-44, the County of Union 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 County of Union 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 County of Union prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

Proof of registration must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids. If subcontractors are named on the bid, proof of the business registration for each must be provided prior to the award of a contract. Similarly, to the bidder, the proof must show that each subcontractor was registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

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 County of Union 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 County of Union 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.

51. BID PROTEST – LEGAL FEES AND COSTS

In the event a Bidder unsuccessfully challenges a Bid Submission by filing an action in a court of law concerning same, said Bidder shall be responsible for payment of reasonable legal costs and fees incurred by the County relating to said protest.

52. AMERICAN GOODS AND PRODUCTS WHERE POSSIBLE

Bidder shall comply with the requirements of N.J.S.A. 40A:11-18 and use only manufactured and farm products of the United States, wherever available, for the Project.

53. NEW JERSEY PAY-TO-PLAY REQUIREMENTS

This Contract is required by law to be publicly advertised for bids. As such, lists of political contributions pursuant to N.J.S.A. 19:44A-1 et seq. are NOT REQUIRED to be provided with the bids.

54. STATEMENT OF EQUIPMENT TO BE USED IN CONSTRUCTION

Pursuant to N.J.S.A. 40A:11-20 entitled Certificate of Bidder Showing Ability to Perform Contract, the County requires a Certification from all bidders submitting a bid showing that the Bidder owns, leases, or controls all necessary equipment required by the Project Plans and Specifications. All bidders shall provide this information at the time of the bid opening using the attached form entitled, "CERTIFICATE OF BIDDER SHOWING ABILITY TO PERFORM CONTRACT".

If the Bidder is not the actual owner of the equipment, it shall state the source from which the equipment will be obtained and shall attach a certificate from the owner or person in control of the equipment demonstrating that the equipment owner has granted the Bidder control of the requisite equipment during such time as may be necessary for completion of the portion of the contract for which the equipment is necessary.

55. NEW JERSEY SALES AND USE TAX REQUIREMENTS

Contractors are required to comply with the following:

New Jersey Sales and Use Tax Requirements: All contractors with subcontractors, or any of their affiliates, who enter into contracts for the provision of goods or services with or for New Jersey local government entities, are required to collect and remit to the New Jersey Director of Taxation in the Department of the Treasury the use tax due on all of their

sales of tangible personal property delivered into the State of New Jersey pursuant to the "Sales and Use Tax Act," (N.J.S.A. 54:32B-1 et seq.), regardless of whether the tangible personal property is intended for a contract with the contracting agency. This tax shall be remitted for the term of the Contract.

For purposes herein "affiliate" shall mean any entity that: (a) directly, indirectly, or constructively controls another entity, (b) is directly, indirectly, or constructively controlled by another entity, or (c) is subject to the control of a common entity. For purposes of the immediately preceding sentence, an entity controls another entity if it owns, directly or indirectly, more than fifty percent (50%) of the ownership interest in that entity. NJSA 52:32-44(g)(3).

56. RESOLUTION NO. 2014-408

WHEREAS, the County of Union recognizes there is a need to ensure that all work on significant public construction and maintenance contracts is performed by responsible, qualified firms that maintain the capacity, expertise, personnel, and other qualifications and resources necessary to successfully perform public contracts in a timely, reliable, and cost-effective manner; and

WHEREAS, in order to effectuate the purpose of selecting responsible contractors for significant public contracts and to protect Union County's capital investments in such contracts prospective contractors and subcontractors should be required to meet pre-established, clearly-defined, minimum standards relating to contractor responsibility, including retirements and criteria concerning qualifications, competency) expertise, adequacy of resources, including equipment, financial and personnel, and satisfactory records regarding past project performance, safety, legal compliance and business integrity; and

WHEREAS, the County has a compelling interest in assuring that its Public Works Projects meet the highest standard of safety and quality; and

WHEREAS, due to the critical impact that skilled construction craft labor has on public works projects, and due to the limited availability of skilled construction craft labor and imminent craft labor skill shortages, it is necessary to require contractors and subcontractors to participate in established, formal apprenticeship training programs for the purpose of both promoting successful project delivery and ensuring future workforce development; and

WHEREAS, an apprenticeship program is a structured system of training

designed to prepare individuals for occupations and lifelong careers in skilled trades and crafts by providing a wage-paying job that incorporates extensive workplace and classroom training under the supervision of experienced workers, in preparation for highly skilled occupations; and

WHEREAS, apprenticeship programs are a critical component in public safety, by ensuring that workers on public projects are properly trained, able, competent and capable craftsmen, and provide assurance of compliance with the County's bid specifications and achieve high quality standards; and

WHEREAS, for an apprenticeship program to be fully effective, the public and private sectors must recognize its value and commit to supporting its mission; and

WHEREAS, Union County has long recognized the value of apprenticeship programs through its support of the Union County Vocational-Technical Schools, which offer training programs to help ensure that Union County will continue to produce a skilled and educated work force in the trade specialties, and thus, strengthen Union County's economy by fostering the development of highly paid trade and craft careers; and

WHEREAS, the use of apprenticeship programs or apprenticeship trained employees on Union County Public Works Projects will serve the dual goal of providing the County with assurance that its public works projects are completed with a well-trained workforce, in a highly skilled and timely fashion, while creating opportunities for careers in the skilled trades and craft industry for County residents; and

WHEREAS, the County of Union also recognizes that it is beneficial to their employees to utilize fair business, employment, and training practices that have a positive impact on local communities affected by such contracts:

NOW, THEREFORE, BE IT RESOLVED by the Board of Chosen Freeholders of the County of Union as follows:

1. The County of Union shall require compliance with the provisions of this Resolution by business entities seeking to provide services to the County of Union as specified herein. The requirements of this Resolution are intended to supplement, not replace, existing contractor qualifications and performance standards or criteria currently required by law, public policy or contracting documents, including but not limited to Union County's DPMC classification and Project Labor Agreement

policies

2. All contractors and subcontractors that perform significant work on any public facility or public works project, including construction, alteration, renovation, repair, service, or maintenance work, shall meet the requirements of this Resolution. For purposes of this Resolution, the term "significant work" shall be defined as any work or activity covered under the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq.

3. All firms engaged in contracts covered by this Resolution shall be qualified responsible contractors or subcontractors that have sufficient capabilities in all respects to successfully perform contracts on which they are engaged, including the necessary experience, equipment, technical skills and qualifications and organizational, financial and personnel resources. Firms bidding on public contracts shall also be required to have a satisfactory past performance record and a satisfactory record of legal compliance, integrity and business ethics. Compliance with these standards shall be established by compliance with the requirements set forth in paragraph 8 of this Resolution.

4. As a condition of performing work on public works contracts over the public works threshold, the general contractor shall provide certification that he and each subcontractor working on the project shall have at least one (1) employee who has successfully completed the OSHA 10-hour construction safety and health course. As a condition of performing work on public works contracts of \$500,000.00 or more total cost of project, the general contractor shall provide certification that each subcontractor working on the project shall have at least one (1) employee who has successfully completed the OSHA 30-hour construction safety and health course.

5. All contractors and subcontractors that perform significant work on any public facility or public works project shall be required to affirmatively provide evidence of and confirm compliance with proof of participation in an Apprenticeship Program currently registered and approved by the United States Department of Labor ("USDOL"), the New Jersey Department of Labor ("NJLDR") or any state having equal to or higher requirements as either the USDOL or NJLDR apprenticeship programs. Additionally, Apprenticeship Programs shall meet the criteria set forth in Section 8(i) of this Resolution.

6. As a condition of performing work on public works contracts subject to this Resolution, a general contractor seeking award of a

contract shall submit a Contractor Responsibility Certification at the time it submits its bid for contract.

7. The Contractor Responsibility Certification shall be completed on a form provided by the Union County Purchasing Department and shall reference the project for which a bid is being submitted by name and contract or project number.

8. In the Contractor Responsibility Certification, general contractors and subcontractors shall certify the following facts regarding their past performance and work history and its current qualifications and performance capabilities:

a. The firm has all valid, effective licenses, registrations or certificates required by federal, state, county, or local law, including, but not limited to, licenses, registrations, certificates required to: (1) do business in the designated locale; and (2) perform the contract work it seeks to perform. These shall include, but not be limited to, licenses, registrations or certificates for any type of trade work or specialty work, which the firm proposes to self-perform.

b. The firm meets the bonding requirements for the contract, as required by applicable law or contract specifications and any insurance requirements, as required by applicable law or contract specifications, including general liability insurance, workers compensation insurance and unemployment requirements.

c. The firm has not been debarred by any federal, state or local government agency or authority in the past three (3) years.

d. The firm has not defaulted on any project in the past three (3) years.

e. The firm has not had any type of business, contracting or trade license, registration, or other certification suspended or revoked in the past three (3) years.

f. The firm has not been cited and found guilty for a willful violation of federal or state safety laws in the past three (3) years.

g. The firm and/or its owners have not been convicted of any crime relating to the contracting business by a final decision of a

court or government agency in the past three (3) years.

h. The firm will pay all craft employees that it employs on the project the current wage rates and benefits as required under applicable Federal or State prevailing wage laws.

i. The firm participates in an Apprenticeship Program that is currently registered with the USDOL, the NJDOL or any state having equal to or higher requirements as either the USDOL or NJDOL apprenticeship programs, for each craft or trade in which it apprentices. The firm shall provide proof of meeting this qualification standard by submitting appropriate documentation as an attachment to this Certification. The firm shall continue to participate in applicable apprenticeship programs for the full duration of the contract work. The apprenticeship program in which the firm participates shall have graduated at least one (1) enrollee in each of the past three (3) years.

9. The County of Union may conduct any additional inquiries to verify that the prospective awardee and its subcontractors have the technical qualifications and performance capabilities necessary to successfully perform the contract and that the firms have a sufficient record of legal compliance and business integrity to justify the award of a public contract. In conducting such inquiries, the County of Union may seek relevant information from the firm, its prior clients or customers, its subcontractors or any other relevant source.

10. If any provision of this Resolution shall be held to be invalid or unenforceable by a court of competent jurisdiction, any such holding shall not invalidate any other provisions of this Resolution and all remaining provisions shall remain in full force and effect.

NOW, THEREFORE, BE IT RESOLVED by the Board of Chosen Freeholders of the County of Union that it hereby establishes and adopts the Responsible Contractor Policy, and it hereby authorizes the County Manager to sign any and all documents necessary to make said Policy effective immediately.

57. FEDERAL TERMS

TERMS AND CONDITIONS APPLICABLE TO ALL CONTRACTS/PURCHASES FUNDED, IN WHOLE OR IN PART, BY FEDERAL FUNDS.

The provisions set forth below apply to all contracts funded, in whole or in part, by Federal funds as required by 2 CFR 200.317.

1. CONTRACTING WITH SMALL AND MINORITY BUSINESSES, WOMEN'S BUSINESS ENTERPRISES, AND LABOR SURPLUS AREA FIRMS

Pursuant to 2 CFR 200.321, the State must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Accordingly, if subawards are to be made the Contractor shall:

- (1) Include qualified small and minority businesses and women's business enterprises on solicitation lists;
- (2) Assure that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- (3) Divide total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
- (4) Establish delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; and,
- (5) Use the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

2. DOMESTIC PREFERENCE FOR PROCUREMENTS

Pursuant to 2 CFR 200.322, where appropriate, the State has a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). If subawards are to be made the Contractor shall include a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). For purposes of this section:

- (1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
- (2) "Manufactured products" means items and construction materials composed in whole or in part of nonferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

3. PROCUREMENT OF RECOVERED MATERIALS

Where applicable, in the performance of contract, pursuant to 2 CFR

200.323, the contractor must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$ 10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

To the extent that the scope of work or specifications in the contract requires the contractor to provide recovered materials the scope of work or specifications are modified to require that as follows.

- i. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—
 1. Competitively within a timeframe providing for compliance with the contract performance schedule;
 2. Meeting contract performance requirements; or
 3. At a reasonable price.
- ii. Information about this requirement, along with the list of EPA-designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.
- iii. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

4. EQUAL EMPLOYMENT OPPORTUNITY

Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." See, 2 CFR Part 200, Appendix II, para. C.

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

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual

orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

- (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- (4) The contractor will send to each labor union or representative of workers with which he/she has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his/her books, records, and accounts by the

administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

- (7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary

responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

5. DAVIS-BACON ACT, 40 U.S.C. 3141-3148, AS AMENDED

When required by Federal program legislation, all prime construction contracts in excess of \$2,000 shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141- 3144, and 3146-3148) and the requirements of 29 C.F.R. pt. 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. Additionally, contractors are required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

6. COPELAND ANTI-KICKBACK ACT

Where applicable, the Contractor must comply with Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants

from the United States").

- a. Contractor. The Contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into the OGS centralized contract.
- b. Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.
- c. Breach. A breach of the clauses above may be grounds for termination of the OGS centralized contract, and for debarment as a Contractor and subcontractor as provided in 29 C.F.R. § 5.12.

7. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT, 40 U.S.C. 3701-3708

Where applicable, all contracts awarded by the non-Federal entity in excess of \$ 100,000 that involve the employment of mechanics or laborers must comply with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5).

- (1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours

without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

- (3) Withholding for unpaid wages and liquidated damages. The unauthorized user shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
- (4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

8. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

9. CLEAN AIR ACT, 42 U.S.C. 7401-7671Q, AND THE FEDERAL WATER POLLUTION CONTROL ACT, 33 U.S.C. 1251-1387, AS AMENDED

Where applicable, Contracts and subgrants of amounts in excess of \$150,000, must comply with the following:

Clean Air Act

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
2. The contractor agrees to report each violation to the Division of Purchase and Property and understands and agrees that the Division of Purchase and Property will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

Federal Water Pollution Control Act

1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
2. The contractor agrees to report each violation to the Division of Purchase and Property and understands and agrees that the Division of Purchase and Property will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

10. DEBARMENT AND SUSPENSION (EXECUTIVE ORDERS 12549 AND 12689)

- (1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- (2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- (3) This certification is a material representation of fact relied upon by the State or authorized user. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the State or authorized user, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

- (4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

11. BYRD ANTI-LOBBYING AMENDMENT, 31 U.S.C. 1352

Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

12. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

(a) Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:

- (1) Procure or obtain;
- (2) Extend or renew a contract to procure or obtain; or
- (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115–232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any

subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

13. CONTRACTS FOR MORE THAN THE SIMPLIFIED ACQUISITION THRESHOLD

Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

14. TERMINATION FOR CONVENIENCE PROVISION

All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.

15. BONDING REQUIREMENTS

For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold, the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or pass-through entity has made a determination that the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

(a) A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.

(b) A performance bond on the part of the contractor for 100 percent of the contract price. A “performance bond” is one executed in connection with a contract to secure fulfillment of all the contractor's requirements under such contract.

(c) A payment bond on the part of the contractor for 100 percent of the contract price. A “payment bond” is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

BIDDER'S NAME: _____

EDWARD T. OATMAN
COUNTY MANAGER

MICHELE HAGOPIAN, ASSISTANT DIRECTOR
DIVISION OF PURCHASING

BID DOCUMENT SUBMISSION CHECKLIST

**ALL SIGNATURES AND SEALS SHALL BE ORIGINALS UNLESS OTHERWISE SPECIFIED
BID SHEETS SHOULD NOT BE SUBMITTED DOUBLE SIDED PAGES, (SINGLE SIDE ONLY)**

EACH BIDDER SHOULD COMPLETE THIS FORM AND INITIAL EACH ENTRY.

DATE COMPLETED: _____

**PLEASE SUBMIT BID DOCUMENTS ON SINGLE SIDED PAPER ONLY, WITH THE EXCEPTION OF
THE SURETY AND BID BOND DOCUMENTS.**

**IN ACCORDANCE WITH THE BID SPECIFICATIONS I HAVE REVIEWED, COMPLETED / EXECUTED
AND INCLUDED THE FOLLOWING FORMS:**

_____ Bid Form Page (**Signed, Dated and Bid on all alternatives applicable to the Work**).

_____ Security in the form of:

_____ Bid bond in an amount equal to 10% of the total amount of this bid not to exceed \$20,000.00; or

_____ Certified check or cashier's check in the amount of 10% of this bid not to exceed \$20,000.00

_____ Consent of Surety form signed by a Surety Company if the total amount of your Bid is over \$36,000.00. If your bid is accepted, the Surety Company that provided the Consent shall be required to furnish a Performance, Labor and Materials Bond in the amount of 100% of the award of the contract.

The County of Union has provided its Consent of Surety form for your use. The use of this form by your Surety Company will expedite the bid review process and eliminate the possibility of having your bid rejected. If, however, you should need to use another form, please use language similar to that used on the Union County form and avoid making any additions or deletions to the Union County form language. In lieu of the Consent of Surety you may submit a Certified Check in the full amount of the bid.

_____ STATEMENT OF BIDDER OWNERSHIP. Pursuant to N.J.S.A. 52:25-24.2, which includes **BOTH** of the following documents:

- Bidder Signature Page
- Bidder Disclosure Statement (**Fill out 2 pages completely**)

_____ SUBCONTRACTOR IDENTIFICATION. Pursuant to N.J.S.A. 40A:11-16, which includes **BOTH** of the following documents:

- Subcontractor Identification Statement: List of Subcontractors (**only for certain types of work**)
- Subcontractor Identification Certification

_____ Acknowledgement of Addendum form: (**This form is to be used only when an addendum has been added to the specifications**).

_____ A copy of the State of New Jersey Department of the Treasury, Division of Revenue, **Business Registration Certificate ("BRC")** should be included with the bids as it must be received by the County prior to the award of the contract. The BRC provided must show that the Bidder was registered at the time of receipt of bids or the bid will be rejected.

BIDDER'S NAME: _____

_____ A copy of the State of New Jersey Department of the Treasury, Division of Revenue, **Business Registration Certificate ("BRC")** of all named or listed subcontractors (List of Subcontractors) in a Construction bid should be included with the bid as the BRC(s) must be received by the County prior to the award of the contract. Each subcontractor's certificate provided must show that the subcontractor was registered at the time of the receipt of bids or the bid will be rejected.

_____ Affirmative Action Requirement

_____ Experience Statement

_____ Certificate of Bidder showing ability to perform Contract

_____ Non-Collusion Affidavit – Fill out completely and notarize

_____ Certificates from New Jersey Department of Labor and Workforce and Workforce Development – Public Works Contractor Registration Act. **(Only for certain types of work)**

_____ Federal Attachments **(If applicable)**

_____ NJDPMC Certificate / Notice of Classification **(If applicable)**

_____ Americans with Disabilities Act

_____ Statement of Bidder's Qualifications

_____ Contractor Performance Record

_____ Affidavit Regarding List of Debarred, Suspended or Disqualified Bidders

_____ Prior Negative Experience Questionnaire

_____ Contractor's Certification of Compliance – New Jersey Prevailing Wage Act

_____ Uncompleted Contracts Affidavit **(For Bidder, if applicable) MUST ALSO PROVIDE DPMC FORM 701**

_____ Certificate of Insurance Statement

_____ Collection of Use Tax on Sales to Local Government Statement

_____ Time of Completion

_____ Prohibited Russia-Belarus Activities & Iran Investment Activities Certification

_____ Federal Non-Debarment Certification

_____ BYRD Anti-Lobbying Amendment Certification

_____ Certification Regarding Lobbying

_____ Disclosure of Lobbying Activities (LLL Form)

I HAVE TAKEN THE FOLLOWING ACTIONS:

_____ Visited the site and attended the Pre-Bid Meeting **(Where applicable)**

_____ Reviewed the Contract Documents (including any permits the County or its professionals may have obtained), Work, Site, Locality, and Local Conditions and Laws and Regulations that in any manner may affect Cost, Progress, Performance or Furnishing of Work.

BIDDER'S NAME: _____

_____ Reviewed Bond Requirements

_____ Provided Proof of Compliance with New Jersey Prevailing Wage Act

_____ Reviewed Form of Owner/Contractor Agreement and General Conditions to the Contract

NOTE: QUESTIONS PERTAINING TO THIS BID ARE TO BE DIRECTED TO THE DIVISION OF PURCHASING AT ucbids@ucnj.org.

BIDDING DOCUMENTS

The Bidding Documents consist of the following items:

- **ADDENDA, if issued**
- **CLARIFICATIONS, if issued**
- **INSTRUCTION TO BIDDERS**
- **BID FORM**
- **OWNER-CONTRACTOR AGREEMENT (AIA 101) AND GENERAL CONDITIONS (AIA 201)**
- **SPECIFICATIONS: As outlined in the Table of Contents and included in the Project Manual.**
- **DRAWINGS: As per List of Drawings, indicated on the Project Title Sheet.**

BIDDER'S NAME: _____

BID FORM

I/We have carefully examined the plans, specifications, and advertisement for bid for the

**New Annex Courthouse Roof Replacement
City of Elizabeth, County of Union, New Jersey
BA#10-2023; UNION COUNTY ENGINEERING PROJECT #2022-003**

that is on file in the Union County Division of Engineering. I/We have inspected the site of the work and will contract to do all the work and furnish all materials mentioned in said plans and specifications. Work will be accomplished in the manner prescribed therein.

LUMP SUM BID:

Written

Figures

CONTINGENCY ALLOWANCE: (To be used if and when directed by the County)

One Hundred Twenty Thousand Dollars Zero Cents
Written

\$ 120,000.00
Figures

TOTAL LUMP SUM PLUS CONTINGENCY ALLOWANCE AMOUNT:

Written

Figures

NOTE: Contingency Allowance may include one-half of one percent of contract amount set aside for local training if and when directed by the County.

UNIT PRICES (SHALL BE FILLED IN AT TIME OF BID)

The Bid is a lump sum basis of award bid for all work. The following Units Prices are for changing quantities of work items from those indicated by the Contract Documents (Drawings and/or Specifications) and upon written instructions from the Architect, the following Unit Prices shall prevail. The Unit Prices may be used by the Owner and shall include all labor, installation, materials, bailing, shoring, removal, overhead, profit, insurance bond, and all incidental items required for similar work under the Specifications, and all other applicable provisions of the Contract to cover the finished work of the several kinds called for. Changes shall be processed in accordance with the provisions set forth in the General Conditions. It is further agreed that the Owner may accept or reject any or all of the submitted Unit Prices at the time the Contract is awarded, or may substitute for them prices negotiated with the Contractor as part of the contract award process or as part of future Change Orders.

BIDDER'S NAME: _____

UNIT PRICES:

- A. Unit Price No. 1: Install a Two-Piece Counterflashing and Reglet.
_____ Dollars (\$) _____) per 1 Linear foot.
Words
- B. Unit Price No. 2: Construction and Removal of the Temporary Protective Shed (Bridge).
_____ Dollars (\$) _____) per 1 Square foot.
Words
- C. Unit Price No. 3: Construction and Removal of the Temporary Fence.
_____ Dollars (\$) _____) (1) 4' long x 8' high Temporary Fencing Panel.
Words
- D. Unit Price No 4: Removal and Installation of sealant at all the transverse joints of the existing copings.
_____ Dollars (\$) _____) per 1 Linear foot.
Words
- E. Unit Price No 5: Repair of the concrete roof deck.
_____ Dollars (\$) _____) per 1 Square foot.
Words

BIDDER'S NAME: _____

CONSENT OF SURETY
TO ACCOMPANY PROPOSAL (BID)

_____ (hereinafter called Surety), organized and existing under the laws of the State of _____ duly authorized and qualified to transact business in the State of New Jersey, in consideration of the sum of One Dollar (\$1.00), lawful money of the United States of America, to it in hand paid, receipt whereof is hereby acknowledged, and in consideration, hereby certifies and agrees that if the contract for which the attached proposal is made be awarded to _____ (hereinafter called Contractor) for the performance of certain work and labor or the supplying of certain materials, or both, as more particularly set forth in said proposal and described for purposes of this instrument as a proposal for _____ to the COUNTY OF UNION and if Contractor shall enter into the contract, Surety will become bound as surety for its faithful performance, labor and material payment and will provide the Contractor with a performance, labor and material payment bond in the full amount of the contract price.

NOTE:
Expiration date
Needed if Annual
Surety

NAME OF INSURANCE COMPANY

ADDRESS: _____

ORIGINAL SIGNATURE
ATTORNEY-IN-FACT FOR INSURANCE CO.

NOTE: PROOF OF AUTHORITY OF OFFICERS OF SURETY COMPANY TO EXECUTE THIS DOCUMENT MUST BE SUBMITTED.

BIDDER'S NAME: _____

BIDDER SIGNATURE PAGE

THE BIDDER MUST READ THE FOLLOWING INSTRUCTIONS TO COMPLETE THIS PAGE:

1. If doing business under a **trade name, partnership or a sole proprietorship**, you must submit the bid under exact title of the trade name, partnership, or proprietorship, and the bid must be signed by either the **owner**, or a **partner** and **witnessed** by a **notary public**.
2. If a **Corporation**, the bid must be signed by the **President** or **Vice President** and **witnessed** by a **Corporate Secretary** (corporate title must be exact) and **affix corporate seal**. If a Corporate Secretary does not exist, President or Vice President's signature shall be witnessed by a Notary Public.
3. Other persons **authorized** by **corporate resolution** to execute agreements in its behalf may also sign the bid documents (pages). **Copy of a resolution must accompany the bid**.
4. The person who signs this bid form **must also** sign the **Non-Collusion Affidavit**.
5. You **cannot** witness your own signature.

NAME OF BIDDER

ADDRESS OF BIDDER

ORIGINAL SIGNATURE
CORPORATE SECRETARY

PRINT NAME AND TITLE
CORPORATE SECRETARY

TEL: _____
FAX: _____
E-Mail: _____

BY: _____
ORIGINAL SIGNATURE

Corporate Seal

PRINT OR TYPE NAME AND TITLE

WARNING: IF YOU FAIL TO FULLY, ACCURATELY, AND COMPLETELY SUPPLY THE INFORMATION REQUESTED ON THIS PAGE, YOUR BID MAY BE REJECTED.

BIDDER'S NAME: _____

STATEMENT OF OWNERSHIP DISCLOSURE

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

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

Name of Organization: _____

Organization Address: _____

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

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

Part II

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

OR

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

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

Name of Individual or Business Entity	Address

BIDDER'S NAME: _____

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

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

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

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

Stockholder/Partner/Member and Corresponding Entity Listed in Part II	Address

Part IV Certification

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

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

BIDDER'S NAME: _____

SUBCONTRACTOR IDENTIFICATION STATEMENT

LIST OF SUBCONTRACTORS

This form is ONLY required for plumbing and gas fitting, steam and hot water heating and ventilating apparatus, steam power plants, electrical work, structural steel, ornamental iron work, and any other trades required to be identified by the specifications (including, but not limited, to satisfying any DPMC Classification requirements).

CHECK THIS BOX IF NONE OF THE ABOVE LISTED TRADES OR THOSE REQUIRED TO BE IDENTIFIED IN THE SPECIFICATIONS ARE TO BE USED TO PERFORM THE WORK

In compliance with N.J.S.A. 40A:11-16 and the bid specifications, the undersigned hereby lists the name or names of the following subcontractors:

Company Name: _____

Address: _____

Telephone: _____ Subcontract Amount: \$ _____

Specific Scope of Work Subcontracted: _____

License No. _____

Company Name: _____

Address: _____

Telephone: _____ Subcontract Amount: \$ _____

Specific Scope of Work Subcontracted: _____

License No. _____

Company Name: _____

Address: _____

Telephone: _____ Subcontract Amount: \$ _____

Specific Scope of Work Subcontracted: _____

License No. _____

IF MORE THAN THREE SUBCONTRACTORS, PLEASE COPY THIS SHEET AS NECESSARY AND ATTACH TO THE BID PACKAGE.

(Continued on following page)

BIDDER'S NAME: _____

SUBCONTRACTOR IDENTIFICATION CERTIFICATION

Note the law does not permit the listing of alternate subcontractors. However, multiple subcontractors for the same trade are permitted to be named provided the bidder meets the following requirements:

- Bidder identifies each subcontractor named for that category;
- Bidder states the scope of work, goods and services (the portion of the work) to be performed by each subcontractor; and
- Bidder provides the price quote provided by each subcontractor.

The bidder is advised that any change of subcontractor(s) from ones listed herein is subject to the County's approval. Change of subcontractor(s) will be approved only if made for good cause and not as a result of an arbitrary purpose.

The undersigned Bidder certifies and declares that the subcontractors listed above shall be used as subcontractors to complete certain portions of the work in this project as set forth in N.J.S.A. 40A: 11-16.

Witness

Date _____

NAME OF BIDDER

ADDRESS

By: _____
ORIGINAL SIGNATURE ONLY

PRINT NAME AND TITLE

BIDDER'S NAME: _____

ACKNOWLEDGMENT OF ADDENDUM

COUNTY OF UNION

(Name of Construction /Public Works Project)

(Project or Bid Number)

Pursuant to N.J.S.A. 40A:11-23.1a., the undersigned bidder, hereby acknowledges receipt of the following notices, revisions, or addenda to the bid advertisement, specifications or bid documents. By indicating date of receipt, bidder acknowledges the submitted bid takes into account the provisions of the notice, revision or addendum. Note that the County of Union's record of notice to bidders shall take precedence and that failure to include provisions of changes in a bid proposal may be subject for rejection of the bid.

Local Unit Reference Number or Title of Addendum/Revision	How Received (mail, fax, pick-up, etc.)	Date Received

ACKNOWLEDGMENT BY BIDDER:

NAME OF BIDDER: _____

ORIGINAL SIGNATURE: _____

PRINTED NAME AND TITLE: _____

DATE: _____

BIDDER'S NAME: _____

CONTRACTOR BUSINESS REGISTRATION CERTIFICATE

Pursuant to N.J.S.A. 52:32-44, the County of Union 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 County of Union 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 County of Union prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

Proof of registration must show that the bidder was in fact registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids. If subcontractors are named on the bid, proof of the business registration for each must be provided prior to the award of a contract. Similarly to the bidder, the proof must show that each subcontractor was registered with the State of New Jersey Department of the Treasury, Division of Revenue and obtained the business registration prior to the receipt of bids.

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 County of Union 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 County of Union 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.

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE
FOR STATE AGENCY AND CASINO SERVICE CONTRACTORS

TAXPAYER NAME: TAX REGISTRATION TEST ACCOUNT
TRADE NAME: CLIENT REGISTRATION
TAXPAYER IDENTIFICATION: 010-007-3021000
SEQUENCE NUMBER: 0107210
ADDRESS: 847 ROEBLING AVE, TRENTON NJ 08611
ISSUANCE DATE: 07/14/04

FORM-BRC(04/01)

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE

Taxpayer Name: TAX REG TEST ACCOUNT
Trade Name:
Address: 847 ROEBLING AVE, TRENTON, NJ 08611
Certificate Number: 1093907
Date of Issuance: October 14, 2004

For Office Use Only:
20041014112823533

BIDDER'S NAME: _____

AFFIRMATIVE ACTION REQUIREMENT

REQUIRED AFFIRMATIVE ACTION EVIDENCE

General Requirements of P.L. 1975, c. 127: You are hereby put on notice that:

CONSTRUCTION CONTRACTS: The successful contractor must submit within three (3) days of the notice of intent to award or the signing of the contract the initial project manning report (A.A.201). This report should be submitted at the time the signed contract is returned to the County of Union. Attention: *Affirmative Action Officer*.

If the successful contract does not submit the initial project manning report (A.A.201) within the three (3) days from the time the signed contract is returned to the County of Union, the County of Union WILL declare the contractor non-responsive and award the contract to the next lowest responsible bidder.

NAME OF BIDDER

ORIGINAL SIGNATURE

PRINT OR TYPE NAME AND TITLE

DATE THIS FORM IS COMPLETED

BIDDER'S NAME: _____

EXPERIENCE STATEMENT

I hereby certify that my company has performed the following private or public work, which is relevant to this bid. I further certify that my company has never defaulted under any contract. Should you not sign this form due to prior defaults, please provide details on an attached sheet.

Witness

Date

NAME OF BIDDER

ADDRESS

By: _____
ORIGINAL SIGNATURE ONLY

PRINT NAME AND TITLE

YOU MAY ATTACH ADDITIONAL SHEETS, BUT YOU MUST SIGN AND WITNESS THIS SHEET.

BIDDER’S NAME: _____

NON-COLLUSION AFFIDAVIT

(N.J.S.A. 52:34-15)

STATE OF _____)
) **SS:** _____
 COUNTY OF _____)

I _____, of the City of _____, in the County of _____, and the State of _____, of full age, being duly sworn according to law, on my oath depose and say that: I am _____ of the firm of _____, the bidder making the proposal for the above named project, and that I executed the said proposal for the above named project, and that I executed the said proposal with full authority to do so; that said bidder has not, directly or indirectly, entered into any agreement, participation in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said proposal and in this Affidavit are true and correct, and made with full knowledge that the COUNTY OF UNION, NEW JERSEY relies upon the truth of the statements contained in said proposal and in the statements contained in the affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bonafide established commercial or selling agencies maintained by _____ (N.J.S.A. 52:34-15).

NAME OF BIDDER

ORIGINAL SIGNATURE ONLY

NOTE: The person who signed the bidder signature page for the bidder should sign this form also.

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

 Notary Public of the State of _____
 My commission expires: _____

WARNING: IF YOU FAIL TO FULLY, ACCURATELY, AND COMPLETELY FILL OUT THIS AFFIDAVIT OF NON-COLLUSION, YOUR BID MAY BE REJECTED.

BIDDER'S NAME: _____

Contractor Registration Advisement
For Public Works Projects

A new law, known as "The Public Works Contractor Registration Act" (P.L. 1999, c.238), became effective April 11, 2000. Under the Act, no contractor/subcontractor will be permitted to bid on or engage in any contract for public work, as defined in Section 2 of P.L. 1963, c.150 (C:34:11-56.26), unless that contractor/subcontractor is registered with the New Jersey Department of Labor and Workforce and Workforce Development. The Act provides that upon registration with the Department, a public works contractor/subcontractor will be issued a certificate by the Department indicating compliance with the Act's requirements. The registration fee has been set at \$300.00 per year. Upon the effective date of the Act, public bodies will be expected to request production of such a certificate from those bidding on or engaging in public works projects.

It is important to note that the term "contractor," is defined in the, Act as, "a person, partnership, association, joint stock company, trust, corporation or other legal business entity or successor thereof who enters into a contract which is subject to the provision of the "New Jersey Prevailing Wage Act," P.L. 1963, c.150 (C.34:11-56.25, et seq.) for the construction, reconstruction, demolition, alteration, repair or maintenance of a public building regularly open to and used by the general public or a public institution, and includes any subcontractor or lower tier subcontractor as defined herein: except that, for the purposes of the act, no pumping station, treatment plant or other facility associated with utility and environmental construction, reconstruction, demolition, alteration, repair or maintenance shall be regarded as a public building regularly open to and used by the general public or a public institution."

Registration forms, copies of the Act, and other relevant information can be obtained by contacting:

Contractor Registration Unit
New Jersey Department of Labor and Workforce and Workforce Development
Division of Wage & Hour Compliance
PO Box 389
Trenton, New Jersey 08625-0389
Telephone: 609-292-9464
Fax: 609-633-8591
E-mail: contreg@dol.state.nj.us

BIDDER'S NAME: _____

AMERICANS WITH DISABILITIES ACT
EQUAL OPPORTUNITY FOR INDIVIDUALS WITH DISABILITIES

The contractor and the County of Union (hereafter "Owner") do hereby agree that the provisions of Title II of the Americans With Disabilities Act of 1990 (the "Act") (42 U.S.C. S12101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the Owner pursuant to this contract, the contractor agrees that the performance shall be in strict compliance with the Act. In the event the contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the contractor shall defend the Owner in any action or administrative proceeding commenced pursuant to this Act. The contractor shall indemnify, protect, and save harmless the Owner, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The contractor shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the Owner's grievance procedure, the contractor agrees to abide by any decision of the Owner which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the Owner, or if the Owner incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the contractor shall satisfy and discharge the same at its own expense.

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

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

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

Name _____
(Please print or type)

Signature _____ **Date** _____

BIDDER'S NAME: _____

STATEMENT OF BIDDER'S QUALIFICATIONS

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. Questions may be answered on separate attached sheets. The Bidder may submit any additional information it desires.

1. _____
(Name of Bidder)

2. _____
(Permanent Main Office Address)

3. _____
(When Organized)

4. _____
(If a Corporation, where incorporated)

5. Number of years your organization has been engaged in construction or contracting business under present firm or trade name? _____

6. How many years of experience in construction work has your organization had (a) as a general contractor? And/or (b) As a subcontractor? _____

7. Contracts on hand: (Attach a list or table showing gross amounts of each Contract and the appropriate dates of completion) _____

8. General character of work performed by you. _____

9. Have you ever failed to complete any work awarded to you? _____

10. Have you ever defaulted on a Contract? _____ If so, complete details, including where and why?

BIDDER'S NAME: _____

STATEMENT OF BIDDER'S QUALIFICATIONS - (continued)

11. Has any officer or partner of your organization ever failed to complete a construction contract handled in its own name? If so, state name of individual, name of owner, location and type of project, and reason for the failure to complete. _____

12. List your major equipment available for this Contract.

13. Experience in the construction work similar in importance to this Project.

14. Have you had any material adverse changes from the trades as listed in NJ Notice of Classification within last five (5) years? _____. If so, list prior classification.

15. Background and experience of the principal members of your organization, including the officers.

Individual's Name	Present Position or Office	Yrs. of Construction Experience	Magnitude & Type of Work	In What Capacity

BIDDER'S NAME: _____

16. Bank Reference. (Name, Address, Phone, Representative) _____

17. Will you, upon request, fill out a detailed financial Statement? _____

18. The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the proper agency in verification of the responses comprising this Statement of Bidder's Qualifications.

19. Bidder's telephone number, fax number and e-mail address (if applicable).

Phone _____

Fax _____

E-mail _____

Mobile _____

Dated at _____ this _____ day of _____, 20____.

BIDDER (Signature)

BIDDER (Print Name)

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

(Seal) Notary Public of New Jersey/
Specify Other State
My Commission Expires _____, 20____.

**NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL
MAY RESULT IN A REJECTION OF YOUR BID.**

BIDDER'S NAME: _____

CONTRACTOR PERFORMANCE RECORD

List all contracts completed by you below or provide separate form.

Name of Owner	Name & Location of Project: Type Of Work	Prime or Sub-Cont.	Engineer or Architect in Charge for Owner	Contract Price (Omit Cost)	Date Completed	Was Time* Extension Necessary	Were Any Penalties Imposed	Were Liens* Claims or Stop Notice Filed

* If answer is YES, provide explanation of details in connection with non-completion of contracts, time extensions, penalties imposed, labor troubles, liens, claims and notices filed against contracts listed in preceding item "Performance Record" on an attached sheet.

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

BIDDER'S NAME: _____

CONTRACTOR PERFORMANCE RECORD
CERTIFICATION

The information above is true and complete to the best of my knowledge and belief.

(Name of Organization)

(Signature)

(Title)

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

(Seal) Notary Public of New Jersey/
Specify Other State
My Commission Expires _____, 20____.

BIDDER'S NAME: _____

**AFFIDAVIT REGARDING LIST OF DEBARRED,
SUSPENDED OR DISQUALIFIED BIDDERS**

STATE OF NEW JERSEY / _____)
 Specify, if Other) SS:
COUNTY OF _____)

I, _____, of the (City, Town, Borough, etc.) of _____ State of _____, of full age, being duly sworn according to law on my oath depose and say that:

I am _____ of the firm of _____, the Bidder making the Proposal for the above named Project. I have executed the said Proposal with full authority to do so. Said Bidder is not at the time of the making this bid included on the New Jersey State Treasurer's or the Federal Government's List of Debarred, Suspended or Disqualified Bidders as a result of action taken by any State or Federal Agency.

Name of Contractor

By: _____
(Signature of Authorized Representative)

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

(Seal) Notary Public of New Jersey/
Specify Other State
My Commission Expires _____, 20__.

**NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR
PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.**

BIDDER'S NAME: _____

PRIOR NEGATIVE EXPERIENCE QUESTIONNAIRE

(N.J.S.A. 40A:11-4)

1. Within the past ten (10) years, have you 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 a contract in a timely manner; or otherwise performed unsatisfactorily under a prior contract with a public entity?

_____ yes _____ no If yes, please provide full, detailed explanation.

2. Within the past ten (10) years, have you defaulted on a contract, thereby requiring a public entity to utilize the services of another contractor to provide the goods or perform the services or to correct or complete the contract?

_____ yes _____ no If yes, please provide full, detailed explanation.

3. Within the past ten (10) years, have you defaulted on a contract, thereby requiring a public entity to look to your surety for completion of the contract or tender of the costs of completion?

_____ yes _____ no If yes, please provide full, detailed explanation.

4. Within the past ten (10) years, have you been debarred or suspended from contracting with any of the agencies or department of the executive branch of the State of New Jersey at the time of the contract award, where the action was based on failure to perform a contract for goods or services with a public entity?

_____ yes _____ no If yes, please provide full, detailed explanation.

BIDDER'S NAME: _____

PRIOR NEGATIVE EXPERIENCE CERTIFICATION

I hereby certify that the above statements are true and accurate as of this _____
day of _____, 20__.

Name of Contractor

By _____
(Signature of Authorized Representative)

Subscribed and sworn to before me
This _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/
Specify Other State
My Commission Expires _____, 20__.

**NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR
PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.**

BIDDER'S NAME: _____

TO BE COMPLETED ONLY WHEN FINAL PAYMENT IS REQUESTED

CONTRACTOR'S CERTIFICATION OF COMPLIANCE - NEW JERSEY PREVAILING WAGE ACT

TO: County of Union
Division of Engineering
2325 South Avenue
Scotch Plains, New Jersey 07076

CONTRACT:

PROJECT:

In accordance with the requirements of the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56 et al *, the undersigned contractor on the public work being performed for:

COUNTY OF UNION

hereby certifies that he/she has complied with the contract requirements regarding the payment of the minimum prevailing wages established under "The New Jersey Prevailing Wage Act" N.J.S.A. 34:11-56 et al.

CONTRACTOR: _____
ADDRESS: _____

BY: _____

ORIGINAL SIGNATURE ONLY

STATE OF NEW JERSEY
COUNTY OF _____

Being by me duly sworn according to law, on his oath deposes and says that _____ is _____ of _____ the above named contractor, and that the facts set forth in the above statement are true.

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

Notary Public: _____
My Commission Expires: _____

* N.J.S.A. 34:11-56.33 requires the contractor and subcontractor to file written statements with the public body in form satisfactory to the Commissioner certifying to the amounts then due and owing from such contractor and subcontractor filing such statement to any and all workmen for wages due on account of the public work, setting forth therein the names of the persons whose wages are unpaid and the amount due to each respectively. Union County will withhold the amount so deducted for the benefit of the workmen whose wages are unpaid as shown by the verified statement filed, and will pay directly to any workman the amount shown by such statement to be due to him for such wages. Such payment shall thereby discharge the obligation of the contractor to the person receiving such payment to the extent of the amount thereof.

BIDDER'S NAME: _____

UNCOMPLETED CONTRACTS AFFIDAVIT
(To be submitted with DPMC Form 701)

PURSUANT TO N.J.A.C. 17:19-2.13, BIDDER DECLARES THE FOLLOWING WITH RESPECT TO ITS UNCOMPLETED CONTRACTS, ON ALL WORK, FROM WHATEVER SOURCE (PUBLIC AND PRIVATE), BOTH IN NEW JERSEY AND FROM OTHER GOVERNMENTAL JURISDICTIONS

ENTITY	PROJECT TITLE	ORIGINAL CONTRACT AMOUNT	UNCOMPLETED AMOUNT AS OF BID OPENING DATE	NAME AND TELEPHONE NUMBER OF PARTY TO BE CONTACTED FROM ENTITY FOR VERIFICATION

TOTAL AMOUNT OF UNCOMPLETED CONTRACTS \$ _____

Sworn and Subscribed to Before me

This _____ day of _____ 20____

Notary Public

BIDDER:

(Signature)

(Print Name)

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

BIDDER'S NAME: _____

CERTIFICATE OF INSURANCE STATEMENT

The Bidder fully understands the County of Union insurance requirements as stated in the Instructions to Bidders as well as the Owner/Contractor Agreement and agrees to provide all insurance required by these documents prior to the issuance of the Notice to Proceed.

BIDDER (Signature)

BIDDER (Print Name)

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

BIDDER'S NAME: _____

COLLECTION OF USE TAX ON SALES TO LOCAL GOVERNMENTS STATEMENT

The Bidder fully understands the requirements of the use tax on sales to local governments as stated in the General Conditions to the Contract for Construction and the Instructions to Bidders, and agrees at all times to comply with the "Contractor Use Tax Collection Legislation", as defined therein, and the terms relating thereto contained in the Contract Documents.

BIDDER (Signature)

BIDDER (Print Name)

NOTE: FAILURE TO COMPLETE AND SUBMIT THIS DOCUMENT WITH YOUR PROPOSAL MAY RESULT IN A REJECTION OF YOUR BID.

BIDDER'S NAME: _____

TIME OF COMPLETION

The undersigned proposed that if awarded the Contract, the scope of work will be started within ten (10) calendar days and will be substantially completed within **Two Hundred and Twenty (220) Calender Days** from the date of notice to proceed.

I, _____ of _____
NAME (Print or type) COMPANY

Agree to complete work in the time frame specified _____
SIGNATURE

SITE VISIT – GENERAL CONTRACTOR

I, _____ of _____
NAME (Print or type) COMPANY

Visited the site of the work on _____
SIGNATURE

STANDARD BID DOCUMENT REFERENCE

Name of Form	COMBINED CERTIFICATION: PROHIBITED ACTIVITIES IN RUSSIA AND BELARUS & INVESTMENT ACTIVITIES IN IRAN					
Statutory Reference	P.L. 2022, c. 3 N.J.S.A. 52:32-55 et seq. N.J.S.A. 40A:11-2.1 N.J.S.A. 18A:18A-49.4					
Applicability		Y/N		Mandatory	Optional	N/A
	LPCL	Y	Goods and Services	X		
	PSCL	Y	Construction			X
Instructions Reference						
Description	P.L. 2022, c. 3 prohibits the award, renewal, amendment, or extension of State and local public contracts for goods or services with persons or entities engaging in prohibited activities in Russia or Belarus. P.L. 2012, c.25 prohibits the award or renewal of State and local public contracts for goods and services with persons or entities engaged in certain investment activities in the energy or finance sectors of Iran. Before a goods and services contract can be entered into, vendors and contractors must certify that neither they nor any parent entity, subsidiary, or affiliate is listed on the New Jersey Department of the Treasury’s list of entities determined to be engaged in prohibited activities in Russia or Belarus pursuant to P.L. 2022, c. 3 (“ Russia-Belarus list ”) or in Iran pursuant to P.L. 2012, c. 25 (“ Chapter 25 list ”).					

The Certification form requires the insertion of contracting unit identification information which should be filled in (in italics on the form) prior to its use.

Prohibited Russia-Belarus Activities & Iran Investment Activities

Person or Entity

Part 1: Certification

COMPLETE PART 1 BY CHECKING **ONE OF THE THREE BOXES BELOW**

Pursuant to law, any person or entity that is a successful bidder or proposer, or otherwise proposes to enter into or renew a contract, for goods or services must complete the certification below prior to contract award to attest, under penalty of perjury, that neither the person or entity, nor any parent entity, subsidiary, or affiliate, is identified on the Department of Treasury's Russia-Belarus list or Chapter 25 list as a person or entity engaging in prohibited activities in Russia, Belarus or Iran. Before a contract for goods or services can be amended or extended, a person or entity must certify that neither the person or entity, nor any parent entity, subsidiary, or affiliate, is identified on the Department of Treasury's Russia-Belarus list. Both lists are found on Treasury's website at the following web addresses:

<https://www.nj.gov/treasury/administration/pdf/RussiaBelarusEntityList.pdf>
www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.

As applicable to the type of contract, the above-referenced lists must be reviewed prior to completing the below certification.

A person or entity unable to make the certification must provide a detailed, accurate, and precise description of the activities of the person or entity, or of a parent entity, subsidiary, or affiliate, engaging in prohibited activities in Russia or Belarus and/or investment activities in Iran. The person or entity must cease engaging in any prohibited activities and provide an updated certification before the contract can be entered into.

If a vendor or contractor is found to be in violation of law, action may be taken as appropriate and as may be 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.

CONTRACT AWARDS AND RENEWALS



I certify, pursuant to law, that neither the person or entity listed above, nor any parent entity, subsidiary, or affiliate appears on the N.J. Department of Treasury's lists of entities engaged in prohibited activities in Russia or Belarus pursuant to P.L. 2022, c. 3 or in investment activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. (Skip Part 2 and sign and complete the Certification below.)

CONTRACT AMENDMENTS AND EXTENSIONS

<input type="checkbox"/>	<p><i>I certify, pursuant to law, that neither the person or entity listed above, nor any parent entity, subsidiary, or affiliate is listed on the N.J. Department of the Treasury's lists of entities determined to be engaged in prohibited activities in Russia or Belarus pursuant to P.L. 2022, c. 3. I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. (Skip Part 2 and sign and complete the Certification below.)</i></p>
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IF UNABLE TO CERTIFY

<input type="checkbox"/>	<p><i>I am unable to certify as above because the person or entity and/or a parent entity, subsidiary, or affiliate is listed on the Department's Russia-Belarus list and/or Chapter 25 Iran list. I will provide a detailed, accurate, and precise description of the activities as directed in Part 2 below, and sign and complete the Certification below. <u>Failure to provide such will prevent the award of the contract to the person or entity, and appropriate penalties, fines, and/or sanctions will be assessed as provided by law.</u></i></p>
--------------------------	--

Part 2: Additional Information

PLEASE PROVIDE FURTHER INFORMATION RELATED TO PROHIBITED ACTIVITIES IN RUSSIA OR BELARUS AND/OR INVESTMENT ACTIVITIES IN IRAN.

You must provide a detailed, accurate, and precise description of the activities of the person or entity, or of a parent entity, subsidiary, or affiliate, engaging in prohibited activities in Russia or Belarus and/or investment activities in Iran in the space below and, if needed, on additional sheets provided by you.

BIDDER'S NAME: _____

Part 3: Certification of True and Complete Information

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

I acknowledge that the County of Union is relying on the information contained herein and hereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the County of Union to notify the County of Union in writing of any changes to the answers of information contained herein.

I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification. If I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the County of Union and that the County of Union at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print)		Title	
Signature			Date

BIDDER'S NAME: _____

**CERTIFICATION OF NON-DEBARMENT
FOR FEDERAL GOVERNMENT CONTRACTS**

N.J.S.A. 52:32-44.1 (P.L. 2019, c.406)

This certification shall be completed, certified to, and submitted to the contracting unit prior to contract award, except for emergency contracts where submission is required prior to payment.

PART I: VENDOR INFORMATION	
Individual or Organization Name	
Physical Address of Individual or Organization	
Unique Entity ID (if applicable)	
CAGE/NCAGE Code (if applicable)	
Check the box that represents the type of business organization:	

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

PART II – CERTIFICATION OF NON-DEBARMENT: Individual or Organization			
I hereby certify that the individual or organization listed above in Part I is not debarred by the federal government from contracting with a federal agency. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the County of Union is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award by the County of Union to notify the County of Union in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the County of Union, permitting the County of Union to declare any contract(s) resulting from this certification void and unenforceable.			
Full Name (Print):		Title:	
Signature:		Date:	

PART III – CERTIFICATION OF NON-DEBARMENT: Individual or Entity Owning Greater than 50 Percent of Organization

Section A (Check the Box that applies)

<input type="checkbox"/>	Below is the name and address of the stockholder in the corporation who owns more than 50 percent of its voting stock, or of the partner in the partnership who owns more than 50 percent interest therein, or of the member of the limited liability company owning more than 50 percent interest therein, as the case may be.
Name of Individual or Organization	
Physical Address	

OR

<input type="checkbox"/>	No one stockholder in the corporation owns more than 50 percent of its voting stock, or no partner in the partnership owns more than 50 percent interest therein, or no member in the limited liability company owns more than 50 percent interest therein, as the case may be.
--------------------------	---

Section B (Skip if no Business entity is listed in Section A above)

<input type="checkbox"/>	Below is the name and address of the stockholder in the corporation who owns more than 50 percent of the voting stock of the organization's parent entity, or of the partner in the partnership who owns more than 50 percent interest in the organization's parent entity, or of the member of the limited liability company owning more than 50 percent interest in organization's parent entity, as the case may be.
Stockholder/Partner/Member Owning Greater Than 50 Percent of Parent Entity	
Physical Address	

OR

<input type="checkbox"/>	No one stockholder in the parent entity corporation owns more than 50 percent of its voting stock, no partner in the parent entity partnership owns more than 50 percent interest therein, or no member in the parent entity limited liability company owns more than 50 percent interest therein, as the case may be.
--------------------------	--

BIDDER'S NAME: _____

Section C – Part III Certification

I hereby certify that no individual or organization that is debarred by the federal government from contracting with a federal agency owns greater than 50 percent of the **Organization listed above in Part I** or, if applicable, owns greater than 50 percent of a parent entity of **<name of organization>** _____ . I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the County of Union is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award by the County of Union to notify the County of Union in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the County of Union, permitting the County of Union to declare any contract(s) resulting from this certification void and unenforceable.

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

Part IV – CERTIFICATION OF NON-DEBARMENT: Contractor – Controlled Entities

Section A

<input type="checkbox"/>	Below is the name and address of the corporation(s) in which the Organization listed in Part I owns more than 50 percent of voting stock, or of the partnership(s) in which the Organization listed in Part I owns more than 50 percent interest therein, or of the limited liability company or companies in which the Organization listed above in Part I owns more than 50 percent interest therein, as the case may be.
--------------------------	--

Name of Business Entity	Physical Address

****Add additional sheets if necessary****

OR

<input type="checkbox"/>	The Organization listed above in Part I does not own greater than 50 percent of the voting stock in any corporation and does not own greater than 50 percent interest in any partnership or any limited liability company.
--------------------------	---

BIDDER'S NAME: _____

Section B (skip if no business entities are listed in Section A of Part IV)			
<input type="checkbox"/>	Below are the names and addresses of any entities in which an entity listed in Part III A owns greater than 50 percent of the voting stock (corporation) or owns greater than 50 percent interest (partnership or limited liability company).		
Name of Business Entity Controlled by Entity Listed in Section A of Part IV	Physical Address		
Add additional Sheets if necessary			
OR			
<input type="checkbox"/>	No entity listed in Part III A owns greater than 50 percent of the voting stock in any corporation or owns greater than 50 percent interest in any partnership or limited liability company.		
Section C – Part IV Certification			
<p>I hereby certify that the Organization listed above in Part I does not own greater than 50 percent of any entity that that is debarred by the federal government from contracting with a federal agency and, if applicable, does not own greater than 50 percent of any entity that in turns owns greater than 50 percent of any entity debarred by the federal government from contracting with a federal agency. I further acknowledge: that I am authorized to execute this certification on behalf of the above-named organization; that the County of Union is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the date of contract award by the County of Union to notify the County of Union in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the County of Union, permitting the County of Union to declare any contract(s) resulting from this certification void and unenforceable.</p>			
Full Name (Print):		Title:	
Signature:		Date:	

BIDDER'S NAME: _____

BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION
(To be submitted with each bid, proposal or offer exceeding \$100,000)

The undersigned, [Company] _____ certifies, to the best of his or her knowledge, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, [Company] _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 et seq., apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Representative

Name and Title of Contractor's Authorized Representative

Date

BIDDER'S NAME: _____

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents of all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, United States Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Organization: _____

Street address: _____

City, State, Zip: _____

CERTIFIED BY: (type or print)

TITLE: _____

(signature)

(date)

DISCLOSURE OF LOBBYING ACTIVITIES (LLL Form)

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352 0348-0046

N/A – My agency does not engage in any lobbying activities

<p>1. Type of Federal Action:</p> <p><input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance</p>	<p>2. Status of Federal Action:</p> <p><input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. Initial award <input type="checkbox"/> c. Post-award</p>	<p>3. Report Type:</p> <p><input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change</p> <p>For Material Change Only: year _____ quarter _____ date of last report _____</p>
<p>4. Name and Address of Reporting Entity:</p> <p><input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known:</p> <p>Congressional District, if known:</p>	<p>5. If Reporting Entity in NO.4 is a Subawardee, enter Name and Address of Prim:</p> <p>Congressional District, if known:</p>	
<p>6. Federal Department/Agency:</p>	<p>7. Federal Program Name/Description:</p> <p>CDFA NUMBER, if applicable _____</p>	
<p>8. Federal Action Number, if known:</p>	<p>9. Award Amount, if known:</p> <p>\$ _____</p>	
<p>10. a. Name and address of Lobbying Registrant <i>(if individual, last name, first name, MI):</i></p>	<p>b. Individuals Performing Services <i>(including address if different from No. 10a) (las name, first name, MI):</i></p>	
<p>11. Information request through this form is authorized by title 31 U.S.C. Section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</p>	<p style="text-align: right;">Signature:</p> <p>_____</p> <p>Print Name: _____ Title: _____ Telephone NO.: _____ Date: _____</p>	

Federal Use Only:

Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)

BIDDER'S NAME: _____

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is or expects to be a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number, Invitation for Bid (IFB) number, grant announcement number, the contract, grant, or loan award number, the application/proposal control number assigned by the Federal agency.) Include prefixes, e.g. "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. A) Enter the full name, address, city, state and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.
B) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter last name, first name and middle initial (MI).
11. The certifying official shall sign and date the form; print his/her name, title, and telephone number.

GENERAL SPECIFICATIONS

FEDERAL TERMS

TERMS AND CONDITIONS APPLICABLE TO ALL CONTRACTS/PURCHASES FUNDED, IN WHOLE OR IN PART, BY FEDERAL FUNDS.

The provisions set forth below apply to all contracts funded, in whole or in part, by Federal funds as required by 2 CFR 200.317.

1. CONTRACTING WITH SMALL AND MINORITY BUSINESSES, WOMEN'S BUSINESS ENTERPRISES, AND LABOR SURPLUS AREA FIRMS

Pursuant to 2 CFR 200.321, the State must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Accordingly, if subawards are to be made the Contractor shall:

- (1) Include qualified small and minority businesses and women's business enterprises on solicitation lists;
- (2) Assure that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- (3) Divide total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
- (4) Establish delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; and,
- (5) Use the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

2. DOMESTIC PREFERENCE FOR PROCUREMENTS

Pursuant to 2 CFR 200.322, where appropriate, the State has a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). If subawards are to be made the Contractor shall include a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). For purposes of this section:

- (1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
- (2) "Manufactured products" means items and construction materials composed in whole or in part of nonferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

3. PROCUREMENT OF RECOVERED MATERIALS

Where applicable, in the performance of contract, pursuant to 2 CFR 200.323, the contractor must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$ 10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

To the extent that the scope of work or specifications in the contract requires the contractor to provide recovered materials the scope of work or specifications are modified to require that as follows.

- i. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—
 1. Competitively within a timeframe providing for compliance with the contract performance schedule;

2. Meeting contract performance requirements; or
 3. At a reasonable price.
- ii. Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.
 - iii. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

4. EQUAL EMPLOYMENT OPPORTUNITY

Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor." See, 2 CFR Part 200, Appendix II, para. C.

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

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:
Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
- (2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- (4) The contractor will send to each labor union or representative of workers with which he/she has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his/her books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by

rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States. The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

5. DAVIS-BACON ACT, 40 U.S.C. 3141-3148, AS AMENDED

When required by Federal program legislation, all prime construction contracts in excess of \$2,000 shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141- 3144, and 3146-3148) and the requirements of 29 C.F.R. pt. 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. Additionally, contractors are required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

6. COPELAND ANTI-KICKBACK ACT

Where applicable, the Contractor must comply with Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States").

- a. Contractor. The Contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into the OGS centralized contract.
- b. Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

- c. Breach. A breach of the clauses above may be grounds for termination of the OGS centralized contract, and for debarment as a Contractor and subcontractor as provided in 29 C.F.R. § 5.12.

7. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT, 40 U.S.C. 3701-3708

Where applicable, all contracts awarded by the non-Federal entity in excess of \$ 100,000 that involve the employment of mechanics or laborers must comply with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5).

- (1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- (2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.
- (3) Withholding for unpaid wages and liquidated damages. The unauthorized user shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.
- (4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

8. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT

If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

9. CLEAN AIR ACT, 42 U.S.C. 7401-7671Q, AND THE FEDERAL WATER POLLUTION CONTROL ACT, 33 U.S.C. 1251-1387, AS AMENDED

Where applicable, Contracts and subgrants of amounts in excess of \$150,000, must comply with the following:

Clean Air Act

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
2. The contractor agrees to report each violation to the Division of Purchase and Property and understands and agrees that the Division of Purchase and Property will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

Federal Water Pollution Control Act

1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
2. The contractor agrees to report each violation to the Division of Purchase and Property and understands and agrees that the Division of Purchase and Property will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

10. DEBARMENT AND SUSPENSION (EXECUTIVE ORDERS 12549 AND 12689)

- (1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- (2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- (3) This certification is a material representation of fact relied upon by the State or authorized user. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the State or authorized user, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- (4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

11. BYRD ANTI-LOBBYING AMENDMENT, 31 U.S.C. 1352

Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

12. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

- (a) Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:
 - (1) Procure or obtain;
 - (2) Extend or renew a contract to procure or obtain; or
 - (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
 - (i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou

Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

13. CONTRACTS FOR MORE THAN THE SIMPLIFIED ACQUISITION THRESHOLD

Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

14. TERMINATION FOR CONVENIENCE PROVISION

All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.

15. BONDING REQUIREMENTS

For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold, the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or pass-through entity has made a determination that the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

(a) A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.

(b) A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's requirements under such contract.

(c) A payment bond on the part of the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION
(To be submitted with each bid, proposal or offer exceeding \$100,000)

The undersigned, [Company] _____ certifies, to the best of his or her knowledge, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, [Company] _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 et seq., apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Representative

Name and Title of Contractor's Authorized Representative

Date

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents of all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, United States Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Organization: _____

Street address: _____

City, State, Zip: _____

CERTIFIED BY: (type or print)

TITLE: _____

(signature)

(date)

DISCLOSURE OF LOBBYING ACTIVITIES (LLL Form)

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352 0348-0046

N/A – My agency does not engage in any lobbying activities

<p>1. Type of Federal Action:</p> <p><input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance</p>	<p>2. Status of Federal Action:</p> <p><input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. Initial award <input type="checkbox"/> c. Post-award</p>	<p>3. Report Type:</p> <p><input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change</p> <p>For Material Change Only: year _____ quarter _____ date of last report _____</p>
<p>4. Name and Address of Reporting Entity:</p> <p><input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known:</p> <p>Congressional District, if known:</p>	<p>5. If Reporting Entity in NO.4 is a Subawardee, enter Name and Address of Prim:</p> <p>Congressional District, if known:</p>	
<p>6. Federal Department/Agency:</p>	<p>7. Federal Program Name/Description:</p> <p>CDFA NUMBER, if applicable _____</p>	
<p>8. Federal Action Number, if known:</p>	<p>9. Award Amount, if known:</p> <p>\$ _____</p>	
<p>10. a. Name and address of Lobbying Registrant <i>(if individual, last name, first name, MI):</i></p>	<p>b. Individuals Performing Services <i>(including address if different from No. 10a) (las name, first name, MI):</i></p>	
<p>11. Information request through this form is authorized by title 31 U.S.C. Section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</p>	<p align="right">Signature:</p> <p>_____</p> <p>Print Name: _____ Title: _____ Telephone NO.: _____ Date: _____</p>	

Federal Use Only:

Authorized for Local Reproduction Standard Form
LLL (Rev. 7-97)

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is or expects to be a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number, Invitation for Bid (IFB) number, grant announcement number, the contract, grant, or loan award number, the application/proposal control number assigned by the Federal agency.) Include prefixes, e.g. "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. A) Enter the full name, address, city, state and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.
B) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter last name, first name and middle initial (MI).
11. The certifying official shall sign and date the form; print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-10046), Washington, DC 20503.



AIA® Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the _____ day of _____ in the year _____
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

The Architect:
(Name, legal status, address and other information)

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

The parties should complete A101®–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement.

AIA Document A201®–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

The Owner and Contractor agree as follows.

TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

- The date of this Agreement.
- A date set forth in a notice to proceed issued by the Owner.
- Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

- Not later than () calendar days from the date of commencement of the Work.

By the following date:

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date
-----------------	-----------------------------

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be (\$), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price
------	-------

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement. (Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance
------	-------	---------------------------

§ 4.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price
------	-------

§ 4.4 Unit prices, if any:

(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
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§ 4.5 Liquidated damages, if any:

(Insert terms and conditions for liquidated damages, if any.)

§ 4.6 Other:

(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the day of the month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than () days after the Architect receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™-2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201-2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201-2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:
(Insert any other conditions for release of retainage upon Substantial Completion.)

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201-2017.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201-2017, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

_____ %

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201-2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

- Arbitration pursuant to Section 15.4 of AIA Document A201–2017
- Litigation in a court of competent jurisdiction
- Other *(Specify)*

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:
(Name, address, email address, and other information)

§ 8.3 The Contractor's representative:
(Name, address, email address, and other information)

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™-2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201-2017, may be given in accordance with AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203-2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

§ 8.7 Other provisions:

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101™-2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201™-2017, General Conditions of the Contract for Construction
- .4 AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
(Insert the date of the E203-2013 incorporated into this Agreement.)

.5 Drawings

Number	Title	Date
--------	-------	------

.6 Specifications

Section	Title	Date	Pages
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.7 Addenda, if any:

Number	Date	Pages
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Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.8 Other Exhibits:

(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

- AIA Document E204™-2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

The Sustainability Plan:

Title	Date	Pages
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Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
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.9 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

This Agreement entered into as of the day and year first written above.

