

**SPECIFICATIONS
FOR
REHABILITATION OF SPRINGFIELD AVENUE MINOR BRIDGE
(Be19), TOWNSHIP OF BERKELEY HEIGHTS
COUNTY OF UNION, NEW JERSEY
BA#31-2016; UNION COUNTY ENGINEERING PROJECT #2013-010**

NOVEMBER 2016

**UNION COUNTY OFFICIALS
BOARD OF CHOSEN FREEHOLDERS**

Bruce H. Bergen, Chairman
Sergio Granados, Vice Chairman
Linda Carter, Freeholder
Angel G. Estrada, Freeholder
Christopher Hudak, Freeholder
Mohamed S. Jalloh, Freeholder
Bette Jane Kowalski, Freeholder
Alexander Mirabella, Freeholder
Vernell Wright, Freeholder

CLERK OF THE BOARD
James E. Pellettiere, RMC

COUNTY MANAGER
Alfred J. Faella

**DEPARTMENT OF ENGINEERING, PUBLIC WORKS AND
FACILITIES MANAGEMENT**
Joseph A. Graziano, Sr., CPWM
Director, Department of Engineering, Public Works and
Facilities Management

**COUNTY ENGINEER
DIVISION OF ENGINEERING**
Thomas O. Mineo, P.E.
2325 South Avenue
Scotch Plains, New Jersey 07076
Telephone: (908) 789-3675
Fax: (908) 789-3674

PREPARED BY:
Dewberry Engineers Inc.
200 Broadacres Drive, Suite 410
Bloomfield, NJ 07003-3154
Phone: (973) 780-9360
Fax: (973) 338-5860

**COUNTY OF UNION
NOTICE TO BIDDERS**

Sealed bids will be received by the director of the Division of Purchasing, or her designee, at the County of Union, New Jersey on December 29, 2016 at 10:30 a.m., prevailing time, in the 3rd Floor Conference Room, U.C. Administration Building, 10 Elizabethtown Plaza, Elizabeth, New Jersey for:

**REPLACEMENT OF SPRINGFIELD AVENUE MINOR BRIDGE (Be19)
TOWNSHIP OF BERKELEY HEIGHTS, COUNTY OF UNION, NEW JERSEY
BA#31-2016; UNION COUNTY ENGINEERING PROJECT #2013-010**

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.

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.S.A.C. 17:27.

LAURA M. SCUTARI, QPA, MPA, DIRECTOR OF PURCHASING

**UNION COUNTY BOARD
OF CHOSEN FREEHOLDERS**

We're Connected to You!

NB-1

**REHABILITATION OF SPRINGFIELD AVENUE MINOR BRIDGE (BE19)
TOWNSHIP OF BERKELEY HEIGHTS, COUNTY OF UNION, NEW JERSEY
BA#31-2016; Union County Engineering Project #2013-010**

TABLE OF CONTENTS

Cover Sheet: County Officials
NB-1: Notice to Bidders

GENERAL SPECIFICATIONS

Definitions

- Section 1: BID FORM
- Section 2: WITHDRAWAL OF BID DUE TO MISTAKE
- Section 3: QUALIFICATIONS OF BIDDERS AND REQUIRED SUBMISSIONS
- Section 4: INTERPRETATIONS AND ADDENDA
- Section 5: OBLIGATION OF BIDDER TO INSPECT SITE AND CONTRACT DOCUMENTS
- Section 6: BID AND PERFORMANCE GUARANTEE
- Section 7: COMMENCEMENT AND COMPLETION
- Section 8: BIDDER AFFIDAVIT
- Section 9: BID SECURITY
- Section 10: LABOR AND MATERIALS
- Section 11: INSURANCE REQUIREMENTS
- Section 12: INDEMNIFICATION REQUIREMENTS
- Section 13: ROYALTIES AND PATENTS
- Section 14: PLANS AND SPECIFICATIONS
- Section 15: GUARANTEE AGAINST DEFECTIVE WORK
- Section 16: TRAFFIC AND STREET MAINTENANCE
- Section 17: CONTRACTOR'S EMPLOYEES
- Section 18: OWNERSHIP DISCLOSURES REQUIRED
- Section 19: NON-COLLUSION AFFIDAVIT
- Section 20: EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCES
- Section 21: COMPLIANCE WITH NEW JERSEY PREVAILING WAGE ACT
- Section 22: BRAND NAME OR EQUAL
- Section 23: LINES AND GRADES
- Section 24: NUMBER OF WORKING DAYS
- Section 25: PROMPT PAYMENT OF CONSTRUCTION CONTRACTS (NJ Prompt Payment Act)
- Section 26: STOPPING WORK ON ACCOUNT OF BAD WEATHER
- Section 27: ACCESS FOR OTHER CONTRACTORS
- Section 28: CONDEMNED MATERIALS AND WORK
- Section 29: STORAGE
- Section 30: FINAL CLEAN UP
- Section 31: SUB-LETTING OF WORK
- Section 32: SAFETY
- Section 33: QUALITY, SAFETY AND PERFORMANCE STANDARDS
- Section 34: MATTERS NOT MENTIONED IN CONTRACT DOCUMENTS
- Section 35: PERMITS
- Section 36: CONTRACTOR TO PROVIDE PROOF OF PAYMENT
- Section 37: CHANGE ORDERS
- Section 38: SUPPLEMENTAL WORK
- Section 39: FORM OF CONTRACT
- Section 40: PROGRESS PAYMENTS
- Section 41: INSPECTION
- Section 42: DAMAGES
- Section 43: LIQUIDATED DAMAGES
- Section 44: AFFIRMATIVE ACTION REQUIREMENTS
- Section 45: INVESTMENT ACTIVITIES WITH IRAN

GENERAL SPECIFICATIONS CONTINUED

- Section 46: COMPLIANCE WITH THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT
(N.J.S.A. 34:11-56.48 et seq)
- Section 47: UTILITIES
- Section 48: MATERIAL COMPLIANCE AND SHOP DRAWINGS
- Section 49: PRECONSTRUCTION
- Section 50: DISPUTES UNDER THE CONTRACT
- Section 51: CONTRACTOR BUSINESS REGISTRATION CERTIFICATE
(New Mandatory Requirement – Effective 1/18/2010)
- Section 52: BID PROTEST - LEGAL FEES AND COSTS
- Section 53: AMERICAN GOODS AND PRODUCTS WHERE POSSIBLE
- Section 54: NEW JERSEY PAY-TO-PLAY REQUIREMENTS
- Section 55: STATEMENT OF EQUIPMENT TO BE USED IN CONSTRUCTION
- Section 56: NEW JERSEY SALES AND USE TAX REQUIREMENTS

BIDDING DOCUMENTS

Bid Document Submission Checklist

Bidding Documents

Bid Form

Consent of Surety

Bidder Signature Page

Bidder Disclosure Statement

Subcontractor Identification Statement: List of Subcontractors

Subcontractor Identification Certification

Acknowledgement of Addendum

Contractor Business Registration Certificate

Affirmative Action Requirement

Experience Statement

Certificate of Bidder Showing Ability to Perform Contract

Non-Collusion Affidavit

Contractor Registration Advisement

Americans with Disabilities Act

Statement of Bidder's Qualifications

Contractor Performance Record

Affidavit Regarding List of Disbarred, Suspended or Disqualified Bidders

Prior Negative Experience Questionnaire-Certification

Contractor's Certification of Compliance - New Jersey Prevailing Wage Act

Uncompleted Contracts Affidavit

Certificate of Insurance Statement

Collection of Use Tax on Sales to Local Governments Statement

Time of Completion

Disclosure of Investment Activities in Iran

NEW JERSEY PREVAILING WAGE DETERMINATION DOCUMENTS

STANDARD SPECIFICATION FORM - SS-1

PROJECT TECHNICAL SPECIFICATIONS

**UNION COUNTY BOARD OF CHOSEN FREEHOLDERS
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 Chosen Freeholders
UC Administration Building, 6th Floor
10 Elizabethtown Plaza
Elizabeth, New Jersey 07207

ADDRESS BIDS AND SUBMIT TO:

Union County Division of Purchasing
UC Administration Building, 3rd Floor
10 Elizabethtown Plaza
Elizabeth, NJ 07207
Attn: Laura M. Scutari, QPA, MPA, Director, Division of Purchasing
Telephone: 908-527-4130
Facsimile: 908-558-2548

TITLE OF PROJECT: **Rehabilitation of Springfield Avenue Minor Bridge (Be19)
Township of Berkeley Heights, County of Union, New Jersey
BA#31-2016; UC Engineering Project #2013-010**

BIDDER: Bidder shall be a single overall contract bidder

ENGINEER: Manuel J. Vera, P.E.
Dewberry Engineers, Inc.
200 Broadacres Drive, Suite 410
Bloomfield, NJ 07003-3154
Phone: (973) 780-9360
Fax: (973) 338-5860

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

COUNTY ENGINEER:

Thomas O. Mineo, P.E.
Union County
Division of Engineering
2325 South Avenue
Scotch Plains, NJ 07076
Office: (908) 789-3675
Facsimile: (908) 789-3674
Email: tmineo@ucnj.org

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 Contactor'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 informality in the bids received so long as said waiver is not of a response which is considered to be material and non-waivable pursuant to law.

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 Michael M. Yuska, QPA, 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, Michael M. Yuska, QPA, Director of the Division of Purchasing or his designee may contact all bidders, after bids are opened, to ascertain if any bidders wish to, or already have exercised a request to withdraw their bid pursuant to N.J.S.A. 40A:11-23.3.

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

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

3. QUALIFICATIONS OF BIDDERS AND REQUIRED SUBMISSIONS

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

4. INTERPRETATIONS AND ADDENDA

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

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

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

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

5. OBLIGATION OF BIDDER TO INSPECT SITE AND CONTRACT DOCUMENTS

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

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

6. BID AND PERFORMANCE GUARANTEE

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

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

account of this Work. A Performance, Labor and Materials bond will be furnished by the Contractor upon an award of Contract, and will be in the amount of 100% of the contract price.

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

N.J.S.A. 40A:11-1.1 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 of Union shall award the contract or reject all bids within sixty (60) days; except that the bids of any bidders who consent thereto may, at the request of the County be held for consideration for such longer periods as may be agreed.

