



COUNTY OF UNION

DEPARTMENT OF ENGINEERING, PUBLIC WORKS & FACILITIES MANAGEMENT

Joseph J. Policay, Jr., CPWM, Acting Director

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County Counsel

JAMES E. PELLETTIERE
Clerk of the Board

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

DATE: January 8, 2024

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

TO: All Potential Bidders

RE: CLARIFICATION 1
Nomahegan Pedestrian Bridge Replacement
Township of Cranford, County of Union,
BA# 6-2024,
Union County Engineering Project #2016-038

Please be advised that the following errors was made on Addendum Number 1.

-Memo stated Addendum Number 2 should be in fact Addendum Number 1

-Specification Revisions were omitted

The revisions are now attached to this Clarification.

DIVISION OF ENGINEERING

2325 South Avenue

Scotch Plains, NJ 07076

(908)789-3675

fax(908)789-3674

www.ucnj.org

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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: January 8, 2024

RE: **ADDENDUM NUMBER 1**
Nomahegan Pedestrian Bridge Replacement
Township of Cranford, County of Union,
BA# 6-2024,
Union County Engineering Project #2016-038

Attached is Addendum Number 1 dated January 8, 2024 for the above referenced project.

Please be sure to complete and submit the standard "Acknowledgement of Addendum" form included in the original bid specifications and submit it with the bid.

DIVISION OF ENGINEERING

SECTION 323413 – PREFABRICATED PEDESTRIAN BRIDGE

PART 1 – GENERAL

1.1 DESCRIPTION

- A. These specifications are for fully engineered half through truss (no overhead bracing) bridge of steel construction and shall be regarded as minimum standards for design and fabrication. The work included under this item shall consist of design, fabricating, finishing and transporting the steel truss bridge superstructure including bearings. These specifications are based on products designed and manufactured by **Contech Engineered Solutions LLC**.
- B. This items covers all work necessary and incidental to furnishing and installing a fully functional prefabricated bridge system. This item shall include, but is not limited to, performing and constructing all necessary excavation, saw-cutting, dewatering, deck construction, railings, reinforcement, foundations, abutments, wing walls, and restoration for construction of the pedestrian bridge system. Contractor is responsible for any damages to existing features to remain located on-site and encountered during construction.
- C. All applicable NJDEP regulations must be maintained with respect to construction of the proposed prefabricated pedestrian bridge. Any applicable construction permits the prefabricated pedestrian bridge must be obtained prior to construction by the Contractor.
- D. Contractor shall note that dewatering will be necessary for the construction of the proposed prefabricated pedestrian bridge, foundations, slabs, deck foundations, wing walls, etc. and must anticipated when bidding on this project.

1.2 QUALIFIED BRIDGE MANUFACTURER

- A. Each Contractor is required to identify their intended supplier as part of the bid submittal. Qualified Bridge Manufacturers must have at least 5 years of experience fabricating these types of structures and shall have an up to date quality certification by AISC per Section 14.1 of these specifications. All suppliers shall fabricate their product utilizing a modern fabrication facility owned and operated by the Bridge Manufacturer that includes the use of CNC beam drilling machines, no brokers are allowed.

Pre-Approved Bridge Manufacturer:
Contech Engineered Solutions LLC
1-800-338-1122
E-mail: info@conteches.com
or Approved Equal

Pre-Approved Bridge Manufacturer:
Pioneer Bridges, Inc.
866-708-5778
E-mail: sdempsey@pioneerbridges.com
or Approved Equal

Pre-Approved Bridge Manufacturer:
Bridge Brothers
866-258-3401
E-mail: sales@bridgebrothers.com
or Approved Equal

Bridge Manufacturers, other than those listed above, may be used provided the Engineer receives a written request at least 10 days prior to the bid. The written request shall accompany the following information:

- Bridge Manufacturer's Product Literature,
- Name and resume of Bridge Manufacturer's design professional who will be signing and sealing the engineering submittals,
- Copy of current AISC certification,
- Representative copies of detailed drawings, field procedures, calculations, quality control manual, welder's certifications, proof of in-house C.W.I.,
- Listing of projects including owner, location, size, year of fabrication, contact person,
- Certification by the Bridge Manufacturer's Design Professional that the bridge proposed will be in accordance with all project development done up to the date of these specifications.

The above will be evaluated by the Engineer for accuracy and ability to provide the bridge in accordance with these specifications. Bridge Manufacturers other than those listed above may only be used if the Engineer provides written approval via addendum 5 days prior to the bid. The Engineer's ruling shall be final.

1.3 BRIDGE MANUFACTURE'S DESIGN PROFESSIONAL AND SUBMITTALS

- A. The Bridge Manufacturer shall have as a direct employee, an engineer who is experienced in bridge design to be in responsible charge of all engineering related task and design. The engineer shall have a minimum of 10 years of experience in bridge design and be a currently licensed civil or structural engineer in the State of New Jersey and shall be the engineer who will seal and sign the plans.
- B. Engineering drawings, 11x17 format, shall be prepared and submitted to the Contractor or Owner for their review after receipt of the order. Submittal drawings shall be unique drawings, prepared to illustrate the specific portion of the bridge being fabricated. All relative design information such as member size, ASTM/AASHTO material specification, dimensions necessary to fabricate and required welding shall be clearly shown on the drawings. Drawings shall have referenced details and sheet numbers. All drawings shall be stamped, signed and dated by the Bridge Manufacturer's Design Professional.
- C. Structural calculations for the design of the bridge superstructure shall be prepared by the Bridge Manufacturer and submitted for review after receipt of the order. Calculations shall include complete design, analysis and code checks for the controlling members, connectivity and support conditions, truss stability checks, deck design, deflection checks, bearings and all splices.



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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: January 8, 2024

RE: **ADDENDUM NUMBER 2**
Nomahegan Pedestrian Bridge Replacement,
Township of Cranford, County of Union, New Jersey
BA# 6-2024;
Union County Engineering Project #2016-038

Attached is Addendum Number 1 dated January 8, 2024 for the above referenced project.

Please be sure to complete and submit the standard "Acknowledgement of Addendum" form included in the original bid specifications and submit it with the bid.

DIVISION OF ENGINEERING

2325 South Avenue

Scotch Plains, NJ 07076

(908)789-3675

fax(908)789-3674

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COUNTY OF UNION

DATE: January 8, 2024

TO: All Prospective Bidders

Re: **Addendum #1**
Nomahegan Pedestrian Bridge Replacement
Township of Cranford, County of Union, New Jersey
BA#6 -2024; Union County Engineering Project #2016-038
Neglia Project No.: UNIOCTY17.011

Bidders of the above-referenced project are hereby notified of the following amendment to the bid plans and specifications issued on December 14, 2023, which are hereby made a part of the Contract Documents. Contractors shall be responsible for acknowledging receipt of this addendum as part of the bid proposal. Failure to do so may subject the prospective bidder to disqualification.

I. **Plan Revisions – None**

II. **Bid Notice Revisions – None**

III. **Specification Revisions:**

A. Technical Specifications

1. Section 323413, Subsection 1.2.A Qualified Bridge Manufacturer (pages 70-71) was revised to include Pioneer Bridge, Inc. and Bridge Brothers as pre-qualified bridge manufacturers per requests submitted by Prospective Bidders.

IV. **The following questions were received regarding this project:**

- A. **Question:** Would the contractor be permitted to detour Riverside Drive in order to stage equipment and materials?

Response: Prospective bidders shall be advised that Riverside Drive is not within Union County jurisdiction. Therefore, Union County cannot provide guidance or guarantee whether Riverside Drive may be closed or detoured during construction.



COUNTY OF UNION

- B. Question: Please provide additional information on the existing pile materials and embedment depth if available.

Response: Please refer to Sheet 2.00 within the bid plan set for information concerning the approximate embedment depths of the existing bridge piles. Contractors are strongly encouraged to review all documents contained within the bid documents and visit the project site to familiarize themselves with the project scope and existing bridge conditions/site constraints prior to bidding.

- C. Question: Will the contractor be permitted to excavate the berms to road grade within the limit of disturbance for construction access?

Response: Prospective bidders shall be advised that although it was not anticipated removal of the berm would be required for construction access, potential options for construction access will be discussed with the awarded contractor during the pre-construction walkthrough process. However, prospective bidders shall be advised that the berm is intended to protect surrounding areas by containing floodwaters within the Rahway River watercourse. As such, the awarded contractor shall be responsible for installing sufficient flood protection measures along any excavations/berm removals during construction, if approved. The contractor shall also be responsible for ensuring that existing structures/features located outside of the limit of disturbance are not negatively impacted by any potential excavations (i.e. trees, utility poles, etc.). Should any excavations/berm removals result in additional disturbances outside of the approved limit of disturbance, the Contractor will be required to obtain re-approval from all regulatory permitting agencies, including NJDEP and Somerset Union Soil Conservation District. The contractor will be required to provide a signed and sealed plan prepared by a New Jersey Licensed Professional Engineer illustrating all proposed excavations/berm removals and flood protection measures for review prior to construction.

- D. Question: It appears that the pedestrian bridge is to be built of unpainted weathering steel based on part 9 of the special provision (section 323413). However note #3 on sheet 6.01 indicates "colors and finishes to be determined by owner", and this selection process would not be possible with a weathering steel bridge. Please confirm that it is to be built of weathering steel and does not require painting.

Response: The basis of design and intention for the prefabricated bridge finish is weathered steel. However, the County of Union will provide final confirmation of the desired bridge finish during the shop drawing review process with the awarded contractor and selected bridge manufacturer.

- E. Question: Please identify existing survey monuments or markings that will allow us to correlate the stationing shown on the plans with field conditions.

Response: Prospective bidders shall reference the Topographic Survey as provided within the bid plan set which depicts the location of the benchmark mag nail.



COUNTY OF UNION

- F. Question: Regarding Plan Sheet 2.00, site inspection revealed several piles shown at approximate Sta. 1+40 yet they are not shown on the plan sheet. Please clarify.

Response: As noted within Sheet 2.00 of the bid plans, existing bridge profile information was obtained from a plan provided by the County of Union, dated October 24, 1949, last revised November 4, 1949. As such, current conditions may vary and contractors are strongly encouraged to review all documents contained within the bid documents and visit the project site to familiarize themselves with the project scope and existing bridge conditions/site constraints prior to bidding.

- G. Question: Several piles have concrete foundations yet foundations are not shown on any of the plan sheets. Please identify piles with concrete foundations, their respective dimensions, thicknesses and top of concrete elevations. Must the foundations be removed or can they remain with the existing piles cut at the top of foundation?

Response: As noted above, contractors are strongly encouraged to review all documents contained within the bid documents and visit the project site to familiarize themselves with the project scope and existing bridge conditions/site constraints prior to bidding. As noted within Sheet 2.00 of the bid plans, the existing bridge is to be completely removed, including but not limited to, the deck, piers, footings, railings, abutments, superstructure, etc., and backfilled to existing grade with suitable material.

- H. Question: With regard to Document Clause 57 on page G-35, please confirm that this project does not contain a goal for small, minority and women's business enterprises.

Response: This project is being funded by Union County Capital Improvement Funds. As such, Federal terms and conditions outlined within clause 57 on page G-35 are not applicable to this project. However, prospective bidders shall be required to comply with Affirmative Action Requirements outlined within Clause 53 of General Specifications beginning on page G-21 of the bid specifications.

- I. Question: Please confirm that there are no underground utilities in the footprints of the proposed abutments or the existing bridge.

Response: As noted within the Topographic Survey, all underground utilities shown on the plans are approximate based on visible evidence. The lack of utility information does not deny the existence of same. Prior to the start of construction, the awarded contractor shall be responsible for requesting utility markouts and contacting the proper utility agencies to verify the presence or absence of utilities within the project limits.

- J. Question: Please define "Stage 1" and "Stage 2" shown on several plan sheets and any associated requirements.

Response: As noted within Sheets 3.00 of the bid plans, Stage 1 and Stage 2 as shown are in reference to temporary cofferdam installations intended for stream diversions required during construction



COUNTY OF UNION

operations. As noted within 6.01 of the bid plans, Stage 1 and Stage 2 can be installed/completed in any order. Prospective bidders shall be advised that temporary cofferdams shall be installed, as necessary, in order to comply with all applicable safety codes and permit requirements to demolish the existing bridge and appurtenances and to construct the proposed prefabricated pedestrian bridge and appurtenances.

- K. Question: Plan Sheet 1.00, Construction Note 6 states "The contractor shall receive all necessary permits..." while Plan Sheet 1.01 Note B1 states "The contractor shall obtain..." Please clarify.

Response: Please refer to Appendix A within the bid documents for additional information regarding permits that have been secured by our office and provided to prospective bidders. However, it shall be the awarded Contractor's responsibility to determine and obtain any other required local, County, State, or Federal opening permits. It is anticipated if there are any local permit fees that they will be waived; however in the event they are not the cost will be paid out of the bid contingency. All permits must be secured prior to the commencement of work.

- L. Question: Please provide a listing of all permits required for this project.

Response: Please refer to Appendix A within the bid documents for additional information regarding permits that have been secured by our office and provided to prospective bidders. However, it shall be the awarded Contractor's responsibility to determine and obtain any other required local, County, State, or Federal opening permits. It is anticipated if there are any local permit fees that they will be waived; however in the event they are not the cost will be paid out of the bid contingency. All permits must be secured prior to the commencement of work.

- M. Question: Plan Sheet 6.01, Bridge Elevation states "Concrete abutment by others". Please clarify.

Response: This call-out refers to concrete bridge abutment structural designs which were prepared by our sub-consulting engineering firm. Additional information concerning the proposed concrete bridge abutments are provided within Sheets S-0.1 through S-1. However, it shall be further clarified to all prospective bidders that the awarded contractor shall be responsible for the complete construction of the proposed prefabricated pedestrian bridge, including the reinforced concrete bridge abutments, as noted within pay item number 20 and Section 323413 of the bid specifications.

- N. Question: Regarding Section 323413, para. 7.1, please indicate the deck plank thickness and width required.

Response: As indicated in Section 323413, part 7.1.D. the deck planks shall be sized to support loads specified in Section 5.0 of these specifications. The awarded contractor shall be responsible for providing the supporting calculations confirming the adequacy of the plank sizing from the selected prefabricated pedestrian bridge manufacturer during the shop drawing review process for review and approval.



COUNTY OF UNION

- O. Question: Regarding the NJDEP Permit (Appendix A), Plan Sheets 3.00 and 3.01 contained in the permit illustrates pavement markings, signage, sidewalks, ADA sidewalk ramps and curbs on Balmiere Parkway which are not shown on Plan Sheets 3.00 and 3.01 provided in the bid documents. Please confirm that the project is to follow the plan sheets provided in the bid documents.

Response: Prospective bidders shall refer to the plan sheets provided in the bid documents regarding the intended proposed improvements within Balmiere Parkway.

- P. Question: Regarding Plan Sheet 3.00, please confirm that the quantities for HMA called out for the east side walkway (triple diagonal lines) include the quantities required for the west side walkway.

Response: The quantities for HMA called out for the east side walkway include the quantities required for the west side walkway.

- Q. Question: Regarding the NJDEP Permit in Appendix A, Item 19 on page 4 of 8 states "Construction may only occur while the stream area is dry or in a de-watered condition. No work may be performed where the stream channel is wet." Please explain the intent of how construction may proceed.

Response: Conditions contained within the NJDEP Land Use Permit secured by our office must be maintained at all times. As noted within Section 312319 of the bid specifications, prospective bidders shall note that dewatering will be necessary for the construction of all slabs, deck foundations, abutments, wing walls, etc., and must be anticipated when bidding on the project. However, prospective bidders shall also be advised that the awarded contractor will ultimately be responsible for determining the appropriate means and methods to complete the required construction activities. Additional guidance regarding dewatering requirements is provided within Section 312319 of the bid specifications.

- R. Question: Please confirm that this project is exempt from sales tax.

Response: Please refer to Section 55 within the General Specifications beginning on page G-30 of the bid specifications for information regarding New Jersey sales and use tax requirements.

V. **The following is noted regarding this project:**

- A. Prospective bidders shall be advised that pre-qualification of bridge manufacturers does not guarantee acceptance/approval of said bridge. All bridge submittals must adhere to all specification and design requirements including NJDEP regulations per the approved NJDEP Land Use Permit which will be reviewed by our office for conformance during the shop drawing review phase before construction. Moreover, it shall be the responsibility of the prospective bidder to provide signed and sealed structural concrete bridge abutment drawings if an alternative bridge manufacturer is submitted for review during the shop drawing review process. All shop drawings shall be stamped, signed and dated by the Bridge Manufacturer's Licensed Professional Engineer.



COUNTY OF UNION

Please note that no further questions will be reviewed and no further addendums will be issued prior to the bid opening date. Thank you for your involvement in this important project.

END OF ADDENDUM #1

SPECIFICATIONS

FOR

**Nomahegan Pedestrian Bridge Replacement, Township of
Cranford, County of Union, New Jersey
BA# 6-2024; Union County Engineering Project #2016-038**

DECEMBER 14, 2023

**UNION COUNTY
BOARD OF COUNTY COMMISSIONERS**

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Alexander Mirabella, Commissioner
Rebecca Williams, Commissioner

CLERK OF THE BOARD

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Edward T. Oatman

**DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND
FACILITIES MANAGEMENT**

Joseph J. Policay, Jr., CPWM
Acting Director, Department of Engineering, Public Works and
Facilities Management

**COUNTY ENGINEER
DIVISION OF ENGINEERING**

Ricardo Matias, PE, CME, CFM

Prepared by:

Neglia Engineering Associates
200 Central Avenue, Suite 102, Mountainside, N.J. 07092
(201) 939-8805
David R. Atkinson, P.E., P.P., C.M.E.

**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 January 18, 2024 at 10:30 a.m., prevailing time, in the 3rd Floor Conference Room, U.C. Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey for:

**Nomahegan Pedestrian Bridge Replacement, Township of Cranford,
County of Union, New Jersey
BA# 6-2024; Union County Engineering Project #2016-038**

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.

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.

MICHELLE HAGOPIAN, ASSISTANT DIRECTOR OF PURCHASING

***Union County Board of County
Commissioners***

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NB-1

**Nomahegan Pedestrian Bridge Replacement, Township of Cranford,
County of Union, New Jersey
BA# 6-2024; Union County Engineering Project #2016-038**

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STANDARD SPECIFICATION FORM - SS-1

NEW JERSEY PREVAILING WAGE DETERMINATION DOCUMENTS

PROJECT TECHNICAL SPECIFICATIONS

**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: Nomahegan Pedestrian Bridge Replacement, Township of Cranford,
County of Union, New Jersey
BA# 6-2024; Union County Engineering Project #2016-038**

BIDDER: Bidder shall be a single overall contract bidder

ENGINEER: Neglia Engineering Associates

COUNTY ENGINEER:

Ricardo S. Matias, PE, CME, CFM
Union County
Division of Engineering

GENERAL SPECIFICATIONS

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 Assistant Director, Division of Purchasing at ucbids@ucnj.org 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 Assistant Director, Division of Purchasing at ucbids@ucnj.org, 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 Office of the Division of Purchasing 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 Assistant Director, Division of Purchasing 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. INVESTMENT ACTIVITIES IN IRAN

Pursuant to N.J.S.A. 52:32-55 et seq., prohibits State and local public contracts with persons or entities engaging in certain investment activities in energy or finance sectors of Iran.

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 ("NJDOL") or any state having equal to or higher requirements as either the USDOL or NJDOL 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.

EDWARD T. OATMAN
COUNTY MANAGER

MICHELLE HAGOPIAN, ASSISTANT DIRECTOR
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")** may be included with the bids to expedite the contract process because the bidder is required to provide the County of Union with its proof of business registration and that of any named subcontractor(s) prior to contract award or authorization.

_____ 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 may be included with the bid as the BRC(s) for each named or listed subcontractors in order to expedite the contract process. 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.

Bidders name: _____

- _____ 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 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

Bidders name: _____

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**
- **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.**

BID FORM

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

**Nomahegan Pedestrian Bridge Replacement, Township of Cranford,
County of Union, New Jersey
BA# 6-2024; Union County Engineering Project #2016-038**

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.

BASE BID ITEMS:

ITEM No.	DESCRIPTION	UNIT	CONTRACT QUANTITY	UNIT PRICE	AMOUNT
1	MOBILIZATION/DEMObILIZATION	1	L.S.		
2	SITE CLEARING/DEMOLITION	1	L.S.		
3	CONSTRUCTION LAYOUT	1	L.S.		
4	FURNISH AND INSTALL SOIL EROSION AND SEDIMENT CONTROL DEVICES	1	L.S.		
5	TEMPORARY COFFERDAM	1	L.S.		
6	SITE GRADING	1	L.S.		
7	EARTHWORK	1	L.S.		
8	MAINTENANCE AND PROTECTION OF TRAFFIC	1	L.S.		
9	UNIFORM TRAFFIC DIRECTORS ALLOWANCE	1	ALLOW	\$25,000.00	\$25,000.00
10	HMA MILLING, 3" OR LESS	130	S.Y.		
11	HOT MIX ASPHALT SURFACE COURSE, MIX 9.5M64, 2" THICK	50	TONS		
12	HOT MIX ASPHALT BASE COURSE, MIX 19M64, 4" THICK	35	TONS		
13	DENSE GRADED AGGREGATE BASE COURSE, 6" THICK	115	S.Y.		
14	RESET WATER VALVE BOX	1	UNIT		
15	RESET MANHOLE CASTING	1	UNIT		
16	RESET INLET CASTING	1	UNIT		
17	CUSTOM ENVIRONMENTAL EDUCATIONAL SIGN	2	UNIT		
18	FURNISH AND INSTALL POST AND RAIL FENCE	120	L.F.		
19	REMOVABLE LOCKING BOLLARD	2	UNIT		
20	PREFABRICATED PEDESTRIAN BRIDGE, COMPLETE (WITH REINFORCED CONCRETE ABUTMENT BRIDGE DECK, RAILINGS, ECT.)	1	L.S.		
21	TREE REMOVAL, OVER 3" TO 14" DIAMETER	5	UNIT		
22	TOPSOILING, HYDROSEED, MULCH AND SOD	250	S.Y.		
23	FINAL CLEANUP/SITE RESTORATION	1	L.S.		
24	UNFORESEEN CONDITIONS ALLOWANCE	1	ALLOW	\$35,000.00	\$35,000.00

Bidders name: _____

TOTAL BASE BID AMOUNT:

Written

Figures

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

Fifty Thousand Dollars and Zero Cents

\$50,000.00

Written

Figures

TOTAL BASE BID ITEMS PLUS BID CONTINGENCY AMOUNT:

Written

Figures

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

Bidders 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.**

Bidders 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.

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

Bidders 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.

Bidders name: _____

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

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. _____

Bidders name: _____

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

(Continued on following page)

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

Bidders 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: _____

CONTRACTOR BUSINESS REGISTRATION CERTIFICATE

New Mandatory Requirement - Effective 1/18/2010

The recently enacted **P.L. 2009, c.315**, requires that effective January 18, 2010; a contracting agency must receive proof of the bidder's business registration prior to the award of a contract. However, the proof 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 subcontractor must be provided prior to the award of bid. 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.

Proof of business registration shall be

- A copy of a Business Registration Certificate issued by the Department of the Treasury, Division of Revenue;
- or
- A copy of the web version provided by the NJ Division of Revenue, or

Register online at www.nj.gov/treasury/revenue/taxreg.htm. Click the "online" link and then select "Register for Tax and Employer Purposes" or call the Division at 609-292-1730.

Note: A NJ Certificate of Authority is not acceptable.

FAILURE to submit proof of registration of the bidder or any subcontractor named on the bid prior to the award of a contract shall be cause to reject the bids.

FAILURE of the bidder or any subcontractor named on the bid to be registered prior to the receipt of bids is cause for a **MANDATORY REJECTION** of bids. (A NON-WAIVABLE DEFECT). This covers construction work as well as non-construction bids.

IN ADDITION:

The contractor shall provide written notice to all **subcontractors and suppliers** not specifically named on the bid of the responsibility to register and submit proof of business registration to the contractor. The requirement of proof of business registration extends down through all levels (tiers) of the project.

Before final payment on the contract is made by the contracting agency, the contractor shall submit an accurate list and the proof of business registration of each subcontractor or supplier used in the fulfillment of the contract, or shall attest that no subcontractors were used.

For the term of the contract, the contractor and each of its affiliates and a subcontractor and each of its affiliates [N.J.S.A. 52:32-44(g)(3)] shall collect and remit to the Director, New Jersey Division of Taxation, the use tax due pursuant to the Sales and Use Tax Act on all sales of tangible personal property delivered into this State, regardless of whether the tangible personal property is intended for a contract with a contracting agency.

A business organization that fails to provide a copy of a business registration as required pursuant to section 1 of P.L.2001,c.134 (C.52:32-44 et al.) or subsection e. or f. of section 92 of P.L.1977,c.110 (C.5:12-92), or that provides false business registration information under the requirements of either of those sections, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration copy not properly provided under a contract with a contracting agency.

Bidders name: _____

BUSINESS REGISTRATION

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 #: 970-097-3922/000
SEQUENCE NUMBER: 0197230

ADDRESS: 847 ROEBLING AVE
TRENTON NJ 08611
ISSUANCE DATE: 07/14/04

EFFECTIVE DATE: 01/01/01

FORM BR(C)(06-01) This Certificate is NOT assignable or transferable. It must be conspicuously displayed at above address.

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:
20041014112813533

Bidders name: _____

ATTACH BRC HERE

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

Bidders 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.

Bidders 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 to before me
this _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/_____ Specify Other State

My Commission Expires _____, 20__.

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

Bidders 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 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 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

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** _____

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?

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

Bidders 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.

Bidders 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.

Bidders 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__.

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.

Bidders 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.

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 to before me

this _____ day of _____, 20__.

(Seal) Notary Public of New Jersey/ _____
Specify Other State

My Commission Expires _____, 20__.

* 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.

Bidders 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 \$ _____

BIDDER:

(Signature)

(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.

Bidders 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.

Bidders 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.

Bidders 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 **250 (calendar days)** from the date of the 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

Bidders name: _____

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 _____

STANDARD BID DOCUMENT REFERENCE	
Name of Form:	FEDERAL NON-DEBARMENT CERTIFICATION
Statutory Reference:	N.J.S.A. 52:32-44.1 (P.L. 2019, c.406)
Description:	Meets statutory criteria for certification of non-debarment by a federal government agency.

Summary of the Certification Requirements under N.J.S.A. 52:32-44.1

Pursuant to state law any natural person, company, firm, association, corporation, or other entity prohibited, or “debarred,” from contracting with the federal government agencies, shall also be prohibited from contracting for public work in the state of New Jersey. This prohibition also extends to any affiliate organization(s) held by or subject to the control of an entity of that prohibited person or entity.

Prior to awarding a contract for public work a local units must obtain written certification from the contracting person or entity through the form below, attesting to their non-debarment from contracting with federal government agencies. Contracting units are reminded that they must fill-in the boilerplate information in the certification sections of Parts II through IV regarding their name and type of contracting unit before using the form.

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.

Section C – Part III Certification			
<p>Section C – Part III Certification</p> <p>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.</p>			
Full Name (Print):		Title:	
Signature:		Date:	

Part IV – CERTIFICATION OF NON-DEBARMENT: Contractor – Controlled Entities	
Section A	
<input type="checkbox"/>	<p>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.</p>
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.		
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:	

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)

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.

STANDARD SPECIFICATIONS

The Standard Specifications for Road and Bridge Construction of New Jersey Department of Transportation, 2019 Edition; is added to and/or amended elsewhere herein by the Notice to Contractors (Advertisement), Proposal, Information for Bidders, General Conditions, Supplemental Conditions, Project Plans, and Supplementary Specifications; shall, insofar as technical requirements are involved, govern in the execution of this project.

Such Standard Specifications are made a part of these Specifications by this reference and will not be repeated herein. It is the responsibility of prospective bidders to familiarize themselves with these Standard Specifications, copies of which may be examined at the office of the Engineer and may be obtained, upon payment of the cost thereof, from:

Department of Transportation
State of New Jersey
1035 Parkway Avenue
Trenton, New Jersey 08625

The Notice to Contractors (Advertisement), Proposal, General Conditions, Special Provisions, Project Plans and/or Supplementary Specifications shall govern and prevail in the case of conflict between them and the Standard Specifications.

In these Standard Specifications the words "COMMISSIONER" or "DEPARTMENT" shall refer to and mean the person, persons, body, board or agent legally empowered to enter into contracts and otherwise legally act for the Owner. The word "STATE" shall refer to and mean the professional engineering representative of the Owner as hereinbefore defined and the word "ENGINEER" shall refer to and mean the professional engineering representative of the Owner as hereinbefore defined and the word "INSPECTOR" shall mean the authorized project representative of the Engineer with the authority as hereinbefore defined. The word "LABORATORY" shall mean and refer to the Engineer who may, at his discretion, and with the consent of the Owner, employ qualified technical personnel or testing laboratories to assist him in fulfilling the duties normally assigned to the "LABORATORY" in these Standard Specifications.

When reference is made herein to the bulletins, standards, specifications, publications or requirements of the American Association of State Highway Official (AASHO), the American Concrete Institute (ACI), the American Society of Civil Engineers (ASCE) or similar national or regional societies, associations, institutes or organizations; the requirements of the bulletins, specifications, publications or requirements referred to shall be considered a part of these Specifications by such reference and shall not be repeated herein but shall have the same import and be as binding as if herein set forth in full.



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									
1000 Hours	65%	70%	75%	80%	85%	90%	95%			
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%
 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		

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

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
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			

APPRENTICE RATE SCHEDULE AS OF 12-3-23:

INTERVAL	PERIOD AND RATES									
6 Months	32.52	35.23	37.94	40.65	43.36	46.07	48.78			
Benefits	28.97	30.65	32.31	33.98	35.69	37.36	39.02			

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

	09/19/23
Foreman	W60.97 B37.97 T98.94
General Foreman	W63.31 B39.08 T102.39
Journeyman	W58.69 B37.41 T96.10

Craft: Heat & Frost Insulator

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	27.51	32.64	39.31	45.91						
Benefits	21.73	25.78	28.63	31.61						

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

	09/19/23
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

	09/05/23
Foreman	W44.75 B24.71 T69.46
Journeyman (Handler)	W39.78 B24.71 T64.49

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

	11/14/23
Class A Journeyman	W38.25 B32.42 T70.67
Class B Journeyman	W37.25 B32.42 T69.67
Class C Journeyman	W31.70 B32.42 T64.12
Foreman	W43.00 B32.42 T75.42
General Foreman	W47.75 B32.42 T80.17

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	29.17	29.17	29.17	29.17						

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: 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

	12/01/23
Apprentice (1st year)	W29.89 B15.70 T45.59
Apprentice (2nd year)	W34.10 B26.65 T60.75
Foreman (Charge Person)	W43.10 B27.43 T70.53
Journeyman 1 (at least 1 year of working exp. as a journeyman)	W38.33 B27.43 T65.76
Journeyman 2 (at least 2 years of working exp. as a journeyman)	W42.10 B27.43 T69.53

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

Craft: Pipefitter

PREVAILING WAGE RATE

	05/02/23
Foreman	W58.68 B49.97 T108.65
Journeyman	W54.43 B46.36 T100.79

Craft: Pipefitter

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	35%	45%	55%	65%	75%					
Benefit	26.80	29.79	32.79	35.78	38.78					

Ratio of Apprentices to Journeymen - 1:5

Craft: Pipefitter

COMMENTS/NOTES

FOREMAN REQUIREMENTS:

- When there are 2 or more Journeyman Pipefitters on a job, 1 shall be designated a Foreman.
- There shall be a Foreman for every 8 Journeyman Pipefitters on a job.

The regular workday shall be 8 hours between 7:00 AM and 3:30 PM.

SHIFT DIFFERENTIAL:

- 2nd Shift (3:30 PM-11:30 PM) shall work 7.5 hours and receive 8 hours pay at the regular rate, plus 10% per hour on the total rate.
- 3rd Shift (11:30 PM-7:00 AM) shall work 7 hours and receive 8 hours pay at the regular rate, plus 15% per hour on the total rate.

OVERTIME:

- All hours worked in excess of 8 per day, Monday through Friday, and all hours worked on Saturday, shall be paid at time and one-half, inclusive of benefits. All hours on Sunday and holidays shall be paid at double time, inclusive of benefits.
- By mutual agreement, employees may work four 10-hour days, Monday to Thursday, at straight time rate. Friday may be used as a make-up day for a day lost to inclement weather, and may be paid at straight time. If Friday is not a make-up day, the first 8 hours shall be paid at time and one-half, inclusive of benefits; hours in excess of 8 shall be paid at double time, inclusive of benefits.

SHIFT DIFFERENTIAL (Maintenance Work Only):

- 2nd Shift (3:30 PM-11:30 PM) shall work 7.5 hours and receive 8 hours pay at the regular rate, plus 10% per hour on the total rate.
- 3rd Shift (11:30 PM-7:00 AM) shall work 7 hours and receive 8 hours pay at the regular rate, plus 15% per hour on the total rate.

OVERTIME (Maintenance Work Only):

- All hours in excess of 8 per day, Monday through Saturday, shall be paid at time and one-half, inclusive of benefits. All

**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 - 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

	08/09/23
Grinder or Assistant	W59.04 B39.69 T98.73
Mechanic	W60.65 B39.70 T100.35
Terrazzo Resinous Worker	W50.47 B32.37 T82.84

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
57.63	37.65	95.28	98.03	100.53

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
57.63	37.65	95.28	98.03	100.53

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
55.72	37.65	93.37	96.12	98.62

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
55.72	37.65	93.37	96.12	98.62

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			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
55.72	37.65	93.37	96.12	98.62

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			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
55.72	37.65	93.37	96.12	98.62

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			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
50.38	37.65	88.03	90.78	93.28

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			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
47.80	37.65	85.45	88.20	90.70

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
57.96	37.65	95.61	98.36	100.86

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (minimum)

OPERATING ENGINEERS **Rates Expiration Date :**

Effective Dates:

	07/01/2023		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
59.22	37.65	96.87	99.62	102.12

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			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
59.22	37.65	96.87	99.62	102.12

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
54.09	37.65	91.74	94.49	96.99

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
54.09	37.65	91.74	94.49	96.99

CLASSIFICATIONS:

Steam Generator or Boiler

Stone Spreader

Tamping Machine (vibrating ride-on type)

Temporary Heating Plant (Nelson or other type, including propane, 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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
61.04	37.65	98.69	101.44	103.94

CLASSIFICATIONS:

Helicopter Pilot/Engineer

Effective Dates:

	07/01/2023		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
65.72	37.65	103.37	106.12	108.62

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
64.72	37.65	102.37	105.12	107.62

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			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
61.22	37.65	98.87	101.62	104.12

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			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
63.72	37.65	101.37	104.12	106.62

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			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
60.22	37.65	97.87	100.62	103.12

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
62.85	37.65	100.50	103.25	105.75

CLASSIFICATIONS:

Helicopter Co-Pilot & Communications Engineer

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2023			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
58.79	37.65	96.44	99.19	101.69

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
56.13	37.65	93.78	96.53	99.03

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
54.60	37.65	92.25	95.00	97.50

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
50.84	37.65	88.49	91.24	93.74

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
58.41	37.65	96.06	98.81	101.31

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (Minimum)

Effective Dates:

	07/01/2023		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
47.80	37.65	85.45	88.20	90.70

CLASSIFICATIONS:

Field Engineer - Rodman or Chainman

STRUCTURAL STEEL ERECTION **Rates Expiration Date :**

Effective Dates:

07/01/2023			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
59.55	37.65	97.20	99.95	102.45

CLASSIFICATIONS:

Field Engineer-Chief of Party

Vacuum Truck

Effective Dates:

07/01/2023			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
67.74	37.65	105.39	108.14	110.64

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			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
66.08	37.65	103.73	106.48	108.98

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			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
63.24	37.65	100.89	103.64	106.14

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			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
61.58	37.65	99.23	101.98	104.48

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
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NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

STRUCTURAL STEEL ERECTION Rates Expiration Date :

Effective Dates:

07/01/2023			07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
63.24	37.65	100.89	103.64	106.14

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
59.22	37.65	96.87	99.62	102.12

CLASSIFICATIONS:

Driller

Effective Dates:

	07/01/2023		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
52.38	37.65	90.03	92.78	95.28

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

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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PREVAILING WAGE RATE DETERMINATION

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		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
57.97	37.65	95.62	98.37	100.87

CLASSIFICATIONS:

Driller

Effective Dates:

	07/01/2023		07/01/2024	07/01/2025
Rate	Fringe	Total	Total	Total
51.13	37.65	88.78	91.53	94.03

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:

10/01/2023

Rate	Fringe	Total
45.26	15.22	60.48

CLASSIFICATIONS:

Lead Dredgerman, Operator, Leverman

Licensed Tug Operator (over 1000 HP)

Effective Dates:

10/01/2023

Rate	Fringe	Total
39.14	14.79	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:

10/01/2023

Rate	Fringe	Total
36.84	14.63	51.47

CLASSIFICATIONS:

Certified Welder

OPERATING ENGINEERS MARINE-DREDGING **Rates Expiration Date :**

Effective Dates:

10/01/2023

Rate	Fringe	Total
35.83	14.31	50.14

CLASSIFICATIONS:

Mate, Drag Barge Operator, Steward, Assistant Fill Placer

Welder

Effective Dates:

10/01/2023

Rate	Fringe	Total
34.68	14.23	48.91

CLASSIFICATIONS:

Boat Operator

Effective Dates:

10/01/2023

Rate	Fringe	Total
28.81	13.82	42.63

CLASSIFICATIONS:

Shoreman, Deckhand, Rodman, Scowman

Effective Dates:

10/01/2023

Rate	Fringe	Total
40.33	14.87	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

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NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
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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

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:

12/01/2023

Rate	Fringe	Total
36.28	33.49	69.77

CLASSIFICATIONS:

Helper (4th year helper)

Effective Dates:

12/01/2023

Rate	Fringe	Total
46.25	33.49	79.74

CLASSIFICATIONS:

Driller

Effective Dates:

12/01/2023

Rate	Fringe	Total
52.66	33.49	86.15

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
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

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
PREVAILING WAGE RATE DETERMINATION

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:

11/01/2023

Rate	Fringe	Total
64.70	31.84	96.54

CLASSIFICATIONS:

Pipeline Journeyman Welder

Effective Dates:

11/01/2023

Rate	Fringe	Total
64.70	31.84	96.54

CLASSIFICATIONS:

Pipeline Journeyman

Effective Dates:

11/01/2023

Rate	Fringe	Total
41.00	23.56	64.56

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 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		12/03/2023
Rate	Fringe	Total	Total
67.52	55.11	122.63	126.53

CLASSIFICATIONS:

General Foreman

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date :**

Effective Dates:

12/04/2022			12/03/2023
Rate	Fringe	Total	Total
60.14	50.62	110.76	114.24

CLASSIFICATIONS:

Foreman

Effective Dates:

12/04/2022			12/03/2023
Rate	Fringe	Total	Total
56.97	48.72	105.69	109.00

CLASSIFICATIONS:

Small Job Foreman

Effective Dates:

12/04/2022			12/03/2023
Rate	Fringe	Total	Total
52.75	46.18	98.93	101.98

CLASSIFICATIONS:

Heavy Equipment Operator

Effective Dates:

12/04/2022			12/03/2023
Rate	Fringe	Total	Total
52.75	46.18	98.93	101.98

CLASSIFICATIONS:

Cable Splicer

Effective Dates:

12/04/2022			12/03/2023
Rate	Fringe	Total	Total
52.75	46.18	98.93	101.98

CLASSIFICATIONS:

Journeyman Lineman

Effective Dates:

12/04/2022			12/03/2023
Rate	Fringe	Total	Total
52.75	46.18	98.93	101.98

CLASSIFICATIONS:

Journeyman Welder

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date :**

Effective Dates:

12/04/2022			12/03/2023
Rate	Fringe	Total	Total
52.75	46.18	98.93	101.98

CLASSIFICATIONS:

Journeyman Painter

Effective Dates:

12/04/2022			12/03/2023
Rate	Fringe	Total	Total
42.20	39.80	82.00	84.45

CLASSIFICATIONS:

Light Equipment Operator

Effective Dates:

12/04/2022			12/03/2023
Rate	Fringe	Total	Total
36.93	36.60	73.53	75.65

CLASSIFICATIONS:

Groundman Truck Driver

Effective Dates:

12/04/2022			12/03/2023
Rate	Fringe	Total	Total
34.29	35.02	69.31	71.28

CLASSIFICATIONS:

Groundman 3rd Year

Effective Dates:

12/04/2022			12/03/2023
Rate	Fringe	Total	Total
31.65	33.42	65.07	66.89

CLASSIFICATIONS:

Groundman 2nd Year

Effective Dates:

12/04/2022			12/03/2023
Rate	Fringe	Total	Total
29.01	31.83	60.84	62.50

CLASSIFICATIONS:

Groundman 1st Year

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

ELECTRICIAN- UTILITY WORK (SOUTH) Rates Expiration Date :

Effective Dates:

12/04/2022			12/03/2023
Rate	Fringe	Total	Total
23.21	28.31	51.52	52.88

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

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)

TERRITORY
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
PREVAILING WAGE RATE DETERMINATION

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)

**NOMAHEGAN PEDESTRIAN BRIDGE REPLACEMENT
BA# 6-2024; UNIOUN COUNTY ENGINEERING PROJECT NO. 2016-038**

TECHNICAL SPECIFICATIONS

This project shall be governed by the “New Jersey Department of Transportation, Standard Specifications for Road and Bridge Construction, 2019” using U.S. Customary English Units except as noted in the following specification.

Payment descriptions within the following specifications prevail over the “New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction 2019.”

All unit prices shall be in accordance with the Bidder’s Proposal. Any unit prices not included in the Bidder’s Proposals shall be assumed distributed across all unit prices.

Any references in this specification to a specific product line or proprietary item, it is understood that the specification refers to that product or an approved equal. The lack of the phrase “or approved equal” does not imply that the specified product is the only product that will be allowed. However, it will be the successful bidder’s burden to prove that an alternate product meets the specification called for.

Should there be a conflict between the plans and specifications, the items shall govern in the following order.

- Addendums to the bid to include changes to the plans

- Technical Specifications

- Plans

**TECHNICAL SPECIFICATIONS
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SECTION 011100 – CONTRACT ALLOWANCE

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Under this Contract this item shall be utilized by the contractor for unforeseen conditions associated with this project including any materials, services or appurtenances not specifically described in the specifications but as required for completion of the project. All work must be ordered by the Engineer to qualify for payment. This item is intended to be utilized to compensate the contractor for the unknown areas of the work or other facilities not specified, but necessary to complete the work not called for or shown on the plans.

1.2 ALLOWANCE FOR UNFORESEEN CONDITIONS

- A. The work shall include the portion of the stipulated amount, as indicated in the Proposal as an allowance for unforeseen conditions as directed and approved by the Engineer.
- B. Submittal Requirements

The Contractor shall provide all invoices from labor, subcontractors and material to the Engineer for his review and approval. The Contractor shall not be reimbursed under the allowance for any work, which he/she has not demonstrated is part of the work authorized by the Engineer.

The Contractor shall not proceed with the work associated with the cash allowance until all costs associated with the work have been authorized in writing by the Engineer.

PART 2 – PRODUCTS – Not Applicable.

PART 3 – EXECUTION – Not Applicable.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The actual charges made will be the contractor's costs calculated in accordance with the Bid Items or if not included in these items, costs shall be agreed to in writing prior to the initiation of services under the item **UNFORESEEN CONDITIONS ALLOWANCE** in the Proposal.

**This item is intended to be utilized to compensate the contractor for the unknown areas of the work or other facilities not specified, but necessary to complete the work not called for or shown on the plans.*

The contractor will be paid from the allowance based on a mutually agreeable price between the contractor and the Engineer prior to commencing modifications for those items as ordered by the Engineer in writing.

Nothing herein shall constitute a guarantee that the contractor is entitled to payment of the full allowance. If no work is done under this item, the full amount shall not be paid by the owner to the Contractor. To qualify for payment, work must be ordered by the Engineer in writing.

END OF SECTION

SECTION 013220 – SUBMITTALS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This section specifies the general methods and requirements of submissions applicable to the following work-related submittals: Shop Drawings, Product Data, and Samples.
- B. Shop Drawings:
 - 1. Shop drawings as specified in individual work sections include, but are not necessarily limited to, data such as fabrication and drawings, scheduled information, setting diagrams, actual shopwork manufacturing instructions, custom templates, coordination of drawings, individual system or equipment inspection and test reports including performance curves and certifications, as applicable to the Work.
 - 2. All shop drawings submitted by subcontractors for approval shall be sent directly to the Contractor for preliminary checking. The Contractor shall be responsible for their submission at the proper time so as to prevent delays in delivery of materials.
 - 3. The Contractor shall check all subcontractor's shop drawings regarding measurements, size of members, materials and details to satisfy himself that they conform to the intent of the Contract Drawings and Specifications. Drawings found to be inaccurate or otherwise in error shall be returned to the subcontractors for correction before submission thereof.
 - 4. All details on shop drawings submitted for approval shall show clearly the elevations of the various parts to the main members and lines of the structure and where correct fabrications of the work depends upon field measurements, such measurements shall be made and noted on the drawings before being submitted for approval.
- C. Product Data:
 - 1. As specified in individual sections, include but are not necessarily limited to standard prepared data for manufactured products (sometimes referred to as catalog data), such as the manufacturer's product specifications and installation instructions and manufacturer's printed statements of compliances and applicability, catalog cuts, product photographs, production or quality control inspection and test reports and certifications, mill reports, product operating and maintenance instructions and recommend spare parts listing, and printed product warranties, as applicable to the Work.
- D. Samples:
 - 1. Samples specified in individual sections include but are not necessarily limited to physical examples of the work, such as sections of manufactured or fabricated work, of pattern swatches and as applicable to the Work.
- E. Contractor's Responsibilities:
 - 1. The Contractor shall review shop drawings, product data and samples prior to submission to determine and verify the following: Field measurements, field construction criteria, catalog numbers and similar data, and conformance with the specifications.

2. Each shop drawing, working drawing, sample and catalog submitted by the Contractor shall have affixed to it the following Certification Statement, signed by the Contractor: "Certification Statement: By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements."
3. Notify the Owner in writing, at the time of submittal, of any deviations in the submittals from the requirements of the contract documents.
4. No portion of the work requiring a shop drawing, working drawing, sample or catalog data shall be started nor shall any materials be fabricated or installed prior to the approval or qualified approval of such item. Fabrication performed, materials purchased or on-site construction accomplished which does not conform to approved shop drawings and data shall be at the Contractor's risk. The Owner will not be liable for any expense or delay due to corrections or remedies required to accomplish conformity.
5. Project work, materials, fabrication and installation shall conform with approved shop drawings, working drawings, applicable samples and catalog data.

F. Submission Requirements:

1. Make submittals promptly in accordance with approved schedule and in such sequence as to cause no delay in the Work or in the work of any other Contractor.
2. Number of submittals required:
 - a. Shop Drawings – submit three (3) copies.
 - b. Product Data – submit three (3) copies.
 - c. Samples – submit the number stated in the respective Specification Section.
3. Submittals shall contain:
 - a. The date of submission and the dates of any previous submissions.
 - b. The project title and number.
 - c. Contractor identification.
 - d. The names of the Contractor, Supplier and Manufacturer.
 - e. Identification of the product, with the specification section number.
 - f. Field dimensions, clearly identified as such.
 - g. Relation to adjacent or critical features of the Work or materials.
 - h. Applicable standards, such as ASTM or Federal Specification numbers.
 - i. Identification of deviations from Contract Documents.
 - j. Identification of revisions or resubmittals.
 - k. An 5-inch by 4-inch blank space for Contractor and Engineer Stamp.

G. Resubmission Requirements:

1. Make any corrections or changes in the submittals required by the Engineer and resubmit until approved.
 2. Shop Drawings and Product Data:
 - a. Revise initial drawings or data and resubmit as specified for the initial submittal.
 - b. Indicate any changes which have been made other than those requested by the Engineer.
 3. Samples: submit new samples as required for initial submittal.
- H. Distribution:
1. Distribute reproductions of approved shop drawings and copies of approved product data and samples, where required, to the job site file and elsewhere as directed by the Engineer. Number of copies shall be as directed by the Engineer but shall be a minimal of three (3) copies.
- I. General Procedure for Submittals:
1. Coordination of Submittal Times – Prepare and transmit each submittal sufficiently in advance of performing the related work or other applicable activities, or within the time specified in the individual work sections of the Specifications, so that the installation will not be delayed by processing times including disapproval and resubmittal (if required), coordination with other submittals, testing, purchasing, fabricating, delivery and similar sequenced activities. No extension of time will be authorized because of the Contractor's failure to transmit submittals sufficiently in advance of the work.
 2. Workmanship Bonds – Where specific units of work require the issuance of a bond or similar provision, as a means of assuring the Owner that certain possible failures of the work to perform as represented will be rectified at someone else's expense, submit fully executed bond backed by a surety company acceptable to the Owner and in the principal amount indicated. Include information sheet for the Owner's maintenance/operating personnel outlining proper procedures in case of failure or other instances which might affect the validity of the bond; list names, addresses and telephone numbers for the Owner's emergency and follow-up in connection with the implementation of each bond.

PART 2 – PRODUCTS – Not Applicable.

PART 3 – EXECUTION – Not Applicable.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. No specific payment shall be made for the above item. The cost of the above described work shall be included in the overall price bid for the various applicable items in the Proposal.

END OF SECTION

SECTION 013233 – PRE-CONSTRUCTION PHOTOGRAPHS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. The Contractor shall furnish photographs, taken by a professional photographer acceptable to the Engineer, to show the condition of the site prior to construction, as well as to show the progress of the work.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Prints of pre-construction and construction photographs shall be 3 inch by 5-inch size, mounted on cardboard and provided with reinforced 1inch wide flap, punched with 2 holes for binding, spaced 4 ¼ inches apart. The binding flap shall be located along the 8-inch dimension, and at the lower right hand corner on the front. The title shall include the name of the photographer, name of the project, contract number, station or other description, direction of view and date the picture was taken. The photographs shall also be numbered consecutively. Negatives of all photographs shall be furnished to the Engineer.

PART 3 – EXECUTION

3.1 METHODS OF PHOTOGRAPHS

- A. Pre-construction photographs shall be taken where directed by the Engineer to especially note the character of all easements and the condition of any structures, lawns, trees, streets, sidewalks, etc., which might be damaged, and shall average at least one photograph for each 50 feet of street or easement in the contract. The Engineer shall be provided with one matte print of each photograph. A minimum of thirty-six construction photographs shall be taken each month at regular intervals while the work is in progress. Photographs shall be taken at such times and at such locations as may be determined by the Engineer. One matte print of each picture taken during the month shall be submitted to the Engineer at the time of submitting the periodic estimate for progress payment.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. No specific payment shall be made for the above item. The cost of the above described work shall be included in the overall price bid on the project.
- B. Contractors are advised that damage claims by property owners, which cannot be disputed by pre-construction photographs, will be required to restore the claimed damage. Therefore, pre-construction photos will be required, and furnished to the engineer. Separate payment will not be made for pre-construction photos and shall be included in the various bid items.
- C. Should the Contractor fail to take pre-construction photos, any property damage complaints received will be repaired by the contractor at no cost to the owner.

END OF SECTION

SECTION 014126 – REGULATORY PERMITS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Portions of the project site are located within areas regulated by the New Jersey Department of Environmental Protection (“NJDEP”). Neglia Group has obtained the required Land Use permits from the NJDEP to construct the improvements shown on the Contract Documents. In addition, Neglia Group has obtained from the Somerset-Union County Soil Conservation District. A copy of said approval will be provided prior to commencement of construction.
- B. The Contractor shall not exceed the approved limits of disturbance shown on the plans. If the Contractor requires additional area in which to construct the proposed improvements, NJDEP Land Use and Somerset-Union County Soil Conservation District re-approval will be required, the cost of which shall be borne by the Contractor, at no additional expense to the Union County, the Owner or Neglia Group

PART 2 – PRODUCTS – Not Applicable

PART 3 – EXECUTION

3.1 ADDITIONAL REGULATORY PERMITS REQUIRED

- A. The Contractor shall not exceed the approved limits of disturbance shown on the plans. If the Contractor requires additional area in which to construct the proposed improvements NJDEP Land Use Permit and Somerset-Union Soil Conservation District re-approval will be required. The cost of obtaining any required NJDEP Land Use Permit or Somerset-Union Soil Conservation District re-approval shall be borne solely by the Contractor, at no additional expense to the Owner or Neglia Group.

END OF SECTION

SECTION 015526 – MAINTENANCE AND PROTECTION OF TRAFFIC

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Under this Contract this item shall mean that the Contractor shall provide for the safe passage of vehicles and pedestrians for safe ingress and egress to properties abutting the limits of construction, including but not limited to the use of flagmen, cones, barrels, etc., in any and all areas where contractor deems it necessary. The portions outside the limits of construction which are open to traffic shall be kept in pre-construction conditions to allow for the safe passage of vehicular and pedestrian traffic.
- B. This item shall also include the maintenance and protection of off-site traffic (e.g. roadways, sidewalks, curbs, etc.) and shall include any and all materials necessary to provide for this passage, and that the Contractor shall abide to all of the rules and regulations as set forth in Section 110 - Traffic Control of the applicable New Jersey State Highway Department Standard Specifications as amended in the Standard Specifications of this project.
- C. Any damage to construction equipment, materials and vehicles are the sole responsibility of the contractor.
- D. The Contractor may utilize outside agencies (e.g. Security Company) to maintain traffic.
- E. The Contractor is responsible for all maintenance, safety and protection of traffic until the project is complete and turned over to the project Owner. The Contractor shall hold harmless the County of Union and its representatives, project construction managers and Neglia Group for any safety incidents during the project construction period.

PART 2 – PRODUCTS – Not Applicable

PART 3 – EXECUTION – Not Applicable

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. Payment for Maintenance and Protection of Traffic will be made on a lump sum basis at the price bid for the items **MAINTENANCE AND PROTECTION OF TRAFFIC** within the Proposal, which price shall include the cost of, any and all materials, all labor and equipment, and all else necessary therefore and incidental thereto for completion of operations as specified herein and as shown on the plans or as directed by the Engineer.

END OF SECTION

SECTION 015527 – TRAFFIC DIRECTORS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Under this Contract, this item shall mean that the Contractor shall provide a safe passage of vehicles and pedestrians for ingress and egress to properties abutting the right-of-way within the limits of the project, when the Contractor is unable to utilize flagmen for traffic control.
- B. Traffic Directors shall be off-duty Police Officers from within the Municipality of where the work is being performed. The Traffic Directors shall be located in a strategic location as determined by the Municipal Traffic Officer and/or Engineer in order to safely and efficiently control traffic during construction hours. The Contractor shall contact the Municipal Police Department in order to obtain the services of Traffic Directors. The name, address and telephone number of the Municipal Traffic Officer is listed below:

Chief Ryan Greco
Cranford Police Department
8 Springfield Avenue
Cranford, NJ 07016
(908) 272-2222

PART 2 – PRODUCTS – Not Applicable

PART 3 – EXECUTION – Not Applicable

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The cost of Traffic Directors for which payment will be made, will be the actual number of man-hours in which an off-duty Police Officer is directing traffic multiplied by the approved rate for the Police Officer. Permitted hours of construction shall be from 8:00 A.M. to 4:00 P.M., Monday thru Friday, unless otherwise noted on the plans, or approved by the Town in advance.
- B. Payment for Traffic Directors will be made as above determined, under the item **UNIFORM TRAFFIC DIRECTORS ALLOWANCE** in the Proposal.

END OF SECTION

SECTION 017113 – MOBILIZATION / DEMOBILIZATION

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Mobilization / demobilization shall consist of the cost of initiating the contract, including preparatory work and operations, necessary for the movement of personnel, equipment, supplies and incidentals to the Project site, and other work performed or costs incurred prior to beginning work and completing work. In any case of inconsistencies with the N.J.A.C. 7:14-2.9, the NJ Administrative Code shall govern.

PART 2 – PRODUCTS – Not Applicable

PART 3 – EXECUTION – Not Applicable

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. Payment for mobilization / demobilization will be made on a lump sum basis, which price shall include the cost of initiating the contract, regardless of the fact that the Contractor may have, for any reason, shut down his work on the Project or moved equipment away from the Project and back again, in accordance with Standard Specifications Section.

Payment will be made in accordance with the following schedule:

- When 5% of the work is completed - 25% of the amount bid for mobilization or 2.5% of the Total Contract Price, whichever is less, will be paid;
- When 10% of the work is completed - 50% of the amount bid for mobilization or 5% of the Total Contract Price, whichever is less, will be paid;
- When 15% of the work is completed – 75% of the amount bid for mobilization or 7.5% of the Total Contract Price, whichever is less, will be paid;
- When 20% of the work is completed – 100% of the amount bid for mobilization or 10% of the Total Contract Price, whichever is less, will be paid upon completion of all work on the project, payment for the amount bid for mobilization in excess of 10% of the Total Contract Price will be made.
- The percentage of work completed shall be the total of payments earned compared to the Total Contract Price. The total of payments earned excludes the amount paid for this item and the amount paid for materials furnished but not incorporated into the work in accordance with Subsection 109.06, as shown on the monthly estimates of the approximate quantities of work done, prepared in accordance with Subsection 109.05.

The lump sum price bid for mobilization / demobilization is limited to the following maximum amounts:

Original Contract Amount
(Including Mobilization)

For More Than	To and Including	Maximum Amount for Item of Mobilization
\$0	\$100,000	\$3,000
\$100,000	\$500,000	\$15,000
\$500,000	\$1,000,000	\$30,000
\$1,000,000	\$2,000,000	\$60,000
\$2,000,000	\$3,000,000	\$90,000
\$3,000,000	\$4,000,000	\$120,000
\$4,000,000	\$5,000,000	\$125,000
\$5,000,000	\$6,000,000	\$150,000
\$6,000,000	\$7,000,000	\$175,000
\$7,000,000	\$10,000,000	\$200,000
\$10,000,000		2.5% of amount bid

- B. Payment for Mobilization/Demobilization will be made on a lump sum basis at the price bid for the item **MOBILIZATION / DEMOBILIZATION** in the proposal which price shall include the cost of, any and all materials, all labor and equipment and all else necessary and incidental thereto for completion of operations as specified herein and as shown on the plans or as directed by the Engineer.

END OF SECTION

SECTION 017123 – CONSTRUCTION LAYOUT

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Under this item the Contractor shall provide all work required in connection with the layout for construction of the project, using the control points and data furnished by the project Licensed Surveyor.
- B. All work shall be constructed according to the lines and grades shown and approved. At the site, the Owner's Engineer will lay-out and mark upon the ground a base line and bench mark, from which the Contractor shall be responsible for staking/laying out the construction lines, in accordance with N.J.A.C. 7:14-2.5. For sewers, the Engineer will lay out and mark suitable number of control points and bench marks, averaging about one every 500 feet. The Contractor shall employ the services of a land surveyor, licensed to practice in this state, for laying out the work, including setting of key or principal stakes, markers and levels, and preparation of cut sheets, if required, on a form approved by the Engineer.

PART 2 – PRODUCTS – Not Applicable

PART 3 – EXECUTION

3.1 METHOD OF STAKEOUT

- A. The Contractor shall submit all necessary computations to establish the exact position of all the work from the control points furnished by the project Licensed Surveyor, along with construction grade sheets, prepared by a licensed land surveyor hired by the Contractor, to Neglia Group for approval prior to the start of construction.
- B. The Contractor shall maintain the line and grade stakes furnished by the project Surveyor for his use in staking out the work. If such control points are damaged, lost, displaced or removed, they shall be reset or replaced at a charge to the Contractor for the actual cost of the work.
- C. The Contractor shall be responsible for maintaining the points he has established. Any error or apparent discrepancies found in the plans or specifications shall be called to the attention of Neglia Group in writing for interpretation prior to proceeding with the work.
- D. Should any inconsistencies arise during layout by the Contractor's surveyor, Neglia Group must be advised prior to construction. Any downtime costs incurred by the contractor due to inconsistencies will not be absorbed by Neglia Group.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. Payment for Construction Layout will be made on a lump sum basis at the price bid for the item **CONSTRUCTION LAYOUT** in the proposal which price shall include the cost of, any and

all materials, all labor and equipment and all else necessary and incidental thereto for completion of operations as specified herein and as shown on the plans or as directed by the Engineer.