OWNER (Signature)

CONTRACTOR (Signature)

(Printed name and title)

(Printed name and title)



AIA Document A101® – 2017 Exhibit A

Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the _____ day of _____ in the year _____
(In words, indicate day, month and year.)

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

THE OWNER:
(Name, legal status and address)

THE CONTRACTOR:
(Name, legal status and address)

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

This document is intended to be used in conjunction with AIA Document A201®–2017, General Conditions of the Contract for Construction. Article 11 of A201®–2017 contains additional insurance provisions.

TABLE OF ARTICLES

- A.1 GENERAL
- A.2 OWNER'S INSURANCE
- A.3 CONTRACTOR'S INSURANCE AND BONDS
- A.4 SPECIAL TERMS AND CONDITIONS

ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A201™–2017, General Conditions of the Contract for Construction.

ARTICLE A.2 OWNER'S INSURANCE

§ A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

§ A.2.2 Liability Insurance

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

§ A.2.3 Required Property Insurance

§ A.2.3.1 Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's

property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ A.2.3.1.1 Causes of Loss. The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:

(Indicate below the cause of loss and any applicable sub-limit.)

Cause of Loss	Sub-Limit
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§ A.2.3.1.2 Specific Required Coverages. The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect's and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:

(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)

Coverage	Sub-Limit
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§ A.2.3.1.3 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

§ A.2.3.1.4 Deductibles and Self-Insured Retentions. If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

§ A.2.3.2 Occupancy or Use Prior to Substantial Completion. The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

§ A.2.3.3 Insurance for Existing Structures

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

§ A.2.4 Optional Extended Property Insurance.

The Owner shall purchase and maintain the insurance selected and described below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)

- § A.2.4.1 **Loss of Use, Business Interruption, and Delay in Completion Insurance**, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.
- § A.2.4.2 **Ordinance or Law Insurance**, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.
- § A.2.4.3 **Expediting Cost Insurance**, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.
- § A.2.4.4 **Extra Expense Insurance**, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.
- § A.2.4.5 **Civil Authority Insurance**, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.
- § A.2.4.6 **Ingress/Egress Insurance**, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.
- § A.2.4.7 **Soft Costs Insurance**, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.

§ A.2.5 Other Optional Insurance.

The Owner shall purchase and maintain the insurance selected below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)

- § A.2.5.1 **Cyber Security Insurance** for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information. *(Indicate applicable limits of coverage or other conditions in the fill point below.)*

- § A.2.5.2 Other Insurance
(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage

Limits

ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

§ A.3.1 General

§ A.3.1.1 **Certificates of Insurance.** The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies.

§ A.3.1.2 **Deductibles and Self-Insured Retentions.** The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

§ A.3.1.3 **Additional Insured Obligations.** To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

§ A.3.2 Contractor's Required Insurance Coverage

§ A.3.2.1 The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:
(If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)

§ A.3.2.2 Commercial General Liability

§ A.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than _____ (\$ __) each occurrence, _____ (\$ __) general aggregate, and _____ (\$ __) aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal injury and advertising injury;
- .3 damages because of physical damage to, or destruction of, tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

§ A.3.2.2.2 The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- .8 Claims related to roofing, if the Work involves roofing.
- .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
- .10 Claims related to earth subsidence or movement, where the work involves such hazards.
- .11 Claims related to explosion, collapse, and underground hazards, where the Work involves such hazards.

§ A.3.2.3 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than _____ (\$) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

§ A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ A.3.2.5 Workers' Compensation at statutory limits.

§ A.3.2.6 Employers' Liability with policy limits not less than _____ (\$) each accident, _____ (\$) each employee, and _____ (\$) policy limit.

§ A.3.2.7 Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks

§ A.3.2.8 If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than _____ (\$) per claim and _____ (\$) in the aggregate.

§ A.3.2.9 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than _____ (\$) per claim and _____ (\$) in the aggregate.

§ A.3.2.10 Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than _____ (\$) per claim and _____ (\$) in the aggregate.

§ A.3.2.11 Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than _____ (\$) per claim and _____ (\$) in the aggregate.

§ A.3.2.12 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than _____ (\$) per claim and _____ (\$) in the aggregate.

§ A.3.3 Contractor's Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)

- § A.3.3.2.1** Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below.

(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)

- § A.3.3.2.2 Railroad Protective Liability Insurance**, with policy limits of not less than _____ (\$) per claim and _____ (\$) in the aggregate, for Work within fifty (50) feet of railroad property.
- § A.3.3.2.3 Asbestos Abatement Liability Insurance**, with policy limits of not less than _____ (\$) per claim and _____ (\$) in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.
- § A.3.3.2.4 Insurance for physical damage to property while it is in storage and in transit to the construction site on an "all-risks" completed value form.**
- § A.3.3.2.5 Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.**
- § A.3.3.2.6 Other Insurance**
(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage

Limits

§ A.3.4 Performance Bond and Payment Bond

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:
(Specify type and penal sum of bonds.)

Type	Penal Sum (\$0.00)
Payment Bond	
Performance Bond	

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:

Sample



AIA® Document A201® – 2017

General Conditions of the Contract for Construction

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

THE OWNER:
(Name, legal status and address)

THE ARCHITECT:
(Name, legal status and address)

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

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, Guide for Supplementary Conditions.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

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

§ 1.1.2 The Contract

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

§ 1.1.3 The Work

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

§ 1.1.4 The Project

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

§ 1.1.5 The Drawings

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

§ 1.1.6 The Specifications

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

§ 1.1.7 Instruments of Service

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

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

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

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining

provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

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

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

§ 1.3 Capitalization

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

§ 1.4 Interpretation

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

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

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

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™-2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building

information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

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

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

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

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

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

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

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the

site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

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

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

§ 2.4 Owner's Right to Stop the Work

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

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

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

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

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

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

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

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's

capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

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

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

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

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

§ 3.4 Labor and Materials

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

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

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

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes

remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

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

§ 3.7 Permits, Fees, Notices and Compliance with Laws

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

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

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

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

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

§ 3.8 Allowances

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

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and

- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

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

§ 3.9 Superintendent

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

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

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

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

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

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

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

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

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

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

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

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

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

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

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

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

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the

time and in the form specified by the Architect.

§ 3.13 Use of Site

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

§ 3.14 Cutting and Patching

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

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

§ 3.15 Cleaning Up

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

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

§ 3.16 Access to Work

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

§ 3.17 Royalties, Patents and Copyrights

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

§ 3.18 Indemnification

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

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

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

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

§ 4.2 Administration of the Contract

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

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

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

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

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under

Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

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

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

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

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

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

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

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

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

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

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

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

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

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

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the

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

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

§ 5.3 Subcontractual Relations

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

§ 5.4 Contingent Assignment of Subcontracts

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

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

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

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

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

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

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate

Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

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

§ 6.2 Mutual Responsibility

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

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

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

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

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

§ 6.3 Owner's Right to Clean Up

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

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

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

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

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

§ 7.2 Change Orders

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

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

§ 7.3 Construction Change Directives

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

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

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

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

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

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

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

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

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

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The

Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

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

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

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

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

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

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

§ 8.2 Progress and Completion

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

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

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

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

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

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

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable

by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

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

§ 9.3 Applications for Payment

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

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

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

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

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

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The

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

§ 9.5 Decisions to Withhold Certification

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

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

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

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

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

§ 9.6 Progress Payments

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

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

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

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers

to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

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

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

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

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

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

§ 9.8 Substantial Completion

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

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

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

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

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

§ 9.9 Partial Occupancy or Use

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

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

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

§ 9.10 Final Completion and Final Payment

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

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

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

constitute a waiver of Claims.

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

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

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

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

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

§ 10.2 Safety of Persons and Property

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

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

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

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

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

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

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

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

§ 10.2.8 Injury or Damage to Person or Property

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

§ 10.3 Hazardous Materials and Substances

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

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

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

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

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

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

§ 10.4 Emergencies

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

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the

endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

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

§ 11.1.4 **Notice of Cancellation or Expiration of Contractor's Required Insurance.** Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 **Failure to Purchase Required Property Insurance.** If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 **Notice of Cancellation or Expiration of Owner's Required Property Insurance.** Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The

Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§ 11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

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

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

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

Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

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

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

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

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

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

§ 12.3 Acceptance of Nonconforming Work

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

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

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

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

§ 13.3 Rights and Remedies

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

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

§ 13.4 Tests and Inspections

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

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

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

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

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

§ 13.5 Interest

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

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

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

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

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

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

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

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

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

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

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

§ 14.3 Suspension by the Owner for Convenience

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

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

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

§ 14.4 Termination by the Owner for Convenience

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

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

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

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section

15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

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

§ 15.1.7 Waiver of Claims for Consequential Damages

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

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

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

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

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

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

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

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

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

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

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

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

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

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

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

§ 15.4 Arbitration

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

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

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

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly

consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

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

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

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

Sample

From: no-reply@dol.nj.gov
To: [MaryAnn Brennan](#)
Subject: Prevailing Wage Rate Determination Confirmation No. 79550
Date: Thursday, July 27, 2023 10:52:44 AM

***** CAUTION *****

This message came from an EXTERNAL address. DO NOT click on links or attachments unless you know the sender and the content is safe. If suspicious forward the message to pcsupport@ucnj.org

Thank you for requesting an Official Prevailing Wage Rate Determination from the New Jersey Department of Labor and Workforce Development, Division of Wage and Hour Compliance.

The official prevailing wage rate determination details are displayed below. You may also view these details at any time by visiting [WageRatesConf.shtml](#) and entering the confirmation number.

Confirmation No.: 79550 **Date of Determination:** 07/27/2023 10:52:42

Below is the list of attachments included in the official wage rate determination:	
UNION	200111914-union-7-19-23.pdf
STATE WIDE RATES	188124549-statewide-7-7-23.pdf
PWConfirmation.PDF	PWConfirmation.pdf
Public Body Awarding the Contract	
Name: County of Union FEIN: XXXXX2481	
Street: 2325 south ave	
City: Scotch Plains State & Zip: NJ 07076	
Project No.:	
Requesting Officer	
First Name: Maryann	
Last Name: Brennan	
Title:	
Company Name: County of Union	
Phone No.: 908-789-3685 Ext. Email: maryann.brennan@ucnj.org	
Street: 2325 south ave	
City: Scotch Plains State & Zip: NJ 07076	

Contractor Who is Being Awarded the Contract
Company Name: TBD FEIN: Contact First Name: Contact Last Name: Street: City: State & Zip: NJ Contract Amount: \$
Location Where Work Will Be Performed
Street: City: Elizabeth
Description of Work: Roof Construction

If any of the links/attachments are not working, please forward this email to PWRIssues@dol.nj.gov and explain which of the links/attachments are not working. Please note that this email address is for online technical issues only; any law or wage rate questions sent to this email address cannot be answered and will be deleted.

For additional information about Prevailing Wage Rate Determinations, please go online at [Prevailing Wage Rates on Construction-Related Public Works Projects.](#)

Sincerely,

NJ Department of Labor and Workforce Development
Division of Wage and Hour Compliance
Public Contracts Section
PO Box 389
Trenton, NJ 08625-0389

Tel. (609) 292-2259
Fax (609) 695-1174

ADVISORY: No contractor shall bid on any contract for public work as defined in section 2 of P.L.1963, c. 150 (C.34:11-56.26) unless the contractor is registered pursuant to this act. No

contractor shall list a subcontractor in a bid proposal for the contract unless the subcontractor is registered pursuant to P.L.1999, c.238 (C.34:11-56.48 et seq.) at the time the bid is made. No contractor or subcontractor, including a subcontractor not listed in the bid proposal, shall engage in the performance of any work requiring the payment of the prevailing wage, unless the contractor or subcontractor is registered pursuant to that act. To verify a contractor/sub-contractor's registration, go online at www.nj.gov/labor (click on Worker Protections, then Wage & Hour Compliance, then Looking for a Registered Public Works Contractor?).



STATE OF NEW JERSEY
Department of Labor and Workforce Development
Division of Wage and Hour Compliance - Public Contracts Section
PO Box 389
Trenton, NJ 08625-0389

PREVAILING WAGE RATE DETERMINATION

The New Jersey Prevailing Wage Act (N.J.S.A. 34:11-56.25 et seq.) requires that the Department of Labor and Workforce Development establish and enforce a prevailing wage level for workers engaged in public works in order to safeguard their efficiency and general well being and to protect them as well as their employers from the effects of serious and unfair competition.

Prevailing wage rates are wage and fringe benefit rates based on the collective bargaining agreements established for a particular craft or trade in the locality in which the public work is performed. In New Jersey, these rates vary by county and by the type of work performed.

Applicable prevailing wage rates are those wages and fringe benefits in effect on the date the contract is awarded. All pre-determined rate increases listed at the time the contract is awarded must also be paid, beginning on the dates specified. Rates that have expired will remain in effect until new rates are posted.

Prevailing Wage Rate

The prevailing wage rate for each craft will list the effective date of the rate and the following information:

W = Wage Rate per Hour

B = Fringe Benefit Rate per Hour*

T = Total Rate per Hour

* Fringe benefits are an integral part of the prevailing wage rate. Employers not providing such benefits must pay the fringe benefit amount directly to the employee each payday. Employers providing benefits worth less than the fringe benefit amount must pay the balance directly to the employee each payday.

Unless otherwise stated in the Prevailing Wage Rate Determination, the fringe benefit rate for overtime hours remains at the straight time rate.

When the Overtime Notes in the Prevailing Wage Rate Determination state that the overtime rates are "inclusive of benefits," the benefit rate is increased by the same factor as the wage rate (i.e. multiplied by 1.5 for time and one-half, multiplied by 2 for double time, etc.).

Apprentice Rate Schedule

An "apprentice" is an individual who is registered with the United States Department of Labor - Office of Apprenticeship and enrolled in a certified apprenticeship program during the period in which they are working on the public works project.

The apprentice wage rate is a percentage of the journeyman wage rate, unless otherwise indicated. The apprentice benefit rate is the full journeyman benefit rate, unless otherwise indicated.

If there is no apprentice rate schedule listed, the individual must be paid at least the journeyman rate even if that individual is in a certified apprentice program for that trade.

If there is no ratio of apprentices to journeymen listed for a particular craft, then the ratio shall be one (1) apprentice to every four (4) journeymen.

Comments/Notes

For each craft listed there will be comments/notes that cover the definition of the regular workday, shift differentials, overtime, recognized holidays, and any other relevant information.

Public Works Contractor Registration

The Public Works Contractor Registration Act (N.J.S.A. 34:11-56.48, et seq.) requires that **all** contractors, subcontractors, or lower tier subcontractors who are working on or who bid on public works projects register with the Department of Labor and Workforce Development. Applications are available at www.nj.gov/labor (click on Wage & Hour and then go to Registration & Permits).

Pursuant to N.J.S.A. 34:11-56.51:

No contractor shall bid on any contract for public work as defined in section 2 of P.L.1963, c. 150 (C.34:11-56.26) unless the contractor is registered pursuant to this act. No contractor shall list a subcontractor in a bid proposal for the contract unless the subcontractor is registered pursuant to P.L.1999, c.238 (C.34:11-56.48 et seq.) at the time the bid is made. No contractor or subcontractor, including a subcontractor not listed in the bid proposal, shall engage in the performance of any public work subject to the contract, unless the contractor or subcontractor is registered pursuant to that act.

Snow Plowing

Snow plowing contracts are not subject to the New Jersey Prevailing Wage Act or the Public Works Contractor Registration Act.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Air Conditioning & Refrigeration - Service and Repair

PREVAILING WAGE RATE

	03/01/23
Journeyman (Mechanic)	W44.23 B28.63 T72.86

Craft: Air Conditioning & Refrigeration - Service and Repair

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
As Shown	1st Year	2nd Year	3rd Year	4th Year	5th Year	Wage = %	of Jnymn	Wage		
Wage and Bene	40%	50%	60%	70%	80%	Bene = %	of Jnymn	Bene		

Ratio of Apprentices to Journeymen - 1:4

Craft: Air Conditioning & Refrigeration - Service and Repair

COMMENTS/NOTES

THESE RATES MAY BE USED FOR THE FOLLOWING:

- Service/Repair/Maintenance Work to EXISTING facilities.
- Replacement or Installation of air conditioning and refrigeration equipment when the combined tonnage does not exceed 15 tons for refrigeration, or 25 tons for air conditioning.
- Replacement or Installation of "packaged" or "unitary" rooftop-type units when the combined tonnage of the units does not exceed 75 tons.

NOTE: These rates may NOT be used for any work in new construction (including work on new additions).

The regular workday shall consist of 8 hours, starting between 6:00 AM and 10:00 AM, Monday through Friday.

SHIFT DIFFERENTIALS:

- The second and third shifts shall be paid an additional 15% of the hourly rate.
- All shifts must run for a minimum of 5 consecutive days.

OVERTIME:

Hours worked in excess of 8 per day or before or after the regular workday, that are not shift work, and all hours on Saturday shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Boilermaker PREVAILING WAGE RATE

	01/01/23
Foreman	W53.50 B46.66 T100.16
General Foreman	W55.50 B47.71 T103.21
Journeyman	W48.50 B44.92 T93.42

Craft: Boilermaker APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	65%	70%	75%	80%	85%	90%	95%			
1000 Hours										
Benefit =	38.07	39.03	40.03	41.00	41.99	42.97	43.93			

Ratio of Apprentices to Journeymen - *

* 1 apprentice will be allowed for the first 5 journeymen, 1 apprentice for the next 10 journeymen and 1 apprentice for each succeeding 20 journeymen up to a maximum of 5 apprentices per contractor on any one job.

Craft: Boilermaker COMMENTS/NOTES

HIGH WORK: All apprentices working on the erection, repair, or dismantling of smoke stacks, standpipes, or water towers shall be paid the Journeyman rate.

The regular workday shall consist of 8 hours, between 8:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall work 7½ hours and receive 8 hours pay, at a rate equal to the regular hourly rate plus 10%.
- The third shift shall work 7 hours and receive 8 hours pay, at a rate equal to the regular hourly rate plus 20%.
- For "Municipal Water Works" projects only, the following shall apply: Two, four day, 10 hour shifts may be worked at straight time Monday through Thursday. The day shift shall work four days, at 10 hours, for 10 hours pay. The second shift shall work four days, at nine and a half hours, for 10 hours pay, plus 10% the hourly rate for new work and .25 cents on repair work. Friday may be used as a make-up day at straight time, due to weather conditions, holiday or any other circumstances beyond the employer's control.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays (except Labor Day) shall be paid at double the hourly rate. All hours on Labor Day shall be paid at four times the hourly rate.
- If any other craft employed by the same contractor, or a subcontractor thereof, receives double time in lieu of time and one-half, then the Boilermaker shall receive double time in lieu of time and one-half.
- For "Municipal Water Works" projects only, the following shall apply: Four 10 hour days may be worked Monday through Thursday at straight time. Friday may be used as a make-up day for a day lost to inclement weather, holiday or other conditions beyond the control of the employer. Overtime shall be paid for any hours that exceed 10 hours per day or 40 hours per week.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Boilermaker - Minor Repairs

PREVAILING WAGE RATE

	01/01/23
Foreman	W35.45 B17.78 T53.23
General Foreman	W35.95 B17.78 T53.73
Mechanic	W33.95 B17.78 T51.73

Craft: Boilermaker - Minor Repairs

COMMENTS/NOTES

NOTE: These rates apply to MINOR REPAIR WORK ONLY (repair work in the field for which the contract amount does not exceed \$125,000.00), for boilers that do not produce electric or are not used in the heating of petroleum products.

OVERTIME:

Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays (except Labor Day) shall be paid at double the hourly rate. All hours on Labor Day shall be paid at four times the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Thanksgiving Day, day after Thanksgiving, Christmas Day. Saturday holidays observed the preceding Friday, Sunday holidays observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Bricklayer, Stone Mason

PREVAILING WAGE RATE

	06/01/23
Deputy Foreman	W51.00 B36.28 T87.28
Foreman	W55.75 B36.28 T92.03
Journeyman	W48.00 B36.28 T84.28

Craft: Bricklayer, Stone Mason

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	40%	50%	55%	60%	65%	70%	75%	80%		
6 Months										
Benefits	4.00	5.00	5.50	6.00	24.29	26.00	27.73	29.43		

Ratio of Apprentices to Journeymen - 1:5

Craft: Bricklayer, Stone Mason

COMMENTS/NOTES

The regular workday shall consist of 8 hours, between 6:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the first, or day shift, shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 10%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 10%, inclusive of benefits, and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 10%, inclusive of benefits, and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 10%, inclusive of benefits.

OVERTIME:

- The first 2 hours in excess of 8 per day, or before or after the regular workday that are not shift work, Monday through Friday, shall be paid at time and one-half the regular rate, inclusive of benefits. Any additional overtime shall be paid at double the regular rate, inclusive of benefits. The first 10 hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. Any additional overtime shall be paid at double the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Saturday may be used as a make-up day for hours lost to inclement weather.
- When Bricklayers/Stone Masons work on Saturday with Laborers, and no other crafts are working on the project for the day, benefits may be paid at straight time. If other crafts are present, the applicable overtime rate for benefits shall be paid.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Carpenter PREVAILING WAGE RATE

	05/04/23
Foreman	W62.72 B37.56 T100.28
Journeyman	W54.54 B32.73 T87.27

Craft: Carpenter APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	40%	55%	65%	80%	90%					
Benefit	59% of	Appren	tice	Wage	for all	intervals	+ \$0.56			

Ratio of Apprentices to Journeymen - 1:3

For Solar installation- all work on solar projects that fall under the jurisdiction of the carpenters, and does not require an electrician, the ratio of Apprentices to Journeymen shall be 1:1.

Craft: Carpenter COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES REGISTERED AS OF 5-1-19:

INTERVAL	PERIOD AND RATES									
Yearly	40%	55%	65%	80%	90%					
Benefits	59% of apprentice wage rate for all intervals + \$0.56									

FOREMAN REQUIREMENTS:

- When there are 2 or more Carpenters on a job, 1 shall be designated as a Foreman.
- When there are 21 or more Carpenters on a job, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours, starting between 6:00 AM and 9:00 AM.

SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 10%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

OVERTIME:

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Carpenter - Resilient Flooring

PREVAILING WAGE RATE

	05/04/23
Foreman	W62.72 B37.47 T100.19
Journeyman	W54.54 B32.64 T87.18

Craft: Carpenter - Resilient Flooring

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	40%	55%	65%	80%	90%					
Benefit	59%	of	Appren	tice	Wage	for all	intervals	+ \$0.47		
					Rate					

Ratio of Apprentices to Journeymen - *

* 1 apprentice shall be allowed to every 2 journeymen or major fraction thereof. No more than 3 apprentices on any one job or project.

Craft: Carpenter - Resilient Flooring

COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES REGISTERED AS OF 5-1-19:

INTERVAL PERIOD AND RATES
 Yearly 40% 55% 65% 80%
 Benefits 59% of apprentice wage rate for all intervals + \$0.47

FOREMAN REQUIREMENTS:

- On any job where there are 4 or more Carpenters of Resilient Flooring, 1 must be designated a Foreman.

FOR SYNTHETIC TURF INSTALLATION ONLY:

- The rate shall be 90% of the wage and benefit rate.

The regular workday consists of 8 hours, starting between 6:00 AM and 9:00 AM.

SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift, shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular wage rate plus 10%.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular wage rate, the second shift shall receive the regular wage rate plus 10% and the third shift shall receive the regular wage rate plus 15%.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular wage rate plus 10% and the third shift shall receive the regular wage rate plus 15%.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

OVERTIME:

- Hours in excess of 8 per day or 40 per week, or before or after the regular workday, Monday through Friday, shall be paid at time and one-half the wage rate. Saturday may be used as a make-up day, at straight time, up to 8 hours, for hours lost to reasons beyond the control of the employer, up to a total of 40 hours per week; hours in excess of 8 on Saturday shall

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

then be paid at time and one-half the wage rate. If Saturday is not a make-up day, all hours on Saturday shall be paid at time and one-half the wage rate. All hours on Sundays and holidays shall be paid at double the wage rate.

- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for hours lost to reasons beyond the control of the employer. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the wage rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Carpenter-Residential Construction

PREVAILING WAGE RATE

	07/19/23
Foreman	W52.62 B11.78 T64.40
Journeyman	W45.76 B10.97 T56.73

Craft: Carpenter-Residential Construction

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	40%	55%	65%	80%						
Benefit	12% of	Appren	tice	wage rate	for all	intervals	+ \$5.47			

Ratio of Apprentices to Journeymen - 1:3

Craft: Carpenter-Residential Construction

COMMENTS/NOTES

FOREMAN REQUIREMENTS:

- When there are 2 or more Carpenters on a job, 1 shall be designated as a Foreman.
- When there are 21 or more Carpenters on a job, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours, starting between 6:00 AM and 9:00 AM.

RESIDENTIAL CONSTRUCTION:

All residential construction (excluding commercial buildings and institutional housing), no more than four (4) floors in height above grade consisting of those projects involving the construction, alteration, or repair of town houses or row houses, single family homes, mobile homes, multi-family homes, mixed-use buildings that include commercial space on the first floor or below grade, and apartment buildings.

SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 10%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 10% and the third shift shall receive the regular rate plus 15%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

OVERTIME:

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Cement Mason

PREVAILING WAGE RATE

See "Bricklayer, Stone Mason" Rates

Craft: Cement Mason

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									

Ratio of Apprentices to Journeymen - 1:4

Craft: Cement Mason

COMMENTS/NOTES

See "Bricklayer, Stone Mason" Rates

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Commercial Painter

PREVAILING WAGE RATE

	05/02/23
Foreman	W48.02 B29.51 T77.53
General Foreman	W52.38 B29.51 T81.89
Journeyman	W43.65 B29.51 T73.16

Craft: Commercial Painter

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
6 Months	40%	45%	55%	65%	70%	75%	80%	80%		
Benefits	8.85	8.85	11.25	11.25	12.30	12.30	15.10	15.10		

Ratio of Apprentices to Journeymen - 1:4

Craft: Commercial Painter

COMMENTS/NOTES

* Commercial Painters perform work on all commercial structures such as offices, schools, hotels, shopping malls, restaurants, condominiums, etc.

Spraying, sandblasting, lead abatement work on commercial buildings, work performed above 3 stories or 30 feet in height, or using swing scaffolds requires an additional 10% of the wage rate.

FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:

- Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular rate.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.
- Four 10-hour days may be worked, at straight time, Monday through Friday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, General Election Day,

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Veterans' Day, Thanksgiving Day, Christmas Day.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Dockbuilder/Pile Driver

PREVAILING WAGE RATE

	06/01/23
Foreman	W59.23 B51.72 T110.95
Foreman (Concrete Form Work)	W58.13 B38.36 T96.49
Journeyman	W51.50 B51.72 T103.22
Journeyman (Concrete Form Work)	W50.55 B38.36 T88.91

Craft: Dockbuilder/Pile Driver

APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
Yearly	20.60	25.75	33.48	41.20						
Benefits	33.96	for all	intervals							

Ratio of Apprentices to Journeymen - *

* When there are 4 or fewer Dockbuilders/Pile Drivers on a job, no more than 1 may be an apprentice. When there are 5 or more Dockbuilders/Pile Drivers, there may be 1 apprentice for every 5 Dockbuilders/Pile Drivers.

Craft: Dockbuilder/Pile Driver

COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR CONCRETE FORM WORK ONLY:

INTERVAL	PERIOD AND RATES			
Yearly	20.22	25.28	32.86	40.44
Benefits	26.14	for all	intervals	

CREOSOTE HANDLING:

When handling creosote products on land piling, floating marine construction, and construction of wharves, the worker shall receive an additional \$0.25 per hour.

HAZARDOUS WASTE WORK:

- Hazardous waste removal work on a state or federally designated hazardous waste site where Level A, B, or C personal protection is required: an additional 20% of the hourly rate, per hour.
- Hazardous waste removal work in Level D, or where personal protection is not required: an additional \$1.00 per hour.

CERTIFIED WELDER: When required on the job by the project owner, a Certified Welder shall receive an additional \$1.00 per hour.

FOREMAN REQUIREMENTS:

The first Dockbuilder/Pile Driver on the job shall be designated a Foreman.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

SHIFT DIFFERENTIAL:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis and receive an additional 113% of the wage rate.
- When a three shift schedule is established, all three shifts shall be established on an 8 hour basis, but the second and third shifts shall receive an additional 113% of the wage rate.
- Benefits on shift work shall be paid at the straight-time rate.

OVERTIME:

Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day, Christmas Day. Veterans' Day may be switched with the day after Thanksgiving.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Drywall Finisher

PREVAILING WAGE RATE

	05/02/23
Foreman	W47.17 B29.54 T76.71
General Foreman	W49.31 B29.54 T78.85
Journeyman	W42.88 B29.54 T72.42

Craft: Drywall Finisher

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	40%	50%		60%	70%		80%	90%		
6 Months										
Benefits	Intervals	1 to 2 =	11.45	Intervals	3 to 4 =	14.33	Intervals	5 to 6 =	18.04	

Ratio of Apprentices to Journeymen - 1:4

Craft: Drywall Finisher

COMMENTS/NOTES

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, and the third shift shall receive 8 hours pay for 7 hours of work.
- Shift work must run for a minimum of 5 consecutive workdays.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Electrician

PREVAILING WAGE RATE

	05/29/23	06/03/24
Cable Splicer	W68.06 B43.20 T111.26	W69.72 B44.96 T114.68
Foreman (11-20 Journeymen)	W72.39 B45.95 T118.34	W74.15 B47.84 T121.99
Foreman (1-3 Journeymen)	W68.06 B43.20 T111.26	W69.72 B44.96 T114.68
Foreman (4-10 Journeymen)	W71.15 B45.17 T116.32	W72.89 B47.02 T119.91
General Foreman (21-30 Journeymen)	W74.24 B47.14 T121.38	W76.06 B49.06 T125.12
General Foreman (31-60 Journeymen)	W80.43 B51.07 T131.50	W82.39 B53.15 T135.54
General Foreman (61+ Journeymen)	W81.67 B51.85 T133.52	W83.66 B53.97 T137.63
Journeyman	W61.87 B39.30 T101.17	W63.38 B40.89 T104.27
Sub-Foreman	W70.52 B44.79 T115.31	W72.25 B46.61 T118.86

Craft: Electrician

APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
Yearly	40%	49%	58%	68%	80%		of Jour	neyman	Wage	Rate
Benefit	40%	49%	58%	68%	80%		of Jour	neyman	Benefit	Rate

Ratio of Apprentices to Journeymen - 2:3

Craft: Electrician

COMMENTS/NOTES

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

THESE RATES ALSO APPLY TO THE FOLLOWING:

- All burglar and fire alarm work.
- All fiber optic work.
- Teledata work in new construction.
- Teledata work involving 16 Voice/Data Lines or more.

The regular workday shall be 8 hours, between 8:00 AM and 4:30 PM.

FOREMAN REQUIREMENTS:

- 1 to 3 Journeymen- 1 must be a Foreman (Foreman/1-3 Journeymen rate).
- 4 to 10 Journeymen- 1 must be a Foreman (Foreman/4-10 Journeymen rate).
- 11 to 20 Journeymen- 1 must be Foreman (Foreman/11-20 Journeymen rate) and 1 must be a Sub-Foreman.
- 21 to 30 Journeymen- 1 must be a General Foreman (General Foreman/21-30 Journeymen rate) and 2 must be a Sub-Foreman.
- 31 to 40 Journeymen- 1 must be a General Foreman (General Foreman/31-40 Journeymen rate) and 3 must be a Sub-Foreman.
- 41 to 50 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 4 must be a Sub-Foreman.
- 51 to 60 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 5 must be a Sub-Foreman.
- 61+ Journeymen- 1 must be a General Foreman (General Foreman/61+ Journeymen rate) and 6 must be a Sub-Foreman.

SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- 2nd Shift (4:30 PM to 12:30 AM) shall receive 8 hours pay for 7.5 hours work + an additional 10% of the regular rate, per hour, inclusive of benefits.
- 3rd Shift (12:30 AM to 8:00 AM) shall receive 8 hours pay for 7 hours work + an additional 15% of the regular rate, per hour, inclusive of benefits.

OVERTIME:

Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, and all hours on Saturdays, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Electrician - Teledata (15 Voice/Data Lines & Less)

PREVAILING WAGE RATE

	11/28/22	12/04/23	12/02/24
Journeyman Technician (1-2 Workers on Job)	W45.86 B27.05 T72.91	W47.08 B27.78 T74.86	W48.21 B28.45 T76.66
Master Tech/General Foreman (26 + Workers on Job)	W59.62 B35.16 T94.78	W61.20 B36.12 T97.32	W62.67 B36.99 T99.66
Senior Technician/Lead Foreman (16-25 Workers on Job)	W54.57 B32.19 T86.76	W56.03 B33.05 T89.08	W57.37 B33.86 T91.23
Technician A/Foreman (9-15 Workers on Job)	W52.28 B30.84 T83.12	W53.67 B31.67 T85.34	W54.96 B32.43 T87.39
Technician B/Working Foreman (4-8 Workers on Job)	W49.99 B29.48 T79.47	W51.32 B30.28 T81.60	W52.55 B31.01 T83.56
Technician C/Foreman (3 Workers on Job)	W47.69 B28.14 T75.83	W48.96 B28.89 T77.85	W50.14 B29.59 T79.73

Craft: Electrician - Teledata (15 Voice/Data Lines & Less)

APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
6 Months	35%	35%	40%	43%	48%	54%	61%	67%	74%	81%
Benefits	7.45	7.45	8.51	9.15	10.22	11.49	12.98	14.26	15.76	17.24

Ratio of Apprentices to Journeymen - 2:3

Craft: Electrician - Teledata (15 Voice/Data Lines & Less)

COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 11-28-22:

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
6 Months	35%	35%	40%	43%	48%	54%	61%	67%	74%	81%
Benefits	7.67	7.67	8.76	9.43	10.52	11.84	13.38	14.69	16.22	17.76

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 12-4-23:

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
6 Months	35%	35%	40%	43%	48%	54%	61%	67%	74%	81%
Benefits	7.88	7.88	9.00	9.68	10.80	12.15	13.73	15.09	16.66	18.23

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 12-2-24:

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

INTERVAL	PERIOD AND RATES									
6 Months	35%	35%	40%	43%	48%	54%	61%	67%	74%	81%
Benefits	8.07	8.07	9.22	9.91	11.07	12.45	14.06	15.44	17.06	18.68

NOTES:

- These rates are for service, maintenance, moves, and/or changes affecting 15 Voice/Data (teledata) lines or less. These rates may NOT be used for any teledata work in new construction (including additions) or any fiber optic work.
- The number of Teledata workers on the jobsite is the determining factor for which Foreman category applies .

The regular workday shall be 8 hours, between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- 2nd Shift (4:30 PM to 12:30 AM) shall receive 8 hours pay for 7.5 hours work + an additional 10% of the regular rate, per hour, inclusive of benefits.
- 3rd Shift (12:30 AM to 8:00 AM) shall receive 8 hours pay for 7 hours work + an additional 15% of the regular rate, per hour, inclusive of benefits.

OVERTIME:

Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, that are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. Hours in excess of 10 on Saturday and all hours on Sunday and holidays shall be paid at double the regular rate, inclusive of benefits.

- Four 10-hour days may be worked Monday through Friday, between the hours of 7:00 AM and 5:30 PM. A make-up day may be used for a day not being worked during the four 10-hour day schedule if a holiday occurs during the week or for any other conditions that prevent an employee from working the four 10-hour day schedule.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. Saturday holidays will be observed the preceding Friday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Electrician - Teledata (16 Instruments & More)

PREVAILING WAGE RATE

See "Electrician" Rates

Craft: Electrician - Teledata (16 Instruments & More)

COMMENTS/NOTES

See ELECTRICIAN Rates

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Electrician- Outside Commercial

PREVAILING WAGE RATE

	05/29/23	06/03/24
Cable Splicer	W68.37 B42.89 T111.26	W70.04 B44.66 T114.70
Certified Welder	W65.26 B40.95 T106.21	W66.86 B42.62 T109.48
Equipment Operator	W62.15 B39.00 T101.15	W63.67 B40.60 T104.27
Foreman (11-20 Journeymen workers on job)	W72.72 B45.62 T118.34	W74.50 B47.50 T122.00
Foreman (1-3 Journeymen workers on job)	W68.37 B42.89 T111.26	W70.04 B44.66 T114.70
Foreman (4-10 Journeymen workers on job)	W71.47 B44.86 T116.33	W73.23 B46.70 T119.93
General Foreman (21-30 Journeymen workers on job)	W74.58 B46.81 T121.39	W76.41 B48.71 T125.12
General Foreman (31-60 Journeymen workers on job)	W80.80 B50.70 T131.50	W82.78 B52.76 T135.54
General Foreman (61+ Journeymen workers on job)	W82.04 B51.48 T133.52	W84.05 B53.58 T137.63
Groundman	W37.29 B23.41 T60.70	W38.21 B24.35 T62.56
Journeyman Lineman/Technician	W62.15 B39.00 T101.15	W63.67 B40.60 T104.27
Sub-Foreman	W70.85 B44.46 T115.31	W72.59 B46.27 T118.86

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Electrician- Outside Commercial

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
1000 Hours	60%	65%	70%	75%	80%	85%	90%			
Benefits	61.75% of	Journey	man	wage	+	\$.01				

Craft: Electrician- Outside Commercial

COMMENTS/NOTES

APPRENTICE RATE SCHEDULE AS OF 5-29-23:

Interval Period and Rates
 1000 Hours 60% 65% 70% 75% 80% 85% 90%
 Benefits 62.75% of the Journeyman wage + \$.01

APPRENTICE RATE SCHEDULE AS OF 6-3-24:

Interval Period and Rates
 1000 Hours 60% 65% 70% 75% 80% 85% 90%
 Benefits 63.75% of the Journeyman wage + \$.01

* FOR UTILITY WORK PLEASE SEE STATEWIDE RATES

The regular worday shall be 8 hours, between 8:00 AM and 4:30 PM.

FOREMAN REQUIREMENTS:

- 1 to 3 Journeymen- 1 must be a Foreman (Foreman/1-3 Journeymen rate).
- 4 to 10 Journeymen- 1 must be a Foreman (Foreman/4-10 Journeymen rate).
- 11 to 20 Journeymen- 1 must be Foreman (Foreman/11-20 Journeymen rate) and 1 must be a Sub-Foreman.
- 21 to 30 Journeymen- 1 must be a General Foreman (General Foreman/21-30 Journeymen rate) and 2 must be a Sub-Foreman.
- 31 to 40 Journeymen- 1 must be a General Foreman (General Foreman/31-40 Journeymen rate) and 3 must be a Sub-Foreman.
- 41 to 50 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 4 must be a Sub-Foreman.
- 51 to 60 Journeymen- 1 must be a General Foreman (General Foreman/31-60 Journeymen rate) and 5 must be a Sub-Foreman.
- 61+ Journeymen- 1 must be a General Foreman (General Foreman/61+ Journeymen rate) and 6 must be a Sub-Foreman.

SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- 2nd Shift (4:30 PM to 12:30 AM): 8 hrs. pay for 7.5 hrs. work + an additional 10% of the regular rate, inclusive of benefits.
- 3rd Shift (12:30 AM to 8:00 AM): 8 hrs. pay for 7 hrs. work + an additional 15% of the regular rate per hour, inclusive benefits.

OVERTIME:

Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, and all hours on Saturdays, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS:

New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day,

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Thanksgiving Day and Christmas Day.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Electrician-Utility Work (North)

PREVAILING WAGE RATE

Rates are located in the "Statewide" rate package

Craft: Electrician-Utility Work (North)

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
* 6 Months	60%	65%	70%	75%	80%	85%	90%			
Benefits	69% of	Appren	tice	Wage	Rate	for all	intervals			

Craft: Electrician-Utility Work (North)

COMMENTS/NOTES

Electrician-Utility Work (North) rates are located in the "Statewide" rate package.

* The apprentice wage rate is paid at the percentage of the Journeyman Lineman wage rate located in the "Statewide" rate package.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Electrician-Utility Work (South)

PREVAILING WAGE RATE

Rates are located in the "Statewide" rate package

Craft: Electrician-Utility Work (South)

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
6 Months	31.65	34.29	36.93	39.56	42.20	44.84	47.78			
Benefits	28.02	29.62	31.20	32.80	34.40	36.00	37.58			

Craft: Electrician-Utility Work (South)

COMMENTS/NOTES

Electrician-Utility Work (South) rates are located in the "Statewide" rate package.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Elevator Constructor

PREVAILING WAGE RATE

	03/29/23
Journeyman	W77.49 B45.23 T122.72

Craft: Elevator Constructor

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	34.60	42.62	50.37	58.12						
Benefits	35.56	36.49	38.02	39.55						

Ratio of Apprentices to Journeymen - 1:1

Craft: Elevator Constructor

COMMENTS/NOTES

The regular workday shall consist of either 7 or 8 hours to be established at the beginning of the project, between 7:00 AM and 4:30 PM.

OVERTIME:

For all hours worked before or after the regular workday, Monday through Friday, and all hours on Saturday and Sunday, shall be paid at double the hourly rate. Holiday pay is one days wages (8 hours) plus double the hourly rate for all hours worked.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays shall be observed on the previous Friday and Sunday holidays shall be observed on the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Elevator Modernization & Service

PREVAILING WAGE RATE

	03/29/23
Journeyman	W60.89 B44.07 T104.96

Craft: Elevator Modernization & Service

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	34.60	33.49	39.58	45.67						
Benefits	35.50	36.07	37.52	38.97						

Ratio of Apprentices to Journeymen - 1:1

Craft: Elevator Modernization & Service

COMMENTS/NOTES

MODERNIZATION (addition, replacement, refurbishing, relocation, or changes in design or appearance, of elevator equipment in existing buildings):

- The regular workday consists of 8 hours, between 7:00 AM and 4:30 PM.

- Overtime:

Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturday and Sunday shall be paid at time and one-half the hourly rate. Holiday pay is one days wages (8 hours) plus time and one-half the hourly rate for all hours worked.

SERVICE (repair or replacement of parts for the purpose of maintaining elevator equipment in good operating condition):

- The regular workday consists of 8 hours, between 6:00 AM and 6:00 PM.

- Overtime:

Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the hourly rate. All hours on Sunday and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS (Modernization and Service): New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays shall be observed on the previous Friday and Sunday holidays shall be observed on the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Glazier PREVAILING WAGE RATE

	06/20/23
* Leadman	W52.53 B30.38 T82.91
Foreman	W54.53 B30.62 T85.15
General Foreman	W56.53 B30.86 T87.39
Journeyman	W50.53 B30.14 T80.67

Craft: Glazier APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
	50%	55%	60%	65%	70%	75%	80%	90%		
6 Months										
Benefits	10.16	10.16	12.85	12.85	16.15	16.15	17.64	17.64		

Ratio of Apprentices to Journeymen - 1:4

Craft: Glazier COMMENTS/NOTES

Hazard/Height Pay: +\$1.00 per hour

* When there are three (3) men working on a jobsite for three (3) days or longer, 1 Journeyman may be designated as a Leadman for the duration of the job, provided he has his OSHA certification.

FOREMAN REQUIREMENTS:

- When there are 4 or more Glaziers on a job, 1 must be designated a Foreman.
- When there are 15 or more Glaziers on a job, 1 must be designated a General Foreman.

The regular workday shall consist of 8 hours, between 7:00 AM and 5:30 PM, Monday to Friday.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, and the third shift shall receive 8 hours pay for 7 hours of work.

OVERTIME:

Hours in excess of 8 per day, or before or after the regular workday Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, General Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Heat & Frost Insulator

PREVAILING WAGE RATE

	09/20/22
Foreman	W60.72 B36.22 T96.94
General Foreman	W63.06 B37.33 T100.39
Journeyman	W58.44 B35.66 T94.10

Craft: Heat & Frost Insulator

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	27.38	32.49	39.13	45.71						
Benefits	20.86	24.73	27.41	30.01						

Ratio of Apprentices to Journeymen - 1:3

Craft: Heat & Frost Insulator

COMMENTS/NOTES

NOTE: These rates apply to the installing of insulation on hot and cold mechanical systems.

The regular workday shall be 8 hours between 7:00 AM and 3:30 PM. In addition, the regular workday may also be 8 hours between 6:00 AM and 2:30 PM.

SHIFT DIFFERENTIAL:

- Shift work must run for a minimum of 5 consecutive workdays.
- Second Shift shall work 7.5 hours and receive 8 hours pay, at the regular rate, plus 25% per hour.
- Third Shift shall work 7 hours and receive 8 hours pay, at the regular rate, plus 30% per hour.

OVERTIME:

The first 2 hours in excess of 8 per day, hours outside of the regular workday Monday through Friday that are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours in excess of 10 per day, and all hours on Sunday and holidays (except Labor Day) shall be paid at double the regular rate, inclusive of benefits. All hours on Labor Day shall be paid at triple the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day and Christmas Day. Sunday holidays observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Heat & Frost Insulator - Asbestos Worker

PREVAILING WAGE RATE

	09/20/22
Asbestos Helper	W36.89
Abatement	B24.92
	T61.81

Craft: Heat & Frost Insulator - Asbestos Worker

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	SEE	HEAT &	FROST	INSULAT OR						

Ratio of Apprentices to Journeymen - 1:3

Craft: Heat & Frost Insulator - Asbestos Worker

COMMENTS/NOTES

NOTE: These rates apply only to the removal of insulation materials/asbestos from mechanical systems, including containment erection and demolition, and placing material in appropriate containers.

The regular workday shall be 8 hours between 7:00 AM and 3:30 PM. In addition, the regular workday may also be 8 hours between 6:00 AM and 2:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- The second shift shall work 7.5 hours and receive 8 hours pay at the regular rate, plus 25% per hour.
- The third shift shall work 7 hours and receive 8 hours pay at the regular rate, plus 30% per hour.

OVERTIME: The first 2 hours in excess of 8 per day, hours outside of the regular workday Monday through Friday that are not shift work, and the first 10 hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours in excess of 10 per day, and all hours on Sunday and holidays (except Labor Day) shall be paid at double the regular rate, inclusive of benefits. All hours on Labor Day shall be paid at triple the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Presidential Election Day, Thanksgiving Day and Christmas Day. Sunday holidays observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Industrial Painter- Bridges

PREVAILING WAGE RATE

	02/01/23	02/01/24	02/01/25	02/01/26
Foreman	W63.28 B34.92 T98.20	W0.00 B0.00 T100.20	W0.00 B0.00 T102.20	W0.00 B0.00 T104.20
General Foreman	W65.78 B34.92 T100.70	W0.00 B0.00 T102.70	W0.00 B0.00 T104.70	W0.00 B0.00 T106.70
Journeyman	W58.28 B34.92 T93.20	W0.00 B0.00 T95.20	W0.00 B0.00 T97.20	W0.00 B0.00 T99.20

Craft: Industrial Painter- Bridges

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	50%	70%	90%							
6 Months										
Benefits	13.65	20.81	27.43							

Ratio of Apprentices to Journeymen - 1:3

Craft: Industrial Painter- Bridges

COMMENTS/NOTES

* Industrial Painters perform work on all industrial structures, such as bridges.

These rates apply to: All bridges that span waterways, roadways, railways and canyons. All tunnels, overpasses, viaducts and all appurtenances.

FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate, except Veterans Day, which shall be paid at time and one-half the regular rate.
- During a regular work week schedule, Saturday may be used as a make-up day lost to inclement weather, paid at the regular rate.
- Four 10-hour days may be worked, at the regular rate, Monday through Thursday. When the four 10-hour day schedule is used, the 11th and 12th hours shall be paid at time and one-half the regular rate. After the 12th hour, a worker shall be paid at double the regular rate. Friday may be used as a make-up day lost to inclement weather, paid at the regular rate.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Industrial Painter- Structural Steel

PREVAILING WAGE RATE

	02/01/23	02/01/24	02/01/25	02/01/26
Foreman	W52.02	W0.00	W0.00	W0.00
	B32.57	B0.00	B0.00	B0.00
	T84.59	T86.59	T88.59	T90.59
General Foreman	W54.52	W0.00	W0.00	W0.00
	B32.57	B0.00	B0.00	B0.00
	T87.09	T89.09	T91.09	T93.09
Journeyman	W47.02	W0.00	W0.00	W0.00
	B32.57	B0.00	B0.00	B0.00
	T79.59	T81.59	T83.59	T85.59

Craft: Industrial Painter- Structural Steel

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	SEE	INDUST	RIAL	PAINTER	BRIDGES					

Ratio of Apprentices to Journeymen - 1:3

Craft: Industrial Painter- Structural Steel

COMMENTS/NOTES

* Industrial Painters perform work on all industrial structures, such as water tanks, waste water facilities, refineries, any structural steel work, etc.

These rates apply to: All work in power plants (any aspect). On steeples, on dams, on hangers, transformers, substations, on all open steel, in refineries, tank farms, water/sewerage treatment facilities and on pipelines.

FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate, except for Veterans Day, which shall be paid at time and one-half the regular rate.
- During the regular work week schedule, Saturday may be used to make-up a day lost to inclement weather, paid at the regular rate.
- Four 10-hour days may be worked, at the regular rate, Monday through Thursday. When the four 10-hour day schedule is used, the 11th and 12th hours shall be paid at time and one-half the regular rate. After the 12th hour, a worker shall be paid at double the regular rate. Friday may be used as a make-up day lost to inclement weather, paid at the regular rate.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Industrial Painter- Water Tanks

PREVAILING WAGE RATE

	02/01/23	02/01/24	02/01/25	02/01/26
Foreman	W53.07 B32.22 T85.29	W0.00 B0.00 T87.29	W0.00 B0.00 T89.29	W0.00 B0.00 T91.29
General Foreman	W55.57 B32.22 T87.79	W0.00 B0.00 T89.79	W0.00 B0.00 T91.79	W0.00 B0.00 T93.79
Journeyman	W48.07 B32.22 T80.29	W0.00 B0.00 T82.29	W0.00 B0.00 T84.29	W0.00 B0.00 T86.29

Craft: Industrial Painter- Water Tanks

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	50%	70%	90%							
6 Months										
Benefits	13.65	20.81	27.43							

Ratio of Apprentices to Journeymen - 1:3

Craft: Industrial Painter- Water Tanks

COMMENTS/NOTES

* Industrial Painters perform work on all industrial structures, such as water tanks, waste water facilities, refineries, any structural steel work, etc.

These rates apply to: All new and repaint water tanks (interior and exterior).

FOREMEN REQUIREMENTS:

- When there are 4 or more Painters on a job, 1 shall be designated a Foreman.
- When there are 15 or more Painters on a job, 1 shall be designated a General Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays and Sundays shall be paid at time and one-half the regular rate. All hours on holidays shall be paid at double the regular rate, except Veterans Day, which shall be paid at time and one-half the regular rate.
- During a regular work week schedule, Saturday may be used to make-up a day lost to inclement weather, paid at the regular rate.
- Four 10-hour days may be worked, at the regular rate, Monday through Thursday. When the four 10-hour day schedule is used, the 11th and 12th hours shall be paid at time and one-half the regular rate. After the 12th hour, a worker shall be paid at double the regular rate. Friday may be used as a make-up day lost to inclement weather, paid at the regular rate.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Saturday holiday observed the preceding Friday. Sunday holiday observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Ironworker PREVAILING WAGE RATE

	07/07/23
Rod /Fence Foreman	W49.89 B49.67 T99.56
Rod/Fence Journeyman	W46.89 B49.67 T96.56
Structural Foreman	W52.19 B49.67 T101.86
Structural Journeyman	W49.19 B49.67 T98.86

Craft: Ironworker APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
6 Months	50%	60%		Yearly	70%	80%	90%			
Benefits	same as	journeyma n	amount							

Ratio of Apprentices to Journeymen - 1:4

Craft: Ironworker COMMENTS/NOTES

HAZARDOUS WASTE WORK: On hazardous waste removal work on a state or federally designated hazardous waste site where the Ironworker is required to wear Level A,B, or C personal protection: + \$3.00 per hour

The regular workday consists of 8 hours between 6:00 AM and 4:30 PM.

FOREMAN REQUIREMENTS:

When there are 2 or more Ironworkers on a job, 1 shall be designated a Foreman.

SHIFT DIFFERENTIALS:

- When a 2 shift schedule is established, the first, or day shift , shall be established on an 8 hour basis .The second shift shall be established on an 8 hour basis, and receive the regular rate plus 15%.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 15%, and the third shift shall receive the regular rate plus 20%.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis.
- When an irregular shift is established for the Ironworker (Structural) classification, the rate shall be paid at time and one-half the regular rate, inclusive of benefits. When an irregular shift is established for the Rod/Fence classification, the shift shall be established on an 8 hour basis and receive the regular rate, plus 20%.

OVERTIME:

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the hourly rate, inclusive of benefits. Saturday may be used as a make-up day for a day lost to inclement weather. If Saturday is not a make-up day, all hours on Saturday shall be paid at time and one-half the hourly rate, inclusive of benefits.

- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Laborer - Asbestos & Hazardous Waste Removal

PREVAILING WAGE RATE

	08/09/22
Foreman	W41.38 B24.21 T65.59
Journeyman (Handler)	W36.78 B24.21 T60.99

Craft: Laborer - Asbestos & Hazardous Waste Removal

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	22.07	25.75	29.42	33.10						
Benefits	22.06	for	all	intervals						

Ratio of Apprentices to Journeymen - *

* Ratio of apprentices to journeymen shall not be more than one apprentice for the first journeyman and no more than (1) apprentice for each additional three (3) journeymen.

Craft: Laborer - Asbestos & Hazardous Waste Removal

COMMENTS/NOTES

NOTE: These rates apply to work in connection with Asbestos, Radiation, Hazardous Waste, Lead, Chemical, Biological, Mold Remediation and Abatement.

The regular workday shall be 8 hours.

OVERTIME:

- Hours in excess of 8 per day, Monday through Saturday, and all hours on Sunday and holidays shall be paid at time and one-half the regular rate.
- Benefits on ALL overtime hours shall be paid at straight time.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Easter, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. (Holidays start at 12:00 am).

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Laborer - Building

PREVAILING WAGE RATE

	06/01/23
Class A Journeyman	W38.00 B32.17 T70.17
Class B Journeyman	W37.00 B32.17 T69.17
Class C Journeyman	W31.45 B32.17 T63.62
Foreman	W42.75 B32.17 T74.92
General Foreman	W47.50 B32.17 T79.67

Craft: Laborer - Building

APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
	60%	70%	80%	90%	of Class B	wage rate				
6 Months										
Benefit	28.92	28.92	28.92	28.92						

Ratio of Apprentices to Journeymen - *

* Ratio of apprentices to journeymen shall not be more than one apprentice for the first journeyman and no more than (1) apprentice for each additional three (3) journeymen.

Craft: Laborer - Building

COMMENTS/NOTES

CLASS A: Specialist laborer including mason tender or concrete pour crew; scaffold builder (scaffolds up to 14 feet in height); operator of forklifts, Bobcats (or equivalent machinery), jack hammers, tampers, motorized tampers and compactors, vibrators, street cleaning machines, hydro demolition equipment, riding motor buggies, conveyors, burners; and nozzle men on gunite work.

CLASS B: Basic laborer - includes all laborer work not listed in Class A or Class C.

CLASS C: Janitorial-type light clean-up work associated with the TURNOVER of a project, or part of a project, to the owner. All other clean-up work is Class B.

The regular workday shall be 8 hours between 6:00 AM and 6:00 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.
- When a 2-shift schedule is worked, including a day shift, both shifts shall be established on the basis of 8 hours pay for 8 hours worked. The second shift shall receive the regular rate plus an additional 10%.
- When a 3-shift schedule is worked, the day shift shall be established on the basis of 8 hours pay for 8 hours worked, the second shift shall be established on the basis of 8 hours pay for 7.5 hours worked, and the third shift shall be established

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

on the basis of 8 hours pay for 7 hours worked. The day shift shall receive the regular rate, the second shift shall receive the regular rate plus an additional 10%, and the third shift shall receive the regular rate plus an additional 15%.

- When a second or third shift is worked with no day shift, the second or third shift shall be established on the basis of 8 hours pay for 8 hours worked. The second shift shall receive the regular rate plus an additional 10%, and the third shift shall receive the regular rate plus an additional 15%.

- When an irregular shift must be established this shift shall receive the regular rate plus an additional 10%.

OVERTIME:

- Hours in excess of 8 per day, or outside the regular workday that are not shift work, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. Saturday may be used as a make-up day (paid at straight time) for a day lost to inclement weather, or for a holiday that is observed during the work week, Monday through Friday. All hours on Sundays and holidays shall be paid at double the regular rate.

- Four 10-hour days may be worked Monday to Thursday, at straight time, with Friday used a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the regular rate.

- Benefits on ALL overtime hours shall be paid at time and one-half.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Laborer - Heavy & General

PREVAILING WAGE RATE

Rates are located in the
"Statewide" rate package

Craft: Laborer - Heavy & General

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
1000 Hours	60%	70%	80%	90%						
Benefit	23.98	for	all	intervals						

Ratio of Apprentices to Journeymen - *

* No more than 1 apprentice for the first journeyman and no more than 1 apprentice for each additional 3 journeymen.

Craft: Laborer - Heavy & General

COMMENTS/NOTES

Heavy & General Laborer rates are located in the "Statewide" rate package.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Laborer-Residential and Modular Construction

PREVAILING WAGE RATE

	04/01/23
* Skilled Tradesman (only applies to Modular Construction)	W27.90 B5.45 T33.35
Foreman (person directing crew, regardless of his skill classification)	W31.90 B5.45 T37.35
Laborer (for single family and stand-alone duplex owned by single owner)	W17.85 B2.95 T20.80
Residential and Modular Construction Laborer	W23.90 B5.45 T29.35

Craft: Laborer-Residential and Modular Construction

APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
	As shown	800 hours	600 hours	600 hours						
wage & benefits	70%	80%	90%							

Ratio of Apprentices to Journeymen-

One (1) apprentice shall be allowed for the first journeyman on site and no more than one (1) additional apprentice for each additional three (3) journeymen on site.

Craft: Laborer-Residential and Modular Construction

COMMENTS/NOTES

* SKILLED TRADESMAN- any worker doing work not typically done by a Building Laborer. Some examples are installing interior doors, sheet rock, hooking up appliances, installing light fixtures, installing railing systems, etc. Please note where local building codes require that certain work be performed under the supervision of a licensed tradesman (i.e. Plumber, Electrician, etc.) Laborers shall work under such supervision.

RESIDENTIAL CONSTRUCTION- All residential construction (not commercial), single-family, stand-alone duplex houses, townhouses and multi-family buildings of not more than four (4) floors. Each housing unit must be fully and independently functional; each housing unit must have its own kitchen and bathroom. The definition includes all incidental items such as site work, parking areas, utilities, streets and sidewalks. Please note the construction must be Residential in nature. A First Floor at or below grade may contain commercial space not to exceed 50% square footage of the floor; at least 50% of the First Floor must contain living accommodations or related nonresidential uses (e.g. laundry space, recreation/hobby rooms, and/or corridor space). Basement stories below grade used for storage, parking, mechanical systems/equipment, etc., are considered basement stories which are not used in determining the building's height. An attic is an unfinished space located immediately below the roof. Such space is not used in determining a building's height even if used for storage purposes. In addition, barracks and dormitories are not considered residential projects.

MODULAR RESIDENTIAL CONSTRUCTION- all aspects of modular residential construction (not commercial) at the site of installation of structures of no more than four (4) stories, including all excavation and site preparation, footings and

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

foundation systems whether poured on-site or prefabricated, all underground waterproofing, underground utilities, concrete slabs, sidewalks, driveways, paving, hardscape and landscaping. Please note the construction must be Residential as defined above. All work performed by the Set Crew (the crew of workers who set the modular boxes on the foundation), including the rigging, setting, attaching and assembly of all modules and structural members, preparation of the foundation to accept modules, such as sill plates, connection of all in-module and under-module connections including, but not limited to, plumbing, electrical, HVAC, fire suppression, CATS, telephone, television/internet, and fiber optic, the building or installation of any porches or decks regardless of material or method of construction, the on-site installation of, or completion of any roof system, doors, windows and fenestrations, including flashing, gutter and soffit systems, waterproofing, insulation and interior and exterior trim work, and painting. Please note that modular construction does not include on-site stick built construction, tip up construction or panel built construction.

The regular workday shall be 8 hours between 6:00 AM and 6:00 PM.

OVERTIME:

Hours worked in excess of 8 per day/40 per week, Monday through Saturday, and all hours worked on Sunday and holidays shall be paid at time and one-half the hourly rate.

RECOGNIZED HOILDAYS:

New Year's Day, Martin Luther King Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day and Christmas Day.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Millwright PREVAILING WAGE RATE

	05/04/23
Foreman	W64.35 B38.57 T102.92
Journeyman	W55.96 B33.62 T89.58

Craft: Millwright APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
6 Months	40%	55%	65%	80%	90%					
Benefits	59% of	Appren	tice	Wage	Rate	for all	intervals	+ \$0.61		

Ratio of Apprentices to Journeymen - 1:3

Craft: Millwright COMMENTS/NOTES

FOREMAN REQUIREMENTS:

- When there are 2 or more Millwrights on a job, 1 shall be designated as a Foreman.

The regular workday shall consist of 8 hours, starting between 6:00 AM and 9:00 AM.

SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 15%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.
- When an irregular shift must be established, this shift shall receive the regular rate plus 15%, inclusive of benefits.

OVERTIME:

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. Veterans' Day may be substituted for the day after Thanksgiving.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Operating Engineer - Field Engineer

PREVAILING WAGE RATE

Rates are located in the
"Statewide" rate package

Craft: Operating Engineer - Field Engineer

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	70%	75%	of Rod/	Chainman	Wage					
Yearly			80%	90%	Transit/	Instrument	man	Wage		

Ratio of Apprentices to Journeymen - *

* No more than 1 Field Engineer Apprentice per Survey Crew.

Craft: Operating Engineer - Field Engineer

COMMENTS/NOTES

Operating Engineer - Field Engineer rates are located in the "Statewide" rate package.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Painter - Line Striping

PREVAILING WAGE RATE

	12/07/22
Apprentice (1st year)	W29.15 B14.75 T43.90
Apprentice (2nd year)	W33.25 B25.70 T58.95
Foreman (Charge Person)	W42.05 B26.48 T68.53
Journeyman 1 (at least 1 year of working exp. as a journeyman)	W37.28 B26.48 T63.76
Journeyman 2 (at least 2 years of working exp. as a journeyman)	W41.05 B26.48 T67.53

Craft: Painter - Line Striping

COMMENTS/NOTES

OVERTIME:

Hours in excess of 8 per day, Monday through Saturday, and all hours on Sundays and holidays shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day and Christmas Day. Veterans Day may be substituted for the day after Thanksgiving.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Paperhanger PREVAILING WAGE RATE

	05/02/23
Foreman	W52.82 B29.51 T82.33
Journeyman	W48.02 B29.51 T77.53

Craft: Paperhanger APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	SEE	COMME R	CIAL	PAINTER						

Craft: Paperhanger COMMENTS/NOTES

FOREMEN REQUIREMENTS:

- When there are 4 or more Paperhangers on a job, 1 shall be designated a Foreman.

The regular workday shall consist of 8 hours between 7:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- The second shift shall receive an additional 10% of the hourly rate, per hour, and the third shift shall receive an additional 15% of the hourly rate, per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular rate.
- Saturday or Sunday may be used to make up a day lost to inclement weather, at straight time.
- Four 10-hour days may be worked, at straight time, Monday through Friday.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day, July 4th, Labor Day, General Election Day, Veterans Day, Thanksgiving Day, Christmas Day

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

hours on Sundays and holidays shall be paid at double time, inclusive of benefits.

NOTE: Maintenance work is work to repair, restore, or improve the efficiency of existing facilities. This does NOT apply to ANY new construction.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays are observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Plasterer

PREVAILING WAGE RATE

See Bricklayer, Stone Mason Rates

Craft: Plasterer

COMMENTS/NOTES

See BRICKLAYER, STONE MASON Rates

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Plumber PREVAILING WAGE RATE

	05/02/23
Foreman	W64.25 B41.62 T105.87
General Foreman	W68.41 B41.62 T110.03
Journeyman	W59.49 B41.62 T101.11

Craft: Plumber APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	30%	45%	55%	65%	75%					
Benefits	17.09	23.48	25.72	27.96	30.19					

Ratio of Apprentices to Journeymen - *

* Employers may employ 1 apprentice on any job where 1 or 2 journeymen are employed. Thereafter, 1 apprentice may be employed for every 4 journeymen.

Craft: Plumber COMMENTS/NOTES

FOREMAN REQUIREMENTS:

- On any job having 2 or more Plumbers, 1 must be designated a Foreman.
- On any job having 9 or more Plumbers, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours between 7:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must continue for a minimum of 5 consecutive workdays.
- When two shifts are worked, the second shift shall work 7.5 hours and receive 8 hours pay, at a rate equal to the hourly rate plus 10%, inclusive of benefits.
- When a third shift is worked, the third shift shall work 7 hours and receive 8 hours pay, at a rate equal to the hourly rate plus 15%, inclusive of benefits.