The County will return all certified checks or cashier's checks after the proposals have been opened, read, tabulated and checked except those of the three (3) bidders who have bid the lowest total price for carrying out the Project. 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 the said 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. BID SECURITY

All Bidders are required to submit a form of Bid Security with their bids.
(Bid Bond or Certified Funds)

The Bid Security shall be in the amount of ten percent (10%) of the Bid, but not in excess of Twenty Thousand Dollars (\$20,000.00), and payable to the order of the "County of Union."

10. 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.

11. 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 Chosen Freeholders, 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 Chosen Freeholders, 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.

12. 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 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."

13. 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.

14. 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".

15. 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.

16. 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.

17. 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.

18. OWNERSHIP DISCLOSURES REQUIRED

Pursuant to P.L. 1977, N.J.S.A. 52:25-24.2, the Bidder shall submit with its Bid, or prior to receipt of bids, a statement setting forth the names and addresses of all stockholders in the corporation or partnership bidding who own ten percent (10%) or greater interest therein. (See forms attached)

19. 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.

20. 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.

21. COMPLIANCE WITH NEW JERSEY PREVAILING WAGE ACT

The County of Union, in order to fulfill the requirements of N.J.S.A. 34:11-56a.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 Industry 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 Chosen Freeholders on May 8, 2014. The resolution is furnished in Section 51 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 statues 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)

22. 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.

23. 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.

24. NUMBER OF WORKING DAYS

In accordance with NJSA 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.

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

Pursuant to NJSA 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.

26. 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.

27. 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.

28. 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.

29. 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.

30. 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.

31. SUB-LETTING OF WORK

Except for the List of Subcontractors, pursuant to NJSA 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 NJSA 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 NJSA 40A:11-16 will not be permitted except with the consent of the County Engineer.

32. 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 Commerce shall be observed.

33. 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.

34. 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.

35. PERMITS

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

36. 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.

37. CHANGE ORDERS

Change Order Procedures shall comply with *N.J.A.C. 5:30-11.1 et seq.*, "Change Orders and Open End Contracts" and subsequent provisions of the New Jersey Administrative Code.

38. 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.

39. 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.

40. 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 NJSA 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.

41. 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.

42. 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.

43. 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.

44. AFFIRMATIVE ACTION REQUIREMENTS

EXHIBIT B (Revised 4/10)

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

CONSTRUCTION CONTRACTS

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

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

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

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

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

When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27-7.2; provided, however, that the Division may, in its discretion, exempt a contractor or subcontractor from

compliance with the good faith procedures prescribed by the following provisions, A, B and C, as long as the Division is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Division, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the 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 Division, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;

(2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;

(3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;

(4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;

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

(i) The contractor or subcontractor shall interview the referred minority or women worker.

(ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Division. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

(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 Division, 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 Division.

(7) To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Division and submitted promptly to the Division upon request.

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the 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 Division an initial project workforce report (Form AA 201) electronically provided to the public agency by the Division, through its website, for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Division and to the public agency compliance officer.

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

(D) The contractor and its subcontractors shall furnish such reports or other documents to the Division of Public Contracts Equal Employment Opportunity Compliance as may be requested by the Division from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Public Contracts Equal Employment Opportunity Compliance for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code (NJAC 17:27)**.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

45. INVESTMENT ACTIVITIES IN IRAN

Pursuant to P.L. 2012, c.25, codified as NJSA 2:32-55 *et seq*, prohibits State and local public contracts with persons or entities engaging in certain investment activities in energy or finance sectors of Iran.

46. COMPLIANCE WITH THE PUBLIC WORKS CONTRACTOR REGISTRATION ACT - (NJSA 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 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.

47. 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.

48. 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.

49. 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.

50. 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.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

51. 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 <http://www.state.nj.us/treasury/revenue/busregcert.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 contract shall be cause to reject the bid.

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:

N.J.S.A. 52:32-44 imposes the following requirements on Contractors and all subcontractors that knowingly provide goods or perform services for a Contractor fulfilling this contract:

- 1) the Contractor shall provide written notice to its subcontractors and suppliers to submit proof of business registration to the Contractor;
- 2) subcontractors through all tiers of a project must provide written notice to their subcontractors and suppliers to submit proof of business registration and subcontractors shall collect such proofs of business registration and maintain them on file;

- 3) prior to receipt of final payment from a contracting agency, the Contractor must submit to the contacting agency an accurate list of all subcontractors and suppliers or attest that none was used; and,
- 4) during the term of this contract, the Contractor and its affiliates shall collect and remit, and shall notify all subcontractors and their affiliates that they must collect and remit, to the Director, New Jersey Division of Taxation, 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 this State.

A Contractor, subcontractor or supplier who fails to provide proof of business registration or provides false business registration information shall be liable to a penalty of \$25 for each day of violation, not to exceed \$50,000 for each business registration copy not properly provided or maintained under a contract with a contracting agency. Information on the law and its requirements are available by calling (609) 292-9292.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

52. 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.

53. AMERICAN GOODS AND PRODUCTS WHERE POSSIBLE

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

54. 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 NJSA 19A:44A-1 et. seq. are NOT REQUIRED to be provided with the bids.

55. STATEMENT OF EQUIPMENT TO BE USED IN CONSTRUCTION

Pursuant to NJSA 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.

56. 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," (NJSA 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).

**ALFRED J. FAELLA
COUNTY MANAGER**

**LAURA M. SCUTARI, QPA, MPA
DIRECTOR / DIVISION OF PURCHASING**

BID DOCUMENT SUBMISSION CHECKLIST

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

EACH BIDDER SHOULD COMPLETE THIS FORM AND INITIAL EACH ENTRY.

DATE COMPLETED: _____

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

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

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

_____ Security in the form of:

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

_____ Consent of Surety form signed by a Surety Company if the total amount of your Bid is over \$36,000.00. If your bid is accepted, the Surety Company that provided the Consent shall be required to furnish a Performance, Labor and Materials Bond in the amount of 100% of the award of the contract. The County of Union has provided its Consent of Surety form for your use. The use of this form by your Surety Company will expedite the bid review process and eliminate the possibility of having your bid rejected. If, however, you should need to use another form, please use language similar to that used on the Union County form and avoid making any additions or deletions to the Union County form language. In lieu of the Consent of Surety you may submit a Certified Check in the full amount of the bid.

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

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

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

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

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

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

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

- _____ Affirmative Action Requirement
- _____ Experience Statement
- _____ Certificate of Bidder showing ability to perform Contract
- _____ Non-Collusion Affidavit – Fill out completely and notarize
- _____ Certificates from New Jersey Department of Labor – 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 form

I HAVE TAKEN THE FOLLOWING ACTIONS:

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

NOTE: QUESTIONS PERTAINING TO THIS BID ARE TO BE DIRECTED TO DIVISION OF ENGINEERING AT 908-789-3675

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.**

Bidder's Name _____

BID FORM

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

**REHABILITATION OF SPRINGFIELD AVENUE MINOR BRIDGE (Be-19)
TOWNSHIP OF BERKELEY HEIGHTS, COUNTY OF UNION, NEW JERSEY
BA No. 31-2016; Union County Engineering Project No. 2013-010**

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	L.S.	L.S.		
2	FIELD OFFICE TYPE A SETUP	UNIT	1		
3	FIELD OFFICE TYPE A MAINTENANCE	MONTH	7		
4	CONSTRUCTION LAYOUT	L.S.	L.S.		
5	HEAVY DUTY SILT FENCE, ORANGE	L.F.	125		
6	INLET FILTER, TYPE 2, 2' X 4'	UNIT	8		
7	CONCRETE WASHOUT SYSTEM	L.S.	L.S.		
8	OIL-ONLY EMERGENCY SPILL KIT, TYPE 1	UNIT	1		
9	BREAKAWAY BARRICADE	UNIT	17		
10	DRUM	UNIT	39		
11	CONSTRUCTION IDENTIFICATION SIGNS, 4' X 8'	UNIT	2		
12	CONSTRUCTION SIGNS	S.F.	1,075		
13	CONSTRUCTION BARRIER CURB	L.F.	260		
14	POLICE TRAFFIC DIRECTOR	ALLOW	ALLOW	\$12,000	\$12,000

Bidder's Name _____

ITEM NO	DESCRIPTION	UNIT	CONTRACT QUANTITY	UNIT PRICE	AMOUNT
15	TEMPORARY CRASH CUSHION, INERTIAL BARRIER SYSTEM, 10 MODULES	UNIT	4		
16	FLASHING ARROW BOARD, 4'X8'	UNIT	2		
17	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	UNIT	2		
18	REMOVABLE BLACK LINE MASKING TAPE, 6"	L.F.	200		
19	FUEL PRICE ADJUSTMENT	DOLL.	DOLL.	\$1,000	\$1,000
20	ASPHALT PRICE ADJUSTMENT	DOLL	DOLL	\$1,000	\$1,000
21	FINAL CLEANUP	L.S.	L.S.		
22	CLEARING SITE	L.S.	L.S.		
23	EXCAVATION, TEST PIT	C.Y.	20		
24	EXCAVATION, UNCLASSIFIED	C.Y.	70		
25	REMOVAL OF PAVEMENT	S.Y.	300		
26	I-14 SOIL AGGREGATE	C.Y.	44		
27	DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK	S.Y.	191		
28	DENSE-GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS	C.Y.	10		
29	HMA MILLING, 3" OR LESS	S.Y.	633		
30	TACK COAT	GALLON	62		
31	PRIME COAT	GALLON	36		
32	HOT MIX ASPHALT 9.5 M 64 SURFACE COURSE	TON	143		
33	HOT MIX ASPHALT 19 M 64 BASE COURSE	TON	76		
34	15" REINFORCED CONCRETE PIPE	L.F.	45		