END OF SECTION

SECTION 017329 – SAWCUTTING

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Sawcutting shall consist of the cutting of sidewalks, concrete, driveways, curbs and pavements of whatever nature in order to maintain a clean finished look when matching into existing areas of concrete and asphalt where directed Neglia Group.

PART 2 – PRODUCTS – Not Applicable

PART 3 – EXECUTION

3.1 MATERIALS - METHODS OF CONSTRUCTION

- A. Concrete or bituminous surfaces shall be cut through the entire pavement thickness in a straight, neat line using diamond-tipped blades with water, as approved by Neglia Group.

***PLEASE NOTE THAT JACK-HAMMERED OR BROKEN EDGES WILL NOT BE ACCEPTED UNDER ANY CIRCUMSTANCES.**

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. No specific payment will be made for sawcutting and the cost thereof shall be included in the prices bid for the various items within the bid proposal.

END OF SECTION

SECTION 017423 – FINAL CLEANUP AND SITE RESTORATION

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Under this item the Contractor shall restore the work site and access area to its original condition including, but not limited to, installation of both temporary and permanent striping, remove and reset street and road signs, relocation of signs, removal and disposal of signs, bollards, topsoil, seeding, fences, hedges, embankments, re-grading, repairing of sidewalks, roadways, curbs, cleaning and removal of stockpiles and equipment, and all else not specifically covered. All concrete aprons shall be restored.

PART 2 – PRODUCTS

2.1 MATERIALS

NJDOT 2019 Standard Specifications

- A. All soil, stone, and other fill materials either imported onto or exported from the property shall comply with all applicable local, County, State, and Federal regulations and requirements.

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. The site shall be returned to its original condition. Fences shall be reinstalled with posts in concrete footings in accordance with the plans and specifications herein. Hedges shall be reinstalled where possible or replaced in kind and in the same locations as existing. Lawn areas disturbed by Contractor's activities shall be re-graded, seeded and mulched as specified by Neglia Group.
- B. All pavement and sidewalks, where construction fence was previously located, shall be repaired. Cleaning shall include hand-brooming of sidewalk and pavement areas. Adjacent structures shall be cleaned, as necessary, by a method approved by Neglia Group and/or County Engineers. Sidewalks shall be replaced with concrete walk in evenly-sized slabs, saw-cut where necessary, only to the extent damaged by the construction. Both concrete and bituminous concrete shall be repaired as specified by Neglia Group and/or County Engineers, saw-cut where necessary, only to the extent damaged by the construction. All construction equipment and stockpiles shall be removed from the site and disposed of by the Contractor in a suitable and timely manner.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The quantity of Final Cleanup and Site Restoration for which payment will be made will be on a lump sum basis for the item **FINAL CLEANUP/SITE RESTORATION** in the Proposal, which price shall include the cost of any and all materials, labor and equipment and all else necessary and incidental thereto for completion operations as specified herein and as shown on the plans or as directed by the Engineer.

END OF SECTION

SECTION 024113 – SITE CLEARING AND DEMOLITION

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Under this item the Contractor shall remove and dispose of all existing pedestrians footbridge, disposal of stripped field materials, all debris, all else indicated on the demolition plan; the removal of which is required to carry out the work of this project, shall be removed and legally disposed of off-site. The contractor shall perform test pits to locate any uncertainties in existing subsurface structures to determine if these structures interfere or affect the proposed construction.
- B. The Contractor shall remove and dispose of the existing bridge structure and all associated components, including but not limited to the deck, piers, piles, footing railing, abutments superstructure as necessary for new construction.
- C. The Contractor shall remove and reset street and road signs, not otherwise paid for; remove and reset to grade manhole and catch basin frames, gas and water valves; and complete all other removals and relocations required for the work and not specifically covered elsewhere for payment.
- D. The Contractor shall be responsible for any and all temporary sheeting and dewatering required for removal of existing bridge.
- E. The Contractors are advised to make a site visit, check the existing site conditions, and determine the detail scope of work for the site clearing before the bidding of this project.
- F. This item shall include a perimeter 8 foot construction fence around the entire property or as directed by the engineer.
- G. All soil, stone, and other fill materials either imported onto or exported from the property shall comply with all applicable local, County, State, and Federal regulations and requirements.

PART 2 – PRODUCTS – Not Applicable

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. The lights, signs, inlets, sidewalk, pavement, bollards, curb and unclassified excavation shall be disposed of outside of the limits of the contract at no extra cost to the Owner.
- B. Trees and shrubs removed by the Contractor shall be cut and the roots and stumps, to be removed by grubbing, shall be refilled with suitable material which shall be solidly compacted so as to make the surface at these points conform to the adjoining grade. No trees shall be cut outside the specified limits without permission of Neglia Group.

- C. Street and road signs shall be removed carefully and shall be reset at the exact locations and in the manner required by the public authorities having jurisdiction, thereof. Site signs along with their foundations and any electrical components shall be removed in their entirety and shall be submitted to the owner unless owner requests complete disposal off-site.
- D. Manhole frames, catch basin frames, fire hydrants, guide rail, gas valves, water valves, and other structures shall be removed and carefully reset to match proposed grades, unless otherwise indicated to be removed.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The quantity of Site Clearing and Demolition for which payment will be made, will be a lump sum basis covering all work of **SITE CLEARING/DEMOLITION** including but not limited to the work specified above. Such price shall include removal of debris, disposal of materials, installation of a temporary construction fence, and all else necessary therefore and incidental thereto for completion of operations as specified herein and as shown on the plans or as directed by the Engineer.
- B. The Contractor shall abide by all of the rules and regulations as set forth in Section 201 – Clearing Site of the 2019 NJDOT State Standard Specifications and the respective amendments.

END OF SECTION

SECTION 033000 – CAST-IN-PLACE CONCRETE

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mix design, placement procedures, and finishes.

1.3 RELATED SECTIONS

- A. Division 31 Section "Earthwork" for backfill.

1.4 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of fly ash, ground granulated blast-furnace slag, and silica fume.

1.5 SUBMITTALS

- A. Product Data: For each type of manufactured material and product indicated.
- B. Concrete Design Mixes: For each concrete mix, submit laboratory test reports for concrete materials and concrete mix design on the Concrete Mix Design Submittal Form attached to the end of this section. Each mix design shall be accompanied by either a standard deviation analysis or trial mixture analysis backup in accordance with ACI 318(08) section 5.3. Include alternate mix designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments.
- C. Steel Reinforcement Shop Drawings: Submit for review shop drawings for all concrete work showing reinforcement, details of fabrication, bending, and placement, prepared according to ACI 315, "Details and Detailing of Concrete Reinforcement", and as shown on the drawings. Include material, grade, bar schedules, stirrup spacing, bent bar diagrams, arrangement, and supports of concrete reinforcement. Include special reinforcement required for openings through concrete structures.
- D. Material Certificates and/or Material Test Reports: Submit material certificates signed by manufacturers certifying that; or submit material test reports from a qualified testing agency indicating and interpreting test results showing that; each of the following items complies with requirements:
 - 1. Cementitious materials and aggregates;
 - 2. Steel reinforcement and reinforcement accessories;

3. Admixtures;
 4. Waterstops;
 5. Bonding agents;
 6. Adhesives; and
 7. Repair materials.
- E. Concrete Delivery Tickets: Submit concrete delivery tickets to the field testing agency for each truckload discharged and used in the work, indicating project identification name and number, date, mix type, mix time, quantity, amount of water introduced, and admixtures used.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C94 requirements for production facilities and equipment.
1. Manufacturer must be certified according to the National Ready Mixed Concrete Association's Certification of Ready Mixed Concrete Production Facilities.
- B. Field Testing Agency Qualifications: An independent testing agency, acceptable to Engineer, qualified according to ASTM C 1077 and ASTM E 329 to conduct the testing indicated, as documented according to ASTM E 548.
1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1 (minimum), according to ACI CP-1.
- C. All admixtures and coatings shall comply with the requirements of the local and state codes regarding Volatile Organic Substances.
- D. Codes and Standards: Comply with the latest edition of the following, unless more stringent provisions are indicated:
1. ACI 301, "Specification for Structural Concrete."
 2. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
 3. ACI 318, "Building Code Requirements for Structural Concrete."
 4. ACI 347R, "Recommended Practice for Concrete Formwork."
 5. Concrete Reinforcing Steel Institute (CRSI), "Manual of Standard Practice."
 6. ASTM C94, "Specification for Ready-Mixed Concrete."
 7. ASTM C618, Standard Specification for Fly Ash and Raw or Calcined Natural Pozzolan for Uses as a Mineral Admixture in Portland Cement Concrete.
 8. ASTM C311, Standard Methods of Sampling and Testing Fly Ash and Natural Pozzolans for Use as a Mineral Admixture in Portland Cement Concrete.
 9. ASTM C989, Ground Granulated Blast-Furnace Slag for Use in Concrete Mortars.
 10. Standard Practice ACI 226.R1, Ground Granulated Blast-Furnace Slag as a Cementitious Constituent in Concrete.
 11. ACI 303.1, "Specifications for Cast-in-Place Architectural Concrete"

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle steel reinforcement to prevent bending and damage.
- B. Deliver materials to site at such intervals to insure uninterrupted progress of work.
- C. Store materials to permit easy access for inspection and identification. Keep reinforcing steel under cover and off the ground using supports. Protect reinforcing steel from rusting, oil, grease or distortion. The Contractor shall be responsible for any demurrage charges due to failure to unload or store material properly. Do not store materials on the structure in a manner that might cause distortion or damage to the members of the supporting structures. Store grout under cover in unopened bags.
- D. Protection: Use all means necessary to protect the materials of this section before, during, and after installation and to protect the installed work and materials of all other trades.
- E. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Engineer and at no additional cost to the Owner.

PART 2 – PRODUCTS

2.1 FORM-FACING MATERIALS

- A. Provide form material with sufficient thickness to withstand pressure of newly placed concrete without objectionable bow or deflection.
- B. Forms for Smooth Exposed Finished Concrete: New Form-facing panels that will provide continuous, straight, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints. Plywood grain ghosting on finish surfaces exposed to view is not acceptable.
 - 1. Plywood, metal, or other approved panel materials.
 - 2. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:
 - a. B-B (Concrete Form), Class 1, or better, mill oiled and edge sealed.
- C. Forms for Unexposed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
- D. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch (19 by 19 mm), minimum.
- E. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces. Selected form-release agent shall provide concrete surface as required.
 - 1. Formulate form-release agent with rust inhibitor for steel form-facing materials.

F. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.

1. Furnish units that will leave no corrodible metal closer than 1 inch (25 mm) to the plane of the exposed concrete surface.
2. Furnish ties that, when removed, will leave holes not larger than 1 inch (25 mm) in diameter in concrete surface.
3. Furnish ties with integral water-barrier plates to walls indicated to receive damp proofing or waterproofing.

2.2 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

B. Plain-Steel Welded Wire Reinforcement: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.

C. Tie Wire: No. 16 American Wire Gage or heavier, black annealed.

2.3 REINFORCEMENT ACCESSORIES

A. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete or fiber-reinforced concrete of greater compressive strength than concrete, and as follows:

1. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected or CRSI Class 2 stainless-steel bar supports.

B. Joint Dowel Bars: Plain-steel bars, ASTM A 615/A 615M, Grade 60. Cut bars true to length with ends square and free of burrs.

2.4 CONCRETE MATERIALS

A. Portland Cement: ASTM C 150, non-air-entraining. All cement shall be one brand, type and color and meet with the Engineer's approval. All cement shall be from the same source.

1. Provide cement of the following types:

- a. Type I/II

2. The cement shall not contain any ingredients as shown by cement mill certificates which would cause more than 3 percent air to be entrained in the concrete when cement is used in the concrete mix.

3. Cement shall be stored in such a manner as to prevent deterioration or intrusion of foreign matter.
 4. No foreign cement (non-domestic cement) shall be permitted in concrete.
 5. Brand of cement shall not be changed during progress of job unless approved in writing by Engineer.
- B. Fine Aggregate: Fine aggregate shall be clean and washed, natural siliceous sand, consisting of hard, strong, durable, uncoated particles, and shall conform to the requirements of ASTM C-33. Fine aggregate shall not contain deleterious substances, including materials that are deleteriously reactive with the alkalis in the cement.
- C. Normal-Weight Coarse Aggregate: Coarse aggregate for stone concrete shall consist of clean, hard, uncoated, strong, durable gravel, or crushed stone, and shall conform to the requirements of ASTM C33, class; Severe weathering region, but not less than 4S. Provide aggregate from a single source for exposed concrete. Provide uniformly graded aggregate and the maximum size of coarse aggregate shall not exceed one-fifth of minimum dimension between forms of member for which concrete is to be used, three-fourths of minimum clear spacing between reinforcing bars or 1 inch, whichever is smaller.
- D. Water: Clean, potable, free from all organic materials, strong acids or alkalis, and complying with ASTM C 94.
- E. Silica Fume: ASTM C 1240, amorphous silica.
- F. Fly Ash: ASTM C 618, Class F.
- G. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.

2.5 ADMIXTURES

- A. General: No admixture shall be used in concrete unless specified herein, except with the permission of the Engineer. No changes of admixtures shall be made after design mix approval. Contractor shall provide the services (including any expenses) of the admixture manufacturer's representative to assure proper use of admixtures.
1. Prohibited Admixtures: Only the specified non-corrosive, non-chloride, noncorrosive accelerator shall be used. Calcium chloride, thiocyanates, or admixtures containing more than 0.05 percent chloride ions are not permitted.
 2. Certification: Written conformance to the above-mentioned requirements and the chloride ion content of the admixture is required from the admixture manufacturer prior to mix design review by the Engineer.
- B. Air-Entraining Admixture: ASTM C260, certified by manufacturer to be compatible with other required admixtures.
1. Products: Subject to compliance with requirements, provide one of the following:

- a. "Air-Mix" or "AEA-92"; Euclid Chemical Company
 - b. "Sika Aer"; Sika Corporation
 - c. "MB AE 90" or "Micro-Air"; Master Builders
 - d. "Daravair –1000" or "Darex II"; W. R. Grace & Co.
 - e. or approved equal.
- C. Water-Reducing Admixture: ASTM C494, Type A, and containing not more than 0.05 percent chloride ions.
- 1. Water-Reducing Admixture: ASTM C494, Type A, and containing not more than 0.05 percent chloride ions.
 - a. "WRDA with Hycol"; W. R. Grace & Co.
 - b. "Eucon WR-75" or "Eucon WR-89"; Euclid Chemical Company
 - c. "Plastocrete 161"; Sika Chemical Corporation
 - d. "Polyheed 997" or "Pozzolith 220-N"; Master Builders.
 - e. or approved equal.
- D. High-Range Water-Reducing Admixture (Super Plasticizer): ASTM C494, Type F or Type G and containing not more than 0.05 percent chloride ions.
- 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Sikament - 300"; Sika Chemical Corporation
 - b. "Eucon 37"; Euclid Chemical Company
 - c. "Daracem-100" or "WRDA-19"; W. R. Grace & Co.
 - d. "Rheobuild 1000"; Master Builders.
 - e. or approved equal.
- E. Water-Reducing, Non-Corrosive, Non-Chloride Accelerator Admixture: ASTM C494, Type C or E, and containing not more than 0.05 percent chloride ions. The admixture manufacturer must have long-term non-corrosive test data from an independent testing laboratory (of at least a year's duration) using an acceptable accelerated corrosion test method such as that using electrical potential measures.
- 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Accelguard 80"; Euclid Chemical Co.
 - b. "Polarset"; W. R. Grace & Co.
 - c. "Pozzutec 20" or "Pozzolith NC-534"; Master Builders
 - d. "Plastocrete 161FL"; Sika Chemical Corporation
 - e. or approved equal.
- F. Water-Reducing, Retarding Admixture: ASTM C 494, Type D, and containing not more than 0.05 percent chloride ions.
- 1. Products: Subject to compliance with requirements, provide one of the following:

- a. "Eucon Retarder 75"; Euclid Chemical Co.
- b. "Daratard 17"; W.R. Grace & Co.
- c. "Plastocrete 161R"; Sika Chemical Co.
- d. "Pozzolith 122R"; Master Builders.
- e. or approved equal.

2.6 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
- B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) dry.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- D. Water: Potable.
- E. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
- F. Reglets: Where resilient or elastomeric sheet flashing or bituminous membranes are terminated in reglets, provide reglets of not less than 26 gage galvanized sheet steel. Fill reglet or cover face opening to prevent intrusion of concrete or debris.
- G. Reveals and Chamfer Strips: Polyvinyl chloride, wood, metal or rubber of sizes and at locations indicated.

2.7 WATERSTOPS

- A. Self-Expanding Rubber Strip Waterstops: Manufactured rectangular or trapezoidal strip, bentonite-free hydrophilic polymer modified chloroprene rubber, for adhesive bonding to concrete, 3/8 by 3/4 inch (10 by 19 mm). Products: Subject to compliance with requirements, provide the following:
 - a. Adeka Ultra Seal/OCM, Inc.; Adeka Ultra Seal.
 - b. Greenstreak; Hydrotite.
 - c. Vinylex Corp.; Swellseal.
 - d. Or approved equal

2.8 REPAIR MATERIALS

- A. Repair Underlayment: Cement-based, polymer-modified, self-leveling product that can be applied in thicknesses from 1/8 inch (3.2 mm) and that can be feathered at edges to match adjacent floor elevations.

1. Cement Binder: ASTM C 150, Portland cement or hydraulic or blended hydraulic cement as defined in ASTM C 219.
2. Primer: Product of underlayment manufacturer recommended for substrate, conditions, and application.
3. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch (3 to 6 mm) or coarse sand as recommended by underlayment manufacturer.
4. Compressive Strength: Not less than 4,100 psi (29 MPa) at 28 days when tested according to ASTM C 109/C 109M.

2.9 CONCRETE MIXES

- A. Prepare design mixes for each type and strength of concrete determined by either laboratory trial mix or field test data bases, as follows:
 1. Proportion normal-weight concrete according to ACI 211.1 and ACI 301.
- B. Use a qualified independent testing agency for preparing and reporting proposed mix designs for the laboratory trial mix basis.
- C. Submit mix designs for each mix required for use on this project. Each mix design shall be accompanied by a complete standard deviation analysis or trial mixture data and analysis. The mix shall be submitted on the mix design submittal form at the end of this specification section.
- D. Design mixes to provide concrete with the following properties, as indicated on the drawings and schedules.
 1. 4,000 psi 28-day compressive strength: Minimum cementitious content: 560 lbs/cu.yd, Maximum Water/Cement Ratio: 0.44. Limit percentage, by weight, of cementitious materials other than Portland cement in concrete as follows: Combined Fly Ash, or Pozzolans, and Ground Granulated Blast-Furnace Slag: 50 percent with fly ash or pozzolans not exceeding 25 percent. Mix shall contain Fly Ash and/or Ground Granulated Blast-Furnace Slag.
- E. Air Content: All concrete exposed to freezing and thawing, deicer chemicals and/or required to be watertight or subjected to hydraulic pressure or soil shall have an air content of 5.5% to 8%.
- F. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.
- G. Admixtures: Use admixtures according to manufacturer's written instructions.
 1. Use water-reducing admixture or high-range water-reducing admixture (superplasticizer) in concrete, for placement and workability in all concrete.
 2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

3. Use high-range water-reducing admixture (superplasticizer) in all mixes.
 4. Use corrosion-inhibiting admixture in concrete mixes where indicated.
- H. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement as follows:
1. Reinforced foundation systems: Not less than 1" and not more than 4".
 2. Concrete containing HRWR admixture (superplasticizer): Between 5" and 9" after addition of HRWR to site-verified 2"-3" slump concrete. Other concrete: Not less than 1" nor more than 4".
- I. Adjustment to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant: Revisions to the mix design shall be made at no cost to the Owner and shall be subject to the Engineer's approval. Laboratory test data for revised mix design and strength results must be submitted to and approved by Engineer before being used in work.

2.10 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.11 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94 and ASTM C 1116 and as herein specified, and furnish batch ticket information.
1. When air temperature is between 85 and 90 degrees F (30 and 32 degrees C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 degrees F (32 degrees C), reduce mixing and delivery time to 60 minutes.
 2. Delete the reference for allowing additional water to be added to the batch for material with insufficient slump. Addition of water to the batch will not be permitted.
 3. Provide batch ticket for each batch discharged and used in work, indicating project identification name and number, date, mix type, mix time, quantity, and amount of water introduced, cement content and admixture used.
 4. Project-Site Mixing: Project-Site Mixing shall not be permitted without approval from the engineer.

PART 3 – EXECUTION

3.1 FORMWORK

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until concrete structure can support such loads.
- B. The design and engineering of formwork, as well as its construction, shall be the responsibility of the Contractor. It shall be the Contractor's total responsibility to insure safety to workmen,

public and for the total structure at all times. The Contractor shall be responsible to use firm unyielding supports and provide adjustable devices for setting, wedging, and lending the finished forms in correct alignment and position with all work in conformity with governing building code requirements and these specifications. The Contractor shall be responsible to pay for all costs connected with design of this work (forms, shores, etc.), checking same and certification to Engineer and Building Department. Such form design shall be performed by a professional engineer licensed in the state of the project and experienced in such form design. When the load on the shores exceeds 150 pounds per square foot, or power buggies are used, the Contractor shall certify that the form, shore, and bracing design has been checked and approved by a professional engineer licensed in the state of the project with at least five (5) years' experience and installation of this work has been done in conformity with the approved design. The design, tolerance of finished lines and camber to compensate for deflection due to weight of fresh concrete shall conform to ACI-347, "Guide to Formwork for Concrete." Construct forms to slopes, lines and dimensions shown, plumb and straight and sufficiently tight to prevent leakage, securely brace and shore forms to prevent displacement and to safely support construction loads. Provide access openings for cleaning and inspecting forms and reinforcing.

- C. Forms, shores, re-shores and bracing shall be designed and installed to withstand all vibrations of the concrete when placing same and carry all dead and live loads to which they are subjected.
- D. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- E. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:
 - 1. Class A, 1/8 inch for all exposed concrete work.
 - 2. Class B, ¼ inch for all other concrete.
- F. Construct forms tight enough to prevent loss of concrete mortar.
- G. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical. Kerf wood inserts for forming keyways, reglets, recesses, and the like, for easy removal.
 - 1. Do not use rust-stained steel form-facing material.
- H. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
- I. Chamfer exterior corners and edges of permanently exposed concrete as shown on drawings.
- J. Form openings, chases, offsets, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.

- K. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- L. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- M. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.
- N. Coat steel forms with a non-staining, rust-preventative form oil or otherwise protect against rusting. Rust-stained steel formwork is not acceptable.
- O. Do not allow excess form-coating material to accumulate in forms or to come into contact with in-place concrete surfaces against which fresh concrete will be placed. Apply in compliance with manufacturer's instructions.

3.2 REMOVING AND REUSING FORMS

- A. General: Formwork, for sides of beams, walls, columns, and similar parts of the Work, that does not support weight of concrete may be removed after cumulatively curing at not less than 50 degrees F (10 degrees C) for 24 hours after placing concrete provided concrete is hard enough to not be damaged by form-removal operations and provided curing and protection operations are maintained.
- B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.
- C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Engineer.

3.3 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
 - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials.
- C. Bars with kinks or bends not required shall not be used. The reinforcement shall not be bent or straightened in a manner which would injure the material. The heating of reinforcement for bending or straightening will not be permitted.
- D. Bends or hooks unless otherwise shown or required shall be cold formed around pins. Hooks shall be ACI Standard.

- E. Reinforcing steel shall be fabricated to the shapes and dimensions shown. Reinforcing steel shall not be spliced at point of maximum stress. Laps shall be wire-tied and not less than 40 diameters, unless otherwise shown. Splices in adjacent bars shall be staggered. Except as otherwise indicated, reinforcing details, the number, type and spacing of supports and minimum concrete covering over steel shall conform to ACI 318.
- F. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
 - 1. Shop- or field-weld reinforcement according to AWS D1.4, where indicated.
- G. After substantial delay in the work previously started, reinforcing steel shall be inspected and cleaned free from mortar prior to proceeding with the work.
- H. No concrete placement shall be allowed when, in Engineer's opinion, insufficient time is provided to review and correct misplaced reinforcing steel.
- I. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- J. Install welded wire fabric in longest practicable lengths on bar supports spaced to minimize sagging (four feet maximum spacing). Lap edges and ends of adjoining sheets at least two mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

3.4 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Engineer.
 - 1. Place joints perpendicular to main reinforcement. Continue reinforcement across construction joints, unless otherwise indicated.
 - 2. Form from bulkhead forms with keys, unless otherwise indicated. Embed keys at least 1-1/2 inches (38 mm) into concrete.
 - 3. Space vertical joints in walls as indicated. Locate joints beside piers integral with walls, near corners, and in concealed locations where possible.
 - 4. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
 - 5. Use epoxy-bonding adhesive at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
- C. Placement of concrete shall be at such rate that surface of concrete not carried to joint levels will not have attained initial set before additional concrete is placed thereon. The Contractor shall have a means at hand to bring any placement to an emergency construction joint; provide proper shear key and/or dowels, roughening of surface application to form as herein

stated if an interruption in the supply of concrete or inclement weather makes such a procedure necessary.

3.5 CONVEYING CONCRETE

- A. Concrete shall be conveyed from the mixer to the forms as quickly as possible by methods which will prevent segregation and loss of materials.
- B. Delivery carts or buggies where used shall be kept on temporary runaways built over the construction. Runaway supports shall not bear upon reinforcing steel or fresh concrete.
- C. Conveyors and pumps shall be capable of expeditiously placing concrete at the rate most advantageous to good workmanship.
- D. Except as otherwise specifically approved by the Engineer, placing equipment requiring changes in the concrete materials or design mix for efficient operation shall not be used.
- E. Pumps shall be operated and maintained so that a continuous stream of concrete is delivered into the forms without air pockets, segregation or changes in slump. The initial charging slurry shall be wasted. When pumping is completed; concrete to be used remaining in the pipeline shall be ejected without contamination of concrete or segregation of ingredients. After each operation, equipment shall be thoroughly cleaned and the flushing water shall be wasted outside the forms. Pump lines shall have a minimum diameter of 5".
- F. Pumps, piping, and other conveying equipment so constructed to allow contact of concrete with aluminum during conveying and pumping shall not be used.
- G. All pumped concrete shall contain the specified high range water reducing admixture (superplasticizer).

3.6 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed. Notify other crafts to permit installation of their work; cooperate with other trades in setting such work.
- B. Before placing concrete, all debris, water and ice shall be removed from the spaces to be occupied by the concrete. Forms shall be treated as previously described and the reinforcement cleaned of ice or other coatings.
- C. Do not add water to concrete during delivery, at Project site, or during placement, unless approved by Engineer.
- D. Deposit concrete continuously or in layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as specified. Deposit concrete to avoid segregation.

- E. Deposit concrete in forms in horizontal layers no deeper than 24 inches (600 mm) and in a manner to avoid inclined construction joints. Place each layer while preceding layer is still plastic, to avoid cold joints.
1. Consolidate concrete by mechanical vibrating equipment supplemented by hand-spading, rodding or tamping during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners. Use equipment and procedures for consolidation of concrete in accordance with ACI 309 "Guide for Consolidation of Concrete".
 2. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations no farther than the visible effectiveness of the vibrator. Place vibrators to rapidly penetrate placed layer and at least 6 inches (150 mm) into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mix constituents to segregate.
- F. Unless otherwise provided, concrete footings and foundations shall be placed directly on undisturbed or structurally compacted backfill surfaces that are thoroughly moistened but not muddy at time concrete is placed. There shall be no free water present at footing bottoms between time of final excavation to grade and concrete placement.
- G. Where established bottoms of footings for bearing as shown on drawings have not been maintained or have been disturbed, all loose material shall be removed to good bottom and the footings may be placed at the lower level with increase in length of vertical reinforcement required to reach the lowered footing or a plain concrete pad may be placed up to the former level of bottom of footing.
- H. Placing of concrete in supported elements shall not be started until the concrete previously placed in walls and columns is no longer plastic.
- I. Concrete shall not be allowed to drop freely where reinforcing will cause segregation nor shall it be dropped freely more than ten (10) feet for concrete containing the high range water reducing admixture (superplasticizer) or five (5) feet for other concrete.
- J. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
- K. It shall be the Contractor's complete responsibility to place and maintain concrete at the specified minimum internal temperature of at least 50 degrees F, for as long as necessary to assure proper strength for safety, stripping and obtaining design strengths with non-excessive deflections. Cold weather requirements regarding class of protection, time period of heat, enclosures, coverings, etc., shall be as required to accomplish the above. When atmospheric temperatures are predicted to fall below 30 degrees F, the Contractor shall obtain approval to pour from Engineer. Class of concrete protection and Contractor's ability to meet all Specification requirements shall determine approval or non-approval.

1. When air temperature has fallen to or is expected to fall below 40 degrees F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 degrees F and not more than 80 degrees F at point of placement.
 2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
 3. Only the specified non-corrosive non-chloride accelerator shall be used. Calcium chloride, thiocyanates or admixtures containing more than 0.05% chloride ions are not permitted.
 4. Heating Methods: All methods proposed for heating materials, and protecting the concrete shall be subject to approval by the Engineer. Concrete shall never be heated over 90 degrees F will any overheating which would produce a flash set be permitted.
- L. Hot-Weather Placement: When hot weather conditions exist that would seriously impair the quality and strength of concrete, place concrete according to recommendations in ACI 305R and as follows:
1. Cool ingredients before mixing to maintain concrete temperature below 90 degrees F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water.
 2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
 3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.
 4. Use water-reducing retarding admixture (Type D) when required by high temperatures, low humidity, or other adverse placing conditions.
 5. When high temperatures, low humidity and dry winds create conditions suitable for plastic cracking, the evaporation retarder may be required to be applied by spraying one or more times during the finishing operation.

3.7 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: For formed concrete surfaces not exposed-to-view in the finished work. As-cast concrete texture imparted by form-facing material with tie holes and defective areas repaired and patched. Remove fins and other projections exceeding ACI 347R limits for class of surface specified.
- B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas with fins or other projections completely removed and smoothed.
1. Apply to concrete surfaces exposed to public view or to be covered with a coating or covering material applied directly to concrete, such as waterproofing, damp-proofing, veneer plaster, painting or similar system.
- C. Smooth Rubbed Finish: Apply smooth rubbed finish to concrete at all locations where concrete repairs are exposed to view, and at areas where the exposed concrete finishes are

discolored or otherwise unacceptable to the Engineer. Smooth rubbed finish is to be applied to concrete which has received smooth form finish treatment, not later than one day after form removal.

1. Smooth-Rubbed Finish - Moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.

- D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.8 MISCELLANEOUS CONCRETE ITEMS

- A. Filling In: Fill in holes and openings left in concrete structures, unless otherwise indicated, after work of other trades is in place. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete Work.

3.9 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and with recommendations in ACI 305R for hot-weather protection during curing.
- B. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
- C. Formed Surfaces: Cure formed concrete surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing by one or a combination of the following methods:
 1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - a. Water.
 - b. Continuous water-fog spray.
 - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.

3.10 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by Engineer. Remove and replace concrete that cannot be repaired and patched to Engineer's approval.

- B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part Portland cement to two and one-half parts fine aggregate passing a No. 16 (1.2-mm) sieve, using only enough water for handling and placing.
- C. Repairing Formed Surfaces: Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
- D. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than 1/2 inch (13 mm) in any dimension in solid concrete but not less than 1 inch (25 mm) in depth. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching mortar on bonding agent. Fill form-tie voids with patching mortar or cone plugs secured in place with bonding agent.
- E. Repair defects on surfaces exposed to view by blending white Portland cement and standard Portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
- F. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Engineer.
- G. Repair finished surfaces containing defects. Surface defects include spalls, pop-outs, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch (0.25 mm) wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
- H. After concrete has cured at least 14 days, correct high areas by grinding.
- I. Repair defective areas, except random cracks and single holes 1 inch (25 mm) or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least 3/4 inch (19 mm) clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mix as original concrete except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
- J. Repair random cracks and single holes 1 inch (25 mm) or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar on bonding agent. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.
- K. All structural repairs shall be made with prior approval of the Engineer as to method and procedure, using the specified epoxy adhesive, epoxy mortar or a low shrinkage structural repair mortar. Where epoxy injection procedures must be used, an approved low viscosity epoxy made by the manufacturers previously specified shall be used.

- L. Repair materials and installation not specified above may be used, subject to Engineer's approval.

3.11 FIELD QUALITY CONTROL

- A. Except as otherwise indicated on drawings or specified herein, all work under this Section shall conform to applicable requirements of the local Building Code and regulations of all governmental authorities having jurisdiction and applicable State Code and ACI Code 318.
- B. The Owner will employ an inspection engineer and a testing agency to perform inspection and tests of concrete as hereinafter required and to submit reports.
- C. Inspection engineer shall be an engineer, trained and specializing in the field of structural engineering, and be under the direct supervision of the Field Inspection Professional Engineer. The Field Inspection Professional Engineer shall be legally licensed to practice in jurisdiction where Project is located (preferably the project's consulting engineer) and who is experienced in providing field inspection services. The inspection engineer shall perform the following services:
 - 1. Inspect concrete reinforcement for quantity, size, type, spacing, and placement.
 - 2. Inspect formwork for ties, finishes and general tightness of joints. Contractor remains responsible for the design, construction and bracing of formwork.
 - 3. Inspect concrete accessories for quantity, size, manufacture, type, spacing, and placement.
 - 4. Inspect method of placing, vibration, and curing of concrete.
 - 5. Supervise the activities of the testing agency.
- D. Testing agency shall be an independent testing agency, acceptable to Engineer, qualified according to ASTM C 1077 and ASTM E 329 to conduct the testing indicated, as documented according to ASTM E 548. Personnel conducting field tests shall be qualified as an ACI Concrete Field Testing Technician, Grade 1 (minimum), according to ACI CP-1. Sampling and testing for quality control shall be performed as specified in this article.
- E. Inspection and testing at the concrete plant shall be performed to observe the facilities, materials, and batching operations to insure the quality of the concrete.
- F. Field Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
 - 1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mix exceeding 5 cu. yd. (4 cu. m), but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m) or fraction thereof or for each 5,000 sq. ft. of surface applied.
 - a. When frequency of testing will provide fewer than five compressive-strength tests for each concrete mix, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.

2. Slump: ASTM C 143; one test for each concrete load at point of discharge and one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mix. Perform additional tests when concrete consistency appears to change.
3. Air Content: ASTM C 231, pressure method, for normal-weight concrete; ASTM C 173, volumetric method, for structural lightweight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mix.
4. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 degrees F (4.4 degrees C) and below and when 80 degrees F (27 degrees C) and above, and one test for each composite sample.
5. Unit Weight: ASTM C 567, fresh unit weight of structural lightweight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mix.
6. Compression Test Specimens: ASTM C 31/C 31M; cast and laboratory cure one set of five standard cylinder specimens for each composite sample. Field-cured specimens below may be required to verify adequacy of curing and protection of concrete or to verify strength for removal of shoring and reshoring in multistory construction.
 - a. Cast and field cure one set of four standard cylinder specimens for each composite sample when required to verify strength for removal of shoring and reshoring in multistory construction.
7. Compressive-Strength Tests: ASTM C 39; test two laboratory-cured specimens at 7 days, two at 28 days and hold one specimen in reserve for later testing if required.
 - a. Test two field-cured specimens at 7 days and two at 28 days.
 - b. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at age indicated.
- G. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
- H. Strength of each concrete mix will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi (3.4 MPa).
- I. Test results shall be reported in writing to Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing agency, concrete type, class and mix number, location of concrete batch in Work, design

compressive strength at 28 days, concrete mix proportions and materials, slump, air content, temperature, unit weight, compressive breaking strength, and type of break for both 7-and 28-day tests. 28 day reports will contain corresponding 7 day tests for the same concrete batch. Reports of non-conforming concrete shall be printed on colored paper.

- J. Field inspection reports made by the inspecting engineer shall be reported in writing to Engineer and Contractor within 24 hours of inspection. Informal reports shall be given to the Contractor, with reports made available to the Engineer, at the time of the inspection. Reports of non-conforming concrete work shall be printed on colored paper.
- K. Contractor's Cooperation for Test Specimens: The Contractor shall cooperate in the making of tests, furnishing the concrete for test cylinders; also, suitable storage space at the job site where test specimens can be cast and left undisturbed until removed by the testing and inspection agency for testing.
- L. Contractor shall make use of test results and inspection reports as provided by the inspecting engineer and testing agency to regulate his controls of concrete operation inclusive of making, transporting, placing, curing and protecting such concrete, all at his own responsibility. Contractor shall conform to all governing Code requirements, approved drawings and Specifications and use good, safe methods of construction at all times.
- M. If the results of tests and/or inspections indicate the concrete and/or steel reinforcement or construction techniques do not meet the requirements as set forth on the drawings or in these Specifications and as determined by Engineer, or is otherwise unsatisfactory to Owner and/or Engineer due to inadequate batching, placing, curing or protection as they determine, Contractor shall proceed as directed by Engineer. Any additional costs resulting from re-testing, load testing, replacement of concrete and/or damage to the work of other trades, inclusive of Engineer's costs for the investigation, field work, etc., shall be borne by Contractor. If, during the installation of the work, it is determined by Engineer that requirements of these Specifications have not been adhered to by either test results, observation of Engineer or his Consultants during inspections, then any investigation and/or tests as may be directed by Engineer to verify concrete requirements as related to drawings and Specifications shall be performed at Contractor's expense no matter whether final results meet or do not meet Specification requirements.
- N. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Engineer but will not be used as sole basis for approval or rejection of concrete.
- O. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Engineer. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42 or by other methods as directed by Engineer.
- P. Report Copies and Timing: Immediately after tests or inspection have been made, and in no case later than seven (7) days after tests or inspection have been made, copies of all test and inspection reports shall be furnished as follows:

1. One (1) copy to the Engineer .
2. One (1) copy to Contractor.
3. One (1) copy to Owner.
4. One (1) copy to Concrete Producer.

Q. Deficiency Reports: All reports which identify deficiencies shall be printed on a unique colored sheet and shall be issued no later than one (1) day after the tests have been made.

3.12 CONCRETE MIX DESIGN SUBMITTAL FORM

A. Submit the following form for each type of concrete specified.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

A. No specific payment will be made for cast-in-place concrete and the cost thereof shall be included in the price bid for the item **PREFABRICATED PEDESTRIAN BRIDGE, COMPLETE (WITH REINFORCED CONCRETE ABUTMENT BRIDGE DECK, RAILINGS, ECT.)** within the Proposal which price shall include, but not be limited to the work specified above including removal of debris, disposal of materials, installation of materials, and all else necessary therefore and incidental thereto for completion of operations as specified herein and as shown on the plans or as directed by the Engineer.

END OF SECTION

SECTION 101400 – CUSTOM SIGN

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Signage shall include the fabrication and installation of a custom sign (educational sign) in accordance with plans and details.

1.2 SUBMITTALS

- A. Contractor to provide a shop drawing of the signs for review, prior to fabrication included all required image copyrights/licenses.

1.3 QUALIFICATIONS

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.

PART 2 – PRODUCTS

2.1 MATERIALS

A. General:

1. Custom educational sign shall be securely fastened with bolts nuts and washers or alum. or hot-dipped galvanized steel.
2. Sing Post: Carbon steel u-post, painted with green enamel paint or galvanized steel 3/8" Dia. Holes 1" O.C., post length varies.

B. Fabrication:

1. Provide manufacturer's standard signs of configurations indicated. Preassemble signs in the shop to greatest extent possible. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in location not exposed to view after final assembly. Conceal fasteners if possible; otherwise, locate fasteners where they will be inconspicuous. Paint over heads of nails or screws to match sign.

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. Locate signs and accessories where indicated. Install signs level, plumb, and at heights indicated, with sign surfaces free of distortion and other defects in appearance.
- B. Backfill signs with satisfactory soil, and compacting to original subgrade elevation.

- C. Mechanical Fasteners: Use non-removable mechanical fasteners placed through predrilled holes. Attach signs with fasteners and anchors suitable for secure attachment to substrate as recommended in writing by sign manufacturer.
- D. Final location of sign placement shall be approved by Neglia Group.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. Payment for the custom sign will be made on a per unit basis for the number of signs actual installed under the price given for the item **CUSTOM ENVIRONMENTAL EDUCATIONAL SIGN** in the Proposal, which price shall include the cost of all posts, fasteners, signs, excavations, disposals, any and all materials, all labor and equipment and all else necessary and incidental thereto.

END OF SECTION

SECTION 310000 – EARTHWORK

PART 1 – GENERAL

1.1 DEFINITIONS

- A. The following terms shall have the meanings ascribed to them in this Article, wherever they appear in this Section.
- B. The work under this item shall include the import and export of all materials for the construction of the new bridge abutments, including the backfilling material required for the removal of the existing bridge piers.
- C. Excavation, Unclassified: The removal of all surface and subsurface material not classified as rock (as defined below). Shall consist of the excavation, removal, export and disposal of all materials of whatever nature, bituminous concrete, concrete, pavement, regulated waste, brick, stone, concrete masonry, small structures, removal of pipe where directed, removal of any other materials encountered of whatsoever nature, required for the proposed construction, the stockpiling and disposal of all excavated materials unsuitable for fill, the transportation of the excavated material, the construction of embankments with the material excavated when so required, the disposal of unsuitable and surplus materials, and all other work as herein described.
- D. Rock Excavation, Unclassified: Rock excavation, unclassified shall mean removal of all rock, boulders or pieces of concrete, and solid ledge rock and masonry, which in the opinion of Neglia Group requires for its removal, drilling and blasting, wedging, sledging, barring, or breaking up with a power-operated tool. Soft or disintegrated rock which can be removed with a pick or power-operated excavator or shovel, loose, shaken or previously blasted rock, broken stone in rock fill or elsewhere, and rock exterior to the maximum limits allowed, or which may fall in the excavation, shall not be included as rock excavation. Pavements, curbs, gutters, sidewalks and driveways shall not be included as rock excavation.
- E. Subgrade Surface: Surface upon which subbase or topsoil is placed.
- F. Subbase: Select granular material or subbase course Type 2 which is placed immediately beneath pavement or concrete slabs.
- G. Maximum Density: The dry unit weight in pounds per cubic foot of the soil at "Optimum Moisture Content" when determined by ASTM D 698 (Method C), and ASTM D 2922 (Method B).
- H. Landscaped Areas: Areas not covered by structures, walks, roads, paving, or parking.
- I. Unauthorized Excavation: The removal of material below required elevation indicated on the Drawings or beyond lateral dimensions indicated or specified without specific written direction by Neglia Group.
- J. Site Grading: The grading, excavation, preparing and compacting all material required for construction of the sub-grade of the entire disturbed area and all incidental work necessary to the satisfaction of the Engineer. All excavated soils in excess of what is required to grade the site shall be disposed of off-site in accordance with Local, County, State, and Federal standards.

1.2 SUBMITTALS

A. Product Data:

1. Filter Fabric: Manufacturer's catalog sheets, specifications, and installation instructions.
2. Numbers, types, and specifications for compacting equipment to be used.
3. Samples: Submit samples as follows:
 - a. Take the samples in the presence of the Engineer, and complete a Granular Material Sample Information Form for each sample. Forms and field sample designation numbers will be furnished by Neglia Group. Samples shall be provided in the following quantities:
 - b. Select Granular Material: 10 lb.
 - c. Selected Fill: 10 lb.
 - d. Subbase Course Type 2: 10 lb.

1.3 PROJECT CONDITIONS

- ### A. Protect existing trees and plants during performance of the Work unless otherwise indicated to be removed. Box trees and plants indicated to remain within the grading limit line with temporary steel fencing or solidly constructed wood barricades as required. Protect root systems from smothering. Do not store excavated material, or allow vehicular traffic or parking within the branch drip line. Restrict foot traffic to prevent excessive compaction of soil over root systems.
- ### B. Cold Weather Requirements:
1. When freezing temperatures are predicted, do not excavate to final required elevations for concrete Work unless concrete can be placed immediately. Retain enough earth over the bottom elevation of footings to prevent frost penetration. If excavation has progressed to final footing elevations and concrete cannot be placed immediately, cover the bottom of the excavations with protective material to adequately insulate the exposed earth surface from frost. Remove protective material immediately before placing concrete.
 2. Do not backfill between November 1 and April 1, except with written permission of Neglia Group.
- ### C. Contractors shall assume OSHA Level D modified for Earthwork.

PART 2 – PRODUCTS

2.1 MATERIALS

- #### A. Select Granular Material: Stockpiled, sound, durable, sand, gravel, stone, or blends of these materials, free from organic and other deleterious materials. Comply with NJDOT Standard Specifications for subbase course material.

Sieve Size	Percent Passing
2 inch	100%
1/4 inch	30-65%
No. 40	5-40%
No. 200	0-10%

- B. Magnesium Sulfate Soundness Test: 20 percent maximum loss by weight after 4 test cycles.
- C. Plasticity Index: The plasticity index of the material passing the No. 40 mesh sieve shall not exceed 5.0.
- D. Elongated Particles: Not more than 30 percent, by weight, of the particles retained on a 1/2 inch sieve shall consist of flat or elongated particles. A flat or elongated particle is defined as one which has its greatest dimension more than 3 times its least dimension.
- E. Selected Fill: Sound, durable, sand, gravel, stone, or blends of these materials, free from organic and other deleterious materials.

Sieve Size	Percent Passing
4 inch	100%
No. 40	0-70%
No. 200	0-15%

- F. Subbase Course Type 2: Stockpiled, crushed ledge rock or approved blast furnace slag. Comply with NJDOT 2019 Standard Specifications for Subbase Course material.

Sieve Size	Percent Passing
2 inch	100%
1/4 inch	25-60%
No. 40	5-40%
No. 200	0-10%

- G. Magnesium Sulfate Soundness Test: 20 percent maximum loss by weight after 4 test cycles.
- H. Plasticity Index: The plasticity index of the material passing the No. 40 mesh sieve shall not exceed 5.0.
- I. Elongated Particles: Not more than 30 percent, by weight, of the particles retained on a 1/2 inch sieve shall consist of flat or elongated particles. A flat or elongated particle is defined as one which has its greatest dimension more than 3 times its least dimension.
- J. Suitable Material (Fill and Backfill for Landscaped Areas): Material consisting of mineral soil (inorganic), blasted or broken rock and similar materials of natural or man-made origin, including mixtures thereof. Maximum particle size shall not exceed 2/3 of the specified layer thickness prior to compaction. NOTE: Material containing cinders, industrial waste, sludge, building rubble, land fill, muck, and peat shall be considered unsuitable for fill and backfill, except topsoil and organic silt may be used as suitable material in landscaped areas provided it is placed in the top layer of the subgrade surface.

- K. Filter Fabric (Separation, Drainage, Slope Protection): Amoco CEF 4545, CEF 4551; Exxon Chemical Co. GTF 150 EX; Mirafi Inc. 140N, 140NL; Nicolon Corp. Filterweave 70/06; Phillips Fibers Corp. Supac 4NP, 5NP, 7NP; Wellman Quline Inc. Q60, Q80, Q100 or approved equal.
- L. Filter Fabric (Stabilization): Amoco CEF 2002 & 2006; Exxon Chemical Co. GTF 350; Mirafi Inc. 500X, 600X, 700X; Nicolon Corp. 500; Phillips Fibers Corp. Supac 3WS, 4WS, 5WS, 6WS; Wellman Quline Inc. Q160 or approved equal.
- M. Lightweight Fill and Backfill: Contractor is advised to follow the specifications of lightweight fill and backfill material if proposed under this project. The placement of this and all fill material must meet the requirements of the Engineer.
- N. All soil, stone, and other fill materials either imported onto or exported from the property shall comply with all applicable local, County, State, and Federal regulations and requirements.

PART 3 – EXECUTION

3.1 CLEARING AND GRUBBING

- A. Clear and grub the site of trees, shrubs, brush, other prominent vegetation, debris, and obstructions except for those items indicated to remain. Completely remove stumps and roots protruding through the ground surface.
- B. Clearing and grubbing of vegetation in wetlands, transition areas, and riparian zones shall only be performed where indicated on the Construction Drawings. Any clearing of vegetation in said areas not within the limits indicated on the plans is strictly prohibited.
- C. Fill depressions caused by the clearing and grubbing operations in accordance with the requirements for filling and backfilling, unless further excavation is indicated.

3.2 UNDERGROUND UTILITIES

- A. Locate existing underground utilities and service connections prior to commencing excavation Work. Determine exact utility locations by hand-excavated test pits. Support and protect utilities to remain in place.
- B. Remove inactive, abandoned utilities within the limits of the areas to be excavated. Cap or plug open ends of abandoned utilities extending outside the excavation limits.

3.3 EXCAVATION

- A. 2019 NJDOT Standard Specifications, Excavation, Unclassified.
- B. Maintain sides and slopes of excavations in a safe condition until completion of backfilling. The Contractor shall comply with Code of Federal Regulations CFR Title 29 - Labor, Part 1926 (OSHA).

- C. Stockpile excavated materials classified as suitable material where directed, until required for fill. Place, grade, and shape stockpiles for proper drainage as approved by Neglia Group.
- D. Excavation for Structures: Conform to elevations, lines, and limits indicated on the Construction Documents. Excavate to a vertical tolerance of plus or minus 1 inch. Extend excavation a sufficient lateral distance to provide clearance to execute the Work.
- E. Footings and Foundations: Trim bottoms to required lines and elevations. Excavate to final elevations by hand just prior to concrete placement. Leave solid undisturbed base for concrete.
- F. Slabs and Floors: Excavate to the following depths below bottom of concrete for addition of select granular material:
 - 1. Interior Floors: 6 inches unless otherwise indicated.
 - 2. Exterior Slabs and Steps: 12 inches unless otherwise indicated.
- G. Pipe Trenches: Open only enough trench length required to facilitate laying pipe or conduit sections. Unless otherwise indicated on the Drawings, excavate trenches approximately 24 inches wider than the outside pipe diameter, equally divided on each side of pipe centerline. Cut trenches to cross section, elevation, profile, line, and grade indicated. Accurately grade and shape trench bottom for uniform bearing of pipe.
- H. Pavement: Excavate to subgrade surface elevation.
- I. Unauthorized Excavations: Unless otherwise directed, backfill unauthorized excavation under footings, foundation bases, and retaining walls with compacted select granular material without altering the required footing elevation. Elsewhere, backfill and compact unauthorized excavation as specified for authorized excavation of the same classification, unless otherwise directed by Neglia Group.

3.4 ROCK EXCAVATION

- A. No blasting shall be performed by the Contractor, except upon written permission of Neglia Group. Any request by the Contractor for permission to blast must be submitted to Neglia Group at least 24 hours prior to start of said proposed blasting.
- B. If blasting permission is granted, the Contractor shall adhere strictly to all required Federal, State and Local safety regulations. In no case shall blasting caps or other exploders be kept at the same place where dynamite or other explosives are stored. A watchman shall be stationed at all times at the place of storage of said explosives.
- C. The prepared blast shall be carefully covered with a heavy woven wire blasting mat, placed so that the area affected by the explosion is positively confined. Should a gas, water or any other conduit intersect the line of trench, the rock must be removed without blasting from a distance of 10 feet on each side of such pipe or conduit.
- D. The contractor shall be responsible for any damage to adjacent structures and property caused by his operations. He shall inspect all structures adjacent to the site of blasting and,

when ordered by Neglia Group, he shall take clear, close-up photographs of these structures before and after blasting. Copies of these photographs shall be submitted to Neglia Group. Neglia Group or their representative must be present at all times during blasting operations.

- E. Contractors are advised that shale rock is known to exist within the area and must either own or rent equipment to remove of such.

3.5 DEWATERING

- A. Prevent surface and subsurface water from flowing into excavations and trenches and from flooding the site and surrounding area.

3.6 PLACING FILTER FABRIC

- A. Place and overlap filter fabric in accordance with the manufacturer's installation instructions, unless otherwise shown. Backfill over fabric in accordance with the manufacturer's instructions and in a manner so as to prevent damage to the fabric.

3.7 PLACING FILL AND BACKFILL

- A. Surface Preparation of Fill Areas: Strip topsoil, remaining vegetation, and other deleterious materials prior to placement of fill. Break up or scarify old pavements to a maximum of two square feet.
- B. The import of fill will be required for this project. Import fill material mined or excavated from undisturbed geologic formations from a commercial source or quarry that has not been located on or impacted by other contaminant sources based on a preliminary assessment or other site review requires the collection and analysis of one (1) sample per geologic formation per year.
- C. Excavations: Backfill as promptly as practicable, but only after approval by Neglia Group. Do not backfill with excavated material unless said material meets the requirements of this Section.
- D. Place backfill and fill materials in layers not more than 8 inches thick in loose depth unless otherwise specified. Before compaction, moisten or aerate each layer as necessary to facilitate compaction to the required density. Do not place backfill or fill material on surfaces that are muddy, frozen, or covered with ice.
- E. Place fill and backfill against foundation walls, and in confined areas (such as trenches) not easily accessible by larger compaction equipment, in maximum 6-inch-thick (loose depth) layers.
- F. Prevent wedging action of backfill against structures by placing backfill uniformly around structure to approximately same elevation in each layer. Place backfill against walls of structures containing basements or crawl spaces only after the first floor structural members are in place.
- G. Under Exterior Concrete Slabs and Steps:
 - 1. Up to Subgrade Surface Elevation: Place selected fill when fill or backfill is required.
 - 2. Subbase Material: Place 12 inches of select granular material over subgrade surface.

- H. Under Interior Concrete Slabs:
 1. Up to Subgrade Surface Elevation: Place selected fill when fill or backfill is required.
 2. Subbase Material: Place 6 inches of select granular material over subgrade surface.
- I. Under Pavements and Walks:
 1. Up to Subgrade Surface Elevation: Place selected fill when fill or backfill is required.
 2. Subbase Material: Place as indicated.
- J. Landscaped Areas: Place suitable material when required to complete fill or backfill areas up to subgrade surface elevation. Do not use material containing rocks over 4 inches in diameter within the top 12 inches of suitable material.
- K. Plastic Pipe and Cement Water Pipe in Trenches: Place cushion material a minimum of 4 inches deep under pipe, 4 inches on both sides, and 4 inches over top of pipe. Complete balance of backfill as specified.
- L. Copper Tubing and Steel Gas Pipe in Trenches: Place cushion material a minimum of 6 inches deep under pipe, 6 inches on both sides, and 4 inches over top of pipe. Complete balance of backfill as specified.
- M. Rigid Non-Metallic Conduit: Except where concrete encasement is required, place cushion material a minimum of 4 inches deep under conduit, 4 inches on both sides, and 12 inches over top of conduit. Complete balance of backfill as specified.

3.8 COMPACTION

- A. Compact each layer of fill and backfill for the following area classifications to the percentage of maximum density specified below and at a moisture content suitable to obtain the required densities, but at not less than 3 percent drier or more than 2 percent wetter than the optimum content as determined by ASTM D 698:

- Structures: 95%
- Concrete Slabs and Steps: 95%
- Landscaped Areas: 90%
- Pavements and Sidewalks: 95%
- Pipes: 95%

3.9 GRADING

- A. The site shall be graded within the limits shown on the Plans or as directed by the Engineer. The Contractor shall grade the sub-grade according to the elevations shown on the Plans, taking into account the thickness of the layers above. The soil shall be placed uniformly in layers not to exceed 12 inches loose thickness. Each layer shall be compacted to 95% density in accordance with Section 204 of the NJDOT Standard Specifications.
- B. Rough Grading: Trim and grade area required by this Contract to a level of 4 inches below the finished grades indicated, unless otherwise specified herein, or where greater depths are indicated. Provide smooth uniform transition to adjacent areas.

- C. Finish Grading: Finish surfaces free from irregular surface changes, and as follows:
 - 1. Grassed Areas: Finish areas to receive topsoil to within 1 inch above or below the required subgrade surface elevations.
 - 2. Walks and Pavements: Place and compact subbase material as specified. Shape surface of areas to required line, grade and cross section, with the finish surface not more than 1/2 inch above or below the required subbase elevation.
 - 3. Building Slabs: Grade subbase material smooth and even, free of voids, compacted as specified to within 1/4 inch above or below required subbase elevation.
- D. The Contractor shall make provisions to implement approved dust control measures while performing this work as not to impact surrounding residences. Should the Contractor fail to implement these measures, he will be responsible to power wash all structures at no additional cost to the Owner.

3.10 SUBGRADE SURFACE FOR WALKS AND PAVEMENT

- A. Shape and grade subgrade surface as follows:
 - 1. Walks: Shape the surface of areas under walks to required line, grade and cross-section, with the finish surface not more than 1 inch above or below the required subgrade surface elevation.
 - 2. Pavements: Shape the surface of areas under pavement to required line, grade and cross-section, with the finish surface not more than 1/2 inch above or below the required subgrade surface elevation.
- B. Grade Control: During construction, maintain lines and grades including crown and cross-slope of subbase course.
- C. Thoroughly compact subgrade surface for walks and pavement by mechanical rolling, tamping, or with vibratory equipment as approved to the density specified.

3.11 TESTING AND DISPOSAL OF EXCESS AND UNSUITABLE MATERIALS

- A. Remove from the project site and dispose of excess and unsuitable materials, including materials resulting from clearing and grubbing and removal of existing improvements.
- B. Transport excess and unsuitable materials, including materials resulting from clearing and grubbing and removal of existing improvements, to spoil areas away from the project site.

3.12 FIELD QUALITY CONTROL

- A. Compaction Testing: Notify Neglia Group at least 3 working days in advance of all phases of filling and backfilling operations. Compaction testing will be performed by an independent lab retained by the Contractor to ascertain the compacted density of the fill and backfill materials. Compaction testing will be performed on certain layers of the fill and backfill as determined by project Geotechnical Engineer. If a compacted layer fails to meet the specified percentage

of maximum density, the layer shall be recompact and will be retested. No additional material may be placed over a compacted layer until the specified density is achieved.

3.13 PROTECTION

- A. Protect areas from traffic and erosion, and keep them free of trash and debris.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- K. The quantity of earthwork, for which payment will be made, will be on a lump sum basis for the item **EARTHWORK** in the Proposal, which price shall include the furnishing of all materials, labor and equipment and all else necessary therefore and incidental thereto as required for preparation, excavation, stockpiling, transportation, grading, spreading and compacting all material required for the earthwork operations as specified herein and as indicated within the contract plans or as directed by the Engineer. The work under this item shall also include the import and export of all materials for the construction of the new bridge abutments, including the backfilling material required for the removal of existing bridge piers. This includes all existing topsoil to be stockpiled, screened, spread, and utilized as backfill. It is the Contractor's responsibility to compute the amount of earthwork required to construct the proposed improvements.

END OF SECTION

SECTION 311300 – TREE REMOVAL

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Tree Removal shall include the work of cutting, removing and disposing all specifically designated individual trees including all limbs, trunks, stumps and roots and the restoration and replacement of all structures including, but not limited to, curbs, sidewalks, driveway aprons, utilities, vegetation, or other property which may be damaged as a result of the Tree Removal, unless removal and/or replacement of such is outlined in these Specifications and an item included in the Proposal. Tree Removal shall also include the topsoil and seeding or asphalt overlay of all disturbed areas.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Sidewalks, curbs, driveway aprons, topsoil and seed shall comply with the requirements listed elsewhere in these Specifications.
- B. Any additional material which may be required during construction shall be subject to the approval of the Engineer.

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

State Standard Specifications and Somerset-Union County Soil Conservation District Regulations.

- A. All trees to be removed under this item shall be marked by the Engineer before any Tree Removal. Each tree designated for removal shall be completely removed, except for the stump which shall be grinded to twelve (12) inches below the existing ground surface. Where specified, the sidewalks and curbs shall be removed and the roots under these shall be removed. The disturbed area shall be backfilled with topsoil and seed, or filled with asphalt as herein specified.
- B. Cutting of trees shall be done by competent workman only and in a workmanship like manner. All trees shall be topped and limbed previous to felling, unless otherwise directed by the Engineer. If necessary, trees shall be felled in sections and disposed of to prevent damage to adjacent vegetation, structures, utility wires, or other property.
- C. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect or misconduct, on the part of the Contractor in the execution of the work, such property shall be restored by the Contractor, at his expense, to a condition equal to that existing before such damage or injury was done, or he shall make good such damage or injury in such other manner as may be acceptable to the Engineer.