OVERTIME:

- All hours in excess of 8 per day, or before or after the regular workday that are not shift work, Monday through Friday, and all hours on Saturday, shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays, shall be paid at double the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Roofer PREVAILING WAGE RATE

	06/13/23
Foreman	W46.77 B30.81 T77.58
Journeyman	W43.77 B30.81 T74.58

Craft: Roofer APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
6 Months	17.50	21.88	26.26	28.45	30.63	32.83	35.01	39.39		
Benefits	2.16	2.16	27.31	27.31	27.31	27.31	27.31	27.31		

Ratio of Apprentices to Journeymen - *

- * A) For roofing jobs that are of the 1 or single ply nature: 1:2 or fraction thereof
- B) For roofing jobs on new built up roofs: 1:3 or fraction thereof
- C) For roofing jobs that are of a tear-off nature: 1:2 or fraction thereof
- D) For roofing jobs {not requiring complete removal of existing systems, installation done over existing roof}: 1:3 or fraction thereof

Craft: Roofer COMMENTS/NOTES

Pitch: +.50 per hour

Mop Man: +.30 per hour

The regular workday consists of 8 hours between 8:00 AM and 4:30 PM.

OVERTIME:

Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturdays, Sundays, and holidays shall be paid at time and one-half the regular rate.

RECOGNIZED HOLIDAYS: New Year's Day, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Sheet Metal Sign Installation

PREVAILING WAGE RATE

	06/13/23
Foreman	W42.32 B41.76 T84.08
Journeyman	W40.07 B41.76 T81.83

Craft: Sheet Metal Sign Installation

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
1000 hours	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%
Benefits	13.85	15.77	17.72	19.69	22.11	24.09	26.07	28.06	30.04	32.02

Ratio of Apprentices to Journeymen - 1:3

Craft: Sheet Metal Sign Installation

COMMENTS/NOTES

FOREMAN REQUIREMENT:

When there are 6 or more Sheet Metal Sign Installers on a job, 1 shall be designated a Foreman.

The regular workday consists of 8 hours, between 7:00 AM and 3:30 PM.

OVERTIME:

Hours before or after the regular workday, Monday through Friday, and all hours worked on Saturday shall be paid at time and one-half the hourly rate. All hours on Sunday and holidays shall be paid at double the hourly rate.

Four(4) 10 hour days may be worked, Monday through Friday, at straight time, for projects lasting at least one week in duration. The fifth day may be used as a make-up day at straight time for a day lost due to inclement weather. However, if the fifth day is not a make-up day, all hours worked will be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Saturday holidays observed the preceding Friday, Sunday holidays observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Sheet Metal Worker

PREVAILING WAGE RATE

	07/19/23
Foreman	W58.90 B49.52 T108.42
General Foreman	W59.90 B49.52 T109.42
Journeyman	W55.40 B49.52 T104.92

Craft: Sheet Metal Worker

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	35%	45%	55%	65%	of	Journey	man	Wage	Rate	
Benefit	35%	45%	55%	65%	of	Journey	man	Benefit	Rate	

Ratio of Apprentices to Journeymen - 1:4

Craft: Sheet Metal Worker

COMMENTS/NOTES

FOREMAN REQUIREMENTS:

- When there are 2 or more Sheet Metal Workers on a project, 1 must be designated a Foreman.
- When there are 17 or more Sheet Metal Workers on a project, 1 must be designated a General Foreman.
- When there is only 1 Sheet Metal Worker (1 Journeyman) on a project, he/she shall receive \$1.00 more than the regular Journeyman's rate.

The regular workday is 8 hours between 7:00 AM and 4:30 PM.

SHIFT DIFFERENTIAL:

- 2nd Shift (3:30 PM - 12:00 AM) : +17% of regular hourly rate
- Shift work must run for a minimum of 5 consecutive workdays.

OVERTIME:

- Hours in excess of 8 per day, or before or after the regular workday, that are not shift work, and the first 10 hours on Saturdays shall be paid at time and one-half of the regular rate, inclusive of benefits. Hours in excess of 10 per day on Saturday, and all hours on Sundays and holidays shall be at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Friday, at straight time, with hours in excess of 10 per day, and hours in excess of 40 per week paid at the overtime rates listed above.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Sprinkler Fitter

PREVAILING WAGE RATE

	07/01/23
Foreman	W71.62 B37.55 T109.17
General Foreman	W75.17 B37.55 T112.72
Journeyman	W67.12 B37.55 T104.67

Craft: Sprinkler Fitter

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
1000 Hours									80%	85%
Benefits							Intervals	9 to 10	Jourymn	Ben.

Craft: Sprinkler Fitter

COMMENTS/NOTES

Apprentice rate schedule for those apprentices registered as of 7-1-13:

Interval Period and Rates
 1000 Hrs. 25% 30% 40% 45% 55% 60% 70% 75% 85% 90%
 Ben. 13.85 13.85 29.30 29.30 29.30 29.30 Intervals 7-10 Journy. Ben.

Apprentice rate schedule for those apprentices registered as of 7-1-22:

Interval Period and Rates
 1000 Hrs. 30% 35% 40% 45% 50% 55% 60% 70% 85% 95%
 Ben. 13.85 13.85 29.30 29.30 29.30 29.30 Intervals 7-10 Journy. Ben.

The regular workday consists of 8 consecutive hours between 6:00 AM and 4:30 PM.

FOREMAN REQUIREMENTS:

- The first Sprinkler Fitter on the job must be designated a Foreman.
- On any job having 12 or more Sprinkler Fitters, one must be designated a General Foreman.

SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 2 consecutive workdays.
- 2nd and 3rd shift shall receive an additional 15% of the regular rate, per hour.
- Any "off hours" shift starting at 8:00 PM or later shall receive an additional 25% of the regular rate, per hour.

OVERTIME:

The first 2 hours in excess of 8 per day, after the regular workday that are not shift work, Monday through Friday, shall be paid at time and one-half the regular rate. Hours worked in excess of 10 per day, Monday through Friday, and all hours on Saturday, Sunday and holidays, shall be paid double the regular rate.
 Four 10 hour days may be worked, Monday through Friday, at straight-time.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Tile Finisher-Marble PREVAILING WAGE RATE

	07/07/23
Finisher	W49.65 B36.82 T86.47

Craft: Tile Finisher-Marble APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
750 Hours	40%	60%	65%	70%	75%	85%	95%			
Benefits	Interval 1	thru 5 =	75% of	jyrnm. ben	rate	Interval 6	thru 7 =	full jyrnm	benefit	rate

Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Finisher-Marble COMMENTS/NOTES

OVERTIME:

Hours in excess of 7 per day, Monday through Friday, and the first 7 hours on Saturdays shall be paid at time and one half the regular rate, inclusive of benefits. Hours in excess of 7 on Saturdays and all hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Tile Setter - Ceramic

PREVAILING WAGE RATE

	06/13/23
Finisher	W48.36 B32.52 T80.88
Setter	W62.98 B35.75 T98.73

Craft: Tile Setter - Ceramic

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
750 Hours	35%	40%	50%	55%	60%	65%	70%	75%	80%	90%

Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Setter - Ceramic

COMMENTS/NOTES

OVERTIME:

Hours in excess of 7 per day, and the first 10 hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Saturdays after 10 hours shall be paid double the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Tile Setter - Marble

PREVAILING WAGE RATE

	07/07/23
Tile Setter	W63.12 B39.49 T102.61

Craft: Tile Setter - Marble

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
750 Hours	40%	60%	65%	70%	75%	85%	95%			
Benefits	Interval 1	thru 5 =	75% of	jyrm. ben	rate	Interval 6	thru 7 =	full jyrm	benefit	rate

Ratio of Apprentices to Journeymen - 1:4

Craft: Tile Setter - Marble

COMMENTS/NOTES

OVERTIME:

Hours in excess of 7 per day, Monday through Friday, and the first 7 hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. Hours in excess of 7 on Saturdays, and all hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Tile Setter - Mosaic & Terrazzo

PREVAILING WAGE RATE

	01/01/23
Grinder or Assistant	W58.67 B39.00 T97.67
Mechanic	W60.28 B39.01 T99.29
Terrazzo Resinous Worker	W50.32 B31.63 T81.95

Craft: Tile Setter - Mosaic & Terrazzo

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
750 Hours	50%	55%	60%	65%	70%	75%	85%	95%	100%	

Ratio of Apprentices to Journeymen - 1:5

Craft: Tile Setter - Mosaic & Terrazzo

COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 7-1-17:

INTERVAL	PERIOD AND RATES						
1500 Hours	35%	45%	60%	70%	80%	90%	100%

The regular workday consists of 7 hours, between 8:00 AM and 3:30 PM.

OVERTIME:

- Hours in excess of 7 per day, or before or after the regular workday, Monday through Friday, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Good Friday, Monday after Easter, Memorial Day, July 4th, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day and the day after, Christmas Day. Sunday holidays observed the following Monday.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Truck Driver

PREVAILING WAGE RATE

	05/01/23	05/01/24
Bucket, Utility, Pick-up, Fuel Delivery trucks	W43.56 B41.78 T85.34	W45.41 B43.28 T88.69
Dump truck, Asphalt Distributor, Tack Spreader	W43.56 B41.78 T85.34	W45.41 B43.28 T88.69
Euclid-type vehicles (large, off-road equipment)	W43.66 B41.78 T85.44	W45.51 B43.28 T88.79
Helper on Asphalt Distributor truck	W43.56 B41.78 T85.34	W45.41 B43.28 T88.69
Low Boy Driver	W45.16 B41.78 T86.94	W47.01 B43.28 T90.29
Slurry Seal, Seeding/Fertilizing/ Mulching truck	W43.56 B41.78 T85.34	W45.41 B43.28 T88.69
Straight 3-axle truck	W43.56 B41.78 T85.34	W45.41 B43.28 T88.69
Tractor Trailer (all types)	W43.66 B41.78 T85.44	W45.51 B43.28 T88.79
Vacuum or Vac-All truck (entire unit)	W43.56 B41.78 T85.34	W45.41 B43.28 T88.69
Winch Trailer	W43.76 B41.78 T85.54	W45.61 B43.28 T88.89

Craft: Truck Driver

COMMENTS/NOTES

BLENDED RATE:

When a truck driver is performing work on the site and also serving as a material delivery driver, the driver shall be paid a "blended rate" which shall be 80% of the above-listed wage rates, plus the full benefit rate. This rate shall be used when the driver "round robins" for a minimum of 6 hours during the work day.

HAZARDOUS WASTE REMOVAL:

- On hazardous waste removal work on a State designated hazardous waste site where the driver is in direct contact with hazardous materials and when personal protective equipment is required for respiratory, skin, and eye protection, the driver shall receive an additional \$3.00 per hour (with or without protective gear).
- A hazardous waste related certified worker at a designated hazardous waste site who is not working in a zone requiring level A, B or C personal protection shall receive an additional \$1.00 per hour.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

TRUCK FOREMAN: \$.75 cents per hour above regular rate. Overtime shall be increased accordingly.

The regular workday shall be 8 hours, starting between 6:00 AM and 8:00 AM.

SHIFT DIFFERENTIAL:

- Shifts starting at 4:00 PM (2nd Shift): + \$3.00 per hour.
- Shifts starting at 12:00 AM (midnight/3rd Shift): time and one-half the hourly rate.
- Shifts starting at a time other than from 6:00 AM to 8:00 AM, when such hours are mandated by the project owner: + \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, or before or after the regular workday, Monday through Friday, that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Employees may work four 10-hour days at straight time, Monday through Thursday, with Friday used as a make-up day for a lost day. If Friday is not a make-up day, then all hours on Friday shall be paid at time and one-half the hourly rate.
- Benefits on overtime shall be \$40.03.
- As of 5-1-23, benefits on overtime shall be \$41.53.
- As of 5-1-24, benefits on overtime shall be \$43.03.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day (Decoration Day), July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. The day after Thanksgiving may be substituted for Veteran's Day.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Truck Driver-Material Delivery Driver

PREVAILING WAGE RATE

	05/01/23	05/01/24
Driver	W35.87 B41.78 T77.65	W37.62 B43.28 T80.90

Craft: Truck Driver-Material Delivery Driver

COMMENTS/NOTES

BLENDED RATE:

When a truck driver is performing work on the site and also serving as a material delivery driver, the driver shall be paid a "blended rate". See the "Truck Driver" craft for the blended rates.

Truck Foreman/Shop Steward: +\$0.25 per hour

SHIFT DIFFERENTIALS:

- 2nd Shift shall receive an additional \$0.50 per hour
- 3rd Shift shall receive time and one-half the hourly rate.

OVERTIME:

- Hours in excess of 8 per day, or before or after the regular workday that are not shift work, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the hourly rate. All hours on Sunday and holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Memorial Day (Decoration Day), July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays will be observed the following Monday. The day after Thanksgiving may be substituted for Veterans Day.

**NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION**

County - UNION

Craft: Welder

PREVAILING WAGE RATE

Welder

Craft: Welder

COMMENTS/NOTES

Welders rate is the same as the craft to which the welding is incidental .

STATEWIDE RATES

OPERATING ENGINEERS **Rates Expiration Date :**

{For apprentice rates refer to "Operating Engineers" apprentice rates in any county rate package}

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must be established for 5 consecutive workdays.
- Any work started outside of the allowed start time, 6:00 AM to 9:00 AM, except for * tidal work, shall be considered an irregular shift and paid at straight time, plus 15% for the first eight hours, inclusive of benefits.
- * FOR TIDAL WORK- a contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work), providing the eight hour shift is completed between the hours of 5:00 AM and 6:30 PM.
- All time worked in excess of an established shift (an established shift is a shift that is determined at the time of the bid) shall be paid at the applicable overtime rate. When a portion of an established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.
- When working with other trades who receive a higher irregular shift differential, these employees shall also receive the higher differential rate.

OVERTIME:

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veterans Day.

For projects bid after April 1, 2020, on hazardous waste removal work of any kind, including a state or federally designated site, where the operating engineer is required to wear level A, B, or C personal protection, the operating engineer shall receive an hourly wage rate of his regular hourly wage plus \$5.00 per hour.

- An operating engineer working at a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level A, B, or C personal protection, shall receive an hourly wage rate of his regular rate plus \$1.00 per hour.

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
57.63	37.65	95.28

CLASSIFICATIONS:

A-Frame

Backhoe (combination)

Boom Attachment on loaders (Except pipehook)

Boring & Drilling Machine

Brush Chopper, Brush Shredder, Tree Shredder, Tree Shearer

Bulldozer, finish grade

Cableway

Carryall

Concrete Pump

Concrete Pumping System (Pumpcrete & similar types)

Conveyor, 125 feet or longer

Drill Doctor (Duties include dust collector and maintenance)

Front End Loader (2 cu. yds. but less than 5 cu. yds.)

Grader, finish

Groove Cutting Machine (ride-on type)

Heater Planer

Hoist: Outside Material Tower Hoist (all types including steam, gas, diesel, electric, air hydraulic, single and double drum, concrete, brick shaft caisson, snorkle roof, and other similar types, Except Chicago-boom type) * receives an additional \$1.00 per hour on 100 ft. up to 199 ft. total height, and an additional \$2.00 per hour on 200 ft. and over total height.

Hydraulic Crane (10 tons & under)

Hydraulic Dredge

Hydro-Axe

Hydro-Blaster

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
57.63	37.65	95.28

CLASSIFICATIONS:

Jack (screw, air hydraulic, power-operated unit, or console type, Except hand jack or pile load test type)

Log Skidder

Pan

Paver, concrete

Plate & Frame Filter Press

Pumpcrete (unit type)

Pumpcrete, Squeezecrete, or Concrete Pumping machine (regardless of size)

Scraper

Side Boom

Straddle Carrier (Ross and similar types)

Whiphammer

Winch Truck (hoisting)

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
55.72	37.65	93.37

CLASSIFICATIONS:

- Asphalt Curbing Machine
- Asphalt Plant Engineer
- Asphalt Spreader
- Autograde Curb Trimmer & Sidewalk Shoulder Slipform (CMI & similar types)
- Autograde Curecrete Machine (CMI & similar types)
- Autograde Tube Finisher & Texturing Machine (CMI & similar types)
- Bar Bending Machines (Power)
- Batcher, Batching Plant, & Crusher [On Site]
- Belt Conveyor System
- Boom-Type Skimmer Machine
- Bridge Deck Finisher
- Bulldozer (all sizes)
- Captain (Power Boats)
- Car Dumper (railroad)
- Compressor & Blower unit for loading/unloading of concrete, cement, fly ash, or similar type materials (used independently or truck-mounted)
- Compressor (2 or 3 battery)
- Concrete Breaking Machine
- Concrete Cleaning/Decontamination Machine
- Concrete Finishing Machine
- Concrete Saw or Cutter (ride-on type)
- Concrete Spreader (Hetzl, Rexomatic & similar types)
- Concrete Vibrator

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
55.72	37.65	93.37

CLASSIFICATIONS:

- Conveyors - under 125 feet
- Crane Signalman
- Crushing Machine
- Directional Boring Machine
- Ditching Machine - Small (Ditchwitch, Vermeer or similar types)
- Dope Pot - Mechanical (with or without pump)
- Dumpster
- Elevator
- Fireman
- Fork Lift (Economobile, Lull & similar types)
- Front End Loader (1 cu. yd. and over but less than 2 cu. yds.)
- Generator (2 or 3 battery)
- Giraffe Grinder
- Goldhofer/Hydraulic Jacking Trailer
- Grader & Motor Patrols
- Grout Pump
- Gunnite Machine (Excluding nozzle)
- Hammer - Vibratory (in conjunction with generator)
- Heavy Equipment Robotics - Operator/Technician
- Hoist (roof, tigger, aerial platform hoist, house car)
- Hopper
- Hopper Doors (power operated)
- Ladder (motorized)

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
55.72	37.65	93.37

CLASSIFICATIONS:

Laddervator

Locomotive (Dinky-type)

Maintenance Utility Man

Master Environmental Maintenance Technician

Mechanic

Mixer (Except paving mixers)

Pavement Breaker (truck-mounted or small self-propelled
ride-on type)

Pavement Breaker - maintenance of compressor or hydraulic unit

Pipe Bending Machine (power)

Pitch Pump

Plaster Pump (regardless of size)

Post Hole Digger (post pounder, auger)

Rod Bending Machines

Roller (black top)

Scale (power)

Seamen Pulverizing Mixer

Shoulder Widener

Silo

Skimmer Machine (boom type)

Steel Cutting Machine (service & maintenance)

Tamrock Drill

Tractor

Transfer Machines

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
55.72	37.65	93.37

CLASSIFICATIONS:

Tug Captains

Tug Master (Power Boats)

Ultra High Pressure Waterjet Cutting Tool System -
Operator/Maintenance Technician

Vacuum Blasting Machine - Operator/Maintenance Technician

Vibrating Plant (used with unloading)

Welder & Repair Mechanic

Effective Dates:

07/01/2023

Rate	Fringe	Total
50.38	37.65	88.03

CLASSIFICATIONS:

Assistant Engineer/Oiler

Driller's Helper

Field Engineer - Transit man or Instrument man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Mechanic's Helper

Off Road Back Dump

Tire Repair & Maintenance

Effective Dates:

07/01/2023

Rate	Fringe	Total
47.80	37.65	85.45

CLASSIFICATIONS:

Field Engineer - Rodman or Chainman

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS Rates Expiration Date :

Effective Dates:

07/01/2023

Rate	Fringe	Total
57.96	37.65	95.61

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (minimum)

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
59.22	37.65	96.87

CLASSIFICATIONS:

- Autograde Pavement Profiler (CMI & similar types)
- Autograde Pavement Profiler - Recycle Type (CMI & similar types)
- Autograde Placer/Trimmer/Spreader Combination (CMI & similar types)
- Autograde Slipform Paver (CMI & similar types)
- Backhoe (Excavator)
- Central Power Plant
- Concrete Paving Machine
- Cranes, Derricks, Pile Drivers (all types), under 100 tons with a boom (including jib and/or leads) under 100 ft.
- Draglines
- Drill, Bauer, AMI and similar types
- Drillmaster, Quarrymaster
- Drillmaster/Quarrymaster (down-the-hole drill), rotary drill, self-propelled hydraulic drill, self-powered drill
- Elevator Grader
- Field Engineer-Chief of Party
- Front End Loader (5 cu. yards or larger)
- Gradall
- Grader, Rago
- Helicopter Co-Pilot
- Helicopter Communications Engineer
- Juntann Pile Driver
- Locomotive (large)
- Mucking Machine

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
59.22	37.65	96.87

CLASSIFICATIONS:

Pavement & Concrete Breaker (Superhammer & Hoe Ram)

Pile Driver

Prentice Truck

Roadway Surface Grinder

Scooper (loader & shovel)

Shovel (Excavator)

Trackhoe (Excavator)

Tree Chopper with boom

Trenching Machine (cable plow)

Tunnel Boring Machine

Vacuum Truck

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
54.09	37.65	91.74

CLASSIFICATIONS:

- Chipper
- Compressor (single)
- Concrete Spreader (small type)
- Conveyor Loader (Except elevator graders)
- Engines, Large Diesel (1620 HP) & Staging Pump
- Farm Tractor
- Fertilizing Equipment (operation & maintenance)
- Fine Grade Machine (small type)
- Form Line Grader (small type)
- Front End Loader (under 1 cubic yard)
- Generator (single)
- Grease, Gas, Fuel, & Oil Supply Trucks
- Heaters (Nelson or other type)
- Lights - portable generating light plant
- Mixer, Concrete (small)
- Mulching Equipment (operation & maintenance)
- Power Broom or Sweeper
- Pump (diesel engine & hydraulic - regardless of power)
- Pump (larger than 2 inch suction, including submersible pumps)
- Road Finishing Machine (small type)
- Roller - grade, fill, or stone base
- Seeding Equipment (operation & maintenance)
- Sprinkler & Water Pump Trucks

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
54.09	37.65	91.74

CLASSIFICATIONS:

Steam Generator or Boiler

Stone Spreader

Tamping Machine (vibrating ride-on type)

Temporary Heating Plant (Nelson or other type, including
proprane, natural gas, and flow-type units)

Water or Sprinkler Truck

Welding Machine (gas, diesel, or electric convertor, of any type)

Welding System - Multiple (rectifier transformer type)

Wellpoint Systems (including installation by bull gang and
maintenance)

Effective Dates:

07/01/2023

Rate	Fringe	Total
61.04	37.65	98.69

CLASSIFICATIONS:

Helicopter Pilot/Engineer

Effective Dates:

07/01/2023

Rate	Fringe	Total
65.72	37.65	103.37

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with boom (including jib and/or leads) 140 ft. and over

Effective Dates:

07/01/2023

Rate	Fringe	Total
64.72	37.65	102.37

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with boom (including jib and/or leads) from 100 ft. to 139 ft.

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
61.22	37.65	98.87

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types) , under 100 tons with a boom (including jib and/or leads) 140 ft. and over

Effective Dates:

07/01/2023

Rate	Fringe	Total
63.72	37.65	101.37

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), 100 tons and over and TOWER CRANE with a boom (including jib and/or leads) under 100 ft.

Effective Dates:

07/01/2023

Rate	Fringe	Total
60.22	37.65	97.87

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), under 100 tons with a boom (including jib and/or leads) from 100 ft. to 139 ft.

STRUCTURAL STEEL ERECTION Rates Expiration Date :

{For apprentice rates refer to "Operating Engineers" apprentice rates in any county rate package}

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must be established for 5 consecutive workdays.
- Any work started outside of the allowed start time, 6:00 AM to 9:00 AM, except for * tidal work, shall be considered an irregular shift and paid at straight time, plus 15% for the first eight hours, inclusive of benefits.
- * FOR TIDAL WORK- a contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work), providing the eight hour shift is completed between the hours of 5:00 AM and 6:30 PM.
- All time worked in excess of an established shift (an established shift is a shift that is determined at the time of the bid) shall be paid at the applicable overtime rate. When a portion of an established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.
- When working with other trades who receive a higher irregular shift differential, these employees shall also receive the higher differential rate.

OVERTIME:

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veterans Day.

For projects bid after April 1, 2020, on hazardous waste removal work of any kind, including a state or federally designated site, where the operating engineer is required to wear level A, B, or C personal protection, the operating engineer shall receive an hourly wage rate of his regular hourly wage plus \$5.00 per hour.

- An operating engineer working at a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level A, B, or C personal protection, shall receive an hourly wage rate of his regular rate plus \$1.00 per hour.

Effective Dates:

07/01/2023

Rate	Fringe	Total
62.85	37.65	100.50

CLASSIFICATIONS:

Helicopter Co-Pilot & Communications Engineer

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

STRUCTURAL STEEL ERECTION Rates Expiration Date :

Effective Dates:

07/01/2023

Rate	Fringe	Total
58.79	37.65	96.44

CLASSIFICATIONS:

A-Frame

Cherry Picker -10 tons or less (Over 10 tons use crane rate)

Hoist (all types Except Chicago-boom)

Jack (screw, air hydraulic, power-operated unit or console type, Except hand jack or pile load test type)

Side Boom

Straddle Carrier

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
56.13	37.65	93.78

CLASSIFICATIONS:

- Aerial Platform Used On Hoists
- Apprentice Engineer/Oiler with Compressor or Welding Machine
- Captain (Power Boats)
- Compressor (2 or 3 in battery)
- Concrete Cleaning/Decontamination Machine Operator
- Conveyor or Tugger Hoist
- Directional Boring Machine
- Elevator or House Car
- Fireman
- Forklift
- Generator (2 or 3)
- Heavy Equipment Robotics, Operator/Technician
- Maintenance Utility Man
- Master Environmental Maintenance Technician
- Tug Master (Power Boats)
- Ultra High Pressure Waterjet Cutting Tool System Operator/Maintenance Technician
- Vacuum Blasting Machine Operator/Maintenance Technician
- Welding Machines, Gas or Electric Converters on any type-2 or 3 in battery including diesels

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
54.60	37.65	92.25

CLASSIFICATIONS:

Compressor (Single)

Generators

Welding Machines, Gas, Diesel, Or Electric Converters of any type-single

Welding System, Multiple (Rectifier Transformer Type)

Effective Dates:

07/01/2023

Rate	Fringe	Total
50.84	37.65	88.49

CLASSIFICATIONS:

Assistant Engineer/Oiler

Drillers Helper

Field Engineer - Transit/Instrument Man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Off Road Back Dump

Effective Dates:

07/01/2023

Rate	Fringe	Total
58.41	37.65	96.06

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (Minimum)

Effective Dates:

07/01/2023

Rate	Fringe	Total
47.80	37.65	85.45

CLASSIFICATIONS:

Field Engineer - Rodman or Chainman

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2023

Rate	Fringe	Total
59.55	37.65	97.20

CLASSIFICATIONS:

Field Engineer-Chief of Party

Vacuum Truck

Effective Dates:

07/01/2023

Rate	Fringe	Total
67.74	37.65	105.39

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms, including jib, 140 ft. and over, above ground). Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. and over, above ground), and Pile Drivers (all types) 100 tons and over and Tower Cranes.

Effective Dates:

07/01/2023

Rate	Fringe	Total
66.08	37.65	103.73

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms including jib, less than 140 ft. above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, less than 140 ft. above ground), Pile Drivers (all types), 100 tons and over and Tower Crane.

Effective Dates:

07/01/2023

Rate	Fringe	Total
63.24	37.65	100.89

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms including jib, 140 ft. and over, above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, 140 ft. and over, above ground), Pile Drivers (all types), under 100 tons.

Effective Dates:

07/01/2023

Rate	Fringe	Total
61.58	37.65	99.23

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms including jib, less than 140 ft. above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, less than 140 ft. above ground), Pile Drivers (all types), under 100 tons.

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

STRUCTURAL STEEL ERECTION Rates Expiration Date :

Effective Dates:

07/01/2023

Rate	Fringe	Total
63.24	37.65	100.89

CLASSIFICATIONS:

Helicopter Pilot & Engineer

TEST BORING PRELIMINARY TO CONSTRUCTION-SOUTH/WEST Rates Expiration Date :

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Hunterdon, Mercer, Monmouth, Ocean, Salem, Sussex, Warren

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 5:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must be established for 5 consecutive workdays.
- Any work started outside of the allowed start time, 6:00 AM to 9:00 AM, except for * tidal work, shall be considered an irregular shift and paid at straight time, plus 15% for the first eight hours, inclusive of benefits.
- * FOR TIDAL WORK- a contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work), providing the eight hour shift is completed between the hours of 5:00 AM and 6:30 PM.
- All time worked in excess of an established shift (an established shift is a shift that is determined at the time of the bid) shall be paid at the applicable overtime rate. When a portion of an established shift works into Saturday, Sunday or a holiday, that time worked shall be paid at the established shift rate.
- When working with other trades who receive a higher irregular shift differential, these employees shall also receive the higher differential rate.

OVERTIME:

- Hours in excess of 8 per day, or outside of the regular workday, Monday through Friday, that are not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sunday and holidays shall be paid at double the regular rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with all hours on Friday paid at time and one-half the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. When all trades on a particular job site agree, the day after Thanksgiving may be substituted for Veterans Day.

For projects bid after April 1, 2020, on hazardous waste removal work of any kind, including a state or federally designated site, where the operating engineer is required to wear level A, B, or C personal protection, the operating engineer shall receive an hourly wage rate of his regular hourly wage plus \$5.00 per hour.

- An operating engineer working at a hazardous waste removal project or site at a task requiring hazardous waste related certification, but who is not working in a zone requiring level A, B, or C personal protection, shall receive an hourly wage rate of his regular rate plus \$1.00 per hour.

Effective Dates:

07/01/2023

Rate	Fringe	Total
59.22	37.65	96.87

CLASSIFICATIONS:

Driller

Effective Dates:

07/01/2023

Rate	Fringe	Total
52.38	37.65	90.03

CLASSIFICATIONS:

Driller's Helper

FREE AIR TUNNEL JOBS **Rates Expiration Date :**

{For apprentice rates refer to "Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

03/01/2023

Rate	Fringe	Total
50.30	35.73	86.03

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

03/01/2023

Rate	Fringe	Total
50.00	35.73	85.73

CLASSIFICATIONS:

Heading Foreman, Shaft Foreman, Rod Foreman, Electrician Foreman, Rigging Foreman

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

FREE AIR TUNNEL JOBS **Rates Expiration Date :**

Effective Dates:

03/01/2023

Rate	Fringe	Total
49.50	35.73	85.23

CLASSIFICATIONS:

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Cleanup Foreman, Grout Foreman

Effective Dates:

03/01/2023

Rate	Fringe	Total
52.00	35.73	87.73

CLASSIFICATIONS:

Blaster

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.95	35.73	84.68

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.60	35.73	84.33

CLASSIFICATIONS:

Skilled Men (including Caulker, Powder Carrier, all other skilled men)

Skilled Men (including Miner, Drill Runner, Iron Man, Conveyor Man, Manitenance Man, Safety Miner, Rigger, Block Layer, Cement Finisher, Tod Man)

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.45	35.73	84.18

CLASSIFICATIONS:

Semi-Skilled Men (including Bell or Signal Man Top or Bottom, Form Worker & Mover, Concrete Worker, Shaft Man, Tunnel Laborer, Caulker's Helper, all other semi-skilled)

Semi-Skilled Men (including Miner's Helper, Chuck Tender, Track Man, Nipper, Brake Man, Derail Man, Cable Man, Hose Man, Gravel Man, Form Man)

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FREE AIR TUNNEL JOBS Rates Expiration Date :

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.05	35.73	83.78

CLASSIFICATIONS:

All Others (including Powder Watchman, Change House Attendant, Top Laborer)

DRILL FOR GROUND WATER SUPPLY **Rates Expiration Date :**

The well driller and/or helper may perform all work relative to the construction, finishing, and servicing of wells, pumps and borings for ground water supply. The present methods of well drilling entailing as they do, many diverse job operations calling for drilling, pump discharge, piping, and the operation of various types of related power equipment, shall all be within the job duties and functions of the well driller and/or helper. In the event that an extension of work should occur beyond water well drilling functions, into the field of general construction work, such extension of work would come under the appropriate rates listed elsewhere in this wage determination.

- For Work Hours, Shift Differentials, Overtime Rates, and Recognized Holidays see the "Operating Engineers" section of this wage determination.

Effective Dates:

07/01/2023

Rate	Fringe	Total
57.97	37.65	95.62

CLASSIFICATIONS:

Driller

Effective Dates:

07/01/2023

Rate	Fringe	Total
51.13	37.65	88.78

CLASSIFICATIONS:

Driller's Helper

OPERATING ENGINEERS MARINE-DREDGING **Rates Expiration Date :**

NOTE: These wage rates only apply to dredging and other marine construction activities occurring in navigable waters and their tributaries.

Boat crews carrying explosive material (dynamite, pourfex, and other similar materials) shall be paid at 120% of the hourly wage rate for hours engaged in handling of said materials. Employees required to possess a Hazardous Material Certification as a condition of employment shall be compensated at 120% of the hourly wage rate.

OVERTIME:

Hours in excess of 40 per week, and all hours on Saturdays and Sundays, shall be paid at time and one-half the hourly rate. All hours on holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Martin Luther King Day, Good Friday, Memorial Day, July 4th, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

Effective Dates:

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
43.94	14.54	58.48	60.48

CLASSIFICATIONS:

Lead Dredgerman, Operator, Leverman

Licensed Tug Operator (over 1000 HP)

Effective Dates:

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
38.00	14.18	52.18	53.93

CLASSIFICATIONS:

Derrick Operator, Spider/Spill Barge Operator

Engineer, Electrician, Chief Welder, Chief Mate

Fill Placer, Operator II

Licensed Boat Operator

Maintenance Engineer

Effective Dates:

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
35.77	14.05	49.82	51.47

CLASSIFICATIONS:

Certified Welder

OPERATING ENGINEERS MARINE-DREDGING **Rates Expiration Date :**

Effective Dates:

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
34.79	13.74	48.53	50.14

CLASSIFICATIONS:

Mate, Drag Barge Operator, Steward, Assistant Fill Placer

Welder

Effective Dates:

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
33.67	13.67	47.34	48.91

CLASSIFICATIONS:

Boat Operator

Effective Dates:

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
27.97	13.33	41.30	42.63

CLASSIFICATIONS:

Shoreman, Deckhand, Rodman, Scowman

Effective Dates:

10/01/2022			10/01/2023
Rate	Fringe	Total	Total
39.16	14.25	53.41	55.20

CLASSIFICATIONS:

Crane Operator

MICROSURFACING/SLURRY SEAL Rates Expiration Date :

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

IN ALL OTHER COUNTIES use the Heavy and General Laborers - North "Slurry Seal Laborer" rates.

SHIFT DIFFERENTIALS:

Any shift starting at 3:30 PM or later shall receive an additional \$0.35/hr

OVERTIME:

Hours in excess of 8 per day or 40 per week shall be paid at time and one-half the hourly rate. All hours on holidays shall be paid at double the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day.

Effective Dates:

03/01/2017

Rate	Fringe	Total
36.50	21.27	57.77

CLASSIFICATIONS:

Foreman

Effective Dates:

03/01/2017

Rate	Fringe	Total
33.80	21.27	55.07

CLASSIFICATIONS:

Box man

Effective Dates:

03/01/2017

Rate	Fringe	Total
31.75	21.27	53.02

CLASSIFICATIONS:

Microsurface/Slurry Preparation

Effective Dates:

03/01/2017

Rate	Fringe	Total
31.75	21.27	53.02

CLASSIFICATIONS:

Squeegee man

TERRITORY
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MICROSURFACING/SLURRY SEAL Rates Expiration Date :

Effective Dates:

03/01/2017

Rate	Fringe	Total
30.30	21.27	51.57

CLASSIFICATIONS:

Cleaner, Taper

ASPHALT LABORERS - SOUTH Rates Expiration Date :

"THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$5.00/hr
- other Hazardous Waste site: + \$1.00/hr

FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

Effective Dates:

03/01/2023

Rate	Fringe	Total
51.80	35.73	87.53

CLASSIFICATIONS:

Paving Foreman

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.35	35.73	84.08

CLASSIFICATIONS:

Head Raker

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.50	35.73	84.23

CLASSIFICATIONS:

Screedman

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
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ASPHALT LABORERS - SOUTH Rates Expiration Date :

Effective Dates:

03/01/2023

Rate	Fringe	Total
47.95	35.73	83.68

CLASSIFICATIONS:

Tampers, Smoothers, Kettlemen,
Painters, Shovelers, Roller Boys

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.05	35.73	83.78

CLASSIFICATIONS:

Milling Controller

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.25	35.73	83.98

CLASSIFICATIONS:

Traffic Control Coordinator

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.20	35.73	83.93

CLASSIFICATIONS:

Raker, Luteman

TEST BORING PRELIMINARY TO CONSTRUCTION-NORTH **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:
Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Somerset, Union

SHIFT DIFFERENTIAL:

Employees on a shift other than between the hours of 8:00 AM and 5:00 PM shall receive an additional \$2.00 per hour.

OVERTIME:

Hours in excess of 8 per day, Monday through Friday, and all hours on Saturday shall be paid at time and one-half the regular rate. All hours on Sundays and holidays shall be paid at double the regular rate.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Hazardous Waste Pay (for Levels A, B, and C): an additional 15% of the hourly rate, per hour.

A newly hired Helper with no experience in the industry shall be paid as follows:

- 1st year on the job - 70% of Helper wage rate
- 2nd year on the job - 80% of Helper wage rate
- 3rd year on the job - 90% of Helper wage rate
- All helpers receive full fringe benefit rate.

Effective Dates:

10/18/2022

Rate	Fringe	Total
0.00	0.00	65.92

CLASSIFICATIONS:

Helper (4th year helper)

Effective Dates:

10/18/2022

Rate	Fringe	Total
0.00	0.00	75.24

CLASSIFICATIONS:

Driller

Effective Dates:

10/18/2022

Rate	Fringe	Total
0.00	0.00	81.28

CLASSIFICATIONS:

Foreman

HEAVY & GENERAL LABORERS - NORTH **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, Warren

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$5.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

03/01/2023

Rate	Fringe	Total
47.55	35.73	83.28

CLASSIFICATIONS:

"D" Rate:

basic, landscape, asphalt, slurry seal, or railroad track laborer; utility meter installer; flagman; salamander tender; pitman; dumpman; rakers or tampers on cold patch work; wrappers or coaters of pipe; waterproofer; timberman; wagon drill or drill master helper; powder carrier; magazine tender; signal man; power buggy operator; tree cutter; operator of basic power tools

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.25	35.73	83.98

CLASSIFICATIONS:

"C" Rate:

pipe layer; laser man; conduit or duct line layer; operator of jack hammer, chipping hammer, pavement breaker, concrete cutter, asphalt cutter, sheet hammer, or walk-behind saw cutter; sandblaster; acetylene cutting or burning; wagon drill, directional drill, or hydraulic drill operator; drill master; core driller; traffic control coordinator; asphalt raker or lute man

HEAVY & GENERAL LABORERS - NORTH **Rates Expiration Date :**

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.50	35.73	84.23

CLASSIFICATIONS:

"B" Rate:

concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; asphalt screedman; rammer; hardscaping; gunite nozzle man

Effective Dates:

03/01/2023

Rate	Fringe	Total
52.05	35.73	87.78

CLASSIFICATIONS:

"A" Rate:

blaster

Effective Dates:

03/01/2023

Rate	Fringe	Total
51.80	35.73	87.53

CLASSIFICATIONS:

"FOREMAN" Rate:

labor foreman, asphalt foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

Effective Dates:

03/01/2023

Rate	Fringe	Total
52.80	35.73	88.53

CLASSIFICATIONS:

"GENERAL FOREMAN" Rate

HEAVY & GENERAL LABORERS - SOUTH **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, Salem

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$5.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

03/01/2023

Rate	Fringe	Total
47.55	35.73	83.28

CLASSIFICATIONS:

basic, landscape, or railroad track laborer; utility meter installer; flagman; salamander tender; pitman; dumpman; rakers or tampers on cold patch work; wrappers or coaters of pipe; waterproofers; tree cutter, timberman

Effective Dates:

03/01/2023

Rate	Fringe	Total
47.55	35.73	83.28

CLASSIFICATIONS:

wagon drill or drill master helper; powder carrier; magazine tender; signal man

HEAVY & GENERAL LABORERS - SOUTH **Rates Expiration Date :**

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.25	35.73	83.98

CLASSIFICATIONS:

pipe layer; laser man; conduit or duct line layer; operator of jack hammer, chipping hammer, pavement breaker, concrete cutter, asphalt cutter, sheet hammer, or walk-behind saw cutter; sandblaster; acetylene cutting or burning

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.25	35.73	83.98

CLASSIFICATIONS:

wagon or directional drill operator; drill master

Effective Dates:

03/01/2023

Rate	Fringe	Total
52.05	35.73	87.78

CLASSIFICATIONS:

blaster

Effective Dates:

03/01/2023

Rate	Fringe	Total
51.80	35.73	87.53

CLASSIFICATIONS:

labor foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

Effective Dates:

03/01/2023

Rate	Fringe	Total
52.80	35.73	88.53

CLASSIFICATIONS:

general foreman

TERRITORY
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NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
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HEAVY & GENERAL LABORERS - SOUTH **Rates Expiration Date :**

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.50	35.73	84.23

CLASSIFICATIONS:

concrete finisher; setter of brick or stone pavers; stone cutter; form setter; manhole, catch basin, or inlet builder; rammer; gunite nozzle man

PIPELINE - MAINLINE TRANSMISSION Rates Expiration Date :

These rates apply to the following: welding on Transportation Mainline pipe lines (cross-country pipe lines, or any segments thereof, transporting coal, gas, oil, water or other transportable materials, vapors or liquids, including portions of such pipe lines within private property boundaries up to the final metering station or connection - the point where a valve, consumer connection, or town border station divides mainline transmission lines or higher pressure lateral and branch lines from lower pressure distribution systems).

PER DIEM PAYMENT:

In addition to the total wage rate paid for each craft, the following per diem (per day) amounts must also be paid - Pipeline Journeyman: \$80.50; Pipeline Journeyman Welder: \$140.50; and Pipeline Helper: \$64.50. Note: in order to receive the per diem payment an employee must work a minimum of 8 hours in a 24 hour period.

NOTES:

- Journeymen employed as "stringer bead" welders and journeymen who are regularly employed as "hot-pass" welders shall receive \$1.00 per hour more than other journeymen.
- Welders running "stringer bead" or "hot-pass" on "cutouts" or "tie-ins" on a production basis shall be paid \$1.00 per hour above the journeymen rate.
- Whenever a welder helper is employed using a power buffer or power grinder immediately behind the stringer bead and/or hot-pass welders, and the pipe gang is set on a production basis, the helper shall be paid \$2.00 per hour above the helper rate.
- If back welding is performed inside a pipe under either or both of the following conditions, the welder engaged in the welding will receive \$3.00 per hour above the regular rate for the job only for the days on which such back welding is performed:
 - The employer elects, as a regular procedure, to back weld each line-up. This condition is not intended to apply to occasional back welding performed by the pipe gang to repair a bead, to rectify a "high-lo" condition or wall thickness, etc.
 - A welder is required to back weld a completed weld behind the firing line.
- If the welder helper is required to go inside the pipe for the purpose of brushing, buffing and grinding the weld, they shall receive a wage rate \$1.00 per hour above the regular helper rate for the days involved.
- Welders working on "hot work" shall be paid \$2.00 per hour above the regular rate for each day engaged in such work. "Hot work" is defined as work on lines in service where there is the danger of fire or explosion.

The regular workday shall be 8 hours, between 8:00 AM and 4:30 PM.

OVERTIME:

Hours in excess of 8 per day, and all hours on Sundays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Effective Dates:

07/01/2023

Rate	Fringe	Total
57.34	34.70	92.04

CLASSIFICATIONS:

Pipeline Journeyman Welder

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
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PIPELINE - MAINLINE TRANSMISSION Rates Expiration Date :

Effective Dates:

07/01/2023

Rate	Fringe	Total
57.34	34.70	92.04

CLASSIFICATIONS:

Pipeline Journeyman

Effective Dates:

07/01/2023

Rate	Fringe	Total
33.84	24.32	58.16

CLASSIFICATIONS:

Pipeline Helper

PIPELINE - GAS DISTRIBUTION **Rates Expiration Date :**

These rates apply to the following: welding on gas line distribution systems (that portion of the gas distribution system placed in streets, roads, subways, tunnels, viaducts, highways and easements which serves the users of gas).

SHIFT DIFFERENTIALS:

An "irregular" shift may start any time from 5:00 PM to 12:00 AM, Monday through Friday, and shall receive an additional 15% of the regular rate per hour, inclusive of benefits.

OVERTIME:

Hours in excess of forty per week, and all hours on Saturdays shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the regular rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day. Sunday holidays observed the following Monday.

Effective Dates:

11/02/2022

Rate	Fringe	Total
63.90	29.83	93.73

CLASSIFICATIONS:

Pipeline Journeyman Welder

Effective Dates:

11/02/2022

Rate	Fringe	Total
63.90	29.83	93.73

CLASSIFICATIONS:

Pipeline Journeyman

Effective Dates:

11/02/2022

Rate	Fringe	Total
40.53	22.15	62.68

CLASSIFICATIONS:

Pipeline Helper

ASPHALT LABORERS- NORTH **Rates Expiration Date :**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union, Warren

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$5.00/hr
- other Hazardous Waste site: + \$1.00/hr

FOR TIDE WORK (pertains to tidal water): A contractor can start their job according to tide schedules (tide schedules are the various high and low tides related to this work) providing the eight (8) hour shift is completed between the hours of 5:00 AM and 6:30 PM.

Effective Dates:

03/01/2023

Rate	Fringe	Total
51.80	35.73	87.53

CLASSIFICATIONS:

Asphalt Foreman

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.50	35.73	84.23

CLASSIFICATIONS:

Asphalt Screedman

Effective Dates:

03/01/2023

Rate	Fringe	Total
48.25	35.73	83.98

CLASSIFICATIONS:

Asphalt Raker or Lute Man

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

ASPHALT LABORERS- NORTH Rates Expiration Date :

Effective Dates:

03/01/2023

Rate	Fringe	Total
47.55	35.73	83.28

CLASSIFICATIONS:

Asphalt Laborer

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date :**

Electrician-Utility Work (North)

(For apprentice rates refer to Electrician-Utility Work (North) in any county rate package).

These rates apply to work contracted for by the following utility companies:

Public Service Electric & Gas Co. of NJ, GPU Energy, Borough of Madison Electric Department, Sussex Rural Electric Cooperative, Rockland Utilities, and Butler Municipal Electric Co.

These rates do not apply to work on substations or switching stations.

For Utility work contracted for by a utility company other than those listed above or those listed under "Electrician-Utility Work (South), see the "Outside Commercial Rates" for the county in which the jobsite is located.

* FOR OUTSIDE COMMERCIAL RATES PLEASE SEE COUNTY RATES

The regular workday is 8 hours, between 6:00 AM and 6:00 PM.

FOR EMERGENCY WORK ONLY: (emergency work is defined as work caused by storm, catastrophe, act of god, and circumstances beyond the control of the employer)-all hours of work shall be paid at double the hourly rate.

SHIFT DIFFERENTIALS:

Shift work must run for a minimum of 5 consecutive workdays.

2nd shift (between the hours of 4:30 PM and 1:00 AM): 8 hours of work + 17.3% of the regular rate, inclusive of benefits.

3rd shift (between the hours of 12:30 AM and 9:00 AM): 8 hours of work + 31.4% of the regular rate per hour, inclusive of benefits.

OVERTIME:

Hours in excess of 8 per day, or before or after the regular workday Monday through Friday, that is not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.

Four 10-hour days may be worked, at straight time, between 6:00 AM and 6:00 PM, Monday through Thursday.

RECOGNIZED HOLIDAYS:

New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day and Christmas Day, or day on which they are legally observed.

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
61.07	42.13	103.20	106.36	109.56

CLASSIFICATIONS:

Chief Lineman

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
57.61	39.75	97.36	100.35	103.36

CLASSIFICATIONS:

Journeyman Lineman

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date :**

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
57.61	39.75	97.36	100.35	103.36

CLASSIFICATIONS:

Special License Operator

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
57.03	39.35	96.38	99.35	102.32

CLASSIFICATIONS:

Transit Man

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
55.31	38.16	93.47	96.33	99.21

CLASSIFICATIONS:

Line Equipment Operator

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
48.39	33.38	81.77	84.29	86.81

CLASSIFICATIONS:

Dynamite Man

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
72.01	49.68	121.69	125.44	129.20

CLASSIFICATIONS:

General Foreman

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
66.25	45.71	111.96	115.41	118.85

CLASSIFICATIONS:

Assistant General Foreman

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date :**

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
64.52	44.51	109.03	112.40	115.76

CLASSIFICATIONS:

Line Foreman

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
46.66	32.19	78.85	81.28	83.72

CLASSIFICATIONS:

Street Light Mechanical Leader

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
44.36	30.60	74.96	77.26	79.58

CLASSIFICATIONS:

Groundman Winch Operator

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
44.36	30.60	74.96	77.26	79.58

CLASSIFICATIONS:

Groundman Truck Operator

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
43.78	30.20	73.98	76.26	78.55

CLASSIFICATIONS:

Street Light Mechanic

Effective Dates:

	12/04/2022		12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
43.78	30.20	73.98	76.26	78.55

CLASSIFICATIONS:

Line Equipment Mechanic

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date :**

Effective Dates:

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
37.45	25.84	63.29	65.23	67.17

CLASSIFICATIONS:

Groundman 2nd Year

Effective Dates:

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
34.57	23.85	58.42	60.21	62.02

CLASSIFICATIONS:

Groundman 1st Year

Effective Dates:

12/04/2022			12/03/2023	12/01/2024
Rate	Fringe	Total	Total	Total
57.03	39.35	96.38	99.35	102.32

CLASSIFICATIONS:

Line Equipment Foreman

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date :**

Electrician-Utility Work (South)

(For apprentice rates refer to Electrician-Utility Work (South) in any county rate package).

These rates apply to work contracted for by the following utility company:

Atlantic City Electric.

These rates do not apply to work on substations or switching stations.

For utility work contracted for by a utility company other than the one listed above or those listed under "Electrician-Utility Work (North), see the "Outside Commercial Rates" for the county in which the jobsite is located.

* FOR OUTSIDE COMMERCIAL RATES PLEASE SEE COUNTY RATES

The regular workday is 8 hours, between 7:00 AM and 4:30 PM.

FOR EMERGENCY WORK ONLY: (emergency work is defined as work caused by storm, catastrophe, act of god, and circumstances beyond the control of the employer)- all hours of work shall be paid at double the hourly rate.

SHIFT DIFFERENTIALS:

Shift work must run for a minimum of 5 consecutive workdays.

When two (2) or three (3) shifts are worked the following shall apply:

1st shift (between the hours of 8:00 AM and 4:30 PM)

2nd shift (between the hours of 4:30 PM and 12:30 AM): 8 hours of work + 10% of the regular rate of pay for 7.5 hours worked.

3rd shift (between the hours of 12:30 AM and 8:00 AM): 8 hours of work + 15% of the regular rate of pay for 7 hours worked.

OVERTIME:

Hours in excess of 8 per day, or before or after the regular workday Monday through Friday, that is not shift work, and all hours on Saturday shall be paid at time and one-half the regular rate. All hours on Sundays and Holidays shall be paid double the hourly rate.

Four 10-hour days may be worked, at straight time, between 6:00 AM and 6:00 PM, Monday through Thursday with Friday used as a make-up day.

RECOGNIZED HOLIDAYS:

New Year's Day, Memorial Day, July 4th, Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day or on days celebrated.

WORKING RULES:

There shall be a Foreman in charge of each work crew. No crews are to exceed twelve (12) men, including Foremen.

There shall be a General Foreman designated for transmission work when three (3) or more crews are on the same job and for distribution work where there are more than twenty (20) employees on site.

A small job crew shall consist of five (5) or less employees, one (1) of the Journeyman Linemen in the crew shall be designated as a Small Job Foreman.

Work performed from ladders and/or mechanical lift equipment shall be the work of Linemen and/or Apprentices.

On new construction, fitting and framing poles, towers or structures may be done by Journeymen and/or Apprentices. Groundmen may assist, but may not perform any work which would be performed by Linemen if assembled in the air.

There shall be a Journeyman Lineman in each pole setting, erection, grounding, wire and cable-pulling crew of more than three (3) men.

Effective Dates:

12/04/2022

Rate	Fringe	Total
67.52	55.11	122.63

CLASSIFICATIONS:

General Foreman

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date :**

Effective Dates:

12/04/2022

Rate	Fringe	Total
60.14	50.62	110.76

CLASSIFICATIONS:

Foreman

Effective Dates:

12/04/2022

Rate	Fringe	Total
56.97	48.72	105.69

CLASSIFICATIONS:

Small Job Foreman

Effective Dates:

12/04/2022

Rate	Fringe	Total
52.75	46.18	98.93

CLASSIFICATIONS:

Heavy Equipment Operator

Effective Dates:

12/04/2022

Rate	Fringe	Total
52.75	46.18	98.93

CLASSIFICATIONS:

Cable Splicer

Effective Dates:

12/04/2022

Rate	Fringe	Total
52.75	46.18	98.93

CLASSIFICATIONS:

Journeyman Lineman

Effective Dates:

12/04/2022

Rate	Fringe	Total
52.75	46.18	98.93

CLASSIFICATIONS:

Journeyman Welder

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date :**

Effective Dates:

12/04/2022

Rate	Fringe	Total
52.75	46.18	98.93

CLASSIFICATIONS:

Journeyman Painter

Effective Dates:

12/04/2022

Rate	Fringe	Total
42.20	39.80	82.00

CLASSIFICATIONS:

Light Equipment Operator

Effective Dates:

12/04/2022

Rate	Fringe	Total
36.93	36.60	73.53

CLASSIFICATIONS:

Groundman Truck Driver

Effective Dates:

12/04/2022

Rate	Fringe	Total
34.29	35.02	69.31

CLASSIFICATIONS:

Groundman 3rd Year

Effective Dates:

12/04/2022

Rate	Fringe	Total
31.65	33.42	65.07

CLASSIFICATIONS:

Groundman 2nd Year

Effective Dates:

12/04/2022

Rate	Fringe	Total
29.01	31.83	60.84

CLASSIFICATIONS:

Groundman 1st Year

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ELECTRICIAN- UTILITY WORK (SOUTH) Rates Expiration Date :

Effective Dates:

12/04/2022

Rate	Fringe	Total
23.21	28.31	51.52

CLASSIFICATIONS:

Flagman

HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS **Rates Expiration Date :**

****THESE RATES APPLY TO CONSTRUCTION ON NEW TRANS HUDSON TUNNELS ONLY****

{For apprentice rates refer to "Laborer - Heavy & General" apprentice rates in any county rate package}

The regular workday consists of 8 hours, starting at 7:00 AM or 8:00 AM.

SHIFT DIFFERENTIALS:

- Shifts must start at 3:00 PM, 4:00 PM, 12:00 AM, or 1:00 AM, to be considered shift work, except when the project owner mandates special hours of work in the job specifications, in which case those hours may be considered shift work.
- When such hours are mandated by the project owner, a shift that begins before midnight on Friday and ends on Saturday morning, or that begins at or after 8:00 PM on Sunday and ends on Monday morning may be paid at the shift differential rate.
- Shifts shall receive an additional \$3.00 per hour.

OVERTIME:

- Hours in excess of 8 per day, Monday through Friday, or outside of the regular workday that are not shift work, and all hours on Saturdays, shall be paid at time and one-half the hourly rate. All hours on Sundays and holidays shall be paid at double the hourly rate.
- Four 10-hour days may be worked, Monday through Thursday, at straight time, with Friday used as a make-up day for a day lost to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, Presidential Election Day, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday. Veterans Day may be substituted for the day after Thanksgiving. However, in the trading of Veterans Day for the day after Thanksgiving, if overtime is worked on Veterans Day, it shall be paid at double the hourly rate.

Hazardous Waste Work:

- where Level A, B, or C protection is required: + \$3.00/hr
- other Hazardous Waste site: + \$1.00/hr

Effective Dates:

03/01/2023

Rate	Fringe	Total
75.46	35.73	111.19

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

03/01/2023

Rate	Fringe	Total
75.01	35.73	110.74

CLASSIFICATIONS:

Heading Foreman, Shaft Foreman, Rod Foreman, Electrical Foreman, Rigging Foreman

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HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS Rates Expiration Date :

Effective Dates:

03/01/2023

Rate	Fringe	Total
74.26	35.73	109.99

CLASSIFICATIONS:

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Clean-up Foreman, Grout Foreman

Effective Dates:

03/01/2023

Rate	Fringe	Total
78.01	35.73	113.74

CLASSIFICATIONS:

Blaster

Effective Dates:

03/01/2023

Rate	Fringe	Total
73.43	35.73	109.16

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

03/01/2023

Rate	Fringe	Total
72.91	35.73	108.64

CLASSIFICATIONS:

Skilled Men (including Caulker, Powder Carrier, all other skilled men)

Skilled Men (including Miner, Drill Runner, Iron Man, Conveyor Man, Maintenance Man, Safety Miner, Rigger, Block Layer, Cement Finisher, Rod Man)

Effective Dates:

03/01/2023

Rate	Fringe	Total
72.68	35.73	108.41

CLASSIFICATIONS:

Semi-Skilled Men (including Bell or Signal Man top or bottom, Form Worker & Mover, Concrete Worker, Shaft Man, Tunnel Laborer, Caulker's Helper, all other semi-skilled)

Semi-Skilled Men (including Miner's Helper, Chuck Tender, Track Man, Nipper, Brake Man, Derail Man, Cable Man, Hose Man, Gravel Man, Form Man)

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HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS Rates Expiration Date :

Effective Dates:

03/01/2023

Rate	Fringe	Total
72.08	35.73	107.81

CLASSIFICATIONS:

All others (including Powder Watchman, Change House Attendant, Top Laborer, Job Steward)

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Access to site and roof.
4. Work restrictions and Employee Screening and Identification.
5. Specification and drawing conventions.

- B. Related Requirements:

1. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

- A. Project Identification: Roof Replacement at the Union County New Annex Courthouse:

1. Project Location: 9 Elizabeth Plaza, Elizabeth, New Jersey 07201.

- B. Owner: Union County, Department of Engineering & PW. 2325 South Avenue, Scotch Plains, New Jersey 07076.

1. Owner's Representative: Matthew Ferraro, LEED AP, Project Manager.

- C. Architect: Netta Architects, 1084 Route 22 West, Mountainside, New Jersey 07092.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the removal and replacement of roofing. Scope of work includes, but is not necessarily limited to the following:

1. Roofing demolition and removal;
2. Patching of existing abandoned roof openings;
3. Replacement of roof drains and sump flashing, and flush out the roof leaders;
4. Installation of new roof scuppers and downspouts on the penthouse roof;
5. Insulated SBS modified bituminous roofing system;
6. Sheet metal flashings;
7. Associated joint sealant and miscellaneous carpentry work.

8. Remove and provide sealant in the transverse joints at the precast concrete copings.
 9. Remove and replace the fixed roof ladder.
 10. Raise the penthouse base flashings and provide reglet type counter flashings.
 11. Remove all abandoned pitch pockets and replace the existing pitch pockets.
- B. Provide a Temporary Personnel/Material Transport Platform at the rear of the Building, as indicated on contract drawing G-001. This Transport Platform shall be used for providing Construction Workers access to the roof due to security requirements within the building. The Contractor shall determine if they will also use it for bringing material to the roof; or if they will be utilizing a temporary crane for bringing the material to the roof.
- C. The Contractor's Construction Vehicles can park within their Staging Area, and/or on the Church's Paved parking areas. The exact locations are to be coordinated with the Owner and the Church. The Contractor's personnel vehicles can park within the nearby public parking deck.
- D. The Roofing Work shall **not** commence until the Contractor has all approved roofing materials on site.
- E. The Contractors staging area, dumpster and crane if they decide to utilize a crane for bringing materials to the roof, will be located on the adjacent First Presbyterian Church property, as indicated on Dwg G-001. Therefore the Contractor shall include on their Certificate of Insurance Statement that the First Presbyterian Church is Additionally Insured. The following wording shall be added to the Certificate of Insurance Statement for the Church;
"Silom-Hope First Presbyterian Church, Snyder Academy and Old First Historic Trust".
- 1.5 ITEMS REQUIRING PROJECT COORDINATION:
1. Union County will retain an Air Monitoring Company to conduct air sampling while the roofing materials are being abated. The Contractor shall coordinate the roof abatement work with the Air Monitoring Company.
 2. The Contractor shall coordinate with Union County and the Courthouse Building Personnel to temporary cover all air intake ducts, fans, etc. Provide a (7) day minimum notice to Union County prior to commencing the roof abatement work.
- 1.6 TYPE OF CONTRACT:
1. Project will be constructed under a single prime contract.
- 1.7 ACCESS TO SITE AND ROOF
- A. General: The building will be fully occupied during construction. The Contractor shall have use of Project site for construction operations during construction period. The Contractor shall coordinate their access with the Owner's representative.
 - B. Access to roof shall be from the exterior only as noted in Section 1.4.B above.
 - C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.8 WORK RESTRICTIONS

A. **Employee Screening and Identification:**

1. It is the requirement of the County of Union that ALL contractors (both General Contractors and their sub-contractors) and their personnel be vetted through a fingerprint based background check process prior to being permitted entry into the County facility(s) and the commencement of the proposed work.
2. It is the responsibility of the General Contractor or vendor in charge, to make sure that all personnel who will be working in and around the County facility contact the State of New Jersey, Department of Law & Public Safety, Division of State Police Criminal Information Unit at (609) 822-2000, Ext. 2918 or visit their website at <https://njsp.org/criminal-history-records/> and follow the instructions to obtain a copy of each person's "Individual Criminal History Record".

PLEASE NOTE: ALL FEES & TIME ASSOCIATED IN COMPLETING THIS PROCESS ARE THE SOLE RESPONSIBILITY OF THE APPLICANT AND/OR THEIR AFFILIATES (E.G. GENERAL CONTRACTOR AND/OR SUBCONTRACTORS).

Once obtained, original sealed records (no copies) shall be sent/delivered to the Union County Sheriff's Office at the following address:

Union County Sheriff's Office
2 Broad Street, Control Center
Elizabeth, NJ 07207
908-527-4440

3. Upon completion of the review and processing of the information received, the Union County Sheriff's Office will issue identification cards to all contractors' personnel authorized in to the County facility to conduct work activities. It is the responsibility of the General Contractor or vendor in charge of the proposed work to maintain a current and accurate list of any and all screened and approved personnel with the Union County Sheriff's Office.
 4. **THE COUNTY OF UNION SHALL NOT BE RESPONSIBLE FOR ANY DELAYS AND/OR DAMAGES EITHER DIRECTLY OR INDIRECTLY RESULTING FROM THE FAILURE TO COMPLY WITH THESE REQUIREMENTS BY ANY GENERAL CONTRACTOR OR VENDOR IN CHARGE.**
- B. Work Restrictions, General: Comply with restrictions on construction operations.
1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- C. On-Site Work Hours: Limit work in the existing building to normal business working hours as outlined in the General Conditions, unless otherwise indicated.
- D. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
1. Notify Architect and Owner not less than two days in advance of proposed utility interruptions.
 2. Obtain Architect's or Owner's written permission before proceeding with utility interruptions.

- E. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 - 1. Notify Architect and Owner not less than two days in advance of proposed disruptive operations.
- F. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.
- G. Controlled Substances: Use of tobacco products and other controlled substances within the existing building and on Project site is not permitted.
- H. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.

1.9 SPECIFICATION AND DRAWING CONVENTIONS

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
 - 1. Contingency allowances.
- C. Related Requirements:
 - 1. Division 01 Section "Quality Requirements" for procedures governing the use of allowances for field testing by an independent testing agency.
- D. The work included in any accepted allowance is to be completed within the original activity milestone dates stated in these documents, as accepted at time of award. No additional time will be awarded to the Contractor as the result of an allowance being utilized.

1.3 DEFINITIONS

- A. Allowance is a quantity of work or dollar amount established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.
- B. It is to be clearly understood that the Allowances are to be used for work beyond the Contractor's base scope of work and at the sole option of the Owner. It is the Contractor's responsibility to perform all work required to comply with the requirements of the Contract Documents and to deliver a complete project without the use of any allowances.

1.4 SELECTION AND PURCHASE

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

1.5 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.6 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.7 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.8 LUMP-SUM ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

1.9 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
 - 1. Include installation costs in purchase amount only where indicated as part of the allowance.

2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.
 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

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

3.2 PREPARATION

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

3.3 SCHEDULE OF ALLOWANCES

- A. Allowance No. 1 – Contingency Allowance: Include the sum of \$120,000.00 for use according to Owner's written instructions.

END OF SECTION 012100

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
 - 1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.3 DEFINITIONS

- A. Unit price is a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

- A. Unit Price No. 1: Two Piece Counterflashing and Reglet Installation.
 - 1. Description: Installation of two-piece reglet and counterflashing at the base of the rooftop penthouse wall in accordance with Specification Section 076200 "Sheet Metal Flashing and Trim", and as indicated on contract drawing A-103.
 - 2. Unit of Measurement: Lineal Foot.

- B. Unit Price No. 2: Construction and Removal of the Temporary Protective Shed (Bridge).
 - 1. Description: The Construction and Removal of the one-story Temporary Protective Shed at the rear of the Building as indicated on contract drawing G-001.
 - 2. Unit of Measurement: Square Foot.

- C. Unit Price No. 3: Construction and Removal of the Temporary Fence.
 - 1. Description: The Construction and Removal of an 8'-0" high Temporary Ballasted/Movable Fence at the rear of the Building as indicated on contract drawing G-001.
 - 2. Unit of Measurement: (1) 4' long x 8' high Temporary Fencing Panel.

- D. Unit Price No 4: Removal and Installation of sealant at all the transverse joints of the existing copings.
 - 1. Description: Remove and install backer rod and sealant within all the transverse joints of the existing coping on the lower roof as indicated on the contract drawings D-101 and A-101.
 - 2. Unit of Measurement: Linear Foot.