Bidder's Name _____

ITEM NO	DESCRIPTION	UNIT	CONTRACT QUANTITY	UNIT PRICE	AMOUNT
35	INLET TYPE B	UNIT	2		
36	INLET TYPE B-1	UNIT	1		
37	INLET TYPE B-2	UNIT	1		
38	RESET EXISTING CASTING	UNIT	1		
39	SET INLET TYPE B, CASTING	UNIT	1		
40	RECONSTRUCTED INLET, TYPE B, USING EXISTING CASTING	UNIT	1		
41	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING	UNIT	1		
42	RECONSTRUCTED INLET, TYPE E, USING NEW CASTING	UNIT	1		
43	TEMPORARY CHAIN-LINK FENCE, 6' HIGH	L.F.	166		
44	CONCRETE SIDEWALK, 4" THICK	S.Y.	80		
45	HOT MIX ASPHALT DRIVEWAY, 9" THICK	S.Y.	104		
46	CONCRETE DRIVEWAY, 6" THICK	S.Y.	29		
47	9"X18" CONCRETE VERTICAL CURB	L.F.	241		
48	GRANITE CURB	L.F.	74		
49	TRAFFIC STRIPES, 4"	L.F.	960		
50	TRAFFIC MARKINGS	S.F.	5		
51	RPM, BI-DIRECTIONAL, AMBER LENS	UNIT	2		
52	REMOVAL OF RPM	UNIT	1		
53	RESET SIGN USING STEEL "U" POST	UNIT	3		
54	RESET WATER VALVE BOX	UNIT	9		

Bidder's Name _____

ITEM NO	DESCRIPTION	UNIT	CONTRACT QUANTITY	UNIT PRICE	AMOUNT
55	RESET MANHOLE, SANITARY SEWER, USING EXISTING CASTING	UNIT	1		
56	RESET GAS VALVE BOX	UNIT	5		
57	TOPSOILING, 4" THICK	S.Y.	88		
58	BORROW TOPSOIL	C.Y.	10		
59	FERTILIZING AND SEEDING, TYPE A-3	S.Y.	88		
60	STRAW MULCHING	S.Y.	88		
61	CLEARING SITE, BRIDGE (STR. NO. Be19)	L.S.	L.S.		
62	EXCAVATION, UNCLASSIFIED	C.Y.	115		
63	I-9 SOIL AGGREGATE	C.Y.	100		
64	REINFORCEMENT STEEL, GALVANIZED	LBS.	13,300		
65	CONCRETE WINGWALL	C.Y.	6		
66	EPOXY WATERPROOFING	S.Y.	55		
67	PRESTRESSED CONCRETE SLAB BEAM (TYPE SI-36), 36"X12"	L.F.	357		
68	PRESTRESSED CONCRETE SLAB BEAM (TYPE SI-48), 48"X12"	L.F.	48		
69	STRUCTURAL STEEL (APPROX. 375 LBS.)	L.S.	L.S.		
70	REINFORCED ELASTOMERIC BEARING ASSEMBLY	UNIT	34		
71	CONCRETE BRIDGE SEATS, HES	C.Y.	20		
72	CONCRETE BRIDGE DECK, HES	C.Y.	40		
73	CONCRETE BRIDGE SIDEWALK	C.Y.	12		
74	CONCRETE BRIDGE PARAPET	L.F.	85		

Bidder's Name _____

ITEM NO	DESCRIPTION	UNIT	CONTRACT QUANTITY	UNIT PRICE	AMOUNT
75	BRIDGE COMBINATION RAILING (1 RAIL, ALUMINUM)	L.F.	70		
76	RUBBLE STONE FACING	S.F.	445		
77	BLUESTONE CAP	S.F.	175		
78	NAME PLAQUE	UNIT	2		

Written _____

Figures _____

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

Ninety Thousand Dollars

\$90,000.00

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.

Bidder's Name _____

CONSENT OF SURETY
TO ACCOMPANY PROPOSAL (BID)

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

NOTE:
Expiration date
Needed if Annual
Surety

NAME OF INSURANCE COMPANY
ADDRESS: _____

ORIGINAL SIGNATURE
ATTORNEY-IN-FACT FOR INSURANCE CO.

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

BIDDER SIGNATURE PAGE

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

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

NAME OF BIDDER

ADDRESS OF BIDDER

**ORIGINAL SIGNATURE
CORPORATE SECRETARY**

**PRINT NAME AND TITLE
CORPORATE SECRETARY**

TEL: _____
FAX: _____
E-Mail: _____

BY: _____
ORIGINAL SIGNATURE

Corporate Seal

PRINT OR TYPE NAME AND TITLE

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

Bidder's Name _____

BIDDER DISCLOSURE STATEMENT

N.J.S.A. 52:25-24.2 (P.L. 1977 c. 33)

Failure of the bidder/respondent to submit the required information is cause for automatic rejection.

CHECK ONE

I certify that the list below contains the names and home addresses of all stockholders holding 10% or more of the issued and outstanding stock of the undersigned.

OR

I certify that no one stockholder owns 10% or more of the issued and outstanding stock of the undersigned.

LEGAL NAME OF BIDDER: _____

Check the box that represents the type of business organization:

- | | | |
|---|--|--|
| <input type="checkbox"/> Partnership | <input type="checkbox"/> Corporation | <input type="checkbox"/> Sole Proprietorship |
| <input type="checkbox"/> Limited Partnership | <input type="checkbox"/> Limited Liability Company | <input type="checkbox"/> Limited Liability Partnership |
| <input type="checkbox"/> Subchapter S Corporation | | |

Complete if the bidder/respondent is one of the 3 types of corporations:

Date Incorporated: _____ **Where Incorporated:** _____

BUSINESS ADDRESS:

Street Address	City	State	Zip Code
-----------------------	-------------	--------------	-----------------

Telephone #	Fax #
--------------------	--------------

Pursuant to N.J.S.A. 52:25-24.2, also referred to as P.L. 1977, c. 33, no corporation or partnership shall be awarded any contract for the performance of any work or the furnishing of any materials or supplies, unless, prior to the receipt of the bid or accompanying the bid of said corporation or partnership, there is submitted a statement setting forth the names and addresses of all stockholders in the corporation or partnership who own ten (10) percent or more of its stock of any class, or of all individual partners in the partnership who own a ten (10) percent or greater interest therein. Further, the Attorney General has concluded that the provisions of N.J.S.A. 52:25-24.2, in referring to corporations and partnerships, are intended to apply to all forms of business entities, including, but not limited to, corporations, limited partnerships, limited liability companies, limited liability partnerships, Subchapter S corporations, partnerships and sole proprietorships.

Bidders are required to disclose whether they are a partnership, corporation, limited liability company or sole proprietorship. The Stockholder Disclosure Certification form shall be completed, signed and notarized. Failure of the bidder to submit the required information is cause for automatic rejection of the bid.

BIDDER DISCLOSURE STATEMENT – (Continued)

N.J.S.A. 52:25-24.2, also referred to as **P.L. 1977, Ch. 33**, requires all corporate, limited liability and partnership bidders for state, county, municipal or school district contracts to submit a list of names and addresses of all stockholders owning 10% or more of their stock or 10% or more of the stock of the corporate stockholders or in the case of partnership or limited liability company, the names and addresses of those partners or owners owning 10% or greater interest in the partnership or limited liability company. Furthermore, the Union County Board of Chosen Freeholders requires a statement from all Bidders, which must indicate all Principals of Bidders.

You must set forth the name, home address, title and percentage of ownership of every person who is an owner of the bidder. You must also set forth the business form of the bidder.

II. Principals:

	NAME	HOME ADDRESS	TITLE	% OF OWNERSHIP
1.				
2.				
3.				
4.				

If one or more of the owners of the Bidder is itself a corporation, limited liability company or partnership, then for that corporation, limited liability company or partnership owner you must set forth the name, home address, title and percentage of ownership of every person who is an owner of that corporation, limited liability company or partnership.

	NAME	HOME ADDRESS	TITLE	% OF OWNERSHIP
1.				
2.				
3.				
4.				

Bidder's Name _____

SUBCONTRACTOR IDENTIFICATION STATEMENT

LIST OF SUBCONTRACTORS

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

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

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

Company Name: _____

Address: _____

Telephone: _____ Subcontract Amount: \$ _____

Specific Scope of Work Subcontracted: _____

License No. _____

Company Name: _____

Address: _____

Telephone: _____ Subcontract Amount: \$ _____

Specific Scope of Work Subcontracted: _____

License No. _____

Company Name: _____

Address: _____

Telephone: _____ Subcontract Amount: \$ _____

Specific Scope of Work Subcontracted: _____

License No. _____

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

(Continued on following page)

Bidder's Name _____

SUBCONTRACTOR IDENTIFICATION CERTIFICATION

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

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

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

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

Witness

Date _____

NAME OF BIDDER

ADDRESS

By: _____
ORIGINAL SIGNATURE ONLY

PRINT NAME AND TITLE

Bidder's Name: _____

ACKNOWLEDGMENT OF ADDENDUM

COUNTY OF UNION

(Name of Construction /Public Works Project)

(Project or Bid Number)

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

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

ACKNOWLEDGMENT BY BIDDER:

NAME OF BIDDER: _____

ORIGINAL SIGNATURE: _____

PRINTED NAME AND TITLE: _____

DATE: _____

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.

Bidder's Name _____


BUSINESS REGISTRATION
Mandatory Requirement

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 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.

Proof of business registration shall be:

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

STATE OF NEW JERSEY BUSINESS REGISTRATION CERTIFICATE <small>FOR STATE AGENCY AND CASINO SERVICE CONTRACTORS</small>			STATE OF NEW JERSEY BUSINESS REGISTRATION CERTIFICATE	
TAXPAYER NAME: TAX REGISTRATION TEST ACCOUNT	TRACE NAME: CLIENT REGISTRATION		Taxpayer Name: TAX REG TEST ACCOUNT	
TAXPAYER IDENTIFICATION: 010-007-382/000	SEQUENCE NUMBER: 01007310	Trade Name:		
ADDRESS: 847 ROEBLING AVE TRENTON NJ 08611	ISSUANCE DATE: 07/14/04	Address: 847 ROEBLING AVE TRENTON, NJ 08611		
EFFECTIVE DATE: 09/01/04	<i>John S. Kelly</i> Authorized	Certificate Number: 1093907		
<small>FORM BR000 (04)</small>	<small>This Certificate is NOT assignable or transferable. It must be temporarily employed at above address.</small>	Date of Issuance: October 14, 2004		
		For Office Use Only:		
		20041014112623533		

ATTACH BRC HERE

Bidder's Name _____

AFFIRMATIVE ACTION REQUIREMENT

REQUIRED AFFIRMATIVE ACTION EVIDENCE

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

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

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

NAME OF BIDDER

ORIGINAL SIGNATURE

PRINT OR TYPE NAME AND TITLE

DATE THIS FORM IS COMPLETED

EXPERIENCE STATEMENT

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

Witness

Date

NAME OF BIDDER

ADDRESS

By: _____
ORIGINAL SIGNATURE ONLY

PRINT NAME AND TITLE

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

Bidder's Name _____

NON-COLLUSION AFFIDAVIT

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

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

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

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

NAME OF BIDDER

ORIGINAL SIGNATURE ONLY

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

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

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

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

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

Bidder's Name _____

AMERICANS WITH DISABILITIES ACT
EQUAL OPPORTUNITY FOR INDIVIDUALS WITH DISABILITIES

The contractor and the County of Union (hereafter "Owner") do hereby agree that the provisions of Title II of the Americans With Disabilities Act of 1990 (the "Act") (42 U.S.C.S12.101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the Owner pursuant to this contract, the contractor agrees that the performance shall be in strict compliance with the Act. In the event the contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the contractor shall defend the Owner in any action or administrative proceeding commenced pursuant to this Act. The contractor shall indemnify, protect, and save harmless the Owner, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The contractor shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the Owner's grievance procedure, the contractor agrees to abide by any decision of the Owner which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the Owner, or if the Owner incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the contractor shall satisfy and discharge the same at its own expense.