- D. It shall be the responsibility of the Bidders to ascertain, by their own inspection and investigations the sizes and types of trees to be removed and to determine and supply the necessary equipment to perform the work.
- E. All trunks, limbs and branches shall be removed from the site as well as sweeping and removal of all chips to a degree that is satisfactory to the Engineer.
- F. Prior to the removal of any trees, the Contractor shall provide for, if needed, the disconnection of all water, sewer, gas, electric, telephone and cable television service facilities that may interfere with the safe performance of the work. The Contractor shall notify the Municipality and utility companies of the time any such disconnections may be needed and the cost of any and all such utility work, including charges, if any, which may be made by the Municipality and utility companies shall be borne by the Contractor and shall be included in the price bid.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. Payment for Tree Removal shall be made on per unit basis at the price bid for the items **TREE REMOVAL, OVER 3" TO 14" DIAMETER** in the Proposal, which prices shall include all materials, labor, and all else necessary therefore and incidental thereto for the removal of trees as specified herein and as shown on the plans or as directed by the Engineer.

END OF SECTION

SECTION 312200 – SITE GRADING

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Site Grading shall include grading, excavation, preparing and compacting all material required for construction of the sub-grade of the entire disturbed area and all incidental work necessary to the satisfaction of the Engineer. All excavated soil in excess of what is required to grade the site shall be disposed of off-site in accordance with local, State and Federal standards. Contractor shall review the existing grades and all construction details, and the bid shall include all excess soil removal and off-site disposal as necessary to construct the project in accordance with the plans and details.
- B. This item includes the excavation of existing soil, stockpiling (as required), moving, spreading, and compaction as specified in Section 310000.
- C. This work shall consist of excavating, temporary stockpiling, dewatering, testing, and disposing of all materials encountered during the grading and construction of the project.

PART 2 – PRODUCTS – Not Applicable

2.1 MATERIALS

- A. Borrow material required for site grading shall conform to NJDOT Standard Specifications. The Contractor shall provide the Engineer with certification attesting that the said material is free of contaminants and suitable for this application. The soil shall be smooth, soft and free of depressions, clods, mounds, stones, or other debris as approved by the Engineer.
- B. All soil, stone, and other fill materials either imported onto or exported from the property shall comply with all applicable local, County, State, and Federal regulations and requirements.

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. The site shall be graded within the limits shown on the Plans or as directed by the Engineer. The Contractor shall grade the sub-grade according to the elevations shown on the Plans, taking into account the thickness of the layers above, and if necessary borrow materials as approved by the Engineer. The soil shall be placed uniformly in layers not to exceed 12 inches loose thickness. Each layer shall be compacted to 95% density in accordance with Section 204 of the NJDOT Standard Specifications.
- B. The Contractor shall make provisions to implement approved dust control measures while performing this work as not to impact surrounding residences. Should the contractor fail to

implement these measures, he will be responsible to power wash all structures at no additional cost to the owner.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The quantity of site grading, for which payment will be made, will be on a lump sum basis for the item **SITE GRADING** in the Proposal, which the price shall include the furnishing of all materials, labor and equipment, and all else necessary therefore and incidental thereto as required for grading, excavation, spreading, stockpiling, moving, preparing and compacting all material required for construction of the sub-grade of the entire disturbed area and all incidental work necessary as specified herein and as shown on the plans or as directed by the Engineer.

END OF SECTION

SECTION 312319 – DEWATERING

PART 1 – GENERAL

1.1 DESCRIPTION

- A. The Contractor shall at all times provide ample means and equipment with which to promptly remove and dispose of all water and drainage entering the excavations or other parts of the work and to keep such excavations dry until the structures to be built therein are completed, including the use of any required steel sheeting and/or cofferdams. In no case will the laying of pipe or placing of masonry be permitted with water in the excavation.
- B. Dewatering methods and equipment shall be subject to the approval of Neglia Group, and all water removed from the work shall be disposed of in a manner without damage to adjacent properties.
- C. All applicable NJDEP regulations must be maintained with respect to dewatering and discharge. Any applicable construction permits for dewatering must be obtained prior to construction by the contractor.
- D. Contractor shall note that dewatering will be necessary for the construction of all slabs, deck foundations, slabs, abutments, wing walls, etc., and must be anticipated when bidding on the project.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. All soil, stone and other fill materials either imported onto or exported from the property shall comply with all applicable local, County, State, and Federal regulations and requirements.

PART 3 – EXECUTION – Not Applicable

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. No specific payment will be made for dewatering associated with construction-related and associated site improvements. This shall be included in the price bid for respective bid items, which the price shall include the cost of, any and all materials, all labor and equipment and all else necessary and incidental thereto.

END OF SECTION

SECTION 312500 – EROSION AND SEDIMENT CONTROL

PART 1 – GENERAL

1.1 DESCRIPTION

- A. The work performed under this item shall include construction of all soil erosion structures, improvements, temporary seeding or mulching, and general soil stabilization as shown on the plans.
- B. A soil erosion and sediment control certification has already been obtained for the project based on the Soil Erosion and Sediment Control Plan included in the Contract Documents. In the event that the Contractor deviates from the previously-approved plan, it shall be his responsibility to obtain subsequent approval from the Sommerset-Union Soil Conservation District, at no cost to the Owner.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Materials shall be in conformance with the Plan and Details, and shall include silt fences, inlet filters, stabilized construction accesses, jute matting, floating turbidity barriers, soil stockpiles, tree protection, soil membrane, hay bales, and soil stabilization. All materials shall be approved by Neglia Group or the Somerset-Union Soil Conservation District.
- B. Temporary matting for construction operations shall be as manufactured by Mabey, or approved equal.
- C. Floating turbidity barriers shall be Type II (for waterbodies with moderate to high velocities). Floating turbidity barriers shall be installed whenever any proposed construction activity will cause soil or debris to come in contact with a waterbody. It shall be specifically noted that floating turbidity barriers will be required during the construction of the force mains, discharge headwall, and riprap apron.
- D. All soil, stone, and other fill materials either imported onto or exported from the property shall comply with all applicable local, County, State, and Federal regulations and requirements.

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. State Standard Specifications and Sommerset-Union Soil Conservation District Regulations.
- B. Contractor is advised that a 48-hour notice prior to construction activities must be given to the Somerset-Union Soil Conservation District.

- C. All erosion and sedimentation control measures shall be in-place prior to any soil disturbances, grading operations or construction of proposed facilities, and shall be maintained until construction is complete and the construction area is stabilized. After restoration is complete, temporary control measures shall be removed and disposed of properly.
- D. All erosion and sedimentation control measures shall be constructed and maintained in accordance with the "Standards for Soil Erosion and Sediment Control in New Jersey," prepared by the New Jersey State Soil Conservation Committee, current edition.
- E. Disturbed areas that will be exposed in excess of 14 days shall be temporarily seeded and/or mulched until proper weather conditions exists for establishment of a permanent vegetative cover except in areas where final restoration is expected to be completed within seven days after the completion of construction, in which case no temporary protective measures will be required. If final restoration is expected to begin more than seven days and completed more than 30 days after the start of construction, seeding shall be required for temporary protection, except where seasonal conditions are not suitable for growing vegetation. In this case, mulch may be applied until conditions are suitable for establishing vegetative cover or until final restoration is implemented.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The quantity of Soil Erosion and Sediment Control Measures, for which payment will be made, will be on a lump sum basis for the item **FURNISH AND INSTALL SOIL EROSION AND SEDIMENT CONTROL DEVICES** in the Proposal, which the price shall include the furnishing of all materials, labor and equipment, jute matting, tree protection, floating turbidity barrier, inlet filter and protection, silt fence, stabilized construction access pad, and all else necessary therefore and incidental thereto as required by the local county Somerset-Union Soil Conservation District.

END OF SECTION

SECTION 314100 – TEMPORARY SHEETING

PART 1 – GENERAL

1.1 DESCRIPTION

- A. The Contractor shall install sheeting or stay bracing, as necessary, in order to comply with the Applicable Safety Code; to demolish the existing bridge and construct the proposed prefabricated pedestrian bridge and appurtenances; to accommodate traffic; to permit access to adjacent occupied properties; to protect adjacent buildings, pavements, structures, and all existing utilities; to provide an opening of proper depth and width in which to install the proposed pipes and other underground structures; and, to protect his workmen, employees of the Owner and Engineer, State and the Public from death or injury, from bank failure, earth collapse or earth movement of any nature whatsoever. In general, all trenches and excavations of five (5) feet in depth, any other unstable excavations or excavations in unstable material, shall be protected against the hazard of collapse.
- B. The Contractor shall be entirely and solely responsible for the adequacy and sufficiency of all supports and of all sheeting, bracing, shoring, underpinning, coffer damming, etc. The Contractor shall assume the entire and sole responsibility for damages on account of injury to persons or damage to adjacent pavements and public and private property (including, but limited to, the work under construction, existing buildings, facilities, etc) which injury or damage results directly from said Contractor's failure to install or to leave in place adequate and sufficient supports, sheeting, bracing, underpinning, coffer damming, etc.
- C. The Contractor shall submit his proposed sheeting and/or shoring design to the Engineer, and any others required by law, prior to the installation of any sheeting and/or shoring. These plans should include, but not be limited to, the type of sheeting or shoring, sizes and dimensions, bracing, spacing, methods of installation and removal, methods of dewatering, etc., and computations verifying same.
- D. It is expressly understood and agreed that removing or leaving in place any sheeting or shoring, etc., shall not relieve the Contractor from any responsibility for any loss or damage whatever due to omission of or failure of the sheeting, the settling of the backfill, or any movement of the ground, or any structure or object adjacent to any trench or excavation made by the Contractor. The Engineer will not order any sheeting, left in place at the expense of the Owner, in order to accommodate the convenience of the Contractor or to save him the cost of its removal.
- E. There shall be no obligation on the part of the Engineer to issue orders for sheeting to be left in place and/or to pass upon sufficiency and adequacy of sheeting; nor shall the failure on the part of the Engineer to give such orders relieve the Contractor from liability for damages on account of injury to persons or damage to property occurring from or upon the work and occasioned by negligence, or otherwise growing out of the Contractor's failure to either install sufficient and adequate sheeting and/or stay bracing or to leave in place in the excavation sufficient and adequate support to prevent the caving in or moving of the ground adjacent to the sides of the excavation during and after the backfilling operation.
- F. All sheeting, shoring and bracing removed shall be carefully removed from the excavation in such a manner as not to endanger the completed work or any adjacent pavements, buildings, structures, utilities, property, etc. All voids left or caused by the withdrawal of such sheeting,

shall be immediately refilled with approved material and compacted by methods approved by the Engineer (ramming, tamping, puddling, or other methods approved by the Engineer) and at no additional cost to the Local Public Agency.

- G. Where wood sheeting has been driven below the excavation bottom to provide for a "toe-in", no wood sheeting below the top of pipe or structure shall be removed, but instead cut off at this elevation and the remaining sheeting above this line removed as described herein. There will be no payment made for this work, nor for the wood sheeting left-in-place.

1.2 SUBMITTALS

- A. The Contractor shall provide structural calculations and plans for the design of the temporary sheeting, as well as any other required excavation support as necessary. Said calculations and plans shall be signed and sealed by a New Jersey licensed professional engineer and provided to Neglia Group for review prior to construction.

PART 2 – PRODUCTS – Not Applicable

PART 3 – EXECUTION – Not Applicable

PART 4 – QUANTITY AND PAYMENT

- A. The quantity of Temporary Sheeting, for which payment will be made, will be on a lump sum basis for the item **TEMPORARY COFFERDAM** in the Proposal, which the price shall include the furnishing of all materials, labor and equipment, and all else necessary therefore.

END OF SECTION

SECTION 320116 – MILLING

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Milling shall consist of the removal, without heat, of all or part of the depth of an in-place bituminous concrete or Portland cement concrete pavement, as necessary to produce the specified profile, cross-section, and grid surface or bonding surface, as required or specified by the Engineer.
- B. The texture produced for finished pavement shall be a grid surface with discontinuous longitudinal grooves.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. The equipment used for milling shall be a power operated planing, grinding, or cutting machine, capable of removing, without heat, and in one pass, the specified layer of pavement to a maximum depth of four inches. The equipment shall be capable of accurately establishing profile grades by referencing from either the existing pavement or from an independent grade control and shall have positive means for controlling cross slope elevations. Additionally, it shall be capable of cutting daylight while maintaining the desired profile. The operating speed of the machine shall be variable and adequate to leave the specified grid surface and to produce milled material approximately 3/4-inch size, if so specified elsewhere, herein. The equipment shall also have an effective means for removing milled material from the surface and for preventing any dust resulting from the operation from escaping into the air.

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. The pavement surface shall be milled and removed to the depth, width, grade and cross-section shown on the Plans, specified elsewhere, or as directed by the Engineer.
- B. Milling shall start at the gutter line and progress toward the center of the roadway.
- C. The stringline reference system shall consist of suitable wire supported by approved devices compatible with the type of automatic grade control systems used. The string line and supports shall be capable of maintaining the line and grade designated by the Plans at the point of support, while withstanding the tensioning necessary to prevent sag in excess of 1/4 inch between supports spaced fifty feet apart. Additional supports shall then be installed to provide a minimum spacing of twenty-five feet between same, or less, if directed by the Engineer, to remove any apparent deviation of the string line from theoretical grade.

- D. The Contractor shall establish the string line reference system. The Contractor shall furnish all materials, equipment, labor and incidentals required to construct the string line reference system as described herein, and shall maintain same until its use is no longer required.
- E. Grade control for other passes of the machine shall be ski type. Automatic grade controls will not be required on sections of the project where intersections or other conditions interfere with their efficient operation.
- F. Pavement to be milled in areas not accessible to the milling machine shall be removed by other equipment, as approved by the Engineer.
- G. The pavement shall be swept clean by mechanical brooming immediately after completion of the milling operation.
- H. On-site millings of the existing roadway may be re-used as fill under areas of the proposed roadway in accordance with the NJDEP Asphalt Millings Guidance in Appendix E.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The quantity of Milling, for which payment will be made, will be the area actually milled to an average depth in accordance with Plans and Specifications, or as directed by the Engineer, without deduction of areas occupied by manholes and similar structures within the pavement area.
- B. Payment for milling will be made for the quantity, as above determined, measured in square yards, at the unit price bid for the item **HMA MILLING, 3" OR LESS** in the Proposal, which price shall include removing the specified depth of pavement, removal and disposal of milled material, sweeping, repair of existing curb and driveway aprons damaged, all materials, labor and equipment, and all else necessary therefore and incidental thereto for completion of operations as specified herein and as shown on the plans or as directed by the Engineer.

END OF SECTION

SECTION 321123 – DENSE GRADED AGGREGATE

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This item shall include the placement of a ¾" Dense Graded Aggregate, if and where directed, at thicknesses shown within the plan details, including all necessary excavation and removal of all earth, rock, boulders, brick, stone, and concrete masonry, including small structures and other materials encountered. It shall also include all necessary transportation, grading, placement, and disposal of material.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. The stone shall be free from pieces coated with clay, caked stone dust and other objectionable materials. It shall not contain more than 5% of weathered and decomposed rock, not more than 5% of stone of types other than the type being used, in accordance with the Specifications, and not more than 7% by weight of flat or elongated pieces. A flat piece shall be one in which the ratio of the width to thickness of its circumscribing rectangular prism is greater than 5:1, and an elongated piece shall be one in which the ratio of the length to width of its circumscribing rectangular prism is greater than 5:1. The percentage of wear shall be determined in accordance with A.A.S.H.T.O. Designation T3.

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. Excavation and backfill of the Dense Graded Aggregate shall be in accordance with the applicable Sections and/or Subsection for Roadway Excavation of the current NJDOT 2019 Standard Specifications.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The quantity of Dense Graded Aggregate for which payment will be made will be on a square yardage basis for the item **DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK** in the Proposal, which price shall include the cost of any and all material, labor, and equipment and all else necessary and incidental thereto.
- B. No specific payment will be made for Hot Mix Asphalt Base Course, 4" Thick, Mix 19M64, associated with Belgian block curb construction and the cost thereof shall be included in the prices bid for the various items within the bid proposal which price shall include the cost of any and all material, labor, and equipment and all else necessary and incidental thereto.

END OF SECTION

SECTION 321216 – HOT MIX ASPHALT, BASE COURSE, MIX 19M64

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Hot Mix Asphalt Base Course shall be Mix 19M64, at the 4” thickness after compaction, if and where directed, as directed by Neglia Group and/or construction manager. This work shall consist of the furnishing and placing of a 4” thick bituminous stabilized base course on the prescribed surfaces, locations, in accordance with the Plans, Details and Specifications.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. The composition of the Hot Mix Asphalt Mix 19M64 Course shall be coarse aggregate, fine aggregate, mineral filler, and asphalt cement. These shall be as shown in the Standard Specifications, except that the materials shall conform to the requirements as shown for "Stone Mix". All reference to gravel mix is deleted.

PART 3 – EXECUTION

3.1 CONSTRUCTION

- A. After spreading and strike off, and while hot, each course shall be compacted thoroughly and uniformly by rolling. The rolling shall be done with a three-wheel ten (10) ton roller until the mixture is thoroughly compacted to the satisfaction of Neglia Group.
- B. A tack coat shall be applied to any one or more layers of the Hot Mix Asphalt Mix 19M64, if in the opinion of the Engineer such layer or layers become coated with dust, dirt, or other foreign material sufficiently to prevent a good bond between the layers of Base Course or between the completed Base Course and Surface Course.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The quantity of Hot Mix Asphalt Base Course, Mix 19M64 for which payment will be made will be on a tonnage basis for the item **HOT MIX ASPHALT BASE COURSE, MIX 19M64, 4” THICK** in the Proposal, which the price shall include the cost of any and all material, labor, and equipment and all else necessary and incidental thereto.
- B. No specific payment will be made for Hot Mix Asphalt, Base Course, 4” Thick, Mix 19M64, associated with Belgian block curb construction and the cost thereof shall be included in the prices bid for the various items within the bid proposal which price shall include the cost of any and all material, labor, and equipment and all else necessary and incidental thereto.

END OF SECTION

SECTION 321217 – HOT MIX ASPHALT, SURFACE COURSE, MIX 9.5M64

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Hot Mix Asphalt Surface Course shall be Mix 9.5M64, constructed in a single layer, and conforming to the lines and grades and at the 2-inch thickness after compaction, as shown on the construction drawings. This surface course shall be installed on the existing base after the application of a tack coat, in accordance with these specifications. This surface course shall be used within the project site and on borough roadways.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. The bituminous materials for Mix 9.5M64 shall consist of asphalt cement. The penetration grade shall be 85/100, conforming to the requirements specified therefor in the applicable Sections and/or Subsections for bituminous materials of the standard specifications unless otherwise directed by the Laboratory. All other materials shall be as shown in the Standard Specifications. The contractor to procure valve boxes and valve extensions as needed from the local utilities. All valve boxes to be set flush with finished roadway and to be included in the surface course pay item.

PART 3 – EXECUTION

3.1 CONSTRUCTION

- A. This article shall be as set forth in the NJDOT 2019 Standard Specifications.
- B. The Contractor shall be responsible for hiring an independent laboratory, which has been approved by Neglia Group, for the purpose of taking pavement cores. These cores shall be tested to determine the conformance of the materials with the Specifications. Tests will be made for composition, air voids, and thickness.
- C. The Contractor shall supply Neglia Group with two (2) copies of all results.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The quantity of Hot Mix Asphalt, Surface Course, Mix 9.5M64 for which payment will be made will be on a tonnage basis for the item **HOT MIX ASPHALT SURFACE COURSE, MIX 9.5M64, 2" THICK** in the Proposal, which price shall include the cost of any and all material, labor, and equipment and all else necessary and incidental thereto.
- B. No specific payment will be made for Hot Mix, Asphalt Base Course, 2" Thick, Mix 9.5M64, associated with Belgian block curb construction and drainage improvements, and the cost

thereof shall be included in the prices bid for the various items within the bid proposal which price shall include the cost of any and all material, labor, and equipment and all else necessary and incidental thereto.

END OF SECTION

SECTION 321540 – CLEAN CRUSHED STONE

PART 1 GENERAL

1.1 DESCRIPTION

- A. The ¾-inch Clean Crushed Stone shall include the furnishing and placing of stones as indications on the Construction Details.

PART 2 – PRODUCTS – Not Applicable

PART 3 – EXECUTION

3.1 MATERIALS – METHODS OF CONSTRUCTION

- A. Clean Crushed Stone shall be uniform in texture and quality and shall conform to the 2009 NJDOT Standard Specifications for Broken Stone and Pipes.
- B. The embankment/erosion control fabric shall be Mirafi 140S, or approved equivalent.
- C. All soil, stone, and other fill materials either imported onto or exported from the property shall comply with all applicable local, County, State, and Federal regulations and requirements.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. No specific payment will be made for Clean Crushed Stone. The cost for all the work specified above shall be included in the prices bid for the installation of various sizes of the proposed pipe and other structures.

END OF SECTION

SECTION 323118 – POST AND RAIL FENCE

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This item shall include all labor, material and equipment to setup and complete the installation of the post and rail fence as identified herein and on the drawings. This includes all material, labor, equipment, and hardware in accordance with the manufacturer's installation specifications.

PART 2 – PRODUCTS

2.1 MATERIALS

Furnish materials in accordance with the following:

A. Posts:

- Provide posts of 18-in. girth (approx.. 25 sq. in.)
- Provide 2-rail posts.
- Bury posts 24-in. into the ground.

B. Rails:

- Provide fences 3 ft. in height.
- Use a 2-rail split rail system.

- C. For wood materials, furnish treated wood or wood of a natural resistance to decay. Provide materials that are free from loose knots, cracks, and other imperfections.

PART 3 – EXECUTION

3.1 CONSTRUCTION

- A. The post and rails shall be installed as recommend with manufacturer's written directions, included with product, as indicate on the drawings or as directed by the Engineer.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The cost of post and rail fence, for which payment will be made on linear feet basis for the item **FURNISH AND INSTALL POST AND RAIL FENCE** in the Proposal, which prices shall include the furnishing of all materials, labor and equipment, and all else necessary therefore and incidental thereto as required for preparing and installing all materials required as specified herein and as shown on the plans or as directed by the Engineer.

END OF SECTION

SECTION 323413 – PREFABRICATED PEDESTRIAN BRIDGE

PART 1 – GENERAL

1.1 DESCRIPTION

- A. These specifications are for fully engineered half through truss (no overhead bracing) bridge of steel construction and shall be regarded as minimum standards for design and fabrication. The work included under this item shall consist of design, fabricating, finishing and transporting the steel truss bridge superstructure including bearings. These specifications are based on products designed and manufactured by **Contech Engineered Solutions LLC**.
- B. This items covers all work necessary and incidental to furnishing and installing a fully functional prefabricated bridge system. This item shall include, but is not limited to, performing and constructing all necessary excavation, saw-cutting, dewatering, deck construction, railings, reinforcement, foundations, abutments, wing walls, and restoration for construction of the pedestrian bridge system. Contractor is responsible for any damages to existing features to remain located on-site and encountered during construction.
- C. All applicable NJDEP regulations must be maintained with respect to construction of the proposed prefabricated pedestrian bridge. Any applicable construction permits the prefabricated pedestrian bridge must be obtained prior to construction by the Contractor.
- D. Contractor shall note that dewatering will be necessary for the construction of the proposed prefabricated pedestrian bridge, foundations, slabs, deck foundations, wing walls, etc. and must anticipated when bidding on this project.

1.2 QUALIFIED BRIDGE MANUFACTURER

- A. Each Contractor is required to identify their intended supplier as part of the bid submittal. Qualified Bridge Manufacturers must have at least 5 years of experience fabricating these types of structures and shall have an up to date quality certification by AISC per Section 14.1 of these specifications. All suppliers shall fabricate their product utilizing a modern fabrication facility owned and operated by the Bridge Manufacturer that includes the use of CNC beam drilling machines, no brokers are allowed.

Pre-Approved Bridge Manufacturer:

Contech Engineered Solutions LLC

1-800-338-1122

E-mail: info@conteches.com

or Approved Equal

Bridge Manufacturers, other than those listed above, may be used provided the Engineer receives a written request at least 10 days prior to the bid. The written request shall accompany the following information:

- Bridge Manufacturer’s Product Literature,

- Name and resume of Bridge Manufacturer's design professional who will be signing and sealing the engineering submittals,
- Copy of current AISC certification,
- Representative copies of detailed drawings, field procedures, calculations, quality control manual, welder's certifications, proof of in-house C.W.I.,
- Listing of projects including owner, location, size, year of fabrication, contact person,
- Certification by the Bridge Manufacturer's Design Professional that the bridge proposed will be in accordance with all project development done up to the date of these specifications.

The above will be evaluated by the Engineer for accuracy and ability to provide the bridge in accordance with these specifications. Bridge Manufacturers other than those listed above may only be used if the Engineer provides written approval via addendum 5 days prior to the bid. The Engineer's ruling shall be final.

1.3 BRIDGE MANUFACTURE'S DESIGN PROFESSIONAL AND SUBMITTALS

- A. The Bridge Manufacturer shall have as a direct employee, an engineer who is experienced in bridge design to be in responsible charge of all engineering related task and design. The engineer shall have a minimum of 10 years of experience in bridge design and be a currently licensed civil or structural engineer in the State of New Jersey and shall be the engineer who will seal and sign the plans.
- B. Engineering drawings, 11x17 format, shall be prepared and submitted to the Contractor or Owner for their review after receipt of the order. Submittal drawings shall be unique drawings, prepared to illustrate the specific portion of the bridge being fabricated. All relative design information such as member size, ASTM/AASHTO material specification, dimensions necessary to fabricate and required welding shall be clearly shown on the drawings. Drawings shall have referenced details and sheet numbers. All drawings shall be stamped, signed and dated by the Bridge Manufacturer's Design Professional.
- C. Structural calculations for the design of the bridge superstructure shall be prepared by the Bridge Manufacturer and submitted for review after receipt of the order. Calculations shall include complete design, analysis and code checks for the controlling members, connectivity and support conditions, truss stability checks, deck design, deflection checks, bearings and all splices.

PART 2 – APPLICABLE CODES AND STANDARDS

2.1 GOVERNING SPECIFICATIONS

- A. Bridge shall be designed in compliance with the AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges, 2009 (*AASHTO Ped*). Calculations shall be in accordance with this document, and formulas shall reference the appropriate sections.

2.2 OTHER REFERENCE CODES, SPECIFICATIONS AND STANDARD

- AASHTO LRFD Bridge Design Specifications, 9th Edition, 2020 (*AASHTO LRFD*)

- AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, First Edition, 2005 (*AASHTO Signs*)
- AISC Steel Construction Manual, 15th Edition, 2017 (*AISC*)
- ANSI/AISC 360-16 Specification for Structural Steel Buildings, 2016 (*AISC 360*)
- American Welding Society, Structural Welding Code, D1.1, 2015 (*AWS D1.1*)
- ASCE/SEI 7-10 Minimum Design Loads for Buildings and Other Structures, 2010 (*ASCE 7*)
- Setra Technical Guide for Footbridges, 2006 (*Setra*)
- ANSI/AWC NDC-2015 National Design Specification for Wood Construction, 2015 (*NDS*)
- Tropical Timbers of the World, US Forest Products Laboratory

The AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges shall control if any conflicting requirements occur with the Other Reference Documents and/or other local Codes.

PART 3 – BRIDGE SYSTEM TYPE

3.1 TRUSS STYLE

- A. The truss style shall be a Connector[®]. The vertical trusses shall be designed such that the top and bottom chord members are parallel for the entire length of bridge. The interior verticals of the trusses shall be perpendicular to the top face of the bottom chord and the end verticals of the trusses shall be plumb. Trusses shall be laid out such that diagonals shall be at an angle of 30-degrees or more with respect to the bottom chord.

3.2 DIAGONAL STYLE

- A. The vertical truss shall use a single-diagonal, Pratt configuration, where all the diagonals are in tension for gravity loads.

3.3 FLOOR BEAM LOCATION

- A. The bridge shall utilize an underhung floor beam where the top face of the floor beam shall be welded to the bottom face of the bottom chord. The distance from the top of deck to the bottom of the floor beam shall be determined by the Bridge Manufacturer during final design.

PART 4 – BRIDGE GEOMETRY

4.1 SPAN LENGTH

- A. The bridge span length shall be 130'-0" (horizontal straight line dimension) and measured from end to end of the bridge truss, not including the end dam, any deck extension or bearing that extends beyond the end of the truss.

4.2 WIDTH

- A. The bridge width shall provide a minimum clearance of 6'-0" between all interior railing elements.

4.3 TOP OF TRUSS HEIGHT ABOVE DECK

- A. The top of the top chord shall not be less than 48" above the deck (measured from the high point of the deck). Note that this dimension may be exceeded due to truss height requirements for structural, deflection and vibration requirements.

4.4 LOWER STEEL CLEARANCE

- A. The Bridge Manufacturer shall determine the distance from the top of the deck (measured from the highest point of the deck) to the bottom of any steel member.

4.5 TRUSS BAY SPACING

- A. The number of bays and the dimension of the panel points shall be determined by the Bridge Manufacturer.

4.6 CAMBER

- A. A single simple-span bridge shall have a vertical camber dimension at the mid span equal to 100% of the anticipated full dead load deflection rounded up to the next $\frac{1}{4}$ ".

4.7 ELEVATION DIFFERENCE

- A. The top of the decks at each end of the bridge shall be constructed with a vertical elevation difference as shown on the plans.

PART 5 – STRUCTURAL DESIGN LOADS

5.1 DEAD LOAD

- A. The bridge structure shall be designed for the total bridge weight including the final deck system.

5.2 PEDESTRIAN LOADING (PL)

- A. The bridge structure shall be designed for a uniform pedestrian loading of 90 psf. This loading shall be patterned to produce the maximum load effects. Consideration of dynamic load allowance is not required with this loading.

5.3 VEHICLE LOAD (VL)

- A. When vehicular access is prevented by permanent physical methods, the floor system shall be designed for each of the following concentrated/vehicular loads:
- A concentrated load of 1,000 pounds placed on any area 2.5 ft by 2.5 ft square.
 - A 1,200 pound two-wheel vehicle with a wheelbase of 60", with the load equally distributed to two axles with a tire footprint of 1.5" in the direction of traffic and 4" transverse to the direction of traffic.

5.4 WIND LOAD (WS)

- A. Pedestrian bridges shall be designed for wind loads as specified in AASHTO Signs, Articles 3.8 and 3.9. The loading shall be applied over the exposed area in front elevations of both trusses including all enclosures.
- B. In addition to the wind load specified above, a vertical uplift line load as specified in AASHTO LRFD Article 3.8.2 and determined as the force caused by a pressure of 20 psf over the full deck width, shall be applied concurrently. This loading shall be applied at the windward quarter point of the deck width.

5.5 SEISMIC (EQ)

- A. The bridge structure shall be designed for seismic loading as specified in Section 3.10 of AASHTO LRFD. The transverse loads shall be calculated considering the transverse period of the bridge and longitudinal loads shall be calculated using a period of zero. A response modification factor of 0.8 shall be used for the calculation of forces applied to the bridge anchorage. A response modification factor of 1.0 shall be used for the calculation of bearing reactions. The transverse seismic load shall be applied to all the bearings and the longitudinal seismic load shall be applied to the fixed bearings only. The vertical bearing reactions shall be calculated using an overturning force on the bridge based on the center of gravity of the bridge times the transverse seismic load.

5.6 FATIGUE LOAD (FL)

- A. The fatigue loading shall be as specified in Section 11 of AASHTO Signs. The Natural Wind Gust specified in Article 11.7.1.2 and the Truck-Induced Gust specified in Article 11.7.1.3 of AASHTO Signs only need only be considered, as appropriate.

5.7 COMBINATION OF LOADS

- A. The load combinations and load factors to be used shall be as specified in AASHTO LRFD Table 3.4.1-1, with the following exceptions:
 - Load combinations Strength II, Strength IV, and Strength V need not be considered.
 - The load factor for Fatigue I load combination shall be taken as 1.0, and Fatigue II load combination need not be considered.

PART 6 – STRUCTURAL DESIGN CRITERIA

6.1 MODELING

- A. The bridge shall be modeled and analyzed utilizing a three-dimensional computer software which shall account for moments induced in members due to joint fixity where applicable. Moments due to both truss deflection and joint eccentricity must be considered. All loads listed in Section 5 of these specifications shall be applied to the model and analyzed appropriately.

6.2 LATERAL FRAME AND MEMBER DESIGN

- A. The bridge shall be designed and proportioned such that appropriate lateral stiffness is provided locally and globally, to ensure that the structure is stable.
- B. For bridges without any overhead members (Half-Through Trusses), the vertical truss members, the floor beams and their connections shall be proportioned to resist a lateral force applied at the top of the truss verticals at the center of the top chord. This lateral force shall be applied as an additional load to the top of the vertical at the center of the top chord, creating a cantilever moment, which is then added to the forces obtained from the three-dimensional model. The magnitude of this lateral force shall not be less than $0.01/K$ times the average factored design compressive force in the two adjacent top chord members increased by a factor of safety of 1.33.
- C. The top chord shall be analyzed as a column with elastic lateral supports at the panel points, considering all moments due to in-plane and out-of-plane bending, along with moments due to eccentricities of the members.

- D. The U-Frame Stiffness of the verticals and floor beams shall be as specified in AASHTO Ped Article 7.1.2, assuming that the vertical and floor beam connection is rigid. This means that the following must be met:
- On H-Section floor beam connections, the floor beam width shall be at least 80% of the vertical face width in order to prevent any deformation due to tube wall plastification of the vertical member faces under service loads. The connection design will be checked at Strength I & Strength III load combinations.
 - On Underhung floor beam connections, the vertical width shall match the bottom chord width in order to transfer vertical moments through the walls of the bottom chord to the verticals with no deformation of the chord side walls due to sidewall yielding or crippling under service loads. The connection design will be checked at Strength I & Strength III load combinations.
 - The vertical and floor beam members shall not be connected to faces of the bottom chord at a 90-degrees to one another.
 - All fixed end moments in the floor beams and verticals due to floor beam rotations, in addition to the loads derived from a U-Frame analysis have been accounted for in the strength design of the connections.
- E. The vertical and floor beam members shall be proportioned such that the effective length factor, K, used in the design of the top chord shall not be greater than 2.0.
- F. The end verticals shall be designed as a simple cantilever to carry the loads obtained from the three-dimensional model, plus the cantilever moment due to a lateral load of 0.01 times the axial force in the end vertical, applied laterally at the top end of the end vertical at the center of the top chord.
- G. The floor beams shall be sized for the forces obtained from a simple span, pinned end analysis, or from the forces obtained from the three-dimensional model, whichever controls.
- H. The diagonals and brace diagonals shall be analyzed as pinned-end connection members.
- I. Interior verticals shall be analyzed as pinned-end connections unless longitudinal forces are applied to the verticals such as when the brace diagonals are connected to floor beams on an H-Section floor beam configuration. When longitudinal forces are applied to the verticals they shall be analyzed as fixed-end connections.
- J. All other members shall be analyzed as fixed-end connections.
- K. HSS member connections shall be evaluated per the requirements of AISC 360 Chapters J & K.

6.3 DEFLECTIONS

- A. The vertical deflection of the bridge due to the unfactored pedestrian live loading shall not exceed $1/360$ of the span length.
- B. The horizontal deflection of the bridge under unfactored wind loading shall not exceed $1/360$ of the span length.

6.4 FRACTURE

- A. The fracture toughness requirements and designation of Fracture Critical Member and Main Member designation are hereby waived for these structures.

6.5 VIBRATIONS

- A. Vibration of the structure shall not cause discomfort or concern to the users of the bridges. To assure this, the fundamental frequency (f) of the pedestrian bridge in the vertical direction, without live load, shall be greater than 3.0 hertz (Hz) to avoid the first harmonic. The fundamental frequency of the pedestrian bridge in the lateral direction, shall be greater than 1.3 Hz. If the fundamental frequency cannot satisfy these limitations, then the bridge should be proportioned such that either of the following criteria are satisfied:

$$f > 2.86 * \ln(180/W)$$

or

$$W > 180 * e^{(-0.35 * f)}$$

Where W is the weight of the bridge in kips and f is the fundamental frequency in the vertical direction in Hz.

For bridges longer than 85 ft and shorter than 125 ft the vertical and horizontal vibration must also meet the requirements for Bridge Class III with a Mean comfort level in accordance with Setra.

PART 7 – DECK SYSTEM

7.1 DECK SYSTEM

- A. Deck to be comprised of transverse wood planks attached to longitudinal steel stringers that are attached to the floor beams.
- B. The wood deck timber planks shall be Select Structural Southern Yellow Pine and meet all applicable requirements as specified by the Southern Pine Inspection Bureau. The timber planks shall be surfaced 4 sides (S4S) and shall be pressure treated in accordance with the American Wood Preservers Association. The treatment shall meet AWPA U1 UC4A Ground Contact. Acceptable treatments are Micronized Copper Azole (MCA) to a 0.15 pounds per cubic foot retention or to refusal or equal. Allowable bending stresses shall be as determined for wet condition, as outline in ANSI ADS.
- C. Deck planks shall be secured utilizing 5/16" flat head self-tapping screws. Each plank shall have enough screws to adequately secure the plank to the stringers and prevent cupping and twisting of the board. Screws shall have adequate edge distance to prevent splitting and cracking. The end edges of the deck planks shall include a cover plate or angle to hide the plank ends from the bridge user or be precision end cut such that the ends are all within 1/16" from plank to plank. Deck planks shall be placed tight together with no gaps.
- D. Deck planks shall be sized to support the loads specified in Section 5.0 of these specifications.
- E. Each deck plank shall be designed to support the maximum wheel load from the design vehicle. Distribution to other planks will only be allowed if those planks are doweled together or if the tire contact wheel length is longer than the width of the plank. The Tire Contact Area

will be calculated as 0.01 times the wheel load. The wheel width transverse to the direction of traffic, is 2.5 times the wheel length. The wheel width is calculated as follows:

- The Wheel Width (in inches) is $2.5 * \sqrt{\left(\frac{0.01 * P}{2.5}\right)}$, where P is the wheel load in pounds.

- F. Plank shall be checked for both shear and moment, and meet all allowable stresses as per NDS.

PART 8 – MATERIALS OF CONSTRUCTION

8.1 STRUCTURAL STEEL

- A. All members of the truss and deck support system shall be fabricated from square or rectangular hollow structural shapes (HSS), with the exception that floor beams may be wide flange shapes. All open ends of end posts and floor support beams shall be capped. Drain holes shall be provided for all sections at the low point of the member that may become filled with water.
- B. All bridges shall be fabricated using A847 for HSS sections and A588 for structural shapes and plates.
- C. Minimum nominal thickness of primary hollow structural shapes shall be 1/4". Rolled shapes shall have a minimum thickness of 1/4".

8.2 FASTENERS

- A. Structural bolts used to field splice or connect all main members shall be ASTM F3125 Grade A325. The nuts for these structural bolts shall be ASTM A563. The Bridge Manufacturer shall determine the finish of the structural bolts. They will be either Type 3 (Weathering) or Type 1 (Hot-Dipped or Mechanically Galvanized) as specified by the Bridge Manufacturer.
- B. Bolts used for the connection of a wood rub rail shall be 18-8 or 316 Stainless Steel, 1/4" diameter carriage bolts.
- C. Screws for the attachment of wood deck shall be steel, 5/16" diameter, six lobe drive, self-tapping screws. The screws shall have flat heads for the screws in the wood and round heads for the screws on the edge cover. The screws shall have a protective coating that will prevent corrosion due to contact with treated wood and environmental exposure.
- D. Self-drilling fasteners for attachment of the form decking shall be #14 x 1" zinc plated hex washer head Tek screws.
- E. Power Actuated fasteners shall be Hilti sheet metal nail X-ENP-19 fastener.
- F. Other miscellaneous fasteners shall be ASTM A307 zinc plated or galvanized, as determined by the Bridge Manufacturer.

PART 9 – FINISH

- A. For corrosion resistant high-strength low-alloy (weathering) steel no surface finish treatment is necessary. All exposed surfaces of structural steel to be cleaned in accordance with Steel Structures Painting Council Surface Preparation Specifications No. 7, SSPC -SP7 brush-off blast cleaning. Exposed surfaces of steel shall be defined as those surfaces seen from the deck or from the outside and bottom of the structure. All other surfaces to have standard mill finish. The steel will be allowed to form a protective weathering patina over time.

PART 10 – ATTACHMENTS

10.1 SAFETY RAILS

- A. Safety rail system shall be placed on the outside of the structure, spaced so as to prevent a 4" sphere from passing through the side truss for the full height of the side truss, or 48" , whichever is less. The top of the top chord may be considered the top of the rail system.
- B. Rails system shall consist of horizontal rails. Rails shall be L 1 ¼ x 1 ¼ x 1/8 placed at a 45-degree orientation with both legs welded to truss verticals and with a maximum unsupported length of 6'-0" if placed on the inside of the structure and 7'-0" if placed on the outside of the structure. If the truss vertical spacing is greater than the maximum unsupported length, mid-bay supports will be required. When safety rails are placed on the inside of the structure and not covered by the end vertical, the ends of rail near the end of the bridge shall be mitered at a 45-degree angle, capped and ground smooth. No solid plate covering all rails as a unit will be allowed.
- C. Each element of the pedestrian rail system shall be designed to support a uniformly applied load of 50 pounds per lineal foot, both transversely and vertically, acting simultaneously. In addition, each longitudinal element shall be designed to support a concentrated load of 200 pounds, which will act simultaneously with the above uniform loads at any point and in any direction at the top of the longitudinal element.
- D. The posts of the pedestrian rail system shall be designed for a concentrated load applied at either the center of gravity of the upper longitudinal element or 60" above the top of the walkway, whichever is less. This concentrated load shall be equal to 200 pounds plus 0.05 times the post spacing in feet.

10.2 TOE PLATE

- A. Toe Plates shall be steel channel shape section, 4" high by 1" wide minimum with the end of the channel legs welded directly to the inside face of the truss verticals. The maximum unsupported length shall be 7'-0". If the vertical spacing is greater than the maximum unsupported length, mid-bay supports will be required. When the ends of the toe plates near the end of the bridge are not covered by the end verticals, they shall be capped and ground smooth. The bottom of the toe plate shall be placed 2" above the finished height of the deck. All seams of the toe plates shall be fully welded to give the appearance of a continuous member (welding should be located at a support member). If toe plates are incorporated into a safety rail system, they may be modified as needed but shall be a minimum of 4" high.

10.3 RUB RAIL

- A. Rub Rails shall be provided at a height of 3'-6" from top of the deck to the top of rub rail. Rub rails shall be steel channel shape section, 4" high by 1" wide minimum with the end of the channel legs welded directly to the inside face of the truss verticals. The maximum unsupported length shall be 7'-0". If the vertical spacing is greater than the maximum unsupported length, mid-bay supports will be required. When the ends of the rub rails near the end of the bridge are not covered by the end verticals, they shall be capped and ground smooth. All seams of the rub rails shall be fully welded to give the appearance of a continuous member (welding should be located at a support member). If rub rails are incorporated into a safety rail system, they may be modified as needed but shall be a minimum of 4" high.

10.4 EXPANSION JOINT

- A. The gap between the end of the bridge deck and the back wall of the foundation system be sized to accommodate bridge movements due to thermal expansion of the bridge over the design temperature range. The gaps shall be covered with a steel cover which attaches to the bridge and extends over the gap and onto the top of the foundation system back wall. The steel cover shall have its edges rounded or beveled at a 45-degree angle. A compression seal sized for movement and rated for pedestrian traffic may be used in place of the steel cover.

PART 11 – BEARINGS

11.1 BEARING TYPE

- A. Bearing type and size shall be designed by the Bridge Manufacturer based on anticipated loads and movements.

11.2 DESIGN TEMPERATURE RANGE

- A. The Design Temperature Range will be site specific and will be determined per AASHTO LRFD Article 3.12.2.

11.3 NON-SHRINK GROUTING

- A. The bridge will be supplied with a lower setting plate. This setting plate shall be leveled and shimmed to the proper elevation. The space between the lower surface of the setting plate and the foundation surface shall be filled with a non-shrink grout capable of achieving a minimum compressive strength equal to or greater than the strength of the foundation concrete. The cost of the leveling, shimming, and non-shrink grout shall be the responsibility of the Contractor.

PART 12 – FOUNDATIONS

12.1 FOUNDATION SYSTEM

- A. Foundation system shall utilize abutments designed by MPP Engineers in conjunction with the bridge bearing requirements and dimensions provided by the Bridge Manufacturer and the site-specific geotechnical information provided by Johnson Soils Company. All abutment dimensions and materials shall be shown on the final contract plans.

12.2 ANCHOR BOLTS

- A. Bridge Manufacturer shall design the diameter and grade of anchor bolts, based on the shear and tensile strength of the anchor bolt material only. All design considerations regarding concrete breakout strength in shear and tension, pullout strength, concrete side-face blowout strength, concrete pry out strength, embedment depth, type of anchorage or any other concrete failure modes are the responsibility of the Foundation Engineer (MPP Engineers) and shall be shown on the final contract plans. All anchor bolts shall be galvanized. The Foundation Engineer (MPP Engineers) shall determine if the anchor bolts shall be cast-in-place, drilled/epoxy, or expansion anchors. Anchor bolts shall be provided and installed by the Contractor.

PART 13 – FABRICATION

13.1 WELDING

- A. Welding procedures and weld qualification test procedures shall conform to the provisions of AWS D1.1. Filler metal shall be in accordance with the applicable AWS Filler Metal Specification and shall match the corrosion properties of the base metal.

13.2 WELDERS

- A. Welders shall be qualified for each process and position used while fabricating the bridge. Qualification tests shall be in accordance with AWS D1.1. All weld qualifications and records shall be kept in accordance with the Fabricator's Quality Assurance Manual which has been approved and audited by AISC as the basis for certification.

13.3 SHOP SPLICES

- A. Shop splices for main truss members shall be full penetration welds all around the perimeter of the member. These shop splices shall be performed using a full perimeter backing plate. After welding of the shop splices, the weld shall be ground smooth to match the perimeter of the member. Grinding these welds smooth is required and will be grounds for rejection of the bridge upon delivery if not completed.
- B. Shop splices for all horizontal rail components to be located at the centerline of the truss verticals, each end welded to the truss vertical and seal welded together. Exposed surface of the seal welds as seen from the deck shall be ground smooth.
- C. Shop spliced for all horizontal stringers to be located at the centerline of the floor beams, each end welded to the floor beam and seal welded together.

13.4 BOLTED SPLICES

- A. For shipping purposes, the bridge may be fabricated in sections. Sections shall be field assembled using bolted connections. No field welding of members shall be allowed.
- B. The chord members of the bridge shall be bolted such that at least two faces of the member are bolted. This is to provide reasonable force distribution around the perimeter of the member. Bolted splices shall be designed and fabricated such that the head of the bolt and washer are the only item exposed. No through-bolting of the member is allowed. The nuts of the fastener cannot be welded to the internal splice plate and shall be held in plate with a nut capture system per Patent US 10,267,345 B2 or equal.
- C. The diagonals and brace diagonals shall be bolted utilizing a through-bolt system with plates on the exterior faces of the members. An internal stiffening plate is required to keep the member from crushing during the bolt tightening process.
- D. All bolted connections are considered to be pretensioned or slip-critical connections. All bolts are to be pretensioned per the requirements of section 8.2 of the Specification for Structural Joints Using High-Strength Bolts. Recommended tightening method of all structural bolts shall be Turn-of-the-Nut Pretensioning.

PART 14 – QUALITY CONTROL

14.1 AISC CERTIFICATION

- A. The bridge shall be fabricated in a shop owned by the Bridge Manufacturer. This facility shall have up to date quality certification by AISC as Certified Bridge Fabricator - Advanced (Major) with Fracture Critical Endorsement and Sophisticated Paint Endorsement.

14.2 CERTIFIED WELD INSPECTOR

- A. The Bridge Manufacturer shall employ a Certified Weld Inspector (CWI), with endorsement by AWS QC1. This CWI shall be present during the complete fabrication of the bridge. The CWI shall provide written documentation that the bridge has been fabricated in accordance with these specifications and the approved design drawings.

14.3 DOCUMENTATION

- A. Material Certifications shall be available for review for all materials within the bridge. Traceability of heat numbers is required for all structural steel.
- B. Documentation showing the performance of all critical quality checks shall also be made available for review by the Engineer or Owner.

14.4 NON-DESTRUCTIVE TESTING

- A. All welds within the structure, shall be visually inspected for conformance to size, under cut, profile and finish.
- B. All shop splices of main truss members shall be magnetic particle tested.

PART 15 – DELIVERY AND ERECTION

15.1 DELIVERY

- A. Delivery shall be made via truck to a location nearest the site which is accessible to normal over-the-road equipment. All trucks delivering bridge materials will need to be unloaded at the time of arrival. If the erection Contractor needs special delivery or delivery is restricted, they shall notify the Bridge Manufacturer prior to bid date. This includes site issues which may prevent over-the-road equipment from accessing the site. Steerable dollies are not used in the cost provided by the Bridge Manufacturer. Determining the length of bridge section which can be delivered is the responsibility of the Contractor and shall be communicated to the Bridge Manufacturer prior to the bid date.

15.2 INSTALLATION & LIFTING PROCEDURES

- A. The Bridge Manufacturer will provide standard typical written procedures for lifting and splicing the bridge. All actual means, methods, equipment and sequence of erection used are the responsibility of the Contractor.

PART 16 – WARRANTY

16.1 WARRANTY

- A. The Bridge Manufacturer shall warrant, at the time of delivery, that it has conveyed good title to its steel structure, free of liens and encumbrances created by the Bridge Manufacturer, and that its steel structure is free of defects in design, material and workmanship. This warranty shall be valid for a period of one (1) year from the earlier date of delivery or 60 days after final fabrication is complete. Durable tropical hardwood decking and hardwood attachments shall carry a one (1) year warranty against rot, termite damage, or fungal decay. This warranty shall specifically exclude all softwood and decking material such as Treated Southern Yellow Pine, Douglas Fir and Wood thermoplastic composite lumber (e.g. Trex). Paint, galvanizing and other special coatings, if warranted, shall be warranted by the coating manufacturer in accordance with their warranty provisions and are not covered under the Bridge Manufacturer's warranty.
- B. This warranty shall not cover defects in the steel structure caused by abuse, misuse, overloading, accident, improper installation, maintenance, alteration, or any other cause not expressly warranted. This warranty shall not cover damage resulting from or relating to the use of any kind of de-icing material. This warranty shall be void unless owner's records are

supplied that show compliance with the minimum guidelines specified in the in the Bridge Manufacturer's inspection and maintenance procedures.

- C. Repair, replacement, or adjustment, in Bridge Manufacturer's sole discretion, shall be the exclusive remedy for any defects under this warranty. This warranty shall exclude liability for any indirect, consequential, or incidental damages.

PART 17 – QUANTITY AND PAYMENT

17.1 QUANTITY AND PAYMENT

- A. Installation and payment for pedestrian bridge will be paid on a lump sum basis for bid proposal item, **PREFABRICATED PEDESTRIAN BRIDGE, COMPLETE (WITH REINFORCED CONCRETE ABUTMENT BRIDGE DECK, RAILINGS, ECT.)** which shall include all engineering design and drawings, materials, labor, and equipment necessary to construct a complete pedestrian bridge in accordance with the Plans and Details or as directed by the Engineer.

END OF SECTION

SECTION 323914 – LOCKING REMOVABLE BOLLARDS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This item shall include all labor, material and equipment to setup and complete the installation of locking removable bollards and concrete foundations as identified herein and on the drawings. This includes all material, labor, equipment, and hardware in accordance with the manufacturer's installation specifications. It shall include the transportation and/or delivery of the locking removable bollards, the disposal of any surplus materials as required, and other work as herein described.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Locking Removable Bollard: Shall be item number 104009, as manufactured by BC Site Service, or approved equal, and shall contain the following features:
 - a. 6-inch diameter (12 inches wide including handles)
 - b. 40-inch height above grade, 60-inch total height
- B. Base plate shall be flush with the ground surface and shall have minimal gapping and no protrusions to prevent tripping hazards.
- C. Contractor shall provide color samples from full available color spectrum to Owner for review and approval prior to ordering.

PART 3 – EXECUTION

3.1 CONSTRUCTION

- A. All locking removable bollards shall be installed as recommended with manufacturer's written directions, included with product, as indicated on the drawings or as directed by the Engineer.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The cost of locking removal bollard, for which payment will be made on unit basis for the item **REMOVABLE LOCKING BOLLARD** in the Proposal, which prices shall include the furnishing of all materials, labor and equipment, and all else necessary therefore and incidental thereto as required for preparing and installing all materials required as specified herein and as shown on the plans or as directed by the Engineer.

END OF SECTION

SECTION 329113 – TOPSOILING, HYDROSEED, STRAW MULCH, AND SOD

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Provide topsoil, seed, straw mulch, and sod as shown and as directed by Neglia Group.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Topsoil obtained from stripping within limits of the project, or furnished from outside the project, shall contain no stones, lumps, roots, or similar objects larger than 2 inches in any dimension, and shall have a pH value of not less than 5.8. When the pH value of the topsoil is less than 5.8, it shall be increased by applying ground limestone at a rate necessary to attain a pH value of 6.5.
- B. Material stripped from the following sources shall not be considered suitable for use as topsoil.
 - 1. Soils having a pH value less than 4.1
 - 2. Chemically contaminated soils.
 - 3. Areas from which the original surface has been stripped and/or covered over, such as borrow pits, open mines, demolition sites, dumps, and sanitary landfills.
 - 4. Unacceptable wet excavation.
- C. Topsoil furnished from sources outside the limits of the project shall have a minimum organic content of not less than 2.75 percent by weight. When the organic content of the topsoil furnished from sources outside the limits of the project is less than 2.75 percent, it shall be increased by adding peat at a rate necessary to attain this minimum organic content. The organic content of soils shall be determined by the Laboratory using the chromic acid titration method, as described in the United States Department of Agriculture's Circular 757.
- D. The organic content of all topsoil used for planting shall conform to the requirements specified above.
- E. The gradation of the topsoil furnished from sources outside the limits of the project shall be determined by the Laboratory, using the Bouyoucos Hydrometer Analysis conforming to the requirements of current A.A.S.H.O. Designation T88. The gradation of the topsoil shall be within the following ranges:
 - Sand (1.00 MM to 0.25 MM) 70% to 80%
 - Silt and Clay (less than .25 MM) 20% to 30%
- F. A percolation rate of 1 inch/Hour to 2 inch/Hour is required after root growth by the sod after establishment.

G. The materials to be used for topsoiling shall conform to the appropriate articles as follows:

Fertilizer, 5-10-5 Commercial Designation.....	Sec. 909.02
Ground Limestone.....	Sec. 909.03
Mulch, Hay.....	Sec. 909.04
Grain Seed	Sec. 909.06
Topsoil	Sec. 909.10
Grass Seed Mixture	Hydroseed Lesco 3 Rye

I. The materials for Sodding shall conform to the requirements of the appropriate Articles as follows:

Fertilizer.....	Sec. 917.03
Ground Limestone.....	Sec. 917.04
Sod	As specified below.

A. Sod:

Shall be New Jersey certified sod containing approved blends, free from noxious weeds and objectionable grasses. It shall not contain all the dense root system of the grass and shall not be less than 1 1/2 inches thick. Before removing the sod, the grass shall be cut to a height of 2 inches and its surface shall be raked clean of all debris. It shall be cut with suitable tools in uniform strips not less than 12 inches wide.

Sod shall be mineral grown on a sandy loam soil from approved sources in the locality of the work where the soil is of such character that it will not break up or crumble during cutting, transportation or laying.

Sod Blend:

Sod blend shall be one of the following blends selected based on site conditions:

Tall Fescue:

- 85% Rembrandt Tall Fescue
- 15% Bluegrass(mixture of P105 and Midnight II Bluegrass)

Penntrio Bentgrass:

- 33% Pennlinks II
- 33% Penneagle II
- 33% Pureformance

Bluegrass Short-Cut:

- 25% Midnight Star
- 25% Moonlight
- 25% Award
- 25% Liberator

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. The topsoil shall be spread over the surface in a uniform layer that will produce the prescribed compacted thickness of at least six (6”) inches. When required, ground limestone which has been protected from moisture and is dry and free flowing, shall be evenly spread over the area to be seeded at a rate that will produce a pH value of the soil of 6.5. The area shall then be raked, disked or otherwise worked to incorporate the limestone into the upper 3 to 4 inches of soil to remove stones, roots, debris and other unsuitable material and to form an even surface. The soil shall be in a pliable condition at the time of seeding.
- B. Section Removed.
- C. The contractor shall hydro-seed (only when directed by the Engineer) only on a calm day. No seeding shall be performed on frozen ground or when the temperature is 32 degrees Fahrenheit or lower. Schedules for fertilizing and seeding must be submitted to Neglia Group for approval prior to the work. Hydroseeding shall be done within ten days following soil preparation.

Fertilizer shall be 5-10-5 and shall be applied at a rate of 325 lbs. per acre.

Virgin wood fiber mulch shall be applied at a rate of 1500 lbs. per acre.

ECT tackifier shall be applied at a rate of 5 lbs. per acre.

Hydroseed mix shall be Lesco 3 Rye.
- D. The Sod shall be placed on a 6-inch-thick bed of topsoil, soon after being cut. Immediately before placing the sod, the topsoil shall be fertilized at the rate of 600 pounds of 5-10-5 fertilizer per acre. The sod shall be laid with staggered joints, and on slopes the placing shall start at the bottom.
- E. The sod pieces shall be pressed closely together, and at the top of a slope the upper edge of the sod strips shall be turned into the soil and covered with earth. On slopes steeper than 4:1, the sod shall be held in place with pegs driven flush with the surface of the sod. The pegs shall be not more than 1 foot apart, and not less than 2 pegs shall be used for each strip of sod. The sod shall be pressed into the underlying soil by thorough tamping and rolling, after which a thin layer of topsoil, and 5-10-5 fertilizer applied at the rate of 600 pounds per acre, shall be spread evenly over all sodded areas shall be thoroughly watered.
- F. The finished surface shall be smooth, even and to the prescribed lines and contour. The sod shall be kept moist until growth is established. Sod showing evidence of dying or other defects before acceptance of the project shall be replaced.
- G. Sod shall be watered by the contractor until established. The watering of the sod may require watering trucks.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. Payment for topsoiling and sod will be made on a square yardage basis for the price bid for the item **TOPSOILING, HYDROSEED, MULCH AND SOD** in the Proposal, which the price shall

include the cost of any and all materials, labor and equipment, and all else necessary and incidental thereto for proper restoration as specified herein and as shown on the plans or as directed by the Engineer.

END OF SECTION

SECTION 330516 – RESET UTILITY VALVES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This work shall consist of the resetting of existing Utility Valves and Castings to grade during the resurfacing of the streets. All damaged, cracked, or valves and castings that are in poor condition will be replaced completely.

PART 2 – MATERIALS

2.1 PRODUCTS

- A. Portland cement concrete shall conform to the 2019 NJDOT Standard Specifications. Other materials shall conform to the following Subsections:

Clay or Shale Brick.....	Section 910.01
Concrete Block	Section 910.02
Mortar	Section 910.03
Concrete Brick.....	Section 910.04

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. The Valves shall be reset or replaced in a manner covered in the 2019 Standard Specifications for Road and Bridge Construction.

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. Payment for this item shall be made for the quantity, as measured in a per unit basis, at the price bid for the item shall be included in the cost of **RESET WATER VALVE BOX** in the Proposal, which will cover the cost of all materials, labor and equipment necessary to reset all water and manhole casting in accordance with the Plans and Specifications, or as directed by the Engineer.