- E. Unit Price No 5: Repair of the concrete roof deck.
 - 1. Description: Repair the concrete roof deck, in accordance with Specification Section 030150.
 - 2. Unit of Measurement: Square Foot.

END OF SECTION 012200

SECTION 012500 – “OR EQUAL” SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the acceptance of “Or Equal” substitutions.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.

1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use Netta Architects.
 - 2. Documentation: Show compliance with all specified requirements for “Or Equal” substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by contractors that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples.
 - f. Certificates and qualification data.

- g. List of similar installations for completed projects with project names and addresses and names and addresses of architects.
 - h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for Project, from latest New Jersey adopted IBC-NJ.
 - j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
4. Architect or his consultant will evaluate and render only one (1) decision on any "Or Equal" Substitution. Re-evaluation of any "Or Equal" Substitution will be paid for by the Contractor at a rate of \$155.00 dollars an hour for reimbursement to the Architect.

1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. If a product or material requires testing to evidence that it is an equivalent, engage a qualified testing agency to perform compatibility tests recommended by Architect.

1.6 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

- a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Substitution request is fully documented and properly submitted.
 - c. Requested substitution will not adversely affect Contractor's construction schedule.
 - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - e. Requested substitution is compatible with other portions of the Work.
 - f. Requested substitution has been coordinated with other portions of the Work.
 - g. Requested substitution provides specified warranty.
 - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
2. Additional Responsibilities: Contractor shall be responsible to compensate the Owner for Architect redesign and evaluation services, increased cost of other construction by Owner, and similar considerations due to Contractor's requests for substitution.
- B. "Or Equal" Substitutions: Architect will consider requests for substitution if received within 21 days after the Notice of Contract Award. Requests received after the 21 days will be rejected by the Architect.
1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Substitution request is fully documented and properly submitted. Requested substitution will not adversely affect Contractor's construction schedule.
 - c. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - d. Requested substitution is compatible with other portions of the Work.
 - e. Requested substitution has been coordinated with other portions of the Work.
 - f. Requested substitution provides specified warranty.
 - g. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 3 - NOT USED

END OF SECTION 012500

PROJECT NAME: _____
NETTA PROJECT #: _____
CONTRACT NO. _____
SUBSTITUTION NO. _____

REQUEST FOR SUBSTITUTION / "OR EQUAL"

Submit a copy of this form for each requested substitution within 21 days after Notice of Contract Award. Fill in all blanks, check all boxes that apply and attach all necessary supporting data.

Specified Item: _____

Specification Section(s)/Paragraph(s): _____

Drawing Number(s): _____

Proposed Substitute: _____

(include, as applicable, manufacturer's name & address, trade name & model number of product and name of fabricator or supplier)

Reason for Proposed Substitution: _____

Net Change to Contract Sum: No Change Deduct \$ _____ Add \$ _____

Change to Contract Time: No Change _____ Days

The following required supporting documents are attached (Check all that apply):

- Complete Product Data
- Detailed Itemized comparison of all properties of proposed product vs. the specified product. All information required is the responsibility of the contractor.
- List of other projects on which proposed has been used, with project name, design professional's name and owner contact.
- List of maintenance services and replacement materials available.
- Statement of effect of substitution on construction schedule.
- Description of change that will be required in other work or products if substitute product is approved.

FOR SUBSTITUTION REQUEST

The undersigned testifies that he/she:

- Is submitting this substitution request within the limits set forth in the Contract Documents.
- Has investigated the proposed product and determined that it is equal or better than the specified product.
- Will provide the same warranty for the proposed product as for the specified product.
- Will coordinate installation and make other changes as required for the work to be complete in all respects, including: (a) redesign and (b) additional components and capacity required by other work affected by the change.
- Waives all claims for additional costs for evaluation of the substitution request, redesign if required, and reapproval by authorities having jurisdiction, if required.
- Will reimburse the Architect for additional costs for evaluation of the substitution request, redesign if required, and reapproval by authorities having jurisdiction, if required.

Contractor's Signature: _____

Typed or Printed Name: _____

Title: _____

Company: _____

Address: _____

Phone Number: _____

Owner Approval: _____ Date: _____

NETTA Architects Approval: _____ Date: _____

Consulting Engineer Approval: _____ Date: _____

END OF SECTION 012500

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
 - 1. Division 01 Section "Or Equal" Substitution Procedures for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 MINOR CHANGES IN THE WORK

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

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

- e. Quotation Form: Use forms acceptable to Architect.

- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract Documents, Contractor may initiate a claim by submitting a request for a change to Architect.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor and supervision directly attributable to the change.
 - 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
 - 7. Proposal Request Form: Use CSI Form 13.6A, "Change Order Request (Proposal)," with attachments CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail."

- C. Contractor Responsibilities: Contractor shall compensate the Architects and/or his consultants at a cost of \$155.00 per hour for all re-designs. Contractor shall not be required to compensate the Architect and/or his consultants if a re-design is required because of a latent or changed condition.

1.5 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: See Section 012100 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.

1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Changes Proposal Request, Owner's Representative will issue a Change Order for signatures of Owner and Contractor on AIA Document G701/2017.

1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Owner's Representative may issue a Construction Change Directive on AIA Document G714/2017. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

August 10, 2023
Issued for Bid

Roof Replacement
at the Union County
New Annex Courthouse,
Elizabeth, NJ

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

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

1.3 DEFINITIONS

- C. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
 - 1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with continuation sheets.
 - b. Submittal schedule.
 - c. Items required to be indicated as separate activities in Contractor's construction schedule.
 - 2. Submit the schedule of values to Owner's Representative at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment for review & approval.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the schedule of values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
2. Arrange schedule of values consistent with format of AIA Document G703.
3. Arrange the schedule of values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 - 1) Labor.
 - 2) Materials.
 - 3) Equipment.
4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
6. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.
7. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
8. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
9. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
10. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 CHANGES IN THE WORK

- A. When a change in the Work includes a category or categories of Work both added to and deducted from the Contract, the total quantities of added Work and of deleted Work shall be determined separately for each category and the appropriate unit price or net cost of the Work shall be applied to the difference between the two total quantities.
- B. Unit prices shall be inclusive of all costs and shall be applied to units of measure as defined in the Specifications for each category of Work.
- C. For all extra Work performed by Contractor, the gross cost to the Owner shall include the net cost of the Work to the Contractor plus an allowance for overhead and profit (inclusive of Bond / Insurance) 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 5% of the net cost, plus the Contractor's overhead and profit (inclusive of Bond / Insurance) not to exceed 10% 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.
 - 4. Power and consumable supplies for the operation of power equipment, pro-rated for the time necessary for the Work. Insurance and Bonds.
 - 5. Contractor to provide detailed breakdown & back up for Items 1-3 when submitting their change order request.
- F. Gross costs shall be net costs plus the allowances described above, such allowances being inclusive, of all cost of superintendence, supervision, engineering, overhead, profit, administrative and site office expenses and all other general expenses.

1.6 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and Owner's Representative and paid for by Owner.
 - 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Submit Application for Payment to Owner's Representative monthly, date to be agreed with Owner. The period covered by each Application for Payment is one month.

1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.
- D. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
- E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
 4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.
- F. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed which is stored on-site.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
 3. Provide summary documentation for stored materials indicating the following:
 - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
 - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
 - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- G. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Owner's Representative by a method ensuring receipt within 24 hours.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of values.
 3. Contractor's construction schedule (preliminary if not final).
 4. Combined Contractor's construction schedule (preliminary if not final) incorporating Work of multiple contracts, with indication of acceptance of schedule by each Contractor.
 5. Products list (preliminary if not final).
 6. Schedule of unit prices.

7. Submittal schedule (preliminary if not final).
 8. List of Contractor's staff assignments.
 9. List of Contractor's principal consultants.
 10. Copies of building permits.
 11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 12. Initial progress report.
 13. Report of preconstruction conference.
 14. Certificates of insurance and insurance policies.
 15. Performance and payment bonds.
 16. Data needed to acquire Owner's insurance.
- I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 6. AIA Document G707, "Consent of Surety to Final Payment."
 7. Evidence that claims have been settled.
 8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 9. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. Coordination drawings.
 - 3. Requests for Information (RFIs).
 - 4. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Requirements:
 - 1. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
 - 2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 3. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

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

1.4 INFORMATIONAL SUBMITTALS

- A. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.
 - 1. Post copies of list in project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.5 GENERAL COORDINATION PROCEDURES

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

- B. Coordination: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its operations with operations, included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.

- C. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's construction schedule.
 - 2. Preparation of the schedule of values.
 - 3. Installation and removal of temporary facilities and controls.
 - 4. Delivery and processing of submittals.
 - 5. Progress meetings.
 - 6. Pre-installation conferences.
 - 7. Project closeout activities.
 - 8. Startup and adjustment of systems.

- E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

1.6 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
 - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
 - b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
 - c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
 - e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
 - f. Indicate required installation sequences.
 - g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

1.7 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
 2. Project number.
 3. Date.
 4. Name of Contractor.
 5. Name of Architect.
 6. RFI number, numbered sequentially.
 7. RFI subject.
 8. Specification Section number and title and related paragraphs, as appropriate.
 9. Drawing number and detail references, as appropriate.

10. Field dimensions and conditions, as appropriate.
 11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- C. RFI Forms: RFI's will be submitted through Oracle's Primavera Contract Management Program.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven (7) working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
1. The following Contractor-generated RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for approval of Contractor's means and methods.
 - d. Requests for coordination information already indicated in the Contract Documents.
 - e. Requests for adjustments in the Contract Time or the Contract Sum.
 - f. Requests for interpretation of Architect's actions on submittals.
 - g. Incomplete RFIs or inaccurately prepared RFIs.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly.
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Architect.
 4. RFI number including RFIs that were returned without action or withdrawn.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Architect's response was received.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.
1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

- G. Excessive RFI: Upon receipt of the Architects decision on the RFI, Architect's response shall be deemed final. Excessive re-reviews of an RFI shall, at the discretion of the Architect, require the Contractor to compensate the Owner for the Architect's Services at a rate of \$155.00 dollars per hour to perform the re-review.

1.8 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
- B. Preconstruction Conference: Owner's Representative will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.
 1. Conduct the conference to review responsibilities and personnel assignments.
 2. Attendees: Authorized representatives of Owner Architect, and their consultants; Owner's Representative, Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Lines of communications.
 - f. Procedures for processing field decisions and Change Orders.
 - g. Procedures for RFIs.
 - h. Procedures for testing and inspecting.
 - i. Procedures for processing Applications for Payment.
 - j. Distribution of the Contract Documents.
 - k. Submittal procedures.
 - l. Preparation of record documents.
 - m. Use of the premises.
 - n. Work restrictions.
 - o. Working hours.
 - p. Owner's occupancy requirements.
 - q. Responsibility for temporary facilities and controls.
 - r. Procedures for moisture and mold control.
 - s. Procedures for disruptions and shutdowns.
 - t. Construction waste management and recycling.
 - u. Parking availability.

- v. Office, work, and storage areas.
 - w. Equipment deliveries and priorities.
 - x. First aid.
 - y. Security.
 - z. Progress cleaning.
4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Pre-installation Conferences (If Required): Conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction.
- 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
 - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility requirements.
 - k. Time schedules.
 - l. Weather limitations.
 - m. Manufacturer's written instructions.
 - n. Warranty requirements.
 - o. Compatibility of materials.
 - p. Acceptability of substrates.
 - q. Temporary facilities and controls.
 - r. Space and access limitations.
 - s. Regulations of authorities having jurisdiction.
 - t. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.
 - y. Protection of construction and personnel.
 - 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 - 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
 - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Progress Meetings: Conduct progress meetings at intervals as agreed.

1. Coordinate dates of meetings with preparation of payment requests.
2. Attendees: In addition to representatives of Owner, Owner's Representative, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Progress cleaning.
 - 10) Quality and work standards.
 - 11) Status of correction of deficient items.
 - 12) Field observations.
 - 13) Status of RFIs.
 - 14) Status of proposal requests.
 - 15) Pending changes.
 - 16) Status of Change Orders.
 - 17) Pending claims and disputes.
 - 18) Documentation of information for payment requests.
4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
 - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Start-up construction schedule.
 - 2. Contractor's construction schedule.
 - 3. Daily construction reports.
 - 4. Material location reports.
 - 5. Field condition reports.
 - 6. Special reports.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.

1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
 - 1. PDF electronic file.
- B. Start-up construction schedule.
- C. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
 - 1. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (initial or updated) and date on label.
- D. Daily Construction Reports: Submit at weekly intervals.

- E. Field Condition Reports: Submit at time of discovery of differing conditions.
- F. Special Reports: Submit at time of unusual event.

1.5 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Substantial Completion and final completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- B. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
 - 1. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
 - 2. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
 - 3. Punch List and Final Completion: Include not more than 30 days for punch list and final completion.
- C. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed and Substantial, with Punchlist and Final Completion.
- D. Recovery Schedule: When periodic update indicates the Work is fourteen (14) or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.

2.2 START-UP CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit start-up horizontal bar-chart-type construction schedule within 14 days of date established for the Notice to Proceed.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 90 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's construction schedule within 30 days of date established for issuance of permits. Base schedule on the start-up construction schedule and additional information received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 - 1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in ten (10) percent increments within time bar.

2.4 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. List of separate contractors at Project site.
 - 3. Approximate count of personnel at Project site.
 - 4. Equipment at Project site.
 - 5. Material deliveries.
 - 6. High and low temperatures and general weather conditions, including presence of rain or snow.
 - 7. Accidents.
 - 8. Meetings and significant decisions.
 - 9. Unusual events (refer to special reports).
 - 10. Stoppages, delays, shortages, and losses.
 - 11. Meter readings and similar recordings.
 - 12. Emergency procedures.
 - 13. Orders and requests of authorities having jurisdiction.
 - 14. Change Orders received and implemented.
 - 15. Construction Change Directives received and implemented.
 - 16. Services connected and disconnected.
 - 17. Substantial Completions authorized.
- B. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.

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2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 3. As the Work progresses, indicate final completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect, Owner's Representative, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

- 1. Submittal schedule requirements.
- 2. Administrative and procedural requirements for submittals.

- B. Related Requirements:

- 1. Division 01 Section "Project Management and Coordination" for submitting coordination drawings and subcontract list and for requirements for web-based Project software.
- 2. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
- 3. Division 01 Section "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
- 4. Division 01 Section "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1.3 DEFINITIONS

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

1.4 SUBMITTAL SCHEDULE

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

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
2. Initial Submittal Schedule: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal Schedule: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule as required to reflect changes in current status and timing for submittals.
4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal Category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's final release or approval.
 - g. Scheduled dates for purchasing.
 - h. Scheduled date of fabrication.
 - i. Scheduled dates for installation.
 - j. Activity or event number.

1.5 SUBMITTAL FORMATS

- A. Submittal Information: Include the following information in each submittal:
 1. Project name.
 2. Date.
 3. Name of Architect.
 4. Name of Contractor.
 5. Name of firm or entity that prepared submittal.
 6. Names of subcontractor, manufacturer, and supplier.
 7. Category and type of submittal.
 8. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
 9. Drawing number and detail references, as appropriate.
- B. Options: Identify options requiring selection by Architect.
- C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.
- D. Electronic Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.

1.6 SUBMITTAL PROCEDURES

- A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Email: Prepare submittals as PDF package and transmit to Architect by sending via email. Include PDF transmittal form. Include information in email subject line as requested by Architect.
 - a. Architect will return annotated file. Annotate and retain one copy of file as a digital Project Record Document file.

- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections, so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 10 days for review of each resubmittal.

- D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
 1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block, and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.

- E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

- F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

1.7 SUBMITTAL REQUIREMENTS

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.

2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 4. Submit Product Data before Shop Drawings, and before or concurrently with Samples.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Notation of coordination requirements.
 - c. Relationship and attachment to adjoining construction clearly indicated.
 - d. Seal and signature of professional engineer if specified.
- C. Samples: Submit Samples for review of type, color, pattern, and texture for a check of these characteristics with other materials.
1. Transmit Samples that contain multiple, related components, such as accessories together in one submittal package.
 2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
 - a. Project name and submittal number.
 - b. Generic description of Sample.
 - c. Product name and name of manufacturer.
 - d. Sample source.
 - e. Number and title of applicable Specification Section.
 - f. Specification paragraph number and generic name of each item.
 3. Email Transmittal: Provide PDF transmittal. Include digital image file illustrating Sample characteristics and identification information for record.
 4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units, showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
 6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

- D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- E. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.
- F. Test and Research Reports:
 - 1. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
 - 2. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
 - 3. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - a. Name of evaluation organization.
 - b. Date of evaluation.
 - c. Time period when report is in effect.
 - d. Product and manufacturers' names.
 - e. Description of product.
 - f. Test procedures and results.
 - g. Limitations of use.

1.8 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF file paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

1.9 CONTRACTOR'S REVIEW

- A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

- B. Contractor's Approval: Indicate Contractor's approval for each submittal with a uniform approval stamp. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
 - 1. Architect will not review submittals received from Contractor that do not have Contractor's review and approval.

1.10 ARCHITECT'S REVIEW

- A. Action Submittals: Architect will review each submittal, indicate corrections or revisions required, and return.
 - 1. PDF Submittals: Architect will indicate, via markup on each submittal, the appropriate action.
- B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Architect will return without review or discard submittals received from sources other than Contractor.
- F. Submittals not required by the Contract Documents will be returned by Architect without action.
- G. Continued submission of revised rejected submittals is not allowed. Architect will review a maximum of two re-submittals of a previously rejected submittal. Additional submission will require compensation to Owner.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections:
 - 1. Division 01 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Preconstruction Testing: Tests and inspections performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- D. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- E. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

- F. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

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

1.5 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems.
 - 1. Seismic-force resisting system, designated seismic system, or component listed in the designated seismic system quality assurance plan prepared by the Architect.
 - 2. Main wind-force resisting system or a wind-resisting component listed in the wind-force-resisting system quality assurance plan prepared by the Architect.
- C. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- D. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Entity responsible for performing tests and inspections.
 - 3. Description of test and inspection.
 - 4. Identification of applicable standards.
 - 5. Identification of test and inspection methods.
 - 6. Number of tests and inspections required.
 - 7. Time schedule or time span for tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.

1.6 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

- B. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.7 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- C. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
 3. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

1.8 QUALITY CONTROL

- A. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.

1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- B. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- C. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- D. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Retain first subparagraph below if required or is not common practice in Project vicinity.
 6. Delivery of samples to testing agencies.
 7. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 8. Security and protection for samples and for testing and inspecting equipment at Project site.
- E. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

- F. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents as a component of the Contractor's quality-control plan. Coordinate and submit concurrently with Contractor's construction schedule. Update as the Work progresses. .
 - 1. Distribution: Distribute schedule to Owner, Architect testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

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

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- F. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.
- G. "Provide": Furnish and install, complete and ready for the intended use.
- H. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
 - 1. For standards referenced by applicable building codes, comply with dates of standards as listed in building codes.

1.4 OWNER STANDARDS

- A. Unexploded Ordnance (UXO) Materials: The College Campus in Edison, New Jersey is located on a section of the Former Raritan Arsenal (FRA) which operated from 1918 through 1963. The Army Corps of Engineers (ACE) has completed investigations and remediation activities related to unexploded ordnance (UXO) materials on the campus. While there are no known UXO's at this time, there remains a possibility that they can be discovered when excavating on campus.
1. The ACE has provided an information safety sheet which advises anyone excavating on the FRA to practice the "3R's" (Recognize, Retreat and Report).
 2. If any material is discovered that appears to be ordnance, the contractor shall immediately stop work, leave the area, call 911, and notify the College. A procedure has been established for emergency responders and military personnel to safely address such a situation.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.
 - 2. Section 012200 "Unit Prices".

1.3 UNIT PRICES

- A. Provide a Unit Price for the following:
 - 1. Unit Price No. 2: Construction and Removal of the Temporary Protective Shed (Bridge).
Provide a Unit Price for the Construction and Removal of the one-story Temporary Protective Shed at the rear of the Building as specified herein. Unit of Measurement shall be in square feet. Refer to Division 00- Section "012200- Unit Prices".
 - 2. Unit Price No. 3: The Construction and Removal of an 8'-0" high Temporary Ballasted/Movable Fence at the rear of the Building as specified herein. Unit of Measurement shall be in (1) 4' long x 8' high Temporary Fencing Panel. Refer to Division 00- Section "012200- Unit Prices".

1.4 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- C. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage.
 - 1. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
 - 2. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.

1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in ICC/ANSI A117.1.

1.6 PROJECT CONDITIONS

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

PART 2 - PRODUCTS

2.1 MATERIALS

Ballasted/Movable Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized-steel, chain-link fabric fencing; minimum 8 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Provide ballasted bases for supporting posts. Provide Chain-Line Lockable Swing Gates as indicated on the drawings.

- B. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.

2.2 TEMPORARY FACILITIES

- A. Provide a Temporary Protective Shed (Bridge) – General – Furnish, erect, and maintain a shed for the protection of persons using rear entry doors under the Work area.
 - 1. The bridge is to be erected within the work area as indicated on the drawings.
 - 2. The structure must be in place before work begins on the roof.
 - 3. Every shed deck shall be designed by a licensed NJ Professional Engineer. Submit signed and sealed drawings to obtain all required permits, etc. design the shed to carry a live load of at least three hundred psf. The members of the shed shall be adequately braced and connected to prevent displacement or distortion of the framework. Bolts and nuts exposed at the pedestrian level shall be protected by applying tape or padding to prevent snagging or injuring passers-by.
 - 4. The deck of the shed shall consist of metal decking. The decking shall be sloped to drain and leaders shall be provided to direct water to existing storm drains.
 - 5. The deck shall cover the entire width of the shed.
 - 6. The outer side and ends of the deck of the shed shall be provided with a substantial enclosure at least three feet six inches high.

7. The shed shall have a minimum clear ceiling height of nine feet.
8. The top deck of the shed shall be built solidly against the face of the structure in such a manner that no material can fall onto the rear parking area. In locations where the shed cannot be installed tight to the building provide wood or other suitable material to seal the open spaces.
9. Provide temporary lighting at the underside of the shed.
10. All exterior surveillance cameras must be maintained in operation either by modifying the shed design.
11. Materials used for the shed shall be in good condition.
 - a. Steel supports shall be freshly painted. The color shall be selected by the Owner.
 - b. Bulkheads and railings shall be constructed of new plywood painted. The color shall be selected by the Owner.

2.3 EQUIPMENT

- A. Provide a Temporary Personnel/Material Transport Platform at the rear of the Building, as indicated on contract drawing G-001. This Transport Platform shall be used for providing Construction Workers access to the roof. The Contractor shall determine if they will also use it for bringing material to the roof; or if they will be utilizing a temporary crane for bringing the material to the roof.
- B. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

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

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.

- C. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- D. Sanitary Facilities:
 - 1. Toilets: Contractor to provide the required amount of Porto-Johns for the workforce.
- E. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
 - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed according to coordination drawings.
 - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
 - b. Maintain negative air pressure within work area using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
 - 2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
 - 3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.
- F. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.
- G. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
 - 1. Install electric power service overhead unless otherwise indicated.
- H. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
 - 2. Install lighting for Project identification sign.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 - 1. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Parking: Refer to the Specification Section 011000 - Summary for parking requirements.
- C. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
2. Remove snow and ice as required to minimize accumulations.

D. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Identification Signs: Provide Project identification signs as indicated on Drawings.
2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
 - a. Provide temporary, directional signs for construction personnel and visitors.
3. Maintain and touchup signs so they are legible at all times.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 1. Comply with work restrictions specified in Section 011000 "Summary."
- C. Storm water Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of storm water from heavy rains.
- D. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- E. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel.
- F. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
- G. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- H. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weather-tight enclosure for building exterior.

- I. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
 1. Prohibit smoking in construction areas.
 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
 4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Operate Project-identification-sign lighting daily from dusk until 12:00 midnight.
- D. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- E. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
 3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products and special warranties.
- B. Related Requirements:
 - 1. Division 01 Section "References" for applicable industry standards for products specified.
 - 2. Division 01 Section "Closeout Procedures" for submitting warranties.

1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Salvaged items or items reused from other projects are not considered new products. Items that are manufactured or fabricated to include recycled content materials are considered new products, unless indicated otherwise.
- B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. Published attributes and characteristics of basis-of-design product establish salient characteristics of products.
- C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications.
- D. Basis-of-Design Product Specification Submittal: An action submittal complying with requirements in Division 01 Section "Submittal Procedures."

1.4 QUALITY ASSURANCE

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

1.5 COORDINATION

- A. Modify or adjust affected work as necessary to integrate work of approved equal products.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

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

- B. Delivery and Handling:

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

- C. Storage:

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

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Where products are accompanied by the term "as selected," Architect will make selection.
 4. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
 5. Or Equal: For products specified by name and accompanied by the terms "or equal," "or approved equal," or "or approved," comply with requirements in "Or Equal" Article to obtain approval for use of an unnamed product.
 - a. Submit additional documentation required by Architect in order to establish equivalency of proposed products. Unless otherwise indicated, evaluation of "or equal" product status is by the Architect, whose determination is final.
- B. Product Selection Procedures:
1. Non-Limited List of Products: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed or an unnamed product that complies with requirements.
 - a. Non-limited list of products is indicated by the phrase "Subject to compliance with requirements, available products that may be incorporated in the Work include, but are not limited to, the following."
 - b. Provision of an unnamed product is not considered a substitution, if the product complies with requirements.
 2. Non-Limited List of Manufacturers: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed or a product by an unnamed manufacturer that complies with requirements.
 - a. Non-limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, available manufacturers whose products may be incorporated in the Work include, but are not limited to, the following."
 - b. Provision of products of an unnamed manufacturer is not considered a substitution, if the product complies with requirements.
 3. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or an equal product by one of the other named manufacturers. Drawings and Specifications may additionally indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Or Equal" Article for consideration of an unnamed product by one of the other named manufacturers.
- C. Sustainable Product Selection: Where Specifications require product to meet sustainable product characteristics, select products complying with indicated requirements. Comply with requirements in Division 01 sustainability requirements Section and individual Specification Sections.

1. Select products for which sustainable design documentation submittals are available from manufacturer.

2.2 "OR EQUAL" PRODUCTS

- A. Conditions for Consideration of "Or Equal" Products: Architect will consider Contractor's request for an equivalent product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with the following requirements:
 1. Evidence that proposed equivalent product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
 2. Contractor's detailed evaluation of significant qualities of proposed equivalent product with those of the named basis-of-design product. Significant product qualities include attributes, such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
 3. Evidence that proposed equivalent product provides specified warranty.
 4. List of similar installations for completed projects, with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples of proposed equivalent product, if requested.
- B. Architect's Action on "Or Equal" Products Submittal: If necessary, Architect will request additional information or documentation for evaluation, as specified in Division 01 Section "Submittal Procedures."
 1. Form of Approval of Submittal: As specified in Division 01 Section "Submittal Procedures."
 2. Use product specified if Architect does not issue a decision on use of a proposed equivalent product request within time allocated.
- C. Submittal Requirements, Two-Step Process: Approval by the Architect of Contractor's request for use of a proposed equivalent is not intended to satisfy other submittal requirements. Comply with specified submittal requirements.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Recycling nonhazardous and construction waste.
- B. Related Requirements:
 - 1. Division 02 Section "SELECTIVE DEMOLITION" for disposal requirements for roofing waste.

1.3 DEFINITIONS

- A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction, or designated spoil areas on Owner's property.
- C. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

1.4 MATERIALS OWNERSHIP

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

1.5 ACTION SUBMITTALS

- A. Waste Management Plan: Submit plan within 7 days of date established for commencement of the Work.

1.6 INFORMATIONAL SUBMITTALS

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

- B. Owner requires a legible copy of weight tickets/receipts for recyclable materials (concrete, asphalt, metals, wood, gypsum, brick, insulation etc.). Whenever possible, Owner prefers materials which are scheduled for demolition, to be recycled.

1.7 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with transportation and disposal regulations of authorities having jurisdiction.

1.8 WASTE MANAGEMENT PLAN

- A. General: Develop a waste management plan according to requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. 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 construction waste generated by the Work.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General: Achieve end-of-Project rates for salvage/recycling of 50 percent by weight of total nonhazardous solid waste generated by the Work. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials , including the following:
 - 1. Construction Waste:
 - a. Masonry and CMU.
 - b. Lumber.
 - c. Wood sheet materials.
 - d. Wood trim.
 - e. Metals.
 - f. Packaging: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
 - 1) Paper.
 - 2) Cardboard.
 - 3) Boxes.
 - 4) Plastic sheet and film.
 - 5) Polystyrene packaging.
 - 6) Wood crates.
 - 7) Wood pallets.
 - g. Construction Office Waste: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle 100 percent of the following construction office waste materials:
 - 1) Paper.
 - 2) Aluminum cans.
 - 3) Glass containers.

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. 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 operation, termination, and removal requirements in Division 01 Section "Temporary Facilities and Controls."

3.2 RECYCLING CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.
- 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 according to approved construction waste management plan.
 - 1. Provide appropriately marked containers or bins for controlling recyclable waste until 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. Remove recyclable waste from Owner's property and transport to recycling receiver or processor as often as required to prevent overfilling bins.

3.3 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.
- C. Paint: Seal containers and store by type.

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END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.

1.3 ACTION SUBMITTALS

- A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- B. Certified List of Incomplete Items: Final submittal at Final Completion.

1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.

1.5 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Participate with Owner's representative in conducting inspection and walkthrough.
2. Complete final cleaning requirements.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1.6 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

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

1.7 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. Use CSI Form 14.1A.

1. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.
2. Submit list of incomplete items in the following format:
 - a. MS Excel electronic file. Architect will return annotated file.
 - b. Three paper copies.

PART 2 - PRODUCTS (NOT REQUIRED)

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
- B. Construction Waste Disposal: Comply with waste disposal requirements in Division 01 Section "Temporary Facilities and Controls."

END OF SECTION 017700

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. Related Requirements:
 - 1. Division 01 Section "Closeout Procedures" for general closeout procedures.

1.3 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Submit one set(s) of marked-up record prints.
 - 2. Number of Copies: Submit copies of Record Drawings as follows:
 - a. Final Submittal:
 - 1) Submit PDF electronic files of scanned Record Prints and three set(s) of file prints.
 - 2) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and Contract modifications.
- C. Record Documents:
 - 1. Maintenance Bond
 - 2. AIA document G706 - Contractor's Affidavit of Payment of Debts and Claims
 - 3. AIA document G706A - Contractor's Affidavit of Release of Liens
 - 4. AIA document G707 - Consent of Surety to Final Payment
 - 5. Manufacturer's warranties
 - 6. Certified payroll reports
 - 7. Final monthly project manning report

1.4 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
1. Preparation: Mark record prints to show the actual installation, where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Accurately record information in an acceptable drawing technique.
 - c. Record data as soon as possible after obtaining it.
 - d. Record and check the markup before enclosing concealed installations.
 - e. Cross-reference record prints to corresponding photographic documentation.
 2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Revisions to routing of piping and conduits.
 - d. Revisions to electrical circuitry.
 - e. Changes made by Change Order or Change Directive.
 - f. Details not on the original Contract Drawings.
 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
 4. Mark record prints with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 5. Mark important additional information that was either shown schematically or omitted from original Drawings.
 6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 2. Format: Annotated PDF electronic and Auto CAD files as follows:
 - a. Provide a complete set of updated as-built mylar drawings.
 - b. Provide an electronic copy of the drawings in AutoCAD 2014, including title blocks, names, and logos. It may be restricted by the consultant to prevent revisions.
 - 1) This shall be used by owner for its record archives and for printing additional copies as required.
 - c. Provide a second electronic copy of the drawings in AutoCAD 2014. It may be provided with the consultants' name, title block, logo, and other such information removed in order to protect the consultant from future liability due to drawing revisions by others.
 - 1) This shall be provided with unlocked layers, including all "X-REF's" in a format that will allow owner to make revisions in order to update facility drawings.
 3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
 4. Identification: As follows:
 - a. Project name.
 - b. Date.

- c. Designation "PROJECT RECORD DRAWINGS."
- d. Name of Architect.
- e. Name of Contractor.

1.5 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation, where installation varies from that indicated in Specifications, addenda, and Contract modifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Note related Change Orders and Record Drawings where applicable.
- B. Format: Submit record specifications as annotated PDF electronic file, paper copy or scanned PDF electronic file(s) of marked-up paper copy of Specifications.

1.6 RECORD PRODUCT DATA

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and revisions to Project Record Documents as they occur; do not wait until end of Project.
- B. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.
- C. Format: Submit Record Product Data as annotated PDF electronic file, paper copy or scanned PDF electronic file(s) of marked-up paper copy of Product Data.
 - 1. Include Record Product Data directory organized by Specification Section number and title, electronically linked to each item of Record Product Data.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017839

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

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

B. Related Requirements:

1. Division 01 Section "Summary" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.
2. Division 01 Section "Execution" for cutting and patching procedures.

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- C. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

1.3 MATERIALS OWNERSHIP

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

1.4 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Roofing Materials: Have been identified with the existing roofing material. Refer to Specification Section -28213.

- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

1.5 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

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

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Verify that hazardous materials have been remediated before proceeding with building demolition operations.

3.2 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
- B. Remove temporary barricades and protections where hazards no longer exist.

3.3 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
- 1) Remove the entire roofing system down to the existing concrete roof deck.
 - 2) Remove all pitch pockets.
 - 3) Remove roof drains and sump flashing.
 - 4) Remove base flashings at equipment, at parapet and penthouse walls.
 - 5) Remove the sheet metal flashings to facilitate raising the flashing heights.
 - 6) Remove joint sealant and miscellaneous wood blocking.
 - 7) Remove sealant in the transverse joints at the precast concrete copings.
 - 8) Remove the fixed roof ladder.
 - 9) Temporarily remove the roof mounted equipment.
 - 10) Temporarily remove the metal stairs leading to the penthouse roof.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
 3. Protect items from damage during transport and storage.
 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

3.4 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Roofing: Remove no more existing roofing than what can be covered in one day by new roofing and so that building interior remains watertight and weathertight. See Section Division 07 Section for Roofing for new roofing requirements.
1. Remove existing roof membrane, flashings, metal fascias and roof accessories.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site
1. Do not allow demolished materials to accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
 4. Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal."
- B. Burning: Do not burn demolished materials.

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3.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

DIVISION 2 – SITE WORK

**SECTION 02 82 13
REMOVAL OF ASBESTOS CONTAINING ROOFING MATERIALS**

PART 1 – GENERAL REQUIREMENTS

1.1 RELATED DOCUMENTS

- A. Drawings and General Provisions of the Contract, including Instructions to Bidders and General Conditions apply to this Section.

1.2 CONDITIONS

- A. All documents prepared by Environmental Connection, Inc., (EC) including any attachments, may contain information that is privileged and confidential, and is exclusively generated for the sole and intended use of this Project. EC's Instruments of Service, included Contract Drawings, Technical Specifications and other documents prepared by EC, are for the sole use of this Project, and unless otherwise provided, EC shall be deemed the Author and Owner of these documents and shall retain all common law, statutory and other reserved rights, including copyrights.
EC shall not be liable for the acts, errors or omissions of the Owner and/or Owner's representative, Vendors, Agents or other entities performing any of the work relative to this Project/Assignment. Should the Owner, and/or Owner's other Representatives, Vendors, Agents or other entities performing any of the work fail to substantially prevail in any lawsuit brought against EC, EC shall be entitled to recover its reasonable attorneys' fees and other costs, in the court of appropriate jurisdiction.
- B. This project involves the removal of asbestos containing roofing materials in preparation for a roof replacement project at the Union County Courthouse Annex located at 9 Elizabethtown Plaza in Elizabeth, New Jersey.
- C. Bidders shall be responsible to inspect and field verify all existing site conditions, in comparison to the information presented in this Section, to ensure all asbestos roofing removal activities are completed in preparation for the roof replacement at Union County Courthouse Annex. Once the project is awarded, the Contractor performing the asbestos containing roofing removal work shall be responsible for any such related work to facilitate the roof replacement project at no additional cost to the Owner and/or the representatives of the Owner and shall not be cause for a delay claim.
- D. For the purposes of this document, the term Contractor shall reference, unless otherwise stated, the Contractor that shall perform the work referenced in this Section.
- E. The removal of roofing materials is an exempt activity, as regulated by New Jersey Administrative Code (N.J.A.C.) 12:120. The removal of the asbestos containing materials referenced herein are classified as category I and II non-friable asbestos containing materials, as defined by the United States Environmental Protection Agency (USEPA), National Emissions Standard for Hazardous Air Pollutants (NESHAPs), 40 CFR, Part 61, Sub-part M. As such, the removal of asbestos containing materials shall be compliant with the United States Department of Labor, Occupational Safety and Health Administration (OSHA), 29 CFR, Part 1926.1101, which is a Class II activity, with respect to personnel training, removal methods, respiratory protection requirements, etc.
- F. The disposal of asbestos containing materials shall be in accordance with N.J.A.C. 7:26, in addition, 40 CFR, Part 61M, which requires, at a minimum, asbestos containing waste to be adequately wetted and appropriately packaged, transported in leak-tight containers and disposed of at an authorized landfill for such waste. Waste manifests shall be provided to the Owner as specified in this Section for payment.
- G. The transport of asbestos containing waste materials shall be in accordance with N.J.A.C. 7:26, including the use of a State of New Jersey, Department of Environmental Protection, (DEP) registered solid waste hauler. United States Department of Transportation regulations, including, but not limited to, 49 CFR, Part 173, shall apply, with respect to placards, labels, etc.
- H. The intent of the asbestos containing roofing removal work to be completed is to facilitate replacement of the existing roof.

DIVISION 2 – SITE WORK

- I. Definitions as noted in these Technical Specifications are included as part of the Contract.
- J. It shall be the sole responsibility of the Contractor to pay directly all fees associated with any Patent, instrument, devices, process, etc., utilized on this project where required by the patent holder.
- K. Except as herein specified, no signs or photographs shall be required other than that necessary for the Contractor to comply with code and the United States Department of Labor, Occupational Safety and Health Administration (OSHA), posting regulations.
- L. Water supply is available at the site(s). Extension to the point of source shall be the responsibility of the Contractor. The Contractor shall ensure leak tight connections. The Contractor shall comply with code specification requirements regarding connections.
- M. Temporary electric service for use during construction is available at the site(s). Extension to the source and point of use shall be the responsibility of the Contractor. The Contractor shall install GFCI protection at a point of source outside of containment.
- N. Temporary heat and temporary cooling is not required.
- O. The Contractor shall refer to the General and Supplemental General Conditions with respect to submission of schedules, including a Critical Path Method (CPM) Schedule, a schedule that reflects coordination with other Trades, where applicable, for the installation of temporary protection, etc. The same shall apply for submission of “AS-BUILT” drawings.
- P. All requests for work and project scheduling shall be coordinated in writing with the the Owner's representative. The Contractor shall not proceed until written authorization and approval on the scheduled start date is obtained. A 72-Hour advance notice to the Owner’s representative shall be issued in writing requesting any change to the schedule.
- Q. All Sections and components, including the Contract Drawings and/or Plans, of these Technical Specifications are interrelated and must be considered in context with provisions documented throughout the Contract Documents. As such, this Section shall not be separated from the balance of the Contract Documents.
- R. Where these Technical Specifications conflict with a regulatory requirement, the regulatory requirement shall be considered the more stringent.
- S. Summary by References: Work of this Contract can be summarized by references to the Contract, General Conditions, Supplementary Conditions, Specification Sections, Drawings, Addenda and modifications to the Contract Documents issued subsequent to the initial printing of this project manual and included, but not necessarily limited to, printed material referenced by any of these. Work of the Contract is also unavoidably affected or influenced by governing regulations, natural phenomena including weather conditions and other forces outside the Contract Documents.

1.3 PROJECT DIRECTORY

- A. Facility
Union County Courthouse Annex
9 Elizabethtown Plaza
Elizabeth, New Jersey 07201
- B. Environmental Consulting Firm:
Environmental Connection, Inc.
120 North Warren Street
Trenton, New Jersey 08608
Telephone: 609-392-4200
Telefax: 609-392-1216
Contact: Jordan Reed

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1.4 COORDINATION

- A. The Contractor shall coordinate all activities with the Owner and the Owner's representative, and the Prime Contractor. Coordination shall also be with the Facility where such coordination is necessary relative to site logistics, electrical power and water sources, and/or ensuring the safety of Facility personnel and residents. Where the Contractor performing the work specified herein is a sub-contractor, the sub-contractor shall coordinate all work with the Prime Contractor and/or General Contractor for coordination with the Owner's representative.
- B. Coordination of work shall be notified, at a minimum within seventy-two (72) hours of an event. The exception shall be that of emergency situations.

1.5 QUANTITIES

- A. The quantities shown are for informational purposes only. The Contractor shall inspect and verify all locations, quantities and measurements indicated in Contract Documents prior to bidding. No additional compensation shall be awarded for failure to complete said review or inspection.

1.6 CONTRACT DOCUMENTS

- A. Contract Documents: Indicate the work of the Contract and related requirements and conditions that have an impact on the project. Related requirements and conditions that are indicated on the Contract Documents include, but are not necessarily limited to, the following:
 - 1. Applicable federal, state, and local codes and regulations.
 - 2. Notices and Permits.
 - 3. Existing site conditions and restrictions on the use of the site.
 - 4. Work performed prior to work under this Contract.
 - 5. Alterations and coordination with existing work.

1.7 DEFINITIONS

- A. Definitions contained in this Section are not necessarily complete, but are general to the extent that they are not defined more explicitly elsewhere in the Contract Documents.
 - 1. Indicated: This term refers to graphic representations, notes or schedules on the drawings, or other Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown," "noted," "scheduled" and "specified" are used, it is to help locate the reference; no limitation on location is intended except as specifically noted.
 - 2. Directed: Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean "directed by the Owner's representative," "requested by the Owner's representative," and similar phrases. However, no implied meaning shall be interpreted to extend the Owner's representative's responsibility into the Contractor's area of construction supervision.
 - 3. Approve: The term "approved," where used in conjunction with the Owner's representative's action on the Contractor's submittals, application, and request, is limited to the responsibilities and duties of the ASCM stated in General and Supplementary Conditions. Such approval shall not release the Contractor from the responsibility to fulfill other Contract requirements.
 - 4. Regulation: The term "Regulations" includes laws, statutes, ordinances and lawful orders issued by authorities having jurisdiction, as well as rules, conventions and agreements within the construction industry that control performance of the work, whether they are lawfully imposed by authorities having jurisdiction or not.
 - 5. Furnish: The term "furnish" is used to mean "supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, and similar operations."
 - 6. Install: The term "install" is used to describe operations at the project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations."

DIVISION 2 – SITE WORK

7. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."
8. Installer: An "Installer" is an entity engaged by the Contractor, either an employee, sub-contractor or sub-subcontractor for performance of a particular construction activity, including installation, erection, application and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
9. The term "experienced," when used with the term "installer" means having a minimum of five (5) previous projects similar in size and scope to this project, or being a certified manufacturer's installer and familiar with the precautions required, and has complied with requirements of any authorities having jurisdiction.
10. Project Site: The Project Site is the space available to the Contractor for performance of the work, either exclusively or in conjunction with others performing other construction as part of the project. The extent of the project site is shown on the drawings and may or may not be identical with the description of the land upon which the project is to be built and/or the facility.
11. Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the project site or elsewhere, to report on, and, if required, to interpret, results of those inspections or tests.
12. Owner's representative: The Owner's representative will represent the Owner during construction. The Owner's representative will advise and consult with the Owner. The Owner's instructions to the Contractor will be forwarded through the Owner's representative.
13. Project Administrator: The Project Administrator is a full time representative of the Owner at the job site with authority to stop the work upon verbal order if requirements of the Contract Documents are not met, or if in the sole judgment of the Project Administrator, Owner's representative or Owner, the interests of the Owner, safety of any person or the Owner's property are jeopardized by the work.
14. General Superintendent: This general superintendent is the Contractor's representative at the work site. This person will generally be the competent person required by OSHA in 29 CFR, Part 1926.1101.

B. Definitions Relative to Removal of Asbestos Containing Roofing

1. Accredited or Accreditation (when referring to a person or laboratory): A person or laboratory accredited in accordance with Section 206 of Title II of the Toxic Substance Control Act (TSCA).
2. Aerosol: A system consisting of particles, solid or liquid, suspended in air.
3. Air Cell: Insulation normally used on pipes and duct work that is comprised of corrugated cardboard which is frequently comprised of asbestos combined with cellulose or refractory binders.
4. Air Monitoring: The process of measuring the fiber content of a specific volume of air.
5. Amended Water: Water to which a surfactant has been added to decrease the surface tension to 35 or less dynes.
6. Asbestos: The asbesti-form varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummintonite-grunerite, anthophyllite, and actinolite-tremolite. For purposes of determining respiratory and worker protection both the asbesti-form and non-asbesti-form varieties of the above minerals and any of these materials that have been chemically treated and/or altered shall be considered as asbestos.
7. Asbestos Containing Material (ACM): Any material containing more than 1% by weight of asbestos of any type or mixture of types.
8. Asbestos Containing Building Materials (ACBM): Surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members of other parts of a building.
9. Asbestos Containing Waste Material: Any material which is or is suspected of being or material with an asbestos containing material which is to be removed from a work area for disposal.

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10. Asbestos Debris: Pieces of ACBM that can be identified by color, texture, or composition, or means dust, if the dust is determined by an accredited inspector to be ACM.
11. Authorized Visitor: The Owner, the Owner's representative, testing lab personnel, the Architect/Engineer, emergency personnel or a representative of any federal, state and local regulatory or other agency having authority over the project.
12. Barrier: Any surface that seals off the work area to inhibit the movement of fibers.
13. Breathing Zone: A hemisphere forward of the shoulders with a radius of approximately six (6) to nine (9) inches.
14. Ceiling Concentration: The concentration of an airborne substance that shall not be exceeded.
15. Certified Industrial Hygienist (C.I.H.): An industrial hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene.
16. Demolition: The wrecking or taking out of any building component, system, finish or assembly of a facility with any related handling operation.
17. Disposal Bag: A properly labeled six (6) mil thick leak-tight plastic bag used for transporting asbestos waste from work to disposal site.
18. Encapsulant: A material that surrounds or embeds asbestos fibers in an adhesive matrix, to prevent release of fibers.
19. Bridging Encapsulant: An encapsulate that forms a discrete layer on the surface of an asbestos matrix.
20. Penetrating Encapsulant: An encapsulate that is absorbed by the in situ asbestos matrix without leaving a discrete surface layer.
21. Removal Encapsulant: A penetrating encapsulate specifically designed to minimize release during removal of asbestos containing materials.
22. Encapsulation: Treatment of asbestos containing materials, with an encapsulant.
23. Enclosure: The construction of an air-tight, impermeable, permanent barrier around asbestos containing material to control the release of asbestos fibers into the air.
24. Filter: A media component used in respirators to remove solid or liquid particles from the inspired air.
25. Friable Asbestos Material: Material that contains more than 1.0% asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.
26. Glove Bag: A polyethylene bag (typically constructed of 10 mil transparent polyethylene or polyvinyl chloride plastic) with inward projecting long sleeve gloves, which is designed to enclose an object from which an asbestos containing material is to be removed.
27. HEPA Filter: A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 microns in a diameter.
28. HEPA Filter Vacuum Collection Equipment (or vacuum cleaner): High efficiency particulate air filtered vacuum collection equipment with a filter system capable of collecting and retaining asbestos fibers. Filters should be of 99.97% efficiency for retaining fibers of 0.3 microns or larger. May also be referred to as Air Filtration Device (AFD).
29. High-Efficiency Particulate Air Filter (HEPA): Refers to a filtering system capable of trapping and retaining 99.97 percent of all monodispersed particles 0.3 um in diameter or larger.
30. Industrial Hygiene Technician: A person hired by the Asbestos Safety Control Monitor, to monitor and inspect the abatement activities not regulated by the New Jersey Administrative Code, (N.J.A.C.) 5:23-8.
31. Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory-inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere.
32. Negative Pressure Ventilation System: A pressure differential and ventilation system.
33. Personal Monitoring: Sampling of the asbestos fiber concentrations within the breathing zone of an employee.
34. Polyethylene Sheet (Fire Retardant): Provide flame resistant polyethylene film that conforms to requirements set forth by the National Fire Protection Association Standard 701, Small Scale Fire Test for Flame Resistant Textiles and Films. Provide largest sheet size possible to

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- minimize seams, six (6) mil thick as indicated, clear, frosted or black as indicated.
35. Pressure Differential and Ventilation System: A local exhaust system, utilizing HEPA filtration capable of maintaining a pressure differential with the inside of the work area at a lower pressure than any adjacent area, and which cleans re-circulated air or generates a constant air flow from adjacent areas into the work area.
 36. Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.
 37. Repair: Returning damaged ACBM to an undamaged condition or to an intact state so as to prevent fiber release.
 38. Respirator: A device designed to protect the wearer from inhalation of harmful atmospheres.
 39. Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation of area.
 40. Time Weighted Average (TWA): The average concentration of a contaminant in air during a specific time period.
 41. Visible Emissions: Any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.
 42. Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with amended water or diluted removal encapsulate and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste.
 43. Work Area: The area where asbestos related work or removal operations are performed which is defined and/or isolated to prevent the spread of asbestos dust, fibers or debris, and entry by unauthorized personnel. Work area is a regulated area as defined by 29 CFR, Part 1926.
 44. Requirements expressed imperatively are to be performed by the Contractor. At certain locations in the text, for clarity, subjective language is used to describe responsibilities which must be fulfilled indirectly by the Contractor, or by others when so noted.
 45. Assignment of Specialists: The Specification requires that certain specific construction activities shall be performed by specialists who are recognized experts in the operations to be performed. The specialists must be engaged for those activities.

1.8 CODES & STANDARDS RELATIVE TO REMOVAL OF ASBESTOS CONTAINING ROOFING

- A. Except to the extent that more explicit or more stringent requirements are written directly into the Contract Documents, all applicable codes, regulations, and standards have the same force and effect (and are made a part of the Contract Documents by reference) as if copied directly into the Contract Documents, or as if published copies are bound herewith.
- B. The Contractor shall assume full responsibility and liability for the compliance with all applicable federal, state, and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site. The Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable federal, state and local regulations. The Contractor shall hold the Owner and the Owner's representative harmless for failure to comply with any applicable work, hauling, disposal, safety, health or other regulation on the part of himself, his employees, or sub-contractors.
- C. A copy of the appropriate codes and standards, as referenced herein, shall be maintained at the project site.
- D. Conflicting Requirements: Where compliance with two (2) or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the Contract Documents indicate otherwise. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent to the Owner's representative for a decision before proceeding.

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- E. Code of Federal Regulations (CFR)
 - 1. 29 CFR, Part 1910.20, Access to Employee Exposure and Medical Records;
 - 2. 29 CFR, Part 1910.134, Respiratory Protection;
 - 3. 29 CFR, Part 1910.145, Specifications for Accident Prevention Signs and Spill Response;
 - 4. 29 CFR, Part 1910.1001 & 29 CFR, Part 1926.1101, Occupational Exposure to Asbestos, Final Rule;
 - 5. 29 CFR, Part 1910.1200 & 29 CFR, Part 1926.59, Hazard Communication;
 - 6. 29 CFR, Part 1926.55, Gases, Vapors, Fumes, Dusts, and Mists;
 - 7. 29 CFR, Part 1926.103, Respiratory Protection;
 - 8. 40 CFR, Part 61, National Emission Standard for Hazardous Air Pollutants (NESHAP);
 - 9. 40 CFR, Part 173, General Requirements for Shipments and Packaging;
 - 10. 40 CFR, Part 178, Shipping Container Specifications;
 - 11. 40 CFR, Part 260 & 40 CFR, Part 261, Hazardous Waste Management Systems

- F. State of New Jersey requirements which govern asbestos containing roofing removal work or hauling and disposal of asbestos waste materials include, but are not limited to the following:
 - 1. **Disposal Regulations**
N.J.A.C. 7:26
 - 2. **Indoor Air Quality Standard**
N.J.A.C. 12:100-13

- G. Standards which apply to asbestos abatement work of hauling and disposal of asbestos waste materials include but are not limited to the following:
 - 1. American National Standards Institute (ANSI)
1430 Broadway
New York, New York 10018
(212) 354-3300
 - 2. Fundamentals Governing the Design and Operation of local Exhaust Systems Publication Z9.2-79
 - 3. Practices for Respiratory Protection Publication Z88.2-80
 - 4. American Society for Testing and Materials (ASTM)
1916 Race Street
Philadelphia, PA 19103
(215) 299-5400
 - 5. Specification for Encapsulants for Friable Asbestos Containing Building Materials Proposal P-189

1.9 PRE-PROJECT INSPECTION

- A. Prior to commencement of work, inspect areas in which work is to be performed. Prepare a listing of damage to structure, surfaces, equipment or of surrounding properties which could be misconstrued as damage resulting from the work. Photograph or videotape existing conditions, as necessary to document conditions. Submit a copy of these photos or tapes to the Owner's representative prior to starting work.

1.10 POTENTIAL ENVIRONMENTAL HAZARDS

- A. The disturbance or dislocation of asbestos containing materials identified in these Technical Specifications may cause a release within the building's atmosphere or the environment, thereby creating a potential health hazard to workmen and building occupants. Apprise all workers, supervisory personnel, sub-contractors, consultants, and authorized visitors who will be at the job site of the seriousness of the hazard and of proper work procedures which must be followed.

DIVISION 2 – SITE WORK

1.11 STOP WORK

- A. If the Owner, the Owner's representative, or the Project Administrator presents a written stop work order, immediately and automatically stop all work. Do not recommence work until authorized in writing by the Owner or his/her appropriate representative.

1.12 CONTRACTOR'S USE OF THE PREMISE

- A. Confine operations, at the site, to the areas permitted under the Contract. Portions of the site beyond areas in which work is indicated are not to be disturbed. Conform to site rules and regulations affecting the work while engaged in project construction.
- B. Secure and obtain facility security regulations for Contractors. All facility security requirements are incorporated by reference. No additional compensation or time shall be allotted for failure to comply with the facility's security requirements.
- C. Keep existing driveways and entrances serving the premises, clear and available to the Owner and his employees at all times. Do not use these areas for parking or storage of materials.
- D. Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials and location of storage sheds to the areas indicated. If additional storage is necessary, obtain and pay for such storage off site.
- E. Maintain existing building in a safe and weather tight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building during the construction period.
- F. Keep public areas such as hallways, stairs, elevator lobbies and toilet rooms free from accumulation of waste, rubbish, or construction debris.
- G. Smoking or open fires will not be permitted within the building enclosure or on the premises.
- H. Cooperate fully with the Owner and/or the Owner's representative during construction operations to minimize conflicts with other Trades. Perform the work so as not to interfere with the Owner's operation.
- I. The Contractor shall be apprised of and be compliant with Facility Requirements, which shall be presented to the Contractor, prior to or during mobilization to, the project site.

1.13 SUBMITTALS

- A. Pre-Project Submittals
 - 1. Written Respiratory Protection Plan, in accordance with 29 CFR, Parts 1910 and 1926.
 - 2. Written site-specific Health and Safety Plan.
 - 3. All Safety Data Sheets (SDS).
- B. Post Project Submittals: Upon completion of work on this project the Asbestos Abatement Contractor shall submit the following information to the Owner:
 - 1. Daily activity reports and personnel sign-in sheets
 - 2. Minutes of meetings
 - 3. Visitations; authorized and unauthorized
 - 4. Special or unusual events
 - 5. Waste material disposal manifests

PART 2 DESCRIPTION OF THE WORK

2.1 SCOPE OF WORK

- A. The Contractor shall supply all labor, materials, services and equipment required to complete the work in accordance with all applicable Federal, State and Local regulations and guidelines and these Contract Documents.

DIVISION 2 – SITE WORK

- B. The Contractor shall remove and dispose of all layers of built-up roofing from the Main Roof and Penthouse Roof, as per the architectural and engineering plans for the project. The Contractor is responsible to remove all of the materials pursuant to these specifications based on review of the drawings and their observations at the pre-bid walkthrough of the site.

2.2 ADDITIONAL INFORMATION

- A. The Contractor shall ensure all electrical and other means of hazardous energy is appropriately de-energized, locked-out/tagged-out, in accordance with 29 CFR, Part 1910.147.
- B. The Contractor shall comply with the OSHA Technical Manual, Section III, Chapter #4, relative to heat stress. The Contractor shall also be advised of OSHA bulletin 3156 from 1998 regarding Cold Stress.
- C. The Contractor shall be responsible for the cleaning of all suspect asbestos containing debris and dust within the work areas, prior to asbestos abatement, which is an industry standard. The cleaning shall consist of High Efficiency Particulate Air (HEPA) vacuuming and/or wet-wiping/mopping surfaces within the work. For large debris items, the debris shall be misted with amended water prior to packaging as asbestos waste.
- D. The Contractor shall comply with all applicable OSHA regulations, relative to fall protection, operation of boom lifts, etc., where applicable, and the manufacturer's recommendations, which shall be included with the Contractor's Health and Safety Program. Boom lift operations, where applicable, shall be in accordance with the American National Standards Institute (ANSI) A92.2-1969 and 29 CFR, Part 1926.453 – Aerial Lifts. Fall Protection, as per 29 CFR, Part 1926.502 – Fall Protection Systems Criteria and Practices, shall also be followed, in addition to any applicable federal, state and local regulations for such activities.
- E. Where suspect asbestos containing materials that are not identified above are uncovered during alterations and renovations work, the activities shall cease. The suspect asbestos containing materials shall be inspected by an accredited USEPA Asbestos Building Inspector. A third party independent laboratory that is accredited by the American Industrial Hygiene Association (AIHA), participating in the National Voluntary Laboratory Accreditation Program (NVLAP) shall provide analytical services. Sampling efforts and analytical services shall not be cause for a delay claim by the Contractor against the Owner, the Owner's representative and/or the Owner's agents, as well as the Prime and/or General Contractor.

PART 3 EXECUTION

3.1 PRODUCTS

- A. The Contractor shall wet all asbestos containing materials prior to any disturbance of the material.
 - 1. The Contractor shall provide water to which a surfactant has been added. Use a mixture of surfactant and water which results in wetting of the asbestos containing material and retardation of fiber release during disturbance of the material equal to, or greater than, that provided by the use of one (1) ounce of surfactant consisting of 50% polyoxyethylene ether and 50% polyoxyethylene mixed with five (5) gallons of water.
- B. Polyethylene sheeting, six (6) mil thick, shall be utilized for wrapping large asbestos contaminated components not suited for disposal bags or drums. If disposal bags are used, they shall be protected with cardboard or burlap bags on the inside for materials that would rupture or penetrate the bags.
- C. Duct tape shall be used to seal disposal bags and wrapped components.
- D. Disposal bags shall be six (6) mil thick, leak tight, and labeled in accordance with OSHA, NESHAPs, and the U.S. Department of Transportation regulations.

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3.2 WORKER PROTECTION

- A. The Contractor shall provide all personal protective equipment to workers necessary to complete the Project.
1. The Contractor shall utilize workers trained in accordance with 29 CFR, Part 1926.1101, dangers inherent in handling asbestos and breathing asbestos dust and in proper work procedures and personal and area protective measures.
 2. Appropriate respiratory protection shall be provided by the Employer upon notification that employees have received medical clearance and monitoring, followed by passing respiratory fit testing, and having read the Contractor's written Respiratory Protection Program.
 - a. The Contractor shall provide medical examinations for all workers in accordance with 29 CFR, Part 1926.1101. Provide an evaluation of the individual's ability to work with respiratory protection in an environment capable of producing heat stress in the worker.
 - b. The Contractor shall have a respiratory protection program established which is in compliance with ANSI Z88.2 - 1980 "Practices for Respiratory Protection" and OSHA's 29 CFR, Parts 1910 and 1926. The written program shall be posted at the job site.
 - c. Provide half face or full-face type respirators to each worker. Equip full face respirators with a nose cup or other anti-fogging device. If negative pressure air purifying respirators are being used, the Contractor shall supply a sufficient quantity of respirator filters approved for asbestos dust, so that workers can change filters during the work day. Store respirators and filters at the job site and protect from exposure to asbestos prior to their use. Clean and sanitize as required.
 - d. Provide, at a minimum, HEPA type filters labeled with NIOSH and MSHA Certification for "Radionuclides, Radon Daughters, Dust, Fumes, Mists including Asbestos-Containing Dusts and Mists" and color coded in accordance with ANSI Z88.2 (1980). In addition, a chemical cartridge section may be added, if required, for solvents, etc., in use. In this case, provide cartridges that have each section of the combination canister labeled with the appropriate color code and NIOSH/MSHA Certification.
 - e. Single use, disposable, or quarter face respirators are strictly forbidden for use during asbestos containing roofing removal and related work.
 - f. No one having a beard or other facial hair in the respiratory facial fit area will be permitted to don a respirator and enter the work area.
 3. Provide disposable full-body coveralls including foot and head covers and require that they be worn by all workers in the work area. Provide a sufficient number for all required changes, for all workers in the work area.
 4. Provide gloves to all workers and require that they be worn inside the work area. Do not remove gloves from the work area and dispose of as asbestos contaminated waste at the end of work.
 5. The Contractor shall strictly prohibit workers from eating, drinking, smoking and chewing gum or tobacco while within the work area. In order to perform any of these functions, workers must exit the work area, and are required to follow the outlined decontamination procedures on each occasion.
- B. Perform United States Department of Labor, Occupational Safety and Health Administration, (OSHA) 8-hour Time Weighted Average personal exposure air monitoring in accordance with 29 CFR, Part 1926.1101. OSHA monitoring is solely the responsibility of the Contractor, and the Contractor shall ensure that the Contractor's Supervisor performs OSHA monitoring in accordance with 29 CFR, Part 1926.1101. The Owner's representative is not responsible for the Contractor's compliance with OSHA monitoring.

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1. Negative Exposure Assessment: The employer shall demonstrate that employees trained in accordance with 29 CFR, Part 1926.1101, shall be exposed to airborne fiber concentrations below the Permissible Exposure Limit (PEL) of less than 0.1 fibers per cubic centimeter of air. However, such as with typical roofing products, product data may demonstrate the material does not release fibers under normal circumstances and/or when removed, that exceeds the PEL for an 8-hour Time Weighted Average (TWA) or the excursion limit (EL) of 1.0 fibers per cubic centimeter of air; therefore, personal monitoring may not be required. If the employer has monitored employees on previous similar projects, within twelve (12) months of the current project, and the PEL and EL were not exceeded, then the aforementioned monitoring is not necessarily required.
- C. The Contractor shall establish the means for personnel decontamination, such as, but not limited to:
 1. Decontamination procedures requiring personnel entering the work area/performing the work, to don two (2) protective suits. The first suit shall be a protective suit and shall be HEPA vacuumed, removed and placed in appropriate disposal bags, prior to exiting. The second suit shall be removed and disposed of appropriately upon exiting the work area. The Contractor shall establish hygiene facilities for hand, face, etc.; respiratory protection shall be removed during this process and the respirator cleaned of all visible dust/debris.

3.3 REMOVAL METHODS

- A. The removal of asbestos containing roofing materials is considered a Class II activity, and will require a Competent Person, as defined by 29 CFR, Part 192.1101, to supervise the work.
- B. All louvers, skylights, HVAC intake ducts, and other openings adjacent to the work area shall be sealed with critical barriers, consisting of two (2) independent layers of six (6) mil polyethylene sheeting.
- C. The Contractor shall place a single layer of six (6) mil polyethylene sheeting, as a drop cloth, around the perimeter of the work. It may prove to be more expedient to simply place a full sheet around the outer perimeter of the work. The Contractor shall be responsible for weighting or staking said sheet(s) to the ground to ensure that they do not blow away during the course of the project. The drop cloth shall extend five (5) feet from the perimeter of the work area.
- D. At a minimum, the roofing material shall be removed intact, to the extent feasible, in conjunction with wet methods. If cutting machines are to be employed, they shall be continuously misted during use, unless it is determined that this creates an unsafe work condition. Removal of built-up roofs, roofing felts, aggregate roof surfaces, etc., where power tools are used shall require High Efficiency Particulate Air (HEPA) filter equipped vacuum attachments.
 1. Prior to and during any removal activities, the Contractor shall mist the roofing materials with amended water, to keep the material adequately wet. The Contractor shall continue the application of amended water to the materials during the removal portion and during the placement of removed materials into waste bags. No visible emissions shall occur during the removal of asbestos containing roofing materials, in accordance with USEPA, NESHAPS.
 2. The removal of less than 25 square feet of roofing does not require wet-methods, as long as the material is manually removed in conjunction with HEPA equipped filtration.
 3. All adjacent surfaces which were in contact with the asbestos containing roof materials shall have all visual residual material completely removed as a part of this abatement.
- E. If unwrapped or unpackaged material is lowered, then it shall be transferred to a closed receptacle in a manner so as to preclude the dispersion of dust; otherwise place waste materials in double, six (6) mil disposal bags, or in a single six (6) mil disposal bag to be placed in lockable fiberboard drums.
- F. Drop cloths shall be disposed of as asbestos containing waste. All of the appropriate OSHA and EPA labels shall be attached to waste disposal bags, lockable fiberboard drums and/or the outer layer of polyethylene sheeting, which ever method to contain the waste applies. ACM waste shall be stored in a covered, locked dumpster or approved waste transfer vehicle. The Contractor shall prepare the waste for transport in accordance with specific requirements of the waste facility and all applicable local, state, and federal regulations, and these Technical Specifications.

DIVISION 2 – SITE WORK

- G. Disposal shall be in accordance with federal, state, and local regulations and county waste flow plans.