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

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

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

Name _____ (Please print or type)

Signature _____ Date _____

Bidder's Name _____

STATEMENT OF BIDDER'S QUALIFICATIONS

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

1. _____
(Name of Bidder)

2. _____
(Permanent Main Office Address)

3. _____
(When Organized)

4. _____
(If a Corporation, where incorporated)

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

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

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

8. General character of work performed by you. _____

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

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

Bidder's Name _____

STATEMENT OF BIDDER'S QUALIFICATIONS - (continued)

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

12. List your major equipment available for this Contract.

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

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

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

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

16. Bank Reference. (Name, Address, Phone, Representative) _____
17. Will you, upon request, fill out a detailed financial statement and furnish any other information that may be required by the proper agency? _____
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.
17. Bidder's telephone number, fax number and e-mail address (if applicable).
- Phone _____
- Fax _____
- E-mail _____
- Mobile _____

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

BIDDER (Signature)

BIDDER (Print Name)

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

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

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

Bidder's Name _____

CONTRACTOR PERFORMANCE RECORD

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

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

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

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

Bidder's Name _____

CONTRACTOR PERFORMANCE RECORD
CERTIFICATION

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

(Name of Organization)

(Signature)

(Title)

Subscribed and sworn to before me

this _____ day of _____, 20__.

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

My Commission Expires _____, 20__.

PRIOR NEGATIVE EXPERIENCE QUESTIONNAIRE

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

1. Within the past ten (10) years, have you been found, through either court adjudication, arbitration, mediation, or other contractually stipulated alternate dispute resolution mechanism, to have: failed to provide or perform goods or services; or failed to complete a contract in a timely manner; or otherwise performed unsatisfactorily under a prior contract with a public entity?

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

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

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

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

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

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

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

Bidder's Name _____

PRIOR NEGATIVE EXPERIENCE CERTIFICATION

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

Name of Contractor

By _____
(Signature of Authorized Representative)

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

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

My Commission Expires _____, 20__.

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

Bidder's Name _____

TO BE COMPLETED ONLY WHEN FINAL PAYMENT IS REQUESTED

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

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

CONTRACT:

PROJECT: _____

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

COUNTY OF UNION

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

CONTRACTOR: _____
ADDRESS: _____

BY: _____
ORIGINAL SIGNATURE ONLY

STATE OF NEW JERSEY
COUNTY OF _____

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

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

Notary Public: _____
My Commission Expires: _____

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

Bidder's Name _____

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

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

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

TOTAL AMOUNT OF UNCOMPLETED CONTRACTS \$ _____

Sworn and Subscribed to Before me

This _____ day of _____, 20__

Notary Public

BIDDER:

(Signature)

(Print Name)

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

Bidder's Name _____

CERTIFICATE OF INSURANCE STATEMENT

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

BIDDER (Signature)

BIDDER (Print Name)

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

Bidder's Name _____

COLLECTION OF USE TAX ON SALES TO LOCAL GOVERNMENTS STATEMENT

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

BIDDER (Signature)

BIDDER (Print Name)

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

Bidder's Name _____

TIME OF COMPLETION

The undersigned proposed that if awarded the Contract, the scope of work will be started within ten (10) calendar days and will be substantially completed within 180 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

COUNTY OF UNION NEW JERSEY
Division of Purchasing

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

Solicitation Number: _____ Bidder/Offeror: _____

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 the person or entity, or one of the person or entity's parents, subsidiaries, or affiliates, is not identified on a list created and maintained by the Department of the Treasury as a person or entity engaging in investment activities in Iran. If the Director finds a person or entity to be in violation of the principles which are the subject 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 person or entity.

I certify, pursuant to Public Law 2012, c. 25, that the person or entity listed above for which I am authorized to bid/renew:

is not providing goods or services of \$20,000,000 or more in the energy sector of Iran, including a person or entity that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipe lines used to transport oil or liquefied natural gas, for the energy sector of Iran,
AND

is not a financial institution that extends \$20,000,000 or more in credit to another person or entity, for 45 days or more, if that person or entity will use the credit to provide goods or services in the energy sector in Iran.

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

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN. You must provide, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

Name _____ Relationship to Bidder/Offeror _____

Description of Activities _____

Duration of Engagement _____ Anticipated Cessation Date _____

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN – (Continued)

Bidder/Offeror
Contact Name _____ Contact Phone Number _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above referenced person or entity. I acknowledge that Union County is relying on the information contained herein and hereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the County to notify the County in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with Union County, New Jersey and that the County at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print) _____ Signature _____

Title _____ Date _____

STANDARD SPECIFICATIONS

The Standard Specifications for Road and Bridge Construction of New Jersey Department of Transportation, 2007 Edition; is added to and/or amended elsewhere herein by the Notice to Contractors (Advertisement), Proposal, Information for Bidders, General Conditions, Special Provisions, 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 Bidders (Advertisement), Proposal, General Conditions, Instructions to Bidders, Special Provisions, Project Plans and/or Technical 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 words "RESIDENT ENGINEER (RE)", "ENGINEER" or "STATE" 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 Manual on Uniform Traffic Control Devices (MUTCD), Institute of Traffic Engineers (ITE), Federal Highway Administration (FHWA), American Association of State Highway Officials (AASHTO), 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

	03/14/16
Journeyman (Mechanic)	W37.18 B21.68 T58.86

Craft: Air Conditioning & Refrigeration - Service and Repair

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	Mo. 1-3	Mo. 4-12	2nd Year	3rd Year	4th Year	5th Year		Wage = %	of Jnymn	Wage
As Shown										
Wage and Bene	50%	55%	60%	65%	75%	85%		Bene = %	of Jnymn	Bene

Ratio of Apprentices to Journeymen - 1:4

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AFTER 3-1-13:

INTERVAL	PERIOD AND RATES							
As Shown	1st Year	2nd Year	3rd Year	4th Year	5th Year		Wage =% of Jnymn Wage	
Wage and Benefit	40%	50%	60%	70%	80%		Bene. =% of Jnymn Wage	

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

	01/01/16
Foreman	W47.00 B41.02 T88.02
General Foreman	W49.00 B42.00 T91.00
Journeyman	W42.00 B39.42 T81.42

Craft: Boilermaker APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	65%	70%	75%	80%	85%	90%	95%			
1000 Hours										
Benefit =	33.33	34.20	35.08	35.94	36.82	37.69	38.55			

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

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

County - UNION

hours per week.

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

	02/26/16
Foreman	W31.54 B16.17 T47.71
General Foreman	W32.04 B16.17 T48.21
Mechanic	W30.04 B16.17 T46.21

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).

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

	11/01/16	05/01/17	05/01/18
Deputy Foreman	W43.00 B30.91 T73.91	W0.00 B0.00 T76.04	W0.00 B0.00 T78.23
Foreman	W46.00 B30.91 T76.91	W0.00 B0.00 T79.04	W0.00 B0.00 T81.23
Journeyman	W40.00 B30.91 T70.91	W0.00 B0.00 T73.04	W0.00 B0.00 T75.23

Craft: Bricklayer, Stone Mason

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	40%	50%	55%	60%	65%	70%	75%	80%		
6 Months										
Benefits	3.72	4.65	5.12	5.58	20.48	21.83	23.18	24.52		

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, 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: Carpenter PREVAILING WAGE RATE

	11/01/16	05/01/17	11/01/17	05/01/18	11/01/18
Foreman	W53.42	W0.00	W0.00	W0.00	W0.00
	B30.44	B0.00	B0.00	B0.00	B0.00
	T83.86	T85.04	T86.04	T87.29	T88.54
Journeyman	W46.45	W0.00	W0.00	W0.00	W0.00
	B26.48	B0.00	B0.00	B0.00	B0.00
	T72.93	T74.23	T75.23	T76.48	T77.73

Craft: Carpenter APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	Yearly	40%	55%	65%	80%	90%				
Benefit	57% of	Appren	tice	Wage	for all	intervals				

Ratio of Apprentices to Journeymen - 1:3

Craft: Carpenter 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 7:00 AM and 9:00 AM.

SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 15%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.

OVERTIME:

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, 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: Carpenter - Resilient Flooring

PREVAILING WAGE RATE

	11/01/16	05/01/17	11/01/17	05/01/18	11/01/18
Foreman	W53.42	W0.00	W0.00	W0.00	W0.00
	B30.44	B0.00	B0.00	B0.00	B0.00
	T83.86	T85.04	T86.04	T87.29	T88.54
Journeyman	W46.45	W0.00	W0.00	W0.00	W0.00
	B26.48	B0.00	B0.00	B0.00	B0.00
	T72.93	T74.23	T75.23	T76.48	T77.73

Craft: Carpenter - Resilient Flooring

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	Yearly	40%	55%	65%	80%	90%				
Benefit	57%	of	Appren	tice	Wage	for all	intervals			

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

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 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 wage rate, the second shift shall receive the regular wage rate plus 15% and the third shift shall receive the regular wage 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. The second shift shall receive the regular wage rate plus 15% and the third shift shall receive the regular wage rate plus 20%.

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 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.