END OF SECTION

SECTION 334913 – STORM AND SANITARY STRUCTURES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Storm and Sanitary Manholes (all sizes and types), Storm Field Drains, Storm Area Drains, Storm Inlets (all sizes and types) and Reset Castings shall consist of the construction of these structures, stone bedding, backfilling and backfill material, and the furnishing, installing and placing of new heads, grates, and covers.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Precast concrete storm and sanitary manholes (all sizes and types), precast concrete inlets (all sizes and types) may be used as approved by Neglia Group.
- B. All materials used in the construction of manholes (all sizes and types), inlets, and catch basins, shall conform to Section 603 - Inlets and Manholes of the 2019 NJDOT Standard Specifications. All structural reinforcing shall be epoxy-coated.
- C. All Type 'B' Inlets shall be equipped with Type-N Eco curb piece (with bicycle-safe grates) as manufactured by Campbell Foundry Pattern No. 2618 or Neenah Foundry or approved equal. Type 'A' and 'E' Inlets located within driveways or parking areas shall be equipped with bicycle-safe grates, as manufactured by Campbell Foundry Pattern No. 3425 or Neenah Foundry, or approved equal.
- D. All castings shall have the name of the Municipality, the date, and the words "Sanitary" or "Storm" stamped or cast clearly and legibly thereon. Units not so furnished will not be accepted for use on Municipal projects. Concrete blocks shall conform to the compressive strength and absorption requirements of ASTM C139.
- E. Inlets identified as "ADS" on the Drainage Plan shall be plastic "Nyloplast" inlet structures, as manufactured by Advanced Drainage Systems, Inc. ("ADS"), or approved equal.
- F. Precast concrete headwall shall be located as indicated on the Construction Documents. The headwall shall be adequately sized to accommodate the two force main pipes through which the pump station stormwater effluent will be discharged. Headwall materials and construction shall be in accordance with the Construction Documents and all applicable NJDOT and NJDEP requirements and regulations.
- G. Recycled Concrete aggregate shall conform to the requirements of the application Sections and/or Subsections of the 2019 NJDOT Standard Specifications; Course aggregate shall be broken stone or washed gravel conforming to the requirements of applicable Sections and/or Subsections of the 2019 NJDOT Standard Specifications.

PART 3 – EXECUTION

3.1 METHODS OF CONSTRUCTION

- A. Construction for manholes (all sizes and types), inlets, area drains, and catch basins shall be in accordance with applicable Sections and/or Subsections for Inlets and Manholes of the 2019 NJDOT Standard Specifications. Particular attention should be brought to precast concrete inlets and manholes, and Reconstruction and Conversion of Existing Structures, of the NJDOT Standard Specifications.
- B. Excavation and Backfilling shall be in accordance with the applicable Sections and/or Subsections of the 2019 NJDOT Standard Specifications.
- C. All precast concrete or “ADS Nyloplast” manholes and inlets with solid covers that are to be installed within the limits of the artificial turf fields or within 25 feet of any athletic field shall be installed in the “buried” condition (i.e. the cover/rim shall be installed beneath the artificial turf field and shall be provided with an adequately sized turf “plug” directly above the rim/cover with a visual identification at the surface, for future inspection and maintenance purposes).

PART 4 – QUANTITY AND PAYMENT

4.1 QUANTITY AND PAYMENT

- A. The quantity of storm structures to be reset, reconstructed, or rehabilitated for which payment shall be made, will be the number of each type thereof constructed, which prices shall include the cost of furnishing all materials, transportation, removal and disposal, excavation, sawcutting, bedding, fabric, backfilling, backfill material, roadway restoration, sheathing, bracing, dewatering, construction or reconstruction complete, as specified, all materials including new head castings and frames and ladder rungs or those claimed for the Project as prescribed, labor, equipment, and all else necessary therefore and incidental thereto for a complete system as specified herein and as shown on the plans or as directed by the Engineer.. The following bid items within the Proposal shall be used for the above work:

<u>Bid Item</u>	<u>Quantity Measure</u>
RESET INLET CASTING	UNIT
RESET MANHOLE CASTING	UNIT

No separate payment shall be made for any damaged curbs, sidewalks, aprons, or roadways for these items. Any damage incurred during construction shall be replaced to existing conditions at no additional cost to the owner.

END OF SECTION

APPENDIX A

Received Regulatory Permit Approvals

1. NJDEP – Flood Hazard Area Individual Permit
(No. 2003-20-0001.2 LUP230001, Approved September 12, 2023, Expires September 11, 2028)
2. NJDEP – Freshwater Wetlands General Permit No. 17
(No. 2003-20-0001.2 LUP210001, Approved September 12, 2023, Expires September 11, 2028)
3. Somerset-Union Soil Conservation District – Soil Erosion & Sediment Control Plan Certification
(No. 2023-6155, dated September 26, 2023)



**STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATERSHED & LAND MANAGEMENT**
Mail Code 501-02A, P.O. Box 420, Trenton, New Jersey 08625-0420
Telephone: (609) 777-0454 or Fax: (609) 777-3656
www.nj.gov/dep/landuse



PERMIT

<p>In accordance with the laws and regulations of the State of New Jersey, the Department of Environmental Protection hereby grants this permit to perform the activities described below. This permit is revocable with due cause and is subject to the terms, conditions, and limitations listed below and on the attached pages. For the purpose of this document, "permit" means "approval, certification, registration, authorization, waiver, etc." Violation of any term, condition, or limitation of this permit is a violation of the implementing rules and may subject the permittee to enforcement action.</p>		Approval Date September 12, 2023
		Expiration Date September 11, 2028
Permit Number: 2003-20-0001.2 LUP230001 2003-20-0001.2 LUP210001	Type of Approvals: Flood Hazard Area Individual Permit Freshwater Wetlands General Permit No. 17 Water Quality Certificate	Governing Rule: N.J.A.C. 7:13-1.1(b)
Permittee: Ricardo Matias Union County 2325 South Avenue Scotch Plains, New Jersey 07076	Site Location: Blocks & Lots: [103, 1] [105, 1] Municipality: Cranford Township County: Union	
Description of Authorized Activities: <p>This document authorizes the proposed replacement of an existing footbridge crossing the Rahway River on the parcels referenced above.</p> <p><i>The Department has determined that the herein approved activities meet the requirements of the FHACA rules. This approval does not obviate the local Floodplain Administrator's responsibility to ensure all development occurring within their community's Special Flood Hazard Area is compliant with the local Flood Damage Prevention Ordinance, and minimum NFIP standards, regardless of any state-issued permits. FEMA requires communities to review and permit all proposed construction or other development within their SFHA in order to participate in the NFIP.</i></p>		
Prepared by: Andrew Mazza	Received and/or Recorded by County Clerk:	
<p>If the permittee undertakes any regulated activity, project, or development authorized under this permit, such action shall constitute the permittee's acceptance of the permit in its entirety as well as the permittee's agreement to abide by the requirements of the permit and all conditions therein.</p>		
This permit is not valid unless authorizing signature appears on the last page.		

STATEMENT OF AUTHORIZED IMPACTS:

The authorized activities allow for the permittee to undertake impacts to regulated areas as described below. Additional impacts to regulated areas without prior Department approval shall constitute a violation of the rules under which this document is issued and may subject the permittee and/or property owner to enforcement action, pursuant to N.J.A.C. 7:7A-22.

FWW GP10B Minor Road Crossings	Permanent Disturbance (Acres)	Temporary Disturbance (Acres)
Freshwater wetlands	0	0
Transition areas	0	0
State open waters	0	0.087

The authorized activities allow for the permittee to undertake impacts to regulated areas as described below. Additional impacts to regulated areas without prior Department approval shall constitute a violation of the rules under which this document is issued and may subject the permittee and/or property owner to enforcement action, pursuant to N.J.A.C. 7:13-2.18.

Riparian Zone Vegetation	Area of riparian zone (Acres)
Permanent Disturbed	0.021
Temporary Disturbed	0

PRE-CONSTRUCTION CONDITIONS:

1. **Timing:** If this permit contains a condition that must be satisfied prior to the commencement of construction, the permittee shall comply with such condition(s) within the time required by the permit or, if no time specific requirement is imposed, then the permittee shall comply with such condition(s) within six months of the effective date of the permit, or provide evidence satisfactory to the Division that such condition(s) cannot be satisfied.
2. Prior to site preparation or construction onsite, the permittee shall obtain all necessary consent from affected offsite and easement property owners. No work shall occur without proper permissions.
3. Prior to the commencement of site clearing, grading, or construction onsite, the permittee shall install a sediment barrier at the limits of disturbance authorized herein which is sufficient to prevent the sedimentation of [insert watercourse] and shall serve as a physical barrier protecting all regulated areas from encroachment by construction vehicles or other soil-disturbing activities. All sediment barriers and soil erosion control measures, including the [insert measures proposed for in-stream work] (delete if not applicable), shall be kept in place and maintained throughout the duration of construction, until such time that the site is stabilized.
4. Prior to the commencement of site clearing, grading, or construction onsite, all existing trees near the project area which are not to be removed shall be marked and a protective construction fence shall be placed around each tree for the duration of construction until the site is stabilized.

SPECIAL CONDITIONS:

1. This permit authorization includes a water quality certificate to conduct activities in freshwater wetlands and/or State open waters.
2. The authorized activities shall comply with the applicable conditions set forth under N.J.A.C. 7:7-5.7, 7.17, and 20.2. Failure to comply with these conditions shall constitute a violation of the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et. seq.). Any additional un-permitted disturbance of freshwater wetlands, State open waters, or transition areas besides that shown on the approved plans shall be considered a violation of the Freshwater Wetlands Protection Act Rules unless the activity is exempt or a permit is obtained from the Department prior to the start of the disturbance.
3. The Department has determined that the riparian zone onsite along the Rahway River is 50 feet. Therefore, vegetation within 50 feet of the top of the bank shall only be disturbed in the areas specifically shown on the approved drawings.
4. In order to protect non trout species within the Rahway River from sediment generating activities, any grading, excavation, or construction activities within the stream or the banks of the stream are prohibited **May 1st through July 31st of each year**. In addition, any activity within the flood hazard area or riparian zone of this watercourse which does not minimize the introduction of sediment into said stream or which could cause more than a minimum increase in the natural level of turbidity, is also prohibited anytime but especially during this period. The Department reserves the right to require additional soil conservation measures if it becomes evident that additional measures are required to protect State regulated resources, or the right to suspend all regulated activities onsite should it be determined that the permittee has not taken proper precautions to ensure continuous compliance with this condition.
5. Regulated areas on site feature documented and suitable habitat for Indiana bat. In order to prevent adverse impacts to Indiana bat, the clearing of trees 5 inches diameter at breast height or greater may not occur on site from **April 1 to September 30**.
6. Construction equipment shall not be stored, staged, or driven within any regulated areas onsite, unless expressly approved by this permit or described on the approved plans.
7. The permittee shall take all measures necessary to ensure the authorized activities do not alter or interfere with the natural hydrology of the area.
8. Upon completion of the project, the permittee shall incorporate trail features designed to educate users about the importance of freshwater wetland and open water ecosystems.
9. In order to preserve the stream channel and any low-flow characteristics, the pilings of the footbridge shall not be placed within the stream channel.
10. The construction of the replacement Nomahegan Pedestrian Bridge shall use non-polluting wood products to protect the environment from the effects of leaching; no creosote or CCA lumber shall be used.
11. In order to minimize disturbances to vegetation, the permittee shall incorporate minor deviations in the trail alignment to avoid impacts to mature trees within the work area.

12. Upon completion of the project, the permittee shall incorporate trail features designed to educate users about the importance of freshwater wetland and open water ecosystems.
13. All temporary disturbances must be permanently discontinued within six months after they are begun, and all temporary disturbed areas must be restored to their original condition.
14. This authorization for a Permit is valid for a term not to exceed five years from the date of this permit. If the permittee wishes to continue an activity covered by the permit after the expiration date of the permit, the permittee must apply for and obtain a permit extension or a new permit, prior to the permit's expiration. If the term of the authorization exceeds the expiration date of the general permit issued by rule, and the permit upon which the authorization is based is modified by rule to include more stringent standards or conditions, or is not reissued, the applicant must comply with the requirements of the new regulations by applying for a new GP authorization or an Individual permit.
15. Any new, reconstructed, enlarged, or elevated structure within a flood hazard area shall be secured to resist flotation, collapse, and displacement due to hydrostatic and hydrodynamic forces from floodwaters.
16. Construction equipment shall not be stored, staged or driven within any channel, freshwater wetland or transition area, unless expressly approved by this permit and/or described on the approved plans.
17. All sediment barriers and other soil erosion control measures shall be installed prior to commencing any clearing, grading or construction onsite, and shall be maintained in proper working condition throughout the entire duration of the project.
18. For the purposes of this permit, the Department has determined that this project is not a Major Development as defined in the Stormwater Management rules at N.J.A.C. 7:8-1.2. Therefore, the Department did not review the proposed project for compliance with these rules.
19. Construction may only occur while the stream area is dry or in a de-watered condition. No work may be performed where the stream channel is wet.
20. All excavated and dredged material must be disposed of in a lawful manner outside of any flood hazard area, riparian zone, open water, freshwater wetland, and adjacent transition area, and in such a way as to not interfere with the positive drainage of the receiving area.

STANDARD CONDITIONS:

1. The issuance of a permit shall in no way expose the State of New Jersey or the Department to liability for the sufficiency or correctness of the design of any construction or structure(s). Neither the State nor the Department shall, in any way, be liable for any loss of life or property that may occur by virtue of the activity or project conducted as authorized under a permit.
2. The issuance of a permit does not convey any property rights or any exclusive privilege.
3. The permittee shall obtain all applicable Federal, State, and local approvals prior to commencement of regulated activities authorized under a permit.

4. A permittee conducting an activity involving soil disturbance, the creation of drainage structures, or changes in natural contours shall obtain any required approvals from the Soil Conservation District or designee having jurisdiction over the site.
5. The permittee shall take all reasonable steps to prevent, minimize, or correct any adverse impact on the environment resulting from activities conducted pursuant to the permit, or from noncompliance with the permit.
6. The permittee shall immediately inform the Department of any unanticipated adverse effects on the environment not described in the application or in the conditions of the permit. The Department may, upon discovery of such unanticipated adverse effects, and upon the failure of the permittee to submit a report thereon, notify the permittee of its intent to suspend the permit.
7. The permittee shall immediately inform the Department by telephone at (877) 927-6337 (WARN DEP hotline) of any noncompliance that may endanger public health, safety, and welfare, or the environment. The permittee shall inform the Watershed & Land Management by telephone at (609) 777-0454 of any other noncompliance within two working days of the time the permittee becomes aware of the noncompliance, and in writing within five working days of the time the permittee becomes aware of the noncompliance. Such notice shall not, however, serve as a defense to enforcement action if the project is found to be in violation of this chapter. The written notice shall include:
 - i. A description of the noncompliance and its cause;
 - ii. The period of noncompliance, including exact dates and times;
 - iii. If the noncompliance has not been corrected, the anticipated length of time it is expected to continue; and
 - iv. The steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
8. Any noncompliance with a permit constitutes a violation of this chapter and is grounds for enforcement action, as well as, in the appropriate case, suspension and/or termination of the permit.
9. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the authorized activity in order to maintain compliance with the conditions of the permit.
10. The permittee shall employ appropriate measures to minimize noise where necessary during construction, as specified in N.J.S.A. 13:1G-1 et seq. and N.J.A.C. 7:29.
11. The issuance of a permit does not relinquish the State's tidelands ownership or claim to any portion of the subject property or adjacent properties.
12. The issuance of a permit does not relinquish public rights to access and use tidal waterways and their shores.
13. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to:

- i. Enter upon the permittee's premises where a regulated activity, project, or development is located or conducted, or where records must be kept under the conditions of the permit;
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
 - iii. Inspect, at reasonable times, any facilities, equipment, practices, or operations regulated or required under the permit. Failure to allow reasonable access under this paragraph shall be considered a violation of this chapter and subject the permittee to enforcement action; and
 - iv. Sample or monitor at reasonable times, for the purposes of assuring compliance or as otherwise authorized by the Federal Act, by the Freshwater Wetlands Protection Act, or by any rule or order issued pursuant thereto, any substances or parameters at any location.
14. The permittee shall not cause or allow any unreasonable interference with the free flow of a regulated water by placing or dumping any materials, equipment, debris or structures within or adjacent to the channel while the regulated activity, project, or development is being undertaken. Upon completion of the regulated activity, project, or development, the permittee shall remove and dispose of in a lawful manner all excess materials, debris, equipment, and silt fences and other temporary soil erosion and sediment control devices from all regulated areas.
 15. The permittee and its contractors and subcontractors shall comply with all conditions, site plans, and supporting documents approved by the permit.
 16. All conditions, site plans, and supporting documents approved by a permit shall remain in full force and effect, so long as the regulated activity, project, or development, or any portion thereof, is in existence, unless the permit is modified pursuant to the rules governing the herein approved permits.
 17. The permittee shall perform any mitigation required under the permit in accordance with the rules governing the herein approved permits.
 18. If any condition or permit is determined to be legally unenforceable, modifications and additional conditions may be imposed by the Department as necessary to protect public health, safety, and welfare, or the environment.
 19. Any permit condition that does not establish a specific timeframe within which the condition must be satisfied (for example, prior to commencement of construction) shall be satisfied within six months of the effective date of the permit.
 20. A copy of the permit and all approved site plans and supporting documents shall be maintained at the site at all times and made available to Department representatives or their designated agents immediately upon request.
 21. The permittee shall provide monitoring results to the Department at the intervals specified in the permit.
 22. A permit shall be transferred to another person only in accordance with the rules governing the herein approved permits.
 23. A permit can be modified, suspended, or terminated by the Department for cause.

24. The submittal of a request to modify a permit by the permittee, or a notification of planned changes or anticipated noncompliance, does not stay any condition of a permit.
25. Where the permittee becomes aware that it failed to submit any relevant facts in an application, or submitted incorrect information in an application or in any report to the Department, it shall promptly submit such facts or information.
26. The permittee shall submit email notification to the Bureau of Coastal & Land Use Compliance & Enforcement at CLU_tomsriver@dep.nj.gov at least 3 days prior to commencement of site preparation and/or regulated activities, whichever comes first. The notification shall include proof of completion of all pre-construction conditions, including proof of recording of permits, approved plans and/or conservation easements, if required. The permittee shall allow an authorized Bureau representative on the site to inspect to ensure compliance with this permit.
27. The permittee shall record the permit, including all conditions listed therein, with the Office of the County Clerk (the Registrar of Deeds and Mortgages, if applicable) of each county in which the site is located. The permit shall be recorded within 30 calendar days of receipt by the permittee, unless the permit authorizes activities within two or more counties, in which case the permit shall be recorded within 90 calendar days of receipt. Upon completion of all recording, a copy of the recorded permit shall be forwarded to Watershed & Land Management at the address listed on page one of this permit.

APPROVED PLANS:

The drawings hereby approved consist of five (5) sheets prepared by Neglia Engineering Associates, dated November 8, 2021, last revised September 7, 2023, entitled:

**“NOMAHEGAN PEDESTRIAN BRIDGE OVER THE RAHWAY RIVER (U.C. PROJECT
NO. 2016-038) TOWNSHIP OF CRANFORD UNION COUNTY NEW JERSEY”**

“SITE PLAN”, Sheet No. 3.00;

“GRADING PLAN AND PROPOSED BRIDGE PROFILE”, Sheet No. 3.01;

“FLOOD HAZARD AREA PERMITTING PLAN”, Sheet No.5.01;

“FRESHWATER WETLANDS PERMITTING PLAN”, Sheet No. 5.00; and

“CONSTRUCTION DETAILS II”, Sheet No. 6.01.

APPEAL OF DECISION:

Any person who is aggrieved by this decision may submit an adjudicatory hearing request within 30 calendar days after public notice of the decision is published in the DEP Bulletin (available at www.nj.gov/dep/bulletin). If a person submits the hearing request after this time, the Department shall deny the request. The hearing request must include a completed copy of the Administrative Hearing Request Checklist (available at www.nj.gov/dep/landuse/forms.html). A person requesting an adjudicatory hearing shall submit the original hearing request to: NJDEP Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, Mail Code 401-04L, P.O. Box 402, 401 East State Street, 7th Floor, Trenton, NJ 08625-0402. Additionally, a copy of the hearing request shall be submitted to the

Director of Watershed & Land Management at the address listed on page one of this permit. In addition to your hearing request, you may file a request with the Office of Dispute Resolution to engage in alternative dispute resolution. Please see www.nj.gov/dep/odr for more information on this process.

If you need clarification on any section of this permit or conditions, please contact Watershed & Land Management's Technical Support Call Center at (609) 777-0454.

Approved By:



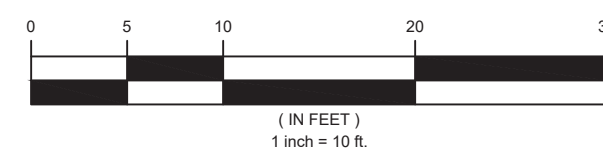
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contois
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Dennis Contois, Supervisor
Watershed & Land Management

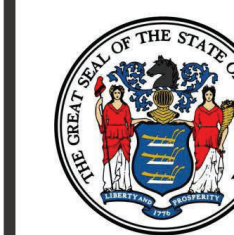
- c: Municipal Clerk, Cranford Township
- Municipal Construction Official, Cranford Township
- Agent (original) – David Atkinson, PE, Neglia Engineering Associates



GRAPHIC SCALE



MH
RIM: 63.38
INW(1): 60.20 (18" RCP)
INW(2): 60.20 (18" RCP)



APPROVED

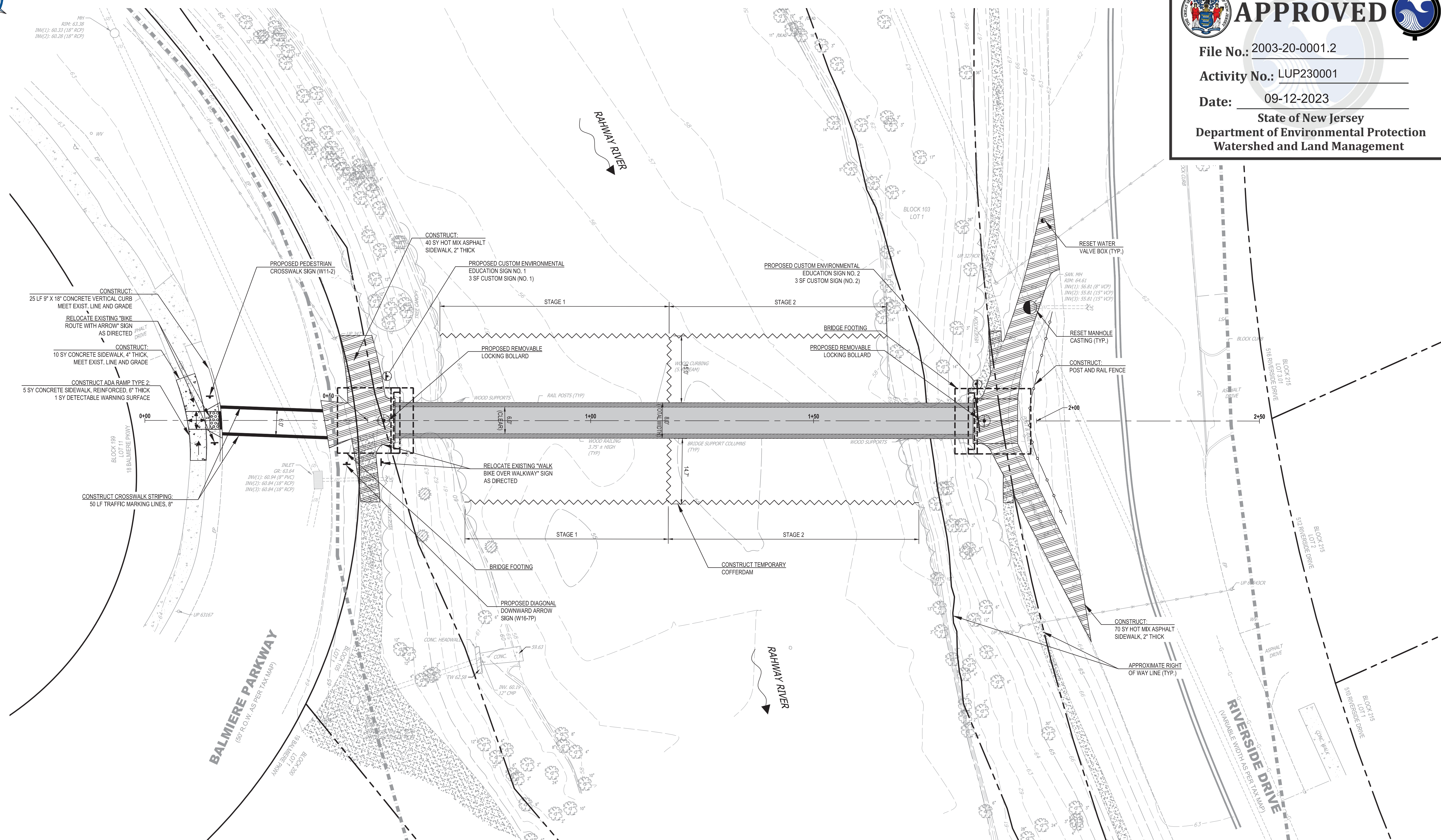


File No.: 2003-20-0001.2

Activity No.: LUP230001

Date: 09-12-2023

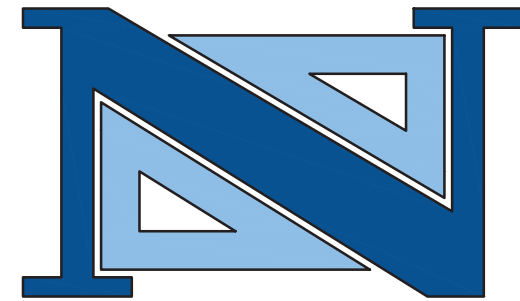
State of New Jersey
Department of Environmental Protection
Watershed and Land Management



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CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS			DRAWN	DESIGNED	CHECKED
NO.	DATE	DESCRIPTION			
1.	2022/03/30	REVISED PER NJDEP COMMENTS	J.V.	J.V.	D.A.
2.	2022/08/04	REVISED PER NJDEP PERMIT RULE 23	J.V.	J.V.	D.A.
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7.	2023/09/07	REVISED PER NJDEP COMMENTS	J.V.	J.V.	N.H.



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THOMAS R. SOLFARO, P.E., C.M.E.
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 License No. 41635
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NEGLIA ENGINEERING ASSOCIATES
 34 PARK AVENUE
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 LYNDHURST NEW JERSEY
 FAX: 201-939-0846
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 PROFESSIONAL ENGINEER
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 PROFESSIONAL LAND SURVEYOR
 N.J. LICENSE NO. 38604
 PROFESSIONAL PLANNER
 N.J. LICENSE NO. 33LI00569800

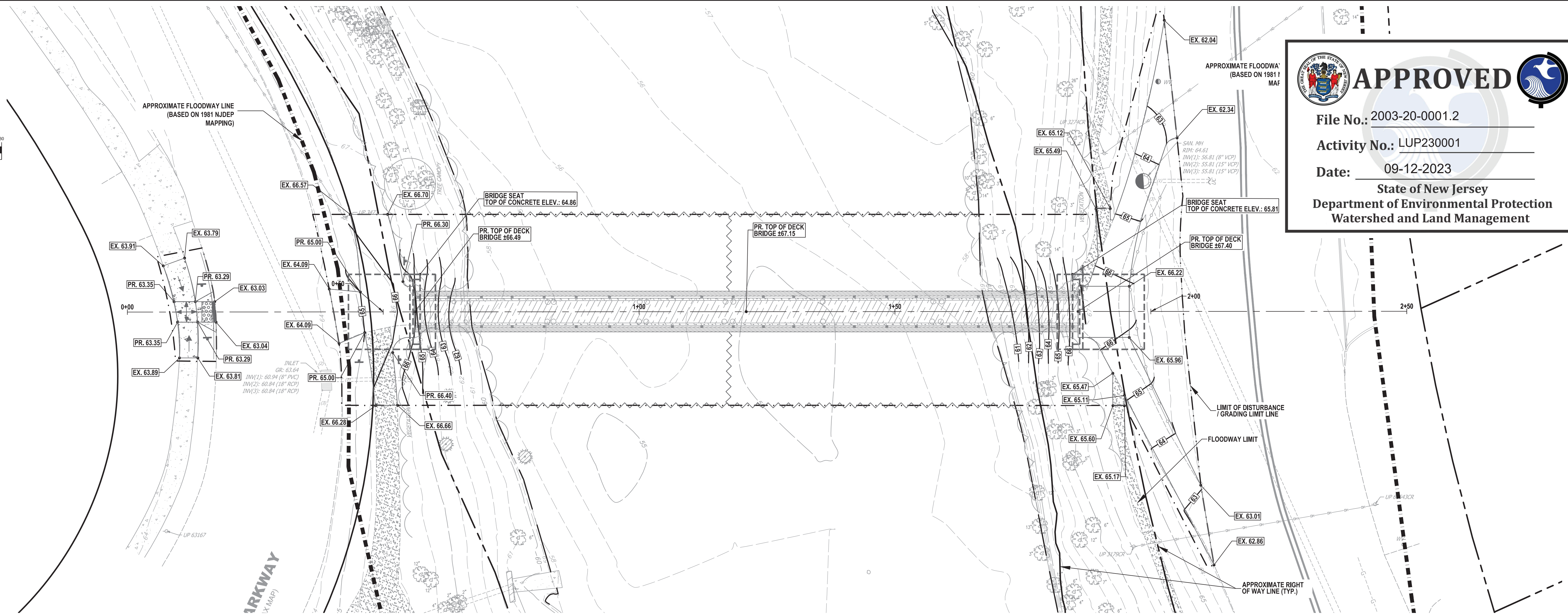
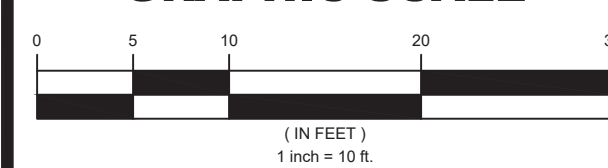
SITE PLAN
NOMAHEGAN PEDESTRIAN BRIDGE
OVER THE RAHWAY RIVER (U.C. PROJECT NO. 2016-038)
TOWNSHIP OF CRANFORD
UNION COUNTY
NEW JERSEY
 DRAWN BY: J.V. CHECKED BY: E.M.J. PROJECT NO.: UNIOCTY17.011 SHEET NO.: 3.00
 DESIGNED BY: E.M.J. SCALE: 1" = 10' PAGE: DATE: NOVEMBER 8, 2021

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GRAPHIC SCALE



APPROVED

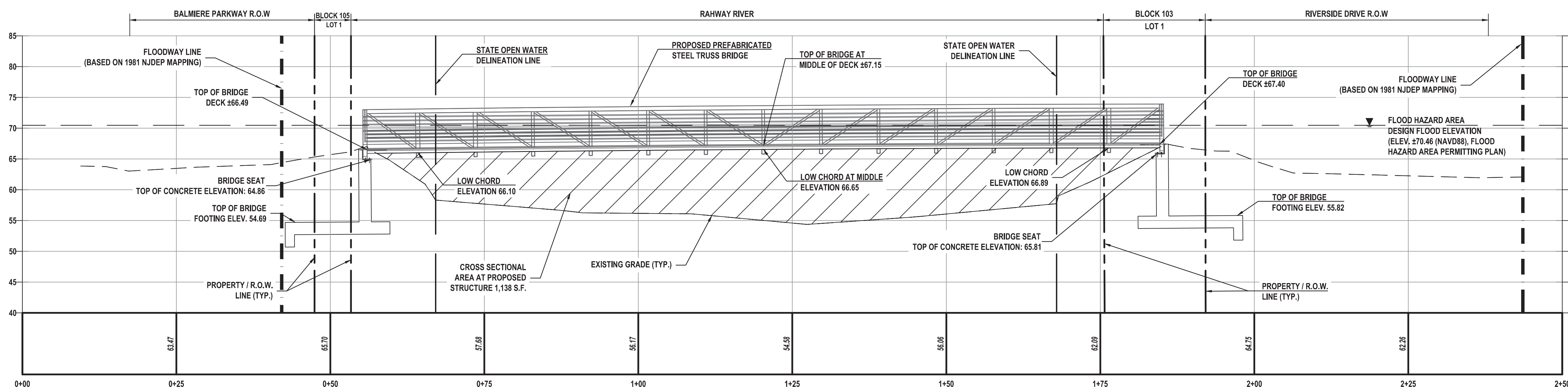
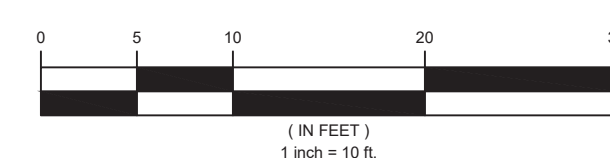
File No.: 2003-20-0001.2

Activity No.: LUP230001

Date: 09-12-2023

State of New Jersey
Department of Environmental Protection
Watershed and Land Management

HORIZONTAL & VERTICAL SCALE



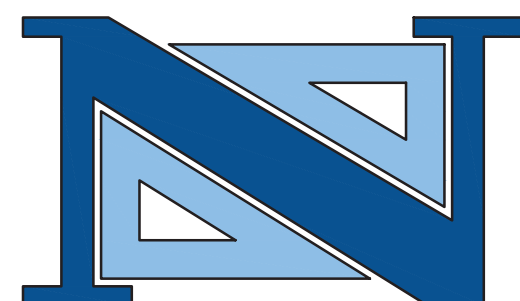
NOMAHEGAN PEDESTRIAN BRIDGE - PROPOSED PROFILE

NOTE: 1. THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

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7.	2023/09/07	REVISED PER NJDEP COMMENTS	J.V.	J.V.	N.H.



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PROFESSIONAL PLANNER
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**GRADING PLAN AND PROPOSED BRIDGE PROFILE
 NOMAHEGAN PEDESTRIAN BRIDGE
 OVER THE RAHWAY RIVER (U.C. PROJECT NO. 2016-038)
 TOWNSHIP OF CRANFORD
 UNION COUNTY
 NEW JERSEY**

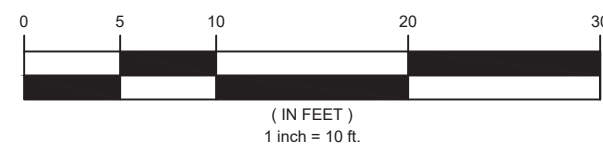
DRAWN BY: J.V.
 DESIGNED BY: E.M.J.
 FIELD BOOK NO.:

CHECKED BY: E.M.J.
 SCALE: 1" = 10'
 PAGE:

PROJECT NO.: UNIOCTY17.011
 SHEET NO.: 3.01
 DATE: NOVEMBER 8, 2021



GRAPHIC SCALE



PERMITTING PLAN LEGEND

	R.O.W. / PROPERTY LINE (APPROX.)
	STATE OPEN WATER DELINEATION LINE
	LIMIT OF DISTURBANCE LINE
	PROPOSED TEMPORARY STATE OPEN WATER DISTURBANCE AREA
	TREE REMOVAL

FACW WETLAND MEADOW MIX - ERNMX-122 SPECIES BREAKDOWN

Botanical Name	Common Name
23.20 % <i>Carex vulpinoidea</i> , PA Ecotype	Fox Sedge, PA Ecotype
22.00 % <i>Carex lurida</i> , PA Ecotype	Lund Sedge, PA Ecotype
20.00 % <i>Cyperus virginicus</i> , PA Ecotype	Marginal Wildrice, PA Ecotype
14.00 % <i>Carex scoparia</i> , PA Ecotype	Blunt Bloom Sedge, PA Ecotype
3.00 % <i>Juncus effusus</i>	Soft Rush
3.00 % <i>Verbena hastata</i> , PA Ecotype	Blue Vervain, PA Ecotype
2.00 % <i>Ackelia incarnata</i> , PA Ecotype	Swamp Milkweed, PA Ecotype
2.00 % <i>Carex intumescens</i> , PA Ecotype	Star Sedge, PA Ecotype
2.00 % <i>Zizia aurea</i> , PA Ecotype	Golden Alexanders, PA Ecotype
1.00 % <i>Aster novae-angliae</i> , PA Ecotype	New England Aster, PA Ecotype
1.00 % <i>Juncus tenuis</i> , PA Ecotype	Foothill Rush, PA Ecotype
1.00 % <i>Verbena strictifolia</i> , PA Ecotype	White Vervain, PA Ecotype
0.70 % <i>Solidago serotina</i> , PA Ecotype	Wormleaved Goldenrod, PA Ecotype
0.50 % <i>Aster lanceolatus</i>	Lance Leaved Aster
0.50 % <i>Aster punctatus</i> , PA Ecotype	Purplestem Aster, PA Ecotype
0.50 % <i>Aster novae-angliae</i> , PA Ecotype	Woods Yellow Aster, PA Ecotype
0.50 % <i>Carex crinita</i> , PA Ecotype	Fringed Sedge, PA Ecotype
0.50 % <i>Lobelia spicata</i> , PA Ecotype	Great Blue Lobelia, PA Ecotype
0.50 % <i>Mimulus ringens</i> , PA Ecotype	Square Stemmed Monkeyflower, PA Ecotype
0.40 % <i>Carex alpestris</i> , PA Ecotype	Wet Sedge, PA Ecotype
0.40 % <i>Eupatorium perfoliatum</i> , PA Ecotype	Bonset, PA Ecotype
0.30 % <i>Helianthus autumnalis</i> , PA Ecotype	Common Sunflower, PA Ecotype
0.30 % <i>Lythrum americanum</i> , PA Ecotype	American Water Hyacinth, PA Ecotype
0.30 % <i>Scirpus atrovirens</i> , PA Ecotype	Green Bulrush, PA Ecotype
0.30 % <i>Scirpus cespitosus</i> , PA Ecotype	Woolgrass, PA Ecotype
0.10 % <i>Alyssa autocolorum</i> , PA Ecotype	Red Throat, PA Ecotype

NOTE: The diverse species provide pollinator habitat and erosion control in wet meadows. Excellent for facultative wetland mitigation sites. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

NOTE: 1. CONTRACTOR TO USE ERNST SEED MIX: ERNMX-122: FACW WETLAND MEADOW MIX TO RESTORE ALL DISTURBED AREA.

PROPOSED FRESHWATER WETLANDS AREA DISTURBANCES

FRESHWATER WETLANDS GENERAL PERMIT No. 17 (TRAILS AND BOARDWALKS)

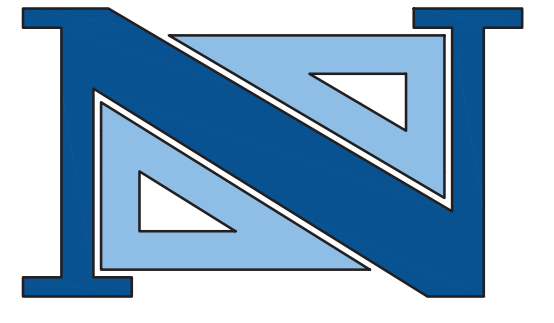
- NJAC 7:7A-7.17(b): TOTAL AREA OF FRESHWATER WETLANDS, TRANSITION AREAS, AND/OR STATE OPEN WATERS DISTURBED UNDER GENERAL PERMIT 17 SHALL NOT EXCEED ONE-QUARTER ACRE, EXCEPT THAT THIS LIMIT SHALL NOT APPLY TO A SITE THAT IS PUBLICLY OWNED.
- TEMPORARY STATE OPEN WATER DISTURBANCE AREA = 0.087 ACRES*
*TOTAL PROPOSED DISTURBANCE AREA = 0.087 ACRES < 0.25 ACRES
*THE PROPERTIES ARE PUBLICLY-OWNED BY UNION COUNTY. THE ONE-QUARTER ACRE LIMIT DOES NOT APPLY TO THIS PROJECT.
- NJAC 7:7A-7.17(c): THE TRAIL OR BOARDWALK SHALL BE NO WIDER THAN SIX FEET, UNLESS THE APPLICANT DEMONSTRATES THAT IT MUST BE WIDER IN ORDER TO COMPLY WITH THE BARRIER FREE SUBCODE OF THE STANDARD UNIFORM CONSTRUCTION CODE, N.J.A.C. 5:23-7.
- THE PROPOSED FOOTBRIDGE WILL HAVE A TOTAL WIDTH OF EIGHT FEET WITH A CLEAR WIDTH OF SIX FEET.

NOTES:
1. THE SITE IS LOCATED WITHIN ZONE AE, PER THE FEMA FLOOD INSURANCE RATE MAP (ENCLOSED HEREIN), UNION COUNTY, NEW JERSEY, MAP NUMBER 34039C0021F EFFECTIVE SEPTEMBER 20, 2006.
2. THE SITE LIES WITHIN THE FLOOD HAZARD AREA OF THE RAHWAY RIVER, AS DELINEATED BY NJDEP WITH A BASE FLOOD HAZARD ELEVATION OF 71.50' (NGVD 29), UTILIZING A CONVERSION FACTOR OF -1.04'. THE NJHAD FLOOD ELEVATION IS ESTABLISHED AT ±70.46' (NAVD88) AND IS THE HIGHEST PUBLISHED FLOOD HAZARD AREA ELEVATION AT THIS LOCATION.

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PROFESSIONAL ENGINEER
N.J. LICENSE NO. 44556
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N.J. LICENSE NO. 41635

A PROJECT OF
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NEW JERSEY
LYNDHURST
FAX: 201-939-0846
E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 38604

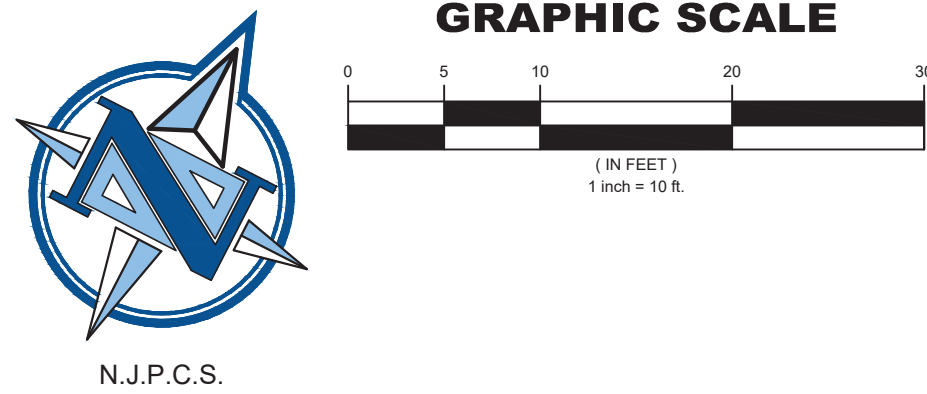
PROFESSIONAL LAND SURVEYOR
N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER
N.J. LICENSE NO. 33LI000569800

**FRESHWATER WETLANDS PERMITTING PLAN
NOMAHEGAN PEDESTRIAN BRIDGE
OVER THE RAHWAY RIVER (U.C. PROJECT NO. 2016-038)
TOWNSHIP OF CRANFORD
UNION COUNTY
NEW JERSEY**

DRAWN BY: J.V. CHECKED BY: E.M.J. PROJECT NO.: UNIOCTY17.011 SHEET NO.: 5.00
DESIGNED BY: E.M.J. SCALE: 1" = 10' PAGE: DATE: NOVEMBER 8, 2021
FIELD BOOK NO.: DATE: NOVEMBER 8, 2021

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THE ENTIRE PROJECT AREA LIES WITHIN THE FLOOD HAZARD AREA (ELEVATION ±70.46', NAVD88) OF THE RAHWAY RIVER

APPROVED

File No.: 2003-20-0001.2

Activity No.: LUP230001

Date: 09-12-2023

State of New Jersey
Department of Environmental Protection
Watershed and Land Management

PERMITTING PLAN LEGEND

	R.O.W. / PROPERTY LINE (APPROX.)
	TOP OF BANK LINE
	LIMIT OF DISTURBANCE LINE
	RIPARIAN ZONE LINE
	FLOODWAY LINE
	TEMPORARY VEGETATION REMOVAL
	TREE REMOVAL

FACW WETLAND MEADOW MIX - ERNMX-122 SPECIES BREAKDOWN

Botanical Name	Common Name
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20.00 % Elymus virginicus, PA Ecotype	Virginia Wildrye, PA Ecotype
14.00 % Carex acutata, PA Ecotype	Blunt Brown Sedge, PA Ecotype
3.00 % Juncus effusus	Soft Rush
2.00 % Verbena hastata, PA Ecotype	Blue Vervain, PA Ecotype
2.00 % Asclepias incarnata, PA Ecotype	Swamp Milkweed, PA Ecotype
2.00 % Carex inumescens, PA Ecotype	Slat Sedge, PA Ecotype
2.00 % Zizia aurea, PA Ecotype	Golden Alexander, PA Ecotype
1.00 % Aster novae-angliae, PA Ecotype	New England Aster, PA Ecotype
1.00 % Juncus tenuis, PA Ecotype	Rhith Rush, PA Ecotype
1.00 % Verbena urticifolia, PA Ecotype	White Vervain, PA Ecotype
0.70 % Solidago rigida, PA Ecotype	Wrinkleleaf Goldenrod, PA Ecotype
0.50 % Aster divaricatus	Lance Leaved Aster
0.50 % Aster purpureus, PA Ecotype	Purplestem Aster, PA Ecotype
0.50 % Bidens cernua, PA Ecotype	Nodding Bur Marigold, PA Ecotype
0.50 % Carex crinita, PA Ecotype	Fringed Sedge, PA Ecotype
0.50 % Lobelia siphilitica, PA Ecotype	Great Blue Lobelia, PA Ecotype
0.50 % Mimulus ringens, PA Ecotype	Square Stemmed Monkeyflower, PA Ecotype
0.40 % Carex stylata, PA Ecotype	Awl Sedge, PA Ecotype
0.40 % Equatorium perfoliatum, PA Ecotype	Boneset, PA Ecotype
0.30 % Helianthus autumnalis, PA Ecotype	Common Sneezeweed, PA Ecotype
0.30 % Lycopus americanus, PA Ecotype	American Water Horehound, PA Ecotype
0.30 % Scirpus atrovirens, PA Ecotype	Green Bulrush, PA Ecotype
0.30 % Scirpus cyperinus, PA Ecotype	Woolgrass, PA Ecotype
0.10 % Alisma subcordatum, PA Ecotype	Mud Plantain, PA Ecotype

Grasses & Grass-like Species - Herbaceous Perennial; Herbaceous Flowering Species - Herbaceous Perennial; Wet Meadows & Wetlands

The diverse species provide pollinator habitat and erosion control in wet meadows. Excellent for facultative wetland mitigation sites. The formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

NOTE:
1. CONTRACTOR TO USE ERNST SEED MIX: ERNMX-122: "FACW WETLAND MEADOW MIX" TO RESTORE ALL DISTURBED AREA.

PROPOSED FLOOD HAZARD AREA DISTURBANCES

FLOOD HAZARD AREA INDIVIDUAL PERMIT

- N.J.A.C. 7:13-10.1(a): A PERSON SHALL OBTAIN AN INDIVIDUAL PERMIT UNDER THIS SUBCHAPTER IN ORDER TO UNDERTAKE ANY ACTIVITY THAT DOES NOT MEET THE REQUIREMENTS OF A PERMIT-BY-RULE PURSUANT TO N.J.A.C. 7:13-7, AND AUTHORIZATION UNDER A GENERAL PERMIT-BY-CERTIFICATION PURSUANT TO N.J.A.C. 7:13-8, AND AUTHORIZATION UNDER A GENERAL PERMIT PURSUANT TO N.J.A.C. 7:13-9, OR A COASTAL PERMIT UNDER THE CIRCUMSTANCES SET FORTH AT N.J.A.C. 7:13-2.1(b)(6);

NOTED:

- N.J.A.C. 7:13-7.10(b)(1): THE APPLICABLE AREA-SPECIFIC REQUIREMENTS AT N.J.A.C. 7:13-11;
- ALL APPLICABLE AREA-SPECIFIC REQUIREMENTS AT N.J.A.C. 7:13-11 WILL BE MET.
- N.J.A.C. 7:13-7.10(b)(2): THE APPLICABLE ACTIVITY-SPECIFIC REQUIREMENTS AT N.J.A.C. 7:13-12;
- ALL APPLICABLE AREA-SPECIFIC REQUIREMENTS AT N.J.A.C. 7:13-12 WILL BE MET.

FLOOD HAZARD AREA INDIVIDUAL PERMIT - 50-FOOT RIPARIAN ZONE

- FOOTBRIDGE**
 - 1.1.1. TOTAL PROPOSED PERMANENT RIPARIAN ZONE DISTURBANCE= 935 SF / 0.021 AC.
 - 1.1.2. MAXIMUM PERMITTED DISTURBANCE= 1,000 SF / 0.023 AC.
 - 1.1.3. DISTURBANCE FOR FOOTBRIDGE IS LESS THAN THE MAXIMUM (N.J.A.C. 7:13-11.2(u)).

NOTES:

- THE SITE IS LOCATED WITHIN ZONE AE, PER THE FEMA FLOOD INSURANCE RATE MAP (ENCLOSED HEREIN), UNION COUNTY, NEW JERSEY, MAP NUMBER 34039C0021F EFFECTIVE SEPTEMBER 20, 2006.
- THE SITE LIES WITHIN THE FLOOD HAZARD AREA OF THE RAHWAY RIVER, AS DELINEATED BY NJDEP WITH A BASE FLOOD HAZARD ELEVATION OF 71.50' (NGVD 29), UTILIZING A CONVERSION FACTOR OF -1.04'. THE NJFHADF ELEVATION IS ESTABLISHED AT ±70.46' (NAVD88) AND IS THE HIGHEST PUBLISHED FLOOD HAZARD AREA ELEVATION AT THIS LOCATION.
- PER USGS STREAMSTATS REPORT THE DRAINAGE AREA FOR THE WATERCOURSE IN QUESTION IS 32.4 SQUARE MILES. PER N.J.A.C. 7:13 THE DEFINITION FOR THE TOP OF BANK IS "THE NORMAL WATER SURFACE LIMIT, FOR A LINEAR FLUVIAL REGULATED WATER THAT CONTAINS WATER AT ALL TIMES AND HAS A DRAINAGE AREA OF 10 SQUARE MILES OR MORE."

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CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

Digitally signed by **DAVID R. ATKINSON, P.E., C.M.E.** and **THOMAS R. SOLFARO, P.E., C.M.E.**

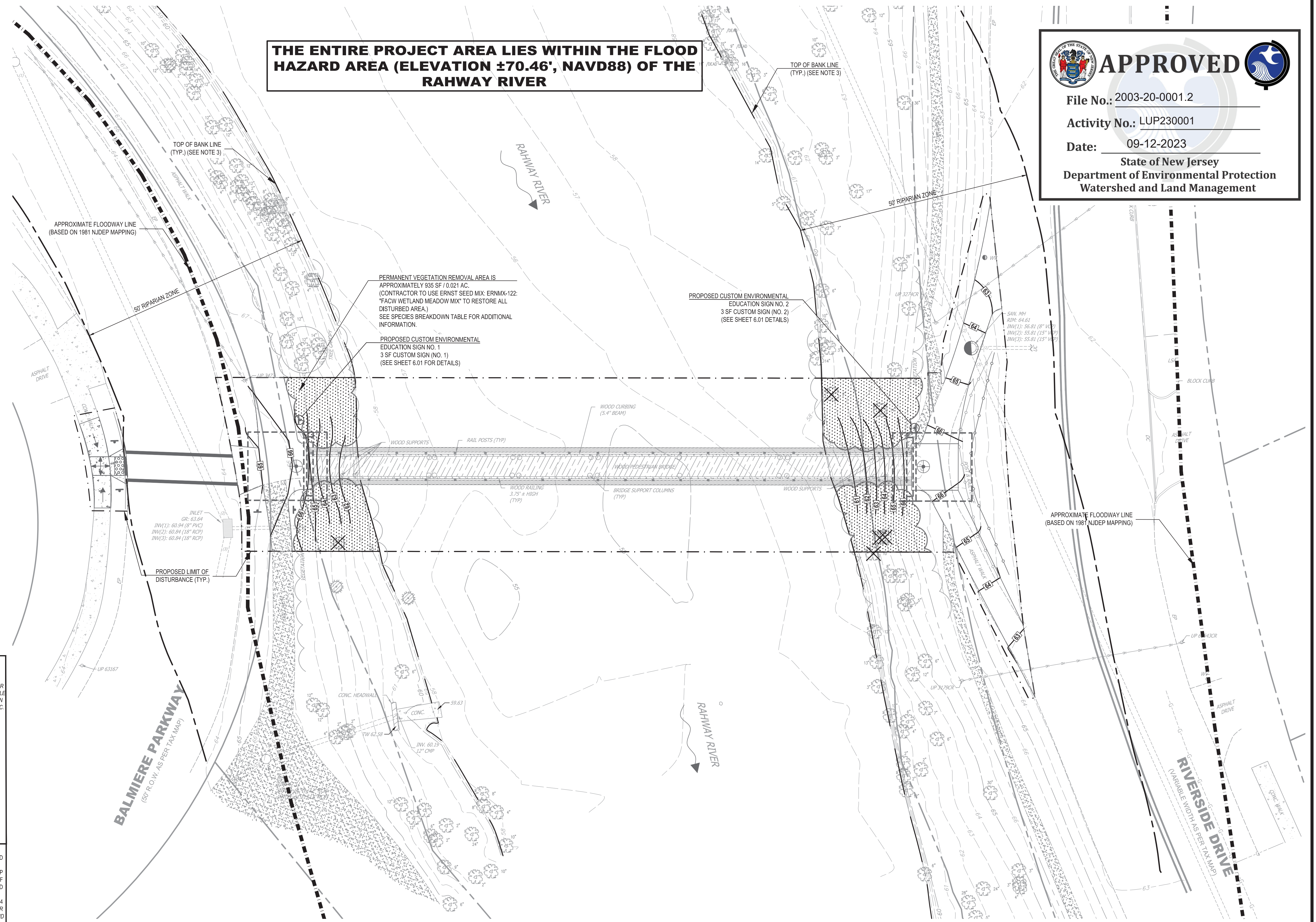
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE, LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM

MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 33LI000569800

DATE: 2023.09.08 09:35:35

FLOOD HAZARD AREA PERMITTING PLAN
NOMAHEGAN PEDESTRIAN BRIDGE
OVER THE RAHWAY RIVER (U.C. PROJECT NO. 2016-038)
TOWNSHIP OF CRANFORD
UNION COUNTY
NEW JERSEY

DRAWN BY: J.V. CHECKED BY: E.M.J. PROJECT NO.: UNIOCTY17.011 SHEET NO.: 5.01
DESIGNED BY: E.M.J. SCALE: 1" = 10' FIELD BOOK NO.: DATE: NOVEMBER 6, 2021





SOMERSET - UNION SOIL CONSERVATION DISTRICT

Somerset County 4-H Center
308 Milltown Road • Bridgewater, NJ 08807
(908) 526-2701 Fax (908) 575-3977

September 26, 2023

Union County
Attn: Ricardo Matias, P.E., C.F.M.
2325 South Avenue
Scotch Plains, NJ 07076

**RE: Nomahegan Pedestrian Bridge
(Union County Project)
(plan revised 9/7/2023)
Block 103 & 105, Lot 1,1 River ROW
Cranford Township
Application #2023-6155**

Dear Sir or Madam:

The Somerset-Union Soil Conservation District has reviewed the above erosion control plan and certifies that the plan is in accordance with the N.J. Erosion and Sediment Control Act, Chapter 251, P.L. 1975.

This approval is limited to the soil erosion and sedimentation controls specified in this plan. It is not authorization to engage in the proposed land use unless such use has been previously approved by the municipality or other controlling agency.

All revisions and municipal renewals of this project will require resubmission and approval by the District. Any conveyance of the project (or portion thereof) will transfer full responsibility for compliance to subsequent owner(s). The District must be notified in writing of any change of ownership.

The District requires written notification prior to the start of land disturbance. Please be advised that failure to do so is considered a violation of State Law and a fine will be imposed.

If there are any questions, please feel free to call our office.

Very truly yours,

SOMERSET-UNION S.C.D.

A handwritten signature in black ink that reads "Mark Kirby".

Mark Kirby
District Supervisor

MK/FC/JK J:\Access\MASTERS\CertLet-35-SU.doc

Enclosure

cc: Cranford Twp. Const. Off.
Mun. Planning Board
Mun. Engineer
Neglia Engineering



SOMERSET - UNION SOIL CONSERVATION DISTRICT
308 Milltown Road • Bridgewater, NJ 08807
(908) 526-2701 • Fax (908) 575-3977

72 HOUR START OF LAND DISTURBANCE

APPLICATION NO. 2023-6155

PROJECT NAME _____

PROJECT ADDRESS _____

AGENT RESPONSIBLE _____ AGENT TEL. _____

AGENT ADDRESS _____

JOB SUPER (ON SITE) _____ COMPANY NAME _____

SUPER ADDRESS _____

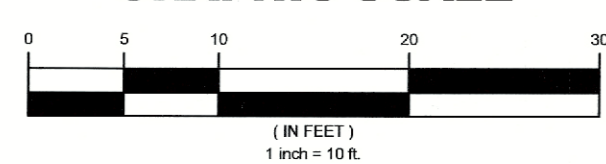
OFFICE OR TRAILER # _____ CELL # _____ FAX # _____

EMAIL ADDRESS _____ ANTICIPATED STARTING DATE _____

REMINDER: IT IS THE RESPONSIBILITY OF THE AGENT TO NOTIFY THE DISTRICT OF ANY CHANGES IN ON-SITE CONTACTS

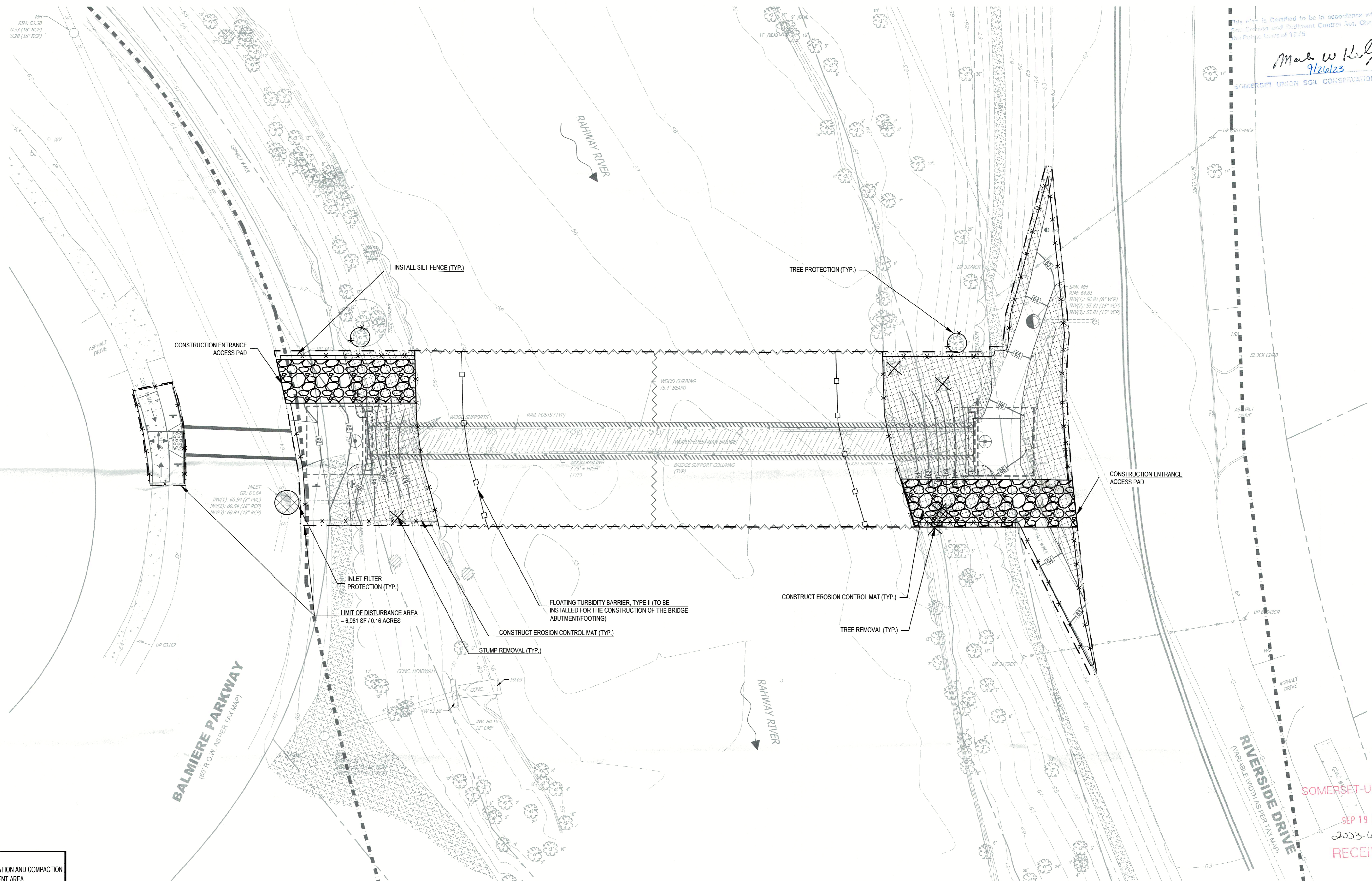


GRAPHIC SCALE



(IN FEET)
1" = 10'

This plan is Certified to be in accordance with the N.J. Soil Erosion and Sediment Control Act, Chapter 251 of the Public Laws of 1975
Mark W. Kelly
9/26/23
SOMERSET UNION SOIL CONSERVATION DISTRICT

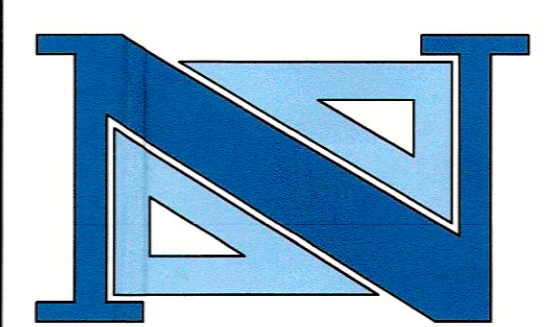


SOIL DE-COMPACTION NOTE:
1. THIS PROJECT IS EXEMPT FROM SOIL DE-COMPACTION REMEDIATION AND COMPACTION TESTING, SINCE IT IS LOCATED WITHIN AN URBAN REDEVELOPMENT AREA.