PART 4 WASTE HANDLING AND DISPOSAL

4.1 ASBESTOS WASTE HANDLING AND DISPOSAL

- A. If structure from which roofing is removed is scheduled for demolition, or 160 square feet or greater of roofing material(s) are rendered friable by removal activities, then the roofing material(s) shall be disposed of as asbestos waste.
Disposal bags shall be six (6) mil, leak tight, and labeled in accordance with OSHA, NESHAPS, and the United States Department of Transportation (USDOT) regulations.
- B. Load all asbestos containing waste material in disposal bags or leak-tight drums. All materials are to be contained in one (1) of the following:
 - 1. Two (2), six (6) mil disposal bags, or,
 - 2. Two (2), six (6) mil disposal bags and a fiberboard drum, or
 - 3. Two (2), six (6) mil disposal bags and sealed steel drum.
- C. Two (2) layers of six (6) mil polyethylene sheeting shall be utilized for wrapping large components not suited for disposal bags or drums.
- D. Duct tape shall be used to seal disposal bags and wrapped components.
- E. The Contractor's vehicle and/or dumpster shall be lined with a critical barrier. The Contractor's vehicle and/or dumpster utilized to transport the asbestos waste off-site, and the Waste Hauler shall be licensed by the New Jersey Department of Environmental Protection.
- F. Maintain records of waste shipments in accordance with NESHAPS 40 CFR, Part 61, Section 61.150, (d) 1-5 and (e).
- G. Notify the USEPA ID #27 approved landfill within 10-days prior to transportation of the asbestos containing waste to the landfill. Provide the name and address of the landfill. Retain manifest from the landfill for all materials disposed of. At the completion of asbestos abatement, forward all manifests to the Owner.
- H. On-site activities shall not be considered complete until all waste is off-site, upon demobilization of the work area(s), and after receipt of satisfactory final clearance air sample results.

4.2 REGULAR CONSTRUCTION DEBRIS WASTE DISPOSAL

- A. Asbestos containing roofing material(s) that have not been rendered friable, or less than 160 square feet of material(s) have been rendered friable, are not regulated as asbestos waste and shall be disposed of as regular construction debris.
- B. Demolished materials shall be treated as regular construction debris ID Waste No. 13.
- C. All waste shall be disposed of in accordance with the County waste flow plan, as applicable. The specific landfill facility chosen must be designated by the State of New Jersey, Department of Environmental Protection, as the recipient facility for the community in which the project is located.
- D. The waste hauler must possess a valid solid waste transporter registration issued by the state in which the remediation work is to occur. A licensed solid waste transporter shall be a commercial collector/hauler or the Contractor if so registered.

PART 5 AIR MONITORING

5.1 SUMMARY

- A. Where required by the Owner, air monitoring shall be performed to demonstrate the effectiveness of engineering controls and methods for the removal of asbestos containing materials with respect to the potential release of asbestos fibers, and the clearance of the work area(s) for re-occupancy.
 - 1. This Section describes air monitoring to verify that the building beyond the work area(s) and the outside environment remains uncontaminated.

DIVISION 2 – SITE WORK

- B. AIR MONITORING REQUIRED BY OSHA IS WORK OF THE CONTRACTOR AND IS NOT COVERED IN THIS SECTION.
- C. Daily air monitoring shall be completed along the work area perimeter. Sample collection and analysis shall be in accordance with the National Institute of Occupational Safety and Health (NIOSH) method#7400, most recent revision, by Phase Contrast Microscopy (PCM). The acceptable airborne fiber concentrations for this type of analysis shall be less than 0.01 fibers per cubic centimeter (f/cc) of aair.

END OF SECTION

SECTION 030150 – MAINTENANCE OF CAST DECKS AND UNDERLAYMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Concrete deck repairs as required creating a sound substrate for new roof installation.
1. Deck repairs may only be done with the written approval by owner's representative.

B. Include in the Base Bid a total of 2,800 square feet of Concrete Roof Deck Repair.

1.2 UNIT PRICES

C. Provide a Unit Price for the following:

1. Unit Price No. 5- Patch the concrete roof deck as specified herein. The Unit of Measurement shall be in square feet. Refer to Specification Section "012200- Unit Prices".

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Basis-of-Design Product: The concrete deck repair products specified herein are based on a system manufactured by SR Products. Subject to compliance with requirements, provide the following named products or comparable products by an approved equal manufacturer including but not limited to the following:

1. "Conoco" by SR Products

2.2 CONCRETE DECK REPAIRS

A. Two-component, epoxy repair product with the following properties:

Test	Typical Value	Test Method
Tensile Strength	1800 psi	ASTM D 638
Compressive Strength	11,000 psi	ASTM D 695
Impact Resistance	160 1n/lb.	Gardener Impact
Abrasion Resistance	72 mg	ASTM D 4060

1. Acceptable Product by Basis of Design Manufacturer: "SRamPatch."

PART 3 - EXECUTION

3.1 PROJECT CONDITIONS

- A. Minimum application temperature - 50°F. (10°C).
- B. Minimum application thickness - 1/4".

3.2 PRODUCT APPLICATION

- A. Remove spalled/deteriorated concrete deck areas until sound base is reached.
- B. Wire brush flaking rust from exposed reinforcing bar. Apply rust inhibitive paint. Allow to dry.
- C. Substrate must be clean, sound, dry and free of all contaminates before applying epoxy repair material
- D. Mixing process:
 - 1. Empty the sand mixture of the 5 gallon container (Part A) into a clean, dry plastic or steel wheel barrel or mortar box. A disposable surface such as a 4 x 8 plywood sheet may also be used.
 - 2. Form an inverted cone in the (Part A) mixture with the aggregate epoxy mix. Make a hole down the center of cone and pour in liquid from quart can (Part B). Mix well.
 - 3. Components shall be mixed thoroughly using small shovel, hoe and/or rake. Components not thoroughly mixed will result in a mixture that will not harden and will need to be removed from the patch area. Approximate pot life 45 minutes depending on weather conditions.
 - 4. Fill prepared area flush with mixed two-component, epoxy repair material according to manufacturer's directions. Allow to set. Approximate hardening time 4-5 hours or hard to touch.
- E. Clean Up:
 - 1. Place empty container (Part B) and unused mixture into empty 5 gallon container (Part A) after use.

END OF SECTION 030150

SECTION 061053 – MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Requirements, bidding documents and drawings.

1.2 GENERAL

- A. Roofing contractor shall furnish and install all materials described herein unless specifically noted otherwise

1.3 SUMMARY

- A. This portion of specification sets forth general requirements, including quality and type of materials required for installation of all lumber used for wood curbs, nailing strips, miscellaneous blocking material, unexposed fillers, fascias, edging strips, etc.

1.4 STORAGE

- A. All material specified herein shall be stored (after delivery to site) and fully protected from damage and weather, and shall be piled to prevent warping. All lumber shall be fully protected to maintain original required moisture content as specified in item titled "Moisture Content".

1.5 OTHER REQUIREMENTS

- A. Dimensions indicated on drawings are nominal dimensions (except where details show actual sizes) and shall be subject to standard reductions required for surfacing or tolerances permitted by grading rules. Unless otherwise indicated on drawings, all material shall be S4S (surfaced four sides).

1.6 PROTECTION

- A. All finished work shall be adequately protected against damage from any source.

1.7 COORDINATION

- A. Carpenters shall coordinate work with other trades so progress continues without interruption.

PART 2 - PRODUCTS

2.1 WOOD - FRAMING AND CURBS, GRADING RULES, GRADES, AND SPECIES

- A. Lumber: Southern Pine, Yellow Pine, Douglas Fir, Spruce, Ponderosa Pine, Larch or Hemlock and shall meet following minimum grade requirement of construction standard (75% #1 and 25% #2); free from warping and visible decay. Lumber shall be graded according to standard grading rules of Southern Pine Inspection Bureau, West Coast Lumber Inspection Bureau, or Western Wood Products Association.

2.2 MOISTURE CONTENT

- A. All lumber shall be air-dried or kiln-dried before treatment, so moisture content is not more than 19%. After treatment, it shall be kiln-dried at temperatures not exceeding 160° F. (71°C) and moisture content is not more than 19% at time of shipment.

2.3 DECAY-RESISTANT TREATMENT

- A. Lumber in contact with roofing or acting as fascias, and all other exterior lumber, shall be Chemically Treated Wood or Natural rot resistant wood.
- B. Chemically Treated Wood
 - 1. Wood shall be pressure-treated with a preservative in accordance with AWWA Specifications and approved by EPA. Chromate copper arsenate, creosote and oil-borne preservatives are not acceptable.
 - 2. Treating processes, material conditions, plant equipment, and other pertinent requirements shall conform to AWWA Specifications for specific kind of lumber and type of preservative to be used. Retention shall be as required for intended use.
- C. Natural rot resistant wood
 - 1. North America Softwoods may be used in lieu of chemically treated wood, limited to:
 - a. Douglas Fir – Heartwood
 - b. Southern Pine – Sapwood
 - c. Western Red Cedar – Heartwood
 - d. Eastern White Cedar – Heartwood
 - e. Western Larch – Heartwood
 - f. Eastern Larch (Tamarack) - Heartwood

- D. All treated lumber shall bear mark of a code recognized third party agency such as AWWA.

2.4 WOOD TO WOOD

- A. Type: Galvanized, common, annular ring nail. Length: Sufficient to penetrate underlay blocking 1-1/4 inches.

B. Acceptable Manufacturers:

1. Buildex Div. of ITW Itasca, IL.
2. Olympic Manufacturing Group Inc. Agawam, MA.
3. Or approved equal.

2.5 WOOD TO MASONRY

A. Acceptable Manufacturers:

1. Buildex Div. of ITW Itasca, IL.
2. Olympic Manufacturing Group Inc. Agawam, MA.
3. Rawl, Powers Fastening Co. New Rochelle, NY.
4. Or approved equal.

B. Length: As recommended by manufacturer.

PART 3 - EXECUTION

3.1 CARPENTRY

- A. At roof edge to receive metal fascia, around all roof top penetration perimeters, and under any flashing component that is to have a roof flange mechanically fastened to roofing substrate;
- B. Mechanically attach wood blocking. Blocking thickness: Equal to final insulation thickness. Width: Six inches nominal.
- C. Fasteners shall be installed in two rows staggered. Spacing in any one row shall not exceed 24 inches. Within eight feet of outside corners, spacing shall not exceed twelve inches in any one row.
- D. Offset blocking layers twelve inches and weave corners.
- E. When preservative treated wood is cut, cut end shall be treated in accordance with AWWA Specification M4.
- F. Lumber shall be accurately cut to work requirements and shall be well fastened.
- G. Bolted fastenings shall have washers of adequate size under both heads and nuts. Nails shall be of correct size and quantity for proper fastening. Oversized nails that will result in splitting shall not be used. All fasteners shall be galvanized per ASTM A 153.

END OF SECTION 061053

SECTION 070150 - PREPARATION FOR RE-ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Requirements, bidding documents and drawings.

1.2 SUMMARY

- A. Section Includes:
 - 1. Roof tear-off.
 - 2. Removal of base flashings.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Temporary Roofing: Include Product Data and description of temporary roofing system. If temporary roof will remain in place, submit surface preparation requirements needed to receive permanent roof, and submit a letter from roofing membrane manufacturer stating acceptance of the temporary membrane and that its inclusion will not adversely affect the roofing system's resistance to fire and wind or its FM Global rating.
- C. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces that might be misconstrued as having been damaged by reroofing operations. Submit before Work begins.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Installer of new membrane roofing system.
- B. Reroofing Conference: Conduct conference at Project site.

1.5 PROJECT CONDITIONS

- A. Owner will occupy portions of building immediately below reroofing area. Conduct reroofing so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.

1. Coordinate work activities daily with Owner so Owner can place protective dust or water leakage covers over sensitive equipment or furnishings, shut down HVAC and fire-alarm or -detection equipment if needed or applicable, and evacuate occupants from below the work area (if applicable).
 2. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below the affected area (if applicable). Verify that occupants below the work area have been evacuated before proceeding with work over the impaired deck area.
- B. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- C. Limit construction loads on roof of rooftop equipment wheel loads and for uniformly distributed loads per recommendations of engineer.
- D. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.

PART 2 - PRODUCTS

2.1 AUXILIARY REROOFING MATERIALS

- A. General: Auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of new membrane roofing system.
- B. Base Sheet Fasteners: Capped head, factory-coated steel fasteners, listed in FM Approval's "Approval Guide."

PART 3 - EXECUTION

3.1 PREPARATION

- A. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
- B. Verify that rooftop utilities and service piping have been shut off before beginning the Work.

3.2 ROOF TEAR-OFF

- A. General: Notify Owner each day of extent of roof tear-off proposed for that day.
- B. Roof Tear-Off: Remove existing roofing membrane and other membrane roofing system components down to the concrete deck.

Main Roof

1. Remove the coated multiple BUR roofing systems.
2. Remove the perlite insulation and the polyisocyanurate roof insulation.
3. Remove the vapor barrier adhered to the structural concrete roof deck.
4. Remove the multiple BUR flashings that are firmly bonded to parapet and penthouse masonry walls. There are (3) three base flashing systems installed at the penthouse walls.
5. Remove metal counter flashings, etc.

Penthouse Roof

1. Remove the coated multiple BUR roofing systems.
2. Remove the 1" wood fiberboard over another BUR system.
3. Remove the 3" of wood fiberboard Insulation on the structural concrete roof deck.
4. Remove the metal fascia and wood blocking.
5. Remove the pitch pockets, etc.

3.3 DECK PREPARATION

- C. Inspect deck after tear-off of membrane roofing system.
- D. If the existing structural concrete roof deck is either spalled or has loose concrete immediately notify Architect. Do not proceed with installation until directed by Architect. Patch the concrete roof deck, refer to Specification Section 030130 Maintenance of Cast-In-Place Concrete.
- E. If deck surface is not suitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect. Do not proceed with installation until directed by Architect.

3.3 EXISTING BASE FLASHINGS

- A. Remove existing base flashings around parapets, curbs, walls, and penetrations.
 1. Clean substrates of contaminants such as asphalt, sheet materials, dirt, and debris.
- B. Do not damage metal counterflashings that are to remain. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish.

3.4 DISPOSAL

- A. Collect and place demolished materials in containers. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Transport and legally dispose of demolished materials off Owner's property.

END OF SECTION 070150.19

SECTION 072113 - ROOF AND DECK INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

- 1. Roof Insulation.
- 2. Roof System Design Wind-Load Analysis.

- B. Related Requirements:

- 1. Division 07 Section "Roof Warranty."
- 2. Division 07 Section "Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing."

- C. This portion of the specification describes materials and workmanship required for installation of insulation over roof decks.

- D. All materials described herein shall be furnished and installed by roofing contractor unless specifically noted otherwise.

1.3 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed insulation materials shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.

- B. Material Compatibility: Provide insulation materials that are compatible with one another under conditions of service and application required, as demonstrated by membrane roofing manufacturer based on testing and field experience.

- C. Roofing System Design: Tested by a qualified testing agency to resist the following uplift pressures:

- 1. Corner Uplift Pressure: 138.3 lbf/sq. ft.
- 2. Perimeter Uplift Pressure: 101.5 lbf/sq. ft.
- 3. Field-of-Roof Uplift Pressure: 64.7 lbf/sq. ft.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that has UL listed or FM Approvals for membrane roofing system consistent to that used for this Project.

- B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by membrane roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
- C. Source Limitations: Obtain components including roof insulation, fasteners, adhesive, and etc. as approved by membrane roofing manufacturer.
- D. Preliminary Roofing Conference: Before starting roof deck construction, conduct conference at Project site. Provide at least 72 hours advance notice to participants prior to convening the preliminary roofing conference. Record discussions and agreements and furnish a copy to each participant.
1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 4. Review deck substrate requirements for conditions and finishes, including flatness and fastening.
 5. Review structural loading limitations of roof deck during and after roofing.
 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 7. Review governing regulations and requirements for insurance and certificates if applicable.
 8. Review temporary protection requirements for roofing system during and after installation.
 9. Review roof observation and repair procedures after roofing installation.
 10. Manufacturer shall provide, at no additional expenses to the Owner, on-site inspection, by the roofing manufacturer's representative, at a minimum of everyday of application to ensure that the roofing is installed as specified. Written reports are to be submitted with pictures to the Architect indicating progress of the Work and conformance to the Contract Documents and manufacturer's best recommended practice. Keep architect informed as to the progress and quality of the work. Report to the architect any refusal by the contractor to correct unacceptable work. confirm upon completion to the architect that manufacturer has observed the application of the roof system and no procedures varied from the design of the architect. Notify architect of any proposed changes. Manufacturer shall attend all required progress meetings.
- E. Preinstallation Roofing Conference: Conduct conference at Project site.
1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 5. Review structural loading limitations of roof deck during and after roofing.
 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 7. Review governing regulations and requirements for insurance and certificates if applicable.
 8. Review temporary protection requirements for roofing system during and after installation.
 9. Review roof observation and repair procedures after roofing installation.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Insulation shall be delivered to site in an undamaged and dry condition. Material received that is not dry or is otherwise damaged shall be rejected.
- C. Proper storage on or off site shall be roofing contractor responsibility.
- D. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- E. Any unused insulation remaining on roof at end of workday shall be returned to storage.
- F. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.6 INSULATION – GENERAL

- A. All insulation materials must be approved by warrantor of primary roof membrane materials. Samples should be provided to manufacturer and written approval from warrantor of primary roof membrane materials is required before ordering these materials for project.
- B. Insulation boards shall be full size except when cutting is required at roof edges and openings. Boards that are broken, cracked, have been exposed to moisture, or are otherwise damaged shall not be used.
- C. Proper installation and fit of wood nailers, blocking, and other rough carpentry in appropriate locations shall be verified prior to installation of roof insulation.
- D. Caution shall be exercised with construction traffic to avoid damage to new insulation. Breaking or crushing of insulation is unacceptable and any damaged insulation shall be replaced at roofing contractor's expense.
- E. Insulation shall be laid with end joints staggered and all joints tight; however, boards shall not be forced into place.
- F. No more insulation shall be installed during any work period than can be covered by all plies of roofing during same work period. At end of work period, temporary edge seals shall be installed to protect roof insulation. Upon resumption of work, they must be removed. Such seals shall consist of strips of roofing felt applied and top-coated with specified adhesive.
- G. Insulation surfaces shall be cleared of all debris before roofing is placed.
- H. All precautions should be made to prevent bitumen dripping during and after application of insulation and roofing materials.

1.7 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.8 WARRANTY

- A. Refer to Section 075105 for warranty requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Basis-of-Design Product: The insulation products specified herein are based on a system manufactured by SR Products. Subject to compliance with requirements, provide the following named product or comparable products by an approved equal manufacturer:

- 1. "H-Shield 20 PSI" by Hunter Panels.

2.2 ROOF INSULATION

- A. General: Preformed roof insulation boards manufactured or approved membrane roofing manufacturer, selected from manufacturer's standard sizes suitable for application, of thicknesses indicated.
- B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class I, Grade 3, felt or glass-fiber mat facer on both major surfaces, two layers, base layer 2" constant thickness.
- C. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/8 inch per 12 inches with a minimum 1/2" leading edge unless otherwise indicated.
- D. Cover Board: ASTM D 3273, semi-rigid asphaltic substrate board, 1/8 inch, 4' x 8' boards.
 - 1. Concrete Deck Roof Areas.
 - a. Acceptable Product by Basis of Design Manufacturer: "SR Products, Pika Ply Recover Board", or an approved equal.
- E. Contractor to survey existing roof area slope and provide a drainage plan indicating location of required saddles, crickets, tapered edge strips, and other insulation shapes required to provide an adequate slope to drain. Fabricate as required.

2.3 INSULATION ACCESSORIES

- A. General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with membrane roofing.
- B. Bead-Applied Insulation Adhesive: Requires bead-applied, low-rise, urethane adhesive formulated to attach roof insulation to substrate or to another insulation layer.
 - 1. Concrete Deck Roof Areas. (All Roof Areas)

- a. Acceptable Product by Basis of Design Manufacturer: "OMG; Olybond 500 Adhesive", or and approved equal.
- C. Insulation Cant Strips: ASTM C 728, perlite insulation board.
- D. Wood Nailer Strips: Comply with requirements in Division 06 Section "Miscellaneous Rough Carpentry."
- E. Tapered Edge Strips: ASTM C 728, perlite insulation board.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of insulation system:
 - 1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.
 - 2. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 - 3. Contractor must verify deck slopes and determine if insulation stops and/or backnailing is required by warranty supplier based on system being installed.
 - 4. Prior to installing insulation, deck must be inspected and accepted by roofing contractor and roofing system warrantor.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Roofing contractor shall perform all other work of preparing deck. When insulation is applied, deck shall be dry and free of dew, frost, ice, and snow.

3.3 INSULATION INSTALLATION

- A. Comply with roofing system manufacturer's written instructions for installing roof insulation.
- B. Insulation Cant Strips: Install and secure preformed 45-degree insulation cant strips at junctures of roofing membrane system with vertical surfaces or angle changes more than 45 degrees.
- C. All boards installed shall be 18 inches in length or width, minimum.
- D. Nailer Strips: If warranty supplier requires backnailing of the plies due to slope, wood insulation stops or nailers shall be provided.

1. Wood nailer thickness shall be equal to insulation thickness with smooth transition.
 2. Spacing of the wood nailers shall not exceed the recommendations of the warranty supplier.
- E. Install tapered insulation under area of roofing to conform to slopes indicated.
- F. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with insulation.
1. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
- G. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches or more, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches in each direction.
- H. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
- I. Install tapered edge strips at perimeter edges of roof that do not terminate at vertical surfaces.
- J. Adhered Insulation: Install each layer of insulation and adhere to substrate as follows:
1. Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
- K. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints a minimum of 6 inches in each direction from joints of insulation below. Loosely butt cover boards together and Tape joints if required by roofing system manufacturer.
1. Set each subsequent layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
- 3.4 PROTECTING AND CLEANING
- A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 072113

SECTION 075105-ROOF WARRANTY

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. Roof supplier's roof warranty.
 - 2. Installer's special roof warranty.

1.3 WARRANTY

- A. Quotations will include a price for a 25 year no dollar limit, non-prorated warranty to be provided by the material supplier. If the supplier is a subsidiary company, the warranty must be issued by the parent company.
- B. The material supplier will issue the warranty to the owner upon material supplier acceptance of the project completion and full payment of all bills related to the project.
- C. Warranty supplier shall, as part of the warranty, provide one (1) maintenance visit within the first two (2) years of the warranty period. Each maintenance visit will include Inspections, Housekeeping, Routine Maintenance and Preventive Maintenance as described below:
 - 1. General: All repairs will follow the manufacturer's written repair and maintenance guidelines or NRCA recommended repair procedure.
 - 2. Debris
 - a. A complete walkover of the existing roof areas to determine the immediate surface conditions of the roof.
 - b. Removal of all naturally occurring debris (i.e., leaves, branches, paper and similar items) from the roof membrane.
 - c. Service will include removal of surface debris from the roof drains, gutters, and scuppers, but not clogged piped or plumbing.
 - d. All debris will be disposed of at the owner's approved site location.
 - 3. Terminations and Flashing
 - a. Sealant voids in termination bars, counter flashings and parapet caps will be cleaned and resealed as required.
 - b. Exposed fasteners will be resealed on perimeter metal details where required.
 - c. All pitch pans will be refilled and topped off as required.
 - d. Metal projections (hoods and clamps) will be checked and resealed.
 - e. Soil stack leads will be inspected for cuts or holed and temporarily resealed when required with appropriate materials until arrangements can be made for permanent repair.

- f. Re-secure loose metal coping caps, termination bars, counter flashings and metal edge systems where required with appropriate fasteners.
4. Membrane
- a. Tears, splits and breaks in the perimeter and internal membrane flashing systems and flashing strip-ins will be repaired with appropriate repair materials.
 - b. Visible membrane defects which may allow water into the roofing system will be repaired with appropriate repair materials.
 - c. Drains and Gutters.
 - d. Check and re-secure drain bolts and clamping rings.
 - e. Check strip-in around drain leads, coat with approved mastics if required.
 - f. Reattach loose gutter straps, seal open gutter joints, and repair gutter strip-ins where required.
 - g. Check scupper boxes for open solder or caulking and seal with appropriate materials if required.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 SPECIAL PROJECT WARRANTY

- A. Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of built-up roofing such as built-up roofing membrane, base flashing, roof insulation, fasteners, cover boards, substrate boards, vapor retarders, roof pavers, and walkway products, for the following warranty period:
- B. Warranty Period: Five (5) years from date of Substantial Completion.
- C. ROOFING INSTALLER'S WARRANTY
- D. WHEREAS _____ of _____, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
 - 1. Owner: Union County Department of Engineering
 - 2. Address: 2325 South Avenue Scotch Plains, NJ 07076
 - 3. Building Name/Type: Union County New Annex Courthouse
 - 4. Address: 9 Elizabethtown Plaza Elizabeth, NJ 07201
 - 5. Area of Work: Upper Penthouse Roof – Lower Roof
 - 6. Acceptance Date: _____.
 - 7. Warranty Period: 25
 - 8. Expiration Date: _____.
- E. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- F. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.

G. This Warranty is made subject to the following terms and conditions:

1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
 - a. lightning;
 - b. peak gust wind speed exceeding 72 mph;
 - c. fire;
 - d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
 - e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
 - f. vapor condensation on bottom of roofing; and
 - g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

H. IN WITNESS THEREOF, this instrument has been duly executed this _____ day of _____, _____.

1. Authorized Signature: _____.
2. Name: _____.
3. Title: _____.

END OF SECTION 075105

SECTION 075216 - STYRENE-BUTADIENE-STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 3 - GENERAL

3.1 SUMMARY

- A. Section Includes:
- 1) Cold process built-up roofing.

3.2 RELATED DOCUMENTS

- A. Related Requirements:
1. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers, curbs, and blocking.
 2. Division 07 Section "Roof Warranty" for manufacturer and installer warranty requirements.
 3. Division 07 Section "Roof and Deck Insulation" for insulation.
 4. Division 07 Sections "Manufactured Gravel Stop Fascia System" and "Manufactured Copings" for factory fabricated roofing accessories.
 5. Division 07 Section "Joint Sealants" for joint sealants, joint fillers, and joint preparation.
 6. Division 22 Section for roof drains.

3.3 DEFINITIONS

- A. Roofing Terminology: Definitions in ASTM D1079 and glossary of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to Work of this Section.

1. PERFORMANCE REQUIREMENTS

- A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by membrane roofing manufacturer based on testing and field experience.
- C. Roofing System Design: Tested by a qualified testing agency to resist the following uplift pressures:
1. Corner Uplift Pressure: 138.3 lbf/sq. ft. (kPa/sq. m).
 2. Perimeter Uplift Pressure: 101.5 lbf/sq. ft. (kPa/sq. m).
 3. Field-of-Roof Uplift Pressure: 64.7 lbf/sq. ft. (kPa/sq. m).
- E. Exterior Fire-Test Exposure: ASTM E 108 or UL 790, Class A for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

- F. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated. Identify products with appropriate markings of applicable testing agency.

3.4 PREINSTALLATION MEETINGS

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
 - 1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, air barrier Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 - 3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 - 5. Review structural loading limitations of roof deck during and after roofing.
 - 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.
 - 7. Review temporary protection requirements for roofing system during and after installation.
 - 8. Review roof observation and repair procedures after roofing installation.

3.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. For insulation and roof system component fasteners, include copy of FM Approvals' RoofNav listing.
- B. Shop Drawings: Include plans, sections, details, and attachments to other work, including the following:
 - 1. Base flashings and membrane terminations.
 - 2. Flashing details at penetrations.
- C. Wind Uplift Resistance Submittal: For roofing system indicating compliance with wind uplift performance requirements.

3.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer manufacturer.
- B. Field Test Reports:
 - 1. Concrete internal relative humidity test reports.
 - 2. Fastener-pullout test results and manufacturer's revised requirements for fastener patterns.

3.7 QUALITY ASSURANCE

- G. **Manufacturer Qualifications:** A qualified manufacturer that has UL listed or FM Approvals for membrane roofing system consistent to that used for this Project.
- H. **Installer Qualifications:** A qualified firm that is approved, authorized, or licensed by membrane roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
- I. **Source Limitations:** Obtain components including roof insulation, fasteners, adhesive, and etc. as approved by membrane roofing manufacturer.
- J. **Preliminary Roofing Conference:** Before starting roof deck construction, conduct conference at Project site. Provide at least 72 hours advance notice to participants prior to convening the preliminary roofing conference. Record discussions and agreements and furnish a copy to each participant.
 - 1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
 - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 - 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review deck substrate requirements for conditions and finishes, including flatness and fastening.
 - 5. Review structural loading limitations of roof deck during and after roofing.
 - 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 - 7. Review governing regulations and requirements for insurance and certificates if applicable.
 - 8. Review temporary protection requirements for roofing system during and after installation.
 - 9. Review roof observation and repair procedures after roofing installation.
 - 10. Manufacturer shall provide, at no additional expenses to the Owner, on-site inspection, by the roofing manufacturer's representative, at a minimum of everyday of application to ensure that the roofing is installed as specified. Written reports are to be submitted with pictures to the Architect indicating progress of the Work and conformance to the Contract Documents and manufacturer's best recommended practice. Keep architect informed as to the progress and quality of the work. Report to the architect any refusal by the contractor to correct unacceptable work. confirm upon completion to the architect that manufacturer has observed the application of the roof system and no procedures varied from the design of the architect. Notify architect of any proposed changes. Manufacturer shall attend all required progress meetings.

3.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer.
 - 1. Protect stored liquid material from direct sunlight.
 - 2. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.

- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources.
 - 1. Store in a dry location.
 - 2. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials, and place equipment in a manner to avoid permanent deflection of deck.

3.9 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

2. WARRANTY

- A. Roof Warranty: Refer to Division 07 Section "Warranty."

PART 4 - PRODUCTS

4.1 MANUFACTURER

- A. Basis-of-Design Product: The design for styrene-butadiene-styrene (SBS) modified bituminous membrane roofing and the products specified herein are based on a system manufactured by SR Products. Subject to compliance with requirements, provide the named products or comparable products by an approved equal manufacturer:

4.2 MULTI-PLY ROOFING MATERIALS

4.3 BASE-SHEET MATERIALS

- A. Roofing Ply Membrane Sheet: one ply, ASTM D 6162, 6163 and 6164, Grade S, Type I, II, or III, SBS-modified asphalt sheet (reinforced with polyester or fiberglass fabric; smooth surfaced; suitable for application method specified.
 - 1) PIKA PLY 180 (FS) – VAPOR BARRIER over primed roof deck.
- B. Base & Ply Sheet: ASTM D 4601, Type II nonperforated, asphalt-impregnated and coated, glass-fiber sheet, dusted with fine mineral surfacing on both sides.

- 1) MULTI-PLY GLASS CL

Property	Typical Value	Test Method
Weight (lb/100 ft ²)	33	ASTM D 4601
Thickness (mils)	60	ASTM D 146
Breaking Strength (lbf/in – width)	165 MD 155 XMD	ASTM D 146
Trapezoid Tear Strength (lbf)	30 MD	ASTM D 5733

	17 XMD	
Pliability (1/2" Radius)	Pass	ASTM D 146
Mass of Desaturated Glass/Polyesters Mat Reinforcement (lb/100ft ²)	2.5	ASTM D 4601
Asphalt (lb/100ft ²)	15	ASTM D 4601
Surfacing and Stabilizers (lb/100 ft ²)	14	ASTM D 4601
Moisture (%)	0	ASTM D 146
Fire Resistance	Pass, Class A	UL 790 / ASTM E 108
Asbestos Content, %	Zero	EPA 600/R-93/116

4.4 SBS-MODIFIED ROOFING MEMBRANE CAP SHEET

- A. Granule-Surface Roofing Membrane Cap Sheet – ASTM D 6162, 6163 or 6164 One Ply: Grade G, Type I, II, or III, SBS-modified asphalt sheet; granular surfaced; suitable for application method specified, and as follows:

1) PERFORMANCE PLY MS FR

Property	Typical Value	Test Method
Thickness, mil (mm)	160 (4.0)	ASTM D 5147/6164
Maximum Load, 73.4 ± 3.6°F (23 ± 2°C), lbf/in.	85 MD 65 XMD	ASTM D 5147/6164
Elongation at Maximum Load, 73.4 ± 3.6°F (23 ± 2°C), %	55 MD 55 XMD	ASTM D 5147/6164
Maximum Load, 0°F ± 3.6°F (-18 ± 2°C), lbf/in.	117 MD 83 XMD	ASTM D 5147/6164
Elongation at Maximum Load, 0°F ± 3.6°F (-18 ± 2°C), %	35 MD 40 XMD	ASTM D 5147/6164
Tear Strength, 73.4 ± 3.6°F (23 ± 2°C), lbf/in.	120 MD 87 XMD	ASTM D 5147/6164
Low Temperature Flexibility, °F	-15	ASTM D 5147/6164
Dimensional Stability, %	0.5	ASTM D 5147/6164
Compound Stability, °F	240	ASTM D 5147/6164
Granule Embedment (Grams Loss)	1.5	ASTM D 5147/6164
Net Mass per Unit Area, lb/100 ft ²	113	ASTM D 228
Solar Reflectance (Initial)	0.26	ASTM C 1549
Emissivity (Initial)	0.87	ASTM C 1371
Compatibility of Coating with ASTM D 312 Asphalt	Oliensis Test (No Exudate)	ASTM D 1370
Asbestos Content, %	Zero	EPA 600/R-93/116
Fire Resistance	Pass, Class A	UL 790 / ASTM E 108

4.5 BASE FLASHING SHEET MATERIALS

- A. Backer Sheet: Polymer modified, fully coated asphalt sheet (reinforced with polyester fabric, or fiberglass/polyester combination reinforcement); smooth surfaced; suitable for application method specified.

2. MULTI-PLY GLASS CL

Property	Typical Value	Test Method
Weight (lb/100 ft ²)	33	ASTM D 4601
Thickness (mils)	60	ASTM D 146
Breaking Strength (lbf/in – width)	165 MD	ASTM D 146

	155 XMD	
Trapezoid Tear Strength (lbf)	30 MD	ASTM D 5733
	17 XMD	
Pliability (1/2" Radius)	Pass	ASTM D 146
Mass of Desaturated Glass/Polyesters Mat Reinforcement (lb/100ft ²)	2.5	ASTM D 4601
Asphalt (lb/100ft ²)	15	ASTM D 4601
Surfacing and Stabilizers (lb/100 ft ²)	14	ASTM D 4601
Moisture (%)	0	ASTM D 146
Fire Resistance	Pass, Class A	UL 790 / ASTM E 108
Asbestos Content, %	Zero	EPA 600/R-93/116

- B. Granule-Surfaced Flashing Sheet – ASTM D 6162, 6163 or 6164 One Ply: Grade G, Type I, II, or III, SBS-modified asphalt sheet; granular surfaced; suitable for application method specified, and as follows:

1) PERFORMANCE PLY MS FR

Property	Typical Value	Test Method
Thickness, mil (mm)	160 (4.0)	ASTM D 5147/6164
Maximum Load, 73.4 ± 3.6°F (23 ± 2°C), lbf/in.	85 MD 65 XMD	ASTM D 5147/6164
Elongation at Maximum Load, 73.4 ± 3.6°F (23 ± 2°C), %	55 MD 55 XMD	ASTM D 5147/6164
Maximum Load, 0°F ± 3.6°F (-18 ± 2°C), lbf/in.	117 MD 83 XMD	ASTM D 5147/6164
Elongation at Maximum Load, 0°F ± 3.6°F (-18 ± 2°C), %	35 MD 40 XMD	ASTM D 5147/6164
Tear Strength, 73.4 ± 3.6°F (23 ± 2°C), lbf/in.	120 MD 87 XMD	ASTM D 5147/6164
Low Temperature Flexibility, °F	-15	ASTM D 5147/6164
Dimensional Stability, %	0.5	ASTM D 5147/6164
Compound Stability, °F	240	ASTM D 5147/6164
Granule Embedment (Grams Loss)	1.5	ASTM D 5147/6164
Net Mass per Unit Area, lb/100 ft ²	113	ASTM D 228
Solar Reflectance (Initial)	0.26	ASTM C 1549
Emissivity (Initial)	0.87	ASTM C 1371
Compatibility of Coating with ASTM D 312 Asphalt	Oliensis Test (No Exudate)	ASTM D 1370
Asbestos Content, %	Zero	EPA 600/R-93/116
Fire Resistance	Pass, Class A	UL 790 / ASTM E 108

4.6 COLD PROCESS MEMBRANE INTERPLY ADHESIVE

- A. Single Component compound, as recommended by roofing system manufacturer for application.

2. MULTI-PLY ADHESIVE SF

Property	Typical Value	Test Method
Asbestos Content, %	0	EPA 600/R-93/116
Uniformity	Pass	ASTM D 4479
Elongation	185%	ASTM D 2370
Solids by Weight	98.5%	ASTM D 4479
Density	10.3 lbs/gal.	ASTM D 1475
Viscosity	20,000 – 25,000 cps	ASTM D 2196

Flash Point	300°F minimum	ASTM D 93
VOC	12 g/l	ASTM D 6511
Low Temperature Flexibility	-40°F	ASTM D 3111
Fire Resistance	Pass	ASTM D 108 / UL 790

4.7 AUXILIARY BUILT-UP ROOFING MATERIALS

A. General: Auxiliary materials recommended by roofing manufacturer for intended use and compatible with built-up roofing.

1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.

B. Asphalt Roofing Mastic: ASTM D 4586, asbestos free.

1. RMA MASTIC

Property	Typical Value	Test Method
Percent Solids by Weight	71%	ASTM D 4586
Percent Solids by Volume	65%	ASTM D 4586
Weight per Gallon, Pounds	8.45	ASTM D 4586
Flash Point – minimum, °F	105	ASTM D 4586
Viscosity @ 77°F	425,000 cps	ASTM D 4586
Long-Term Service Temperature	-60°F to +160°F	ASTM D 4586
Water Resistance, Intermittent Exposure	Excellent	ASTM D 4586
Water Resistance, Pondered	Good	ASTM D 4586
UV Resistance	Good	ASTM D 4586
Solvent Resistance	Poor	ASTM D 4586
VOC	<300 g/l	ASTM D 4586

2. RMA ELASTIC

Property	Typical Value	Test Method
Percent Solids by Weight	78%	ASTM D 4586
Percent Solids by Volume	70%	ASTM D 4586
Weight per Gallon	9.6 lbs	ASTM D 4586
Flash Point (Seta C. C.)	105°F	ASTM D 4586
Viscosity @ 77°F	640,000 cPs	ASTM D 4586
Long-Term Service Temperature	-60°F to +160°F	ASTM D 4586
Water Resistance, Intermittent Exposure	Excellent	ASTM D 4586
Water Resistance, Pondered	Fair	ASTM D 4586
UV Resistance	Excellent	ASTM D 4586

C. Asphalt/Urethane Solvent Free Trowel Grade Mastic:

1. DETAIL MASTIC SF

Property	Typical Value	Test Method
Asbestos Content	0%	EPA 600/R-93/116
Uniformity	Pass	ASTM D 4479
Elongation	185%	ASTM D 2370
Solids by Weight	98.5%	ASTM D 4479
Density	9.0 lbs/gal.	ASTM D 1475
Viscosity	50,000 – 75,000 cps	ASTM D 2196

Flash Point	300°F minimum	ASTM D 93
VOC	20 g/l	ASTM D 6511

- C. Penetration Pocket Sealant: Pourable, elastomeric, one-component, coal tar urethane sealant.

1) PITCH PAN SEALER

Property	Typical Value	Test Method
Asbestos Content	0%	EPA 600/R-93/116
Uniformity	Pass	ASTM D 4479
Elongation	450%	ASTM D 2370
Solids by Weight	98.5%	ASTM D 4479
Density	10.6 lbs/gal.	ASTM D 1475
Viscosity	20,000 – 25,000 cps	ASTM D 2196
Flash Point	250°F minimum	ASTM D 93
VOC	25 g/l	ASTM D 6511

- D. Joint Sealant: Polyurethane; one component moisture cured, quick skin, rapid cure non-hardening, non-sagging complying with ASTM C920, Type S, Grade NS, Class 25, use NT, A, M, G and O.

1. SR SEALANT

Property	Typical Value	Test Method
Tensile Strength at 77°F (25°C)	250 psi	ASTM D-412
Movement Capability	± 25%	ASTM C-719
Rheological (sag in vertical displacement) at 120°F (25°C)	No sag	ASTM C-639
Bond Durability (± 25% movement) on Glass, Aluminum or Concrete	No failure	ASTM C-719
Cure Time at 77°F (25°C); 50% R.H.	4-7 days	Observed
Elongation (%)	500%	ASTM D-412
Shrinkage	Negligible	Observed
Hardness (Shore A)	25 ± 5	ASTM D-2240
V.O.C. Content	30g/liter	ASTM D-2369-98
Tack Free Time at 77°F (25°C); 50% R.H.	16-24 hours	Fed. Spec. TT-S-230c

- E. Roofing Granules: Ceramic-coated roofing granules, No. 11 screen size with 100 percent passing No. 8 (2.36-mm) sieve and 98 percent of mass retained on No. 40 (0.425-mm) sieve, color to match roofing membrane.
- F. Aggregate Surfacing: ASTM D 1863, No. 6 or No. 67, clean, dry, opaque, water-worn gravel or crushed stone, free of sharp edges.
- G. Miscellaneous Accessories: Provide those recommended by roofing system manufacturer.

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 the Work.
1. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.

2. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions.

1. Remove sharp projections.

B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction.

1. Remove roof-drain plugs when no work is taking place or when rain is forecast.

3.3 INSTALLATION OF ROOFING, GENERAL

A. Install roofing membrane system according to roofing system manufacturer's written instructions and applicable recommendations in ARMA/NRCA's "Quality Control Guidelines for the Application of Polymer Modified Bitumen Roofing".

B. Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.

C. Coordinate installation of roofing system so insulation and other components of the roofing membrane system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.

1. At end of each day's work, provide tie-offs to cover exposed roofing membrane sheets and insulation with a course of coated felt set in roofing mastic or hot roofing asphalt, with joints and edges sealed.

2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system.

3. Remove and discard temporary seals before beginning work on adjoining roofing.

D. Substrate-Joint Penetrations: Prevent roofing asphalt and adhesives from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.

E. Membrane installation further requirements:

1. Place ply sheets to ensure water will flow over or parallel to, but never against, exposed edges.

2. Ply should never touch ply even at roof edges, laps, tapered edge strips, and cants.

3. Avoid excessive application of asphalt adhesive over top ply, leave top ply exposed with minimal asphalt at ply lines.

4. Light brooming or squeegeeing may be required to aid adhesion of ply sheets, base sheets, and/or cap sheets.

5. Avoid traffic on all newly installed membrane.

6. Overlap previous day's work 24 inches.

7. Lap ply sheet ends six inches. Stagger end laps twelve inches minimum.

8. Fit plies into roof drain rims, install metal flashing and finishing plies, secure clamping collars, and install domes.
9. Cut out fish mouths/side laps that are not completely sealed. Replace all sheets that are not fully and continuously bonded.
10. Roof is to be inspected and approved by representative from roof system warrantor before application of surfacing.
11. Follow warranty supplier's recommendations for backnailing requirements.

F. Daily Water stop/Tie-Ins

1. Install "Deadman" insulation filler at insulation staggers.
2. Extend roofing plies at least twelve inches onto prepared area of adjacent roofing. Embed plies into Specified Interply Adhesive. Strip edges with twelve-inch-wide ply sheet embedded completely in alternate uniform courses of Specified Interply Adhesive.
3. At beginning of next day's work, remove temporary connection by cutting felts evenly along edge of existing roof system. Remove "Deadman" insulation fillers.

3.4 INSTALLATION OF BASE SHEET

- A. Install lapped base-sheet course, extending sheet over and terminating beyond cants. Attach base sheet as follows:
1. Torched to substrate.

3.5 INSTALLATION OF SBS-MODIFIED BITUMINOUS

- A. Install modified bituminous roofing membrane sheet and cap sheet according to roofing manufacturer's written instructions, starting at low point of roofing system. Extend roofing membrane sheets over and terminate beyond cants, installing as follows:
1. Adhere to substrate in a full application of specified adhesive at the rate required by product data sheet.
 2. Unroll roofing membrane sheets and allow them to relax for minimum time period required by manufacturer.
 3. Install specified membrane as starter strips at all edges, perimeters, transitions, around equipment curbs, and penetrations, and drains, a minimum of 18" width from the top of the cant strip or from the edge on to the roof in specified ply adhesive.
- B. Laps: Accurately align roofing membrane sheets, without stretching, and maintain uniform side and end laps. Stagger end laps. Completely bond and seal laps, leaving no voids.
1. Repair tears and voids in laps and lapped seams not completely sealed.
 2. Apply roofing granules to cover exuded bead at laps while bead is hot.
- C. Install roofing membrane sheets so side and end laps shed water.

3.6 INSTALLATION OF FLASHING AND STRIPPING

- A. Install base flashing over cant strips and other sloped and vertical surfaces, at roof edges, and at penetrations through roof; secure to substrates according to roofing system manufacturer's written instructions, and as follows:

1. Prime substrates with asphalt primer if required by roofing system manufacturer.
 2. Backer Sheet Application: Adhere backer sheet to substrate in asphalt roofing mastic at rate required by roofing system manufacturer.
 3. Flashing Sheet Application: Adhere flashing sheet to substrate in asphalt roofing mastic at rate required by roofing system manufacturer.
 4. Liquid Applied: Three Coats, apply base coat and embed fabric at rate required by roofing system manufacturer, apply topcoat at rate required by roofing system manufacturer.
- B. Additional instructions for mineral surface flashing cap.
1. Snap a chalk line 6" from the toe of cant out onto roof membrane.
 2. Measure the distance from the chalk line up the wall to where flashing will be terminated. On sloped roofs, take two measurements 1 meter (39") apart.
 3. Measure down length of a roll of specified membrane, and cut, in cross machine direction, a section same length. If roof is sloped, start at the bottom, and transfer height measurement to cutting of the flashing cap. Each section is 1 meter (39") in width.
 4. The joints of the membrane covering the deck should be staggered so that the membranes covering the vertical face of the parapet or curb do not coincide with those covering the deck.
 5. Starting at the low end of the area being flashed, apply section in specified adhesive using a strapping method, overlapping the exposed smooth selvage with each new section. Bottom of flashing cap must be lined up 6" from toe of cant, on chalk line.
 6. The salvage of the last section should be cut flush to the mineral surface prior to the application, ensuring that total flashing surface is mineral surfaced.
 7. All areas where excessive adhesive is exposed on side laps may be coated with specified heat reflective coating or granules sprinkled in as flashing sections are installed.
- C. Extend base flashing up walls or parapets a minimum of 8 inches (200 mm) above roofing membrane and a maximum of 14 inches above finished roof, and 4 inches (100 mm) onto field of roofing membrane.
- D. Mechanically fasten top of base flashing securely at terminations and perimeter of roofing, fasten minimum of 8 inches on center.
1. Seal top termination of base flashing with a strip of glass-fiber fabric set in asphalt roofing mastic.
- E. Install specified counter flashing system as per detail drawings.
- F. Install roofing membrane cap-sheet stripping where metal flanges and edgings are set on membrane roofing according to roofing system manufacturer's written instructions.
- G. Flashing at Single and Multiple Penetrations-Small Pipes and Conduits.
1. Remove existing pitch pans.
 2. Install new insulation and roofing membrane system.
 3. Apply 1/16 inch uniformly thick layer of asphalt mastic to surface receiving metal flange.
 4. Install specified pitch pan(s) around penetration(s).
 5. Prime metal flange, projection, and pitch pan interior with asphalt primer. Do not prime pan interior or projection if urethane pitch pocket sealant is used.
 6. Seal flange with two strips of polyester roofing ply embedded between alternate spreads of membrane adhesive. Extend first ply two inches beyond flange, second ply two inches beyond first ply.
 7. Fill to pitch pan 3/4" from top with non-shrink grout, allow to set up.
 8. Seal top with specified pitch pan sealant.
 9. All penetrations will receive a bonnet or watershed as shown in detail drawings.

H. Flashing at Plumbing Vents.

1. Remove existing stack flashing.
2. Wedge plumbing vent tight against deck.
3. Fabricate and install plumbing vent flashing from specified lead.
 - . Flange, six inches wide minimum, extend completely around periphery of vent flashing. Set flange into asphalt mastic. Neatly dress flange with wood block.
 - a. Pipe outside diameters greater than two inches: Bend lead inside pipe one inch minimum with rubber/plastic mallet. Replace cracked lead.
 - b. Pipe outside diameters two inches or less: Cut lead at vent top. Fabricate and install integral lead cap.
 - c. Prime metal flange with asphalt primer and allow to dry.
 - d. Apply flashing adhesive on metal flange and onto roof.
 - e. Flash with three targets of flashing base ply felt, four, eight, and twelve inches larger than lead flange.

I. Flashing at Equipment Stands – “I” Beams and Angle Irons.

1. Remove existing flashing. Weld 1/4-inch plate steel (where required) to open portion of beam. Slope to shed water away from I-beam. Fill beam interior below sloped plate to roof deck with batt insulation. Install vertical and horizontal sections of wood blocking around column. Blocking height to be a minimum of 8 inches above final insulation surface. Provide tapered edge strip and cant around stand. Mechanically attach to deck, miter corners.
2. Install new roofing two inches beyond top edge of cant. Adhere base ply(s) of specified flashing membrane. Overlap section four inches. Extend flashing ply four inches beyond toe of cant.
3. Install top ply of specified flashing membrane over the base ply, extend six inches beyond base flashing ply. Mechanically fasten top of flashing to substrate with one inch cap nails eight inches o.c. Adhere flashing tape, to vertical flange of welded plate and around entire column. Surface flashing with specified reflective coating (if specified).
4. Fabricate and install new aluminum counterflashing. Mechanically fasten counterflashing to structural beam with compatible bar/fasteners. Extend counterflashing two inches below top of base flashing. Wipe clean top surface of counterflashing with metal cleaner. Caulk top of counterflashing, provide watershed, and tool neatly. Paint exposed installed steel with specified reflective coating.

J. Flashing at Expansion Joints, Roof Dividers, and Coping.

1. Install new wood blocking at flashing base. Provide tapered edge strip over installed insulation at blocking edge. Firmly butt tapered edge strip to blocking. Edge strip shall be properly adhered or attached to the substrate.
2. Properly adhere or attach cant strip securely to substrate and blocking.
3. Extend new roofing at least two inches beyond top edge of cant.
4. Adhere flashing base ply(s) and top ply to flashing substrate in a continuous application of flashing adhesive. Remove wrinkles and voids. Overlap sections four inches. Extend flashing ply four inches beyond toe of cant, and top ply four inches beyond toe of base ply.
5. Expansion Joints shall receive the following:
 - . Install vinyl water barrier over joint opening. Allow barrier to drape four inches within joint opening. Nail both sides of barrier eight inches o.c.
 - a. Insert fiberglass batt insulation into expansion joint opening; fill entire opening.
6. Install flashing as specified.

7. Install joint cover as shown on detail drawing.

K. Flashing at Scuppers.

1. Remove existing scupper liners and membrane to wood blocking.
2. Replace rotted and untreated blocking as needed and approved by owner's representative with new, treated wood blocking.
3. Install base membrane over wood blocking, into the port and out onto the roof 2 feet in all directions, set in a bed of asphalt mastic.
4. Install pre-manufactured scupper.
5. Install scupper head below outside of port and new downspouts.
6. Prime metal surfaces to receive membrane plies and allow to dry.
7. Solidly adhere roof membrane plies completely to stripping plies, scupper flanges, cant, and port, progressing plies 1-2" further than previous applied ply.
8. Wall flashings shall extend over flanges and roof membrane out 6" past cant.

L. Flashing at Gravel Stops, Drip Edges, and Fascia.

1. Remove existing edge flashing system to wood blocking.
2. Replace rotted blocking as needed and approved by building owner's representative.
3. Provide tapered edge strip along gravel stop, over installed insulation at blocking edge. Firmly butt tapered edge strip to blocking. Fully adhere edge strip to insulation.
4. Solidly adhere roof membrane plies completely to insulation and blocking. Envelope felts. Ensure complete bond and continuity without wrinkles or voids.
5. Install fascia system and stripping plies according to detail drawings.
6. Install new downspouts at spill-out scupper locations. Dimensions to match existing.

M. Flashing at Edge/Gutters.

1. Remove existing edge flashing, gutters and downspouts.
2. Replace rotted blocking as needed and approved by building owner's representative. Install insulation firmly butting against wood blocking.
3. Solidly adhere roofing membrane plies completely to insulation blocking. Ensure complete bond and continuity without wrinkles or voids. Envelope felts.
4. Fabricate and install new edge/gutter with outlet tubes. Locate outlet tubes in original position. Slope gutter to outlets.
5. Install gutter support system.
6. Provide gutter expansion joints every 30 feet.
7. Fasten and strip-in drip edge flange according to detail drawing.
8. Install new downspouts. Dimensions to match existing.

- N. Roof Drains: Set 30-by-30-inch- (760-by-760-mm-) square metal flashing in bed of asphalt roofing mastic on completed roofing membrane. Cover metal flashing with roofing membrane cap-sheet stripping and extend a minimum of 6 inches (150 mm) beyond edge of metal flashing onto field of roofing membrane. Clamp roofing membrane, metal flashing, and stripping into roof-drain clamping ring. Refer to Section 22146 – Roof Drains for further information.

3.7 FIELD QUALITY CONTROL

- C. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.

1. Notify Architect and Owner 48 hours in advance of date and time of inspection.

- D. Test Cuts: Remove test specimens to evaluate problems observed during quality-assurance inspections of roofing membrane as follows:
 - 1. Determine approximate quantities of components within roofing membrane according to ASTM D3617.
 - 2. Examine test specimens for interply voids according to ASTM D3617 and to comply with criteria established in Appendix 3 of ARMA/NRCA's "Quality Control Guidelines for the Application of Polymer Modified Bitumen Roofing."
 - 3. Repair areas where test cuts were made according to roofing system manufacturer's written instructions.
 - E. Repair or remove and replace components of roofing system where inspections indicate that they do not comply with specified requirements.
 - F. Roofing system will be considered defective if it does not pass tests and inspections.
 - 1. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.
- 3.8 PROTECTING AND CLEANING
- A. Protect roofing system from damage and wear during remainder of construction period.
 - B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
 - C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075216

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 the following:
 - 1. Formed sheet metal work for flashing and insulated expansion joint covers are specified in this section.

1.3 UNIT PRICES

- A. Provide a Unit Price for the following:
 - 1. Unit Price No. 1: Install a two-piece reglet and counterflashing at the base of the rooftop penthouse wall as indicated on contract drawing A-103, and as specified herein. Unit of measurement shall be in linear feet. Refer to Division 00- Section "012200- Unit Prices".

1.4 RELATED REQUIREMENTS:

- A. Division 06 Section "Miscellaneous Rough Carpentry" for wood nailers, curbs, and blocking.
- B. Composition base flashings and stripping in metal roof flanges:
 - 1. Section 075216 - STYRENE-BUTADIENE-STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING.
- C. Flashing of Roof Drains:
 - 1. Section 221426 - ROOF DRAINS.

1.5 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies as indicated 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. FM Approvals' Listing: Manufacture and install roof-edge flashings that are listed in FM Approvals' "RoofNav" and approved for windstorm classification. Identify materials with FM Approvals' markings. Wind Load: Total roof system installation, including Sheet Metal Flashing and Trim Work, shall be in conformance with FM 4450, FM 4470, UL 580 or UL 1890.
- C. Fabricate and install roof edge flashing capable of resisting forces according to recommendations in FMG Loss Prevention Data Sheet 1-49 applicable to the Project site location.

- D. SPRI Wind Design Standard: Manufacture and install roof-edge flashings tested according to SPRI ES-1 and capable of resisting the following design pressures:
 - 1. Design Pressure: Per IBC-2015.
- E. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F , ambient; 180 deg F, material surfaces.
- F. Comply with Applicable Requirements of the following:
 - 1. Class 1-90 Rating: Provide Roof Specialties Work in conformance with Class 1-90 requirements and coordinated with built-up roofing system and component materials which have been evaluated by an accredited test laboratory to have a Class 1-90 rating.

1.6 SUBMITTALS

- A. Product Data: Submit manufacturer's material and finish data, product specifications, installation instructions and general recommendations for each specified sheet and flashing material and fabricated product.
- B. Shop Drawings: Show installation layouts of sheet metal flashing and trim, including plans, elevations, profiles, expansion-joint systems and locations, anchoring methods, keyed details, relationships to adjacent construction and materials, etc. Distinguish between shop- and field-assembled work.
 - 1. Flashings.
 - 2. Copings.
 - 3. Gravel Stop-Fascia.
 - 4. Gutter and Conductors.
 - 5. Expansion joints.
 - 6. Fascia-cant.
 - 7. Manufacturer's Literature and Data.
 - 8. Two-piece counterflashing.
 - 9. Thru wall flashing.
 - 10. Expansion joint cover, each type.
 - 11. Non-reinforced, elastomeric sheeting.
 - 12. Copper clad stainless steel.
 - 13. Polyethylene coated copper.
 - 14. Bituminous coated copper.
 - 15. Copper covered paper.
 - 16. Fascia-cant.
- A. Qualification Data: For qualified fabricator.
- B. Maintenance Data: For sheet metal flashing, trim, and accessories to include in maintenance manuals.

1.7 APPLICABLE PUBLICATIONS

- A. The publications listed below for a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American Society for Testing and Materials (ASTM):
1. A167-99(R 2004): Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip
 2. A653/A653M-05: Steel Sheet Zinc-Coated (Galvanized) or Zinc Alloy Coated (Galvanized) by the Hot- Dip Process
 3. B32-04: Solder Metal
 4. B209-04: Aluminum and Aluminum-Alloy Sheet and Plate
 5. B370-03: Copper Sheet and Strip for Building Construction
 6. D173-03: Bitumen-Saturated Cotton Fabrics Used in Roofing and Waterproofing
 7. D412-98 (R2002): Vulcanized Rubber and Thermoplastic Elastomers-Tension
 8. D1187-97 (R2002): Asphalt Base Emulsions for Use as Protective Coatings for Metal
 9. D1784-03: Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
 10. D3656-04: Insect Screening and Louver Cloth Woven from Vinyl-Coated Glass Yarns
 11. D4586-00: Asphalt Roof Mastic, Asbestos Free
- C. American National Standards Institute/Single Ply Roofing Industry (ANSI/SPRI):
1. ES-1-2017: Test Standard for Edge Systems Used with Low Slope Roofing Systems
- D. Sheet Metal and Air Conditioning Contractors National Association (SMACNA): Architectural Sheet Metal Manual (Fifth Edition, 1993).
- E. National Association of Architectural Metal Manufacturers (NAAMM):
1. AMP 500 Series: Metal Finishes Manual
- F. American Architectural Manufacturers Association (AAMA):
1. 605-98: Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions Panels
- G. Federal Specification (Fed. Spec):
1. A-A-1925A: Shield, Expansion; (Nail Anchors)
 2. UU-B-790A: Building Paper, Vegetable Fiber
- H. International Building Code (IBC):
1. 2021 Edition

1.8 QUALITY ASSURANCES

- A. Fabricator Qualifications: Shop that 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.
- B. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless more stringent requirements are specified or shown on Drawings.
- C. SMACNA AND NRCA DETAILS: Conform work with details shown, and with fabrication requirements of "Architectural Sheet Metal Manual" by SMACNA. Comply with installation details of "Roofing and Waterproofing Manual" by NRCA.
- D. NRCA "Roofing and Waterproofing Manual", current edition. Material and installation specifications published by the insulation and membrane manufacturers.
- E. Class 1-90 Rating: Provide Sheet Metal Flashing and Trim Work in conformance with Class 1-90 requirements and coordinated with built-up roofing system and component materials which have been evaluated by an accredited test laboratory to have a Class 1-90 rating.
- F. Wind Load: Total roof system installation, including Sheet Metal Flashing and Trim Work, shall be in conformance with FM 4450, FM 4470, UL 580 or UL 1890.
- G. Fabricator Qualifications: Shop that 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.
- H. Installer Qualifications: Engage an experienced Installer who has completed sheet metal flashing and trim work similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
- I. Refer to Roofing Sections for requirements relating to single source responsibility for all roofing and sheet metal work, including guarantees and temporary protection. Sheet Metal Flashing and Trim work shall be in accordance with roofing system manufacturer's requirements so as not to void or compromise the roofing warranty.

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 the extent necessary for the period of sheet metal flashing and trim installation.

1.10 PROJECT CONDITIONS

- A. Coordinate work of this section with interfacing and adjoining work for proper sequencing of each installation. Ensure best possible weather resistance and durability of the work and protection of materials and finishes. Coordinate work with other Sections for material and finishes.

1.11 WARRANTY

- A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
- B. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

- A. Solder: ASTM B32; flux type and alloy composition as required for use with metals to be soldered.
- B. Stainless Steel: ASTM A167, Type 302 or 304, dead soft temper.
- C. Aluminum Sheet: ASTM B209, alloy 3003-H14. Except alloy used for color anodized aluminum shall be as required to produce specified color. Alloy required to produce specified color shall have the same structural properties as alloy 3003-H14.
- D. Galvanized Sheet: ASTM, A653.
- E. Nonreinforced, Elastomeric Sheeting: Elastomeric substances reduced to thermoplastic state and extruded into continuous homogenous sheet (0.056 inch) thick. Sheeting shall have not less than 7 MPa (1,000 psi) tensile strength and not more than seven percent tension-set at 50 percent elongation when tested in accordance with ASTM D412. Sheeting shall show no cracking or flaking when bent through 180 degrees over a 1/32-inch diameter mandrel and then bent at same point over same size mandrel in opposite direction through 360 degrees at temperature of -30°C (-20 °F).
- F. Rosin Paper: Fed-Spec. UU-B-790, Type I, Grade D, Style 1b, Rosin-sized sheathing paper, weighing approximately 6 lbs/100 sf.
- G. Bituminous Paint: ASTM D1187, Type I.
- H. Fasteners:
 - 1. Use stainless steel for stainless steel and aluminum alloy. Use galvanized steel or stainless steel for galvanized steel.
 - 2. Nails:
 - a. Minimum diameter for stainless steel nails: 0.095 inch and annular threaded.
 - b. Length to provide not less than 7/8" penetration into anchorage.

3. Rivets: Not less than 1/8 inch diameter.
4. Expansion Shields: Fed Spec A-A-1925A.

- I. Sealant: As specified in Section SEALANTS AND CAULKING for exterior locations.
- J. Insect Screening: ASTM D3656, 18 by 18 regular mesh.
- K. Roof Mastic: ASTM D4586.

2.5 SHEET METAL THICKNESS

- A. Except as otherwise shown or specified use thickness or weight of sheet metal as follows:
- B. Concealed Locations (Built into Construction):
 1. Stainless steel: 0.010 inch thick.
 2. Galvanized steel: 0.021 inch thick.
- C. Exposed Locations:
 1. Stainless steel: 0.015 inch.

2.6 FABRICATION

- A. Jointing:
 1. In general, copper, stainless steel and copper clad stainless-steel joints, except expansion and contraction joints, shall be locked and soldered.
 2. Jointing of stainless steel over 0.018 inch thick shall be done by lapping, riveting and soldering.
 3. Joints shall conform to following requirements:
 - a. Flat-lock joints shall finish not less than 3/4 inch wide.
 - b. Lap joints subject to stress shall finish not less than one inch wide and shall be soldered and riveted.
 - c. Unsoldered lap joints shall finish not less than 4 inches wide.
 4. Flat and lap joints shall be made in direction of flow.
 5. Edges of bituminous coated copper, copper covered paper, nonreinforced elastomeric sheeting and polyethylene coated copper shall be jointed by lapping not less than 4 inches in the direction of flow and cementing with asphalt roof cement or sealant as required by the manufacturer's printed instructions.
 6. Soldering:
 - a. Pre tin both mating surfaces with solder for a width not less than 1 1/2 inches of uncoated copper, stainless steel, and copper clad stainless steel.
 - b. Wire brush to produce a bright surface before soldering lead coated copper.

- c. Treat in accordance with metal producer's recommendations other sheet metal required to be soldered.
- d. Completely remove acid and flux after soldering is completed.

B. Expansion and Contraction Joints:

1. Fabricate in accordance with the Architectural Sheet Metal Manual recommendations for expansion and contraction of sheet metal work in continuous runs.
2. Space joints as shown or as specified.
3. Space expansion and contraction joints for copper, stainless steel, and copper clad stainless steel at intervals not exceeding 24 feet.
4. Space expansion and contraction joints for aluminum at intervals not exceeding 18 feet, except do not exceed 10 feet for gravel stops and fascia-cant systems.
5. Fabricate slip-type or loose locked joints and fill with sealant unless otherwise specified.
6. Fabricate joint covers of same thickness material as sheet metal served.

C. Cleats:

1. Fabricate cleats to secure flashings and sheet metal work over 12 inches wide and where specified.
2. Provide cleats for maximum spacing of 12-inch centers unless specified otherwise.
3. Form cleats of same metal and weights or thickness as the sheet metal being installed unless specified otherwise.
4. Fabricate cleats from 2-inch-wide strip. Form end with not less than 3/4-inch-wide loose lock to item for anchorage. Form other end of length to receive nails free of item to be anchored and end edge to be folded over and cover nail heads.