**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, 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: 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: Dockbuilder PREVAILING WAGE RATE

	11/01/16	05/01/17	11/01/17	05/01/18	11/01/18
Foreman	W0.00 B0.00 T95.59	W0.00 B0.00 T96.79	W0.00 B0.00 T97.99	W0.00 B0.00 T99.24	W0.00 B0.00 T100.49
Foreman (Concrete Form Work)	W0.00 B0.00 T81.70	W0.00 B0.00 T82.90	W0.00 B0.00 T84.10	W0.00 B0.00 T85.35	W0.00 B0.00 T86.60
Journeyman	W0.00 B0.00 T88.97	W0.00 B0.00 T90.17	W0.00 B0.00 T91.37	W0.00 B0.00 T92.62	W0.00 B0.00 T93.87
Journeyman (Concrete Form Work)	W0.00 B0.00 T75.16	W0.00 B0.00 T76.36	W0.00 B0.00 T77.56	W0.00 B0.00 T78.81	W0.00 B0.00 T80.06

Craft: Dockbuilder APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
Yearly	17.64	22.05	28.67	35.28						
Benefit	29.61	for all	intervals		Concrete	Form Work	Only Ben.	= 21.81	for all	intervals

Ratio of Apprentices to Journeymen - *

* When there are 4 or fewer Dockbuilders on a job, no more than 1 may be an apprentice. When there are 5 or more Dockbuilders, there may be 1 apprentice for every 5 Dockbuilders.

Craft: Dockbuilder COMMENTS/NOTES

CREOSOTE HANDLING:

When handling creosote products on land piledriving, 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 on the job shall be designated a Foreman.

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.

**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, 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

	05/01/16	05/01/17
Foreman	W42.55 B23.10 T65.65	W44.30 B22.60 T66.90
General Foreman	W44.45 B23.10 T67.55	W46.20 B22.60 T68.80
Journeyman	W38.75 B23.10 T61.85	W40.50 B22.60 T63.10

Craft: Drywall Finisher

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	30%	40%	50%	60%	70%	75%	80%	85%	90%	
4 Months										
Benefits	Intervals	1 to 3 =	9.85	Intervals	4 to 6 =	12.28	Intervals	7 to 9 =	14.95	

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

	05/30/16	05/29/17	05/28/18
Cable Splicer	W58.71 B33.74 T92.45	W60.08 B34.53 T94.61	W61.52 B35.35 T96.87
Foreman	W59.77 B34.34 T94.11	W61.17 B35.15 T96.32	W62.64 B35.98 T98.62
Journeyman	W53.37 B30.67 T84.04	W54.62 B31.39 T86.01	W55.93 B32.13 T88.06

Craft: Electrician

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	Yearly	40%	49%	58%	68%	80%		of Jour	neyman	Wage
Benefit	40%	49%	58%	68%	80%		of Jour	neyman	Benefit	Rate

Ratio of Apprentices to Journeymen - 2:3

Craft: Electrician

COMMENTS/NOTES

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:

- On any job where there are 1 to 10 Journeymen electricians, 1 shall be designated a 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.

**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, 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

	11/01/16
Master Technician/General Foreman	W52.18 B28.69 T80.87
Senior Technician/Lead Foreman (21-30 Workers on Job)	W47.77 B26.26 T74.03
Technician A/Foreman (11-20 Workers on Job)	W45.76 B25.16 T70.92
Technician B/Working Foreman (4-10 Workers on Job)	W43.75 B24.06 T67.81
Technician C/Journeyman (1-3 Workers on Job)	W40.14 B22.07 T62.21

Craft: Electrician - Teledata (15 Voice/Data Lines & Less)

APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
6 Months	20.14	21.48	23.72	26.41	29.54	32.23	35.36	38.49		
Benefits	7.85	8.38	9.25	10.29	11.52	12.56	13.79	15.01		

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 10-31-14:

INTERVAL	PERIOD AND RATES									
6 Months	17.90	19.25	21.48	24.17	27.30	29.99	33.12	36.26		
Benefits	6.98	7.51	8.38	9.42	10.65	11.69	12.92	14.13		

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 8:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for a minimum of 5 consecutive workdays.

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

County - UNION

- 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 (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

	05/30/16	05/29/17	05/28/18
Cable Splicer	W58.99 B33.46 T92.45	W60.37 B34.24 T94.61	W61.82 B35.06 T96.88
Certified Welder	W56.31 B31.94 T88.25	W57.62 B32.68 T90.30	W59.01 B33.47 T92.48
Equipment Operator	W53.63 B30.42 T84.05	W54.88 B31.13 T86.01	W56.20 B31.88 T88.08
Foreman (1-10 Journeyman workers on job)	W60.07 B34.07 T94.14	W61.47 B34.86 T96.33	W62.94 B35.70 T98.64
Foreman (11-20 Journeyman workers on job)	W61.67 B34.98 T96.65	W63.11 B35.79 T98.90	W64.63 B36.66 T101.29
General Foreman (21-30 Journeyman workers on job)	W63.28 B35.89 T99.17	W64.76 B36.73 T101.49	W66.32 B37.61 T103.93
General Foreman (31-60 Journeyman workers on job)	W68.65 B38.94 T107.59	W70.25 B39.84 T110.09	W71.94 B40.80 T112.74
General Foreman (61+ Journeyman workers on job)	W69.72 B39.54 T109.26	W71.34 B40.46 T111.80	W73.06 B41.44 T114.50
Groundman	W32.18 B18.26 T50.44	W32.93 B18.68 T51.61	W33.72 B19.13 T52.85
Journeyman Lineman/Technician	W53.63 B30.42 T84.05	W54.88 B31.13 T86.01	W56.20 B31.88 T88.08
Sub-Foreman	W60.07 B34.07 T94.14	W61.47 B34.86 T96.33	W62.94 B35.70 T98.64

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

County - UNION

Craft: Electrician- Outside Commercial

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
1000 Hours	60%	65%	70%	75%	80%	85%	90%			
Benefits	56.4% of	Journey	man	wage	+	\$.01				

Craft: Electrician- Outside Commercial

COMMENTS/NOTES

EFFECTIVE 5-30-16- The apprentice benefit rate shall be 56.7% + \$.01.
 EFFECTIVE 5-29-17- The apprentice benefit rate shall be 56.7% + \$.01.
 EFFECTIVE 5-28-18- The apprentice benefit rate shall be 56.7% + \$.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:

On jobs where there are 2 Journeymen, one shall be a Foreman. The following number of Foreman, General Foreman, Assistant General Foreman and Sub-Foreman shall be required with respect to number of Journeymen on site:

- 2-10 Journeymen (1 Foreman)
- 11-20 Journeymen (1 Foreman and 1 Sub-Foreman)
- 21-30 Journeymen (1 Foreman and 2 Sub-Foremen)

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, 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	62.5% 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.

**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	27.37	29.65	31.93	34.21	36.49	38.77	41.05			
Benefits	24.01	25.34	26.73	28.09	29.43	30.80	32.18			

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

	03/17/16	03/17/17	03/17/18
Journeyman	W60.96 B39.77 T100.73	W62.64 B41.56 T104.20	W64.48 B43.36 T107.84

Craft: Elevator Constructor APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	27.22	33.53	39.62	45.72						
Benefits	31.75	32.88	34.41	35.93						

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

	03/17/16	03/17/17	03/17/18
Journeyman	W47.91	W49.14	W50.49
	B38.17	B39.91	B41.66
	T86.08	T89.05	T92.15

Craft: Elevator Modernization & Service

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	27.22	26.35	31.14	35.93						
Benefits	31.68	31.99	33.37	34.74						

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

	06/20/16
Foreman	W47.39 B23.26 T70.65
General Foreman	W49.39 B23.50 T72.89
Journeyman	W43.39 B22.78 T66.17

Craft: Glazier APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	30%	40%	50%	60%	70%	75%	80%	85%	90%	
4 Months										
Benefits	Intervals	1 to 3 =	6.51	Intervals	4 to 6 =	9.33	Intervals	7 to 9 =	11.67	

Ratio of Apprentices to Journeymen - 1:4

Craft: Glazier COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM AS OF 5-1-14:

INTERVAL	PERIOD AND RATES							
6 Months	50%	55%	60%	65%	70%	75%	80%	90%
Benefits	8.10	8.10	10.34	10.34	11.51	11.51	14.62	14.62

Hazard/Height Pay: +\$1.00 per hour

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 rate.

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

County - UNION

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

	10/17/16
Foreman	W52.52 B30.17 T82.69
General Foreman	W55.07 B31.28 T86.35
Journeyman	W51.24 B29.61 T80.85

Craft: Heat & Frost Insulator

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	23.77	28.19	34.05	39.96						
Benefits	17.83	21.08	23.21	25.16						

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 8:00 AM and 4:30 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

	10/17/16
Asbestos Helper Abatement	W33.52 B22.69 T56.21
Firestop/Hazmat	W26.93 B9.25 T36.18
Foreman	W52.52 B30.17 T82.69

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 8:00 AM and 4:30 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: Ironworker PREVAILING WAGE RATE

	08/02/16	07/01/17
Rod /Fence Foreman	W42.24 B44.27 T86.51	W0.00 B0.00 T88.51
Rod/Fence Journeyman	W39.24 B44.27 T83.51	W0.00 B0.00 T85.51
Structural Foreman	W44.54 B44.27 T88.81	W0.00 B0.00 T90.56
Structural Journeyman	W41.54 B44.27 T85.81	W0.00 B0.00 T87.56

Craft: Ironworker APPRENTICE RATE SCHEDULE

<u>INTERVAL</u>	<u>PERIOD AND RATES</u>									
6 Months	50%	60%		Yearly	70%	80%	90%			

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

	04/07/16
Journeyman (Handler)	W29.87 B22.92 T52.79

Craft: Laborer - Asbestos & Hazardous Waste Removal

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	17.92	20.91	23.90	26.88						
Benefits	21.27	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 between 6:00 AM and 6:00 PM.

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.
- When the owner (Public Body) mandates that work is to be performed on Sunday, those hours may be worked at straight time, up to 8 hours per day, up to 40 hours per week.
- Benefits on ALL overtime hours shall be paid at straight time.