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DAVID R. ATKINSON, P.E., C.M.E.
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THOMAS R. SOLFARO, P.E., C.M.E.
PROFESSIONAL ENGINEER
N.J. LICENSE NO. 41635

David R. Atkinson

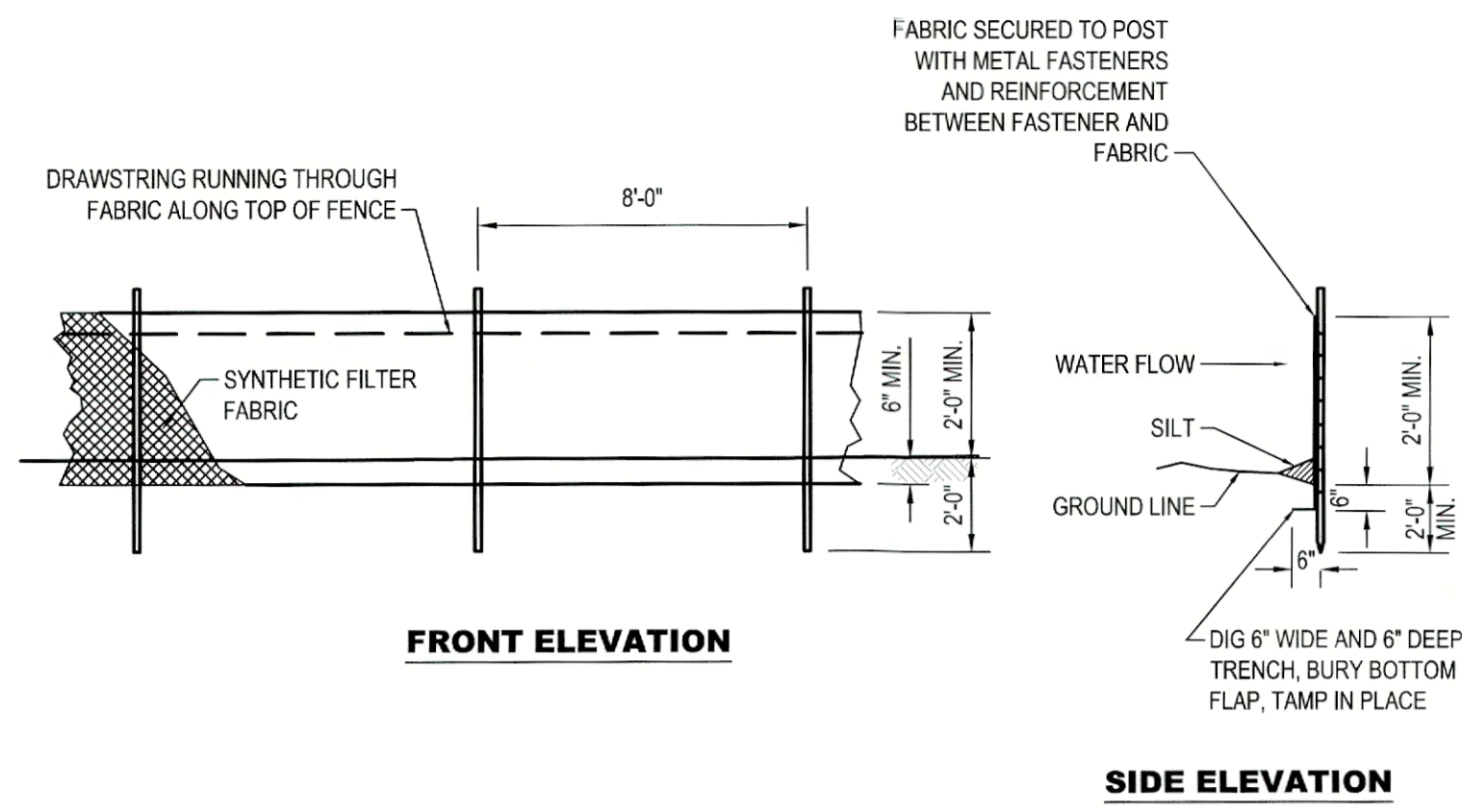
A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
34 PARK AVENUE
LYNDHURST, NEW JERSEY
TEL: 201-939-8805 FAX: 201-939-0846 E-MAIL: NEA@NEGLIAENGINEERING.COM
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PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 35LJ056800

SOIL EROSION AND SEDIMENT CONTROL PLAN
NOMAHEGAN PEDESTRIAN BRIDGE
OVER THE RAHWAY RIVER (U.C. PROJECT NO. 2016-038)
TOWNSHIP OF CRANFORD
UNION COUNTY NEW JERSEY
DRAWN BY: J.V. CHECKED BY: E.M.J. PROJECT NO: UNIOCTY17.011 SHEET NO: 4.00
DESIGNED BY: E.M.J. SCALE: 1" = 10' FIELD BOOK NO. PAGE: DATE: NOVEMBER 8, 2021

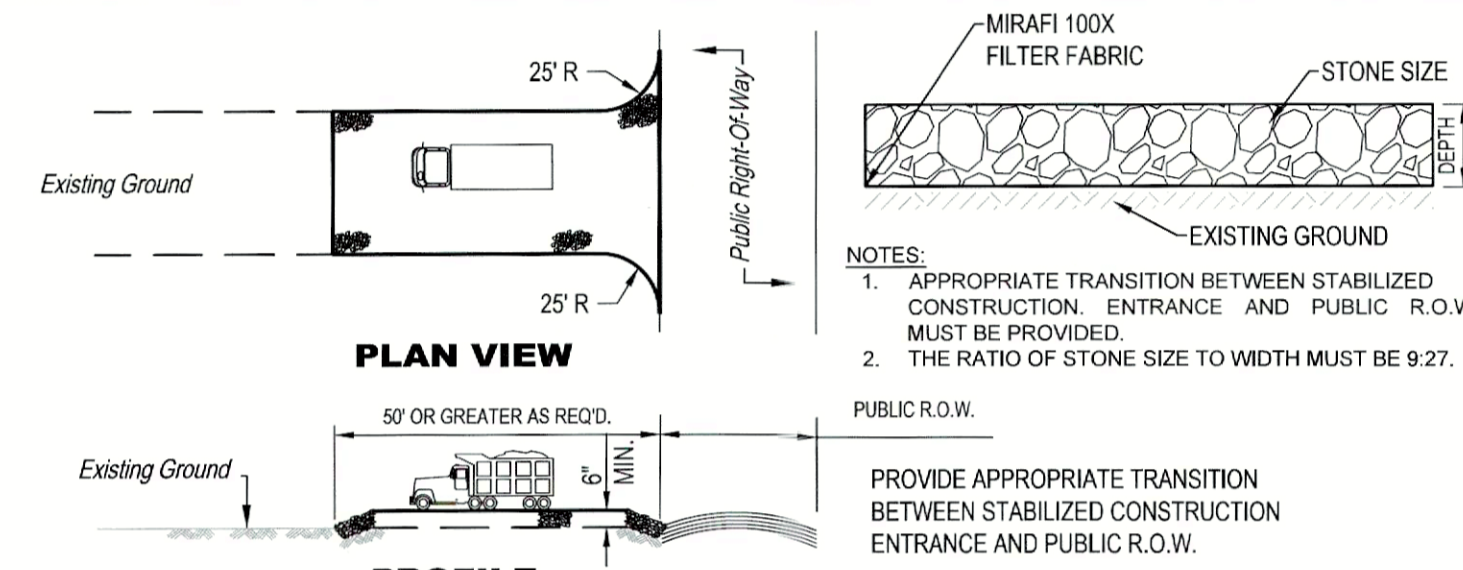
SOMERSET UNION SOIL CONSERVATION DISTRICT
SEP 19 2023
2023-0155
RECEIVED

**SOMERSET-UNION COUNTIES SOIL CONSERVATION DISTRICT
SOIL EROSION & SEDIMENT CONTROL NOTES**

- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 30 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO NJ STATE STANDARDS.
- PERMANENT VEGETATION SHALL BE SEED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING. MULCH WILL BE USED FOR PROTECTION UNTIL SEEDING IS ESTABLISHED.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NJ STATE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, 7TH EDITION LAST REVISED JANUARY 2014.
- A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS IN ORDER TO STABILIZE STREETS, ROADS, DRIVEWAYS AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN 15 DAYS OR PRELIMINARY GRADING.
- IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING ALL CRITICAL AREAS SUBJECT TO EROSION (I.E.: STEEP SLOPES, ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO THE NJ STATE STANDARDS.
- ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS (I.E.: SLOPES GREATER THAN 3:1).
- TRAFFIC CONTROL STANDARDS REQUIRE THE INSTALLATION OF A 50'X30'X6" PAD OF 1 1/2" OR 2" STONE, AT ALL CONSTRUCTION DRIVEWAYS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE.
- THE SOMERSET-UNION SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING 48 HOURS IN ADVANCE OF ANY LAND DISTURBING ACTIVITY.
- AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES.
- IN THAT N.J.A.C. 7:27-2.9, REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE THE PROVISIONS OF THE CERTIFIED PLAN FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES. ALL SITE WORK FOR SITE PLANS AND ALL WORK AROUND INDIVIDUAL LOTS IN SUBDIVISIONS, WILL HAVE TO BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.
- CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
- ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT NJ STATE SOIL EROSION & SEDIMENT CONTROL STANDARDS.
- THE SOMERSET-UNION SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES IN OWNERSHIP.
- MULCHING TO THE NJ STANDARDS IS REQUIRED FOR OBTAINING A CONDITIONAL REPORT OF COMPLIANCE. CONDITIONALS ARE ONLY ISSUED WHEN THE SEASON PROHIBITS SEEDING.
- CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ADJACENT ROADS CLEAN DURING LIFE OF CONSTRUCTION PROJECT.
- THE DEVELOPER SHALL BE RESPONSIBLE FOR REMEDIATING ANY EROSION OR SEDIMENT PROBLEMS THAT ARISE AS A RESULT OF ONGOING CONSTRUCTION AT THE REQUEST OF THE SOMERSET-UNION SOIL CONSERVATION DISTRICT.
- HYDRO SEEDING IS A TWO-STEP PROCESS. THE FIRST STEP INCLUDES SEED, FERTILIZER, LIME, ETC., ALONG WITH MINIMAL AMOUNTS OF MULCH TO PROMOTE CONSISTENCY, GOOD SEED TO SOIL CONTACT, AND GIVE A VISUAL INDICATION OF COVERAGE. UPON COMPLETION OF SEEDING OPERATION, HYDRO-MULCH SHOULD BE APPLIED AT A RATE OF 1500 LBS. PER ACRE IN SECOND STEP. THE USE OF HYDRO-MULCH, AS OPPOSED TO STRAW, IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE NJ STANDARDS.



SILT FENCE
NOT TO SCALE



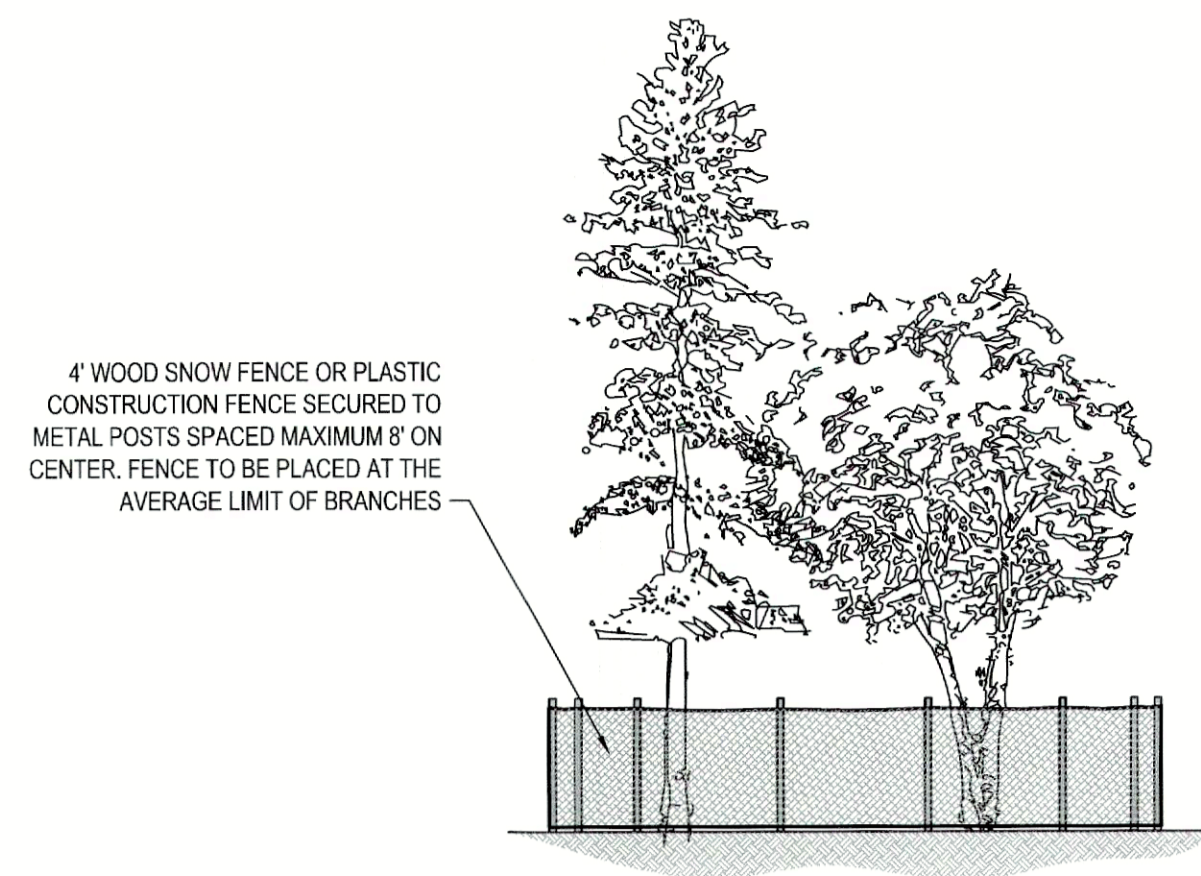
NOTES:

- PLACE STABILIZED CONSTRUCTION ENTRANCE AT LOCATION(S) AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
- STONE SIZE SHALL BE ASTM C-33, SIZE NO.2 OR 3, CRUSHED STONE.
- THE THICKNESS OF THE STABILIZED CONSTRUCTION ENTRANCE SHALL NOT BE LESS THAN 6".
- THE WIDTH AT THE EXIST. PAVEMENT SHALL NOT BE LESS THAN THE FULL WIDTH OF POINTS OF INGRESS AND EGRESS.
- THE STAB. CONST. ENT. SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE R.O.W./PAVEMENT. THIS REQUIRES PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT.
- ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO THE PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
- APPROPRIATE TRANSITION BETWEEN STAB. CONST. ENT. & PUBLIC R.O.W. MUST BE PROVIDED.
- THE RATIO OF STONE SIZE TO WIDTH MUST BE 9:27.

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT.	100 FT.
2 TO 5%	100 FT.	200 FT.
>5%	ENTIRE SURFACE STABILIZED WITH FABR. BASE COURSE*	

* AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

STABILIZED CONSTRUCTION ACCESS
NOT TO SCALE

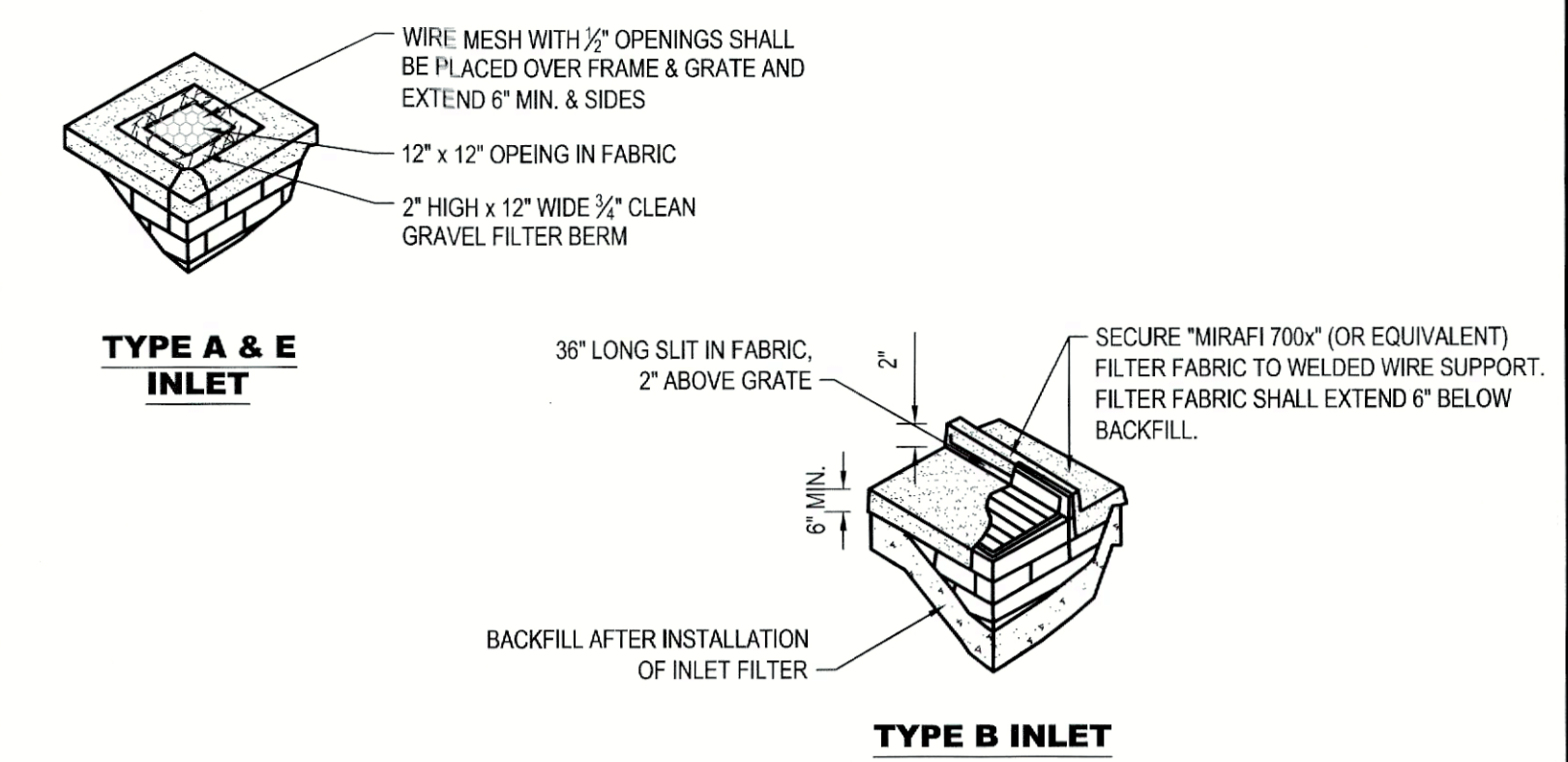


TREE PROTECTION
NOT TO SCALE

- NOTES:**
- CONSTRUCTION EQUIPMENT OF ANY KIND IS TO BE PROHIBITED FROM DRIVING AND/OR PARKING UNDER TREES. THE STOCKPILE OF CONSTRUCTION MATERIAL SHALL BE PROHIBITED FROM BEING STORED UNDER ANY TREES.

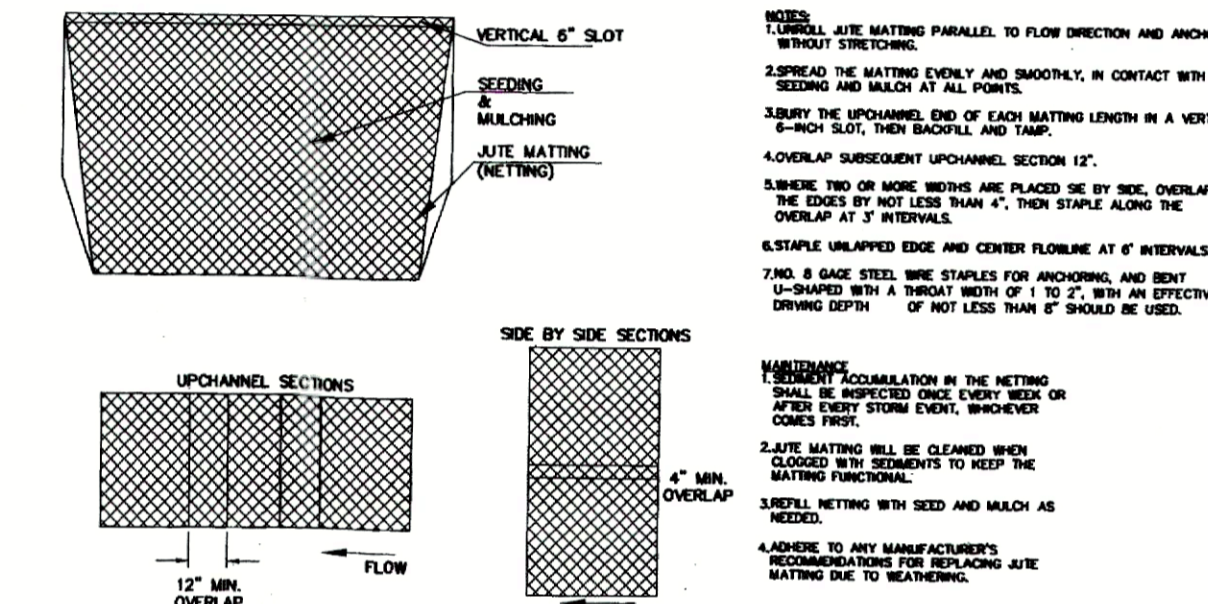
SEQUENCE OF CONSTRUCTION

ACTIVITY	APPROXIMATE DURATION, (days)
1. INSTALL CONSTRUCTION ENTRANCE.	2 DAYS
2. INSTALL SEDIMENT CONTROL MEASURES & TURBIDITY BARRIERS	3 DAYS
3. BEGIN SELECTIVE SITE CLEARING AND TREE REMOVAL.	10 DAYS
4. PATH PAVEMENT REMOVAL AND REMOVAL OF BRIDGE	5 DAYS
5. BEGIN INITIAL GRADING	10 DAYS
6. CONSTRUCT NEW PEDESTRIAN BRIDGE	5 DAYS
7. BEGIN FINAL GRADING	5 DAYS
8. PAVEMENT STRIPING AND SITE RESTORATION	5 DAYS
9. LANDSCAPING, REMOVE SOIL EROSION & SEDIMENT CONTROL MEASURES, FINAL SITE CLEANUP (PROVIDE PERMANENT STABILIZATION OF ALL EXPOSED SURFACES)	5 DAYS
TOTAL DURATION	45 DAYS



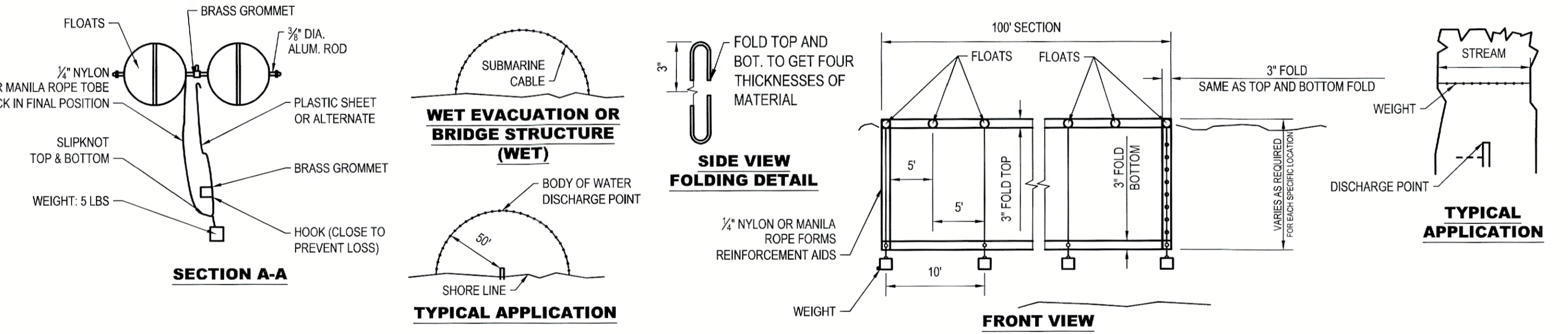
INLET FILTER & PROTECTION
NOT TO SCALE

- NOTES:**
- CONTRACTOR IS TO INSPECT INLET FILTER AFTER EVERY STORM, AND CLEAN OR REPLACE AS REQUIRED
 - CONTRACTOR IS TO REMOVE FABRIC AND MESH JUST PRIOR TO PAVING
 - FILTER FABRIC SHALL BE 'MIRAFIX 700X' TYPE OR APPROVED EQUIVALENT
 - INLET FILTER SHALL FILTER RUNOFF FROM THE 1 YEAR 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO STORM SEWER SYSTEM.



JUTE MATTING EROSION CONTROL DETAIL
NOT TO SCALE

- 1. INSTALL JUTE MATTING/EROSION CONTROL MATTING AS SHOWN OR APPROVED EQUAL SLOPE PROTECTION ON ANY 3:1 OR GREATER SLOPES THAT ARE DISTURBED OR CONSTRUCTED.**

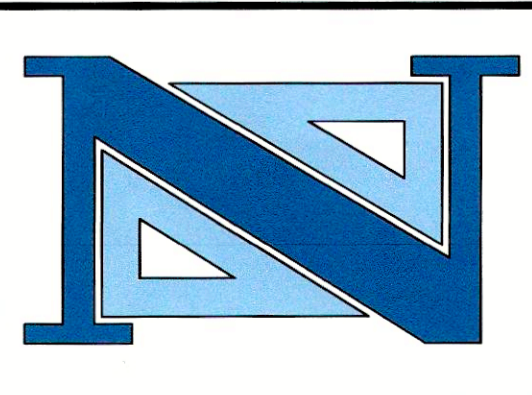


- NOTES:**
- PLACE SILT BARRIER TO PREVENT DRIFTING OF SILT CAUSED BY DISCHARGE OF STORM SEWERS DURING CONSTRUCTION, DREDGING OR FILLING OPERATIONS.
 - EXACT PLACEMENT OF SILT BARRIER SHALL BE SO AS TO EFFECTIVELY CONTROL SILT DISPERSION UNDER CONDITIONS PRESENT ON A PARTICULAR PROJECT.
 - THE DETAILS SHOWN ON THIS SHEET ARE SUGGESTED METHODS ONLY ALTERNATE SOLUTION AND USAGE OF MATERIALS MAY BE USED AS APPROVED.
 - AT SHALLOW WATER LOCATIONS, THE PLASTIC SHEET OR SUITABLE ALTERNATE MAY BE FASTENED O STAKES DRIVEN INTO THE BOTTOM IN LIEU OF FLOATS AND WEIGHTS.

FLOATING TURBIDITY BARRIER
NOT TO SCALE

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REVISIONS			DRAWN	DESIGNED	CHECKED
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PROFESSIONAL ENGINEER
N.J. LICENSE NO. 45596

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N.J. LICENSE NO. 41635

A PROJECT OF
NEGLIA ENGINEERING ASSOCIATES
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PROFESSIONAL ENGINEER
N.J. LICENSE NO. 38604

PROFESSIONAL LAND SURVEYOR
N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER
N.J. LICENSE NO. 3310056800

CONSTRUCTION DETAILS I
NOMAHEGAN PEDESTRIAN BRIDGE
OVER THE RAHWAY RIVER (U.C. PROJECT NO. 2016-038)
TOWNSHIP OF CRANFORD
NEW JERSEY

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DATE: NOVEMBER 6, 2021

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APPENDIX B

Geotechnical Engineering Report



66 Glen Avenue
Glen Rock, NJ 07452
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June 2, 2021

NEGLIA ENGINEERING ASSOCIATES

200 Central Avenue, Suite 102
Mountainside, NJ 07092

Re: Geotechnical Engineering Report
Proposed Pedestrian Bridge
Between Balmiere Parkway & Riverside Drive
Cranford, NJ
JSC Job # 21-283

Johnson Soils Company, Inc. (JSC) has been retained by **NEGLIA ENGINEERING ASSOCIATES** to perform a geotechnical investigation at the above referenced location for the proposed new pedestrian bridge as per our proposal dated April 20, 2021 and revised April 26, 2021. It includes JSC's findings, conclusions and recommendations related to the proposed new pedestrian bridge.

The site is an existing pedestrian bridge between Balmiere Parkway and Riverside Drive. The property is located between Balmiere Parkway and Riverside Drive and across the Rahway River in Cranford, New Jersey. The proposed building area is shown on the plan entitled "Boring Location Plan," provided by **JSC**.

INVESTIGATION

Two (2) borings were completed on May 6, 2021. The borings were advanced using truck-mounted drilling equipment by our sub-contractor, RV Drilling, Inc., in accordance with the procedures of the Standard Penetration Test (ASTM-1586). For this test, a standard split barrel sampler, which is two (2) inches outside diameter and one and three eighths (1 3/8) inches inside diameter, is advanced into the soil using a one hundred forty (140) pound weight hammer falling thirty (30) inches. Standard Penetration Tests were taken continuously from zero (0) to twelve (12) feet and at five (5) foot intervals thereafter to a completion depth of forty-two (42) feet.

The boring location plan and record sheet for each boring are attached to this report.

FINDINGS

The explorations for this study indicate that the site is underlain by fairly uniform subsurface. The strata are listed below in order of increasing depth. Detailed descriptions of the subsurface conditions are shown on the individual "Logs of Borings," Plates 3A and 3B.

1. Misc. FILL: A layer of Misc. Fill was encountered from the surface in both Borings to depths ranging from ten to twelve (10-12) feet below the existing surface grade.
2. Silty Sand (SM): A layer of Silty Sand was encountered below the Misc. FILL in Boring 2 to a depth of twenty-two (22) feet below the existing surface grade.
3. Silt (ML): A layer of Silt was encountered below the Misc. FILL in Boring 1 to a depth of eighteen (18) feet below the existing surface grade.
4. Silty Sand & Gravel (SW-GW): A layer of Silty Sand & Gravel was encountered below the Silt in Boring 1 and below the Silty Sand in Boring 2 to a completion depth of forty-two (42) feet below the existing surface grade.

Ground water was observed in the borings at depths ranging from fourteen to fifteen (14-15) feet in the Borings at the time of the investigation. It should be noted that the water level conditions may fluctuate due to variations in seasons, rainfall, temperature and other factors.

GENERAL SITE GEOLOGY

This site lies within the Rosselle Quadrangle within the Piedmont Physiographic Province.

The bottom layer of bedrock in this region is a part of the Passaic formation, which was formed during the Late Triassic to the Early Jurassic period (237-174 MYA). The bedrock consists of interbedded reddish-brown sandstone with siltstone, shaly siltstone, and shale. The sandstone ranges from fine to medium grained, it is thin to medium bedded, and contains mica. Middle and lower parts of unit contain interbedded olive-gray, dark-gray, or black siltstone, silty shale, shale, and less common argillite. Reddish-brown sandstone and pebbly sandstone are thin-to-thick-bedded, medium-to-coarse grained, planar to cross-bedded with local lensoidal interbeds of pebble conglomerate. Within the formation there are small variations that appear in layers within the classic Passaic formation of siltstone, silty mudstone, and shale. Two layers that occur include a layer with a sandstone, siltstone, and mudstone facies, and a layer with gray facies. The next layer of bedrock is Orange Mountain Basalt, This basalt is dark green-gray to black in color due to a composition of calcic plagioclase and clinopyroxene.

The top layer of surficial geology in this region is composed of alluvium, this layer is made up of silt, sand, clay and minor pebble to cobble, gravel. It contains different amounts of organic matter. Below this is a layer of Lake-bottom silt, fine sand and clay, which can be as much as 90 feet thick. The bottom most layer is made up of Rahway Till, it's reddish-brown to reddish-yellow silt sand, sandy silt and sand with some sub-rounded and sub-angular pebbles and cobbles and few to some sub-rounded boulders.

COMMENTS AND CONCLUSIONS

The borings showed a layer of fill on both sides of the existing bridge ranging from ten to twelve (10-12) feet from the existing surface grade. The depth from the bridge to the water elevation appears to be in the 10-15 feet range.

The proposed bridge foundation can be placed on the Silt or Silty Sand below all Misc. FILL. The depth of the fill will vary and needs to be field verified at the time of construction.

All foundation excavations should be verified by a qualified geotechnical engineer at the time of the excavation to confirm the depth to suitable bearing material.

Please see the recommendations section for additional information.

In the instance where groundwater or surface runoff that may enter the proposed excavations, this may be effectively controlled by sump pits placed within or adjacent to the proposed excavations. It should be noted that the water level conditions may fluctuate due to variations in rainfall, temperature and other factors at the time of construction.

RECOMMENDATIONS

The following geotechnical design and construction recommendations are offered:

1. Foundation:

- a. Excavate down to the Silt or Silty Sand.
 - i. If the existing grades are not changed, estimated depth to suitable material ranges between ten to twelve feet (10'-12') below the existing surface grade of each of the adjacent streets (Balmiere Parkway and Riverside Drive).
 - ii. The actual depth to the bottom of footing elevation could be greater and shall be confirmed with the civil and structural drawings for the proposed elevations required.
 - iii. Proof roll the bottom of excavation with a vibratory plate tamper or other approved equivalent.
 - iv. A minimum of one foot (1') of crushed stone shall be placed under footings.
 - v. Ground water control might be required during construction. (to be designed by others)
- b. Use an allowable bearing capacity of **three thousand (3,000) pounds per square foot (PSF)** on crushed stone on the Silt or Silty Sand.
- c. Maximum settlement is less than 1 in.
- d. Estimated differential settlement is less than 0.5 in.
- e. Minimum depth for frost protection is three feet (3') below the final exterior grade.
- f. All concrete footings should be kept dry a minimum of forty-eight (48) hours after the footings are poured for proper curing.
- g. Concrete blankets (or equivalent) are required if the temperature drops below thirty-two (32) degrees to prevent the concrete from freezing.

- 2.
3. Soil Classification "C" as per OSHA 1926 Subpart P App A with maximum allowable slopes (H:V) of 1 ½:1 as per OSHA 1926 Subpart P App B Table B-1.
 - a. This is for short-term maximum allowable slopes less than twelve (12) feet.
 - b. Sloping or benching for excavations greater than twenty (20) feet deep shall be designed by a Professional Engineer licensed in the State of New Jersey.
4. The Site Seismic Classification is "C" in terms of the International Building Code (IBC). The profile is not considered to be susceptible to liquefaction.
 - a. $S_S = 0.270g$
 - b. $S_1 = 0.071g$
 - c. $S_{MS} = 0.324g$
 - d. $S_{M1} = 0.120g$
 - e. $S_{DS} = 0.216g$
 - f. $S_{D1} = 0.080g$

5. Types of Controlled FILL:

- a. The existing FILL or Silt is UNSUITABLE for reuse as backfill or controlled FILL.
- b. The existing onsite Silty Sand can be reused as backfill or controlled Fill when used +/- 2% moisture content and approved by a geotechnical engineer at the time of use. This material can be moisture sensitive and extreme care shall be taken to keep dry.
- c. Contractor shall be careful to keep excavated material dry as possible with tarps or other protection.
- d. Other Controlled Fill Options:
 - i. Crushed Stone at ¾" or 1 ½" size with no fines.
 - ii. Sand and Gravel with less than 20% passing the #200 sieve.
 - iii. Quarry Process Stone (QP) with less than 20% passing the #200 sieve.

6. Controlled and Compacted Fill Requirements:

- a. A geotechnical engineer licensed in the state of New Jersey to inspect all earthwork operations.
- b. The contractor and/or owner shall notify the geotechnical engineer in writing a minimum of five (5) days prior to the start of all work on the project. The notification shall include all sources of Fill, equipment to be used, the estimated dates of the work and the proposed onsite supervisor.
- c. All misc. Fill and Topsoil shall be graded prior to the start of all earthwork operations.
- d. All Fill areas shall be proof rolled prior to the placement of any new Fill. All proof rolling shall be performed in the presence of the geotechnical engineer. If soft areas are found during the proof rolling process, the area shall be removed and replaced with compacted, controlled Fill as per the direction of the geotechnical engineer.
- e. Any proposed Fill area shall be leveled before placement of any Fill. The area shall be free from ruts, hummocks or other uneven surfaces that would prevent uniform compaction.
- f. Use any of the material stated in the types of controlled Fill section or other material approved by the geotechnical engineer.
- g. A fifty pound (50-lb) bag of material shall be submitted to the geotechnical engineer for approval and testing a minimum of five (5) days prior to the start of work. No Fill material shall be placed until the geotechnical engineer has approved the material for use in the project.
- h. All controlled Fill should be placed in horizontal layers of eight to twelve (8-12) inches in loose thickness and be uniformly compacted to achieve a density of at least ninety-five (95) percent of the maximum dry density as determined by in the laboratory when tested in accordance with the most recent ASTM D1557 Standard.
- i. Backfill within confined areas should be placed in layers of six to eight (6-8) inches in loose thickness and compacted to the same 95% of maximum dry density using portable compaction equipment.

- j. No Fill material shall be placed, spread or compacted when the ground or Fill is frozen, thawing or during unfavorable weather conditions. When work is interrupted by heavy rain or frost, operations shall not be resumed unless the moisture content and density of the Fill are acceptable to the geotechnical engineer.
 - k. A sufficient number of passes shall be approved by the geotechnical engineer in order to achieve the acceptable specified density above. A minimum of three (3) passes of the approved compactor shall be required over all areas of each lift.
 - l. Field density tests shall be made by the geotechnical engineer to determine the in-place field density in each layer placed. No Fill shall be placed over any layer that has not been previously approved by the geotechnical engineer. Should any of the tests find insufficient density, then additional compaction will be required until the required density is obtained.
7. The following construction tasks should be inspected by a geotechnical engineer using appropriate laboratory and field testing support:
- a. Bottom of excavated area for all new footings are to be excavated into the dense Silty Sand or Silt and approved by a Geotechnical Engineer before rebar and concrete placement.
 - i. All footings shall have a minimum of one (1) foot of crushed stone under the footings.
 - b. All types of controlled Fill soils to be used in footings.
 - c. Compaction of all controlled Fill for footings and backfill.

The recommendations above are based on the data obtained from soil borings performed at the indicated specific locations and from other identified information. This report does not reflect any variations which may occur across the site apart from the borings. The nature and extent of such variations may not become evident until construction. If variations appear evident, it will be necessary to re-evaluate the recommendations of this report. Supplemental recommendations may be required upon the finalization of the construction plans or changes to the proposed structure location and/or use.

This report has been prepared for the specific application to the project noted. In the event that there are changes in the nature, design or locations of the proposed structures, the conclusions and recommendations contained herein are not valid unless the changes are reviewed and the recommendations modified in writing by JSC.

JSC assumes that a qualified contractor will be employed to perform all required construction activities and that the contractor will be cognizant that all excavations are performed in accordance with all applicable codes and in good building practice. Contractor shall be aware of avoiding damage to all adjacent properties.

The exploration and analysis of the foundation conditions described herein are considered suitable to form a practical basis for the foundation design.

The information and opinions rendered in our report are exclusively for use by **NEGLIA ENGINEERING ASSOCIATES** and JSC will not distribute or publish this report without written consent except as required by law or court order. The information and opinions expressed in this report are given in response to a limited assignment and should be considered and implemented only in light of that assignment. The services provided by JSC in completing this project were consistent with normal standards of engineering profession. No warranty, expressed or implied, is made.

The following Plates are attached to this report:

Plate 1 -	Site Location Map
Plate 2 -	Boring Location Plan
Plates 3A through 3B -	Log of Borings
Plate 4 -	Unified Soil Classification System

Very truly yours,

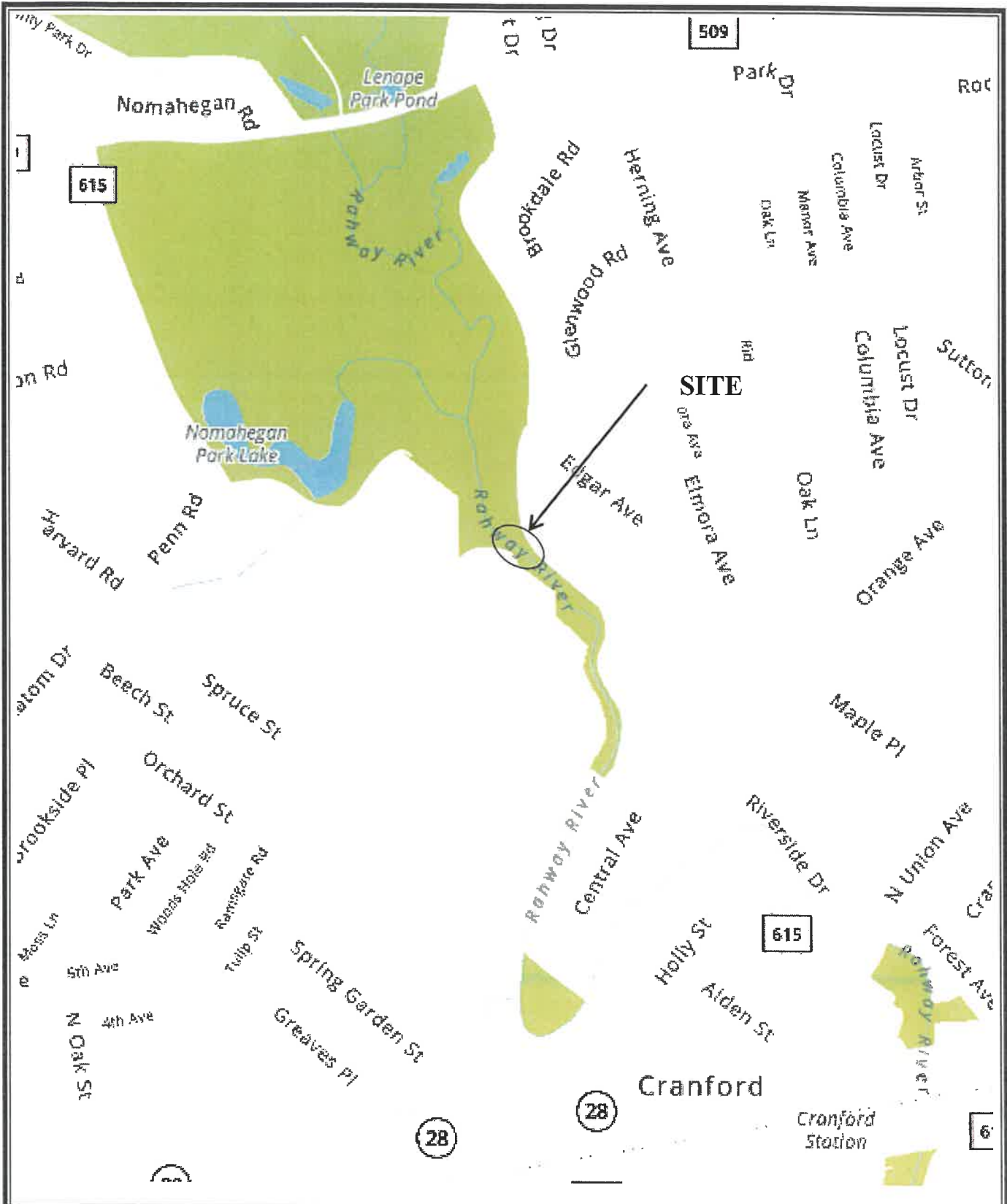
JOHNSON SOILS COMPANY



Lisa V. Mahle-Greco, P.E.

Engineering Manager

NJ Lic. No. 43197

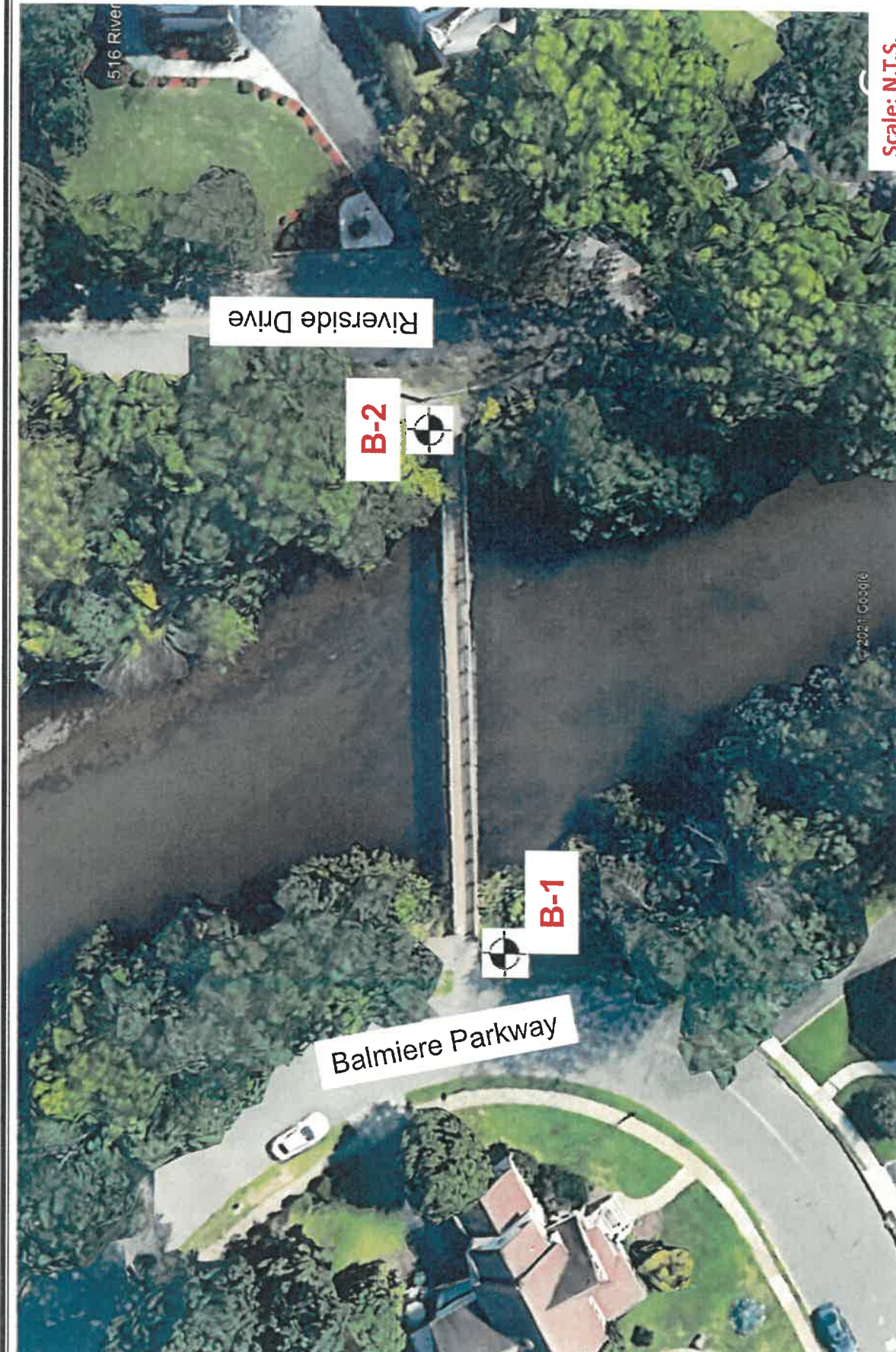


Site Location Plan

Nomahegan Pedestrian Bridge
Cranford, NJ

JSC #21-283

PLATE 1



JSC #21-283

Boring Location Plan

Nomahegan Pedestrian Bridge
Cranford, NJ

PLATE 2





**LOG OF BORING
B-1**

Sheet 1 of 1
JSC #21-283
Completed 05/26/2021
Water Level : 14'

Depth (Feet)	Sample #	Depth (Feet)	Sample/Spoon Blows/6"	USCS Symbol	Depth	Description
0	1	0-2	3-3-4-7		0-10'	Fill - Sand, Organic, Silt, Wood & Gravel.
-	2	2-4	9-7-6-9			
-	3	4-6	10-4-3-3			
5	4	6-8	1-1-1-1			
-	5	8-10	1-2-2-3			
10	6	10-12	3-7-7-9	ML	10'-18'	Redbrown Silt, little Fine Sand, trace Gravel. (moist, stiff)
-	7	15-17	18-20-13-13			
15	8	20-22	9-12-16-33	SW-GW	18'-42'	Brown fine to coarse Sand and Gravel, trace Silt. (wet, medium dense)
-	9	25-27	19-22-29-34			
20	10	30-32	11-23-30-36			
25	11	35-37	17-22-27-35			
-	12	40-42	16-23-26-36			
30						
35						
40						
45						
50						

Remarks: Boring B-1 completed @ 42' on 5/26/2021

Client: NEGLIA ENGINEERING ASSOCIATES Hollow Stem Auger
 Site: Nomahegan pedestrian bridge, Cranford, NJ Portable
 Driller: RV Drilling Mud Rotary



**LOG OF BORING
B-2**

Sheet 1 of 1
JSC #21-283
Completed 05/26/2021
Water Level : 15'

Depth (Feet)	Sample #	Depth (Feet)	Sample/Spoon Blows/6"	USCS Symbol	Depth	Description
0	1	0-2	6-1-1-6		0-12'	Fill - Sand, Organic, Silt, Wood & Gravel.
-	2	2-4	4-4-4-4			
-	3	4-6	4-4-3-2			
5	4	6-8	4-4-4-3			
-	5	8-10	4-5-6-5			
10	6	10-12	6-6-8-5			
-				SM	12'-22'	Redbrown fine to medium Sand, little Silt & Gravel. (moist, medium dense)
15	7	15-17	7-9-9-12			
-						
20	8	20-22	11-13-11-17	SW-GW	22'-42'	Brown fine to coarse Sand and Gravel, trace Silt. (wet, dense) -grading to very dense@30'
-						
25	9	25-27	15-20-25-32			
-						
30	10	30-32	25-27-34-37			
-						
35	11	35-37	28-29-31-30			
-						
40	12	40-42	21-32-33-26			
-						
45						
-						
50						
-						

Remarks: Boring B-2 completed @ 42' on 5/26/2021

Client: NEGLIA ENGINEERING ASSOCIATES Hollow Stem Auger

Site: Nomahegan pedestrian bridge, Cranford, NJ Portable

Driller: RV Drilling Mud Rotary

PLATE 3B



66 Glen Avenue
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UNIFIED SOIL CLASSIFICATION SYSTEM

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)	GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)	GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
	SAND AND SANDY SOILS	CLEAN SAND (LITTLE OR NO FINES)	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)	GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	MORE THAN 50% OF COURSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN SAND (LITTLE OR NO FINES)	SW	WELL-GRADED SANDS, GRAVELLY-SANDS LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)	SP	POORLY-GRADED SANDS, GRAVELLY SANDS LITTLE OR NO FINES
	SILTS AND CLAYS	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)	SM	SILTY SANDS, SAND-SILT MIXTURES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)	SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDS CLAYS, SILTY CLAYS, LEAN CLAYS
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
HIGHLY ORGANIC SOILS	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50	CH	INORGANIC CLAYS OF HIGH PLASTICITY FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

GRADUATION*

COMPACTNESS*
SAND AND/OR GRAVEL

CONSISTENCY*
CLAY AND/OR SILT

% FINER BY WEIGHT

RELATIVE DENSITY

RANGE OF SHEARING STRENGTH
IN POUND PER SQUARE FOOT

TRACE.....0% TO 10%
 LITTLE.....10% TO 20%
 SOME.....20% TO 35%
 AND.....35% TO 50%

LOOSE.....0% TO 40%
 MEDIUM DENSE.....40% TO 70%
 DENSE.....70% TO 90%
 VERY DENSE.....90% TO 100%

VERY SOFT.....LESS THAN 250
 SOFT.....250 TO 500
 MEDIUM.....500 TO 1000
 STIFF.....1000 TO 2000
 VERY STIFF.....2000 TO 4000
 HARD.....GREATER THAN 4000

VALUES ARE FROM LABORATORY OR FIELD TEST DATA WHERE APPLICABLE WHEN NO TESTING WAS PERFORMED, VALUES ARE ESTIMATED.



NOMAHEGAN PEDESTRIAN BRIDGE REPLACEMENT

BA# 6-2024; UNION COUNTY ENGINEERING PROJECT NO. 2016-038

BLOCK 103, LOT 1; BLOCK 105, LOT 1, AND RIVER RIGHT-OF-WAY

TOWNSHIP OF CRANFORD UNION COUNTY, NEW JERSEY

NOVEMBER 8, 2021

ISSUED FOR BID: DECEMBER 14, 2023



CONSTRUCTION NOTES:

1. THE LOCATIONS OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES FOR THEIR EXACT LOCATIONS.
2. TRENCHES OR AREAS EXCAVATED WITHIN THE MUNICIPAL RIGHT-OF-WAY ARE TO BE BACK FILLED WITH DENSE GRADED AGGREGATE AT THE END OF EACH WORKING DAY AND PAVED AT THE END OF THE WORK WEEK. TRENCHES LEFT OPEN OVERNIGHT ARE NOT PERMITTED.
3. THE 2019 NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED AND ADDED TO HEREIN, SHALL GOVERN IN THIS CONTRACT AND CONSTRUCTION, SHOULD THE SPECIFICATIONS NOT INCLUDE PARTICULAR CONSTRUCTION ITEMS.
4. ANY MATERIAL THAT MAY BE DISTURBED DURING THE REMOVAL AND REPLACEMENT TO EXISTING CURBING AND SIDEWALKS, MUST BE RETURNED TO ITS ORIGINAL CONDITION. THE COST FOR THIS SHALL BE INCLUDED IN THE UNIT PRICE BID IN THE APPROPRIATE PAY ITEM.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAPERING PROPOSED WORK TO MEET EXISTING CONDITIONS IN A UNIFORM MANNER.
6. THE CONTRACTOR SHALL RECEIVE ALL THE NECESSARY PERMITS & APPROVALS FROM ALL LOCAL, COUNTY, AND STATE GOVERNING AGENCIES, PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ANY ASSOCIATED FEES, AND SAME TO BE INCLUDED IN THE VARIOUS BID ITEMS.
7. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ONE CALL NUMBER (800) 272-1000 FOR MARK OUTS PRIOR TO START OF WORK. THE CONTRACTOR SHALL RECORD AND HAVE THE CONFIRMATION NUMBER ONSITE DURING CONSTRUCTION.
8. THE CONTRACTOR SHALL VISIT THE SITE TO PERFORM HIS OWN DUE DILIGENCE, AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS PRIOR TO SUBMITTING HIS BID. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.

GENERAL NOTES:

EXISTING CONDITIONS

1. IT IS THE CONTRACTORS RESPONSIBILITY TO ASCERTAIN ALL UTILITY LOCATIONS PRIOR TO BIDDING.

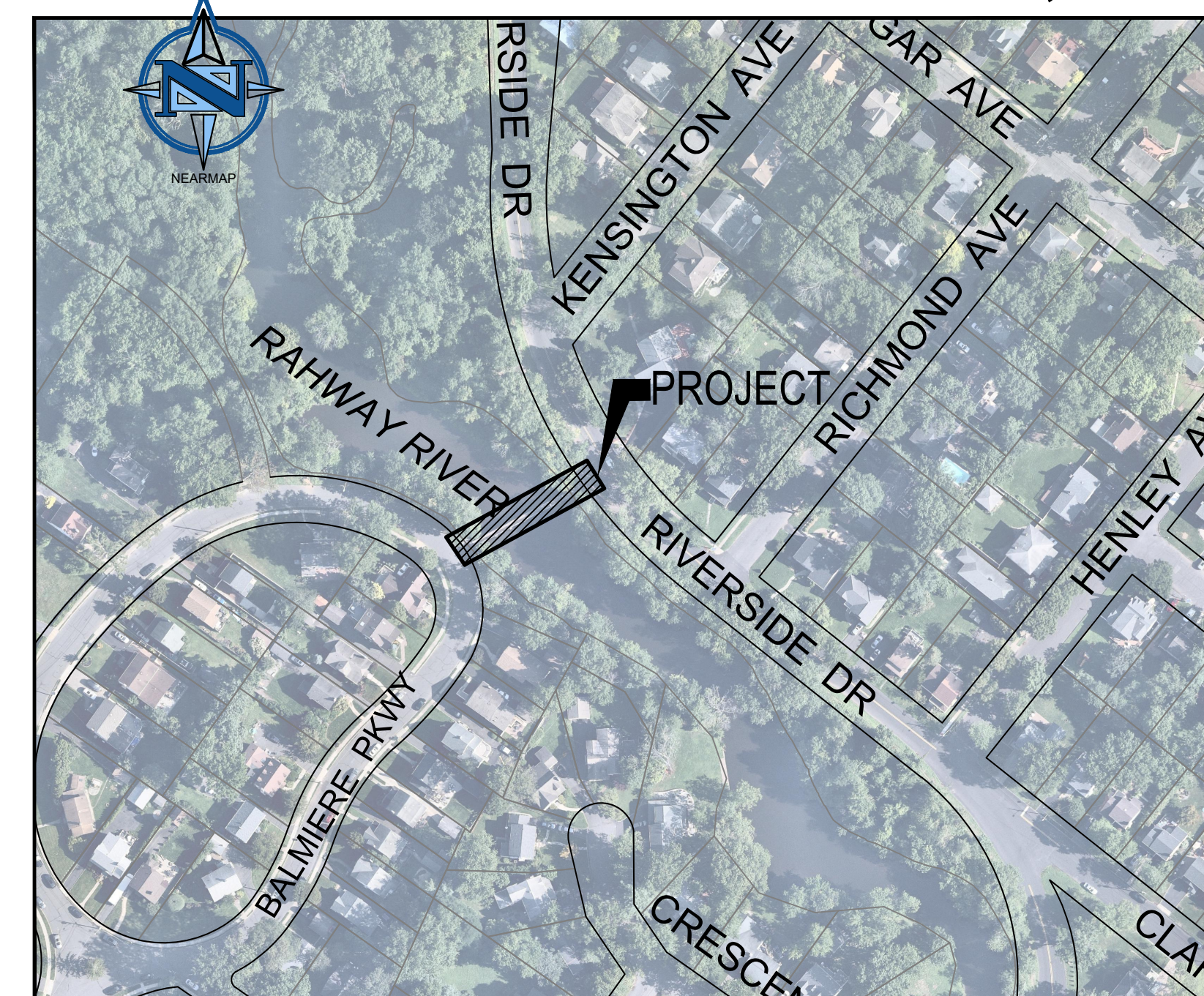
PROPOSED WORK

1. MAINTENANCE AND PROTECTION OF PEDESTRIAN TRAFFIC CONTROL MUST CONFORM TO NJDOT AND MUTCD STANDARDS ALONG WITH THE REQUIREMENTS OF THE MUNICIPALITY. POLICE TRAFFIC DIRECTORS SHALL BE COORDINATED WITH THE MUNICIPALITY.
2. ALL STORM DRAINS AND CATCH BASINS WILL BE PROTECTED AT ALL TIMES. ANY DAMAGE WILL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
3. ALL FILL REMOVED FROM THE TRENCH IS TO BE DISCARDED BY THE CONTRACTOR IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS. THE TRENCH MUST BE OF SUITABLE WIDTH TO OBTAIN PROPER MECHANICAL COMPACTING, NOT TO EXCEED 4 FEET IN WIDTH. ALL BACKFILL IS TO BE DONE WITH QUARRY PROCESS STONE, TYPE I-5 OR DGA FOR THE FULL DEPTH OF THE TRENCH. FIRST LIFT OF FILL, TWELVE (12) INCHES ABOVE THE PIPE, SHALL BE COMPACTED USING A JUMPING JACK TAMPER. SUCCESSIVE LIFTS SHALL BE COMPACTED BY MECHANICAL MEANS SUCH AS TAMPING, VIBRATING OR ROLLING. A VIBRA PLATE TAMPER IS NOT ACCEPTABLE.
4. SEE SITE PLAN FOR PROPOSED FINISHED SURFACE TREATMENTS.
5. THE CONTRACTOR SHALL KEEP THE TRENCH FILLED TO THE LEVEL OF THE SURROUNDING GRADES UNTIL SETTLEMENT HAS CEASED.
6. TRAFFIC CONTROL DEVICES AS NECESSARY TO BE INCLUDED IN THE VARIOUS BID ITEMS.
7. TRAFFIC CONTROL TO BE IN ACCORDANCE WITH MUNICIPAL, UNION COUNTY, AND MUTCD STANDARDS.