D. Edge Strips or Continuous Cleats:

1. Fabricate continuous edge strips where shown and specified to secure loose edges of the sheet metal work.
2. Except as otherwise specified, fabricate edge strips or minimum 0.050-inch-thick aluminum.
3. Use material compatible with sheet metal to be secured by the edge strip.
4. Fabricate in 10 feet maximum lengths with not less than 3/4 inch loose lock into metal secured by edge strip.
5. Fabricate Strips for fascia anchorage to extend below the supporting wood construction to form a drip and to allow the flashing to be hooked over the lower edge at least 3/4 inch.
6. Fabricate anchor edge maximum width of 3 inches or of sufficient width to provide adequate bearing area to ensure a rigid installation using 0.031-inch-thick stainless steel.

E. Drips:

1. Form drips at lower edge of sheet metal counter-flashings (cap flashings), fascias, gravel stops, wall copings, by folding edge back 1/2 inch and bending out 45 degrees from vertical to carry water away from the wall.
2. Form drip to provide hook to engage cleat or edge strip for fastening for not less than 3/4-inch loose lock where shown.

F. Edges:

1. Edges of flashings concealed in masonry joints opposite drain side shall be turned up 1/4 inch to form dam, unless otherwise specified or shown otherwise.
2. Finish exposed edges of flashing with a 1/4 inch hem formed by folding edge of flashing back on itself when not hooked to edge strip or cleat. Use 1/4 inch minimum penetration beyond wall face with drip for through-wall flashing exposed edge.
3. All metal roof edges shall meet requirements of IBC 2021.

2.7 THROUGH-WALL FLASHINGS

A. Form through-wall flashing to provide a mechanical bond or key against lateral movement in all directions. Install a sheet having 1/16-inch-deep transverse channels spaced four to every one inch, or ribbed diagonal pattern, or having other deformation unless specified otherwise.

1. Fabricate in not less than 8 feet lengths; 10 feet maximum lengths.
2. Fabricate so keying nests at overlaps.

B. For Masonry Work When Concealed Except for Drip:

1. Either copper, stainless steel, or copper clad stainless steel.
2. Form an integral dam at least 3/16 inch high at back edge.
3. Form exposed portions of flashing with drip, approximately 1/4-inch projection beyond wall face.

C. For Masonry Work When Exposed Edge Forms a Receiver for Counter Flashing:

1. Use same metal and thickness as counter flashing.
2. Form an integral dam at least 3/16 inch high at back edge.
3. Form exposed portion as snap lock receiver for counter flashing upper edge.

D. For Flashing at Architectural Precast Concrete Panels or Stone Panels.

1. Use plan flat sheet of stainless steel.
2. Form exposed portions with drip as specified or receiver.

E. Window sill Flashing and Lintel Flashing:

1. Use either copper, stainless steel, copper clad stainless steel plane flat sheet, or nonreinforced elastomeric sheeting, bituminous coated copper, copper covered paper, or polyethylene coated copper.
2. Fabricate flashing at ends with folded corners to turn up 3/16 inch in first vertical masonry joint beyond masonry opening.
3. Turn up back edge as shown.
4. Form exposed portion with drip as specified or receiver.

F. Door Sill Flashing:

1. Where concealed 0.018-inch-thick stainless steel.
2. Where shown on drawings as combined counter flashing under threshold, sill plate, door sill, or where subject to foot traffic, use 0.024 inch thick stainless steel.
3. Fabricate flashing at ends to turn up 3/16 inch in first vertical masonry joint beyond masonry opening with folded corners.

2.8 BASE FLASHING

- A. Use metal base flashing at vertical surfaces intersecting built-up roofing without cant strips or where shown.
 1. Use stainless steel, thickness specified unless specified otherwise.
 2. When flashing is over 10 inches in vertical height or horizontal width use 0.018-inch stainless steel.
 3. Use stainless steel at aluminum roof curbs where flashing contacts the aluminum.
 4. Use stainless steel at pipe flashings.
- B. Fabricate metal base flashing up vertical surfaces not less than 8 inch nor more than 16 inches.
- C. Fabricate roof flange not less than 4 inches wide unless shown otherwise. When base flashing length exceeds 8 feet form flange edge with 1/2-inch hem to receive cleats.
- D. Form base flashing bent from strip except pipe flashing. Fabricate ends for riveted soldered lap seam joints. Fabricate expansion joint ends as specified.
- E. Pipe Flashing: (Other than engine exhaust or flue stack)
 1. Fabricate roof flange not less than 4 inches beyond sleeve on all sides.
 2. Extend sleeve up and around pipe and flange out at bottom not less than 1/2 inch and solder to flange and sleeve seam to make watertight.
 3. At low pipes 8 inch to 18 inch above roof:
 - a. Form top of sleeve to turn down into the pipe at least one inch.
 - b. Allow for loose fit around and into the pipe.
 4. At high pipes and pipes with goosenecks or other obstructions which would prevent turning the flashing down into the pipe:
 - a. Extend sleeve up not less than 12 inch above roofing.
 - b. Allow for loose fit around pipe.

2.9 COUNTERFLASHING (CAP FLASHING OR HOODS)

- A. Aluminum, unless specified otherwise.
- B. Fabricate to lap base flashing a minimum of 4 inches with drip.
 1. Form lock seams for outside corners. Allow for lap joints at ends and inside corners.

2. In general, form flashing in lengths not less than 8 feet and not more than 10 feet.
 3. Two-piece, lock in type flashing may be used in lieu of one-piece counter-flashing.
 4. Manufactured assemblies may be used.
 5. Where counterflashing is installed at new work use an integral flange at the top designed to be extended into the masonry joint or reglet in concrete.
 6. Where counterflashing is installed at existing work use surface applied type, formed to provide a space for the application of sealant at the top edge.
- C. One-piece Counterflashing.
1. Back edge turned up and fabricate to lock into reglet in concrete.
 2. Upper edge formed to extend full depth of masonry unit in mortar joint with back edge turned up 1/4 inch.
- D. Two-Piece Counterflashing:
1. Receiver to extend into masonry wall depth of masonry unit with back edge turned up 1/4 inch and exposed edge designed to receive and lock counterflashing upper edge when inserted.
 2. Counterflashing upper edge designed to snap lock into receiver.
- E. Surface Mounted Counterflashing: one or two pieces:
1. Use at existing or new surfaces where flashing cannot be inserted in vertical surface.
 2. One piece fabricates upper edge folded double for 1 1/2 inches with top 3/4 inch bent out to form "V" joint sealant pocket with vertical surface. Perforate flat double area against vertical surface with horizontally slotted fastener holes at 16-inch centers between end holes. Option: One piece surface mounted counterflashing (cap flashing) may be used. Fabricate as detailed on Plate 51 of SMACNA Architectural Sheet Metal Manual.
 3. Two pieces: Fabricate upper edge to lock into surface mounted receiver. Fabricate receiver joint sealant pocket on upper edge and lower edge to receive counterflashing, with slotted fastener holes at 16-inch centers between upper and lower edge.
- F. Pipe Counterflashing:
1. Form flashing for water-tight umbrella with upper portion against pipe to receive a draw band and upper edge to form a "V" joint sealant receiver approximately 3/4 inch deep.
 2. Fabricate 4-inch overlap at end.
 3. Fabricate draw band of same metal as counter flashing. Use 0.013-inch-thick stainless steel.
 4. Use stainless steel bolt on draw band tightening assembly.
 5. Vent pipe counter flashing may be fabricated to omit draw band and turn down one inch inside vent pipe.
- G. Where vented edge decks intersect vertical surfaces, form in one piece, shape to slope down to a point level with and in front of edge-set notched plank; then, down vertically, overlapping base flashing.

2.10 GRAVEL STOPS

A. General:

1. Fabricate in lengths not less than 8 feet long and maximum of 10 feet.
2. Fabricate internal and external corners as one-piece with legs not less than 2 feet or more than 4 feet long.
3. Fabricate roof flange not less than 4 inches wide.
4. Fabricate top edge to extend above roof not less than one inch for embedded gravel aggregate and not less than 4 inches for loose laid ballast.
5. Fabricate lower edge outward at an angle of 45 degrees to form drip and as fascia or as counter flashing as shown.
 - a. Fabricate of one-piece material of suitable width for fascia height of 10 inch maximum or counterflashing lap of not less than 4 inch over base flashing.
 - b. Fabricate bottom edge of formed fascia to receive edge strip.
 - c. When fascia bottom edge forms counter flashing over roofing lap roofing not less than 6 inches.

B. Formed Flat Sheet Metal Gravel Stops and Fascia:

1. Fabricate as shown of 0.050 inch thick Prefinished Aluminum.
2. When fascia exceeds 6 inches in depth, form one or more horizontal stops not less than 1/2 inch high in the fascia.
3. Fabricate as two-piece fascia when fascia depth exceeds 10 inches.
4. At joint between ends of sheets, provide a concealed clip soldered or welded near one end of each sheet to hold the adjoining sheet in lapped position. The clip shall be approximately 4 inches wide and shall be the full depth of the fascia less one inch at top and bottom. Clip shall be of the same thickness as the fascia.
5. Provide edge strip as specified with lower hooked edge bent outward at an angle of 45 degrees.

2.11 BITUMEN STOPS

- A. Fabricate bitumen stops for bituminous roofing edges for use with formed sheet metal gravel stops, pipe penetrations, and other penetrations through roof deck without a curb.
- B. Fabricate with 3/4-inch vertical legs and 3 inch horizontal legs.
- C. When used with gravel stop or metal base flashing use same metal for bitumen stop in thickness specified for concealed locations.

2.12 COPINGS

- A. Fabricate of 0.050 inch thick aluminum sheets 8 to 10 feet long.
- B. Fabricate coping to profile shown.

- C. Use continuous edge strips with drips at bottom edges on exterior wall side. Use slotted holes for fasteners on roof wall side if continuous cleats or edge strips are not used.
- D. Form joints between sections with either alternate 4 or 5 as shown on plate 68, SMACNA, unless shown otherwise.
- E. Fabricate corners with mitered joints, locked and sealed if aluminum.
- F. Fabricate ends of coping terminating at vertical building surfaces to form a slot for the installation of sealant.
- G. Fabricate exterior ends of coping closures of same appearance as exterior wall side.

2.13 HANGING GUTTERS

- A. Fabricate gutters of not less than 0.051 inch thick Prefinished Aluminum.
- B. Fabricate hanging gutters in sections not less than 8 feet long, except at ends of runs where shorter lengths are required.
- C. Gutter Bead: Stiffen outer edge of gutter by folding edge over approximately 3/4 inch toward roof and down approximately 3/4 inch unless shown otherwise.
- D. Gutter Spacers:
 - 1. Fabricate of same material and thickness as gutter.
 - 2. Fabricate one-inch-wide strap and fasten to gutters not over 36 inches on center.
 - 3. Turn back edge up one inch and lap front edge over gutter bead.
 - 4. Rivet and solder to gutter except rivet and seal to aluminum.
- E. Outlet Tubes:
 - 1. Form outlet tubes to connect gutters to conductors of same metal and thickness as gutters extend into the conductor 3 inch. Flange upper end of outlet tube 1/2 inch.
 - 2. Lock and solder longitudinal seam except use sealant in lieu of solder with aluminum.
 - 3. Seal aluminum tube to gutter and rivet to gutter.
 - 4. Fabricate basket strainers of same material as gutters.
- F. Gutter Brackets:
 - 1. Fabricate of same metal as gutter. Use 1/8 by one 1/8 by 1 1/2 inch stainless steel.
 - 2. Fabricate to gutter profile.
 - 3. Drill two 3/16-inch diameter holes in anchor leg for countersunk flat head screws.

2.14 CONDUCTORS (DOWNSPOUTS)

- A. Fabricate conductors of same metal and thickness as gutters in sections approximately 10 feet long // with 3/4-inch-wide flat locked seams. // //Fabricate open face channel shape with hemmed longitudinal edges. //
- B. Fabricate elbows by mitering, riveting, and soldering except seal aluminum in lieu of solder. Lap upper section to the inside of the lower piece.
- C. Fabricate conductor brackets or hangers of same material as conductor, 1/16 inch thick by one-inch minimum width. Form to support conductors one inch from wall surface in accordance with Architectural Sheet Metal Manual Plate 34, Design C for rectangular shapes and E for round shapes.
- D. Conductor Heads:
 - 1. Fabricate of same material as conductor.
 - 2. Fabricate conductor heads to not less than 10 inch wide by 8 inch deep by 8 inches from front to back.
 - 3. Form front and side edges channel shape not less than 1/2-inch-wide flanges with edge hemmed.
 - 4. Slope bottom to sleeve to conductor or downspout at not less than 60-degree angle.
 - 5. Extend wall edge not less than one inch above front edge.
 - 6. Solder joints for watertight assembly.
 - 7. Fabricate outlet tube or sleeve at bottom not less than 2 inches long to insert into conductor.

2.15 SPLASHPANS

- A. Fabricate of 16 oz copper // 0.015-inch-thick stainless steel or 0.050 inch thick aluminum.
- B. Fabricate in accordance with Architectural Sheet Metal Manual Plate 35 with not less than two ribs as shown in alternate section.

2.16 REGLETS

- A. Fabricate reglets of one of the following materials:
 - 1. 16 oz copper.
 - 2. Stainless steel, not less than 0.012 inch thick.
 - 3. Plastic coated extruded aluminum, not less than 1.4 mm 0.055 inch thick prefilled with butyl rubber sealer and complete with plastic wedges inserted at 40 inches on centers.
 - 4. Plastic, ASTM D1784, Type II, not less than 0.075 inch thick.
- B. Fill open-type reglets with fiberboard or other suitable separator, to prevent crushing of the slot during installation.

- C. Bend edges of reglets for setting into concrete to an angle of not less than 45 degrees and make wide enough to provide firm anchorage in the concrete.
- D. Fabricate reglets for building into horizontal masonry mortar joints not less than 3/4 inch deep, nor more than one inch deep.
- E. Fabricate mitered corners, fittings, and special shapes as may be required by details.
- F. Reglets for concrete may be formed to receive flashing and have a 3/8-inch, 45 degree snap lock.

2.17 INSULATED EXPANSION JOINT COVERS

- A. Type optional, use only one type throughout.
- B. Types:
 - 1. Construct of two preformed, stainless-steel strips, not less than 0.015 inch thick, mechanically and adhesively bonded to both sides of a 1/16-inch-thick neoprene or butyl sheet, or to a 0.4 mm (32 mil) thick reinforced chlorinated polyethylene sheet. Adhesively attach a 3/8-inch-thick sheet of closed cell, neoprene foam insulation, to the underside of the neoprene, butyl, or chlorinated polyethylene sheet.
 - 2. Constructed of a 1/16-inch-thick vinyl sheet, flanged at both sides with stainless steel strips not less than 0.015 inch thick. Vinyl sheet locked and encased by the stainless-steel strip and prepunched for nailing. A 3/8-inch-thick closed cell polyvinyl chloride foam insulating strip shall be heat laminated to the underside of the vinyl sheet between the stainless-steel strips.
- C. Expansion joint covers shall have factory fabricated mitered corners // crossing // tees // and other necessary accessories. Furnish in the longest available lengths.
- D. Metal flange of sufficient width to extend over the top of the curb and down curb sides 2 inches with hemmed edge for lock to edge strip.

2.18 ENGINE EXHAUST PIPE OF FLUE OR STACK FLASHING

- A. Flashing at penetrations through roofing shall consist of a metal collar, sheet metal flashing sleeve and hood.
- B. Fabricate collar with roof flange of 0.047-inch minimum thick black iron or galvanized steel sheet.
 - 1. Fabricate inside diameter of collar 4 inches larger than the outside diameter of the item penetration the roofing.
 - 2. Extend collar height from structural roof deck to not less than 14 inches above roof surface.
 - 3. Fabricate collar roof flange not less than 4 inches wide.

4. Option: Collar may be of steel tubing 0.125-inch minimum wall thickness, with not less than four, 2 inch by 4 inch by 0.125 inch thick tabs bottom edge evenly spaced around tube in lieu of continuous roof flange. Full butt weld joints of collar.
- C. Fabricate sleeve base flashing with roof flange of either copper, stainless steel, or copper clad stainless steel.
 1. Fabricate sleeve roof flange not less than 4 inches wide.
 2. Extend sleeve around collar up to top of collar.
 3. Flange bottom of sleeve out not less than 1/124 inch and soldered to 4-inch-wide flange to make watertight.
 4. Fabricate interior diameter 2 inch greater than collar.
 - D. Fabricate hood counter flashing from same material and thickness as sleeve.
 - E. Fabricate the same as pipe counter flashing except allow not less than 4-inch lap below top of sleeve and to form vent space minimum of 4 inch wide.
 - F. Hem bottom edge of hood 1/2 inch.
 - G. Provide a 2-inch deep draw band.
 - H. Fabricate insect screen closure between sleeve and hood. Secure screen to sleeve with sheet metal screws.
- 2.19 SCUPPERS (COPPER)
- A. Fabricate scuppers with minimum of 4-inch-wide flange, with full and solid corners.
 - B. Provide flange at top on through wall scupper to extend to top of base flashing.
 - C. Fabricate exterior wall side to project not less than 1/2 inch beyond face of wall with drip at bottom outlet edge.
 - D. Fabricate not less than 4-inch-wide flange to lap behind gravel stop fascia.
 - E. Fabricate exterior wall flange for through wall scupper not less than one inch wide on top and sides with edges hemmed.
 - F. Fabricate gravel stop bar of one-by-one inch angle strip soldered to bottom of scupper.
 - G. Fabricate scupper not less than 8 inches wide and not less than 5 inches high for through wall scupper.
 - H. Solder joints watertight.

2.20 GOOSENECK ROOF VENTILATORS

- A. Form of 0.0508 inch thick sheet aluminum, reinforce as necessary for rigidity, stiffness, and connection to curb, and to be watertight.
 - 1. Form lower edge to sleeve to curb.
 - 2. Curb:
 - a. Form for 4-inch-high sleeve to ventilator.
 - b. Form for concealed anchorage to structural curb and to bear on structural curb.
 - c. Form bottom edge of curb as counterflashing to lap base flashing.
- B. Provide open end with 16-gauge, stainless steel wire guard of 1/2 inch square mesh.
 - 1. Construct suitable aluminum angle frame to retain wire guard.
 - 2. Rivet angle frame to end of gooseneck.

PART 3 - EXECUTION

3.4 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions 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.
- B. Perform any corrective preparation work required to correct conditions detrimental to performance of the Work.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.5 PREPARATION

- A. Promptly remove protective film, if any, from exposed surfaces of finished metals. Strip with care to avoid damage to finish.

3.6 INSTALLATION, GENERAL

- 1. Install flashing and sheet metal items as shown in Sheet Metal and Air Conditioning Contractors National Association, Inc., publication, ARCHITECTURAL SHEET METAL MANUAL, except as otherwise shown or specified.
- 2. Apply sheet metal and other flashing material to surfaces which are smooth, sound, clean, dry and free from defects that might affect the application.
- 3. Remove projections which would puncture the materials and fill holes and depressions with material compatible with the substrate. Cover holes or cracks in wood wider than 1/4 inch with sheet metal compatible with the roofing and flashing material used.

4. Coordinate with masonry work for the application of a skim coat of mortar to surfaces of unit masonry to receive flashing material before the application of flashing.
5. Apply a layer of 15 pound saturated felt followed by a layer of rosin paper to wood surfaces to be covered with copper. Lap each ply 2 inch with the slope and nail with large headed copper nails.
6. Confine direct nailing of sheet metal to strips 12 inch or less wide. Nail flashing along one edge only. Space nails not over 4 inches on center unless specified otherwise.
7. Install bolts, rivets, and screws where indicated, specified, or required in accordance with the SMACNA Sheet Metal Manual. Space rivets at 3 inches on centers in two rows in a staggered position. Use neoprene washers under fastener heads when fastener head is exposed.
8. Coordinate with roofing work for the installation of metal base flashings and other metal items having roof flanges for anchorage and watertight installation.
9. Nail continuous cleats on 3 inches on centers in two rows in a staggered position.
10. Nail individual cleats with two nails and bend end tab over nail heads. Lock other end of cleat into hemmed edge.
11. Install flashings in conjunction with other trades so that flashings are inserted in other materials and joined together to provide a watertight installation.
12. Where required to prevent galvanic action between dissimilar metal isolate the contact areas of dissimilar metal with sheet lead, waterproof building paper, or a coat of bituminous paint.
13. Isolate aluminum in contact with dissimilar metals others than stainless steel, white bronze or other metal compatible with aluminum by:
 - a. Paint dissimilar metal with a prime coat of zinc-chromate or other suitable primer, followed by two coats of aluminum paint.
 - b. Paint dissimilar metal with a coat of bituminous paint.
 - c. Apply an approved caulking material between aluminum and dissimilar metal.
 - d. Paint aluminum in contact with or built into mortar, concrete, plaster, or other masonry materials with a coat of bituminous paint.
 - e. Paint aluminum in contact with absorptive materials that may become repeatedly wet with two coats of bituminous paint or two coats of aluminum paint.
14. Bitumen Stops:
 - a. Install bitumen stops for built-up roof opening penetrations through deck and at formed sheet metal gravel stops.
 - b. Nail leg of bitumen stop at 12-inch intervals to nailing strip at roof edge before roofing material is installed.

3.7 THROUGH-WALL FLASHING

A. General:

1. Install continuous through-wall flashing between top of concrete foundation walls and bottom of masonry building walls; at top of concrete floors; under masonry, concrete, or stone copings and elsewhere as shown.

2. Where exposed portions are used as a counterflashing's, lap base flashings at least 4 inches and use thickness of metal as specified for exposed locations.
 3. Exposed edge of flashing may be formed as a receiver for two-piece counter flashing as specified.
 4. Terminate exterior edge beyond face of wall approximately 1/4 inch with drip edge where not part of counter flashing.
 5. Turn back edge up 1/4 inch unless noted otherwise where flashing terminates in mortar joint or hollow masonry unit joint.
 6. Terminate interior raised edge in masonry backup unit approximately 1 1/2 inch into unit unless shown otherwise.
 7. Under copings terminate both edges beyond face of wall approximately 1/4 inch with drip edge.
 8. Lap end joints at least two corrugations, but not less than 4 inches. Seal laps with sealant.
 9. Where dowels, reinforcing bars and fastening devices penetrate flashing, seal penetration with sealing compound.
 10. Coordinate with other work to set in a bed of mortar above and below flashing so that total thickness of the two layers of mortar and flashing are same as regular mortar joint.
 11. Where ends of flashing terminate turn ends up one inch and fold corners to form dam extending to wall face in vertical mortar or veneer joint.
 12. Turn flashing up not less than 8 inches between masonry or behind exterior veneer.
 13. When flashing terminates in reglet extend flashing full depth into reglet and secure with lead or plastic wedges spaced 6 inches on center.
 14. Continue flashing around columns:
 - a. Where flashing cannot be inserted in column reglet hold flashing vertical leg against column.
 - b. Counter flash top edge with 3-inch-wide strip of saturated cotton unless shown otherwise. Secure cotton strip with roof cement to column. Lap base flashing with cotton strip 1 1/2 inch
- B. Flashing at Top of Concrete Foundation Walls Where concrete is exposed. Turn up not less than 8 inch high and into masonry backup mortar joint or reglet in concrete backup as specified.
- C. Flashing at Top of Concrete Floors (except where shelf angles occur): Place flashing in horizontal masonry joint not less than 8 inches below floor slab and extend into backup masonry joint at floor slab 1 1/2 inch.
- D. Flashing at Cavity Wall Construction: Where flashing occurs in cavity walls turn vertical portion up against backup under waterproofing, if any, into mortar joint. Turn up over insulation, if any, and horizontally through insulation into mortar joint.
- E. Flashing at Veneer Walls:
1. Install near line of finish floors over shelf angles or where shown.
 2. Turn up against sheathing.
 3. At stud framing, hem top edge 3/4 inch and secure to each stud with stainless steel fasteners through sheathing.
 4. At concrete backing, extend flashing into reglet as specified.
 5. Coordinate with installation of waterproofing or asphalt felt for lap over top of flashing.

F. Lintel Flashing when not part of shelf angle flashing:

1. Install flashing full length of lintel to nearest vertical joint in masonry over veneer.
2. Turn ends up one inch and fold corners to form dam and extend end to face of wall.
3. Turn back edge up to top of lintel; terminate back edge as specified for back-up wall.

G. Windowsill Flashing:

1. Install flashing to extend not less than 4 inches beyond ends of sill into vertical joint of masonry or veneer.
2. Turn back edge up to terminate under window frame.
3. Turn ends up one inch and fold corners to form dam and extend to face of wall.

H. Door Sill Flashing:

1. Install flashing under bottom of plate sills of doors over curbs opening onto roofs. Extend flashing out to form counter flashing or receiver for counter flashing over base flashing. Set in sealant.
2. Extend sill flashing 8 inches beyond jamb opening. Turn ends up one inch in vertical masonry joint, extend end to face of wall. Join to counter flashing for watertight joint.
3. Where doors thresholds cover over waterproof membranes install sill flashing over waterproof membrane under thresholds. Extend beyond opening to cover exposed portion of waterproof membrane and not less than 6 inches beyond door jamb opening at ends. Turn up approximately 1/4 inch under threshold.

I. Flashing at Masonry, Stone, or Precast Concrete Copings:

1. Install flashing with drips on both wall faces unless shown otherwise.
2. Form penetration openings to fit tight against dowel or other item with edge turned up. Seal penetrations with sealant.

3.8 BASE FLASHING

A. Install where roof membrane type base flashing is not used and where shown.

1. Install flashing at intersections of roofs with vertical surfaces or at penetrations through roofs, to provide watertight construction.
2. Install metal flashings and accessories having flanges extending out on top of the built-up roofing before final bituminous coat and roof aggregate is applied.
3. Set flanges in heavy trowel coat of roof cement and nail through flanges into wood nailers over bituminous roofing.
4. Secure flange by nailing through roofing into wood blocking with nails spaced 3 inches on centers or, when flange over 4 inch wide terminate in a 1/2-inch folded edge anchored with cleats spaced 8 inch on center. Secure one end of cleat over nail heads. Lock another end into the seam.

- B. For long runs of base flashings install in lengths of not less than 8 feet nor more than 3000 mm (ten feet). Install a 3-inch-wide slip type, loose lock expansion joint filled with sealant in joints of base flashing sections over 8 feet in length. Lock and solder corner joints at corners.
- C. Extend base flashing up under counter flashing of roof specialties and accessories or equipment not less than 3 inches.

3.9 COUNTERFLASHING (CAP FLASHING OR HOODS)

A. General:

- 1. Install counterflashing over and in conjunction with installation of base flashings, except as otherwise specified or shown.
- 2. Install counterflashing to lap base flashings not less than 4 inches.
- 3. Install upper edge or top of counterflashing not less than 9 inch above top of the roofing.
- 4. Lap joints not less than 4 inches. Stagger joints with relation to metal base flashing joints.
- 5. Use surface applied counterflashing on existing surfaces and new work where not possible to integrate into item.
- 6. When fastening to concrete or masonry, use screws driven in expansion shields set in concrete or masonry. Use screws to wood and sheet metal. Set fasteners in mortar joints of masonry work.

B. One Piece Counterflashing:

- 1. Where flashing is installed at new masonry, coordinate to ensure proper height, embed in mortar, and end lap.
- 2. Where flashing is installed in reglet in concrete insert upper edge into reglet. Hold flashing in place with lead wedges spaced not more than 8 inches apart. Fill joint with sealant.
- 3. Where flashing is surface mounted on flat surfaces.
 - a. When top edge is double folded anchor flat portion below sealant "V" joint with fasteners spaced not over 16 inches on center.
 - b. Locate fasteners in masonry mortar joints.
 - c. Use screws to sheet metal or wood.
 - d. Fill joint at top with sealant.
- 4. Where flashing or hood is mounted on pipe.
 - a. Secure with draw band tight against pipe.
 - b. Set hood and secure to pipe with a one by 1 x 1/8-inch bolt on stainless steel draw band type clamp, or a stainless worm gear type clamp.
 - c. Completely fill joint at top with sealant.

C. Two-Piece Counterflashing.

- 1. Where receiver is installed at new masonry coordinate to ensure proper height, embed in mortar, and lap.
- 2. Surface applied type receiver:

- a. Secure to face construction in accordance, with manufacturer's instructions.
 - b. Completely fill space at the top edge of receiver with sealant.
3. Insert counter flashing in receiver in accordance with fabricator or manufacturer's instructions and to fit tight against base flashing.
- D. Where vented edge occurs install so lower edge of counterflashing is against base flashing.
- E. When counter flashing is a component of other flashing install as shown.

3.10 REGLETS

- A. Install reglets in a manner to provide a watertight installation.
- B. Locate reglets not less than 9 inch nor more than 16 inch above roofing, and not less than 125 mm (5 inch) nor more than 13 inch above cant strip.
- C. Butt and align end joints or each section of reglet and securely hold in position until concrete or mortar are hardened.
1. Coordinate reglets for anchorage into concrete with formwork construction.
 2. Coordinate reglets for masonry to locate horizontally into mortar joints.

3.11 GRAVEL STOPS

- A. General:
1. Install gravel stops and fascias with allowance for expansion at each joint; minimum of 1/4 inch.
 2. Extend roof flange of gravel stop and splice plates not less than four inches out over roofing and nail or screw to wood nailers. Space fasteners on 3-inch centers in staggered pattern.
 3. Install continuous cleat for fascia drip edge. Secure with fasteners as close to lower edge as possible on 3-inch centers.
 4. Where ends of gravel stops and fascias abut a vertical wall, provide a watertight, flashed and sealant filled joint.
 5. Set flange in roof cement when installed over built-up roofing.
 6. Edge securement for low-slope roofs: Low-slope membrane roof systems metal edge securement, except gutters, shall be designed in accordance with ANSI/SPRI ES-1, except the basic wind speed shall be determined from Figure 1609, of IBC 2015.
- B. Sheet metal gravel stops and fascia:
1. Install with end joints of splice plates sheets lapped three inches.
 2. Hook the lower edge of fascia into a continuous edge strip.
 3. Lock top section to bottom section for two-piece fascia.
- C. Corrugated sheet gravel stops and fascia:

1. Install 12-inch-wide sheet flashing centered under joint. A combination bottom and cover plate, extending above and beneath the joint, may be used.
2. Hook lower edge of fascia into a continuous edge strip.

D. Scuppers:

1. Install scupper with flange behind gravel stops; leave 1/4-inch joint to gravel stop.
2. Set scupper at roof water line and fasten to wood blocking.
3. Use sealant to seal joint with fascia gravel stops at ends.
4. Coordinate to lap over conductor head and to discharge water into conductor head.

3.12 COPINGS

A. General:

1. On walls topped with a wood plank, install a continuous edge strip on the front and rear edge of the plank. Lock the coping to the edge strip with a 3/4-inch loose lock seam.
2. Where shown turn down roof side of coping and extend down over base flashing as specified for counterflashing. Secure counterflashing to lock strip in coping at continuous cleat.
3. Install ends adjoining existing construction to form space for installation of sealants.

B. Aluminum Coping:

1. Install with 1/4-inch joint between ends of coping sections.
2. Install joint covers, centered at each joint, and securely lock in place.

3.13 EXPANSION JOINT COVERS, INSULATED

- A. Install insulated expansion joint covers at locations shown on curbs not less than 8 inch high above roof surface.
- B. Install continuous edge strips of same metal as expansion joint flange, nailed at not less than 3-inch centers.
- C. Install insulated expansion joint covers in accordance with manufacturer's directions locking edges to edge strips.

3.14 ENGINE EXHAUST PIPE OR STACK FLASHING

- A. Set collar where shown and secure roof tabs or flange of collar to structural deck with 1/2-inch diameter bolts.
- B. Set flange of sleeve base flashing not less than 4 inches beyond collar on all sides as specified for base flashing.

- C. Install hood to above the top of the sleeve 2 inch and to extend from sleeve same distance as space between collar and sleeve beyond edge does not sleeve.
 - 1. Install insect screen to fit between bottom edge of hood and side of sleeve.
 - 2. Set collar of hood in high temperature sealant and secure with one by 3 mm (1/8 inch) bolt on stainless steel draw band type, or stainless-steel worm gear type clamp. Install sealant at top of head.

3.15 HANGING GUTTERS

- A. Hang gutters with high points equidistant from downspouts. Slope at not less than 1:200 (1/16 inch per foot).
- B. Lap joints, except for expansion joints, at least one inch in the direction of flow. Rivet and seal or solder lapped joints.
- C. Support gutters in brackets spaced not more than 24 inch on centers, brackets attached to facial or wood nailer by at least two screws or nails.
 - 1. For copper or copper clad stainless-steel gutters use brass or bronze brackets.
 - 2. For stainless steel gutters use stainless steel brackets.
 - 3. For aluminum gutters use aluminum brackets or stainless-steel brackets.
 - 4. Use brass or stainless-steel screws.
- D. Secure brackets to gutters in such a manner as to allow free movement of gutter due to expansion and contraction.
- E. Gutter Expansion Joint:
 - 1. Locate expansion joints midway between outlet tubes.
 - 2. Provide at least a one-inch expansion joint space between end baffles of gutters.
 - 3. Install a cover plate over the space at expansion joint.
 - 4. Fasten cover plates to gutter section on one side of expansion joint only.
 - 5. Secure loose end of cover plate to gutter section on other side of expansion joint by a loose-locked slip joint.
- F. Outlet Tubes: Set bracket strainers loosely into gutter outlet tubes.

3.16 CONDUCTORS (DOWNSPOUTS)

- A. Where scuppers discharge into downspouts install conductor head to receive discharge with back edge up behind drip edge of scupper. Fasten and seal joint. Sleeve conductors to gutter outlet tubes and fasten joint and joints between sections.
- B. Set conductors plumb and clear of wall, and anchor to wall with two anchor straps, located near top and bottom of each section of conductor. Strap at top shall be fixed to downspout,

intermediate straps and straps at bottom shall be slotted to allow not less than 1/2 inch movement for each 10 feet of downspout.

- C. Install elbows, offsets and shoes where shown and required. Slope not less than 45 degrees.

3.17 SPLASH PANS

- A. Install where downspouts discharge on low slope roofs unless shown otherwise.
- B. Set in roof cement prior to pour coat installation or sealant compatible with single ply roofing membrane.

3.18 GOOSENECK ROOF VENTILATORS

- A. Install on structural curb not less than 8 inch high above roof surface.
- B. Securely anchor ventilator curb to structural curb with fasteners spaced not over 12 inches on center.
- C. Anchor gooseneck to curb with screws having neoprene washers at 6 inches on center.

3.19 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 as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
- B. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerances specified in MCA's "Guide Specification for Residential Metal Roofing."

3.20 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 installation, remove unused materials and clean finished surfaces. Maintain in a 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 077119 - MANUFACTURED GRAVEL STOP FASCIA SYSTEM

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. Factory fabricated and finished gravel stop systems.
- B. Related Requirements:
 - 1. Division 07 Section "Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing."
 - 2. Division 07 Section "Roof Warranty" for manufacturer and installer warranty requirements.

1.3 REFERENCES

- A. Fascia system shall be tested by an independent third party per ANSI/SPRI ES-1 design test requirements.
- B. Attachment of the perimeter wood blocking shall be installed in accordance with Factory Mutual Global "Property Loss Data Sheets 1-49".

1.4 SUBMITTALS

- A. Design Pressures: Provide documentation that the product shall be designed and installed for wind loads in accordance with Chapter 16, Figure 1609 of the International Building Code and tested for resistance in accordance with ANSI/ SPRI ES-1.
- B. Product Data: Provide specified product and installation data for all materials.
 - 1. Submit: Warranty and manufacturer/supplier's performance certificates.
 - 2. Submit: Product Approval Sheets to adequately represent field dimensions and conditions.
- C. Shop drawings: Show profiles, joining method, location of accessory items, anchorage and flashing details, adjacent construction interface, and dimensions.
- D. Samples: Available on request; sized to adequately represent material.

1.5 QUALITY ASSURANCE

- A. Certificates: Warrantor's certificate ANSI requirements.

1.6 PRODUCT HANDLING

- A. All materials shall arrive in the manufacturer/supplier's original sealed, labeled containers.
- B. Store the fascia materials in a dry, protected and well-vented area. Report damaged material immediately to delivering carrier and manufacturer/supplier.
- C. Remove protective plastic surface film after immediately after installation.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Basis of Design Manufacturer: The Basis of Design manufacturer of manufactured gravel stop fascia system products is SR Products. Subject to compliance with requirements, provide the following product by the Basis of Design manufacturer or approved equal three-part fascia assembly designed for built-up and modified bitumen roofs:
 - 1. Acceptable Gravel Stop Fascia System by Basis of Design Manufacturer: "Storm Defender 5000,"

2.2 MANUFACTURED GRAVEL STOP FASCIA SYSTEM

- A. Formed Metal Fascia: System consists of a continuous galvanized steel water dam, spring clip, exterior fascia cover, concealed joint cover, and corrosion resistant fasteners.
 - 1. Cover Metal Type: Kynar Coated Aluminum.
 - 2. Cover Metal thickness: 0.50" aluminum.
 - 3. Metal Size: Sufficient to extend 1" below bottom of wood blocking.
- B. Fascia: Standard 12'-0" lengths with matching concealed joint splice plates.
- C. Water Dam/Cant: Std. 12'-0" length of commercial type galvanized steel.
- D. Fasteners: Supplied by the manufacturer/supplier per substrate application and be corrosion resistant.

2.3 ACCESSORIES

- A. Corners, fascia sumps, spill outs, ledge caps, downspouts, or other special fabrications shall be fabricated by the fascia manufacturer/supplier.
- B. Welding the accessory assembly shall be used to maintain watertight integrity.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Edging installation shall not disrupt other trades.
- B. Fascia mounting surfaces shall be straight, level and secure; substrates shall be proper width.
 - 1. Contractor to verify that wood substrate is level (+ or - 1/8") dry, clean and free of foreign matter.
- C. Correct defects before proceeding.

3.2 PREPARATION

- A. Verify that other trades are complete before mounting coping covers.
- B. Refer to construction documents, shop drawings and fascia installation instructions.
- C. Coordinate installation with roof membrane warrantor's instructions before starting.

3.3 INSTALLATION

- A. Follow warrantor's installation instructions to insure proper design and installation.
- B. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
- C. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.
- D. Installer shall check as-built condition and approve specified details before fabrication.
- E. Installer shall install mechanical fasteners into water dam cant or continuous rail concealed and splice plate; fascia cover shall be snapped into place consistent with warrantor's instructions; suitable to substrates.

END OF SECTION 077119

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. Section Includes:
 - 1. Silicone joint sealants.
 - 2. Urethane joint sealants.
 - 3. Butyl joint sealants.

1.3 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.
- B. Product Testing: Test joint sealants using a qualified testing agency.
 - 1. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.

1.5 FIELD 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.
 - 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.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, 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.

2.2 SILICONE JOINT SEALANTS

- A. Silicone, S, NS, 50, NT: Single-component, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Use NT.

2.3 URETHANE JOINT SEALANTS

- A. Urethane, S, NS, 25, NT: Single-component, nonsag, nontraffic-use, plus 25 percent and minus 25 percent movement capability, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT.

2.4 BUTYL JOINT SEALANTS

- A. Butyl-Rubber-Based Joint Sealants: ASTM C 1311.

2.5 JOINT-SEALANT BACKING

- A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. 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.

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 performance of the Work.
- 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.
 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. 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.

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.

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, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.6 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.
 - 1. Joint Locations:
 - a. Joints between metal components.
 - b. Control and expansion joints in and other.
 - c. Other joints as indicated on Drawings.
 - 1. Joint Sealant: Silicone, nonstaining, S, NS, 50, NT.
 - 2. Joint Sealant: Butyl or urethane, nonstaining, S, NS, 25-50, NT.
 - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

END OF SECTION 079200

SECTION 079200.1 - JOINT SEALANTS
(Joint Sealant for the transverse joint of the existing coping on the lower level)

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. Nonsag gunnable joint sealants.
 - 2. Joint backings and accessories.

1.3 UNIT PRICES

- A. Provide a Unit Price for the following:
 - 1. Unit Price No 4: Remove and install backer rod and sealant within all the transverse joints of the existing copings located on the lower roof. Refer to contract drawings D-101 and A-101, and as specified herein. Unit of Measurement shall be in linear feet. Refer to Division 00- Section "012200- Unit Prices".

1.3 ACTION SUBMITTALS

- A. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
 - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
 - 2. List of backing materials approved for use with the specific product.
 - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
 - 4. Substrates the product should not be used on.
 - 5. Substrates for which laboratory adhesion and/or compatibility testing is required.
 - 6. Installation instructions, including precautions, limitations, and recommended backing materials and tools.
- B. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- C. Preinstallation Field Adhesion Test Plan: Submit at least two weeks prior to start of installation.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.
- B. Product Testing: Test joint sealants using a qualified testing agency.

1. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.

1.5 FIELD 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.
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.

PART 2 - PRODUCTS\

2.1 MANUFACTURERS

- A. Non-Sag Sealants: Permits application in joints on vertical surfaces without sagging or slumping.

1. Basis of Design; Sika Corporation SikaHyflex-150LM, or an approved equal.

2.2 JOINT-SEALANT BACKING

- A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- B. 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.

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 performance of the Work.

- 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.
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. Concrete.

- 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.

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.

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, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION 079200

SECTION 099123 - PAINTING

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 surface preparation and the application of paint systems on the following interior substrates:
 - 1. Steel, including roof top steel.

1.3 DEFINITIONS

- A. Gloss Level 5 (Semi-Gloss): 35 to 70 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements, color charts and application instructions.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg. F.
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.6 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg. F.
- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg. F above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1. Benjamin Moore & Co.
 - 2. PPG Paints.
 - 3. Sherwin-Williams Company (The).

2.2 PAINT, GENERAL

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
- B. Material Compatibility:
 - 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 - 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- C. Colors: As indicated selected by Architect from manufacturer's standard offerings.

2.3 METAL PRIMERS

- A. Primer, Rust-Inhibitive, Water Based: MPI #107.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- C. Proceed with coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates indicated.

- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and re-prime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- D. Steel Substrates: Remove rust, loose mill scale, and shop primer, if any. Clean using methods recommended in writing by paint manufacturer, but not less than SSPC-SP 3, "Power Tool Cleaning."
 - 1. Use SSPC-SP 2, "Hand Tool Cleaning" only where site conditions don't permit power use.
- E. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."
 - 1. Use applicators and techniques suited for paint and substrate indicated.
 - 2. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
 - 3. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 - 4. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
 - 1. Contractor shall touch up and restore painted surfaces damaged by testing.
 - 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 PAINTING SCHEDULE

A. Steel Substrates:

- 1. Water-Based Light Industrial Coating System MPI EXT 5.1M:
 - a. Prime Coat: Primer, rust-inhibitive, water based MPI #107.
 - b. Topcoat: Acrylic latex, exterior, institutional low odor/VOC, semi-gloss (Gloss Level 5), MPI #165.

END OF SECTION 099123

SECTION 099653 - ELASTOMERIC COATINGS
(APPLICATION OVER EXISTING COPINGS ON THE LOWER ROOF)

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Elastomeric coatings.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Indicate VOC content.

B. Samples for Initial Selection: For each type of elastomeric coating.

C. Samples for Verification: For each type of elastomeric coating indicated and in each color and gloss.

1. Submit Samples on same type of substrate as that to receive application, 8 inches square.
2. Apply coats on Samples in steps to show each separate coat, including primers and block fillers as applicable.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

D. Product List: Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules. Include color designations.

1.3 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Quantity: Furnish an additional 5 percent but not less than 2 gallons. of each material, color, and texture applied.

1.4 MOCKUPS

A. Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Architect will select one surface to represent surfaces and conditions for application of each paint system.

- a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft.
 - b. Other Items: Architect will designate items or areas required.
2. Final approval of color selections will be based on mockups.
- a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.
3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
1. Maintain containers in clean condition, free of foreign materials and residue.
 2. Remove rags and waste from storage areas daily.

1.6 FIELD CONDITIONS

- A. Apply coatings only when temperature of surfaces to be coated and ambient air temperatures are between 50 and 90 deg F unless otherwise permitted by manufacturer's written instructions.
- B. Do not apply coatings in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.
- C. Allow wet surfaces to dry thoroughly and attain temperature and conditions specified before starting or continuing coating operation.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace elastomeric coatings that fail within specified warranty period.
1. Failures include, but are not limited to, the following:
 - a. Water penetration through the coating.
 - b. Deterioration of coating beyond normal weathering.
 2. Warranty Period: 10 years from date of Substantial Completion.
 - 3.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Basis of Design: Sika Products as manufactured by Sika Corporation, 1682 Marion Williamsport Road, Marion, Ohio, 43302, or an approved equal manufacturer.

2.2 MATERIALS

1. Sikagard 550W Elastocolor,
 2. Sikagard Elastic Base Coat (Smooth & Textured),
 3. Sikagard 552W Primer or SikaLatex R,
- B. Elastomeric Acrylic Coating:
1. Product shall be 100% Acrylic Emulsion with the following properties:
 - a. Water vapor permeable
 - b. Can bridge dynamically moving cracks
 - c. Crack bridging properties maintained at low temperatures
 - d. The material shall be resistant to dirt pick-up and mildew.
- C. Elastomeric Acrylic Smooth & Textured Base Coating:
1. Product shall be 100% Acrylic Emulsion with the following properties:
 - a. Water vapor permeable
 - b. Can bridge dynamically moving cracks
 - c. Crack bridging properties maintained at low temperatures
- D. Adhesion Promoter / Surface Conditioner
1. Product shall be a water-based, acrylic primer with the following properties:
 - a. Solids content 12.5% -20% by volume
 - b. Recoat time 4 – 24 hours

2.3 PERFORMANCE CRITERIA

- E. Properties of the elastomeric Sikagard 550W Elastocolor acrylic coating:
1. Pot Life: indefinite
 2. Tack Free Time 6 Hours @ 73°F, 50% Relative Humidity. Final Cure < 24 Hours
 3. Carbon Dioxide Diffusion: μCO_2 214,000 Carbon Dioxide Diffusion Resistance at 16 mils (400 microns) $\text{SdCO}_2 = 299$ ft. (equivalent air thickness) i.e. Approx. 9-in. of standard concrete cover.
 4. Water Vapor Diffusion: $\mu\text{H}_2\text{O}$ 2,146 Water Vapor Diffusion Resistance at 16 mils $\text{SdH}_2\text{O} = 2.6$ ft. (0.8m) (equivalent air thickness)
 5. Moisture Vapor permeability (ASTM E96) 14.5 perms

6. Tensile Properties (ASTM D-412 Modified)
7 day-Tensile strength 190 psi (1.3 MPa) - Elongation at break 820% - 340% @ 0°F (-18°C)
 7. Crack Bridging(at 16 mils = 400 microns DFT
 - a. Static (at -4°F/-20°C) 30 mils (0.75mm)
 - b. Dynamic>1000 cycles(at -4°F/-20°C) 12 mils (0.30mm)
 8. Resistance to wind driven rain (TT-C-555B): No passage of water through coating
 9. Weathering (ASTM G-23) 10,000 hours excellent, no chalking or cracking.
 10. Solids Content: by weight – 62% by volume – 55%
- Flame Spread and Smoke Development
(ASTM E-84-94) Flame Spread 5
Smoke Development 5 Class Rating A

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with manufacturer's requirements for maximum moisture content, alkalinity, and other conditions affecting performance of work.
- B. Begin coating only when moisture content of substrate is 12 percent or less when measured with an electronic moisture meter.
- C. Verify that substrate is within the range of alkalinity recommended by manufacturer.
- D. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- E. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions applicable to substrates and coating systems indicated.
- B. Remove hardware and hardware accessories, plates, machined surfaces, light fixtures, and similar items already installed that are not to be coated. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and coating.
 1. After completing coating operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean substrates of substances that could impair bond of coatings, including dirt, oil, grease, and incompatible paints and encapsulants. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.

1. Remove incompatible primers and reprime substrate with compatible primers as required to produce coating systems indicated.
 2. Perform cleaning and coating application so dust and other contaminants from cleaning process will not fall on wet, newly coated surfaces.
- D. Crack Repair: Fill cracks in accordance with manufacturer's written instructions before coating surfaces.

3.3 MIXING AND APPLICATION

- A. Mixing: Stir materials to ensure uniformity using a low speed (400-600 rpm) drill and paddle. To minimize color variation, blend two batches of material.(boxing).
- B. Crack detail: Recommended application temperatures 40° - 100°F.
- Small defects and cracks (non-structural): Cracks 10 – 20 mils. Apply Surface Filler “Brush Grade” generously over the center of the cracks. Feather material to zero over a two-inch wide area. Allow a minimum 24 hours to cure before overcoating.
- Large defects and cracks (non-structural): Cracks >20mils. Rout to 1/4-in wide by 1/4-in. deep. Blow out cut with oil-free compressed air. Fill slot with Surface Filler “Knife Grade” allowing for a small crest to remain. This will compensate for any shrinkage that might occur. Allow 24 hours-minimum cure before over coating.
- C. Coating Application: Apply by brush, roller, or spray over entire area moving in one direction. A minimum of two coats are required. Each coat should be applied at a rate not to exceed 100 sq. ft. per gallon. Total dry film thickness shall be a minimum 8 - 10 dry mils per coat. Allow a minimum of 2 hours prior to re-coating.
- D. When applying the coating, never stop the application until the entire surface has been coated. Always stop application at an edge, corner, or joint. Never let a previously coated film dry; always coat into a wet film. Always apply the coating at a 45° angle to an edge, corner, or joint.
- E. If substrate has been previously coated and presents a “chalky” condition, apply 1 coat of Sikagard 552W or SikaLatex R, primer/surface conditioner by brush, roller, or spray at a rate not to exceed 300 sq. ft. per gallon.
- F. Adhere to all limitations and cautions for the elastomeric acrylic coating in the manufacturers printed literature.

3.3 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from coating application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities, touch up and restore damaged or defaced coated surfaces.

3.4 ELASTOMERIC COATING SCHEDULE

A. Concrete Substrates:

1. Elastomeric Coating System – (Application over Existing Copings on the Lower Roof as indicated on the contract drawings):
 - a. Prime Coat: As recommended in writing by topcoat manufacturer.
 - b. Intermediate Coat: As recommended in writing by topcoat manufacturer.
 - c. Topcoat: Elastomeric, pigmented, exterior, water-based, coating.

END OF SECTION 099653

SECTION 221426 - ROOF DRAINS

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. Existing drains will be re-worked, re-flashed, and deteriorated components replaced.
 - 2. At start of each workday, drains within daily work area shall be plugged. Plugs to be removed at end of each workday or before arrival of inclement weather.
 - 3. All drains will require new flashing lead.
 - 4. New drains to be installed as directed by building owner's representative.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

PART 2 - PRODUCTS

2.1 DRAIN ACCESSORIES

- A. Replacement parts should be from same manufacturer of original drain.
- B. New drains should be appropriate for existing conditions. Acceptable drain manufacturer's are:
 - 1. Zurn, Erie, PA.
 - 2. Smith, Montgomery, AL.
 - 3. Josam, Michigan City, IN.
- C. Metal Flashing: Refer Division 07 Section Flashing and as follows:
 - 1. ASTM B29, four lb. sheet lead.
 - 2. Soft copper drain flashing sheet.
- D. Mastics and Adhesives: As approved by roofing system manufacturer.

PART 3 - EXECUTION

3.1 DRAINS

A. Existing Drains:

1. Remove flashing collar. Clean. If broken, replace.
2. Install tapered edge strip around drain to create 48 x 48 inch sump. Miter corners. Seal top of tapered edge to drain rim with fiberglass mesh embedded between alternate courses of asphalt mastic.
3. Install multi-ply roofing or stripping plies into sump and onto drain rim.
4. Apply 1/16 inch uniformly thick layer of asphalt mastic to surface receiving lead flashing.
5. Set single piece lead flashing (30" square minimum) in mastic centered over drain, extend lead six inches beyond drain rim. Neatly dress lead with wood block.
6. Prime lead with asphalt primer.
7. Install two plies fiberglass roof ply embedded in alternate courses of hot melt adhesive over primed lead. Stripping plies shall extend two and four inches beyond edge of lead.
8. Re-clamp flashing collar to drain in bed of mastic. If bolts are broken, drill and re-tap. If ladder clamps are installed, replace clamps.
9. Neatly cut lead within drain at rim, remove.
10. Install strainer.

B. New Drains:

1. Locate and install drain body in locations specified by owner's representative.
2. Install tapered edge strip around drain to create 48 x 48 inch sump. Miter corners. Seal top of tapered edge to drain rim with fiberglass mesh embedded between alternate courses of asphalt mastic.
3. Install multi-ply roofing or stripping plies into sump and onto drain rim.
4. Apply 1/16 inch uniformly thick layer of asphalt mastic to surface receiving lead flashing.
5. Set single piece lead flashing (30" square minimum) in mastic centered over drain, extend lead six inches beyond drain rim. Neatly dress lead with wood block.
6. Prime lead with asphalt primer.
7. Install two plies fiberglass roof ply embedded in alternate courses of hot melt adhesive over primed lead. Stripping plies shall extend two and four inches beyond edge of lead.
8. Re-clamp flashing collar to drain in bed of mastic. If bolts are broken, drill and re-tap. If ladder clamps are installed, replace clamps.
9. Neatly cut lead within drain at rim, remove.
10. Seal/plug drain to prevent water entry until service connection is completed.

C. Service Connection:

1. Locate new piping to include as few bends as possible. Do not overload any existing pipe and drain, ensure balanced disposal of all rain water. Make adequate provisions for thermal movement of all piping. Location should not be adjacent to structural columns.
2. Provide cleanouts at elbows under each drain, and at tops and bottoms of each vertical run, at connection to storm sewer, as called for by Plumbing Code, and as required to make sure that drainage system can be cleaned anywhere, if needed. Provide and install access panels if required for service cleanouts.
3. Where new work joins old, provide all necessary materials, repairs, changes, and associated work as needed for proper connections.
4. Make all connections watertight.

August 10, 2023
Issued for Bid

Roof Replacement
at the Union County
New Annex Courthouse,
Elizabeth, NJ

5. Remove seal/plug and install strainer.
6. Use insulation on all pipes and fittings from drains to existing down- pipes. Ensure full continuity of insulation over pipes, fitting, and connections. Provide concealed saddles at all hangers.

END OF SECTION 221426

August 10, 2023
Issued for Bid

Roof Replacement
at the Union County
New Annex Courthouse,
Elizabeth, NJ

ATTACHMENT A

ENVIRIOMENTAL TEST REPORT & ROOF CORE LOCATION DRAWING

JOHN H. ALLGAIR, PE, PP, LS (1983-2001)
DAVID J. SAMUEL, PE, PP, CME
JOHN J. STEFANI, PE, LS, PP, CME
JAY B. CORNELL, PE, PP, CME
MICHAEL J. McCLELLAND, PE, PP, CME
GREGORY R. VALES, PE, PP, CME



TIM W. GILLEN, PE, PP, CME (1991-2019)
BRUCE M. KOCH, PE, PP, CME
LOUIS J. PLOSKONKA, PE, CME
TREVOR J. TAYLOR, PE, PP, CME
BEHRAM TURAN, PE, LSRP
LAURA J. NEUMANN, PE, PP
DOUGLAS ROHMEYER, PE, CFM, CME
ROBERT J. RUSSO, PE, PP, CME
JOHN J. HESS, PE, PP, CME

November 15, 2022

Mr. Ricardo Matias, P.E., Director
Union County Division of Engineering
2325 South Avenue
Scotch Plains NJ 07076

**Re: 2022 Union County On-Call Environmental Engineering Services –
Summary of Analytical Results for Roofing Core Testing for UC New Annex Building (Task 78014)**

Dear Mr. Matias,

In response to a recent request from the County, CME submitted four (4) roof core samples collected from the UC New Annex Building, 9 Elizabethtown Plaza, Elizabeth, NJ for laboratory testing in anticipation of the final design phase for roof replacement of the building. CME prepared a Chain of Custody on behalf of the County and the County submitted the samples to EMSL Laboratory, to an accredited NJ laboratory which participates in the National Voluntary Laboratory Accreditation Program (NVLAP), where the probe samples were analyzed via Polarized Light Microscopy (PLM) in accordance with the USEPA's 40 CFR, Part 763, Polarized Light Microscopy (PLM) analytical protocol. Non-friable Organically Bound (NOB) materials (i.e. roofing) which revealed a negative result, or a result of less than one percent (<1%) of asbestos by weight by Polarized Light Microscopy (PLM) methodology were also analyzed by Transmission Electron Microscopy (TEM) NOB methodology, as mandated by the State of New Jersey, Department of Labor and Workforce Development, (NJDOLEWD) and as recommended by the USEPA. All samples were submitted for a 1-week turnaround time.

Four (4) samples were submitted to the laboratory representative of homogenous areas (HA) Main Roof (HA 01) and Penthouse Roof (HA 02). The lab further segregated the HAs into their component parts. Five (5) of the materials were found to contain greater than 1% asbestos content by weight. As such these materials are classified as asbestos containing materials. Analysis also revealed that two (2) of the materials contain less than 1% asbestos content by weight. These materials are classified as "Trace" asbestos containing materials. Trace asbestos containing materials are not regulated by the USEPA or State of New Jersey but are regulated by the United States Department of Labor Occupational Safety and Health Administration (OSHA).

Accordingly, all components of the main roof and penthouse roofing field should be treated as asbestos containing. Removal of asbestos containing roofing material does not require a State of New Jersey Asbestos Abatement License. However, the generated waste must be handled, transported, and disposed of as a regulated hazardous material. The identified asbestos containing roofing materials should be removed in accordance with 29 CFR 1926.1101, the OSHA Asbestos Standard for the Construction Industry. We recommend including specifications for the removal of asbestos roofing materials in the design documents for the project. During construction activities, daily air monitoring should be conducted during removal of asbestos containing roofing materials.



November 15, 2022
Page 2

Mr. Ricardo Matias, P.E., Director
Union County Division of Engineering
**Re: 2022 Union County On-Call Environmental Engineering Services
UC Annex Roof Sampling Summary Report (Task 78014)**

The sampling results have been summarized by Environmental Connection Inc. (ECI) in the attached Review Letter, which also includes recommendations for the handling of the ACM identified. Should you have any questions in this regard, please do not hesitate to call me at (732) 951-2101 Ext. 103.

Very truly yours,
CME Associates

Behram Turan, P.E., L.S.R.P. - Principal
Director of Environmental Services

Enclosure

Cc: Matthew Ferraro, Project Manager/ Union County Division of Engineering
Samantha Ring/ Union County Division of Engineering



ENVIRONMENTAL CONNECTION INC

A Vertical Technologies Corporation

November 9, 2022

Ms. Jacquelyn Fagan
Environmental Scientist
CME Associates
3759 US Hwy 1 South - Suite 100
Monmouth Junction, NJ 08852

Re: Asbestos Containing Material Bulk Sampling Results Review Letter

Facility: Union County Courthouse Annex
9 Elizabethtown Plaza
Elizabeth, New Jersey 07201

EC Project #: 22398-01

Environmental Connection, Inc., (EC) was contracted by CME Associates to review and interpret the asbestos bulk sampling laboratory results for the Union County Courthouse Annex Roof Probe Project. Note: EC was not involved in Roof Probe Project and did not participate in the collection, handling, analysis, or management of samples referenced herein. As such, this review letter is limited to interpretation of the laboratory certificates of analysis.

The certificates of analysis indicate that the probe samples were analyzed via Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM). Results for PLM and TEM analysis methods are reported in percentage by weight. According to the USEPA, materials containing greater than 1% asbestos content by weight are classified as asbestos containing materials. In accordance with State of New Jersey regulations, where feasible the laboratory analyzed distinguishable components of the roof probe samples separately. The following table documents the laboratory analytical results.

Table 1 – Analytical Results Summary Union County Courthouse Annex			
ID #	Material	PLM Results	TEM Results
01	Main Roof Built-Up Roofing (Layer 1)*	<1% Chrysotile	0.15% Chrysotile
001-A	Main Roof Built-Up Roofing (Layer 2)	None Detected	None Detected
01-B	Main Roof Built-Up Roofing (Layer 3)	None Detected	None Detected
01-C	Main Roof Tar Paper	5% Chrysotile	8.5% Chrysotile
01-D	Main Roof Tar*	None Detected	<0.1% Chrysotile
01-E	Main Roof Silver Paint	None Detected	2.8 % Chrysotile
01-F	Main Roof Rubber Membrane	None Detected	None Detected
02	Penthouse Roof Built-Up Roofing 1	None Detected	8.1% Chrysotile
02-A	Penthouse Roof Silver Paint 1	4 % Chrysotile	N/A
02-B	Penthouse Roof Built-Up Roofing 2	None Detected	10.4 % Chrysotile
02-C	Penthouse Roof Silver Paint 2	None Detected	None Detected
02-D	Penthouse Roof Felt	None Detected	None Detected
02-E	Penthouse Roof Tar	None Detected	None Detected



ID #	Material	PLM Results	TEM Results
02-F	Penthouse Insulation	None Detected	N/A

Trace*/ N/A – Not Applicable

Five (5) of the materials were found to contain greater than 1% asbestos content by weight. As such these materials are classified as asbestos containing materials. Analysis also revealed that two (2) of the materials contain less than 1% asbestos content by weight. These materials are classified as “Trace” asbestos containing materials. Trace asbestos containing materials are not regulated by the USEPA or State of New Jersey but are regulated by the United States Department of Labor Occupational Safety and Health Administration (OSHA).

Disclaimers

Environmental Connection was not involved in the collection of probe samples referenced herein. As such, EC cannot comment on the sample collection method or confirm that all suspect asbestos containing materials present in the roof field were represented in the samples submitted to and/or reported by the analytical laboratory. Similarly, EC cannot speak to the qualifications of the individual(s) that performed the probe and collected the referenced samples. Suspect asbestos containing material sampling should be performed in accordance 40 CFR, Part 763, inclusive of utilizing USEPA accredited Asbestos Building Inspectors to collect samples and the use of an accredited analytical laboratory.

Considerations

Based on our review of the referenced results and due to the inseparable nature of identified asbestos containing roofing materials, all components of the main roof and penthouse roofing field should be treated as asbestos containing.

- Removal of asbestos containing roofing material does not require a State of New Jersey Asbestos Abatement License. However, the generated waste must be handled, transported, and disposed of as a regulated hazardous material.
- The identified asbestos containing roofing materials should be removed in accordance with 29 CFR 1926.1101, the OSHA Asbestos Standard for the Construction Industry.
- Include specifications for the removal of asbestos roofing materials in the design documents for the project.
- Daily air monitoring during removal of asbestos containing roofing materials.



ENVIRONMENTAL CONNECTION INC

Should you have any questions or require additional information, please contact the undersigned at your convenience.

Respectfully Submitted:
ENVIRONMENTAL CONNECTION, INC.

A handwritten signature in blue ink, appearing to read 'Jordan Reed'.

Jordan Reed, CIH
Project Manager

Attachments:

- Attachment I – Documents Provided for Review

ATTACHMENT I

Documents Provided for Review



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
 Phone/Fax: (800) 220-3675 / (856) 786-5974
<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order ID: 042226221
 Customer ID: CMEA75
 Customer PO:
 Project ID:

Attn: Jacquelyn Fagan
 CME Associates
 3759 US Highway 1 South
 Suite 100
 Monmouth Junction, NJ 08852
Phone: (732) 951-2101
Fax: (732) 951-2106
Collected: 7/ 6/2022
Received: 10/19/2022
Analyzed: 11/03/2022
Proj: UC New Annex Roof Sampling / IUN00311.09-78014

Summary Test Report for Asbestos Analysis in Accordance with N.J.A.C. 8:60 and 12:120 via EPA 600/R-93/116

Client Sample ID: 01-RP1-Roofing **Lab Sample ID:** 042226221-0001

Sample Description: Main Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/25/2022	Black	7.0%	93.0%	<1% Chrysotile	
TEM Grav. Reduction	11/03/2022	Black	0.00%	99.85%	0.15% Chrysotile	

Client Sample ID: 01-RP1-Roofing 2 **Lab Sample ID:** 042226221-0001A

Sample Description: Main Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Black	7.0%	93.0%	None Detected	
TEM Grav. Reduction	11/03/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 01-RP1-Roofing 3 **Lab Sample ID:** 042226221-0001B

Sample Description: Main Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Black	10.0%	90.0%	None Detected	
TEM Grav. Reduction	11/03/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 01-RP1-Tar Paper **Lab Sample ID:** 042226221-0001C

Sample Description: Main Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	11/03/2022	Black	0.0%	95.0%	5% Chrysotile	
TEM Grav. Reduction	11/03/2022	Black	0.0%	91.5%	8.5% Chrysotile	

Client Sample ID: 01-RP1-Tar **Lab Sample ID:** 042226221-0001D

Sample Description: Main Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Black	0.0%	100.0%	None Detected	
TEM Grav. Reduction	11/03/2022	Black	0.0%	100.0%	<0.1% Chrysotile	

Client Sample ID: 01-RP1-Silver Paint **Lab Sample ID:** 042226221-0001E

Sample Description: Main Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Silver	0.0%	100.0%	None Detected	
TEM Grav. Reduction	11/03/2022	Silver	0.0%	97.2%	2.8% Chrysotile	Result includes a small amount of inseparable attached material



EMSL Analytical, Inc.