RECOGNIZED HOLIDAYS: New Year's Day, President's Day, Good Friday, Easter, 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 - Building

PREVAILING WAGE RATE

	11/01/16	05/01/17	11/01/17	05/01/18
Class A Journeyman	W31.55	W0.00	W0.00	W0.00
	B27.22	B0.00	B0.00	B0.00
	T58.77	T59.67	T60.72	T62.57
Class B Journeyman	W31.05	W0.00	W0.00	W0.00
	B27.22	B0.00	B0.00	B0.00
	T58.27	T59.17	T60.22	T62.07
Class C Journeyman	W26.43	W0.00	W0.00	W0.00
	B27.22	B0.00	B0.00	B0.00
	T53.65	T54.55	T55.60	T57.45
Foreman	W35.46	W0.00	W0.00	W0.00
	B27.22	B0.00	B0.00	B0.00
	T62.68	T63.58	T64.63	T66.48
General Foreman	W39.38	W0.00	W0.00	W0.00
	B27.22	B0.00	B0.00	B0.00
	T66.60	T67.50	T68.55	T70.40

Craft: Laborer - Building

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	60%	70%	80%	90%						
6 Months										
Benefit	23.97	23.97	23.97	23.97						

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 nozzlemen 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%.

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, 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: 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	18.78	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.

With respect to the APPRENTICE RATE SCHEDULE, the following shall apply:

- On 9-1-16- benefits shall be \$18.78.
- On 3-1-17- benefits shall be \$19.53.

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

County - UNION

Craft: Millwright PREVAILING WAGE RATE

	11/01/16
Foreman	W53.53 B31.65 T85.18
Journeyman	W46.55 B27.60 T74.15

Craft: Millwright APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
6 Months	40%	45%	50%	55%	60%	65%	70%	75%	85%	95%
Benefits	58% of	Appren	tice	Wage	Rate	for all	intervals	+ \$.60		

Ratio of Apprentices to Journeymen - 1:3

Craft: Millwright COMMENTS/NOTES

FOREMAN REQUIREMENTS:

- When there are 2 or more Millwrights on a job, 1 shall be designated as a Foreman.
- When there are 21 or more Millwrights on a job, 2 shall be designated as Foremen.

The regular workday shall consist of 8 hours, starting between 7:00 AM and 9:00 AM.

SHIFT DIFFERENTIALS:

- When a 2 shift schedule (including a day shift) is established, the day shift shall be established on an 8 hour basis. The second shift shall be established on an 8 hour basis, and receive the regular rate plus 15%, inclusive of benefits.
- When a three shift schedule is established, the first shift shall be established on an 8 hour basis, the second shift on a 7.5 hour basis, and the third shift on a 7 hour basis. The first shift shall receive the regular hourly rate, the second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.
- When there is no day shift, and a second or third shift is established, it shall be established on an 8 hour basis. The second shift shall receive the regular rate plus 15% and the third shift shall receive the regular rate plus 20%, inclusive of benefits.

OVERTIME:

- All hours in excess of 8 per day, or before or after an established shift that are not shift work, and all hours on Saturdays shall be paid at time and one-half the hourly rate, inclusive of benefits. All hours on Sundays and holidays shall be paid at double the hourly rate, inclusive of benefits.
- Four 10-hour days may be worked, Monday to Thursday, at straight time. Friday may be used as a make-up day for a day lost due to inclement weather. If Friday is not a make-up day, all hours on Friday shall be paid at time and one-half the hourly rate, inclusive of benefits.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day, July 4th, Labor Day, 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: 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 - Bridges

PREVAILING WAGE RATE

	05/01/16	05/01/17
Foreman	W57.38 B26.92 T84.30	W61.13 B25.67 T86.80
General Foreman	W59.38 B26.92 T86.30	W63.13 B25.67 T88.80
Journeyman	W52.38 B26.92 T79.30	W56.13 B25.67 T81.80

Craft: Painter - Bridges

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	40%	50%			60%	70%		80%	90%	
6 Months										
Benefits	Intervals	1 to 2 =	8.88	Intervals	3 to 4 =	10.81	Intervals	5 to 6 =	13.48	

Ratio of Apprentices to Journeymen - 1:4

Craft: Painter - Bridges

COMMENTS/NOTES

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.
- 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, 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: Painter - Line Striping

PREVAILING WAGE RATE

	12/01/15	12/01/16	12/01/17
Foreman (Charge Person)	W35.80 B16.10 T51.90	W36.80 B16.90 T53.70	W38.05 B17.74 T55.79
Helper (1st Year)	W28.05 B16.10 T44.15	W29.05 B16.90 T45.95	W30.30 B17.74 T48.04
Helper (2nd Year)	W29.38 B16.10 T45.48	W30.38 B16.90 T47.28	W31.63 B17.74 T49.37
Helper (3rd Year)	W31.53 B16.10 T47.63	W32.53 B16.90 T49.43	W33.78 B17.74 T51.52
Journeyman	W35.30 B16.10 T51.40	W36.30 B16.90 T53.20	W37.55 B17.74 T55.29

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: Painter - New Construction

PREVAILING WAGE RATE

	05/01/16	05/01/17
Foreman	W42.26 B22.94 T65.20	W44.39 B22.35 T66.74
General Foreman	W46.10 B23.40 T69.50	W48.43 B22.81 T71.24
Journeyman	W38.42 B22.49 T60.91	W40.36 B21.90 T62.26

Craft: Painter - New Construction

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	30%	40%	50%	60%	70%	75%	80%	85%	90%	
4 Months										
Benefits	Intervals	1 to 3 =	8.00	Intervals	4 to 6 =	10.00	Intervals	7 to 9 =	11.00	

Ratio of Apprentices to Journeymen - 1:4

Craft: Painter - New Construction

COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM ON 5-1-14:

INTERVAL	PERIOD AND RATES							
6 Months	40%	45%	55%	65%	70%	75%	80%	90%
Benefits	8.00	8.00	10.00	10.00	11.00	11.00	14.00	14.00

Spraying, sandblasting, lead abatement, work on tanks or stacks, 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.

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

County - UNION

- 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: Painter- Containment

PREVAILING WAGE RATE

	05/01/16	05/01/17
Journeyman	W33.43 B23.92 T57.35	W37.68 B22.92 T60.60

Craft: Painter- Containment

COMMENTS/NOTES

NOTE: These rates shall require no painting, but used in a supporting capacity only, such as wrapping, boxing, fencing, etc. on tanks.

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..

- 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, 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: Painter-Elevated Water Tanks

PREVAILING WAGE RATE

	05/01/16	05/01/17
Foreman	W47.17 B24.17 T71.34	W50.92 B22.92 T73.84
General Foreman	W49.17 B24.17 T73.34	W52.92 B22.92 T75.84
Journeyman	W42.17 B24.17 T66.34	W45.92 B22.92 T68.84

Craft: Painter-Elevated Water Tanks

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	SEE	PAINTER	BRIDGES							

Craft: Painter-Elevated Water Tanks

COMMENTS/NOTES

These rates apply to: All new and repaint elevated 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.
- 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, 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: Painter-Structural Steel

PREVAILING WAGE RATE

	05/01/16	05/01/17
Foreman	W46.12 B24.51 T70.63	W49.87 B23.26 T73.13
General Foreman	W48.12 B24.51 T72.63	W51.87 B23.26 T75.13
Journeyman	W41.12 B24.51 T65.63	W44.87 B23.26 T68.13

Craft: Painter-Structural Steel

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	SEE	PAINTER	BRIDGES							

Craft: Painter-Structural Steel

COMMENTS/NOTES

These rates apply to: All work in power plants (any aspect). On steeples, on dams, on hangers, transformers, substations, etc. and on open steel, whether new or repaint. All new work (excluding traditional commercial painting work) 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.
- 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, 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: Paperhanger - New Construction

PREVAILING WAGE RATE

	05/01/16	05/01/17
Foreman	W43.25 B22.59 T65.84	W45.32 B21.44 T66.76
Journeyman	W39.32 B22.59 T61.91	W41.20 B22.01 T63.21

Craft: Paperhanger - New Construction

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
4 Months	30%	40%	50%	60%	70%	75%	80%	85%	90%	
Benefits	Intervals	1 to 3 =	8.00	Intervals	4 to 6 =	10.00	Intervals	7 to 9 =	11.00	

Ratio of Apprentices to Journeymen - 1:4

Craft: Paperhanger - New Construction

COMMENTS/NOTES

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES ENTERING PROGRAM ON 5-1-14:

INTERVAL	PERIOD AND RATES							
6 Months	40%	45%	55%	65%	70%	75%	80%	90%
Benefits	8.00	8.00	10.00	10.00	11.00	11.00	14.00	14.00

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: Paperhanger - Renovation

PREVAILING WAGE RATE

	05/01/16	05/01/17
Foreman	W32.39 B18.96 T51.35	W35.06 B18.53 T53.59
Journeyman	W29.45 B18.96 T48.41	W31.88 B18.53 T50.41

Craft: Paperhanger - Renovation

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	SEE	PAPER-	HANGER	NEW	CONSTR	TION				
					UC					

Ratio of Apprentices to Journeymen - 1:4

Craft: Paperhanger - Renovation

COMMENTS/NOTES

NOTE: These rates may only be used on jobs where no major alterations occur, and where not more than 3 other trades are present on the job, but may NOT, under any circumstances, be used for work on bridges, stacks, elevated tanks, or generating stations.

FOREMEN REQUIREMENTS:

- When there are 4 or more Paperhangers on a job, 1 shall be designated a Foreman.

OVERTIME:

- Hours in excess of 8 per day and 40 per week shall be paid at time and one-half the regular rate.

- Four 10-hour days may be worked, at straight time, Monday through Sunday.