RESTRICTIONS AND REQUIREMENTS

1. WORKING HOURS SHALL BE IN ACCORDANCE WITH UNION COUNTY REQUIREMENTS.
2. THE CONTRACTOR SHALL FURNISH AN APPROVED CONSTRUCTION SCHEDULE PRIOR TO MOBILIZATION.
3. THE CONTRACTOR SHALL MAINTAIN ACCESS FOR EMERGENCY VEHICLES.
4. THE CONTRACTOR SHALL PROVIDE PRE-CONSTRUCTION PHOTOGRAPHS OR VIDEOTAPES OF THE PROJECT AREA. PHOTOGRAPHS SHALL BE LABELED WITH DESCRIPTORS AND CORRESPONDING PHOTO LOCATION MAP AND MOUNTED INTO BINDERS. AUDIO SHALL BE USED ON VIDEOTAPES TO DESIGNATE THE PHOTO LOCATIONS AND DESCRIPTORS. THE CONTRACTOR SHALL PROVIDE THE PHOTOGRAPHS OR VIDEOTAPES PRIOR TO MOBILIZATION.
5. THE CONTRACTOR SHALL OBSERVE ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES ILLUSTRATED WITHIN THESE CONSTRUCTION PLANS. A STAGING AREA HAS NOT BEEN DETERMINED FOR USE BY THE CONTRACTOR AT THE TIME THESE CONTRACT DRAWINGS WERE DRAWN. WHEN A STAGING AREA IS DETERMINED, THE CONTRACTOR SHALL CALL THE UNION COUNTY SOIL CONSERVATION DISTRICT (908-231-7000) FOR INSPECTION OF THE STAGING AREA. THE CONTRACTOR IS RESPONSIBLE TO IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AT THE STAGING AREA PRIOR TO INSPECTION. ALL COSTS TO BE INCLUDED IN THE VARIOUS ITEMS BID.

ALL WORK STATED IN THESE NOTES, PLANS AND SPECIFICATIONS SHALL BE INCLUDED IN THE VARIOUS BID ITEMS UNLESS SPECIFICALLY ITEMIZED ON THE PROPOSAL SHEET. THE CONTRACTOR IS NOT LIMITED TO THE REQUIREMENTS WITHIN THESE NOTES AND IS STRONGLY ADVISED TO REVIEW THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



NEARMAP IMAGE
SOURCE: REF. NEARMAP IMAGERY
SCALE: 1" = 150'

ESTIMATE OF QUANTITIES		
ITEM NO.	DESCRIPTION	APPROX.
		QTY. UNIT
1	Mobilization/Demobilization	1 L.S.
2	Site Clearing/Demolition	1 L.S.
3	Construction Layout	1 L.S.
4	Furnish and Install Soil Erosion and Sediment Control Devices	1 L.S.
5	Temporary Cofferdam	1 L.S.
6	Site Grading	1 L.S.
7	Earthwork	1 L.S.
8	Maintenance and Protection of Traffic	1 L.S.
9	Uniform Traffic Directors Allowance	1 ALLOW.
10	HMA Milling, 3" Or Less	130 S.Y.
11	Hot Mix Asphalt Surface Course, Mix 9.5M64, 2" Thick	50 TONS
12	Hot Mix Asphalt Base Course, Mix 19M64, 4" Thick	35 TONS
13	Dense Graded Aggregate Base Course, 6" Thick	115 S.Y.
14	Reset Water Valve Box	1 UNIT
15	Reset Manhole Casting	1 UNIT
16	Reset Inlet Casting	1 UNIT
17	Custom Environmental Educational Sign	2 UNIT
18	Furnish and Install Post and Rail Fence	120 L.F.
19	Removable Locking Bollard	2 UNIT
20	Prefabricated Pedestrian Bridge, Complete (with Reinforced Concrete Abutment Bridge Deck, Railings, Ect.)	1 L.S.
21	Tree Removal, Over 3" To 14" Diameter	5 UNIT
22	Topsoiling, Hydroseed, Mulch and Sod	250 S.Y.
23	Final Cleanup/Site Restoration	1 L.S.
24	Unforeseen Conditions Allowance	1 ALLOW.

KEVIN BOYER, P.E., C.F.M.
ENGINEER, TOWNSHIP OF CRANFORD

[Signature] DATE: 12/12/23

BRIAN ANDREWS
MAYOR, TOWNSHIP OF CRANFORD

[Signature] DATE: 12-18-23

RICARDO MATIAS, P.E., C.M.E., C.F.M.
COUNTY ENGINEER, COUNTY OF UNION

[Signature] DATE: 12/18/23

EDWARD T. OATMAN
COUNTY MANAGER, COUNTY OF UNION

[Signature] DATE: 12/21/23

COUNTY OF UNION

10 ELIZABETHTOWN PLAZA, ELIZABETH, NEW JERSEY 07207
PHONE: (908) 527-4000

COMMISSIONERS

SERGIO GRANADOS, CHAIRMAN KIMBERLY PALMIERI-MOUEDE, VICE CHAIRWOMAN
JAMES E. BAKER, JR. JOSEPH BODEK
DR. ANGELA R. GARRETSON BETTE JANE KOWALSKI
LOURDES M. LEON ALEXANDER MIRABELLA
REBECCA WILLIAMS

PERMITTING & CONSTRUCTION TIMING NOTES

THIS PROJECT HAS RECEIVED APPROVAL OF LAND USE PERMITTING FROM THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION (NJDEP). THE PERMITS LISTED BELOW HAVE BEEN APPLIED FOR AND APPROVED BY THE NJDEP:

1. FLOOD HAZARD AREA INDIVIDUAL PERMIT (No. 2003-20-0001.2 LUP230001) - APPROVED SEPTEMBER 12, 2023, EXPIRES SEPTEMBER 11, 2028; AND
2. FRESHWATER WETLANDS GENERAL PERMIT No. 17 (No. 2003-20-0001.2 LUP210001) - APPROVED SEPTEMBER 12, 2023, EXPIRES SEPTEMBER 11, 2028.

THIS PROJECT IS SUBJECT TO CONSTRUCTION TIMING RESTRICTIONS IMPOSED BY THE NJDEP, AS FOLLOWS:

- IN ORDER TO PROTECT NON TROUT SPECIES WITHIN THE RAHWAY RIVER FROM SEDIMENT GENERATING ACTIVITIES, ANY GRADING, EXCAVATION, OR CONSTRUCTION ACTIVITIES WITHIN THE STREAM OR THE BANKS OF THE STREAM ARE PROHIBITED MAY 1ST THROUGH JULY 31ST OF EACH YEAR.
- IN ORDER TO PREVENT ADVERSE IMPACTS TO INDIANA BAT, THE CLEARING OF TREE 5 INCHES DIAMETER AT BREAST HEIGHT OR GREATER MAY NOT OCCUR ON SITE FROM APRIL 1 TO SEPTEMBER 30.

THE PROJECT HAS RECEIVED AN APPROVAL FROM THE SOMERSET-UNION SOIL CONSERVATION DISTRICT (SUSCD) FOR SOIL EROSION AND SEDIMENT CONTROL PLAN CERTIFICATION:

1. SOIL EROSION AND SEDIMENT CONTROL PLAN CERTIFICATION, BY THE SUSCD (No. 2023-6155), DATED SEPTEMBER 26, 2023.

****THE CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ALL CONDITIONS AND REGULATIONS OF THE APPROVED PERMITS. A COPY OF THE APPROVED PERMITS, AND ASSOCIATED CONDITIONS, HAS BEEN PROVIDED IN THE CONSTRUCTION DOCUMENTS, AND MUST REMAIN ON-SITE AT ALL TIMES.****

ENGINEERING SITE PLAN SHEETS

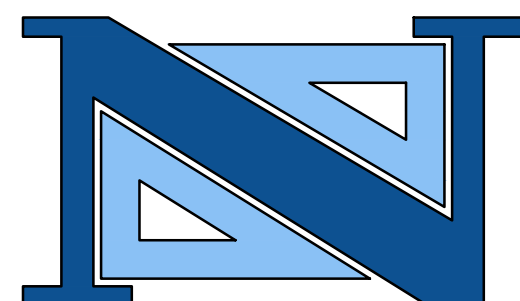
DRAWING NO.	DRAWING TITLE
1.00	COVER SHEET
1.01	GENERAL NOTES & STANDARD LEGEND
2.00	EXISTING CONDITIONS AND DEMOLITION PLAN AND PROFILE
3.00	SITE PLAN
3.01	GRADING PLAN AND PROPOSED BRIDGE PROFILE
4.00	SOIL EROSION AND SEDIMENT CONTROL PLAN
5.00	FRESHWATER WETLANDS PERMITTING PLAN
5.01	FLOOD HAZARD AREA PERMITTING PLAN
6.00 - 6.03	CONSTRUCTION DETAILS I - IV
1 OF 1	TOPOGRAPHIC SURVEY
S-0.1 - S-1	BRIDGE FOUNDATION PLAN & SECTION (BY MPP ENGINEERS)



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CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

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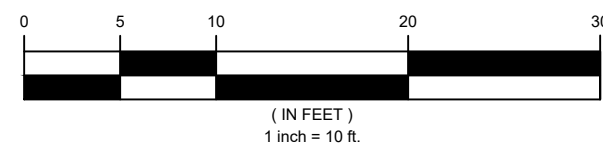
MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
PROFESSIONAL ENGINEER PROFESSIONAL LAND SURVEYOR PROFESSIONAL PLANNER
N.J. LICENSE NO. 38604 N.J. LICENSE NO. 38604 N.J. LICENSE NO. 33L00569800

COVER SHEET
NOMAHEGAN PEDESTRIAN BRIDGE REPLACEMENT
BA# 6-2024; UNION COUNTY ENGINEERING PROJECT #2016-038
TOWNSHIP OF CRANFORD
UNION COUNTY NEW JERSEY

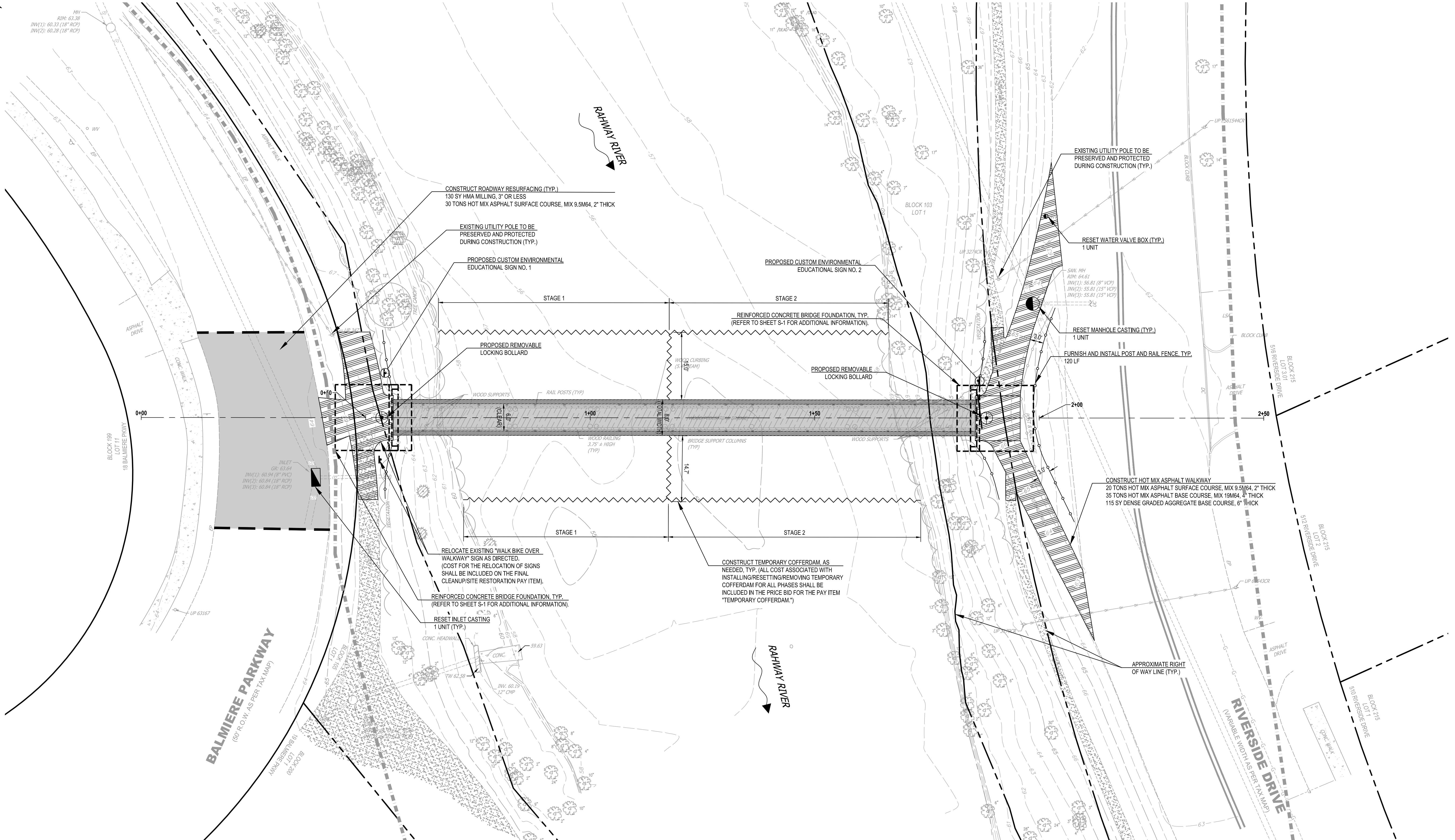
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DESIGNED BY: J.V. SCALE: N.T.S. DATE: NOVEMBER 8, 2021
FIELD BOOK NO.: PAGE:



GRAPHIC SCALE



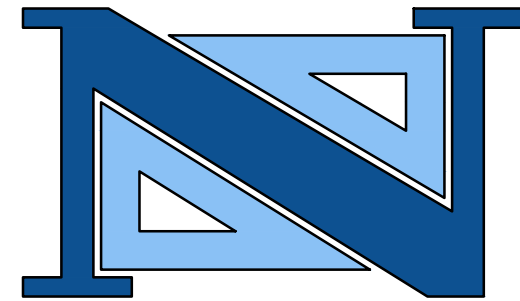
MH
RIM: 63.38
INV(1): 60.23 (18" RCP)
INV(2): 60.28 (18" RCP)



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PROFESSIONAL LAND SURVEYOR
N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER
N.J. LICENSE NO. 33L00569800

SITE PLAN
NOMAHEGAN PEDESTRIAN BRIDGE REPLACEMENT
BA# 6-2024; UNION COUNTY ENGINEERING PROJECT #2016-038
TOWNSHIP OF CRANFORD
UNION COUNTY NEW JERSEY

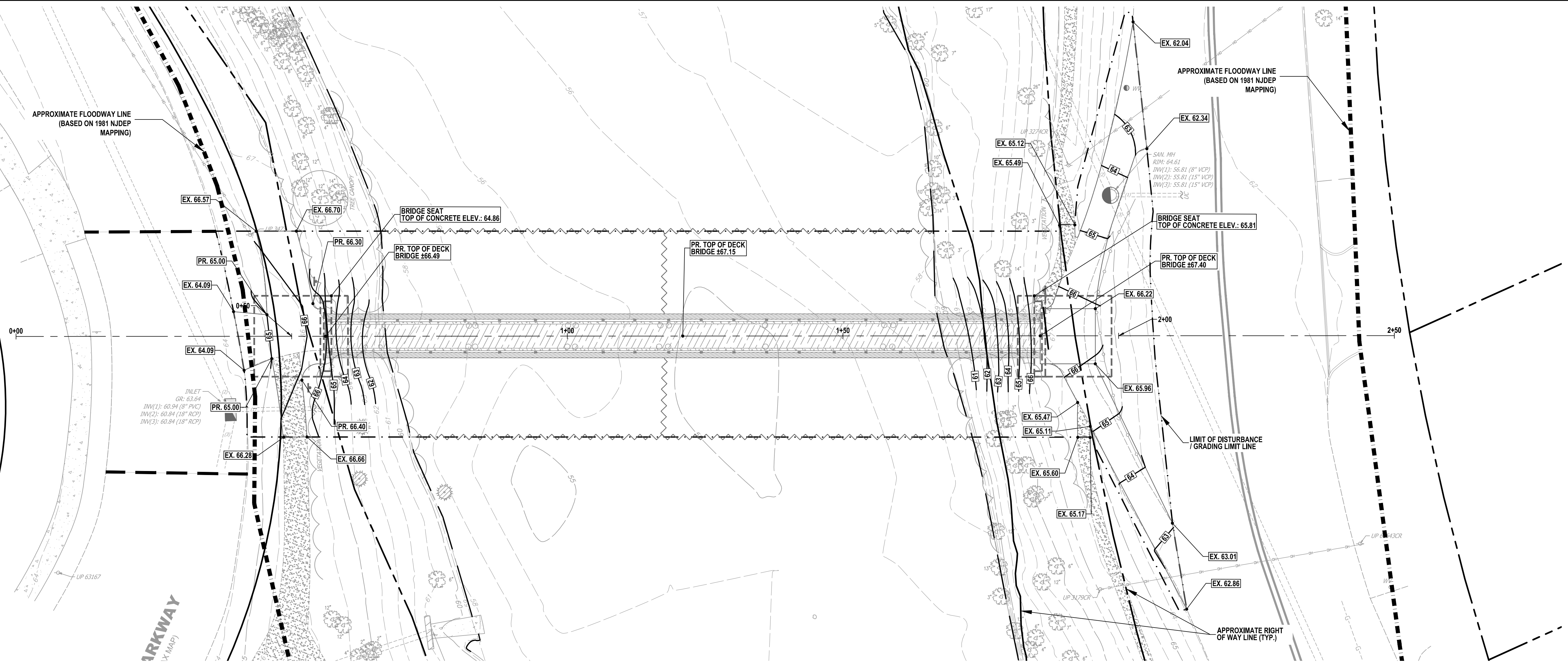
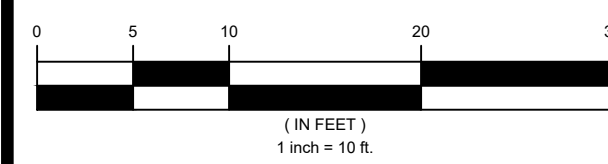
PROJECT NO: UNIOCTY17.011 SHEET NO: 3.00
DATE: NOVEMBER 6, 2021

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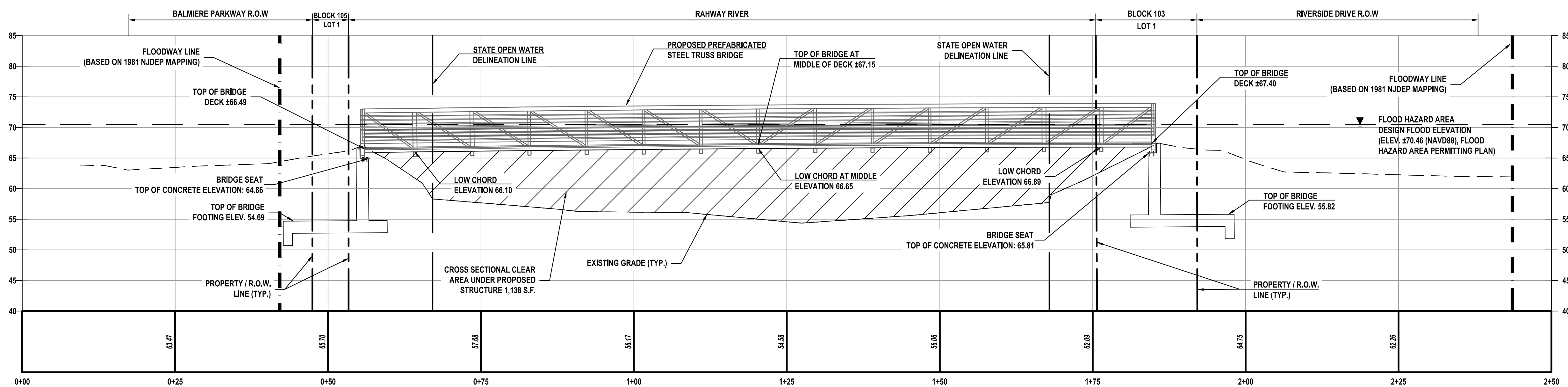
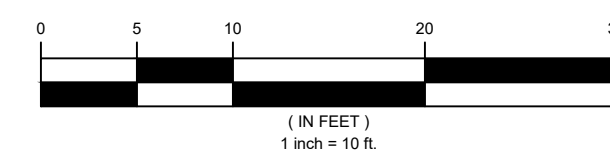


N.J.P.C.S.

GRAPHIC SCALE



HORIZONTAL & VERTICAL SCALE



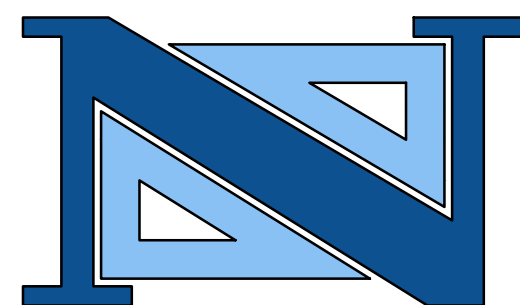
NOMAHEGAN PEDESTRIAN BRIDGE - PROPOSED PROFILE

NOTE:
1. THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

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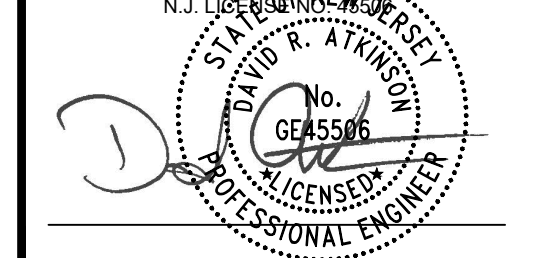
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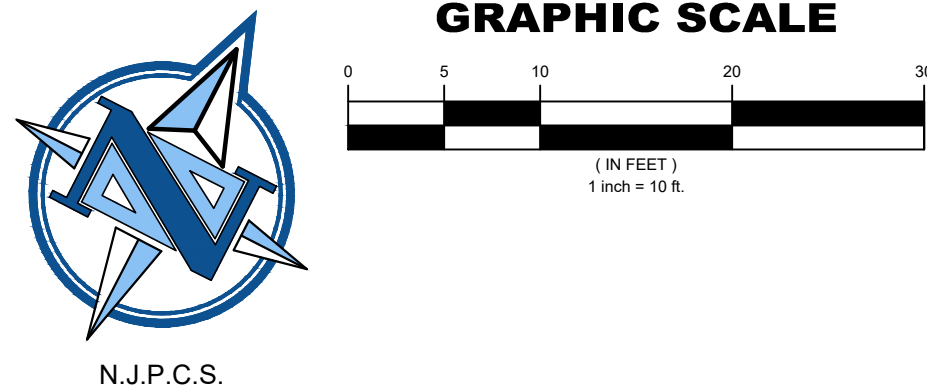
MICHAEL J. NEGLIA, P.E., P.L.S., P.P.
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PROFESSIONAL LAND SURVEYOR
 N.J. LICENSE NO. 38604

PROFESSIONAL PLANNER
 N.J. LICENSE NO. 33LI00569800

GRADING PLAN AND PROPOSED BRIDGE PROFILE
NOMAHEGAN PEDESTRIAN BRIDGE REPLACEMENT
BA# 6-2024; UNION COUNTY ENGINEERING PROJECT #2016-038
TOWNSHIP OF CRANFORD
UNION COUNTY
NEW JERSEY

DRAWN BY: J.V. CHECKED BY: N.H./D.R.A. PROJECT NO.: UNIOCTY17.011 SHEET NO.: 3.01
 DESIGNED BY: J.V. SCALE: 1" = 10' DATE: NOVEMBER 8, 2021
 FIELD BOOK NO.: PAGE:



THE ENTIRE PROJECT AREA LIES WITHIN THE FLOOD HAZARD AREA (ELEVATION ±70.46', NAVD88) OF THE RAHWAY RIVER

PERMITTING PLAN LEGEND	
	R.O.W. / PROPERTY LINE (APPROX.)
	TOP OF BANK LINE
	LIMIT OF DISTURBANCE LINE
	RIPARIAN ZONE LINE
	FLOODWAY LINE
	TEMPORARY VEGETATION REMOVAL
	TREE REMOVAL

FACW WETLAND MEADOW MIX - ERNMX-122 SPECIES BREAKDOWN	
Botanical Name	Common Name
23.20 % <i>Carex vulpinoidea</i> , PA Ecotype	Fox Sedge, PA Ecotype
22.00 % <i>Carex lurida</i> , PA Ecotype	Lurid Sedge, PA Ecotype
22.00 % <i>Elymus virginicus</i> , PA Ecotype	Virginia Wildrye, PA Ecotype
14.00 % <i>Carex acutata</i> , PA Ecotype	Blunt Brown Sedge, PA Ecotype
3.00 % <i>Juncus effusus</i>	Soft Rush
3.00 % <i>Veronica hastata</i> , PA Ecotype	Blue Vervain, PA Ecotype
2.00 % <i>Asclepias incarnata</i> , PA Ecotype	Swamp Milkweed, PA Ecotype
2.00 % <i>Carex inumescens</i> , PA Ecotype	Slate Sedge, PA Ecotype
2.00 % <i>Zizia aurea</i> , PA Ecotype	Golden Alexander, PA Ecotype
1.00 % <i>Aster novae-angliae</i> , PA Ecotype	New England Aster, PA Ecotype
1.00 % <i>Juncus tenuis</i> , PA Ecotype	Rhith Rush, PA Ecotype
1.00 % <i>Veronica urticellata</i> , PA Ecotype	White Vervain, PA Ecotype
0.70 % <i>Solidago rigida</i> , PA Ecotype	Wrinkleleaf Goldenrod, PA Ecotype
0.50 % <i>Aster spicatus</i>	Lance Leaved Aster
0.50 % <i>Aster purpureus</i> , PA Ecotype	Purplestem Aster, PA Ecotype
0.50 % <i>Solidago nemoralis</i> , PA Ecotype	Hoop Pine, PA Ecotype
0.50 % <i>Carex crinita</i> , PA Ecotype	Fringed Sedge, PA Ecotype
0.50 % <i>Lobelia siphilitica</i> , PA Ecotype	Great Blue Lobelia, PA Ecotype
0.50 % <i>Mimulus ruginosus</i> , PA Ecotype	Square Stemmed Monkeyflower, PA Ecotype
0.40 % <i>Carex stipitata</i> , PA Ecotype	Awl Sedge, PA Ecotype
0.40 % <i>Equisetum perfoliatum</i> , PA Ecotype	Bonset, PA Ecotype
0.30 % <i>Hedera autumnalis</i> , PA Ecotype	Common Snowweed, PA Ecotype
0.30 % <i>Lycopus americanus</i> , PA Ecotype	American Water Horehound, PA Ecotype
0.30 % <i>Scirpus atrovirens</i> , PA Ecotype	Green Bulrush, PA Ecotype
0.30 % <i>Scirpus cyperinus</i> , PA Ecotype	Woolgrass, PA Ecotype
0.10 % <i>Aster subulnoides</i> , PA Ecotype	Mud Plantain, PA Ecotype
Grasses & Grass-Like Species - Herbaceous Perennial; Herbaceous Flowering Species - Herbaceous Perennial; Wet Meadows & Wetlands	

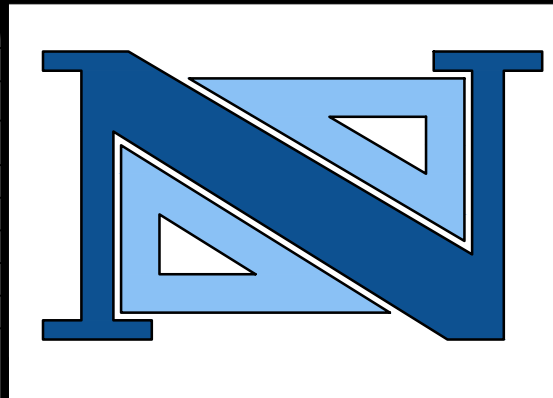
NOTE:
1. CONTRACTOR TO USE ERNST SEED MIX: ERNMX-122: "FACW WETLAND MEADOW MIX" TO RESTORE ALL DISTURBED AREA.

PROPOSED FLOOD HAZARD AREA DISTURBANCES	
FLOOD HAZARD AREA INDIVIDUAL PERMIT	
<p>N.J.A.C. 7:13-10.1(a): A PERSON SHALL OBTAIN AN INDIVIDUAL PERMIT UNDER THIS SUBCHAPTER IN ORDER TO UNDERTAKE ANY ACTIVITY THAT DOES NOT MEET THE REQUIREMENTS OF A PERMIT-BY-RULE PURSUANT TO N.J.A.C. 7:13-7, AND AUTHORIZATION UNDER A GENERAL PERMIT-BY-CERTIFICATION PURSUANT TO N.J.A.C. 7:13-8, AND AUTHORIZATION UNDER A GENERAL PERMIT PURSUANT TO N.J.A.C. 7:13-9, OR A COASTAL PERMIT UNDER THE CIRCUMSTANCES SET FORTH AT N.J.A.C. 7:13-2.1(b)(6);</p>	
<p>NOTED:</p> <p>N.J.A.C. 7:13-7.10(d)(1): THE APPLICABLE AREA-SPECIFIC REQUIREMENTS AT N.J.A.C. 7:13-11;</p> <p>ALL APPLICABLE AREA-SPECIFIC REQUIREMENTS AT N.J.A.C. 7:13-11 WILL BE MET.</p> <p>N.J.A.C. 7:13-7.10(d)(2): THE APPLICABLE ACTIVITY-SPECIFIC REQUIREMENTS AT N.J.A.C. 7:13-12;</p> <p>ALL APPLICABLE AREA-SPECIFIC REQUIREMENTS AT N.J.A.C. 7:13-12 WILL BE MET.</p>	
FLOOD HAZARD AREA INDIVIDUAL PERMIT - 50-FOOT RIPARIAN ZONE	
1. FOOTBRIDGE	1.1.1. TOTAL PROPOSED PERMANENT RIPARIAN ZONE DISTURBANCE= 935 SF / 0.021 AC.
	1.1.2. MAXIMUM PERMITTED DISTURBANCE= 1,000 SF / 0.023 AC.
	1.1.3. DISTURBANCE FOR FOOTBRIDGE IS LESS THAN THE MAXIMUM (N.J.A.C. 7:13-11.2(u)).
<p>NOTES:</p> <p>1. THE SITE IS LOCATED WITHIN ZONE AE, PER THE FEMA FLOOD INSURANCE RATE MAP (ENCLOSED HEREIN), UNION COUNTY, NEW JERSEY, MAP NUMBER 34039C0021F EFFECTIVE SEPTEMBER 20, 2006.</p> <p>2. THE SITE LIES WITHIN THE FLOOD HAZARD AREA OF THE RAHWAY RIVER, AS DELINEATED BY NJDEP WITH A BASE FLOOD HAZARD ELEVATION OF 71.50' (NGVD 29), UTILIZING A CONVERSION FACTOR OF -1.04'. THE NJFHAD FLOOD ELEVATION IS ESTABLISHED AT ±70.46' (NAVD88) AND IS THE HIGHEST PUBLISHED FLOOD HAZARD AREA ELEVATION AT THIS LOCATION.</p> <p>3. PER USGS STREAMSTATS REPORT THE DRAINAGE AREA FOR THE WATERCOURSE IN QUESTION IS 32.4 SQUARE MILES. PER N.J.A.C. 7:13 THE DEFINITION FOR THE TOP OF BANK IS "THE NORMAL WATER SURFACE LIMIT, FOR A LINEAR FLUVIAL REGULATED WATER THAT CONTAINS WATER AT ALL TIMES AND HAS A DRAINAGE AREA OF 10 SQUARE MILES OR MORE."</p>	

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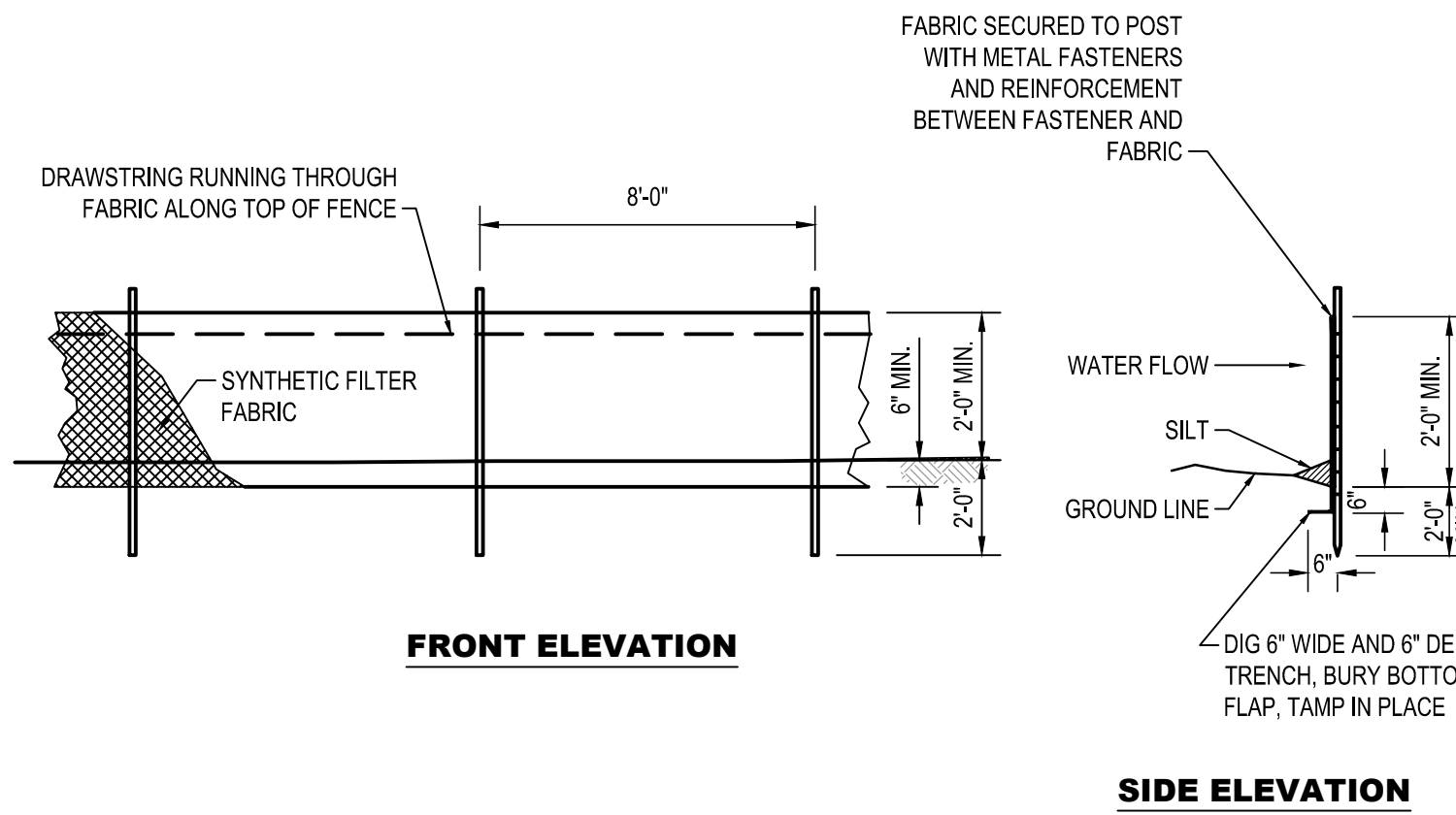
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PROFESSIONAL PLANNER
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FLOOD HAZARD AREA PERMITTING PLAN			
NOMAHEGAN PEDESTRIAN BRIDGE REPLACEMENT			
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TOWNSHIP OF CRANFORD			
UNION COUNTY			
NEW JERSEY			
DRAWN BY: J.V.	CHECKED BY: N.H.J.D.R.A.	PROJECT NO:	SHEET NO:
DESIGNED BY: J.V.	SCALE: 1" = 10'	UNIOCTY17.011	5.01
FIELD BOOK NO:	PAGE:	DATE: NOVEMBER 6, 2021	

**SOMERSET-UNION COUNTIES SOIL CONSERVATION DISTRICT
SOIL EROSION & SEDIMENT CONTROL NOTES**

- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 30 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO NJ STATE STANDARDS
- PERMANENT VEGETATION SHALL BE SEEDING OR SODDING ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING. MULCH WILL BE USED FOR PROTECTION UNTIL SEEDING IS ESTABLISHED
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NJ STATE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, 7TH EDITION LAST REVISED JANUARY 2014
- A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS IN ORDER TO STABILIZE STREETS, ROADS, DRIVEWAYS AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN 15 DAYS OR PRELIMINARY GRADING.
- IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING ALL CRITICAL AREAS SUBJECT TO EROSION (I.E.: STEEP SLOPES, ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO THE NJ STATE STANDARDS.
- ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS (I.E.: SLOPES GREATER THAN 3:1)
- TRAFFIC CONTROL STANDARDS REQUIRE THE INSTALLATION OF A 50X30X6PAD OF 1 1/2" OR 2" STONE, AT ALL CONSTRUCTION DRIVEWAYS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE.
- THE SOMERSET-UNION SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING 48 HOURS IN ADVANCE OF ANY LAND DISTURBING ACTIVITY.
- AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES.
- IN THAT NUSA 4-24-39 ET SEQ., REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE THE PROVISIONS OF THE CERTIFIED PLAN FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES. ALL SITE WORK FOR SITE PLANS AND ALL WORK AROUND INDIVIDUAL LOTS IN SUBDIVISIONS, WILL HAVE TO BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.
- CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
- ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT NJ STATE SOIL EROSION & SEDIMENT CONTROL STANDARDS.
- THE SOMERSET-UNION SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES IN OWNERSHIP.
- MULCHING TO THE NJ STANDARDS IS REQUIRED FOR OBTAINING A CONDITIONAL REPORT OF COMPLIANCE. CONDITIONALS ARE ONLY ISSUED WHEN THE SEASON PROHIBITS SEEDING.
- CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ADJACENT ROADS CLEAN DURING LIFE OF CONSTRUCTION PROJECT.
- THE DEVELOPER SHALL BE RESPONSIBLE FOR REMEDIATING ANY EROSION OR SEDIMENT PROBLEMS THAT ARISE AS A RESULT OF ONGOING CONSTRUCTION AT THE REQUEST OF THE SOMERSET-UNION SOIL CONSERVATION DISTRICT.
- HYDRO SEEDING IS A TWO-STEP PROCESS. THE FIRST STEP INCLUDES SEED, FERTILIZER, LIME, ETC., ALONG WITH MINIMAL AMOUNTS OF MULCH TO PROMOTE CONSISTENCY, GOOD SEED TO SOIL CONTACT, AND GIVE A VISUAL INDICATION OF COVERAGE. UPON COMPLETION OF SEEDING OPERATION, HYDRO-MULCH SHOULD BE APPLIED AT A RATE OF 1500 LBS. PER ACRE IN SECOND STEP. THE USE OF HYDRO-MULCH, AS OPPOSED TO STRAW, IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE NJ STANDARDS.



INLET PROTECTION STANDARDS

DEFINITION
A TEMPORARY BARRIER AND SETTLING FACILITY INSTALLED AT A STORM SEWER INLET.

PURPOSE
THE PURPOSE OF STORM SEWER INLET PROTECTION IS TO INTERCEPT AND RETAIN SEDIMENT, THUS PREVENTING THE ENTRANCE OF SEDIMENT INTO THE STORM SEWER SYSTEM.

CONDITIONS WHERE PRACTICE APPLIES

- CONTRIBUTING DRAINAGE AREA IS 3 ACRES OR LESS.
- A STORM SEWER OR THE OUTLET CHANNEL OF A STORM SEWER NEEDS PROTECTION FROM SEDIMENT.
- TRAFFIC WILL NOT DESTROY OR CAUSE CONSTANT MAINTENANCE OF THE STORM SEWER INLET PROTECTION.
- A TRAFFIC HAZARD WILL NOT BE CREATED.
- A FLOODING PROBLEM WILL NOT BE CREATED.

WATER QUALITY ENHANCEMENT

THE PRIMARY BENEFIT TO WATER QUALITY IS REMOVAL OF SEDIMENT FROM STORMWATER RUNOFF PRIOR TO ENTERING THE STORM SEWER SYSTEM, AS AN ADDED BENEFIT, OTHER FLOATABLE DEBRIS, SUCH AS VEGETATIVE MATTER AND LITTER MAY ALSO BE FILTERED OUT OF THE RUNOFF.

DESIGN CRITERIA

THE FOLLOWING APPLIES TO ALL METHODS OF STORM SEWER INLET PROTECTION:

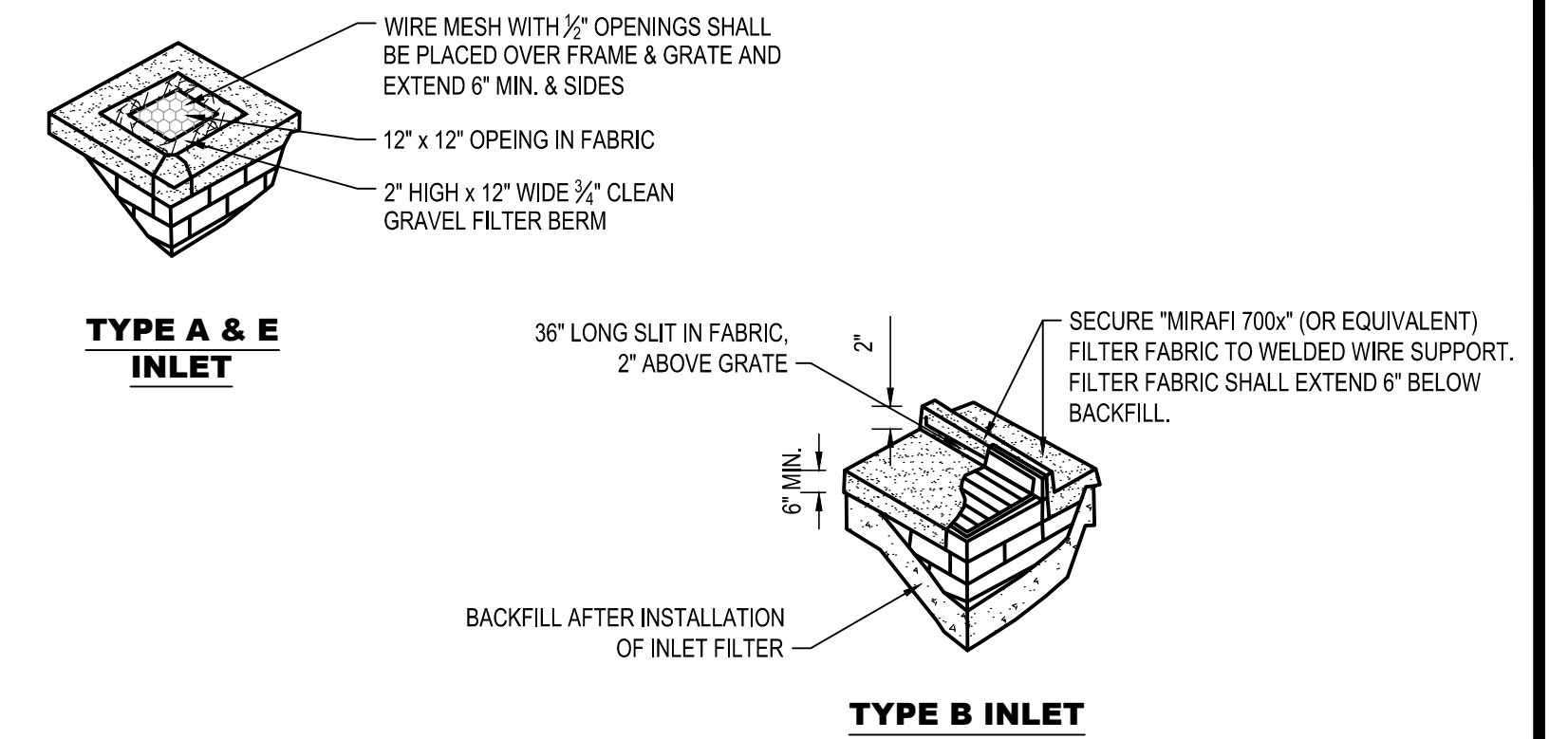
- MUST SLOW THE STORM WATER, PROVIDE THE COARSE SEDIMENT PARTICLES A CHANCE TO SETTLE, AND PROVIDE AN AREA TO RETAIN THE PARTICLES THAT HAVE SETTLED.
- IN ALL CASES, THE INLET PROTECTION SHOULD NOT COMPLETELY CLOSE OFF THE INLET.
- THE PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM.

OTHER METHODS THAT ACCOMPLISH THE PURPOSE OF STORM SEWER INLET PROTECTION MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.

INSPECTIONS SHALL BE FREQUENT. MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY, AS NEEDED, THE BARRIER SHALL BE REMOVED WHEN THE AREA DRAINING TOWARD THE INLET HAS BEEN STABILIZED.

SEQUENCE OF CONSTRUCTION

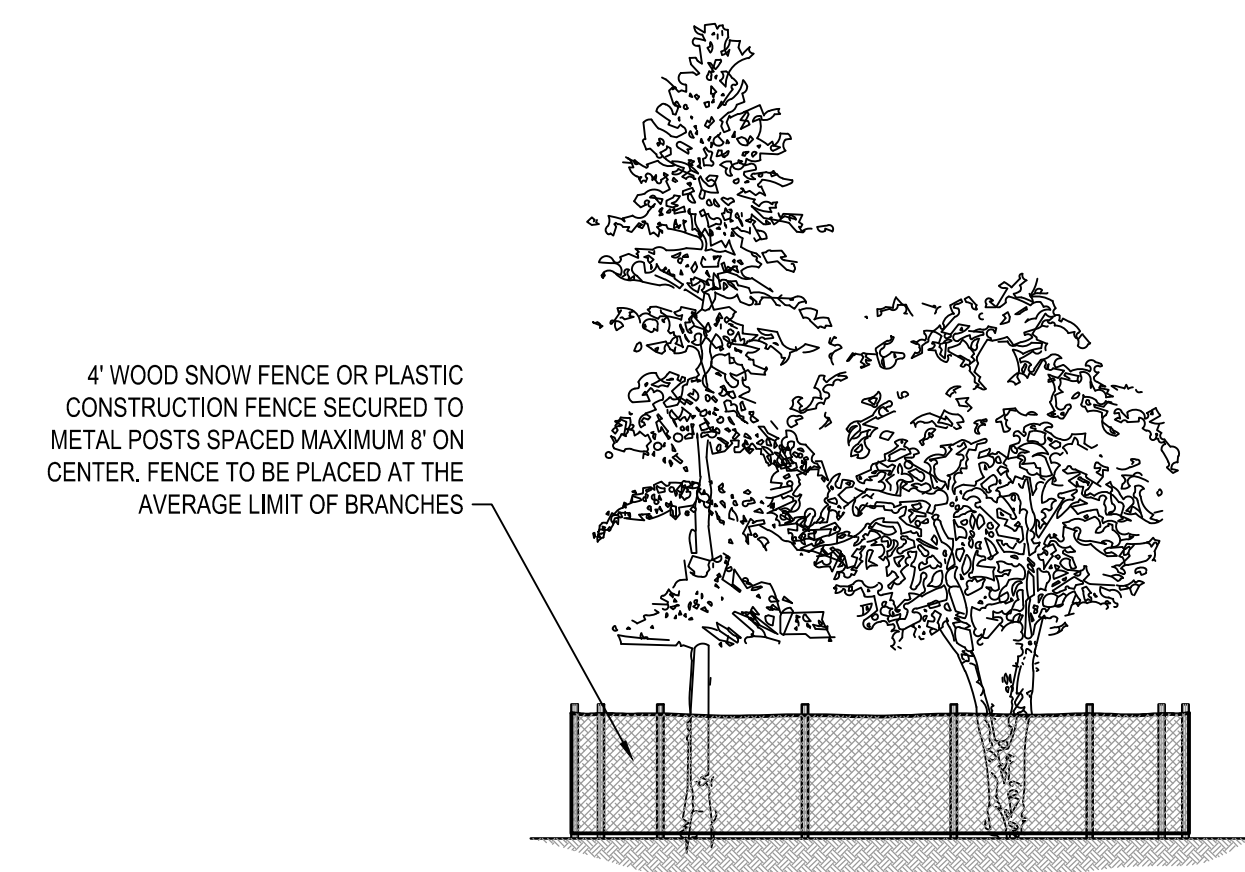
ACTIVITY	APPROXIMATE DURATION (days)
1. INSTALL CONSTRUCTION ENTRANCE AND INSTALL SEDIMENT CONTROL MEASURES & TURBIDITY BARRIERS	1 DAY
2. BEGIN SELECTIVE SITE CLEARING AND TREE REMOVAL.	1 DAY
3. PATH PAVEMENT REMOVAL AND REMOVAL OF BRIDGE.	15 DAYS
4. BEGIN INITIAL GRADING.	1 DAY
5. MANUFACTURED AND DELIVERY OF NEW BRIDGE.	210 DAYS
6. CONSTRUCT NEW BRIDGE FOUNDATION AND STRUCTURE.	25 DAYS
7. BEGIN FINAL GRADING, MILLING AND PAVING OF ROADWAY, PAVING ASPHALT WALKWAYS, INSTALL SIGNS AND FENCE.	1 DAY
8. SITE RESTORATION AND REMOVE SOIL EROSION & SEDIMENT CONTROL MEASURES, FINAL SITE CLEANUP, PROVIDE PERMANENT STABILIZATION OF ALL EXPOSED SURFACES)	1 DAY
TOTAL DURATION	±250 DAYS



NOTES:

- CONTRACTOR IS TO INSPECT INLET FILTER AFTER EVERY STORM, AND CLEAN OR REPLACE AS REQUIRED
- CONTRACTOR IS TO REMOVE FABRIC AND MESH JUST PRIOR TO PAVING
- FILTER FABRIC SHALL BE "MIRAFI 700K" TYPE OR APPROVED EQUAL
- INLET FILTER SHALL FILTER RUNOFF FROM THE 1 YEAR 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO STORM SEWER SYSTEM.

INLET FILTER & PROTECTION

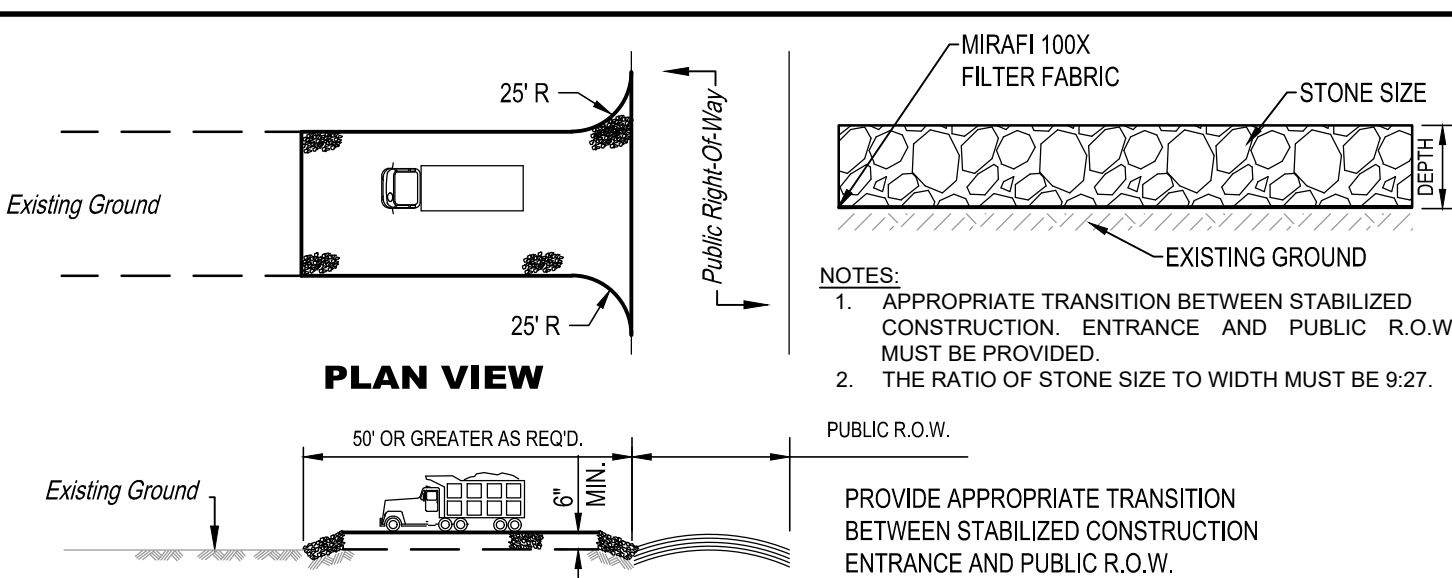


NOTES:

- CONSTRUCTION EQUIPMENT OF ANY KIND IS TO BE PROHIBITED FROM DRIVING AND/OR PARKING UNDER TREES. THE STOCKPILE OF CONSTRUCTION MATERIAL SHALL BE PROHIBITED FROM BEING STORED UNDER ANY TREES.

TREE PROTECTION

SILT FENCE
NOT TO SCALE



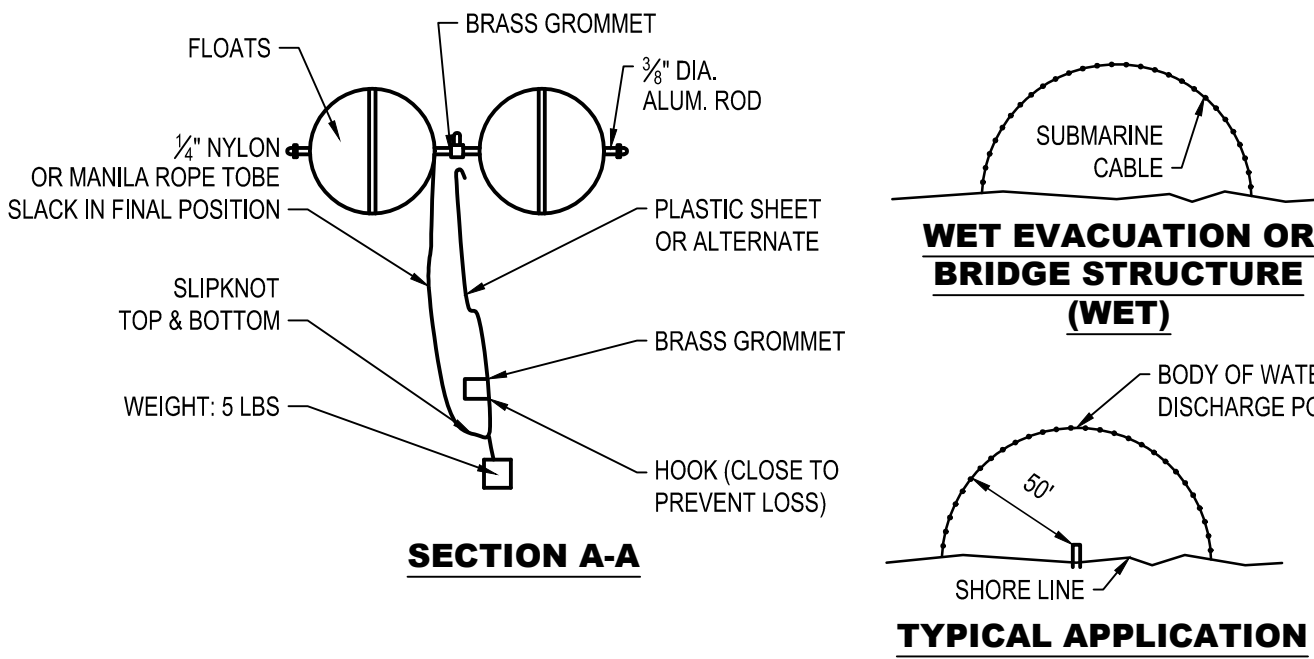
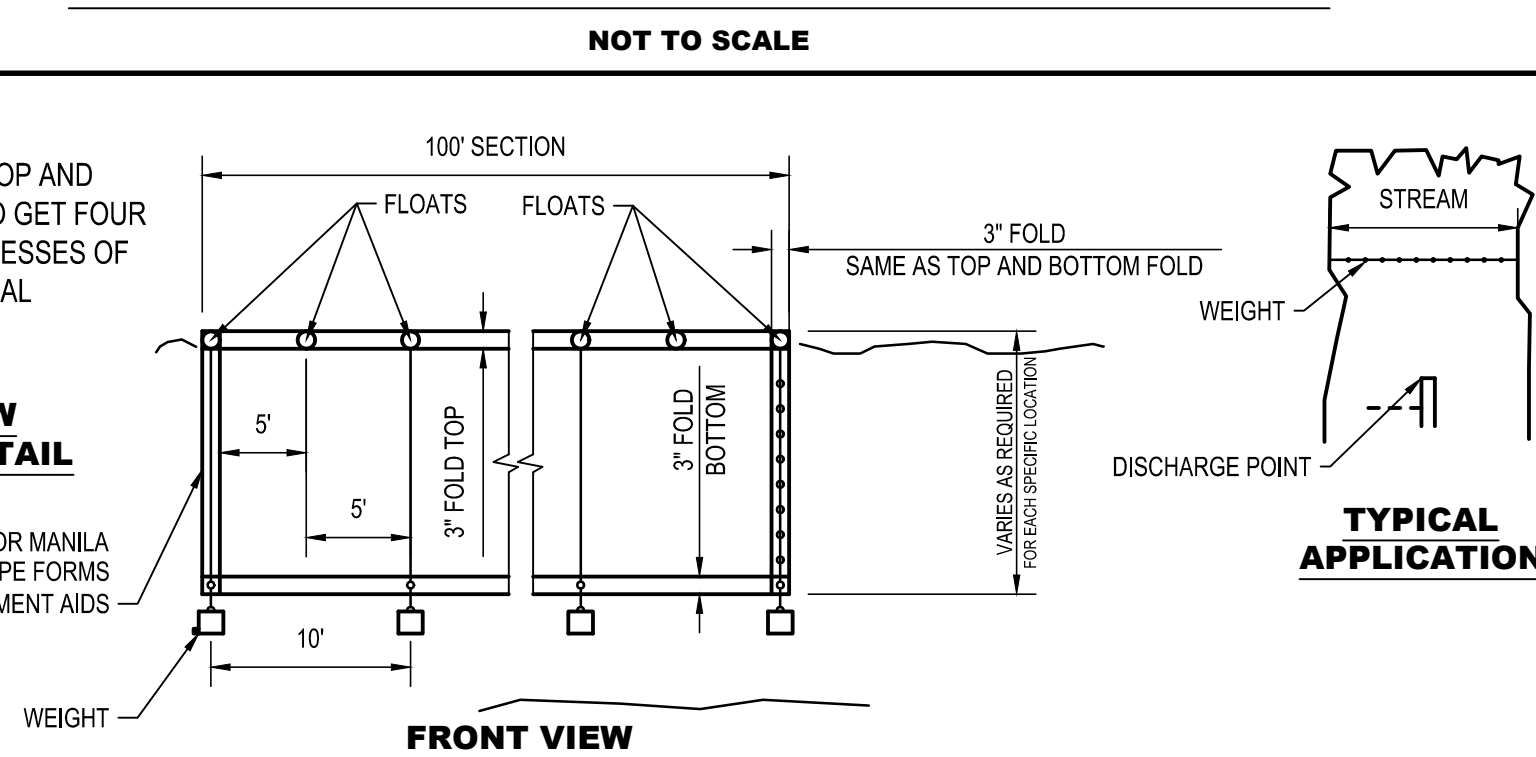
NOTES:

- PLACE STABILIZED CONSTRUCTION ENTRANCE AT LOCATION(S) AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
- STONE SIZE SHALL BE ASTM C-33, SIZE NO.2 OR 3, CRUSHED STONE.
- THE THICKNESS OF THE STABILIZED CONSTRUCTION ENTRANCE SHALL NOT BE LESS THAN 6".
- THE WIDTH AT THE EXIST. PAVEMENT SHALL NOT BE LESS THAN THE FULL WIDTH OF POINTS OF INGRESS AND EGRESS.
- THE STAB. CONST. ENT. SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE R.O.W./PAVEMENT. THIS REQUIRES PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT.
- ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO THE PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
- APPROPRIATE TRANSITION BETWEEN STAB. CONST. ENT. & PUBLIC R.O.W. MUST BE PROVIDED.
- THE RATIO OF STONE SIZE TO WIDTH MUST BE 9:27.