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EMSL Order ID: 042226221
Customer ID: CMEA75
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis in Accordance with N.J.A.C. 8:60 and 12:120 via EPA 600/R-93/116

Client Sample ID: 01-RP1-Rubber Membrane **Lab Sample ID:** 042226221-0001F
Sample Description: Main Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	White	0.0%	100.0%	None Detected	
TEM Grav. Reduction	11/03/2022	White	0.0%	100.0%	None Detected	

Client Sample ID: 02-RP3-Roofing **Lab Sample ID:** 042226221-0002
Sample Description: Main Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Black	10.0%	90.0%	<1% Chrysotile	

Client Sample ID: 02-RP3-Roofing 2 **Lab Sample ID:** 042226221-0002A
Sample Description: Main Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Black/Silver	20.0%	80.0%	None Detected	Result includes a small amount of inseparable attached material

Client Sample ID: 02-RP3-Roofing 3 **Lab Sample ID:** 042226221-0002B
Sample Description: Main Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Black	20.0%	80.0%	None Detected	

Client Sample ID: 02-RP3-Tar **Lab Sample ID:** 042226221-0002C
Sample Description: Main Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 02-RP3-Silver Paint **Lab Sample ID:** 042226221-0002D
Sample Description: Main Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Silver	0.0%	100.0%	None Detected	

Client Sample ID: 03-RP4-Roofing **Lab Sample ID:** 042226221-0003
Sample Description: Penthouse Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Black	10.0%	90.0%	None Detected	
TEM Grav. Reduction	11/03/2022	Black	0.0%	91.9%	8.1% Chrysotile	Result includes a small amount of inseparable attached material

Client Sample ID: 03-RP4-Silver Paint **Lab Sample ID:** 042226221-0003A
Sample Description: Penthouse Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Silver	0.0%	96.0%	4% Chrysotile	



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order ID: 042226221
Customer ID: CMEA75
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis in Accordance with N.J.A.C. 8:60 and 12:120 via EPA 600/R-93/116

Client Sample ID: 03-RP4-Roofing 2

Lab Sample ID: 042226221-0003B

Sample Description: Penthouse Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Black	20.0%	80.0%	None Detected	
TEM Grav. Reduction	11/03/2022	Black	0.0%	89.6%	10.4% Chrysotile	Result includes a small amount of inseparable attached material

Client Sample ID: 03-RP4-Silver Paint 2

Lab Sample ID: 042226221-0003C

Sample Description: Penthouse Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Silver	0.0%	100.0%	None Detected	
TEM Grav. Reduction	11/03/2022	Silver	0.0%	100.0%	None Detected	

Client Sample ID: 03-RP4-Felt

Lab Sample ID: 042226221-0003D

Sample Description: Penthouse Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Black	40.0%	60.0%	None Detected	
TEM Grav. Reduction	11/03/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 03-RP4-Tar

Lab Sample ID: 042226221-0003E

Sample Description: Penthouse Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Black	0.0%	100.0%	None Detected	
TEM Grav. Reduction	11/03/2022	Black	0.0%	100.0%	None Detected	

Client Sample ID: 03-RP4-Insulation

Lab Sample ID: 042226221-0003F

Sample Description: Penthouse Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Brown	95.0%	5.0%	None Detected	

Client Sample ID: 04-RP6

Lab Sample ID: 042226221-0004

Sample Description: Penthouse Roof/Built Up Roofing

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	10/26/2022	Black/Silver	10.0%	90.0%	<1% Chrysotile	Result includes a small amount of inseparable attached material



EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
<http://www.EMSL.com> / cinnasblab@EMSL.com

EMSL Order ID: 042226221
Customer ID: CMEA75
Customer PO:
Project ID:

Summary Test Report for Asbestos Analysis in Accordance with N.J.A.C. 8:60 and 12:120 via EPA 600/R-93/116

Analyst(s):

Alex Francois PLM (13)
Gabrielle DiDonato PLM (1)
Quynh Vu PLM (6)
Seri Smith TEM Grav. Reduction (12)

Reviewed and approved by:

Samantha Rundstrom, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. Estimation of uncertainty available upon request. This report is a summary of multiple methods of analysis, fully compliant reports are available upon request. A combination of PLM and TEM analysis may be necessary to ensure consistently reliable detection of asbestos. This report must not be used to claim product endorsement by NVLAP of any agency or the U.S. Government.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NJ DEP 03036, PA ID# 68-00367, LA #04127

Report amended: 11/03/2022 17:26:22 Replaces initial report from: 10/26/2022 11:26:54 Reason Code: Data Entry-Results Changed



Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.

200 Route 130 North
Cinnaminson, NJ 08077

042226221

PHONE: (800) 220-3675

EMAIL: CinnAsblab@EMSL.com

EMSL ANALYTICAL, INC.
TESTING LABS • PRODUCTS • TRAINING

Customer Information	Customer ID:			Billing Information	Billing ID:				
	Company Name:	CME Associates			Company Name:	Same			
	Contact Name:	Jacquelyn Fagan			Billing Contact:	Same			
	Street Address:	3759 US Hwy 1 South - Suite 100			Street Address:	Same			
	City, State, Zip:	Monmouth Junction, New Jersey, 08852	Country:		USA	City, State, Zip:	Same	Country:	Same
	Phone:	732-951-2101			Phone:	Same			
Email(s) for Report:	jfagan@cmeusa1.com		Email(s) for Invoice:	jfagan@cmeusa1.com					

Project Information			
Project Name/No:	UC New Annex Roof Sampling / IUN00311.09-78014		Purchase Order:
EMSL LIMS Project ID: (If applicable, EMSL will provide)	US State where samples collected:	NJ	State of Connecticut (CT) must select project location: <input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)
Sampled By Name:	Matthew Ferraro	Sampled By Signature:	<i>Matthew Ferraro</i> Date Sampled: July 6, 2022 No. of Samples in Shipment: 4

Turn-Around-Time (TAT)

3 Hour
 6 Hour
 24 Hour
 32 Hour
 48 Hour
 72 Hour
 96 Hour
 1 Week
 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am.

PLM - Bulk (reporting limit)	TEM - Bulk
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) <input type="checkbox"/> POINT COUNT <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> POINT COUNT w/ GRAVIMETRIC <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1,000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NYS 198.1 (Friable - NY) <input type="checkbox"/> NYS 198.6 NOB (Non-Friable - NY) <input type="checkbox"/> NYS 198.8 (Vermiculite SM-V)	<input checked="" type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (Non-Friable - NY) <input type="checkbox"/> TEM EPA 600/R-93/116 w Milling Prep (0.1%)
<p>Other Tests (please specify)</p> <input checked="" type="checkbox"/> Positive Stop - Clearly Identified Homogeneous Areas (HA)	

Sample Number	HA Number	Sample Location	Material Description
01-RP1	01	Main Roof	Built-Up Roofing
02-RP3	01	Main Roof	Built-Up Roofing
03-RP4	02	Penthouse Roof	Built-Up Roofing
04-RP6	02	Penthouse ROOF	Built-Up Roofing

RECEIVED
 EMSL
 CINNAMINSON, N.J.
 2022 OCT 19 AM 11:16

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Please analyze all samples via PLM and only analyze samples 01-RP1 & 03-RP4 via TEM if PLM analyses are None Detected

Method of Shipment:	FedEx	Sample Condition Upon Receipt:	
Relinquished by:	Union County	Received by:	<i>[Signature]</i>
Relinquished by:		Received by:	<i>[Signature]</i>
Date/Time:		Date/Time:	10-19-22

Controlled Document - Asbestos Bulk R7 9/14/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

**Union County
New Annex Courthouse
Roof Probe Result Report
9 Elizabethtown Plaza
Elizabeth, NJ**

Prepared for:
**Union County Division of
Engineering
2325 South Avenue
Scotch Plains,
New Jersey, 07076**

Prepared By:
**Netta Architects
1084 Route 22 West
Mountainside, NJ
07902**

Date: August 8, 2022

Project No.: NA-2221736



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EXECUTIVE SUMMARY

The Union County New Annex Courthouse is five stories in height and has a main roof area and a penthouse roof. Mechanical equipment is located on main roof and one large HVAC unit located on an elevated structural steel structure on the penthouse roof.

There has been a long history of water infiltration into the building coming from the fifth floor main roof and within the penthouse building. In an attempt to stop the leaks several patches have been installed unsuccessfully in the past. The roofing system is comprised of a multilayered built-up asphalt roof over insulation on a flat structural concrete roof deck. As a result there is no positive pitch leading to the existing roof drains. Thereby, creating ponding areas on the roof.

All of the roofing systems are in a deteriorated state since there is sever water infiltration which is penetrating the roofing system and has completely saturated the roofing materials, as is evident by the photos taken while conducting the roof probe samples.

Netta Architects was requested to perform a roof survey and prepare a roof probe result report for the main and penthouse roofs; identifying the overall condition of the roof in preparation of replacing the current roofing systems. Netta Architects visited the site on July 6, 2022 to perform an inspection and conduct roof probes with the assistance of SR Solutions Group.

Due to the age of the existing roofing assemblies we recommend that either the roof probe samples collected or the new samples be environmentally tested. Union County has informed Netta Architects that they will have samples tested and will share the results with them as soon as they become available.

OBERVATIONS AND EVALUATIONS

Main Roof

The main roof is accessed from the penthouse. This roof has masonry parapet and penthouse walls. The roof has several small HVAC condensing units and an exhaust fan mounted on roof curbs. (See Photo 1). There are also several refrigerant lines that are connected to the condensing units which are either wall mounted to the penthouse or are set on roof curbs. There is a small one story prefabricated metal building that appears to be an addition to the original penthouse and is located on the south side of the penthouse. This metal building is elevated above the main roof and therefore there is a stair landing and two steps leading up to the entrance door.

There is a metal stair and a ladder leading up from the main roof to the penthouse roof.

There is an antenna located in the northeast corner attached to the parapet wall. (See Photo 2).

The roof equipment curbs are approximately 6" higher than the main roof.

The roof also has several openings within the membrane. Moss and vegetation is growing on this roof in several locations due to poor drainage from these areas. (See Photo 3).

There are several pitch pockets located on the roof which are in poor condition.

The roof parapet walls are masonry with a reinforced precast concrete coping. The inboard side of the brick parapet walls has been covered with the roof flashing material. The coping appears to be in fair condition, but has a few visible hairline cracks. The sealant at the in the transverse joints of the concrete coping are alligating and oxidizing causing them to split open and fail.

The base flashing on the exposed penthouse brick walls has an aluminum counter flashing which has either a reglet or a surface mounted type. (See Photo 4).

There are two roof drains located on the north and south sides of this roof.

Penthouse Roof

The penthouse roof is accessed from the main roof via the exterior stairway or the exterior ladder. There is one large HVAC unit which is set on an elevated structural steel structure located on this roof. (See Photo 5).

There are several pitch pockets located on the roof which are in poor condition. There are several abandoned pitch pockets, and some operational pitch pockets which are currently open allowing water to enter into the roofing assembly. (See Photo 6).

The perimeter of this roof has a fasica/gravel stop which is in poor condition.

There is only one roof drain located on the penthouse roof.

Metal Building Roof

The metal building roof is a metal standing seam roof with an integral gutter.

The flashing at the connection between the penthouse roof and metal building is in poor condition. (See Photo 7).

This metal roof is in fair condition but has vegetation growing near the gutter. (See Photo 8).

Photos



Photo 1- View of the HVAC equipment located on the main roof. Note the equipment roof curbs on which the unit is located.



Photo 2- View of the antenna attached to the parapet wall on the main roof.



Photo 3- View of the Moss and vegetation is growing on the main roof.

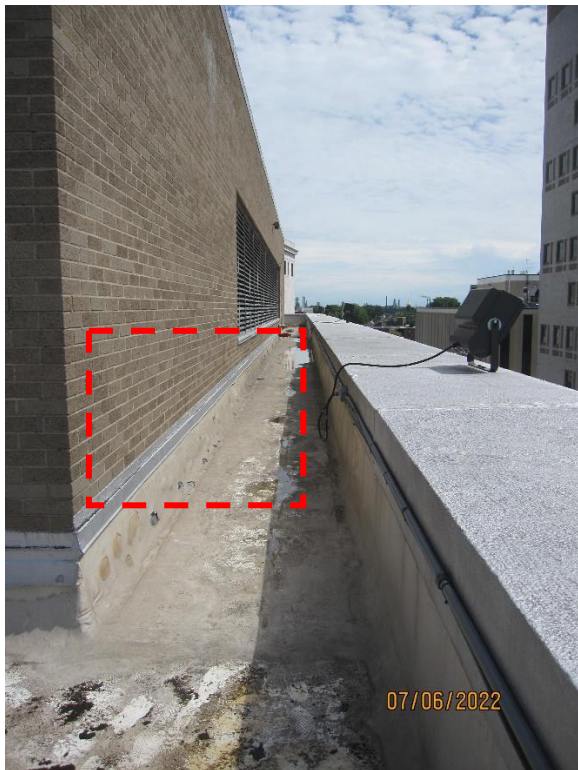


Photo 4- View of the surface mounted and reglet type counter flashings located on the penthouse walls.



Photo 5- View of the large HVAC unit which is set on an elevated structural steel structure on the penthouse roof.



Photo 6- View of open operational pitch pocket located on the penthouse roof.



Photo 7- View of the flashing at the connection between the penthouse roof and metal building which is in poor condition.



Photo 8- View of the vegetation growing on the metal standing seam roof near the integral gutter.

Roof Probe Sample Photos and Descriptions



Photo 9- Probe RP1- View of the removed probe sample. Note the saturated condition of the entire sample.

Probe RP1

Main Roof - (See Photo 9)

- Coating on the Multiply BUR (Built-Up Roofing)
- Perlite Insulation
- Polyisocyanurate Insulation
- Vapor Barrier on the Structural Concrete Roof Deck

The entire roofing assembly is saturated and the total thickness of the roofing assembly is 3 inches



Photo 10- Probe RP2 - View of the removed probe sample. Note the saturated condition of the entire sample.

Probe RP2

Main Roof - (See Photo 10)

- Coating on the Multiply BUR (Built-Up Roofing)
- Perlite Insulation
- Polyisocyanurate Insulation
- Vapor Barrier on the Structural Concrete Roof Deck

The entire roofing assembly is saturated and the total thickness of the roofing assembly is 3 inches



Photo 11- Probe RP3 - View of the removed probe sample.

Probe RP3

Main Roof Penthouse Wall - (See Photo 11)

- The inboard face of the parapet wall is constructed of brick.
 - The BUR flashing consists of multi-layers with a coating
 - It was determined that there are three (3) base flashing systems at the base of the penthouse wall
- The entire base flashing assembly is wet and the total thickness of the roofing assembly is 3-1/4 inches



Photo 12- Probe RP4 - View of the removed entirely saturated probe sample. Note the water filling within the hole where the removed probe was taken.

Probe RP4

Penthouse Roof - (See Photo 12)

- Coating on the Multiply BUR (Built-Up Roofing)
- 1" wood fiberboard over another BUR system
- Over 3" of wood fiberboard Insulation
- Over Structural Concrete Roof Deck

The entire roofing assembly is saturated and the total thickness of the roofing assembly is 4-1/2 inches



Photo 13- Probe RP5 - View of the hole where the probe sample was taken. Note the water within the hole where the removed probe was removed.

Probe RP5

Penthouse Roof - (See Photo 13)

- Coating on the Multiply BUR (Built-Up Roofing)
- 1" wood fiberboard over another BUR system
- Over 3" of wood fiberboard Insulation
- Over Structural Concrete Roof Deck

The entire roofing assembly is saturated and the total thickness of the roofing assembly is 4-1/2 inches

RECOMMENDATIONS

We offer the following Recommendations;

Main Roof

Remove the entire BUR Roofing Assembly down to the structural concrete roof deck and provide a new SBS (Styrene-Butadiene-Styrene) Modified Roofing Assembly with a cap membrane and two base membranes with SBS Modified base flashings and have a combination of non-tapered and tapered insulation. The tapered insulation will provide a positive slope to the roof drains. This roof assembly is the most practical system based on the systems membrane redundancy and that it is readily available within the current market. The proposed roofing system will include replacement of all flashings, flashed penetrations, gravel stops, etc. A 25 year no dollar limit roofing warranty will be provided.

1. The existing rooftop equipment will have to be temporarily disconnected and raised onto higher roof curbs due to the tapered insulation heights.
2. We are studying several tapered insulation layouts utilizing the existing roof drain locations in an effort to minimize the impact to the fifth floor Court Rooms and Judges Offices.
3. The existing exterior stairs will have to be modified in height due to the tapered insulation heights. Scrape and paint the stairs and railings.
4. Remove and provide sealant in the transverse joints at the precast concrete copings.
5. Replace roof drain assemblies and flush out the roof leaders. Provide interior protection.
6. Remove and replace the fixed roof ladder.
7. May have to raise the penthouse door heights.
8. Raise the penthouse base flashings and provide reglet type counter flashings.
9. Remove all abandoned pitch pockets and replace the existing pitch pockets.

Penthouse Roof

Remove the entire BUR Roofing Assembly down to the structural concrete roof deck and provide a new SBS (Styrene-Butadiene-Styrene) Modified Roofing Assembly with a cap membrane and two base membranes with SBS Modified base flashings and have a combination of non-tapered and tapered insulation. The tapered insulation will provide positive pitch to the existing roof drain and to several new roof scuppers on this roof. Refer to the Main Roof recommendation above for the roofing selection and warranty information.

1. Remove the existing fascia/gravel stop around the perimeter of this roof. Provide a new raised fascia/gravel stop around the entire roof edge.
2. Remove all abandoned pitch pockets and replace the existing pitch pockets.
3. Temporarily remove the top landing of the exterior stair to facilitate the replacement of the fascia.
4. Scape and paint the existing elevated structural steel structure.



Photo 5- View of the large HVAC unit which is set on an elevated structural steel structure on the penthouse roof.



Photo 6- View of open operational pitch pocket located on the penthouse roof.



Photo 7- View of the flashing at the connection between the penthouse roof and metal building which is in poor condition.



Photo 8- View of the vegetation growing on the metal standing seam roof near the integral gutter.

Roof Probe Sample Photos and Descriptions



Photo 9- Probe RP1- View of the removed probe sample. Note the saturated condition of the entire sample.

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- Perlite Insulation
- Polyisocyanurate Insulation
- Vapor Barrier on the Structural Concrete Roof Deck

The entire roofing assembly is saturated and the total thickness of the roofing assembly is 3 inches



Photo 10- Probe RP2 - View of the removed probe sample. Note the saturated condition of the entire sample.

Probe RP2

Main Roof - (See Photo 10)

- Coating on the Multiply BUR (Built-Up Roofing)
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- Polyisocyanurate Insulation
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Probe RP4

Penthouse Roof - (See Photo 12)

- Coating on the Multiply BUR (Built-Up Roofing)
- 1" wood fiberboard over another BUR system
- Over 3" of wood fiberboard Insulation
- Over Structural Concrete Roof Deck

The entire roofing assembly is saturated and the total thickness of the roofing assembly is 4-1/2 inches



Photo 13- Probe RP5 - View of the hole where the probe sample was taken. Note the water within the hole where the removed probe was removed.

Probe RP5

Penthouse Roof - (See Photo 13)

- Coating on the Multiply BUR (Built-Up Roofing)
- 1" wood fiberboard over another BUR system
- Over 3" of wood fiberboard Insulation
- Over Structural Concrete Roof Deck

The entire roofing assembly is saturated and the total thickness of the roofing assembly is 4-1/2 inches

RECOMMENDATIONS

We offer the following Recommendations;

Main Roof

Remove the entire BUR Roofing Assembly down to the structural concrete roof deck and provide a new SBS (Styrene-Butadiene-Styrene) Modified Roofing Assembly with a cap membrane and two base membranes with SBS Modified base flashings and have a combination of non-tapered and tapered insulation. The tapered insulation will provide a positive slope to the roof drains. This roof assembly is the most practical system based on the systems membrane redundancy and that it is readily available within the current market. The proposed roofing system will include replacement of all flashings, flashed penetrations, gravel stops, etc. A 25 year no dollar limit roofing warranty will be provided.

1. The existing rooftop equipment will have to be temporarily disconnected and raised onto higher roof curbs due to the tapered insulation heights.
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3. The existing exterior stairs will have to be modified in height due to the tapered insulation heights. Scrape and paint the stairs and railings.
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5. Replace roof drain assemblies and flush out the roof leaders. Provide interior protection.
6. Remove and replace the fixed roof ladder.
7. May have to raise the penthouse door heights.
8. Raise the penthouse base flashings and provide reglet type counter flashings.
9. Remove all abandoned pitch pockets and replace the existing pitch pockets.

Penthouse Roof

Remove the entire BUR Roofing Assembly down to the structural concrete roof deck and provide a new SBS (Styrene-Butadiene-Styrene) Modified Roofing Assembly with a cap membrane and two base membranes with SBS Modified base flashings and have a combination of non-tapered and tapered insulation. The tapered insulation will provide positive pitch to the existing roof drain and to several new roof scuppers on this roof. Refer to the Main Roof recommendation above for the roofing selection and warranty information.

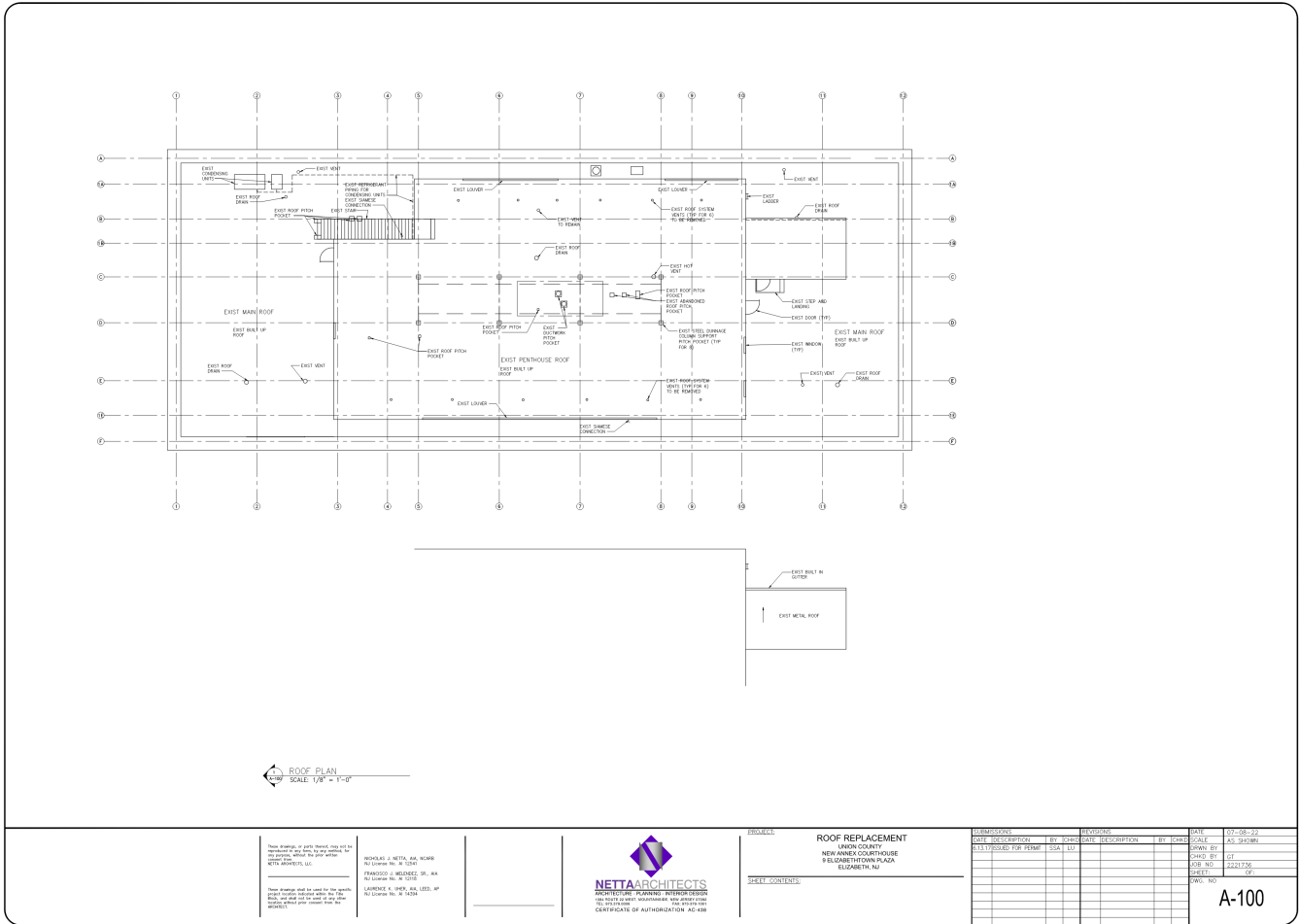
1. Remove the existing fascia/gravel stop around the perimeter of this roof. Provide a new raised fascia/gravel stop around the entire roof edge.
2. Remove all abandoned pitch pockets and replace the existing pitch pockets.
3. Temporarily remove the top landing of the exterior stair to facilitate the replacement of the fascia.
4. Scape and paint the existing elevated structural steel structure.

Metal Building Roof

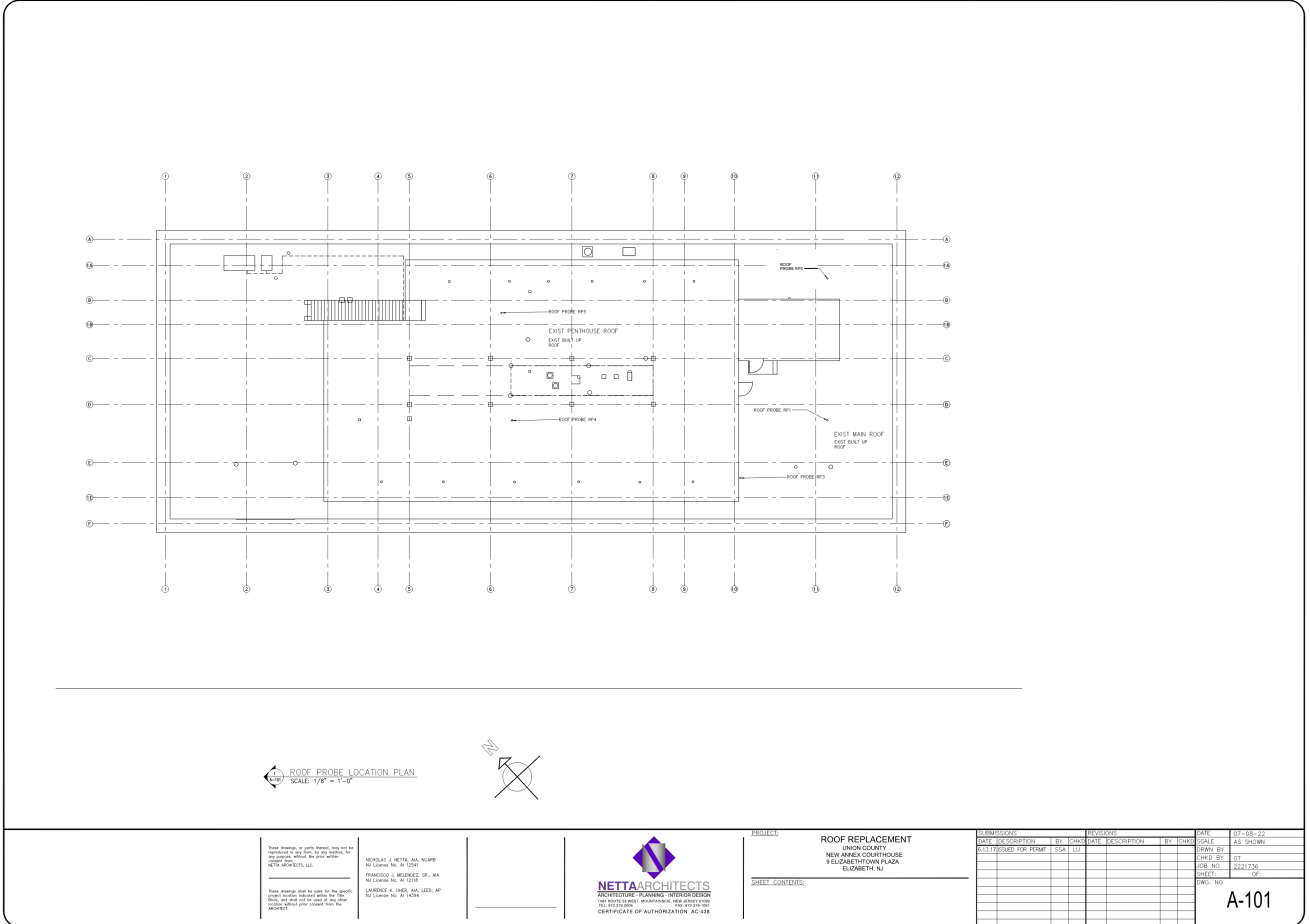
1. Provide a new elastomeric acrylic coating over the entire metal standing seam roofing assembly to seal openings within the roof.
2. Modify and reline the existing integral gutter.
3. Flush out the roof downspouts.
4. Replace the existing flashing at the connection between the metal building and the original penthouse.

APPENDIX

Roof Plan



Roof Probe Location Plan



ROOF PROBE LOCATION PLAN
 SCALE: 1/8" = 1'-0"



These drawings are the property of the Architect and shall not be used for any other project without the written consent of the Architect.

NETTA ARCHITECTS
 1000 W. 10TH ST. SUITE 200
 ELIZABETH, NJ 07208
 TEL: 908.382.1111
 WWW.NETTAARCHITECTS.COM

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 ARCHITECTURAL PLANNING INTERIOR DESIGN
 1000 W. 10TH ST. SUITE 200
 ELIZABETH, NJ 07208
 TEL: 908.382.1111
 WWW.NETTAARCHITECTS.COM

PROJECT: ROOF REPLACEMENT
 UNION COUNTY
 NEW ANNEX COURTHOUSE
 9 ELIZABETHTOWN PLAZA
 ELIZABETH, NJ

SHEET CONTENTS:

DATE	DESCRIPTION	BY	DATE	DESCRIPTION	BY	DATE
07-28-22 <td>AS SHOWN <td></td> <td></td> <td></td> <td></td> <td></td> </td>	AS SHOWN <td></td> <td></td> <td></td> <td></td> <td></td>					

A-101

UNION COUNTY NEW ANNEX COURTHOUSE ROOF REPLACEMENT

9 ELIZABETHTOWN PLAZA
ELIZABETH, NJ 07201
ISSUED FOR BID, 08.10.2023
NA JOB # 2221736

UNION COUNTY COMMISSIONERS

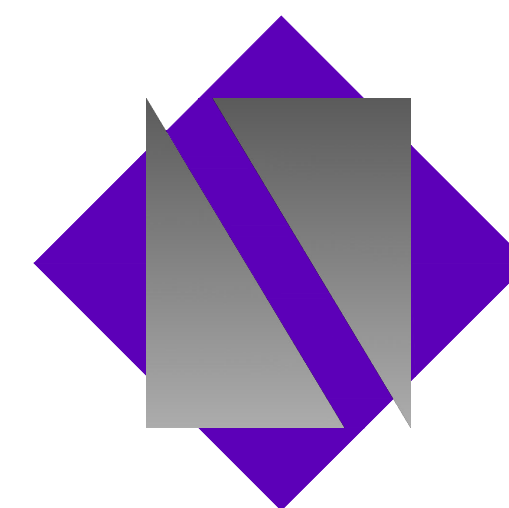
SERGIO GRANADOS, CHAIRMAN
KIMBERLY PALMIERI-MOUDED, VICE CHAIRWOMAN
JAMES E. BAKER, JR.
JOSEPH BODEK
DR. ANGELA R. GARRETSON
BETTE JANE KOWALSKI
LOURDES M. LEON
ALEXANDER MIRABELLA
REBECCA WILLIAMS

COUNTY MANAGER

EDWARD T. OATMAN

COUNTY ENGINEER

RICARDO MATIAS P.E.



NETTAARCHITECTS

1084 Route 22 West
Mountainside, NJ 07092
Phone: 973.379.0006
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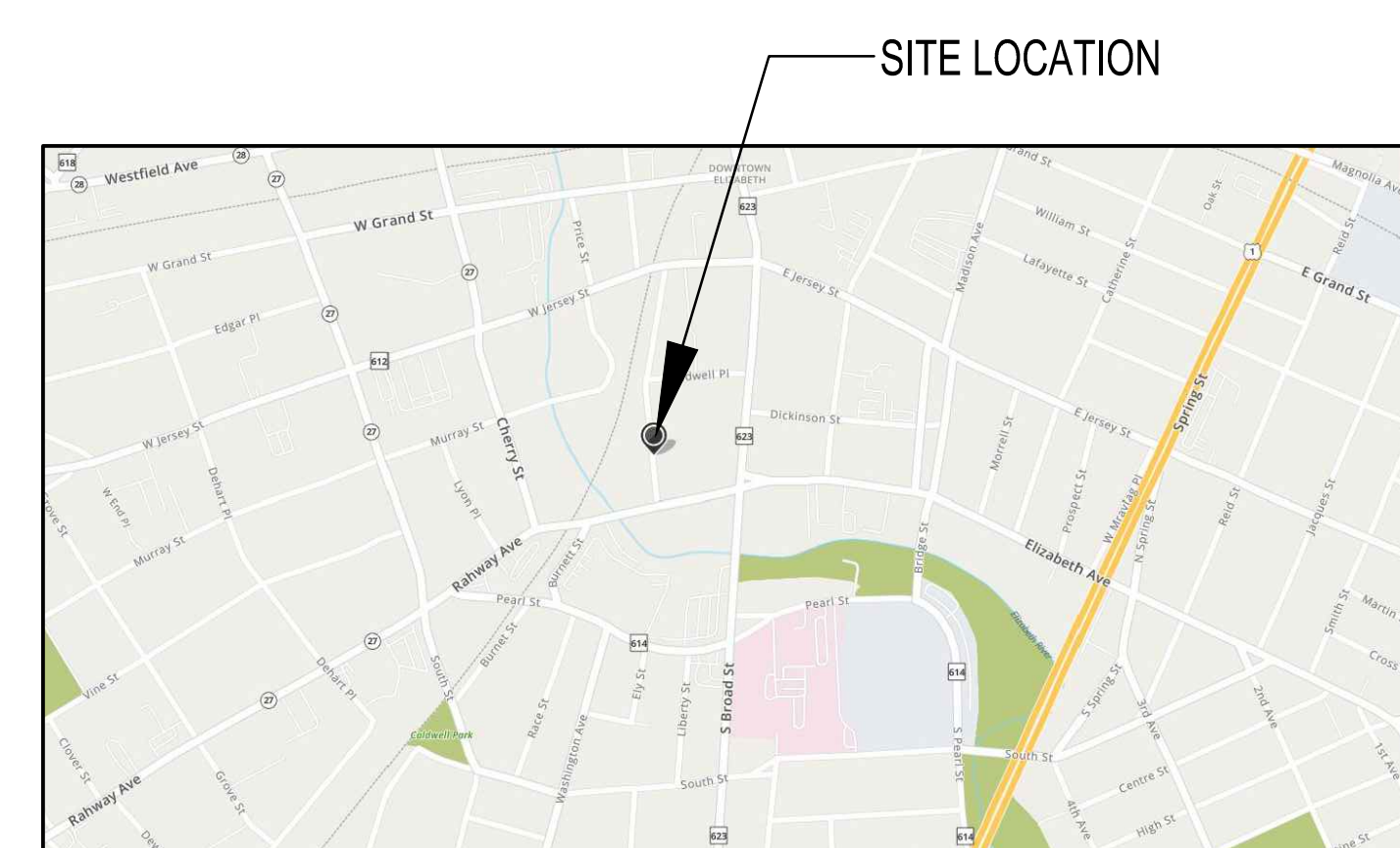
237 West 35th Street
Suite 1004
New York, NY 10004
Phone: 212.777.2090

OWNER & ARCHITECT INFORMATION

OWNER:
COUNTY OF UNION
DEPARTMENT OF ENGINEERING & PW
2325 SOUTH AVENUE
SCOTCH PLAINS, NJ 07076

ARCHITECT:
NETTA ARCHITECTS, LLC
1084 ROUTE 22 WEST
MOUNTAINSIDE, NEW JERSEY 07092
Tel.: 973-379-0006

LOCATION PLAN



SITE LOCATION

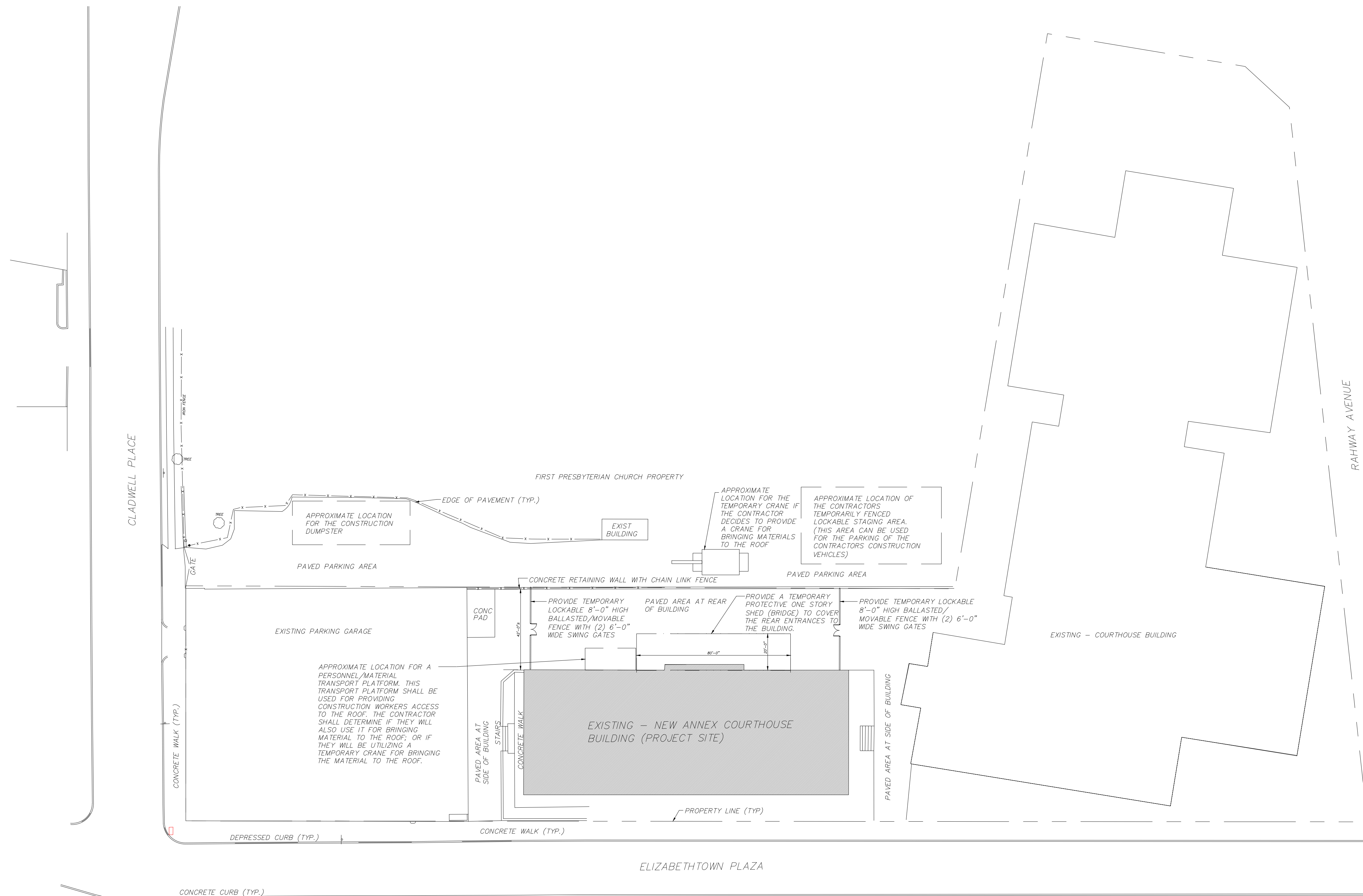


CODE INFORMATION

BUILDING CODE INFORMATION		
PROJECT NAME:	Roof Replacement	
LOCATION:	UC New Annex Courthouse - 9 Elizabethtown Plaza, Elizabeth, NJ 07201	
THE PRIMARY CODE REFERENCE WILL BE THE NEW JERSEY UNIFORM CONSTRUCTION CODE (N.J.A.C. 5:23 ET SEQ.). THE UNIFORM CONSTRUCTION CODE ADOPTS SEVERAL MODEL CODES THAT ARE REFERENCED AS SUBCODES. THESE SUBCODES ARE AN INTEGRAL PART OF THE UNIFORM CONSTRUCTION CODE AND ARE AS FOLLOWS:		
SUBCODE	NATIONAL MODEL CODE	UCC REFERENCE
BUILDING	IBC/2021 NEW JERSEY EDITION	N.J.A.C. 5:23-3.14
PLUMBING	NATIONAL STANDARD PLUMBING CODE 2021	N.J.A.C. 5:23-3.15
ENERGY	INTERNATIONAL ENERGY CONSERVATION CODE 2021	

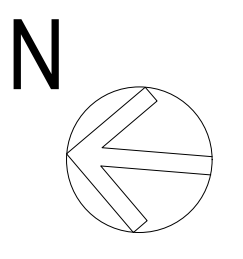
DRAWING LIST

DRAWING LIST	
DWG. NO.	SHEET CONTENTS
UNION COUNTY COURTHOUSE - ROOF REPLACEMENT	
	COVER SHEET
G.001	CONTRACTOR STAGING AREA & SITE LOGISTICS PLAN
D.101	ROOF DEMOLITION PLAN AND TEMPORARY REMOVAL OF EXISTING STAIRS AND RAILINGS
A.101	ROOF CONSTRUCTION PLAN
A.102	REINSTALLATION OF EXISTING STAIRS AND RAILINGS
A.103	ROOF DETAILS
A.104	ROOF DETAILS



1
G-001
CONTRACTOR STAGING AREA & SITE LOGISTICS PLAN

SCALE: 1" = 30'-0"



NOTES:
 1. THIS SITE PLAN REPRESENTS APPROXIMATE LOCATIONS FOR THE STAGING, DUMPSTER, PERSONNEL/MATERIAL TRANSPORT PLATFORM AND PROTECTION SHED (BRIDGE), ETC. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THEIR OWN SITE SAFETY AND SITE LOGISTICS PLAN DURING CONSTRUCTION FOR REVIEW AND APPROVAL BY THE ARCHITECT AND THE OWNER.
 2. THE CONTRACTOR SHALL UTILIZE THE PROPERTY OF THE FIRST PRESBYTERIAN CHURCH DUE TO SITE CONSTRAINTS ON THE PROJECT SITE. THE OWNER WILL MAKE ARRANGEMENTS FOR OBTAINING PERMISSION FROM THE CHURCH TO UTILIZE THEIR PROPERTY. THE CONTRACTOR HOWEVER SHALL PAY FOR ANY COSTS THAT ARE INCURRED FROM FIRST PRESBYTERIAN CHURCH ALLOWING UNION COUNTY AND THE CONTRACTOR USE OF THEIR PROPERTY. THIS FEE WILL BE TAKEN OUT OF THE CONTINGENCY ALLOWANCE. A PROJECT CONTINGENCY ALLOWANCE IS PROVIDED WITHIN THIS PROJECT. REFER TO SPECIFICATION SECTION 012100.
 3. THE CONTRACTOR SHALL OBTAIN A NJ LICENSED P.E. TO PREPARE SIGNED AND SEALED PERMIT DRAWINGS FOR THE TEMPORARY PROTECTION SHED (BRIDGE). THE CONTRACTOR SHALL PROVIDE ALL REQUIRED INSURANCES REQUIRED FOR THE PROTECTION SHED, THE PERSONNEL/MATERIAL TRANSPORT PLATFORM AND TEMPORARY CRANE IF THE CONTRACTOR DECIDES TO UTILIZE A CRANE.

These drawings, or parts thereof, may not be reproduced in any form, by any method, for any purpose, without the prior written consent from NETTA ARCHITECTS, LLC.

These drawings shall be used for the specific project location indicated within the title block, and shall not be used at any other location without prior consent from the ARCHITECT.

NICHOLAS J. NETTA, AIA, NCARB
 NJ License No. AI 12541

FRANCISCO J. MELENDEZ, SR., AIA
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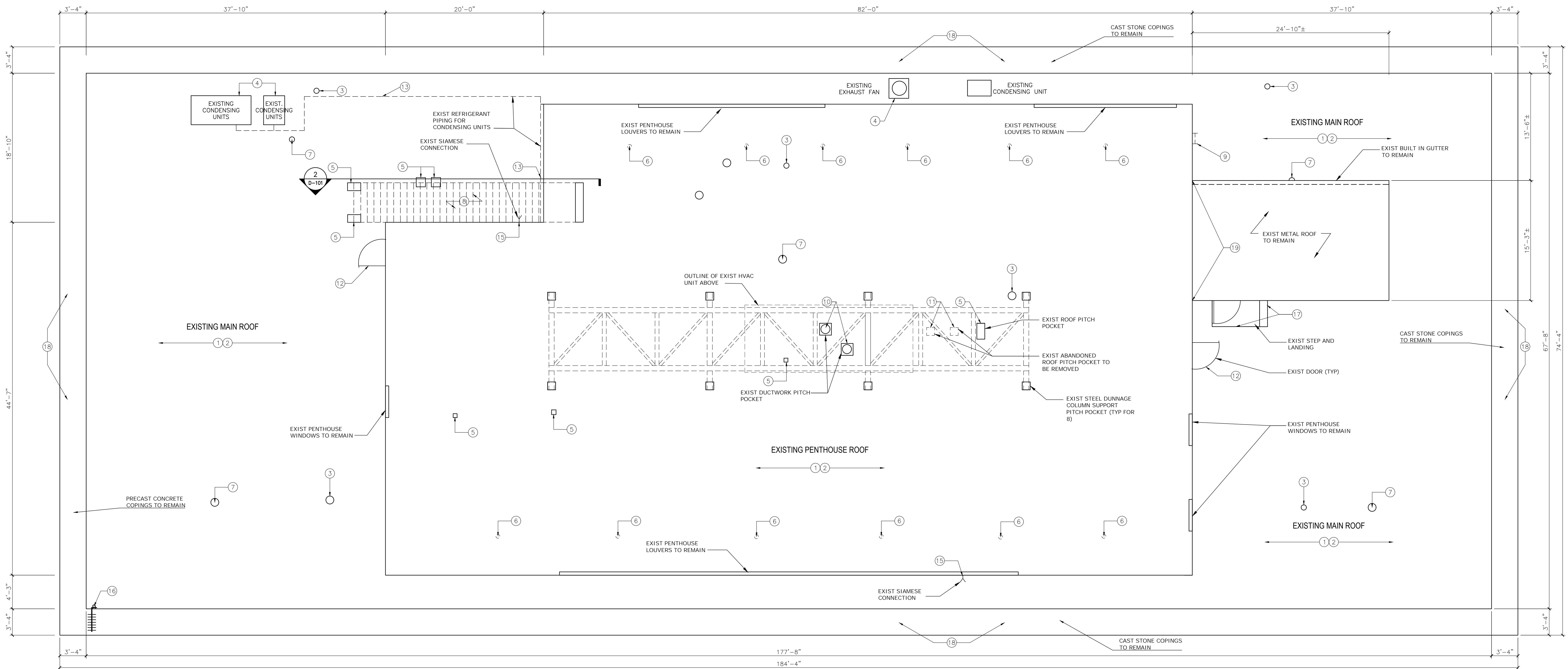


PROJECT:
UNION COUNTY ROOF REPLACEMENT
 NEW ANNEX COURTHOUSE
 9 ELIZABETHTOWN PLAZA, ELIZABETH, NJ 07201

SHEET CONTENTS:
CONTRACTOR STAGING AREA & SITE LOGISTICS PLAN

SUBMISSIONS				REVISIONS				DATE
DATE	DESCRIPTION	BY	CHKD	DATE	DESCRIPTION	BY	CHKD	SCALE
08.10.23	ISSUED FOR BID	CC	GT					09-09-22
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								DRWN BY SSA, CC
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								SHEET: OF:
								DWG. NO

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GENERAL DEMOLITION NOTES:

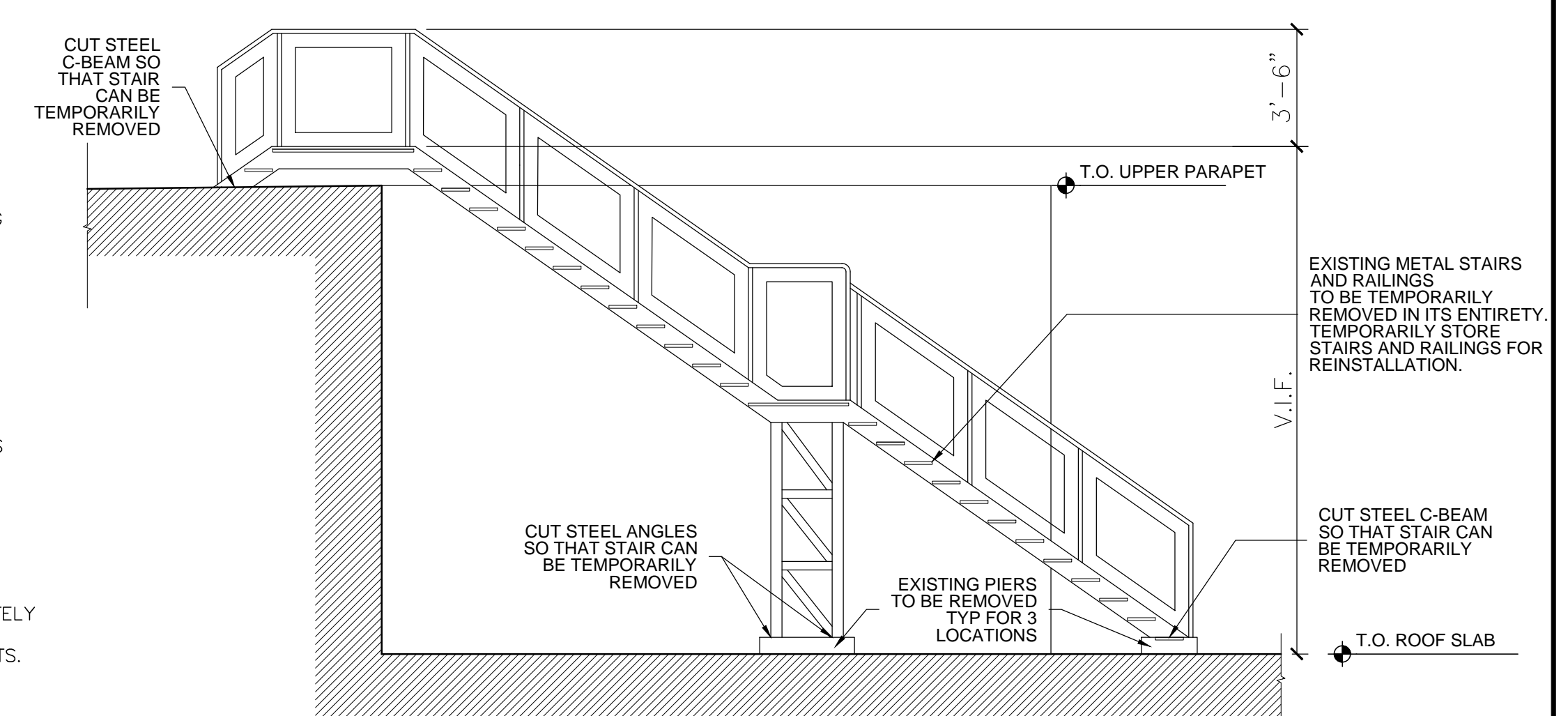
- ALL DAMAGES DURING DEMOLITION WORK TO THE EXISTING FACILITY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND ALL DAMAGES TO BE REPAIRED AT THEIR OWN EXPENSES.
- BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL SET UP A SCHEDULE OF OPERATIONS WITH THE DIRECTOR OF FACILITIES, COORDINATING PERFORMANCE OF ALL WORK WITHIN THE OPERATION SCHEDULE OF THE FACILITY.
- THERE SHALL BE NO INTERRUPTION OF THE EXISTING PLUMBING, MECHANICAL, ELECTRICAL SERVICES WITHOUT PRIOR CONSENT OF THE OWNERS REPRESENTATIVE. SUCH INTERRUPTION SHALL BE KEPT TO A MINIMUM AND SHALL BE CLOSELY SCHEDULED WITH THE FACILITY.
- ALL DEMOLITION OPERATIONS SHALL BE COORDINATED WITH APPLICABLE UTILITY COMPANIES WHERE REQUIRED.
- SELECTIVE DEMOLITION TAGS ARE KEPT ON THIS DRAWINGS TO INDICATE THE DEMOLITION SCOPE OF WORK AND REPRESENT AREAS OF SIGNIFICANT WORK. HOWEVER, THEY DO NOT RELIEVE THE CONTRACTOR OF ANY ADDITIONAL WORK OF SIMILAR SCOPE AND NATURE IDENTIFIED THROUGH FIELD INVESTIGATIONS.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED DEMOLITION PERMITS PRIOR TO BEGINNING ANY WORK.
- DEMOLITION PERMITS ARE REQUIRED PRIOR TO BEGINNING OF ANY REMOVAL OR RELOCATION OF EXISTING EQUIPMENT, MATERIALS, APPURTENANCES, ETC. AS INDICATED ON THE DRAWINGS OR AS HEREIN SPECIFIED OR REQUIRED. THESE CONDITIONS MAY OCCUR DURING THE PHASING OF THE RE-ROOFING SCOPE OF WORK.
- THE CONTRACTOR SHALL KEEP THE SITE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY THE WORK. UPON COMPLETION OF THE CONTRACT, THE CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE THE SITE IN THE SAME CONDITION AS BEFORE COMMENCEMENT OF THE WORK.
- THE CONTRACTOR SHALL CAREFULLY MAKE ALL INVESTIGATIONS IN THE FIELD PRIOR TO SUBMITTING THEIR BID. THEIR BID SHALL REFLECT ALL WORK NECESSARY FOR THE COMPLETE ROOF REPLACEMENT AT THE EXISTING BUILDING.
- ANY ITEMS NOT SPECIFICALLY IDENTIFIED BUT REQUIRED TO BE REMOVED OR REPAIRED TO PREPARE THE BUILDING FOR NEW WORK OR TO OTHERWISE PRODUCE THE FINISHED PRODUCT SHOWN IN THE CONTRACT DOCUMENTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SCOPE OF DEMOLITION WORKS:

- REMOVE EXISTING ROOF SYSTEM AND BASE FLASHINGS TO EXPOSE EXISTING CONCRETE DECKING, SUBSTRATE AND WALL SUBSTRATE.
- EXAMINE EXISTING SUBSTRATE AND NOTIFY ARCHITECT OF ANY DAMAGE, DETERIORATION, OR DEFICIENCIES. REPLACE ANY AND ALL UNSUITABLE SUBSTRATE IN ACCORDANCE WITH THE UNIT PRICE SCHEDULE AND REQUIREMENTS INDICATED WITHIN THE PROJECT MANUAL.
- REMOVE EXISTING METAL FLASHINGS, COUNTER FLASHINGS AND TRIM.
- REMOVE EXISTING METAL ROOF EDGE SYSTEM, METAL TERMINATION BARS, COUNTER FLASHINGS, PITCH POCKETS, WALL FLASHINGS, SEALANTS AND ADHESIVES.
- REMOVE EXISTING PERIMETER CANTS AND TAPERED EDGE STRIPS.
- REMOVE ALL EXISTING ROOF CURBS, CURB FLASHINGS AND CAPS.
- RAISE HEIGHT OF ALL EXISTING ROOF CURB FLASHINGS TO A MINIMUM OF 8-INCHES ABOVE THE TOP SURFACE OF THE ROOFING SYSTEM AS INDICATED ON DRAWINGS.
- REMOVE EXISTING WOOD NAILERS AND BLOCKING.
- CLEAN EXISTING SUBSTRATE OF DUST, DEBRIS, SHARP PROJECTIONS AND / OR OTHER SUBSTANCES DETRIMENTAL TO THE ROOFING SYSTEM.
- SEAL ALL PENETRATIONS THROUGH EXISTING SUBSTRATES WITH SPRAY FOAM INSULATION.
- PROVIDE WEATHER PROTECTION DURING ALL PHASES OF CONSTRUCTION TO EXISTING BUILDING.
- REMOVE EXISTING METAL GRAVEL STOP, AND FLASHINGS.
- REMOVE EXISTING ROOF DRAINS ON PENTHOUSE ONLY. REMOVE CLAMPING RINGS, STRAINER AND BOLTS AT THE MAIN ROOF. REMOVE ENTIRE ROOD DRAIN AT THE WALL OF THE METAL BUILDING.
- REMOVE ALL EXISTING WOOD NAILERS.
- REMOVE ALL EXISTING FASTENERS IN THE ROOF DECK.
- REMOVE ALL EXISTING PITCH POCKETS.
- RAISE ALL EQUIPMENT CURBS TO A MINIMUM OF 8" ABOVE THE TOP SURFACE OF THE NEW BUILT UP ROOFING SYSTEM.
- EXISTING ROOF MOUNTED EQUIPMENT SHALL BE TEMPORARILY REMOVED TO FACILITATE THE INSTALLATION OF THE NEW ROOFING SYSTEM AND FLASHINGS. OPENINGS SHALL BE MAINTAINED WEATHERTIGHT AT ALL TIMES. COORDINATE SHUTDOWN AND REINSTALLATION OF ALL EQUIPMENT WITH FACILITY. VERIFY PROPER OPERATION OF EQUIPMENT AFTER REINSTALLATION.
- THE CONTRACTOR SHALL REMOVE EXISTING ABANDONED DUCTS, CURBS, ETC. INCLUDING ALL ASSOCIATED APPURTENANCES AND SHALL PROVIDE NEW FRAMING TO CLOSE ROOF OPENINGS AND ROOF OVER EXISTING OPENING WITH NEW SPECIFIED ROOFING SYSTEM.

DEMOLITION KEYNOTES:

- COMPLETELY REMOVE ROOFING SYSTEM IN ITS ENTIRETY DOWN TO THE STRUCTURAL CONCRETE ROOF DECK. PATCH DAMAGED AREAS OF CONCRETE DECK AS REQUIRED. NOTIFY THE ARCHITECT PRIOR TO REPAIRING THE DAMAGED CONCRETE DECK AND PHOTOGRAPH THE DAMAGED AREAS SO THE ARCHITECT CAN VERIFY ITS CONDITION AND DETERMINE THE EXTENT OF THE REQUIRED REPAIR. PROVIDE A UNIT PRICE FOR THE PATCHING OF THE CONCRETE ROOF DECK IN ACCORDANCE WITH THE PROJECT MANUAL.
- COMPLETELY REMOVE ALL WALL & ROOF MEMBRANE AND METAL FLASHING, FORMED FASCIA COVER & ASSEMBLY AND ROOF & BUILDING EXPANSION JOINTS AND PREPARE ROOF AS REQUIRED TO RECEIVE NEW ROOFING SYSTEM AND ALL ASSOCIATED FLASHING TYPICAL.
- EXISTING VENT PIPES TO REMAIN. CONTRACTOR TO CLEAN AND PREPARE VENT PIPES AS REQUIRED TO RECEIVE NEW FLASHING AND SEALING.
- TEMPORARILY DISCONNECT AND REMOVE EXISTING EQUIPMENT AND STORE IN A SAFE LOCATION FOR REINSTALLATION. (REFER TO GENERAL DEMOLITION NOTE 18).
- TEMPORARILY REMOVE EXISTING PITCH POCKETS TO FACILITATE THE INSTALLATION OF THE NEW ROOFING SYSTEM.
- EXISTING ONE WAY ROOFING SYSTEM VENTS SHALL BE REMOVED WITH THE ROOFING SYSTEM.
- REMOVE EXISTING ROOF DRAINS, REFER TO DEMO NOTE #13
- TEMPORARILY REMOVE AND STORE EXISTING METAL STAIR TO FACILITATE ROOFING WORK. MODIFY EXISTING STAIR ROOF CURB DUE TO THE INCREASED HEIGHT OF NEW ROOFING SYSTEM. MODIFY THE STAIR AND TREADS AS REQUIRED.
- REMOVE THE EXISTING METAL LADDER TO THE PENTHOUSE.
- TEMPORARILY REMOVE AND REINSTALL EXISTING HVAC DUCTS TO FACILITATE THE INSTALLATION OF THE NEW ROOFING SYSTEM.
- REMOVE ABANDONED PITCH POCKETS
- EXISTING DOOR AND FRAME TO BE REMOVED. THE DOOR AND FRAME MUST BE RAISED AS REQUIRED, DUE TO THE INCREASED HEIGHT OF THE NEW ROOFING SYSTEM.
- REMOVE THE EXISTING ROOF AND WALL MOUNTED REFRIGERANT PIPING CONNECTED FOR THE A/C CONDENSING UNITS. REMOVE SUPPORTS.
- TEMPORARILY REMOVE AND SUPPORT EXISTING CONDUITS ATTACHED TO THE PARAPET WALLS TO FACILITATE THE ROOFING WORK.
- EXISTING SIAMESE CONNECTION TO REMAIN.
- TEMPORARILY REMOVE EXISTING ANTENNA TO FACILITATE THE ROOFING WORK AND STORE IN A SAFE PLACE. REINSTALL AT THE END OF CONSTRUCTION WORK AT THE SAME LOCATION. (REFER TO GENERAL DEMOLITION NOTE 18)
- CAREFULLY REMOVE AND STORE EXISTING METAL RAILINGS, STEPS AND LANDING PLATFORM AND SUPPORT POSTS ADJACENT TO THE METAL BUILDING TO FACILITATE ROOFING WORK AND DUE TO THE INCREASED HEIGHT OF THE ROOFING SYSTEM. RE-INSTALL IN ORIGINAL LOCATION
- REMOVE SEALANT FROM THE TRANSVERSE HORIZONTAL AND VERTICAL JOINTS AT THE PRECAST CONCRETE COPINGS AROUND THE PERIMETER OF THE MAIN ROOF (TYP). REMOVE APPROXIMATELY 260 L.F. TOTAL OF SEALANT FROM THE TRANSVERSE JOINTS. PROVIDE AN UNIT PRICE FOR SEALING THE TRANSVERSE JOINTS. REFER TO SPECIFICATION SECTION 012200-UNIT PRICES.
- REMOVE EXISTING JOINT, FLASHING AND BLOCKING FROM EXISTING DECK.