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

County - UNION

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

	05/04/16
Foreman	W55.52 B32.99 T88.51
General Foreman	W59.12 B32.99 T92.11
Journeyman	W51.41 B32.99 T84.40

Craft: Plumber APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
Yearly	30%	45%	55%	65%	75%					
Benefits	12.77	18.77	20.44	22.13	23.80					

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

	06/06/16
Foreman	W36.52 B25.03 T61.55
Journeyman	W35.52 B25.03 T60.55

Craft: Roofer APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
6 Months	14.21	17.76	21.31	24.86	28.42	31.97				
Benefits	2.10	2.10	22.28	22.28	22.28	22.28				

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

	10/31/16
Foreman	W33.79 B31.82 T65.61
Journeyman	W32.54 B31.82 T64.36

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	10.28	11.73	13.18	14.65	16.47	17.96	19.44	20.93	22.40	23.89

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

	08/02/16	06/01/17
Foreman	W49.99 B38.73 T88.72	W0.00 B0.00 T91.22
General Foreman	W50.99 B38.73 T89.72	W0.00 B0.00 T92.22
Journeyman	W46.49 B38.73 T85.22	W0.00 B0.00 T87.72

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

	07/01/16	01/01/17	07/01/17	01/01/18	07/01/18	01/01/19
Foreman	W63.33 B25.72 T89.05	W62.93 B26.12 T89.05	W64.93 B26.12 T91.05	W64.38 B26.67 T91.05	W66.63 B26.67 T93.30	W66.08 B27.22 T93.30
General Foreman	W66.33 B25.72 T92.05	W65.93 B26.12 T92.05	W67.93 B26.12 T94.05	W67.38 B26.67 T94.05	W69.63 B26.67 T96.30	W69.08 B27.22 T96.30
Journeyman	W59.23 B25.72 T84.95	W58.83 B26.12 T84.95	W60.83 B26.12 T86.95	W60.28 B26.67 T86.95	W62.53 B26.67 T89.20	W61.98 B27.22 T89.20

Craft: Sprinkler Fitter

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	9.50	11.25	50%	55%	60%	65%	70%	75%	80%	85%
1000 Hours	9.50	11.25	50%	55%	60%	65%	70%	75%	80%	85%
Benefits	10.67	10.67	21.22	21.22	21.22	21.22	Intervals	7 to 10	Jourymn	Ben.

APPRENTICE RATE SCHEDULE FOR THOSE APPRENTICES REGISTERED AS OF 7-1-13:

INTERVAL	PERIOD AND RATES									
1000 hours	25%	30%	40%	45%	55%	60%	70%	75%	85%	90%
Benefits	10.67	10.67	21.22	21.22	21.22	21.22	Intervals	7 to 10	receive	Journeyman Ben.

Craft: Sprinkler Fitter

COMMENTS/NOTES

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 Thursday, at straight-time.

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.

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

County - UNION

Craft: Tile Setter - Marble

PREVAILING WAGE RATE

	07/01/16	01/01/17	07/01/17	01/01/18
Tile Setter	W57.32	W57.74	W58.18	W58.53
	B33.23	B34.26	B35.27	B36.37
	T90.55	T92.00	T93.45	T94.90

Craft: Tile Setter - Marble

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	50%	55%	65%	70%	75%	85%	90%	95%		
750 Hours										

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

	07/01/16	01/01/17
Grinder or Assistant	W50.21	W0.00
	B33.64	B0.00
	T83.85	T85.00
Mechanic	W51.82	W0.00
	B33.65	B0.00
	T85.47	T86.62

Craft: Tile Setter - Mosaic & Terrazzo

APPRENTICE RATE SCHEDULE

INTERVAL	PERIOD AND RATES									
	50%	55%	65%	70%	75%	85%	90%	95%		
750 Hours										

Ratio of Apprentices to Journeymen - 1:5

Craft: Tile Setter - Mosaic & Terrazzo

COMMENTS/NOTES

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

	11/01/16	05/01/17	11/01/17	05/01/18	11/01/18
Bucket, Utility, Pick-up, Fuel Delivery trucks	W36.40 B33.01 T69.41	W36.83 B33.78 T70.61	W36.83 B34.58 T71.41	W37.26 B35.40 T72.66	W37.66 B35.80 T73.46
Dump truck, Asphalt Distributor, Tack Spreader	W36.40 B33.01 T69.41	W36.83 B33.78 T70.61	W36.83 B34.58 T71.41	W37.26 B35.40 T72.66	W37.66 B35.80 T73.46
Euclid-type vehicles (large, off-road equipment)	W36.55 B33.01 T69.56	W36.98 B33.78 T70.76	W36.98 B34.58 T71.56	W37.41 B35.40 T72.81	W37.81 B35.80 T73.61
Helper on Asphalt Distributor truck	W36.40 B33.01 T69.41	W36.83 B33.78 T70.61	W36.83 B34.58 T71.41	W37.26 B35.40 T72.66	W37.66 B35.80 T73.46
Slurry Seal, Seeding/Fertilizing/ Mulching truck	W36.40 B33.01 T69.41	W36.83 B33.78 T70.61	W36.83 B34.58 T71.41	W37.26 B35.40 T72.66	W37.66 B35.80 T73.46
Straight 3-axle truck	W36.45 B33.01 T69.46	W36.88 B33.78 T70.66	W36.88 B34.58 T71.46	W37.31 B35.40 T72.71	W37.71 B35.80 T73.51
Tractor Trailer (all types)	W36.55 B33.01 T69.56	W36.98 B33.78 T70.76	W36.98 B34.58 T71.56	W37.41 B35.40 T72.81	W37.81 B35.80 T73.61
Vacuum or Vac-All truck (entire unit)	W36.40 B33.01 T69.41	W36.83 B33.78 T70.61	W36.83 B34.58 T71.41	W37.26 B35.40 T72.66	W37.66 B35.80 T73.46
Winch Trailer	W36.65 B33.01 T69.66	W37.08 B33.78 T70.86	W37.08 B34.58 T71.66	W37.51 B35.40 T72.91	W37.91 B35.80 T73.71

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.

TRUCK FOREMAN: \$.75 cents per hour above regular rate. Overtime shall be increased accordingly.

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

County - UNION

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): + \$2.50 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: + \$2.50 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.

RECOGNIZED HOLIDAYS: New Year's Day, Presidents' Day, Memorial Day (Decoration Day), July 4th, Labor Day, Presidential Election 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: Truck Driver-Material Delivery Driver

PREVAILING WAGE RATE

	05/01/12
Driver	W22.90 B10.17 T33.07

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, Presidential Election 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 : 06/30/2017**

{For apprentice rates refer to "Operating Engineers" apprentice rates in any county rate package}

On all machines, including pile drivers with booms of 100 feet and over (including jib) the Operating Engineer shall receive the regular hourly rate plus: \$1.00 per hour on rigs with 100 foot Boom (including jib) up to 139 feet, and \$2.00 per hour on rigs with 140 foot Boom (including jib) and over. On all hoists where "Cat Head" or "Sheave Point" is 100 feet or more above ground level, the same differential pay shall apply as applicable to booms 100 feet and over.

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for 5 consecutive workdays.
- When 2 shifts are worked, the second shift shall receive an additional 10% of the regular rate inclusive of benefits, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, plus an additional 10% of the regular rate inclusive of benefits, per hour. The third shift shall receive 8 hours pay for 7 hours of work, plus an additional 15% of the regular rate inclusive of benefits, per hour.
- When such hours are mandated by the project owner, a shift that starts between 8:00 PM and midnight and ends by 6:00 AM Saturday, or that starts after 8:00 PM on Sunday, provided there are consecutive hours of work within the shift, shall receive an additional 15% of the regular rate, inclusive of benefits.
- On Highway, Road, Street, and Sewer projects irregular shifts starting between 5:00 PM and 12:00 AM may be worked Monday through Friday, and shall receive an additional 15% of the regular rate, inclusive of benefits. When working with other trades that receive a higher irregular shift rate, the Operating Engineer shall also receive the higher irregular shift 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 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.
- 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, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

On hazardous waste removal work or asbestos removal work, on a state or federally designated hazardous waste site, where the operating engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin, and eye protection, the operating engineer shall receive an additional 20% of the hourly wage, per hour.

OPERATING ENGINEERS **Rates Expiration Date : 06/30/2017**

Effective Dates:

07/01/2016		01/01/2017	
Rate	Fringe	Total	Total
46.48	30.63	77.11	78.26

CLASSIFICATIONS:

- A-Frame
- Backhoe (combination)
- Boom Attachment on loaders (Except pipehook)
- Boring & Drilling Machine
- Brush Chopper, Brush Shredder, Tree Shredder
- 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 (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)
- Hydraulic Crane (10 tons & under)
- Hydro-Axe
- Hydro-Blaster
- Jack (screw, air hydraulic, power-operated unit, or console type, Except hand jack or pile load test type)
- Log Skidder

OPERATING ENGINEERS **Rates Expiration Date : 06/30/2017**

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
46.48	30.63	77.11	78.26

CLASSIFICATIONS:

- 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)
- Vacuum Truck
- Whiphammer
- Winch Truck (hoisting)

OPERATING ENGINEERS **Rates Expiration Date : 06/30/2017**

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
44.57	30.63	75.20	76.35

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 : 06/30/2017**

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
44.57	30.63	75.20	76.35

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
- Grader & Motor Patrols
- Grout Pump
- Gunnite Machine (Excluding nozzle)
- Hammer - Vibratory (in conjunction with generator)
- Heavy Equipment Robotics - Operator/Technician
- Hoist (roof, tugger, aerial platform hoist, house car)
- Hopper
- Hopper Doors (power operated)
- Ladder (motorized)
- Laddervator

OPERATING ENGINEERS **Rates Expiration Date : 06/30/2017**

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
44.57	30.63	75.20	76.35

CLASSIFICATIONS:

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)

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

Tug Captains

Tug Master (Power Boats)

OPERATING ENGINEERS **Rates Expiration Date : 06/30/2017**

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
44.57	30.63	75.20	76.35

CLASSIFICATIONS:

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:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
41.23	30.63	71.86	73.01

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

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
38.65	30.63	69.28	70.43

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 : 06/30/2017

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
48.81	30.63	79.44	80.59

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (minimum)

OPERATING ENGINEERS **Rates Expiration Date : 06/30/2017**

Effective Dates:

07/01/2016		01/01/2017	
Rate	Fringe	Total	Total
48.07	30.63	78.70	79.85

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
- 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
- Pavement & Concrete Breaker (Superhammer & Hoe Ram)

OPERATING ENGINEERS **Rates Expiration Date : 06/30/2017**

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
48.07	30.63	78.70	79.85

CLASSIFICATIONS:

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

OPERATING ENGINEERS **Rates Expiration Date : 06/30/2017**

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
42.94	30.63	73.57	74.72

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 : 06/30/2017

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
42.94	30.63	73.57	74.72

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:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
49.89	30.63	80.52	81.67

CLASSIFICATIONS:

Helicopter Pilot/Engineer

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
53.82	30.63	84.45	86.35

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), over 100 tons and TOWER CRANE with boom (including jib and/or leads) 140 ft. and over

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
52.82	30.63	83.45	85.35

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), over 100 tons and TOWER CRANE with boom (including jib and/or leads) from 100 ft. to 139 ft.