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT.	100 FT.
2 TO 5%	100 FT.	200 FT.
>5%	ENTIRE SURFACE STABILIZED WITH FABR. BASE COURSE*	

* AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

STABILIZED CONSTRUCTION ACCESS

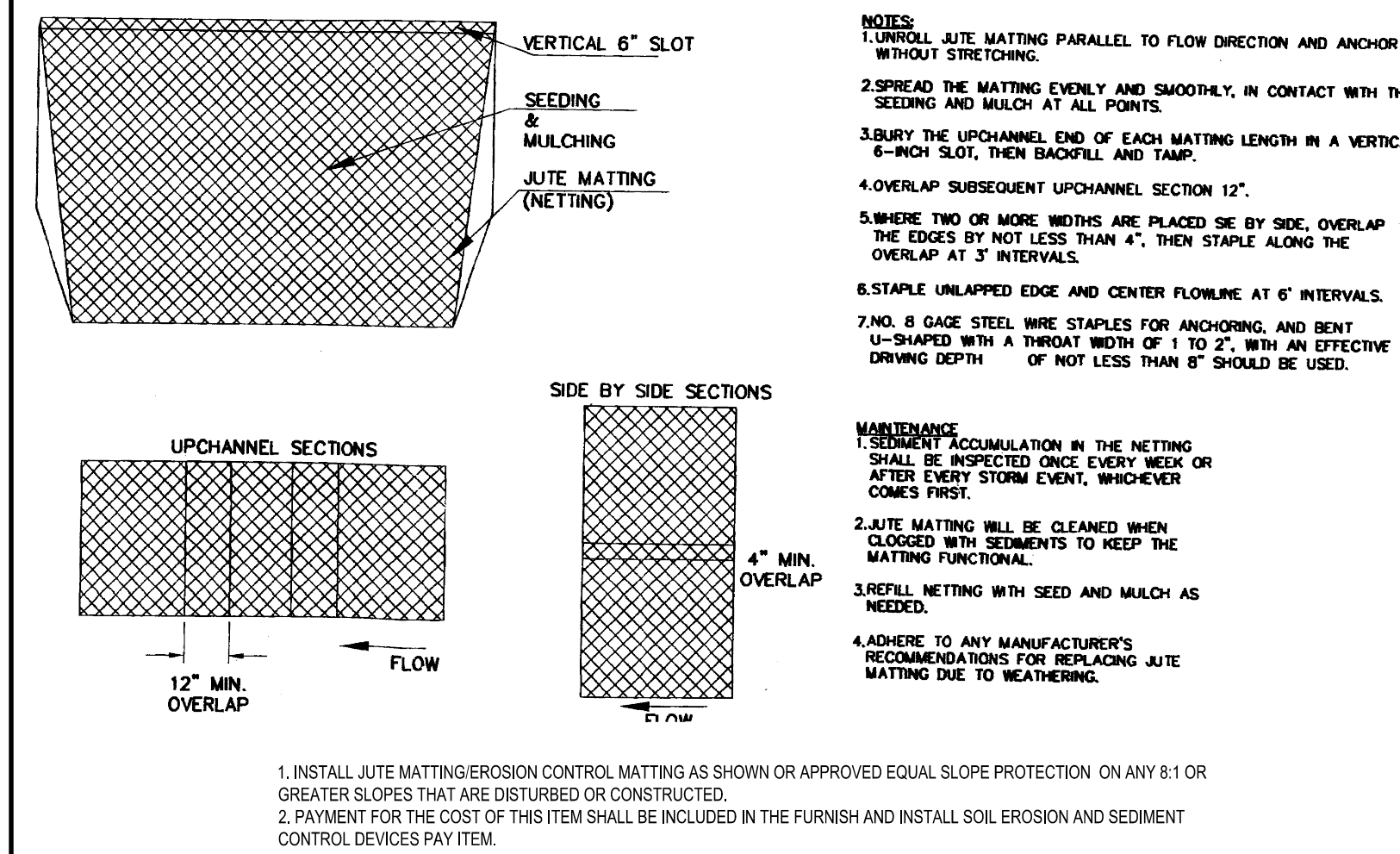


NOTES:

- PLACE SILT BARRIER TO PREVENT DRIFTING OF SILT CAUSED BY DISCHARGE OF STORM SEWERS DURING CONSTRUCTION, DREDGING OR FILLING OPERATIONS.
- EXACT PLACEMENT OF SILT BARRIER SHALL BE SO AS TO EFFECTIVELY CONTROL SILT DISPERSION UNDER CONDITIONS PRESENT ON A PARTICULAR PROJECT.
- THE DETAILS SHOWN ON THIS SHEET ARE SUGGESTED METHODS ONLY ALTERNATE SOLUTION AND USAGE OF MATERIALS MAY BE USED AS APPROVED.
- AT SHALLOW WATER LOCATIONS, THE PLASTIC SHEET OR SUITABLE ALTERNATE MAY BE FASTENED O STAKES DRIVEN INTO THE BOTTOM IN LIEU OF FLOATS AND WEIGHTS.

FLOATING TURBIDITY BARRIER

NOT TO SCALE



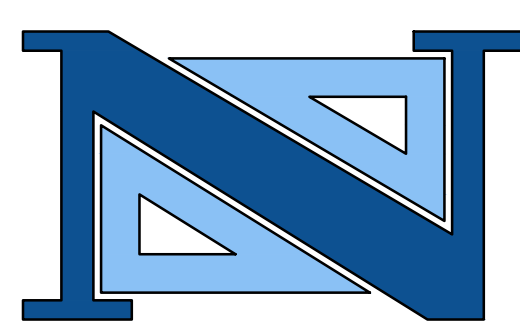
JUTE MATTING EROSION CONTROL DETAIL

NOT TO SCALE

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CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

REVISIONS				
NO.	DATE	DESCRIPTION	DRAWN	CHECKED
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2.	2022/08/04	REVISED PER NJDEP PERMIT RULE 23	J.V.	J.V. D.A.
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CONSTRUCTION DETAILS I
NOMAHEGAN PEDESTRIAN BRIDGE REPLACEMENT
BA# 6-2024; UNION COUNTY ENGINEERING PROJECT #2016-038
TOWNSHIP OF CRANFORD
UNION COUNTY
NEW JERSEY

DRAWN BY: J.V. CHECKED BY: N.H.D.R.A. PROJECT NO: UNIOCTY17.011 SHEET NO: 6.00
DESIGNED BY: J.V. SCALE: N.T.S. DATE: NOVEMBER 8, 2021
FIELD BOOK NO: PAGE

ENVIRONMENTAL NOTES & COMMITMENTS:

- CONSTRUCTION EQUIPMENT SHALL NOT BE WASHED IN THE WATERWAY OR IN THE AREAS IN WHICH WASH WATER WILL DRAIN INTO THE WATERWAY.
- SENSITIVE AREA - WETLANDS/STATE OPEN WATERS, THE CONTRACTOR SHALL NOT ENCRoACH UPON OR STORE ANY EQUIPMENT/VEHICLE/MATERIALS IN WETLANDS/TRANSITION AREAS/STATE OPEN WATER AREAS BEYOND THOSE APPROVED IN ANY ISSUED PERMITS OR SHOWN ON THE PLANS. THE CONTRACTOR IS PERMITTED TO BE ONLY IN THOSE WETLANDS/TRANSITION AREAS/STATE OPEN WATERS THAT ARE NECESSARY TO GAIN ACCESS TO THE WORK ZONE AS DEPICTED ON THE PLANS AND IN THE WORK ZONE ITSELF. ALL REMAINING AREAS OF WETLANDS, TRANSITION AREAS, OR STREAM ARE NOT TO BE ENCRoACHED UPON. THEREFORE, THE CONTRACTOR MUST ADHERE TO THE LOCATIONS OF THE SILT FENCE AND ADHERE TO THE LIMITS OF DISTURBANCE IN THE STREAM. IN ADDITION, STOCKPILES, VEHICLES, AND/OR EQUIPMENT SHALL NOT BE LOCATED WITHIN 50 FEET OF A SLOPE, DRAINAGE FACILITY, WETLAND, OR FLOOD PLAIN OTHER THAN THE CONSTRUCTION AREA SHOWN ON THE PLANS. ALL STOCKPILE BASES SHALL BE PROTECTED BY A HAY BALE BARRIER OR SILT FENCE.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NJDOT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- AREAS OF TEMPORARY IMPACT SHALL BE RESTORED TO ORIGINAL CONDITION AS APPROVED BY THE RE.
- DISCHARGING OF SEDIMENT-LADEN WATER FROM DEWATERING ACTIVITIES DIRECTLY INTO THE STREAM IS PROHIBITED. DOWNSTREAM AREAS SHALL BE PROTECTED FROM EXCESS TURBIDITY DURING CONSTRUCTION.
- A DEWATERING BASIN SHALL BE INSTALLED FOR ANY IN-STREAM WORK REQUIRING DRY CONDITIONS WHERE RETURN DISCHARGES CAN RELEASE TURBID WATERS DOWNSTREAM. ALL DEWATERING REQUIRES USE OF A DEWATERING BASIN TO SETTLE OUT SUSPENDED SOLIDS. THE AREA OF RETURN DISCHARGE TO THE WATERWAY SHALL BE ENCOMPASSED BY TURBIDITY BARRIER. THE DEWATERING CONDUIT LEADING INTO THE BASIN SHALL BE FITTED WITH A SEDIMENT CONTROL BAG. VEGETATION AND OTHER AREAS OF TEMPORARY IMPACT, AS SHOWN ON THE PLANS, SHALL BE PRESERVED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- STREAM FLOW SHALL BE MAINTAINED AT ALL TIMES, REGARDLESS OF HOW THE CONSTRUCTION IS STAGED. FLOATING TURBIDITY BARRIER MUST BE USED. FLOATING TURBIDITY BARRIER SHALL BE TIED TO ONE BANK AND SURROUND THE IN-STREAM WORK. IF WATER IS TOO SHALLOW FOR FLOATING TURBIDITY BARRIER, USE

TURBIDITY DAM INSTEAD, EARTHEN BERMS SHALL NOT BE USED AS COFFERDAMS.

9. THE FOLLOWING TIMING RESTRICTIONS APPLY: IN ORDER TO PROTECT THE GENERAL GAME AND ANADROMOUS FISHERY RESOURCES IN THE SOUTH BRANCH RAHWAY RIVER FROM SEDIMENTATION, PROPOSED CONSTRUCTION ACTIVITIES ARE PROHIBITED BETWEEN APRIL 1 AND JULY 31 EACH YEAR. IN ADDITION, ANY ACTIVITY WITHIN THIS WATERCOURSE WHICH COULD INTRODUCE SEDIMENT INTO SAID RIVER OR WHICH COULD CAUSE AN INCREASE IN THE NATURAL LEVEL OF TURBIDITY IS ALSO PROHIBITED DURING THIS PERIOD. THE NJDEP RESERVES THE RIGHT TO SUSPEND ALL REGULATED ACTIVITIES ON SITE SHOULD IT BE DETERMINED THAT PROPER PRECAUTIONS HAVE NOT BEEN TAKEN TO ENSURE CONTINUOUS COMPLIANCE WITH THIS CONDITION.

10. ANY CHANGES TO PERMIT RELATED WORK WILL REQUIRE NJDEP APPROVAL.

11. ANY EXCAVATED MATERIAL THAT WILL NOT BE USED AS BACKFILL MUST BE DISPOSED OF IN A LAWFUL MANNER OUTSIDE THE LIMITS OF ANY REGULATED FLOODPLAIN, OPEN WATER, FRESH WATER WETLAND OR ADJACENT TRANSITION AREAS. DISPOSAL SHALL BE CONDUCTED IN SUCH A MANNER AS TO NOT INTERFERE WITH THE POSITIVE DRAINAGE OF THE RECEIVING AREA.

12. A COPY OF THE PERMIT(S) SHALL BE KEPT AT THE WORK SITE AND SHALL BE EXHIBITED UPON REQUEST OF ANY PERSON.

13. DURING THE COURSE OF THE CONSTRUCTION, NEITHER THE APPLICANT NOR ITS AGENT SHALL CAUSE OR PERMIT UNREASONABLE INTERFERENCE WITH THE FREE FLOW OF THE STREAM BY PLACING OR DUMPING ANY MATERIALS, EQUIPMENT, DEBRIS, OR STRUCTURES WITHIN OR ADJACENT TO THE STREAM CORRIDOR, UPON COMPLETION OR ABANDONMENT OF THE WORK, THE APPLICANT AND/OR ITS AGENTS SHALL REMOVE AND DISPOSE OF IN A LAWFUL MANNER ALL EXCESS MATERIALS, EQUIPMENT AND DEBRIS FROM THE STREAM CORRIDOR AND ADJACENT ANDS.

14. ALL TERMS AND CONDITIONS OF NJDEP PERMITS/WAIVERS SHALL BE ADHERED TO.

15. ANY DISTURBED AREA THAT WILL BE LEFT EXPOSED FOR MORE THAN 90 DAYS, SHALL IMMEDIATELY RECEIVE TEMPORARY SEEDING AND STRAW MULCHING (SEE SOIL EROSION AND SEDIMENT CONTROL NOTES).

16. THE DEWATERING BASIN FOR ALL CONSTRUCTION ACTIVITIES IN THE STREAM SHALL BE CONSTRUCTED WITHIN RIGHT OF WAY.

17. NATURAL SUBSTRATE FROM THE AREA OF DISTURBANCE SHALL BE UTILIZED TO FILL VOIDS WITHIN THE

ARTICULATED CONCRETE BLOCK MATS. VOIDS SHALL BE FILLED FLUSH WITH THE TOP OF MATS AFTER PLACING THE CONCRETE BETWEEN THE ACB MAT ENDS. LARGER STONES FROM THE NATURAL STREAM BED MATERIAL SHALL BE EMBEDDED RANDOMLY IN THE CONCRETE SURFACE, AVOIDING THE LOW-FLOW AREA.

18. NO RAW CONCRETE SHALL COME IN CONTACT WITH THE WATER. CONCRETE MUST CURE FOR A MINIMUM OF 7 DAYS PRIOR TO WATER FLOW OVER THE CONCRETE. ANY GROUT/CONCRETE THAT COMES IN CONTACT WITH THE WATER MUST BE REMOVED IMMEDIATELY. NO PUMP WATER FROM GROUT/CONCRETE OPERATIONS MAY BE DISCHARGED DIRECTLY TO THE WATER BODY. ALL PUMPED WATER SHALL BE DISCHARGED TO A HOLDING TANK AND DISPOSED OF PROPERLY.

19. CONCRETE DEBRIS SHALL BE DISPOSED OF IN ACCORDANCE WITH 201.03.08 OF THE STANDARD SPECIFICATIONS AND SHALL NOT BE USED IN THE CONSTRUCTION OF EMBANKMENTS.

WATERWAY STAGING AND DIVERSION NOTES:

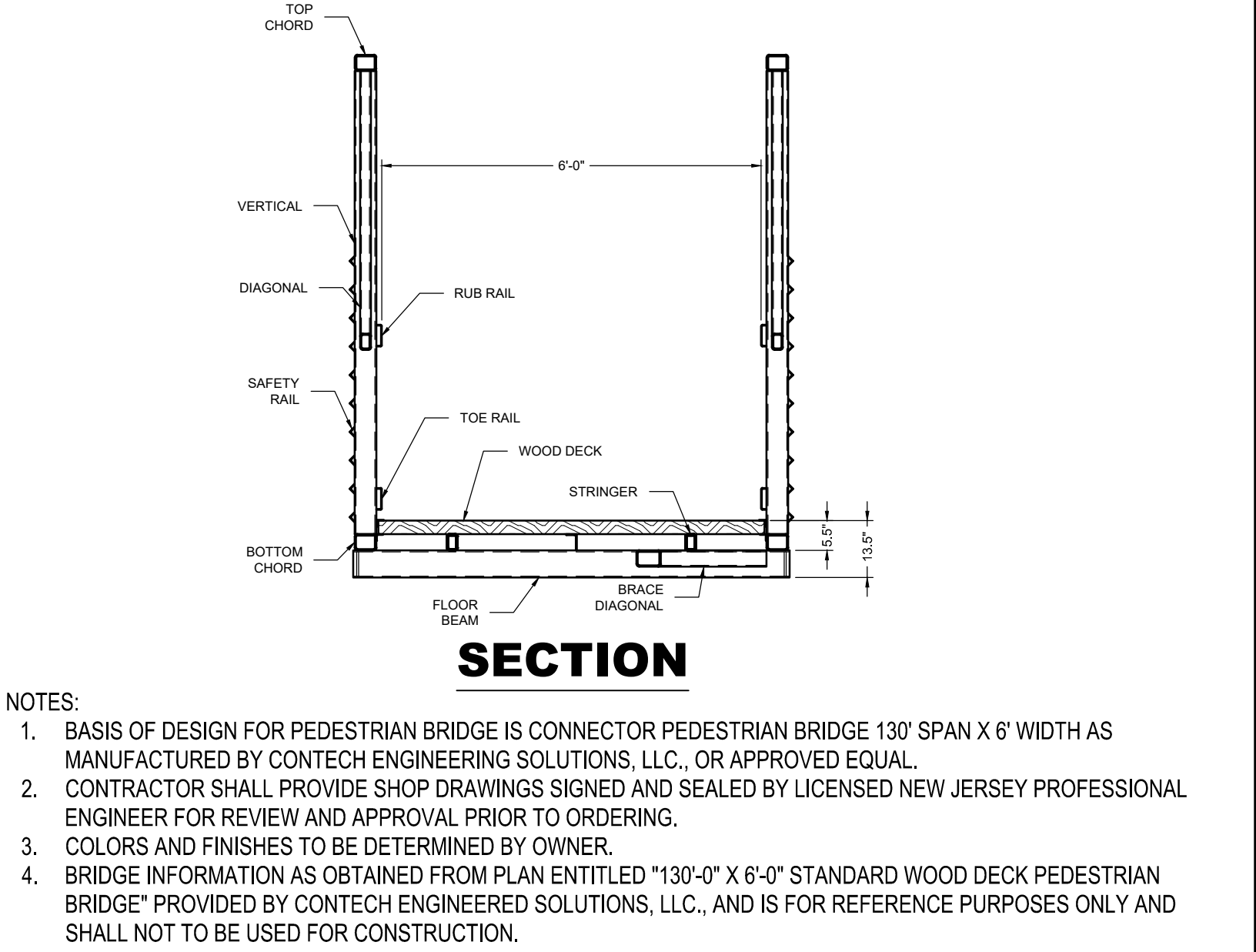
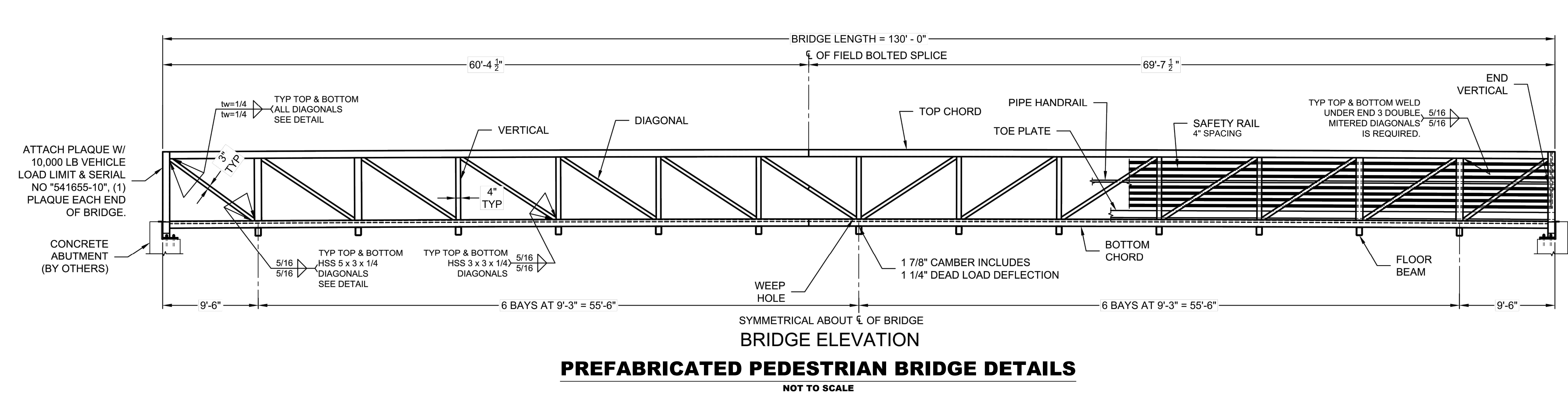
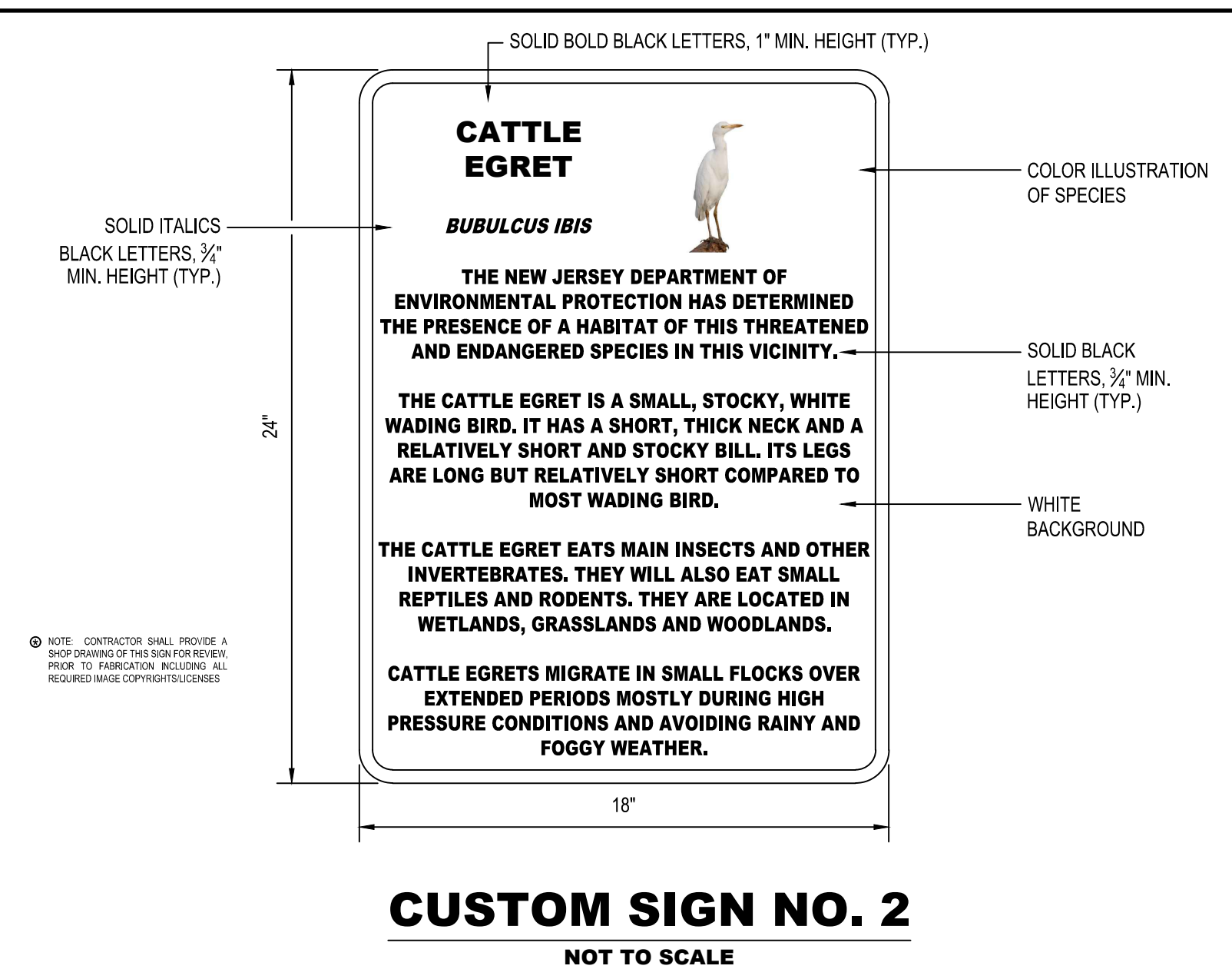
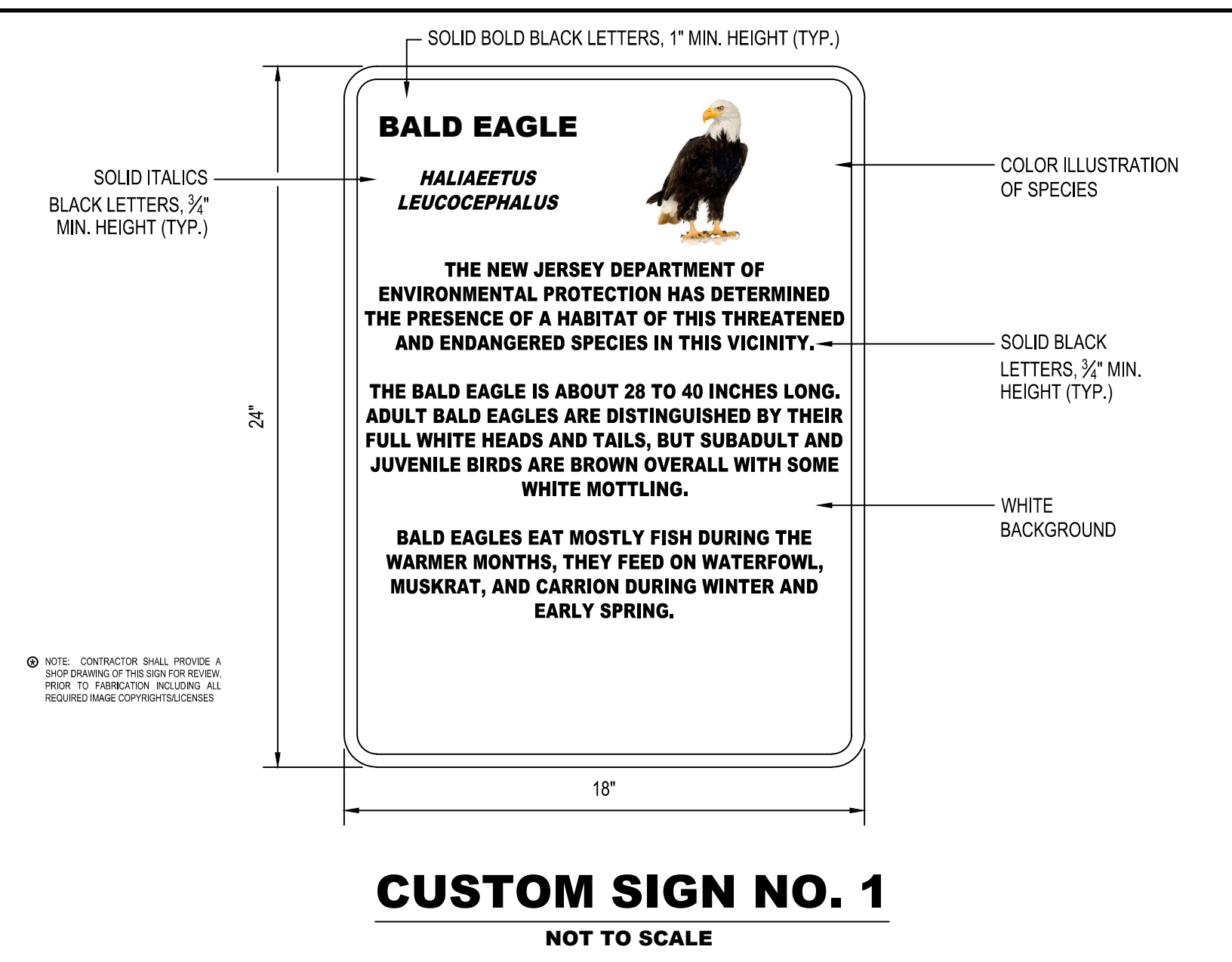
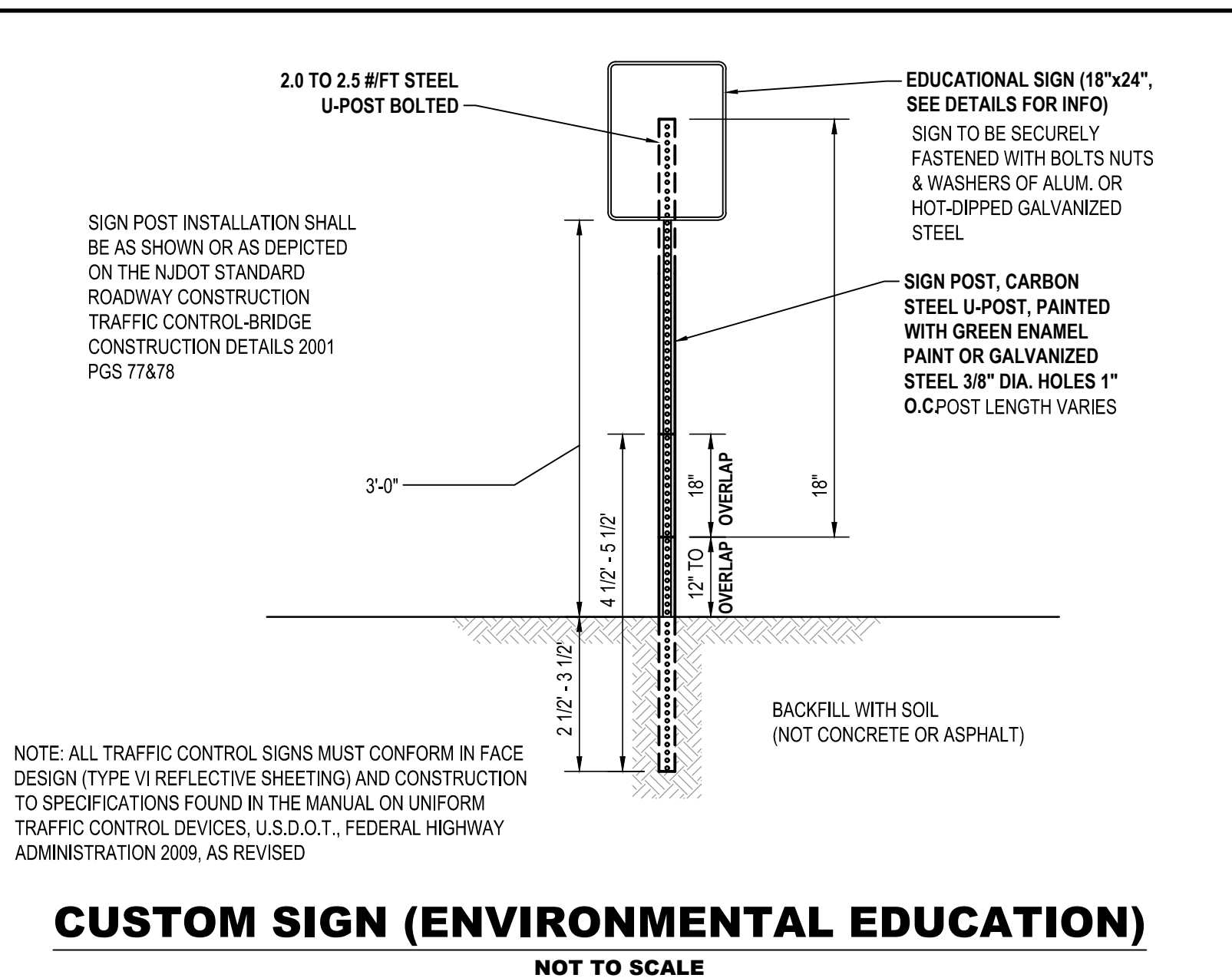
1. STREAM DIVERSION STAGES 1 AND 2 CAN BE DONE IN ANY ORDER.

GENERAL NOTES:

- BACKFILL WITH SUITABLE EXCAVATED ON SITE MATERIAL OR COARSE AGGREGATE STONE, SIZE NO.57 AS DIRECTED BY THE RE.
- REFER TO SHEET NO. 3 FOR LOCATION OF THE TEMPORARY COFFERDAMS.

SITE RESTORATION OF DISTURBED AREA NOTES

- ALL VEGETATED AREAS WITHIN THE DISTURBED LIMITS OF THE PROJECT SHALL RECEIVE TOPSOIL, FERTILIZER, HYDRO-SEEDING AND MULCH. ALL SEEDED AREAS SHALL BE MULCHED WITH SALT HAY, PENN MULCH, OR APPROVED EQUAL. SEE NATIVE MEADOW SEED MIX DETAIL FOR RESTORATION SEED MIXTURE.
- TOPSOIL SHALL BE SCREENED TOPSOIL SHALL CONTAIN NO STONES, LUMPS, ROOTS, OR SIMILAR OBJECTS LARGER THAN 1/2 INCH IN ANY DIMENSION, AND SHALL HAVE A PH VALUE OF NOT LESS THAN 5.8. WHEN THE PH VALUE OF THE TOPSOIL IS LESS THAN 5.8, IT SHALL BE INCREASED BY APPLYING GROUND LIMESTONE AT A RATE NECESSARY TO ATTAIN A PH VALUE OF 6.5. TOPSOIL SHALL BE INSPECTED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR ENGINEER PRIOR TO PLACEMENT. ANY TOPSOIL IMPORTED FOR CONSTRUCTION SHALL BE CERTIFIED CLEAN. WHEN THE ORGANIC CONTENT OF THE TOPSOIL FURNISHED FROM SOURCES OUTSIDE THE LIMITS OF THE PROJECT IS LESS THAN 2.75 PERCENT, IT SHALL BE INCREASED BY ADDING PEAT AT A RATE NECESSARY TO ATTAIN THIS MINIMUM ORGANIC CONTENT. THE ORGANIC CONTENT OF SOILS SHALL BE DETERMINED BY THE LABORATORY USING THE CHROMIC ACID TITRATION METHOD, AS DESCRIBED IN THE UNITED STATES DEPARTMENT OF AGRICULTURE'S CIRCULAR 757. ALL LABORATORY TESTING REPORTS SHALL BE SUBMITTED TO THE PROJECT LANDSCAPE ARCHITECT OR ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. THE GRADATION OF THE TOPSOIL FURNISHED FROM SOURCES OUTSIDE THE LIMITS OF THE PROJECT SHALL BE DETERMINED BY THE LABORATORY, USING THE BOUYCOUCOS HYDROMETER ANALYSIS CONFORMING TO THE REQUIREMENTS OF CURRENT A.A.S.H.O. DESIGNATION T88.
- CONTRACTOR SHALL WATER SEEDED AREAS DAILY AND AS REQUIRED TO ESTABLISH NEW TURF/MEADOW LAWN AREAS.



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CONSTRUCTION DETAILS II
NOMAHEGAN PEDESTRIAN BRIDGE REPLACEMENT
BA# 6-2024; UNION COUNTY ENGINEERING PROJECT #2016-038
TOWNSHIP OF CRANFORD
UNION COUNTY
NEW JERSEY

CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

DRAWN BY: J.V. CHECKED BY: N.H./D.R.A. PROJECT NO: UNIOCTY17.011 SHEET NO: 6.01

DESIGNED BY: J.V. SCALE: N.T.S. PAGE: DATE: NOVEMBER 6, 2021

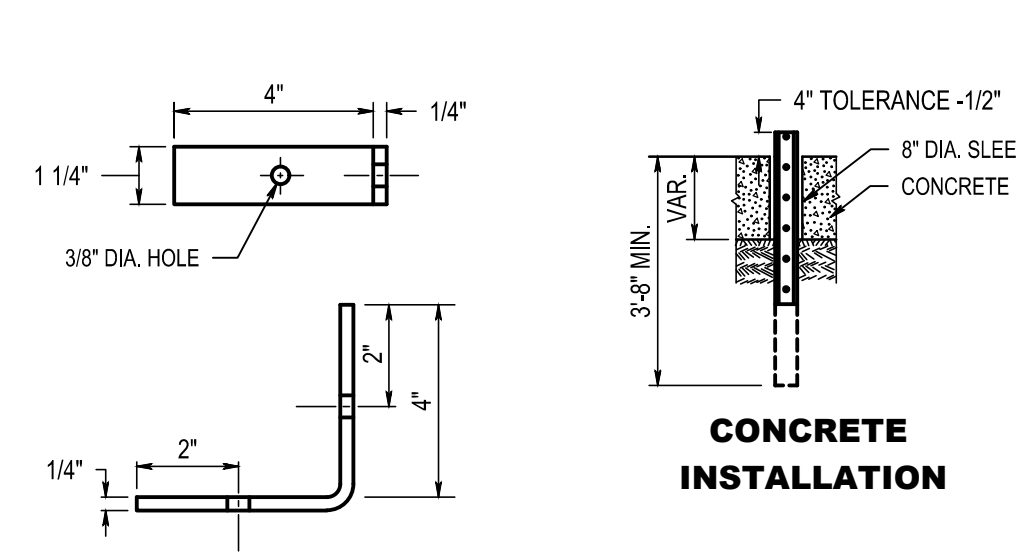
GENERAL NOTES:

- ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND AS INDICATED BELOW.
- ALL SMALL SIGN SUPPORTS SHALL BE OF THE BREAKAWAY TYPE WITH EXCEPTION OF THOSE INSTALLED BEHIND GUIDE RAIL OR OTHER ROADSIDE BARRIER.
- ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH ASTM A123.
- ALL STEEL U-POST SIGN SUPPORTS MUST BE INSTALLED FACING THE PREDOMINANT TRAFFIC FLOW. A MOUNTING BRACKET SHOULD BE USED ON SIDE MOUNTED SIGNS SUCH AS "ONE WAY" SIGNS INSTALLED IN MEDIANS.
- SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBER AS SHOWN ON THIS DETAIL.
- BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT, BUT SHALL ENGAGE ALL THREADS IN THE NUT.
- WHEN SIGNS ARE INSTALLED ON SLOPES 10H:1V OR FLATTER, THE MINIMUM VERTICAL CLEARANCE REQUIREMENTS FOR SIGNS ARE:
FOR SINGLE POST INSTALLATIONS - THE MINIMUM DISTANCE BETWEEN THE EDGE OF THE PAVEMENT AND THE BOTTOM OF ANY PANEL MUST BE 7 FEET, AND THE MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO THE TOP OF ANY SIGN PANEL MUST BE 9 FEET.
FOR MULTI-POST INSTALLATIONS - THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE BOTTOM OF A MAIN SIGN PANEL MUST BE 7 FEET.
SECONDARY SIGN PANELS (LAND SERVICE HIGHWAYS) - THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE BOTTOM OF A SECONDARY SIGN PANEL IS 6 FEET.
SECONDARY SIGN PANELS (INTERSTATE AND FREEWAYS) - THE BOTTOM OF THE MAIN SIGN SHALL BE A MINIMUM OF 8 FEET AND THE SECONDARY SIGN PANEL A MINIMUM OF 5 FEET ABOVE THE EDGE OF PAVEMENT.
WHERE GRADING OF 10H:1V OR FLATTER CANNOT BE OBTAINED, OR WHERE CURB OR BERM IS GREATER THAN 4 INCHES, THE MINIMUM VERTICAL CLEARANCE WILL BE MEASURED FROM THE GROUND LINE TO THE BOTTOM OF THE SIGN.
- THE HORIZONTAL OFFSET FROM EDGE OF PAVEMENT TO EDGE OF SIGN IS DERIVED FROM SECTION 2A.19 OF THE MUTCD AS FOLLOWS:
FOR URBAN INSTALLATIONS - IN AREAS WHERE LATERAL OFFSETS ARE LIMITED, A MINIMUM LATERAL OFFSET OF 2 FEET IS DESIRABLE. A MINIMUM OFFSET OF 1 FOOT FROM THE FACE OF THE CURB MAY BE USED IN AREAS WHERE THE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB.
FOR RURAL INSTALLATIONS - 6 FEET MINIMUM DESIRABLE FROM EDGE OF SHOULDER, BUT 12 FEET MINIMUM DESIRABLE FROM EDGE OF TRAFFIC OR AUXILIARY LANE.
FOR INTERSTATE AND FREEWAY INSTALLATIONS - 6 FEET MINIMUM DESIRABLE FROM EDGE OF SHOULDER, BUT NOT LESS THAN 12 FEET FROM THE EDGE OF TRAFFIC OR AUXILIARY LANE.
FOR RAMP INSTALLATIONS - 6 FEET MINIMUM FROM EDGE OF ROAD.
WHERE BEHIND GUIDE RAIL - 4 FEET MINIMUM FROM BACK OF BEAM GUIDE RAIL ELEMENT TO SIGN POST.
PERMANENT SIGN SUPPORTS SHOULD NOT BE INSTALLED ON SLOPES GREATER THAN 10H:1V EXCEPT WHERE GRADING OF 10H:1V CANNOT BE OBTAINED OR THE SIGN SUPPORTS WILL BE BEHIND A TRAFFIC BARRIER. THE SLOPE SHALL EXTEND A MINIMUM OF 3 FEET BEYOND THE OUTSIDE EDGE OF SIGN (SEE GRADING DETAIL FOR SLOPE TREATMENT).
- EXTRUDED ALUMINUM SIGN PANELS ARE NOT PERMITTED FOR USE WITH STEEL U-POST SIGN SUPPORTS.
- STEEL U-POST SIGN SUPPORTS SHALL NOT BE PLACED IN FRONT OF GUIDE RAIL AND THE POSTS MUST NOT STRADDLE GUIDE RAIL.
- TO EXTEND THE HEIGHT OF A SIGN POST, A MAXIMUM OF ONE SPLICE MAY BE MADE AND MUST BE A MINIMUM OF 9 FEET FROM THE GROUNDLINE TO CENTER LINE OF SPLICE.

PANEL SIZE (W x H)	# OF POSTS	POST SIZE (LB/FT)
18" x 18"	1	2.5
18" x 24"	1	2.5
24" x 24"	1	2.5
24" x 30"	1	2.5
30" x 24"	1	2.5
30" x 30"	1	2.5
36" x 12"	2	2.5
36" x 36" x 36"	2	2.5
30" x 36"	1	4.0

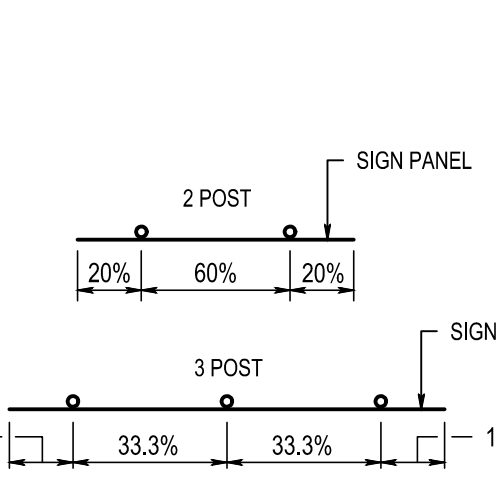
PANEL SIZE (W x H)	# OF POSTS	POST SIZE (LB/FT)
36" x 36"	2	2.5
36" x 48"	2	2.5
48" x 36"	2	2.5
48" x 24"	2	2.5
48" x 36"	2	2.5
48" x 48"	2	4.0
48" x 64" x 64"	2	2.5
60" x 36"	2	4.0
48" x 60"	2	4.0
60" x 30"	2	4.0

BREAKAWAY SIGN SUPPORT U-POST SELECTION TABLE

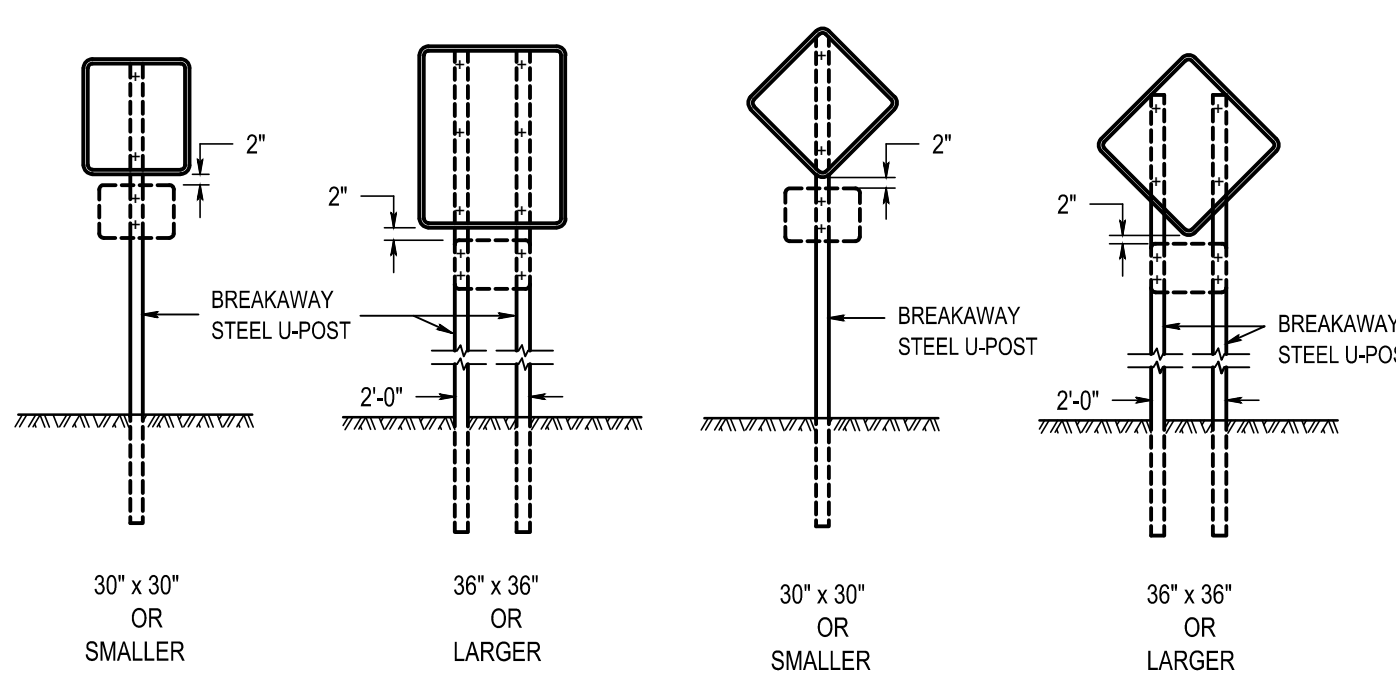


CONCRETE INSTALLATION

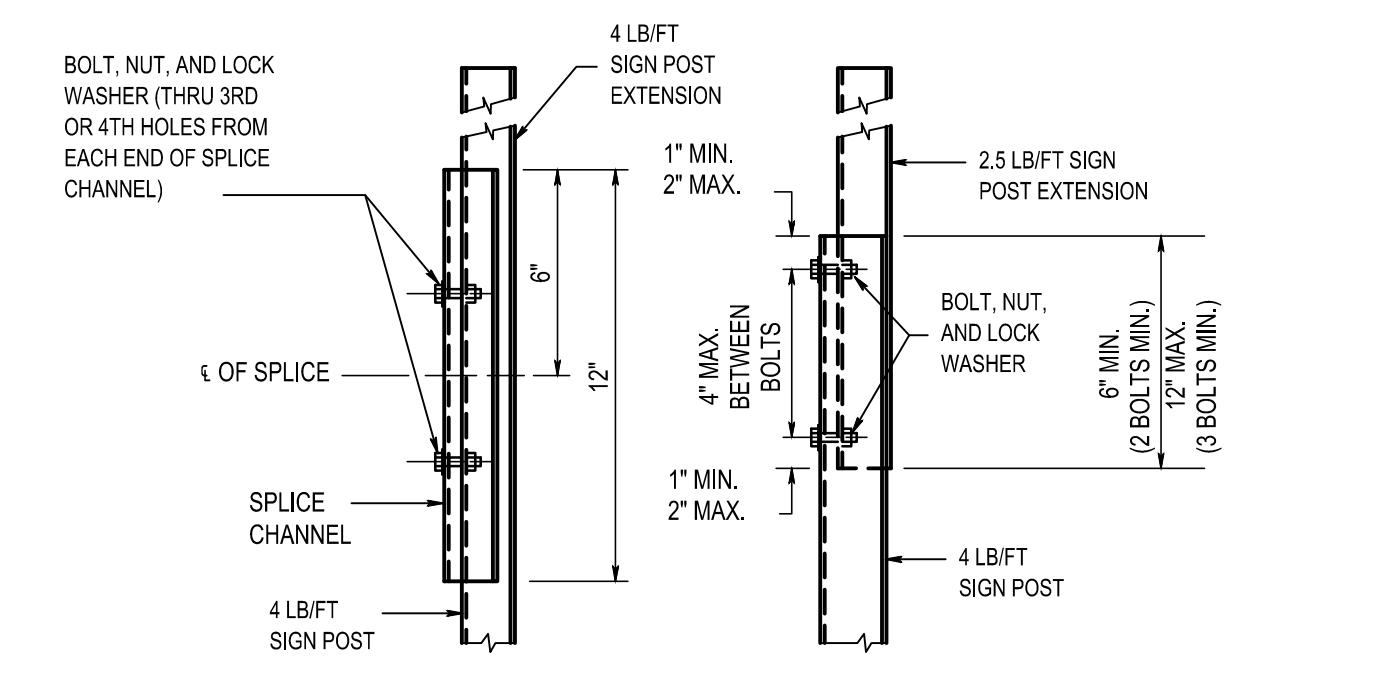
DETAIL OF BRACKET FOR SIDE MOUNTED SIGNS



STEEL U-POST SPACING



FRONT MOUNT BRACKET

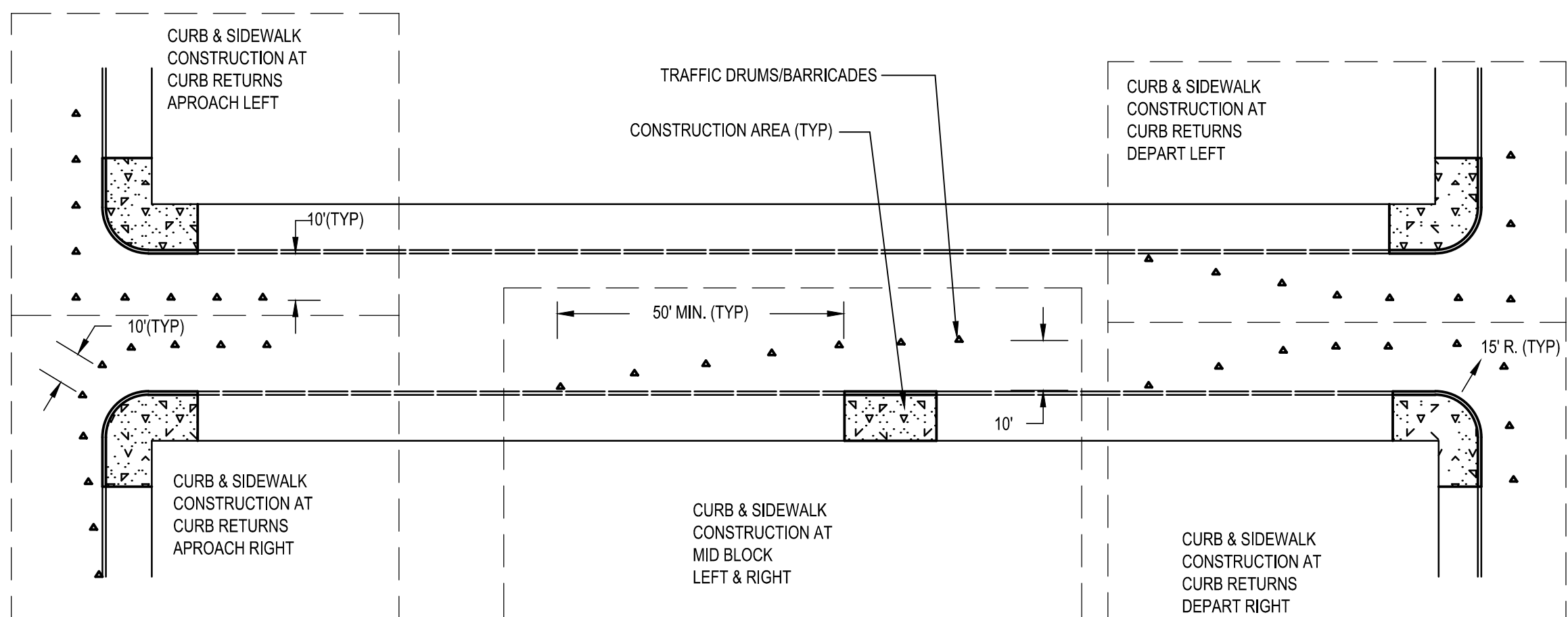


SIDE MOUNT BRACKET

SIGN POST EXTENSION SPLICE DETAILS

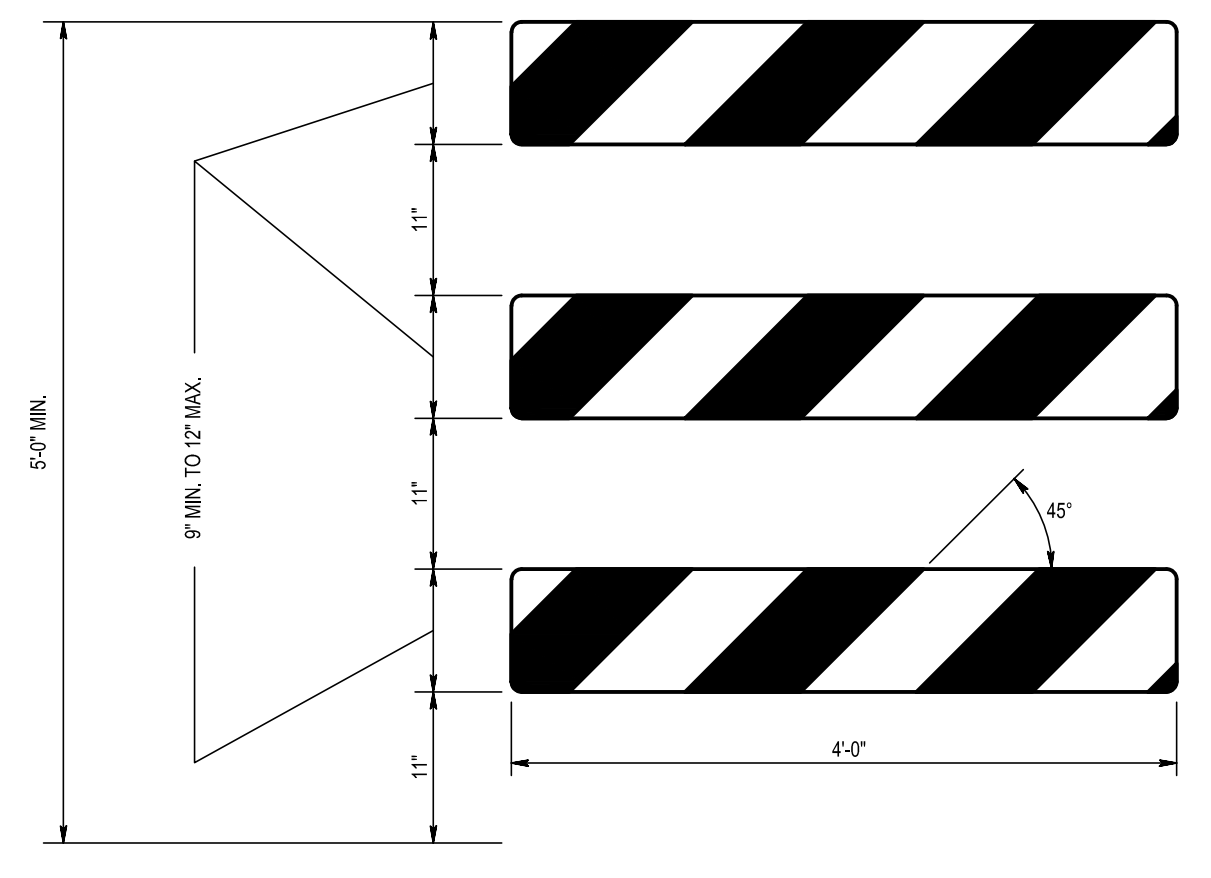


STEEL U-POST GRADING DETAIL



TRAFFIC CONTROL FOR CURB & SIDEWALK CONSTRUCTION

NOT TO SCALE



TYPE III BARRICADE - FRONT VIEW

BREAKAWAY BARRICADES

NOT TO SCALE CD-159-1.3

GENERAL NOTES FOR SIGNS:

- DIMENSIONS, COLORS AND DETAILS OF VARIOUS SIZE SIGNS, AND ACCESSORY PANELS TO FOLLOW STANDARDS IN THE CURRENT "STANDARD HIGHWAY SIGN PUBLICATION" AND THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
- (S) REPRESENTS A SPECIAL SIZE SIGN.
- LETTERS AND NUMERALS SHALL CONFORM TO THE CURRENT MANUAL, "STANDARD ALPHABETS FOR HIGHWAY SIGNS" U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.
- THE CONTRACTOR SHALL OBTAIN THE APPROVAL OF THE ENGINEER FOR THE DISTANCE TO BE USED ON THE ADVANCE WARNING SIGNS, AND FOR THE SPEED LIMIT TO BE USED ON THE R2-1 SIGN.
- DISTANCE LEGEND SIGN NUMBER FOLLOWED BY

LETTER	DISTANCE
A	1500'
B	1000'
C	500'
D	500'
E	MILES AHEAD
F	MILES AHEAD

BACKING MATERIAL

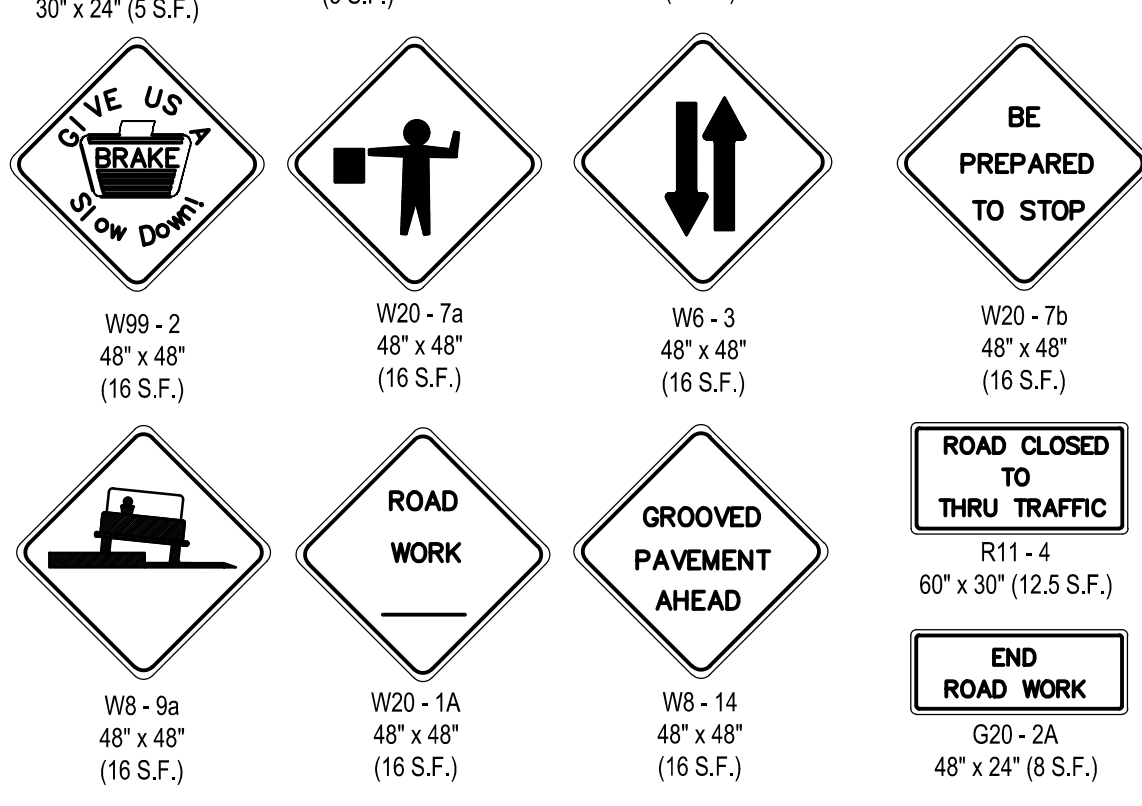
- ALUMINUM SHALL BE FLAT SHEET OF ALLOY 5052-H38 OR 6061-T6 ALLOY, 0.100" GAUGE.
- SIGN SUPPORTS SHALL BE OF WELL SEASONED LUMBER, S4S, FREE OF SPLITS, KNOTS AND WARPS OR, OF STEEL COMPONENTS.
- WOOD POSTS SHALL HAVE A UNIFORM CROSS-SECTION AND SHALL NOT EXCEED THE FOLLOWING DIMENSIONS FOR:
SINGLE POST = 4" x 6"; TWO POSTS = 3" x 6" OR 4" x 5"; THREE POSTS = 3" x 5" OR 4" x 4"
4" x 6" WOOD POSTS SHALL BE MODIFIED BY DRILLING 1 1/2" DIAMETER HOLES 4" AND 18" ABOVE THE GROUND LINE AND PERPENDICULAR TO THE ROADWAY CENTERLINE.
- NO BRACING IS PERMITTED. VERTICAL CLEARANCES FOR SIGNS MOUNTED ON WOOD SUPPORTS SHALL BE 7' MINIMUM. EMBEDMENT DEPTH FOR THE WOOD POST SHALL NOT EXCEED 3.5'.
- STEEL POSTS SHALL BE IN ACCORDANCE WITH THE STANDARD DETAIL FOR U-POST SIGN SUPPORT.
- TEMPORARY SIGN SUPPORTS NOT MEETING THIS CRITERIA SHALL BE SHIELDED BY A LONGITUDINAL BARRIER OR CRASH CUSHIONS.