2 EXISTING STEEL STAIRS - REMOVAL
 SCALE: 1/4"=1'-0"

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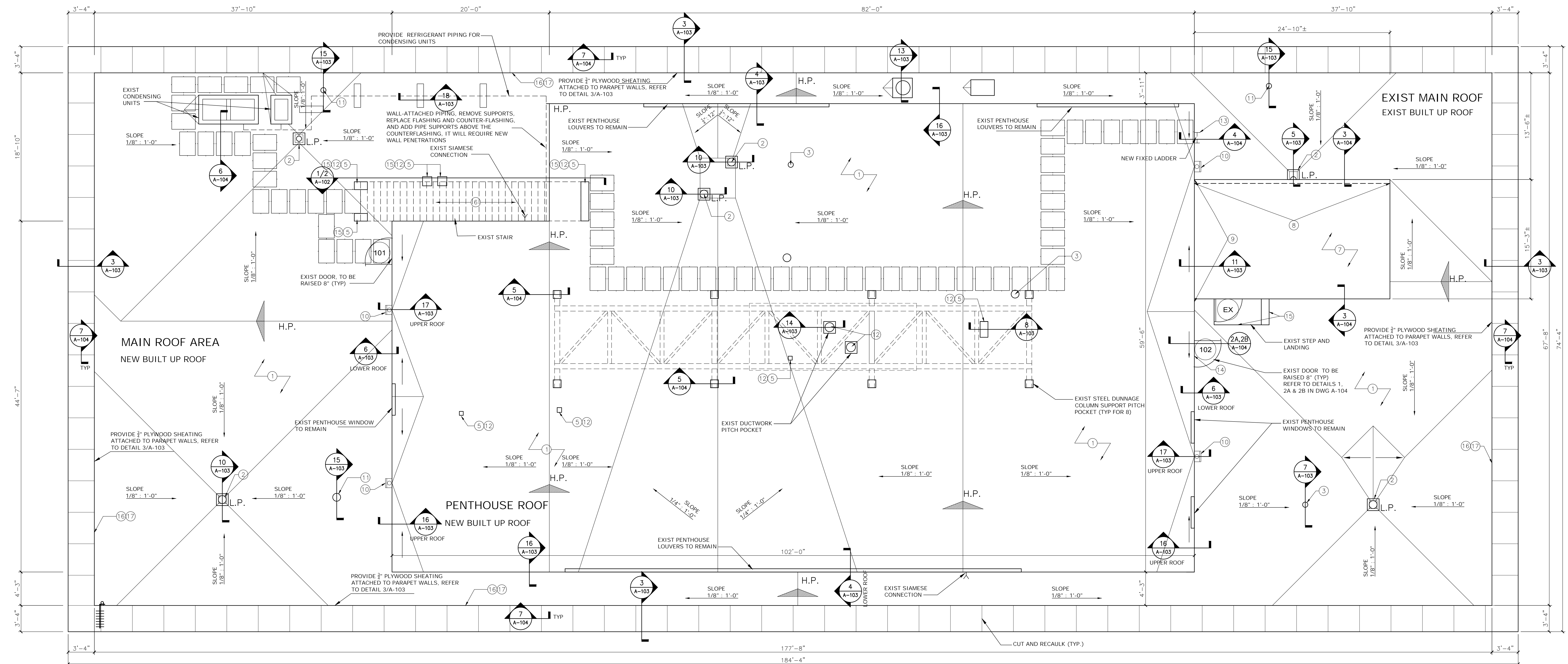


PROJECT:
UNION COUNTY ROOF REPLACEMENT
 NEW ANNEX COURTHOUSE
 9 ELIZABETHTOWN PLAZA, ELIZABETH, NJ 07201

SHEET CONTENTS:
ROOF DEMOLITION PLAN AND
TEMPORARY REMOVAL OF EXISTING
STAIR AND RAILINGS

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								JOB NO 2221736
								SHEET: 1 OF: 5
								DWG. NO

D.101



1 ROOF PLAN
 A-101 SCALE: 3/16"=1'-0"
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CONSTRUCTION NOTES:

- PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING AT PERIMETER OF ROOF AND OTHER CONDITIONS AS INDICATED ON DRAWINGS.
- PROVIDE ROOF CURBS AND FLASHINGS AS INDICATED ON DRAWINGS TO A MINIMUM OF 12-INCHES ABOVE THE TOP SURFACE OF THE ROOFING SYSTEM. REPLACE ALL EXISTING SUPPORT RAILS. SECURE BOTTOM OF ROOF CURBS & RAILS DIRECTLY TO EXISTING SUBSTRATE ON WOOD BLOCKING TO NEW REQUIRED INSULATION HEIGHT.
- PRIME EXISTING DECK SUBSTRATE. PROVIDE A 1-PLY APPLICATION OF A TRI-LAMINATE BASE SHEET VAPOR BARRIER TORCH APPLIED OVER PRIMED CONCRETE DECK SUBSTRATE. LOWER ALL DRAINS AS REQUIRED TO CREATE A SUMP.
- PROVIDE 1 LAYER OF 2.0' ISO-CYANURATE BOARD AS AN INSULATION BASE LAYER AND A 1/8-INCH PER FOOT TAPERED POLYISOCYANURATE INSULATION (W/ 1/2-INCH LEADING EDGE), AS INDICATED ON DRAWINGS, SET-IN LOW-RISE URETHANE FOAM ADHESIVE w/ STAGGERED JOINTS. PROVIDE MINIMUM 2'-0" OVERLAP OVER ALL LAYERS OF INSULATION.
- PROVIDE 1/4-INCH PER FOOT SLOPED CRICKETS AT HIGH SIDE OF ROOF CURBS, PENETRATIONS, BETWEEN ROOF DRAINS AND AS INDICATED ON DRAWINGS, SET-IN LOW-RISE URETHANE ADHESIVE.
- PROVIDE 1/8-INCH-THICK COVER BOARD OVER INSULATION, SET-IN LOW-RISE URETHANE ADHESIVE.
- PROVIDE 2 BASE PLY TRI-LAMINATE SHEETS SET IN COLD PROCESS ADHESIVE OVER COVER BOARD AND CANT STRIPS. EXTEND MEMBRANE PLY SHEETS UP VERTICAL SURFACE OF WALL A OF MINIMUM 4-INCHES ABOVE TOP OF THE CANT.
- PROVIDE MINERAL SURFACE FIRE RATED CAP SHEET SET IN COLD PROCESS ADHESIVE. EXTEND MEMBRANE SHEET UP VERTICAL SURFACE. MINIMUM 4-INCHES ABOVE TOP OF THE CANT.
- PROVIDE FIRE RATED SBS CAP SHEET FLASHING MEMBRANE SET IN COLD PROCESS ADHESIVE OVER BASE PLY FLASHING SET IN COLD PROCESS ADHESIVE AT ALL INTERIOR AND EXTERIOR FLASHING CONDITIONS AND OTHER CONDITIONS AS INDICATED ON DRAWINGS.
- PROVIDE METAL TERMINATION BARS AND METAL COUNTER FLASHING AT WALL FLASHINGS AS INDICATED ON DRAWINGS. PROVIDE THE SAME DETAIL FOR ALL EXPOSED VERTICAL EDGE OF FLASHING CONDITIONS.
- PROVIDE PRE-MANUFACTURED CANT DAM EDGE METAL SYSTEM AS INDICATED ON DRAWINGS WITH EXTENDERS AND SCUPPERS AT PENTHOUSE ELEVATION ROOF.
- PROVIDE ROOF EXPANSION JOINT SYSTEMS, AND ANY AND ALL ACCESSORIES, AS INDICATED ON DRAWINGS.
- PROVIDE SHEET METAL FLASHING AND TRIM AS INDICATED ON DRAWINGS.
- PROVIDE ROLLED LEAD STACK FLASHING SLEEVE AT ALL EXISTING PIPING PENETRATIONS.
- PROVIDE WALKWAY PADS AS INDICATED ON DRAWINGS, SET IN FLASHING ADHESIVE.
- PROVIDE PRE-MANUFACTURED ADJUSTABLE PIPE SUPPORTS AT 5'-0" O.C. MAXIMUM.
- PROVIDE A 25 YEAR NDL ROOF SYSTEM EDGE TO EDGE WARRANTY.
- PROVIDE SHOP DRAWINGS FOR ALL DETAILS. DO NOT PROCEED WITH WORK WITH OUT WRITTEN APPROVAL OF ALL SUBMITTALS.
- REMOVE AND REPLACE BRICK AS NOTED ON THE DRAWINGS. PROVIDE NEW STAINLESS-STEEL COUNTER FLASHING.
- ALL METAL SHALL BE A MINIMUM OF .050 GAUGE KYNAR FINISH AT ALL LOCATIONS OR STAINLESS STEEL AS NOTED.
- PROVIDE NEW PITCH POCKETS FOR ACC UNITS AS INDICATED ON DRAWINGS. MODIFY REFRIGERANT PIPING, CONDUIT AND WIRING AS REQUIRED FOR PROPER INSTALLATION OF PITCH POCKETS.
- PROVIDE NEW CRICKETS AS INDICATED ON DRAWINGS. CRICKETS SHALL BE CONSTRUCTED TO DIVERT WATER AROUND CURBS AND TO PROMOTE POSITIVE DRAINAGE OFF THE ROOF. CRICKETS LOCATED AT FLAT SECTION OF ROOF SHALL CONSIST OF PRE-MANUFACTURED INSULATION, OF THE TYPE SPECIFIED AS PART OF THE ROOF ASSEMBLY SYSTEM, TO A SLOPE OF NOT LESS THAN 1/4" PER FOOT, UNLESS OTHERWISE NOTED.
- PROVIDE NEW PITCH POCKETS FOR ACC UNITS AS INDICATED ON DRAWINGS. MODIFY REFRIGERANT PIPING, CONDUIT AND WIRING AS REQUIRED FOR PROPER INSTALLATION OF PITCH POCKETS.
- PROVIDE NEW CRICKETS AS INDICATED ON DRAWINGS. CRICKETS SHALL BE CONSTRUCTED TO DIVERT WATER AROUND CURBS AND TO PROMOTE POSITIVE DRAINAGE OFF THE ROOF. CRICKETS LOCATED AT FLAT SECTION OF ROOF SHALL CONSIST OF PRE-MANUFACTURED INSULATION, OF THE TYPE SPECIFIED AS PART OF THE ROOF ASSEMBLY SYSTEM, TO A SLOPE OF NOT LESS THAN 1/4" PER FOOT, UNLESS OTHERWISE NOTED.

PLAN LEGEND:

	NEW ROOF DRAIN
	NEW 2'x3' WALKING PAD
	NEW CRICKET/DIVERTER
H.P.	ROOF HIGH POINT
L.P.	ROOF LOW POINT

CONSTRUCTION KEYNOTES:

- PROVIDE AND INSTALL NEW SBS ROOF SYSTEM OVER TAPERED POLY-ISO INSULATION OVER VAPOR BARRIER TORCH APPLIED ON PRIMED CONCRETE ROOF DECK. REFER TO ROOF DETAILS ON DRAWING A-103 AND A-104 FOR ADDITIONAL INFORMATION. COORDINATE WITH SPECIFICATION SECTION 075114.
- PENTHOUSE ROOF - PROVIDE SUMP PAN TO MATCH CAST IRON DRAIN BODY HUB ASSEMBLY ALONG WITH CLAMPING RING AND CAST IRON DOME STRAINER, INCLUDING BOLTS. AT EXISTING ROOF DRAIN LOCATIONS, BASED OF DESIGN JR SMITH 1015 OR AN APPROVED EQUAL. SECURE NEW DRAIN HUB ASSEMBLY BODY TO EXISTING DRAIN PIPES. THE EXISTING ROOF DRAIN IS JOSAM 4414-4.
- 2A MAIN ROOF - PROVIDE CLAMPING RING, STRAINER AND BOLTS AT ALL EXISTING ROOF DRAINS LOCATIONS. EXCEPT AT THE METAL BUILDING SIDEWALL DRAIN WHICH WILL BE REPLACED, THE BASIS OF DESIGN OF THE SIDEWALL SCUPPER DRAIN IS A ZURN Z1717. THE EXISTING ROOF DRAIN IS JOSAM 4415-5. THE CONTRACTOR SHALL ENSURE THAT THE PROVIDED DRAIN ASSEMBLY PARTS ARE COMPATIBLE WITH THIS MODEL.
- PROVIDE AND INSTALL NEW VENT FLASHING AT ALL EXISTING PLUMBING SANITARY VENTS. REFER TO ROOF DETAIL 7/A-103 FOR ADDITIONAL INFORMATION.
- PROVIDE AND INSTALL NEW FLASHING AT ALL EXISTING ELECTRICAL CONDUIT, WATER LINE AND CHILLER LINES PIPES. REFER TO ROOF DETAILS ON DRAWING A-103 AND A-104 FOR ADDITIONAL INFORMATION.
- PROVIDE AND INSTALL FIELD FORMED PITCH POCKET AT EXISTING EQUIPMENT DUNNAGE SUPPORTS. REFER TO DETAIL 5/A104 FOR ADDITIONAL INFORMATION.
- RAISE THE HEIGHT OF THE EXISTING STAIR CONCRETE PIER SUPPORTS BY PROVIDING ADDITIONAL CONCRETE. REFER TO DETAIL 12 ON DWG A-103. SCRAPE AND PAINT STAIR AND RAILINGS AND MODIFY THEM ACCORDINGLY, AND REINSTALL.
- PROVIDE NEW ELASTOMERIC ACRYLIC COATING OVER THE ENTIRE METAL STANDING SEAM ROOFING ASSEMBLY TO SEAL OPENINGS WITHIN THE ROOF
- MODIFY AND SEAL COAT THE ENTIRE EXISTING INTEGRAL GUTTER, FLUSH OUT THE ROOF DOWNSPOUTS.
- REPLACE THE EXISTING FLASHING AT THE CONNECTION BETWEEN THE METAL BUILDING AND THE ORIGINAL PENTHOUSE
- NEW SCUPPER AND DOWNSPOUT, CONCRETE SPLASH BLOCK AT THE BOTTOM.
- GOOSE-NECK PIPE, PROVIDE TYPICAL PITCH POCKET, REFER TO DETAIL 15/A-103
- APPLY LIQUID FLASHING ON EXISTING PITCH POCKETS AND ROOF PIERS
- PROVIDE FIXED ROOF ACCESS LADDER FROM MAIN ROOF TO PENTHOUSE. REFER TO DETAIL 4 ON DWG A-104.
- RAISE THE HEIGHT OF THE EXISTING DOOR SILL APPROXIMATELY 4" HIGHER. PROVIDE NEW STEEL LINTELS AND INSTALL ADDITIONAL CONCRETE TO RAISE THE SILL HEIGHT. REFER TO DETAILS 2A AND 2B ON DWG A-104
- RAISE THE HEIGHT OF THE EXISTING LANDING SUPPORTS BY WELDING ADDITIONAL SUPPORT MEMBERS TO MATCH THE EXISTING SUPPORTS. MODIFY THE LANDING, STEPS AND RAILINGS ACCORDINGLY. SCRAPE AND PAINT THE ENTIRE ASSEMBLY AND REINSTALL. REFER TO PITCH POCKET DETAIL 8 ON DWG A-103
- RESEAL THE TRANSVERSE JOINTS WITHIN THE PRECAST CONCRETE COPINGS. REFER TO DEMOLITION KEYNOTE 18 ON DWG D.101.
- PROVIDE AN ELASTOMERIC COATING OVER THE ENTIRE SURFACE OF THE PRECAST CONCRETE COPINGS AROUND THE ENTIRE PERIMETER OF THE MAIN ROOF (TYP)

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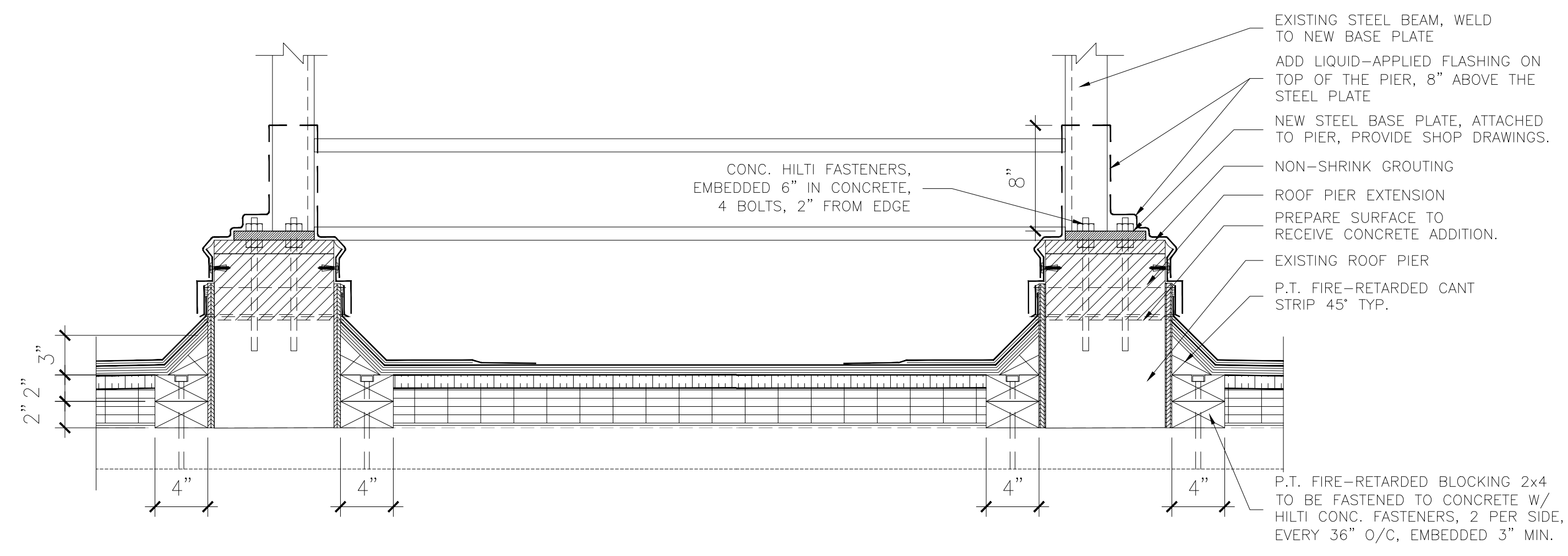
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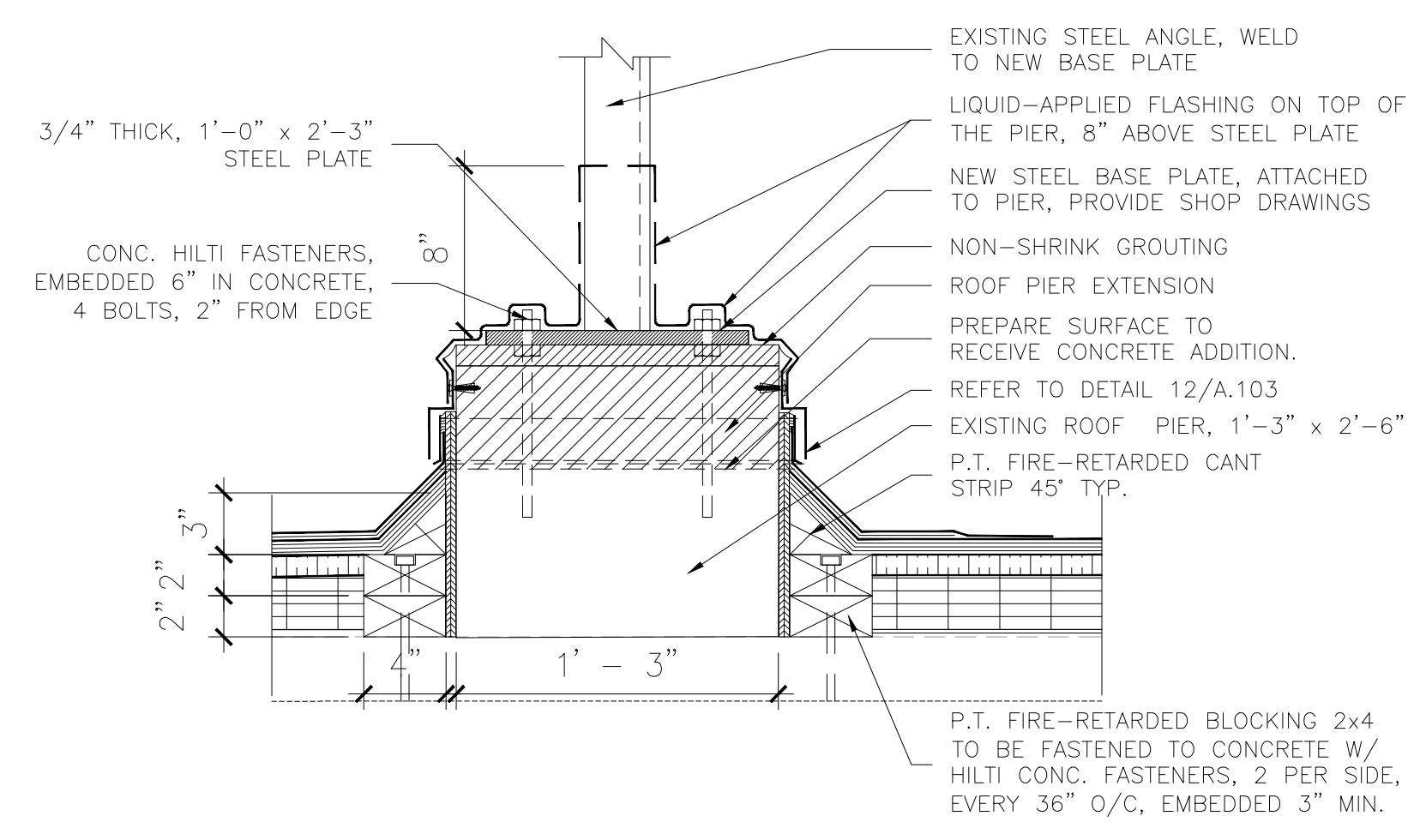
PROJECT:
UNION COUNTY ROOF REPLACEMENT
 NEW ANNEX COURTHOUSE
 9 ELIZABETHTOWN PLAZA, ELIZABETH, NJ 07201

SHEET CONTENTS:
ROOF CONSTRUCTION PLAN

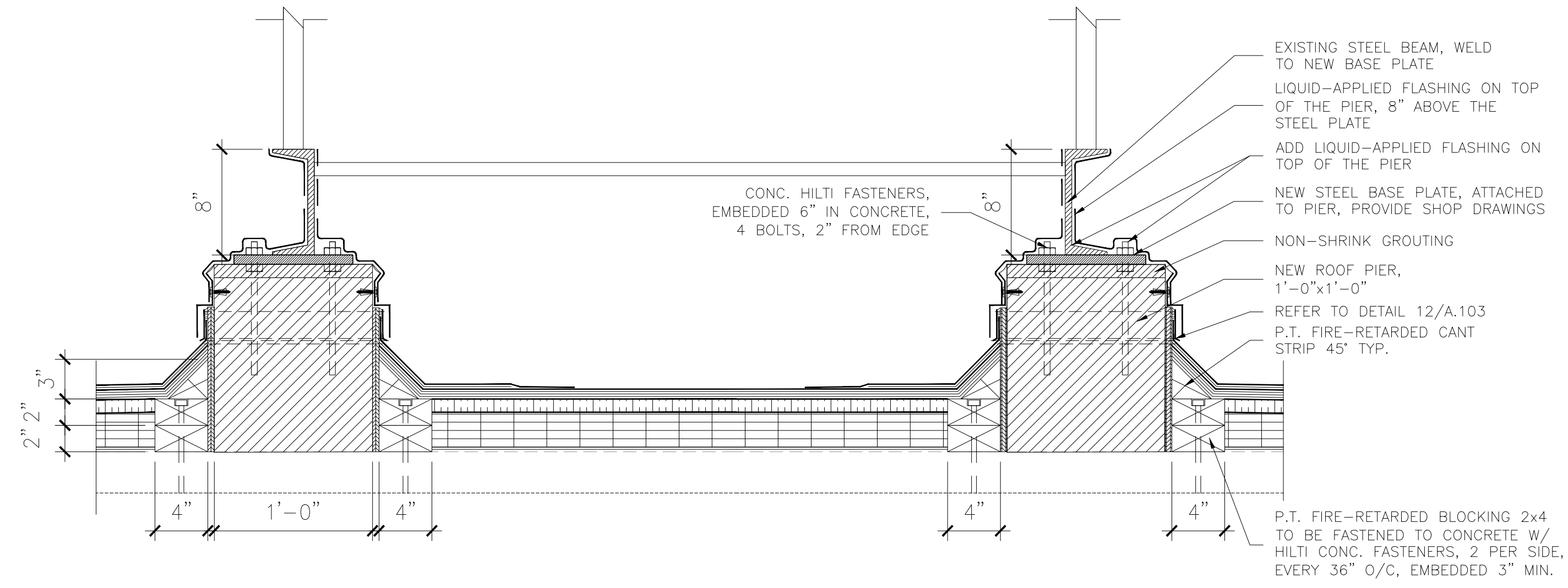
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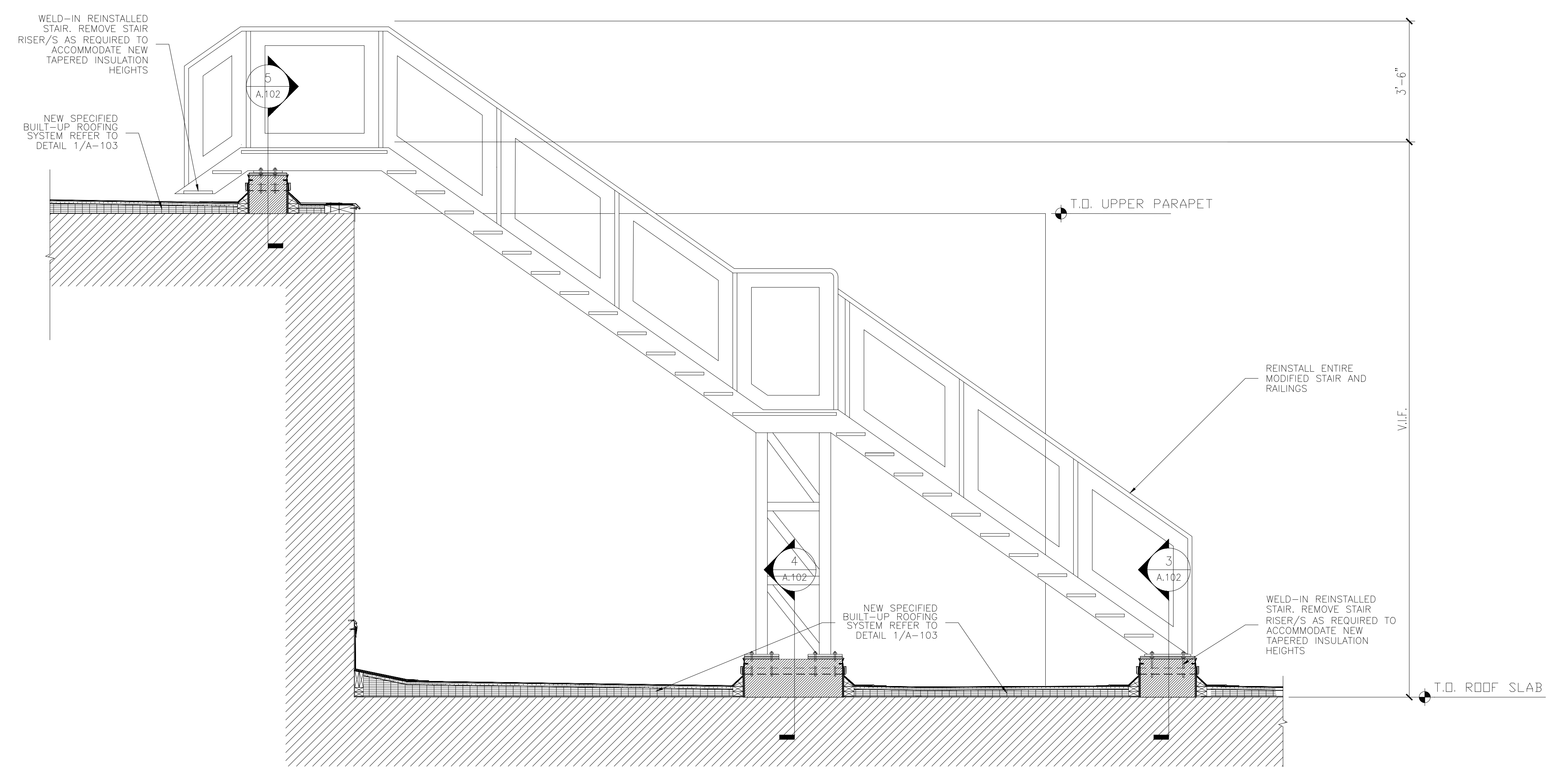
3 STEEL STAIRS - ATTACHMENT DETAIL
 A.102 SCALE: 1 1/2" = 1'-0"



4 STEEL STAIRS - ATTACHMENT DETAIL
 A.102 SCALE: 1 1/2" = 1'-0"



5 STEEL STAIRS - ATTACHMENT DETAIL
 A.102 SCALE: 1 1/2" = 1'-0"



2 EXISTING STEEL STAIRS - REINSTALLATION
 A.102 SCALE: 1/2" = 1'-0"

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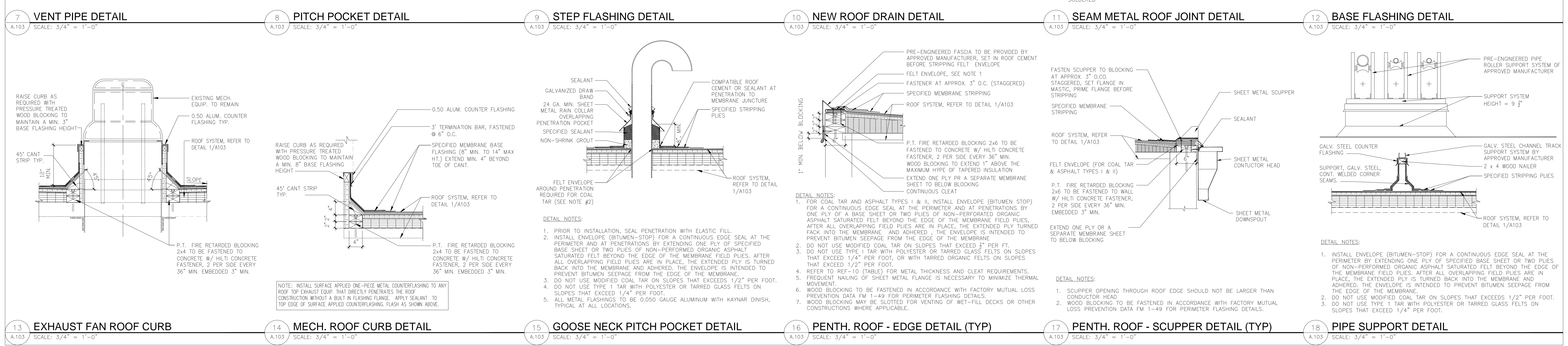
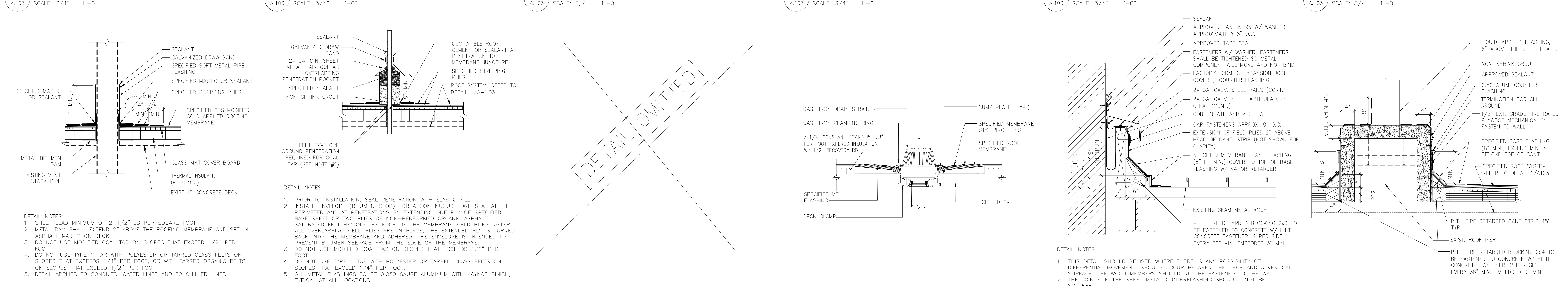
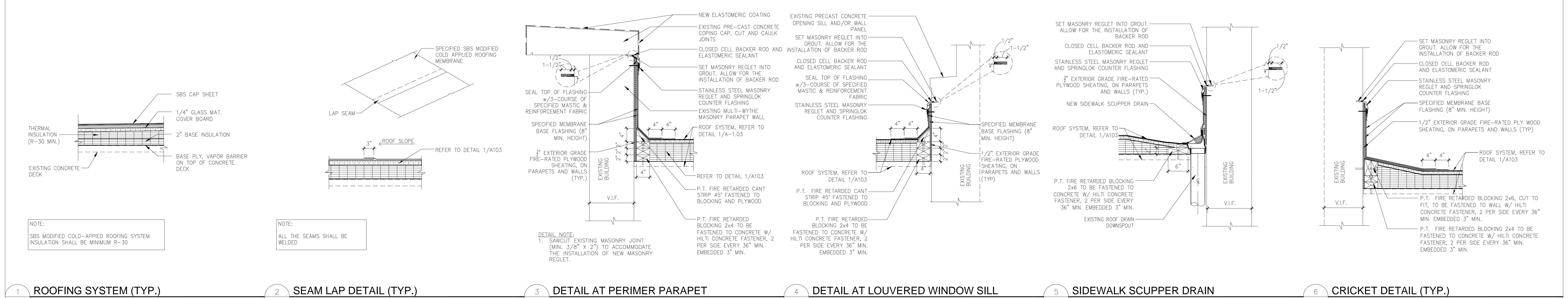


PROJECT:
UNION COUNTY ROOF REPLACEMENT
 NEW ANNEX COURTHOUSE
 9 ELIZABETHTOWN PLAZA, ELIZABETH, NJ 07201

SHEET CONTENTS:
 REINSTALLATION OF EXISTING STEEL STAIRS AND RAILINGS

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								SHEET: 3 OF: 5
								DWG. NO

A.102



13 EXHAUST FAN ROOF CURB
A.103 SCALE: 3/4" = 1'-0"

14 MECH. ROOF CURB DETAIL
A.103 SCALE: 3/4" = 1'-0"

15 GOOSE NECK PITCH POCKET DETAIL
A.103 SCALE: 3/4" = 1'-0"

16 PENTH. ROOF - EDGE DETAIL (TYP.)
A.103 SCALE: 3/4" = 1'-0"

17 PENTH. ROOF - SCUPPER DETAIL (TYP.)
A.103 SCALE: 3/4" = 1'-0"

18 PIPE SUPPORT DETAIL
A.103 SCALE: 3/4" = 1'-0"

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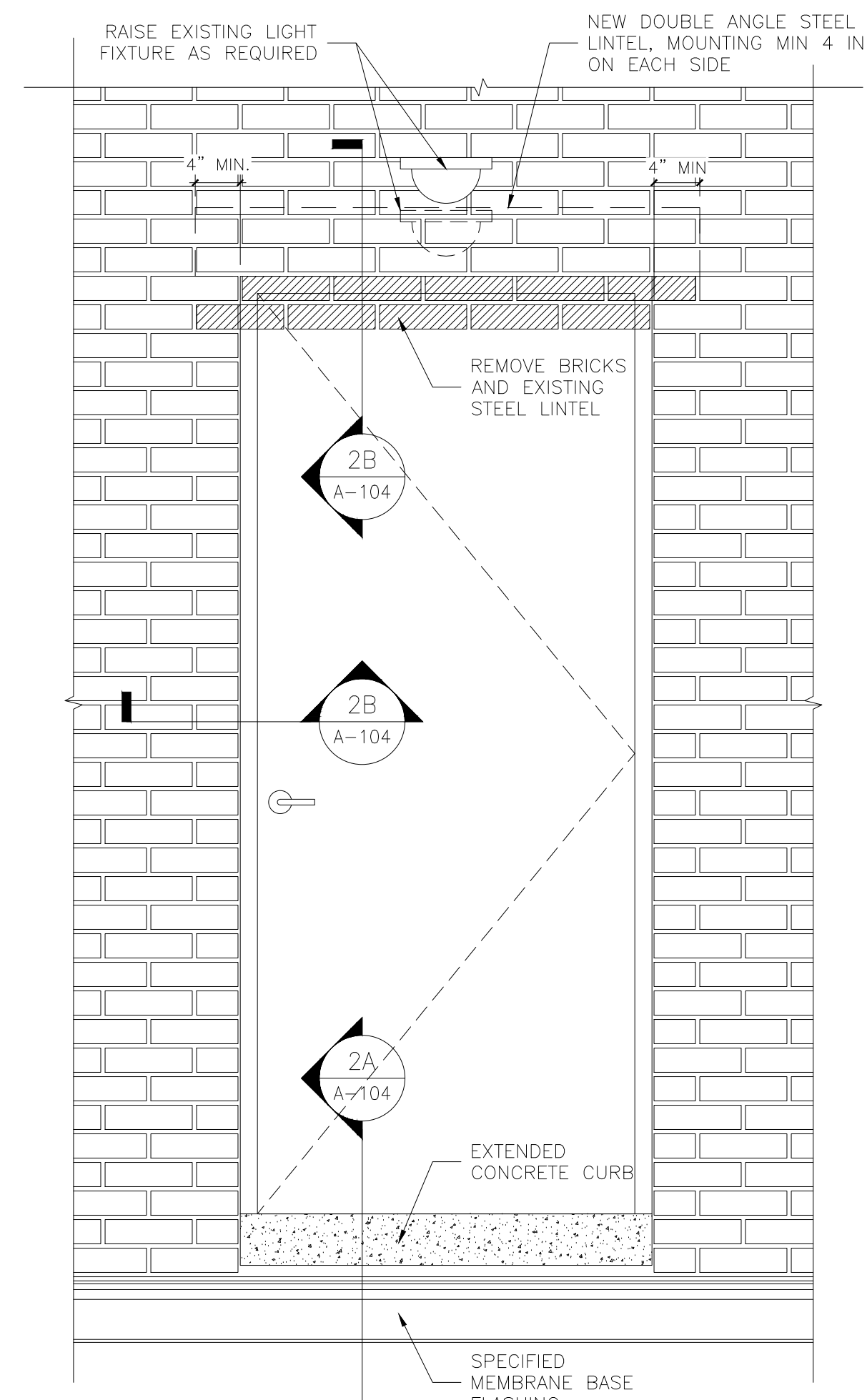
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1064 ROUTE 22 WEST, MOUNTAINSIDE, NEW JERSEY 07092
TEL: 973.379.0098 FAX: 973.379.1061
CERTIFICATE OF AUTHORIZATION AC-438

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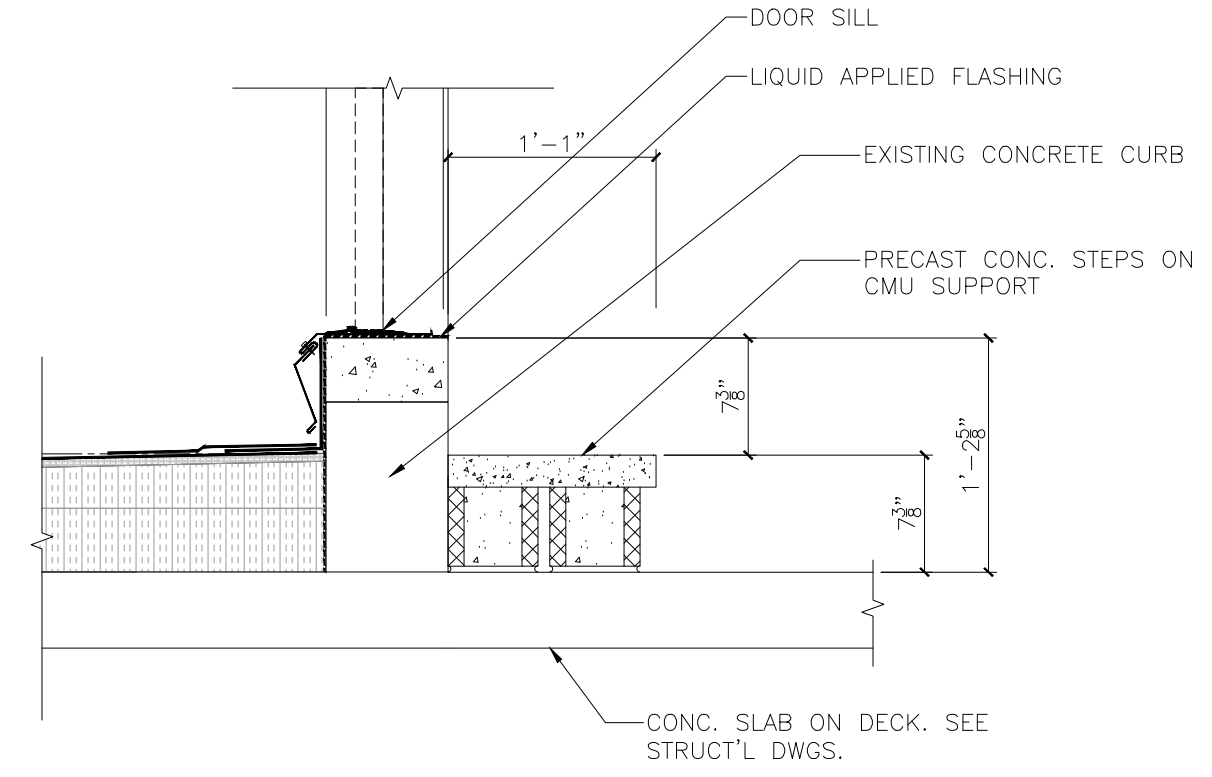
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ROOF DETAILS

SUBMISSIONS				REVISIONS				DATE
DATE	DESCRIPTION	BY	CHKD	DATE	DESCRIPTION	BY	CHKD	SCALE
08.10.23	ISSUED FOR BD	CC	GT					09-09-22
								AS SHOWN
								DRWN BY SSA, CC
								CHKD BY GT
								JOB NO 2221736
								SHEET: 4 OF: 5
								DWG. NO

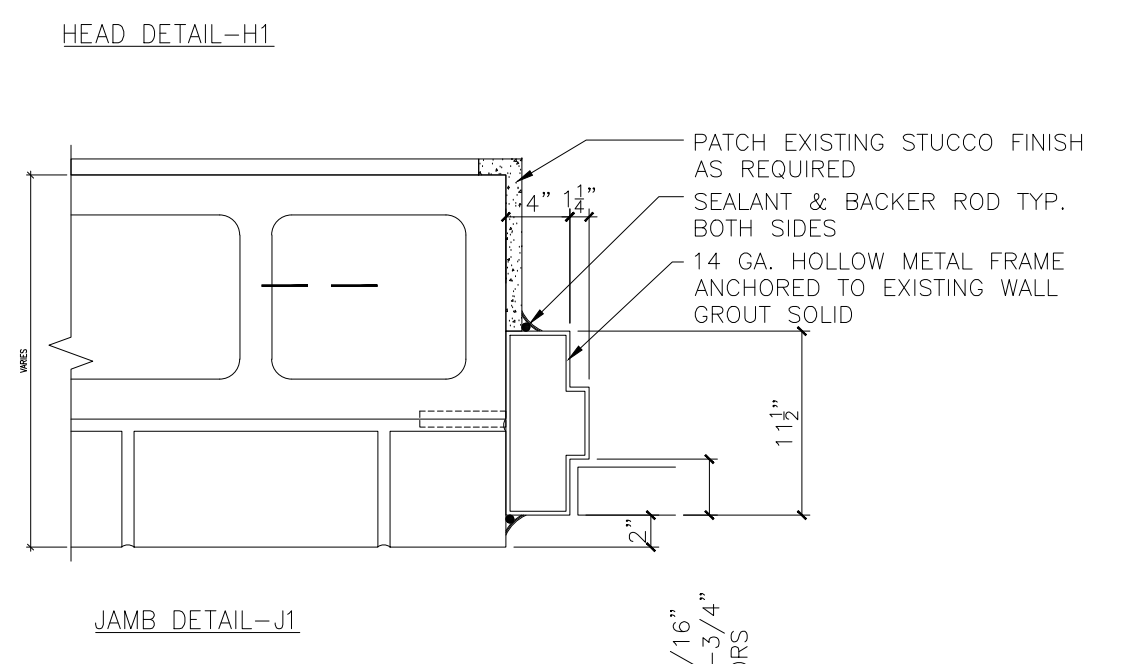
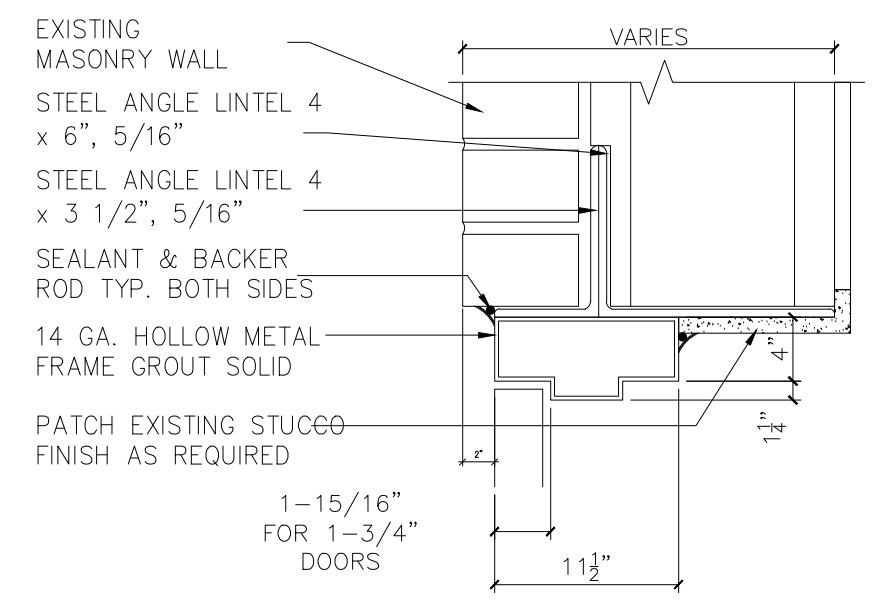
A.103



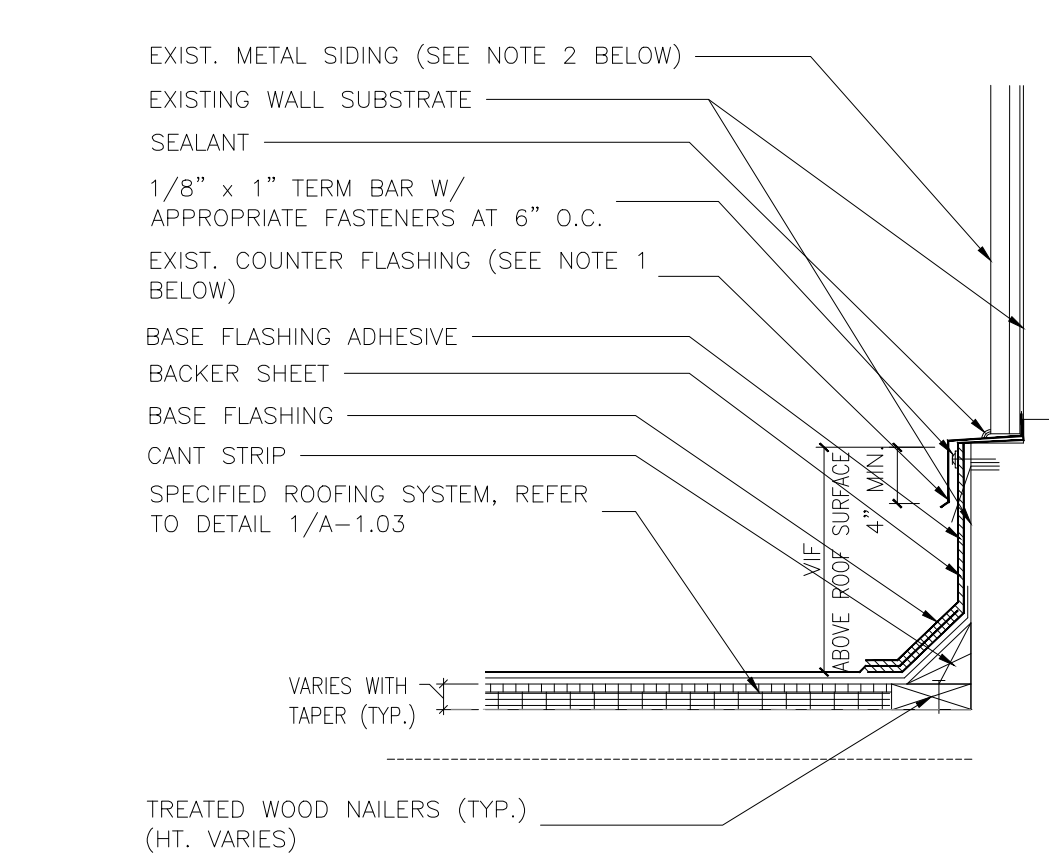
1 RAISED DOOR - ELEVATION
A.104 SCALE: 3/4" = 1'-0"



2A RAISED DOOR - SILL DETAIL
A.104 SCALE: 3/4" = 1'-0"

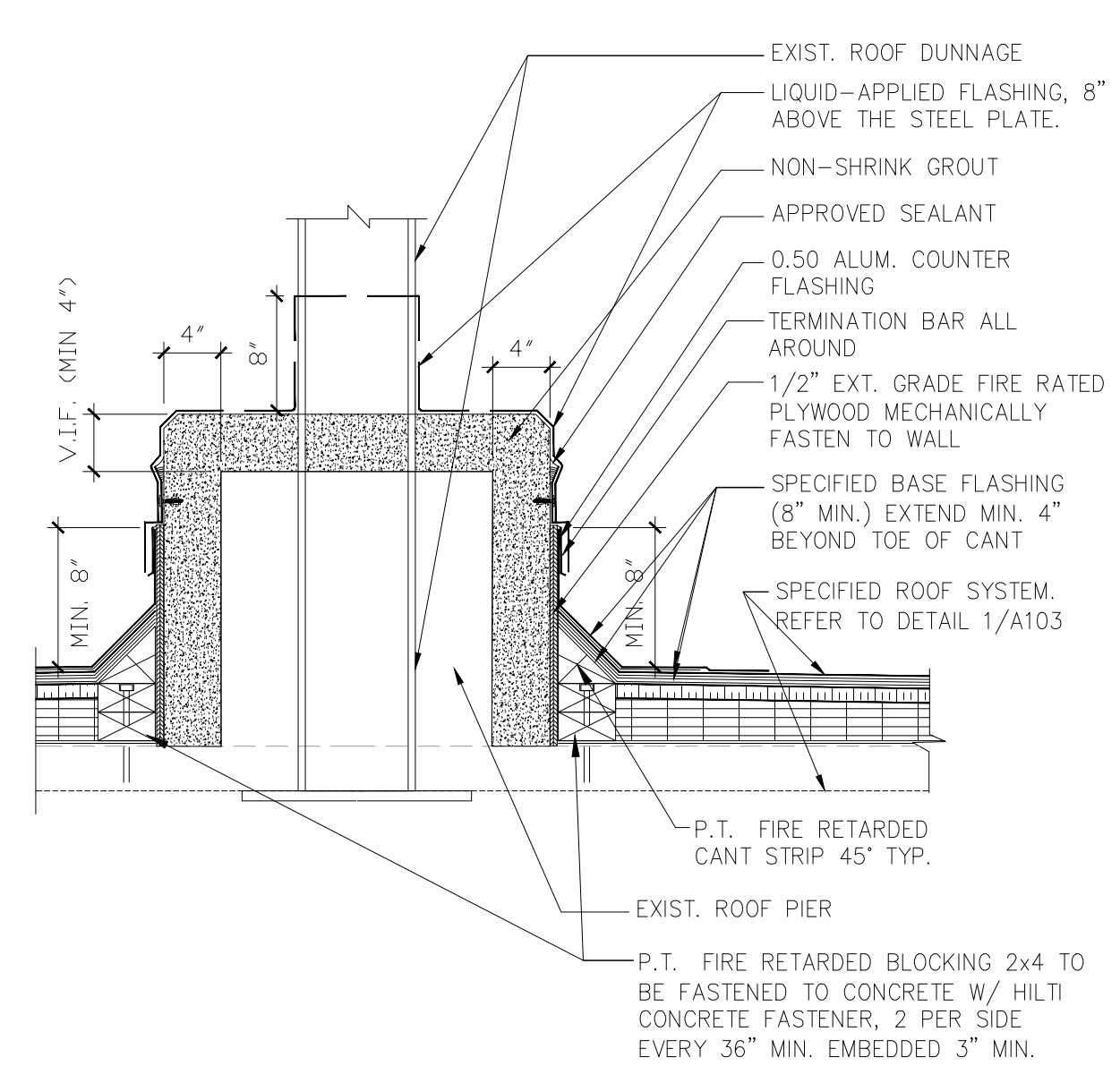


2B RAISED DOOR - HEAD AND JAMB DETAILS
A.104 SCALE: 1 1/2" = 1'-0"

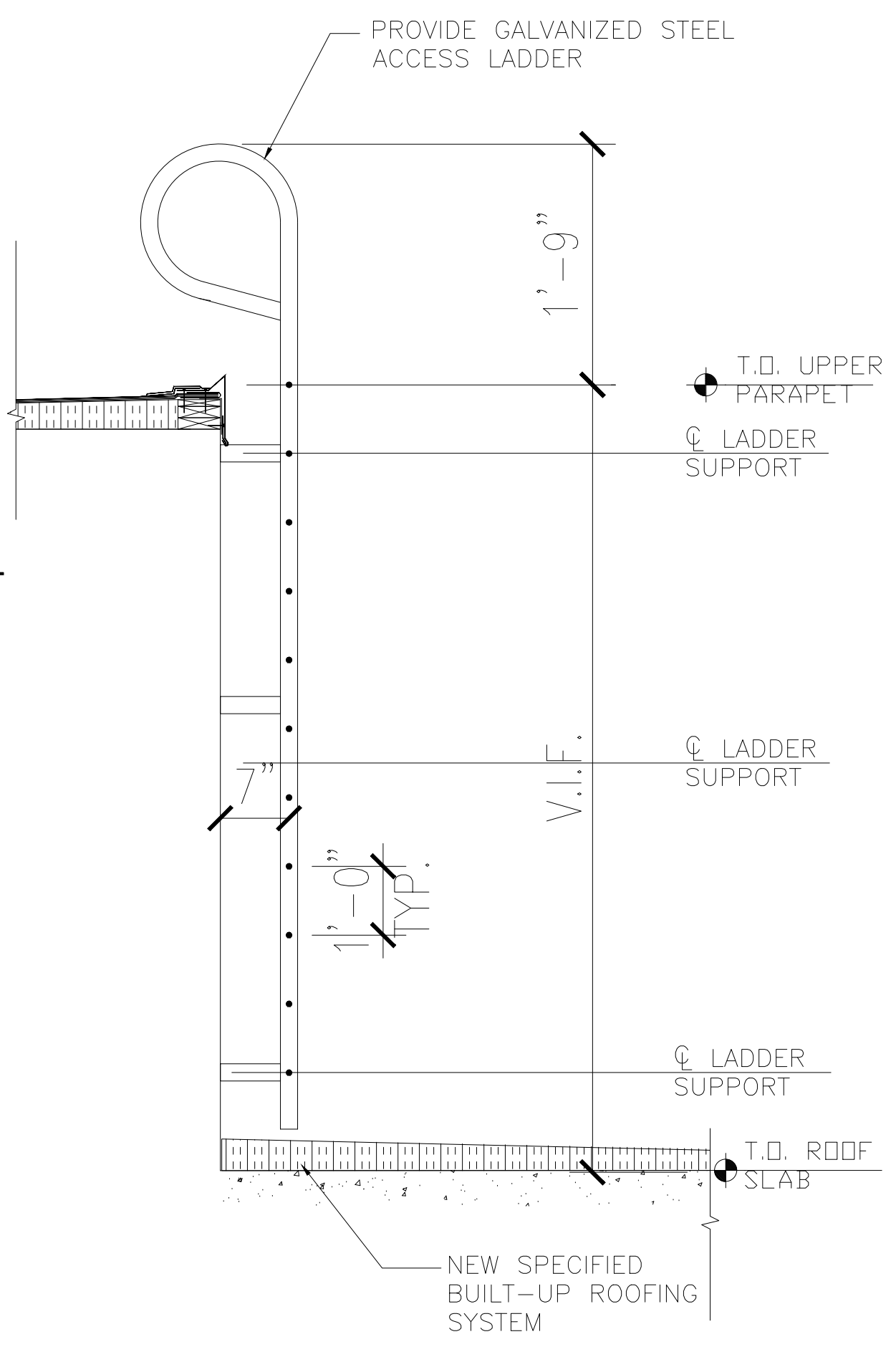


- NOTES:
- REMOVE EXIST. FLASHING & COUNTER FLASHING.
 - TEMPORARILY REMOVE AND REINSTALL THE EXISTING METAL SIDING PANELS TO FACILITATE THE INSTALLATION OF THE NEW TERM BAR BEHIND SIDING. THE CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING METAL SIDING PANELS INCLUDING ANY ASSOCIATED TRIM. SIDING PANELS AND TRIM SHALL BE TEMPORARILY STORED IN AN APPROPRIATE LOCATION APPROVED BY OWNER AND IN A MANNER TO PREVENT DAMAGE TO THE PANELS AND ROOFING SYSTEM. PROVIDE TEMPORARY PROTECTION FOR THE BUILDING AS REQUIRED TO PREVENT MOISTURE PENETRATION.

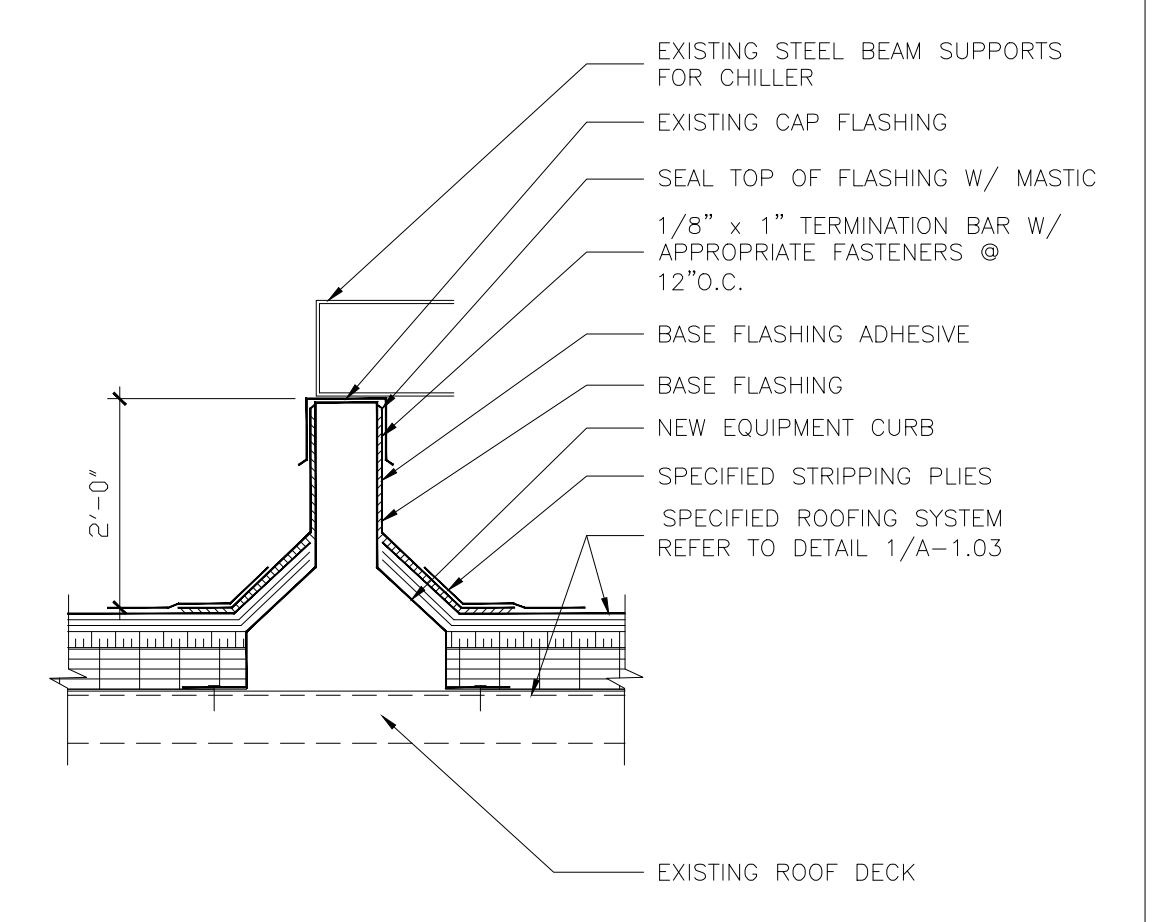
3 DETAIL ALONG BASE OF FOUNDATION WALL AND METAL BUILDING PANELS
A.104 SCALE: 1 1/2" = 1'-0"



5 STEEL DUNNAGE SUPPORT DETAIL
A.104 SCALE: 3/4" = 1'-0"

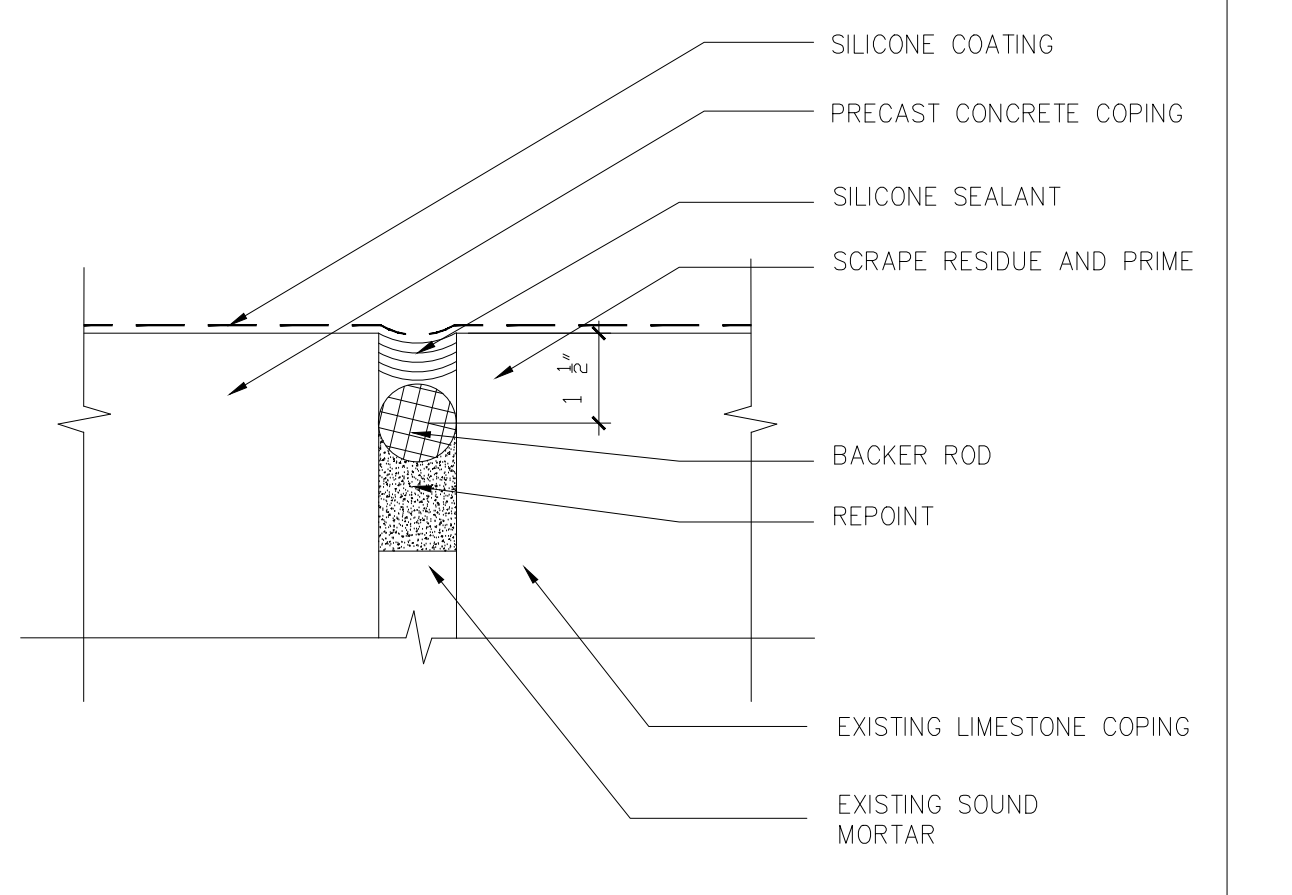


4 NEW FIXED LADDER
A.104 SCALE: 3/8" = 1'-0"

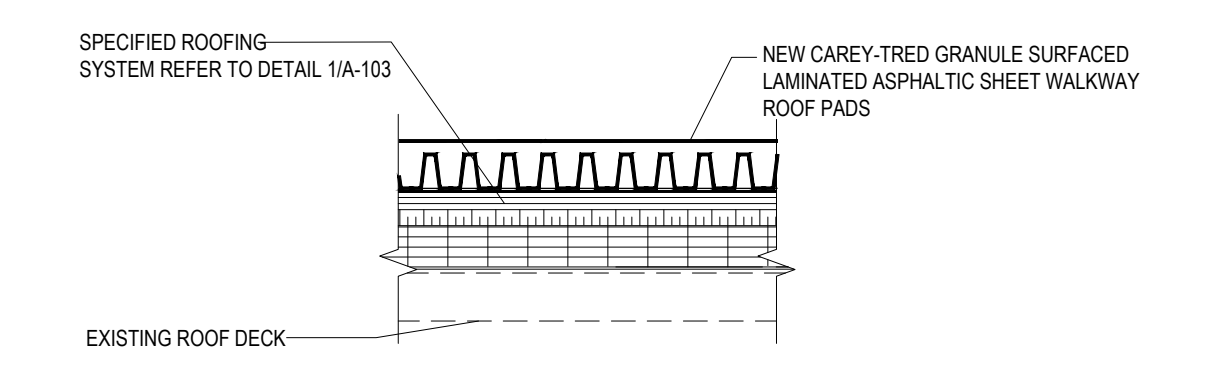


- DETAIL NOTES:
- INSTALL ENVELOPE (BITUMEN-STOP) FOR A CONTINUOUS EDGE SEAL AT THE PERIMETER BY EXTENDING ONE PLY OF SPECIFIED BASE SHEET OR TWO PLYS OF NON-PERFORMED ORGANIC ASPHALT SATURATED FELT BEYOND THE EDGE OF THE MEMBRANE FIELD PLYS. AFTER ALL OVERLAPPING FIELD PLYS ARE IN PLACE, THE EXTENDED PLY IS TURNED BACK INTO THE MEMBRANE AND ADHERED. THE ENVELOPE IS INTENDED TO PREVENT BITUMEN SEEPAGE FROM THE EDGE OF THE MEMBRANE.
 - DO NOT USE MODIFIED COAL TAR ON SLOPES THAT EXCEEDS 1/2" PER FOOT.
 - DO NOT USE TYPE 1 TAR WITH POLYESTER OR TARRED GLASS FELTS ON SLOPES THAT EXCEED 1/4" PER FOOT.

6 MECH. EQUIPMENT CURB
A.104 SCALE: 1 1/2" = 1'-0"



7 PRECAST CONCRETE COPING - JOINT
A.104 SCALE: N.T.S.



8 TYPICAL ROOF WALKWAY PAD DETAIL
A.104 SCALE: 1 1/2" = 1'-0"

DOOR SCHEDULE										
DOOR # (SEE A-101)	WIDTH	HEIGHT	THICKNESS	SILL HEIGHT	DOOR MATERIAL	FRAME MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL/THRESHOLD DETAIL	DESCRIPTION
101	3'-0"	6'-10"	1 3/4"	7" MIN TO FINISHED ROOF	HOLLOW METAL	HOLLOW METAL	2B / A-104	2B / A-104	2A / A-104	EXISTING DOOR TO BE RAISED
102	3'-0"	6'-10"	1 3/4"	7" MIN TO FINISHED ROOF	HOLLOW METAL	HOLLOW METAL	2B / A-104	2B / A-104	2A / A-104	EXISTING DOOR TO BE RAISED

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CERTIFICATE OF AUTHORIZATION AC-438

PROJECT:
UNION COUNTY ROOF REPLACEMENT
NEW ANNEX COURTHOUSE
9 ELIZABETHTOWN PLAZA, ELIZABETH, NJ 07201

SHEET CONTENTS:
ROOF DETAILS

SUBMISSIONS				REVISIONS				DATE
DATE	DESCRIPTION	BY	CHKD	DATE	DESCRIPTION	BY	CHKD	SCALE
08.10.23	ISSUED FOR BD	CC	GT					'09-09-22
								AS SHOWN
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								SHEET: 5 OF: 5
								DWG. NO

A.104