SIGN FACES

- SIGN FACES SHALL BE RETROREFLECTIVE SHEETING, TYPE II OR IIIA, EXCEPT FOR THE W20 SERIES AND W4-2 SIGN FACES WHICH SHALL BE TYPE IV-B SHEETING.

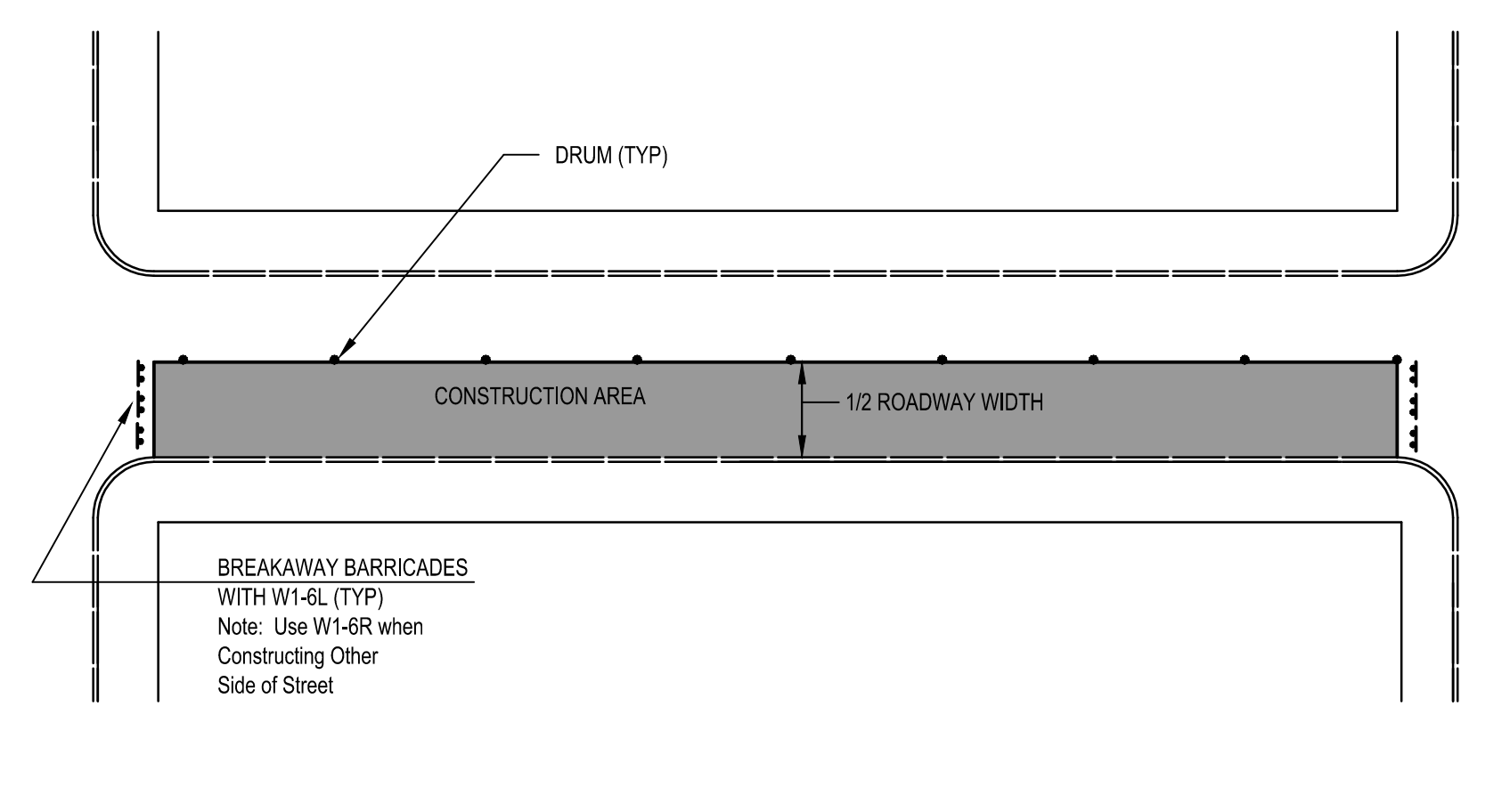
FASTENING

- ALL SIGNS SHALL BE SECURELY FASTENED TO THEIR SUPPORTS WITH BOLTS, NUTS AND WASHERS IN ACCORDANCE WITH THE SPECIFICATIONS.



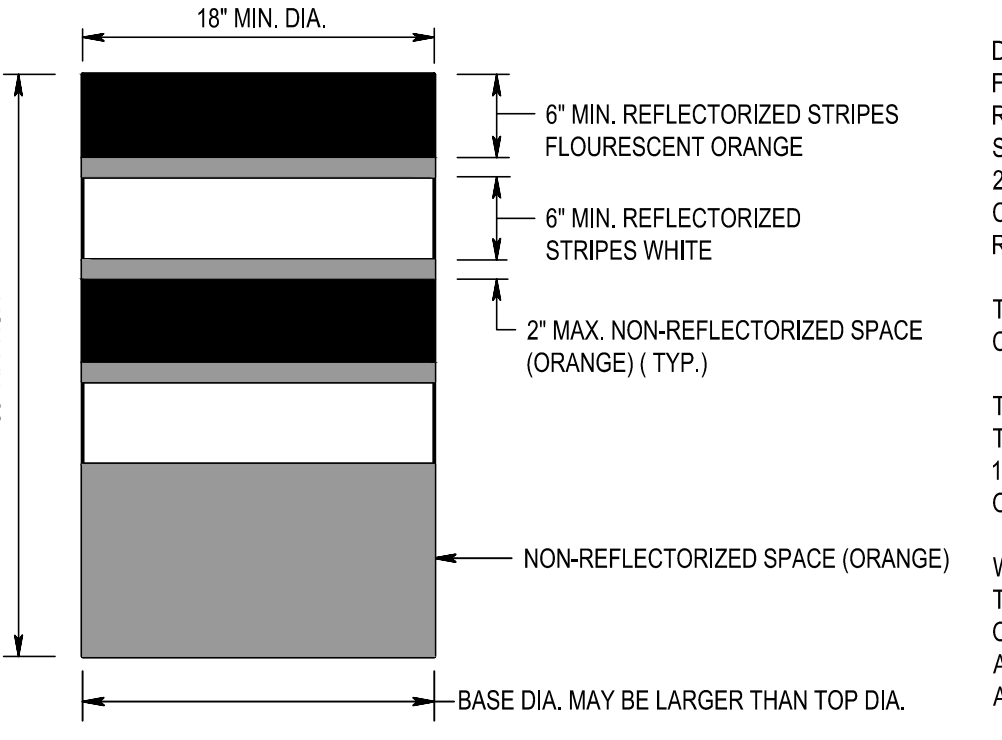
CONSTRUCTION SIGNS

NOT TO SCALE



TRAFFIC CONTROL FOR MILLING AND OVERLAY

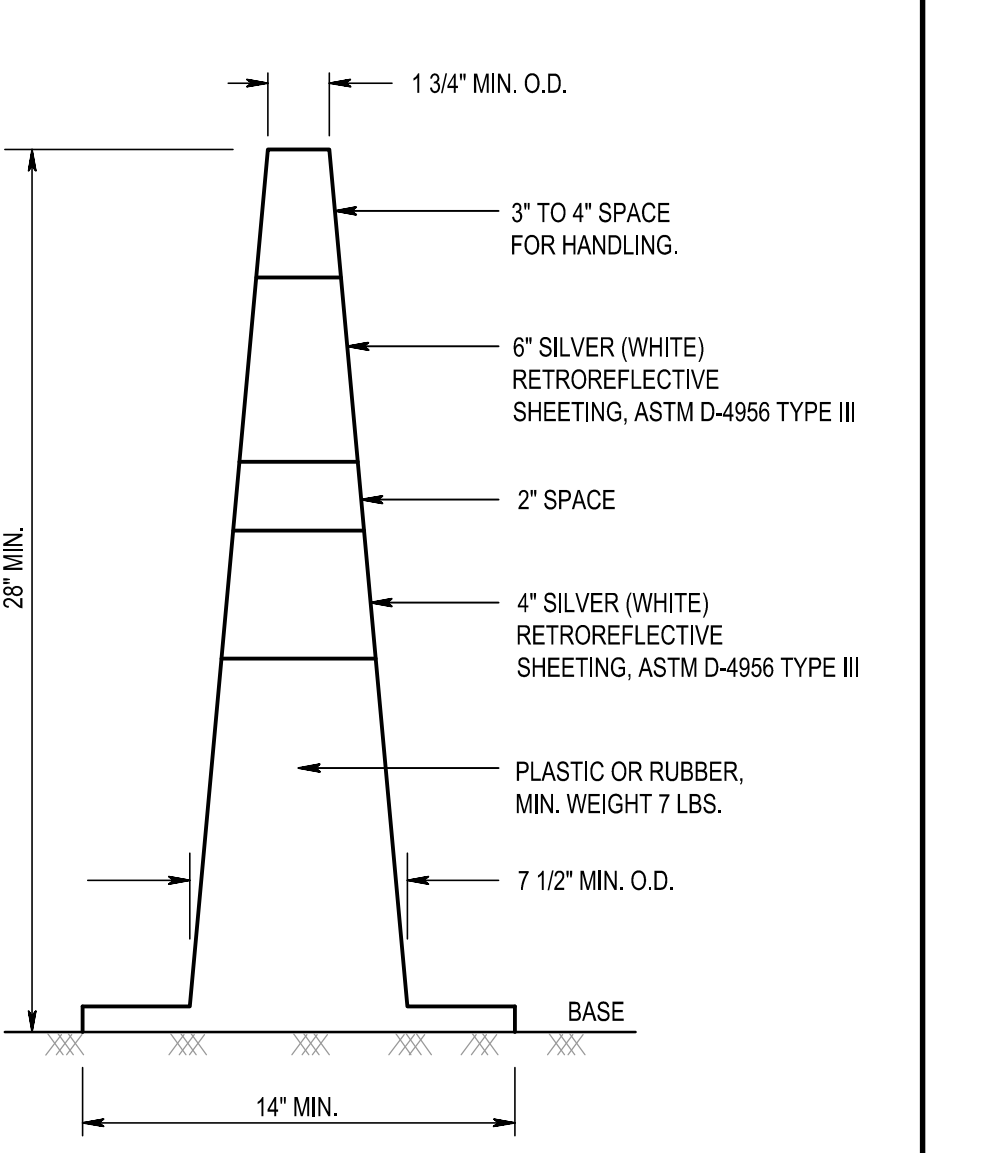
NOT TO SCALE



DRUMS

NOT TO SCALE CD-159-1.1

- DRUMS SHALL BE MADE OF ORANGE PLASTIC WITH A MINIMUM OF FOUR ALTERNATE FLUORESCENT ORANGE AND WHITE RETROREFLECTIVE STRIPES. IF THERE ARE NON-REFLECTORIZED SPACES BETWEEN THE STRIPES, THEY SHALL BE NO MORE THAN 2" WIDE. RETROREFLECTIVE SHEETING FOR STRIPES SHALL CONFORM WITH ASTM D 4956 TYPE VII OR VIII WITH S2 REQUIREMENTS.
- THE TOP OF THE DRUM SHALL NOT BE OPEN. DRUMS SHALL BE CONSTRUCTED TO INHIBIT ROLLING IF KNOCKED OVER.
- THE REFLECTORIZED AREA OF DRUMS SHALL BE ROUND EXCEPT THAT OTHER SHAPES, WHICH PROVIDE THE SAME VISIBILITY AS AN 18 INCH DIAMETER ROUND DRUM REGARDLESS OF ORIENTATION, MAY BE USED.
- WHEN BALLAST IS REQUIRED BY THE R.E., SAND SHALL BE USED. THE MAXIMUM WEIGHT OF THE BALLAST SHALL BE 50 LBS. AND BE LOCATED APPROXIMATELY AT GROUND LEVEL. ALTERNATE TYPES OF BALLAST SHALL BE APPROVED BY THE R.E.



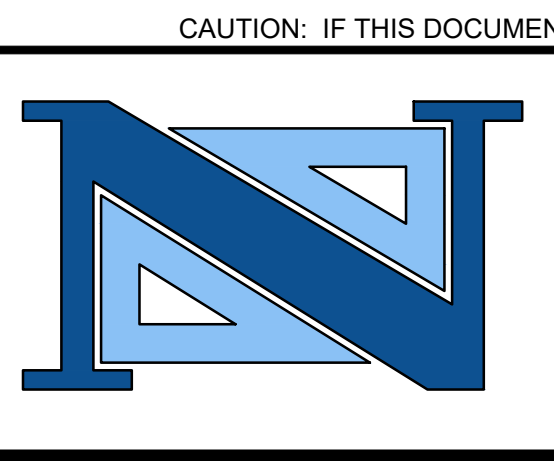
TRAFFIC CONES

NOT TO SCALE CD-159-1.2

GENERAL NOTES

- MAINTENANCE AND PROTECTION OF TRAFFIC**
- All devices and procedures for the maintenance and protection of traffic shall be in accordance with the "Manual on Uniform Traffic Control Devices" for streets and highways. The contractor shall plan and carry out his work to provide for the convenient and safe passage of all vehicular and pedestrian traffic.
 - Contractor to develop detailed maintenance and protection of traffic plan for review by the engineer prior to construction.
 - The contractor shall follow the recommended traffic control procedures. If the contractor desires to change the procedure, he shall present his changes in writing to the engineer for review. There may be utility relocations, adjustments and improvements which are necessitated by the proposed construction. The contractor shall coordinate his work with each of the utility companies located within the project limits.
 - The contractor is responsible for providing maintenance and protection of traffic throughout the duration of construction. The costs for the individual devices used to maintain and protect traffic shall be included in the lump sum price bid for maintenance and protection of traffic. No separate payments will be made for relocating the devices as required, or as directed by the municipality, during the course of construction.
 - The contractor will not be permitted to close down the entire street. The contractor shall provide means of access at all times for pedestrians and vehicular traffic at all private driveways and occupied buildings affected by the work of this contract. During construction, in the vicinity of a driveway, the access width at the driveway entrance shall be plainly marked by lights, barricades or other such devices approved by the municipality.
 - The contractor shall maintain at least one lane of traffic at all times.
 - During construction, all roads shall be properly maintained to accommodate emergency vehicles at all times.
 - Minor manufacturer's variations may be acceptable upon approval of the engineer.
 - All barricades shall be Type III breakaway barricades.
 - Fill material for escape ramps shall be on-site material. All costs for storing, placing, moving and removing fill material shall be included in the price bid for the various items in the proposal.

REVISIONS				
NO.	DATE	DESCRIPTION	DRAWN	CHECKED
1.	2022/03/30	REVISED PER NJDEP COMMENTS	J.V.	J.V. D.A.
2.	2022/08/04	REVISED PER NJDEP PERMIT RULE 23	J.V.	J.V. D.A.
3.	2023/03/29	REVISED PER NJDEP FWY COMMENTS VIA EMAIL AND FHAIIP	J.V.	J.V. N.H.
4.	2023/08/14	REVISED PER NJDEP MEETING	J.V.	J.V. N.H.
5.	2023/08/25	REVISED PER NJDEP CONVERSATION	J.V.	J.V. N.H.
6.	2023/09/06	REVISED PER NJDEP COMMENTS VIA EMAIL	J.V.	J.V. N.H.
7.	2023/09/07	REVISED PER NJDEP COMMENTS	J.V.	J.V. N.H.



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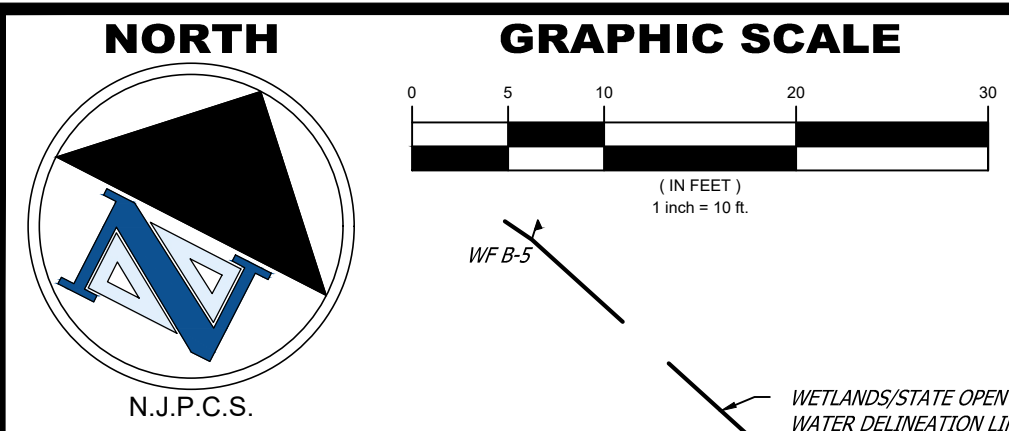
A PROJECT OF
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PROFESSIONAL ENGINEER N.J. LICENSE NO. 38604
PROFESSIONAL LAND SURVEYOR N.J. LICENSE NO. 38604
PROFESSIONAL PLANNER N.J. LICENSE NO. 33100569800

CONSTRUCTION DETAILS IV
NOMAHEGAN PEDESTRIAN BRIDGE REPLACEMENT
BA# 6-2024; UNION COUNTY ENGINEERING PROJECT #2016-038
TOWNSHIP OF CRANFORD
UNION COUNTY
NEW JERSEY

UNIOCTY17.011
DATE: NOVEMBER 6, 2021

DESIGNED BY: J.V. CHECKED BY: N.H.J.R.A. PROJECT NO.: SHEET NO.:
FIELD BOOK NO.: SCALE: N.T.S. PAGE: 6.03



N.J.P.C.S.

WETLANDS/STATE OPEN WATER DELINEATION LINE

FLOODWAY LINE (SEE NOTE 6)

TOP OF BANK

BOTTOM OF BANK

ASPHALT DRIVE

CONC. BANK

RAIL PATH

WOOD CURBING (6" x 6" BEAM)

WOOD PEDESTRIAN BRIDGE

WOOD RAILING 3.75' HIGH (TYP)

WOOD SUPPORTS

RAIL POSTS (TYP)

BRIDGE SUPPORT COLUMNS (TYP)

WOOD CURBING (6" x 6" BEAM)

WOOD PEDESTRIAN BRIDGE

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WOOD SUPPORTS

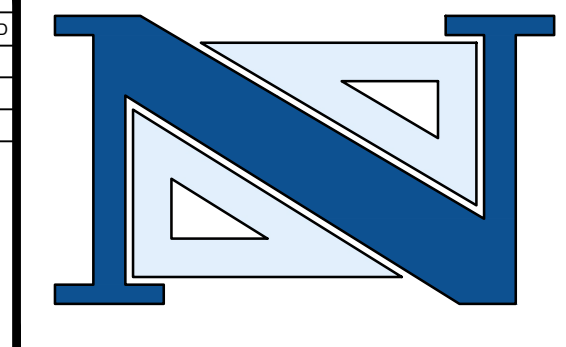
PLAN LEGEND:

	INLETS		SIGNS
	TREES		UTILITY POLE
	SHRUB		LIGHT POLE
	ROOF DRAIN		WATER VALVE
	DEPRESSED CURB		GAS VALVE
	EDGE OF PAVEMENT		CLEAN-OUT
	MANHOLE		UNKNOWN VALVE
	FIRE HYDRANT		LANDSCAPED AREA
	HANDICAPPED SPACE		CHAIN LINK FENCE
	ELECTRIC MARKOUT		FINISHED FLOOR(SILL)
	FIBER OPTIC MARKOUT		STORM SEWER LINE
	GAS MARKOUT		SANITARY SEWER LINE
	OVERHEAD WIRES		TELEPHONE MARKOUT
	UNKNOWN CONNECTION		WATER MARKOUT
	TREE STUMP		ELECTRIC METER
	WETLANDS DELINEATION FLAGGING		DEPicts NON-GRADE LEVEL ELEVATIONS

NEW JERSEY CERTIFICATION:
 I CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, LICENSED TO PRACTICE IN THE STATE OF NEW JERSEY, AND THAT THIS MAP OR PLAN IS A RESULT OF A FIELD SURVEY MADE ON FEBRUARY 28, 2019 UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE RULES AND REGULATIONS PROMULGATED BY THE STATE BOARD OF ENGINEERS AND LAND SURVEYORS. I DECLARE THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFORMATION SHOWN HEREON CORRECTLY REPRESENTS THE CONDITIONS FOUND AT, AND AS OF THE DATE OF THE FIELD SURVEY, EXCEPT SUCH IMPROVEMENTS OR EASEMENTS, IF ANY, BELOW THE SURFACE AND NOT VISIBLE.

- SURVEY NOTES:**
- THIS IS NOT A BOUNDARY SURVEY.
 - SUBJECT TO EASEMENTS AND/OR RESTRICTIONS OF RECORD AND RIGHTS OR CLAIMS OF PARTIES IN POSSESSION OF THE SUBJECT LAND OR ADJOINING LANDS AND/OR EASEMENTS OR CLAIMS OF EASEMENTS NOT SHOWN BY THE PUBLIC RECORD.
 - UNDERGROUND UTILITIES IF DEPICTED ARE BASED ON VISIBLE EVIDENCE. THE LACK OF UTILITY INFORMATION DOES NOT DENY THE EXISTENCE OF SAME. PRIOR TO ANY DESIGN OR CONSTRUCTION THE PROPER UTILITY AGENCIES MUST BE CONTACTED TO VERIFY THE PRESENCE OR ABSENCE OF UTILITIES.
 - DELINEATION FOR WETLANDS AND STATE OPEN WATERS HAS BEEN PERFORMED FOR THIS PROJECT BY ENVIRONMENTAL TECHNOLOGIES INC. ON SEPTEMBER 16, 2021. FLAGGING HAS BEEN LOCATED BY NEGLIA ENGINEERING USING SURVEY GRADE INSTRUMENTS.
 - TOXIC WASTES ARE NOT DEPICTED. THE LACK OF TOXIC WASTE INFORMATION DOES NOT DENY THE EXISTENCE OF SAME. SITE REVIEW FOR THE SAME SHOULD BE PURSUED AND APART FROM THIS SURVEY.
 - IN ACCORDANCE WITH A CERTAIN MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FIRM, PANEL 00215, PANEL 21 OF 49, MAP NUMBER 3403000215, WITH AN EFFECTIVE DATE OF SEPTEMBER 20, 2006, THE SUBJECT AREA LIES WITHIN ZONE AE. THE BASE FLOOD ELEVATION FOR THIS AREA IS ELEV. 70 (NGVD29), WHICH IS BASED ON FLOOD INSURANCE STUDY, NO. 34030002A, PANEL 120P, WITH AN EFFECTIVE DATE OF SEPTEMBER 20, 2006. CONVERT TO NAVD88 WITH A CONVERSION FACTOR OF -1.04' (ELEV. 69 - NAVD88).
 - FENCES & WALLS HAVE BEEN LOCATED AT THE BOTTOM OF THE STRUCTURE, AT THE TIME OF FIELD SURVEY.
 - THE MERIDIAN OF THIS SURVEY IS BASED ON THE NEW JERSEY PLANE COORDINATE SYSTEM NAD83(2011) AS ESTABLISHED USING GPS METHODS AND THE SMARTNET NETWORK.
 - ELEVATIONS SHOWN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS ESTABLISHED USING GPS METHODS AND THE SMARTNET NETWORK.

NO.	DATE	REVISIONS	DRAWN	DESIGNED	CHECKED
1	09-17-2021	ADDED WETLANDS FLAGGING	DJC		GAV
2	01-25-2022	UPDATED AS PER NIEP COMMENTS	DJC		GAV
3	09-23-2023	UPDATED AS PER NIEP COMMENTS	PJP		GAV



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TOPOGRAPHIC SURVEY
NOMAHEGAN PARK PEDESTRIAN BRIDGE
OVER RAHWAY RIVER
TOWNSHIP OF CRANFORD
UNION COUNTY
NEW JERSEY

PROJECT NO. UNIOCTY17.011
 SHEET NO. 1 OF 1
 DATE: MARCH 2019

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CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA27927000

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GENERAL STRUCTURAL AND CONSTRUCTION NOTES

1.0 GENERAL

- All work shall conform to all applicable Federal, State, and Local regulations.
- In case of conflict between the General Notes, Specifications, and details, the most rigid requirements shall govern.
- Work not indicated on a part of the drawings but reasonably implied to be similar to that shown at corresponding places shall be repeated.
- Job site safety and construction procedures are the sole responsibility of the Contractor.
- The Contractor shall provide for dewatering as required during excavation and construction. Refer to Specifications for additional information.
- The Contractor shall coordinate openings, sleeves, concrete housekeeping pads, inserts, and depressions shown on the Architectural, Structural and Site Civil Drawings.
- See Architectural Drawings for locations of masonry and drywall non-load bearing partitions. Provide slip connections that allow vertical movement at the heads of all such partitions. Connections shall be designed to support the top of the walls laterally for the code-required lateral load.
- All costs of investigation and/or redesign due to Contractor improper installation of structural elements or other items not in conformance with the Contract Documents shall be at the Contractor's expense.
- The structural drawings shall be used in conjunction with the specifications, architectural and mechanical drawings. If there is a discrepancy between drawings, it is the Contractor's responsibility to notify the Architect prior to performing the work.
- The Contractor shall verify all existing building information shown (dimensions, elevations, etc.) and notify the Architect/Engineer of any discrepancies prior to fabrication of any structural component.
- The Contractor shall verify and/or establish all existing conditions and dimensions at the site. Failure to notify Architect/Engineer of unsatisfactory conditions constitutes acceptance of unsatisfactory conditions.
- If the existing field conditions do not permit the installation of the work in accordance with the details shown, the Contractor shall notify the Architect/Engineer immediately and provide a sketch of the condition with his proposed modification of the details given on the Contract Documents. Do not commence work until condition is resolved and modification is approved by the Architect.
- Where alterations involve the existing supporting structure, the Contractor shall provide shoring and protection required to ensure the structural integrity of the existing structure.
- The Contractor shall be responsible to determine allowable construction loads and to provide design and construction of falsework, formwork, stagings, bracing, sheeting, and shoring, etc.
- Contractor to provide sheeting, bracing, and underpinning as necessary to prevent any lateral or vertical movements of existing buildings, streets, and any existing utility lines.
- Bracing, sheeting, shoring, etc., required to insure the structural integrity of the existing buildings or new construction, sidewalks, utilities, etc., shall be designed by a Professional Engineer engaged by the Contractor. Detailed signed and sealed shop drawings shall be prepared indicating all work to be performed. Submit the shop drawings in accordance with the Contract requirements.
- No blasting shall be permitted without written approval.
- Shop drawings for all structural materials to be submitted to Architect for review prior to the start of fabrication or commencement of work. Review period shall be a minimum of two (2) weeks.
- Reproduction of any portion of the Structural Contract Drawings for resubmittal as shop drawings is prohibited. Shop drawings produced in such a manner will be rejected and returned.
- Shop drawings shall bear the Contractor's stamp of approval which shall constitute certification that the Contractor has verified all construction criteria, materials, and similar data and has checked each drawing for completeness, coordination, and compliance with the Contract Documents.
- The shop drawings shall include dimensioned floor and roof edges, openings and sleeves at all floors required for all trades.
- The drawings have been produced entirely on MPP Engineers Cadd System. Any other lettering, lines or symbols, other than professional stamps and signatures, have been made without the authorization of MPP Engineers are invalid.
- The structural drawings shall govern the work for all structural features, unless noted otherwise. The architectural drawings shall govern the work for all dimensions.
- Inspection is required of all construction delineated on the Structural Drawings and/or specifications. The Owner shall employ a Testing/Inspection Agency which shall provide personnel with the following minimum qualifications:
 - Certified by Institute of Certified Engineering Technicians, or other recognized comparable organization, and,
- For inspection, sampling, testing concrete and masonry: ACI Certified Concrete Field-Testing Technician, Grade I; and Construction Inspector, Level II.
- Submit periodic reports within one business day after receipt by the Contractor to Architect/Engineer and the construction code official during construction. Submit final inspection report summary for each division of work, certified by a licensed professional Engineer, that inspections were performed and that work was performed in accordance with Contract Documents.
- The Owner shall engage a testing agency to provide testing services as indicated in each section of these General Notes.
- All materials shall be stored to protect them from exposure to the elements.

2.0 EARTHWORK

- Engineered (controlled compacted) fill within the building area shall be constructed prior to footing excavation.
- Excavation shall be performed so as not to disturb existing adjacent buildings, streets, and utility lines. Verify location of all utilities prior to commencement of work. Hand excavate around utilities as required.
- See the specifications and geotechnical report for excavation, backfill and preparation of the foundation and slab-on-grade subgrade, including compaction requirements.
- Compact soil to not less than the following percentages of maximum density of modified proctor (ASTM D1557):
 - Under building foundations - 98%
 - Under building slabs, steps, pavements - 95%
- Remove existing vegetation, topsoil, and unsatisfactory soil materials. Proof roll subgrade to obtain uniformly densified substrata prior to placing fill material evenly in 8" thick (maximum) layers and compacting to required density.
- The Owner shall retain the services of a Professional Geotechnical Engineer, subject to the approval of the Architect, to perform soil testing and inspection. The engineer shall inspect the subgrade to verify bearing levels and ensure that the safe bearing capacity meets or exceeds the design value indicated below. Reports shall be submitted to the Architect outlining the work performed and test results.

3.0 FOUNDATIONS

- Foundations have been designed and footing elevations established on the basis of a Subsurface Investigation Report and recommendations prepared by Johnson Soils Company, dated June 2, 2021. See the report for additional requirements. The requirements contained in the geotechnical report are part of the Construction Documents.
- Footings shall bear on undisturbed stratum or engineered fill with a minimum bearing capacity of 3,000 psf. 1'-0" of crushed stone shall be placed below all footings.
- Prior to footing concrete placement, the footing subgrade shall be approved by the inspecting Geotechnical Engineer. If conditions prove to be unacceptable at elevations shown, footing bottoms shall be lowered to acceptable subgrade material. Fill over-excavation with lean concrete (2,500 psi).
- The bottom of exterior footings shall be a minimum of three and a half (3 1/2) feet below finished grade, or as required by Local building codes.
- Concrete for foundations shall be poured on the same day the subgrade is approved by the Geotechnical Engineer.
- Utility lines shall not be placed through or below foundations without the Structural Engineer's approval.
- The Contractor shall observe water conditions at the site and take the necessary precautions to ensure that the foundation excavations remain dry during construction. Any sheeting or shoring required for dewatering shall be the responsibility of the Contractor.
- The Contractor shall be responsible for coordinating the need to use foundation rebar as a grounding electrode system and shall be responsible for installing the bonding clamp prior to placement of the concrete.

4.0 CAST-IN-PLACE CONCRETE

- Concrete shall be designed and detailed in accordance with the Building Code Requirements for Structural Concrete (ACI-318-14), and constructed in accordance with the CRSI Manual of Standard Practice.
- Concrete shall have a minimum compressive 28-day strength of 5,000 psi. Air Entrainment 4.5% to 7.5% in all exposed concrete work.
- All concrete shall have 4 gallons of calcium nitrate corrosion inhibitor per cubic yard.
- Maximum water/cement ratios:
 - 0.40 for 5,000 PSI mix
- All concrete shall be normal weight concrete (144 pcf +) with all cement conforming to ASTM C150, Type I. Maximum aggregate size shall be 1/2" for footings and 3/4" for walls conforming to ASTM C33.
- All Reinforcing steel shall be epoxy coated: ASTM A615 Grade 60, epoxy coated per ASTM A775.
- Leveling Grout shall be non-shrink, non-metallic type, factory pre-mixed grout in accordance with CE-CR0-C621 or ASTM C109, with a minimum compressive 28-day strength of 5,000 psi.
- Reinforcing steel clear cover shall be as follows unless noted otherwise:
 - Concrete cast against and permanently exposed to earth 3".
 - Concrete exposed to earth or weather
 - #6 bars and larger 2"
 - #5 bars and smaller 1-1/2"
- Submit to Engineer reinforcing steel shop drawings for approval and mix designs for review prior to placing any concrete.
- All reinforcement shall be securely held in place while placing concrete. If required, additional bars, stirrups or chairs shall be provided by the Contractor to furnish support for all bars.
- Provide plastic tipped bolsters and chairs at all locations where the concrete surface in contact with the bolsters or chairs is exposed.
- Placing of concrete shall not start until the placement of reinforcing has been approved by the Inspection Agency.
- Bonding agent shall be used where new concrete is placed against existing concrete.
- Epoxy adhesive shall be used where dowels are to be installed into existing concrete. Submit manufacturer information for engineer review.
- No sleeve shall be placed through any concrete element unless shown on the approved shop drawings or specifically authorized in writing by the Structural Engineer. The Contractor shall verify dimensions and locations of all slots, pipe sleeves, etc. as required for mechanical trades before concrete is placed.
- Pipes or conduits placed in slabs shall not have an outside diameter larger than 1/3 the slab thickness and shall not be spaced closer than 3 diameters on center. Aluminum conduits shall not be placed in concrete. No conduits shall be placed in slabs within 12 inches of column face or face of bearing wall. No conduits may be placed in exterior slabs or slabs subjected to fluids.
- Prior to placing concrete, the Contractor shall submit for review by the structural engineer, a concrete pour schedule showing location of all proposed construction joints and waterstops.
- Prior to concrete placement, the Contractor shall submit to the structural engineer for review, concrete mix designs prepared in accordance with the specifications and requirements indicated in the general notes.
- Concrete shall not be pumped through aluminum pipes and shall not be placed in contact with aluminum forms, mixing drums, buggies, chutes, conveyors or other equipment made of aluminum.
- All inserts and sleeves shall be cast-in-place whenever feasible. Drilled or powder driven fasteners will be permitted when proven to the satisfaction of the Structural Engineer that the fasteners will not spall the concrete and have the same capacity as cast-in-place inserts.
- When installing expansion bolts or adhesive anchors, the Contractor shall take measures to avoid drilling or cutting of any existing reinforcing and destruction of concrete. Holes shall be blown clean prior to placing bolts or adhesive anchors.
- The concrete slabs shall be finished flat and level within tolerance, to the elevation indicated on the drawings.
- Early drying out of concrete, especially during the first 24 hours, shall be carefully guarded against. All surfaces shall be moist cured or protected using a membrane curing agent applied as soon as forms are removed. If membrane curing agent is used, exercise care not to damage coating.
- Cold weather concreting shall be in accordance with ACI-306. Hot weather concreting shall be in accordance with ACI-305R.
- Throughout construction, the concrete work shall be adequately protected against damage due to excessive loading, construction equipment, materials or methods, ice, rain, snow, excessive heat, and freezing temperatures.
- Prepare concrete test cylinders from each day's pour. Cylinders shall be properly cured and stored. Sample fresh concrete in accordance with ASTM C172.
- Retain laboratory to provide testing service. Slump per ASTM C1431 air content per ASTM C231 or C173, cylinder tests per ASTM C31 and C39. One set of six (6) cylinders for each 50 cubic yards for each mix used. Reports of all tests to be submitted to the Architect.

5. SPECIAL INSPECTIONS REQUIREMENTS

SCHEDULE OF SPECIAL INSPECTIONS				
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
CONCRETE CONSTRUCTION				
1. Inspection of reinforcing steel and placement.	---	X	ACI 318 3.5.7.1-7.7	1913.4
2. Verifying use of required design mix.	---	X	ACI 318: Ch.4, 5.2-5.4	1904.2.2, 1913.2, 1913.3
3. At the fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content test, and determine the temperature of the concrete.	X	---	ASTM 172 ASTM C31 ACI 318:5.6, 5.8	1913.1
4. Inspection of concrete placement for proper application techniques.	X	---	ACI 318:5.9, 5.10	1913.6, 1913.7, 1913.8
5. Inspection of maintenance of specified curing temperature and techniques.	---	X	ACI 318:5.11-5.13	1913.9
6. Inspect formwork for Shape, location and dimensions of the concrete member being formed.	---	X	ACI 318:6.1.1	---
INSPECTION OF SOILS				
VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK	PERIODICALLY DURING TASK		
1. Verify materials below footings are adequate to achieve the design bearing capacity.	X	---		
2. Verify excavations are extended to proper depth and have reached proper material.	---	X		
3. Perform classification and testing of controlled fill materials.	---	X		
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of controlled fill are in accordance with geotechnical recommendations.	X	---		
5. Prior to placement of controlled fill, observe subgrade and verify that site has been prepared properly.	---	X		

5. SPECIAL INSPECTIONS REQUIREMENTS:

The Owner shall employ one or more special inspectors to provide inspections during construction on the types of work listed in the Schedule of Special Inspections. The special inspector shall be a qualified person who shall demonstrate competence to the satisfaction of the Building Official, and be approved by the Structural Engineer of Record, for inspection of the particular type of construction or operation requiring special inspection.

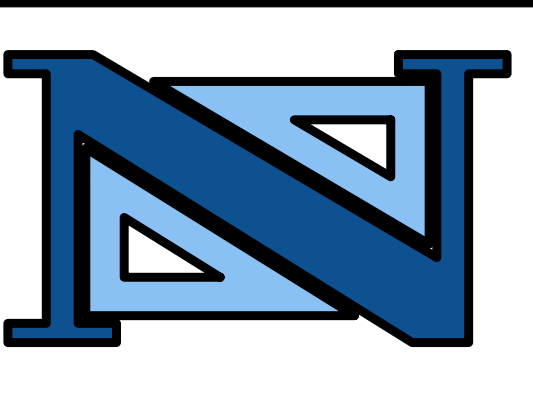
The contractor shall be responsible to notify and coordinate all required special inspections with the special inspection agency prior to performing any work that requires special inspections. The contractor shall notify the special inspection agency at least 24 hours in advance to performing any work that requires special inspections. Job safety is solely the responsibility of the contractor. Materials and activities to be inspected are not to include the contractor's equipment and methods used to erect or install the materials listed.

The Special Inspectors shall keep records of all inspections and shall furnish inspection reports to the Construction Official and to the Structural Engineer of Record. All discrepancies shall be brought to the immediate attention of the contractor for correction. If the discrepancies are not corrected, the discrepancies shall be immediately brought by the Special Inspector to the attention of the Code Official and the Structural Engineer of Record.

The special inspection agency shall submit a final report signed and sealed by a NJ PE that is in charge of the inspections. This final report shall document all required special inspections, test or structural observations and any discrepancies noted in these inspections.

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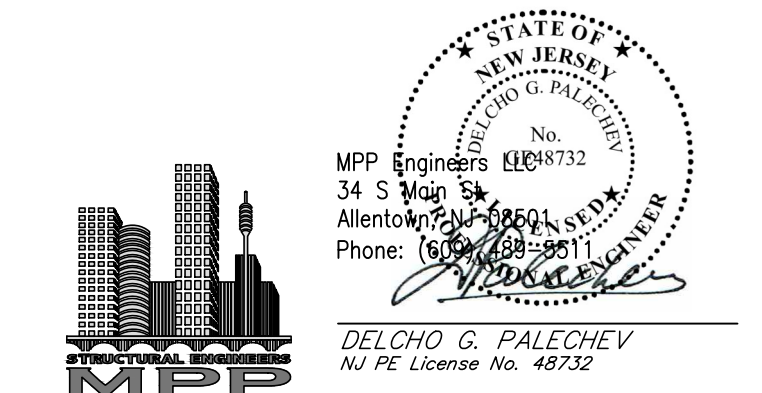
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**BRIDGE FOUNDATION PLAN & SECTION
NOMAHEGAN PEDESTRIAN BRIDGE
OVER THE RAHWAY RIVER (U.C. PROJECT NO. 2016-038)
TOWNSHIP OF CRANFORD
UNION COUNTY NEW JERSEY**

PROJECT NO.: 21-0230 SHEET NO.: S-0.1
DATE: NOVEMBER 8, 2021



CERTIFICATE OF AUTHORIZATION (N.J.S.A. 45:8-56) 24GA28175400

TYPICAL ABBREVIATIONS

- NOTES:
 1. ALL ABBREVIATIONS MAY NOT BE USED.
 2. THESE ABBREVIATIONS APPLY TO STRUCTURAL DWGS ONLY. SEE ARCH & MEP DWGS FOR SEPARATE SYMBOLS AND ABBREVIATIONS LISTS.

Ø	AT	FD	FLOOR DRAIN	OA	OVERALL	UBC	UNIFORM BUILDING CODE
ABV	ABOVE	FDN	FOUNDATION	OC	ON CENTER	UON	UNLESS OTHERWISE NOTED
ACI	AMERICAN CONCRETE INSTITUTE	FF	FINISHED FLOOR	OD	OUTSIDE DIAMETER	USACE	UNITED STATES ARMY CORPS OF ENGINEERS
ADH	ADHESIVE	FIN	FINISH	O/F	OUTSIDE FACE		
ADDL	ADDITIONAL	FLG	FLASHING	OPH	OPPOSITE HAND	VEF	VERTICAL EACH FACE
ADJ	ADJUSTABLE	FLR	FLOOR	OPNG	OPENING	VERT	VERTICAL
AFF	ABOVE FINISHED FLOOR	FO	FACE OF	OPP	OPPOSITE	VIF	VERTICAL INSIDE FACE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	FRMG	FRAMING			VOF	VERTICAL OUTSIDE FACE
AL	ALUMINUM	FS	FAR SIDE	PART	PARTITION	VSC	VERTICAL SLOTTED CONNECTION
ALT	ALTERNATE	FT	FOOT	PC	PIECE		
APPROX	APPROXIMATELY	FTG	FOOTING	PCC	PRECAST CONCRETE	W	WIDTH, WIDE
AR	ANCHOR ROD	FV	FIELD VERIFY	PCF	POUNDS PER CUBIC FOOT	W/	WITH
ARCH	ARCHITECT			PEN	PENETRATION	WD	WOOD
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	GA	GAUGE, GAGE	PFB	PREFABRICATE(D)	WF	WIDE FLANGE
ASTM	AMERICAN SOCIETY OF TESTING & MATERIALS	GALV	GALVANIZE	PL	PLATE	W/O	WITHOUT
AWS	AMERICAN WELDING SOCIETY	GB	GRADE BEAM	PLAS	PLASTER	WPRF	WATERPROOF
BCX	BOTTOM CHORD EXTENSION	GC	GENERAL CONTRACTOR	PLF	POUNDS PER LINEAR FOOT	WP	WORKING POINT
BLDG	BUILDING	CLUM	GLUED LAMINATED	PLYWD	PLYWOOD	WS	WATERSTOP
BLKG	BLOCKING	GR	GRADE	PRESS	PRESSURE	WT	WEIGHT
BM	BEAM	GYP	GYPSONUM	PROJ	PROJECT; PROJECTED; PROJECTION	WWR	WELDED WIRE REINFORCING
BOCA	BUILDING OFFICIALS & CODE ADMINISTRATORS	H&V	HORIZONTAL AND VERTICAL	PSF	POUNDS PER SQUARE FOOT		
BOT	BOTTOM	HEF	HORIZONTAL EACH FACE	PSI	POUNDS PER SQUARE INCH		
BPL	BEARING PLATE/BASE PLATE	HI	HIGH	PT	POST-TENSIONED		
BT	BENT	HIF	HORIZONTAL INSIDE FACE	PTD	PRESSURE TREATED		
		HK	HOOK	R	RADIUS		
CANT	CANTILEVER	HOF	HORIZONTAL OUTSIDE FACE	RC	REINFORCED CONCRETE		
CJ	CONTROL JOINT	HORIZ	HORIZONTAL	RD	ROOF DRAIN		
CJT	CONSTRUCTION JOINT	HP	HIGH POINT	RECT	RECTANGULAR		
CL	CENTER LINE	HNGR	HANGER	REF	REFER(ENCE)		
CLR	CLEAR/CLEARANCE	HT	HEIGHT	REINF	REINFORCING		
CM	CONSTRUCTION MANAGER			REQD	REQUIRED		
CMU	CONCRETE MASONRY UNIT(S)	IBC	INTERNATIONAL BUILDING CODE	REV	REVISE; REVISION		
COL	COLUMN	ID	INSIDE DIAMETER	RF	ROOF		
CONC	CONCRETE	I/F	INSIDE FACE	RFTTR	RAFTER		
CONN	CONNECTION	INCL	INCLUSIVE	SC	SLIP CRITICAL		
CONSTR	CONSTRUCTION	INT	INTERIOR	SCH	SCHEDULE		
CONT	CONTINUOUS			SDL	SUPERIMPOSED DEAD LOAD		
COORD	COORDINATE	JST	JOIST	SECT	SECTION		
CR	CRACK	JT	JOINT	SEIS	SEISMIC		
CSK/S	COUNTERSUNK SCREW			SHT	SHEET		
CTRD	CENTERED	K	KIPS	SHTG	SHEATHING		
		KB	KNEE BRACE	SIM	SIMILAR		
d(penny)	NAILS			SL	SLOPE		
D	DEPTH	L	LONG; LENGTH	SNT	SEALANT		
DBE	DECK BEARING ELEVATION	LAM	LAMINATED	SOG	SLAB ON GRADE		
DBL	DOUBLE	LAT	LATERAL	SP	SPIRAL		
DEMO	DEMOLITION	LF	LINEAR FOOT	SPCG	SPACING		
DET	DETAIL	LL	LIVE LOAD	SPEC	SPECIFICATION		
DEG	DEGREE	LLH	LONG LEG HORIZONTAL	SQ	SQUARE		
DIA	DIAMETER	LLV	LONG LEG VERTICAL	SSPC			
DIAG	DIAGONAL	LO	LOW	SST	STAINLESS STEEL		
DIM	DIMENSION	LP	LOW POINT	STD	STANDARD		
DIR	DIRECTION	LS	LAG SCREW	STGR	STAGGER		
DL	DEAD LOAD	LTL	LINTEL	STIFF	STIFFENER		
DN	DOWN	LTW	LIGHTWEIGHT	STIRR	STIRRUP		
DWG	DRAWING(S)	LWB	LONG WAY BOTTOM	STL	STEEL STRUCTURES PAINTING COUNCIL		
DWLS	DOWELS	LWC	LIGHTWEIGHT CONCRETE	STRUCT	STRUCTURAL		
		LWT	LONG WAY TOP	SWB	SHORT WAY BOTTOM		
EA	EACH	MAS	MASONRY	SWT	SHORT WAY TOP		
EF	EACH FACE	MAX	MAXIMUM	SYM	SYMMETRICAL		
EL	ELEVATION	MBR	MEMBER				
ELEV	ELEVATOR	MECH	MECHANICAL	T	TOP		
EMBED	EMBEDMENT	MEP	MECHANICAL, ELECTRICAL & PLUMBING	T/	TOP OF		
ENGR	ENGINEER	MFR	MANUFACTURER	T&B	TOP AND BOTTOM		
EOD	EDGE OF DECK	MIN	MINIMUM	T&G	TONGUE AND GROOVE		
EOR	ENGINEER OF RECORD	MISC	MISCELLANEOUS	TCX	TOP CHORD EXTENSION		
EOS	EDGE OF SLAB	MO	MASONRY OPENING	TEMP	TEMPORARY		
EQ	EQUAL	MTL	METAL	THK	THICK		
EQUIP	EQUIPMENT	#	NUMBER	THRU	THROUGH		
EW	EACH WAY	NIC	NOT IN CONTACT	TOS	TOP OF STEEL		
EWEF	EACH WAY EACH FACE	NOM	NOMINAL	T/SL	TOP OF SLAB		
EXIST	EXISTING	NS	NEAR SIDE	TU	TILTUP		
EXP	EXPANSION	NTS	NOT TO SCALE	T/W	TOP OF WALL		
EXT	EXTERIOR			TYP	TYPICAL		

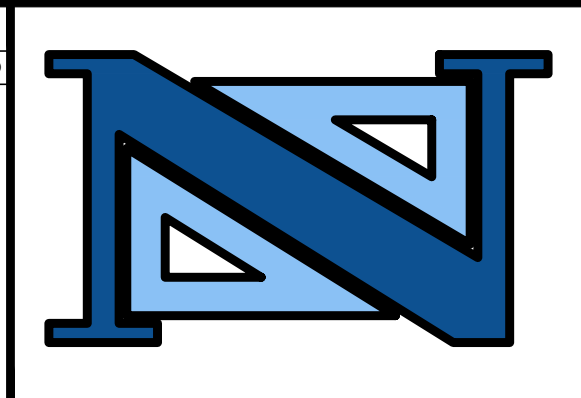
MATERIAL INDICATIONS

SYMBOL	DESCRIPTION		DESCRIPTION		DESCRIPTION
	- EARTH		- GRATING		- CONT SOLID WOOD
	- DRAINAGE FILL/GRAVEL/STONE		- STEEL		- WOOD BLOCKING
	- CONCRETE		- RIGID INSULATION		- BED ROCK
	- CMU GROUTED SOLID		- PLYWOOD		
	- MASONRY BLOCK (CMU)		- BATT INSULATION		
	- BRICK		- LAMINATED WOOD		

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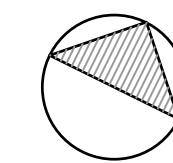
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 NOMAHEGAN PEDESTRIAN BRIDGE
 OVER THE RAHWAY RIVER (U.C. PROJECT NO. 2016-038)
 TOWNSHIP OF CRANFORD
 UNION COUNTY
 NEW JERSEY**

DRAWN BY: MPP	CHECKED BY: DGP	PROJECT NO.:	SHEET NO.:
DESIGNED BY: DGP	SCALE:	21-0230	S-0.2
FIELD BOOK NO.:	PAGE:	DATE: NOVEMBER 8, 2021	

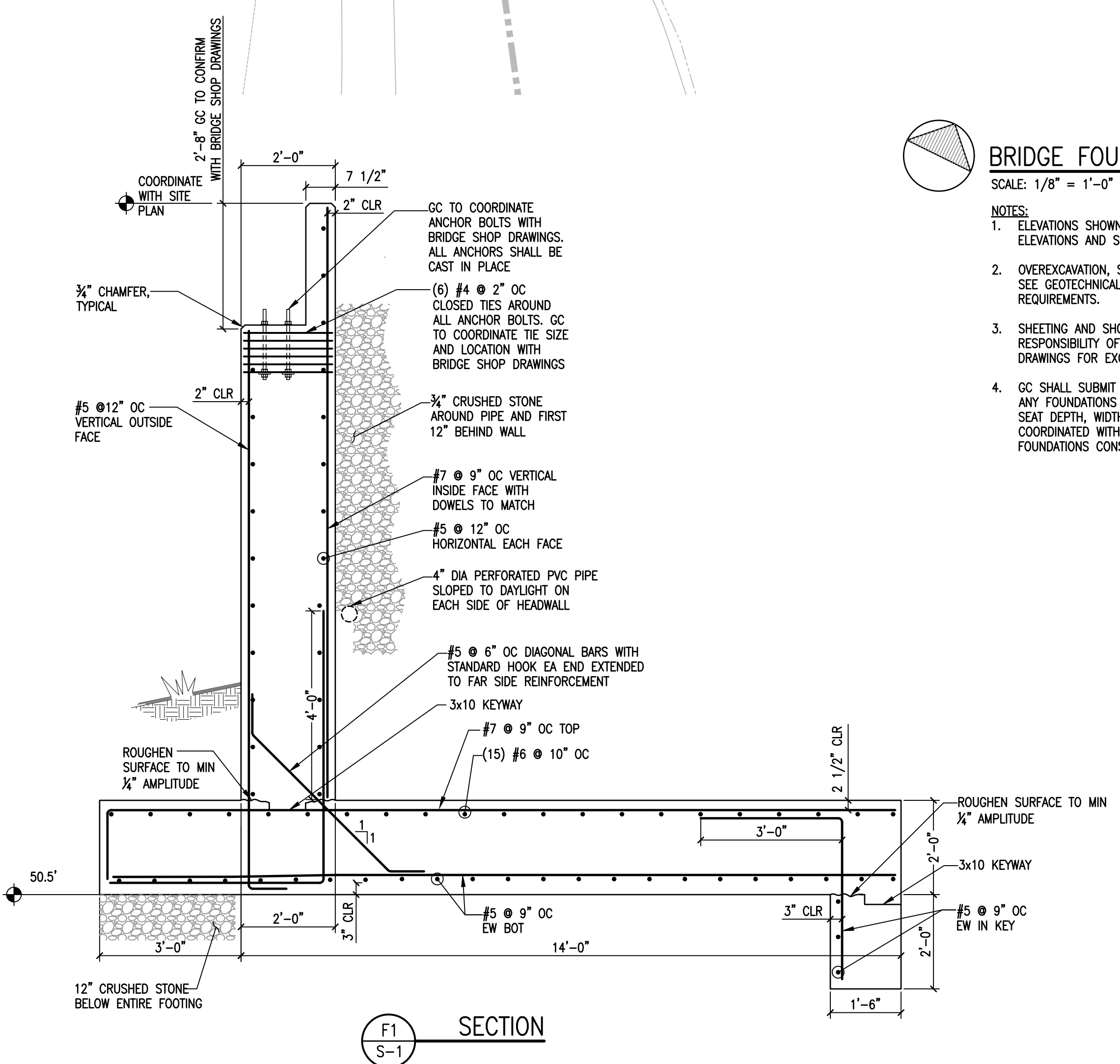




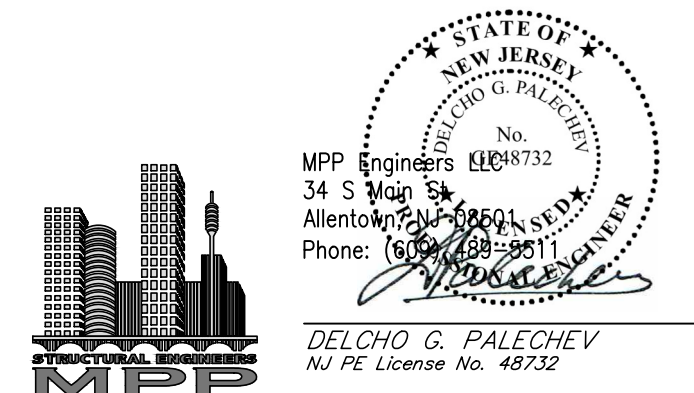
BRIDGE FOUNDATION PLAN

SCALE: 1/8" = 1'-0" (DO NOT SCALE PLAN)

- NOTES:
1. ELEVATIONS SHOWN ARE FOR REFERENCE ONLY. SEE SITE CIVIL PLANS FOR ALL ELEVATIONS AND SLOPES.
 2. OVEREXCAVATION, SOIL REMOVAL AND PLACEMENT OF CONTROLLED FILL IS REQUIRED. SEE GEOTECHNICAL REPORT FOR OVEREXCAVATION, PROOFROLLING AND FILL PLACEMENT REQUIREMENTS.
 3. SHEETING AND SHORING AND DEWATERING DESIGN AND CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUBMIT NJ PE SIGNED AND SEALED SHOP DRAWINGS FOR EXCAVATION SHEETING AND SHORING.
 4. GC SHALL SUBMIT BRIDGE SHOP DRAWINGS FOR REVIEW PRIOR TO CONSTRUCTION OF ANY FOUNDATIONS OR FABRICATION OF REINFORCEMENT. ALL ABUTMENT DIMENSIONS, SEAT DEPTH, WIDTH, HEIGHT AND ANCHOR BOLT REQUIREMENTS SHALL BE COORDINATED WITH THE BRIDGE MANUFACTURER SHOP DRAWINGS PRIOR TO FOUNDATIONS CONSTRUCTION.

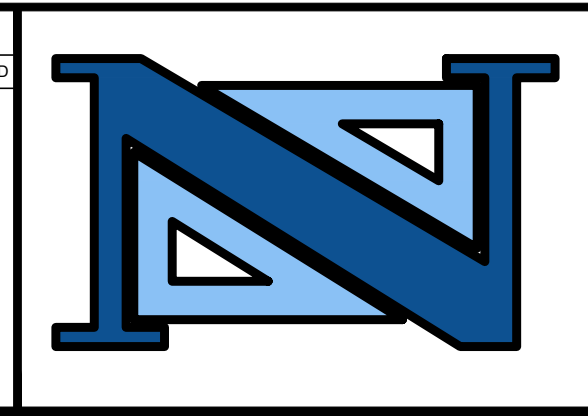


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NEW JERSEY**

DRAWN BY: MPP
DESIGNED BY: DGP
FIELD BOOK NO:

CHECKED BY: DGP
SCALE:

PROJECT NO.:
21-0230

SHEET NO.:
S-1

DATE: NOVEMBER 8, 2021