OPERATING ENGINEERS **Rates Expiration Date : 06/30/2017**

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
50.07	30.63	80.70	81.85

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types) , under 100 tons with a boom (including jib and/or leads) 140 ft. and over

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
51.82	30.63	82.45	84.35

CLASSIFICATIONS:

Cranes, Derricks, Pile Driver (all types), over 100 tons and TOWER CRANE with a boom (including jib and/or leads) under 100 ft.

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
49.07	30.63	79.70	80.85

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 : 06/30/2017

{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 4:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for 5 consecutive workdays.
- When 2 shifts are worked, the second shift shall receive an additional 10% of the regular rate inclusive of benefits, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, plus an additional 10% of the regular rate inclusive of benefits, per hour. The third shift shall receive 8 hours pay for 7 hours of work, plus an additional 15% of the regular rate inclusive of benefits, per hour.
- When such hours are mandated by the project owner, a shift that starts between 8:00 PM and midnight and ends by 6:00 AM Saturday, or that starts after 8:00 PM on Sunday, provided there are consecutive hours of work within the shift, shall receive an additional 15% of the regular rate, inclusive of benefits.
- On Highway, Road, Street, and Sewer projects irregular shifts starting between 5:00 PM and 12:00 AM may be worked Monday through Friday, and shall receive an additional 15% of the regular rate, inclusive of benefits. When working with other trades that receive a higher irregular shift rate, the Operating Engineer shall also receive the higher irregular shift 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 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.
- 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, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

On hazardous waste removal work or asbestos removal work, on a state or federally designated hazardous waste site, where the operating engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin, and eye protection, the operating engineer shall receive an additional 20% of the hourly wage, per hour.

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
51.70	30.63	82.33	83.48

CLASSIFICATIONS:

Helicopter Pilot or Engineer

STRUCTURAL STEEL ERECTION **Rates Expiration Date : 06/30/2017**

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
47.64	30.63	78.27	79.42

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

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
44.98	30.63	75.61	76.76

CLASSIFICATIONS:

Aerial Platform Used On Hoists

Apprentice Engineer/Oiler with Compressor or Welding Machine

Captain (Power Boats)

Compressor (2 or 3 in battery)

Conveyor or Tugger Hoist

Elevator or House Car

Fireman

Forklift

Generator (2 or 3)

Maintenance Utility Man

Tug Master (Power Boats)

Welding Machines, Gas or Electric Converters on any type-2 or 3 in battery including diesels

STRUCTURAL STEEL ERECTION **Rates Expiration Date : 06/30/2017**

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
43.45	30.63	74.08	75.23

CLASSIFICATIONS:

Compressor (Single)

Generators

Welding Machines, Gas, Diesel, Or Electric Converters of any type-single

Welding System, Multiple (Rectifier Transformer Type)

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
41.69	30.63	72.32	73.47

CLASSIFICATIONS:

Assistant Engineer/Oiler

Drillers Helper

Field Engineer - Transit/Instrument Man

Maintenance Apprentice (Deckhand)

Maintenance Apprentice (Oiler)

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
49.26	30.63	79.89	81.04

CLASSIFICATIONS:

Lead Engineer, Foreman Engineer, Safety Engineer (Minimum)

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
38.65	30.63	69.28	70.43

CLASSIFICATIONS:

Field Engineer - Rodman or Chainman

STRUCTURAL STEEL ERECTION **Rates Expiration Date : 06/30/2017**

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
48.40	30.63	79.03	80.18

CLASSIFICATIONS:

Field Engineer-Chief of Party

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
55.84	30.63	86.47	88.37

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) over 100 tons and Tower Cranes.

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
54.18	30.63	84.81	86.71

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), over 100 tons and Tower Crane.

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
52.09	30.63	82.72	83.87

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:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
50.43	30.63	81.06	82.21

CLASSIFICATIONS:

Cranes (all cranes, land or floating with booms including jib, less than 140 ft. above ground), Derricks (all derricks, land, floating or Chicago Boom type with booms including jib, less than 140 ft. above ground), Pile Drivers (all types), under 100 tons.

TERRITORY
ENTIRE STATE

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

STRUCTURAL STEEL ERECTION Rates Expiration Date : 06/30/2017

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
52.09	30.63	82.72	83.87

CLASSIFICATIONS:

Helicopter Co-Pilot

Helicopter Communications Engineer

TEST BORING PRELIMINARY TO CONSTRUCTION-SOUTH/WEST **Rates Expiration Date : 06/30/2017**

THESE RATES APPLY IN THE FOLLOWING COUNTIES ONLY:

Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Hunterdon, Mercer, Monmouth, Ocean, Salem, Sussex, Warren

On all machines, including pile drivers with booms of 100 feet and over (including jib) the Operating Engineer shall receive the regular hourly rate plus: \$1.00 per hour on rigs with 100 foot Boom (including jib) up to 139 feet, and \$2.00 per hour on rigs with 140 foot Boom (including jib) and over. On all hoists where "Cat Head" or "Sheave Point" is 100 feet or more above ground level, the same differential pay shall apply as applicable to booms 100 feet and over.

The regular workday consists of 8 hours, Monday to Friday, between 6:00 AM and 4:30 PM.

SHIFT DIFFERENTIALS:

- Shift work must run for 5 consecutive workdays.
- When 2 shifts are worked, the second shift shall receive an additional 10% of the regular rate inclusive of benefits, per hour.
- When 3 shifts are worked, the second shift shall receive 8 hours pay for 7.5 hours of work, plus an additional 10% of the regular rate inclusive of benefits, per hour. The third shift shall receive 8 hours pay for 7 hours of work, plus an additional 15% of the regular rate inclusive of benefits, per hour.
- When such hours are mandated by the project owner, a shift that starts between 8:00 PM and midnight and ends by 6:00 AM Saturday, or that starts after 8:00 PM on Sunday, provided there are consecutive hours of work within the shift, shall receive an additional 15% of the regular rate, inclusive of benefits.
- On Highway, Road, Street, and Sewer projects irregular shifts starting between 5:00 PM and 12:00 AM may be worked Monday through Friday, and shall receive an additional 15% of the regular rate, inclusive of benefits. When working with other trades that receive a higher irregular shift rate, the Operating Engineer shall also receive the higher irregular shift 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 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.
- 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, Veterans' Day, Thanksgiving Day, Christmas Day. Sunday holidays observed the following Monday.

On hazardous waste removal work or asbestos removal work, on a state or federally designated hazardous waste site, where the operating engineer is in direct contact with hazardous material and when personal protective equipment is required for respiratory, skin, and eye protection, the operating engineer shall receive an additional 20% of the hourly wage, per hour.

Effective Dates:

	07/01/2016		01/01/2017
Rate	Fringe	Total	Total
48.07	30.63	78.70	79.85

CLASSIFICATIONS:

Driller

TERRITORY
ENTIRE STATE

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

TEST BORING PRELIMINARY TO CONSTRUCTION-SOUTH/WEST Rates Expiration Date : 06/30/2017

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
41.23	30.63	71.86	73.01

CLASSIFICATIONS:

Driller's Helper

FREE AIR TUNNEL JOBS **Rates Expiration Date : 08/31/2017**

{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 \$2.50 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:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
40.35	27.78	68.13	70.53

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
40.05	27.78	67.83	70.23

CLASSIFICATIONS:

Heading Foreman, Shaft Foreman, Rod Foreman, Electrician Foreman, Rigging Foreman

FREE AIR TUNNEL JOBS **Rates Expiration Date : 08/31/2017**

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
39.55	27.78	67.33	69.73

CLASSIFICATIONS:

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Cleanup Foreman, Grout Foreman

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
42.05	27.78	69.83	72.23

CLASSIFICATIONS:

Blaster

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
39.00	27.78	66.78	69.18

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
38.65	27.78	66.43	68.83

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:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
38.50	27.78	66.28	68.68

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

FREE AIR TUNNEL JOBS Rates Expiration Date : 08/31/2017

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
38.00	27.78	65.78	68.18

CLASSIFICATIONS:

All Others (including Powder Watchman, Change House Attendant, Top Laborer)

DRILL FOR GROUND WATER SUPPLY **Rates Expiration Date : 06/30/2017**

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:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
46.82	30.63	77.45	78.60

CLASSIFICATIONS:

Driller

Effective Dates:

07/01/2016			01/01/2017
Rate	Fringe	Total	Total
39.98	30.63	70.61	71.76

CLASSIFICATIONS:

Driller's Helper

OPERATING ENGINEERS MARINE-DREDGING **Rates Expiration Date : 09/30/2018**

NOTE: 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:

10/01/2016			10/01/2017
Rate	Fringe	Total	Total
37.25	13.78	51.03	52.51

CLASSIFICATIONS:

Lead Dredgerman, Operator, Leverman

Licensed Tug Operator (over 1000 HP)

Effective Dates:

10/01/2016			10/01/2017
Rate	Fringe	Total	Total
32.22	13.38	45.60	46.95

CLASSIFICATIONS:

Derrick Operator, Spider/Spill Barge Operator

Engineer, Electrician, Chief Welder, Chief Mate

Fill Placer, Operator II

Licensed Boat Operator

Maintenance Engineer

Effective Dates:

10/01/2016			10/01/2017
Rate	Fringe	Total	Total
30.33	13.23	43.56	44.86

CLASSIFICATIONS:

Certified Welder

OPERATING ENGINEERS MARINE-DREDGING **Rates Expiration Date : 09/30/2018**

Effective Dates:

10/01/2016			10/01/2017
Rate	Fringe	Total	Total
29.50	12.86	42.36	43.64

CLASSIFICATIONS:

Mate, Drag Barge Operator, Steward, Assistant Fill Placer

Welder

Effective Dates:

10/01/2016			10/01/2017
Rate	Fringe	Total	Total
28.54	12.78	41.32	42.58

CLASSIFICATIONS:

Boat Operator

Effective Dates:

10/01/2016			10/01/2017
Rate	Fringe	Total	Total
23.71	12.10	35.81	36.92

CLASSIFICATIONS:

Shoreman, Deckhand, Rodman, Scowman

MICROSURFACING/SLURRY SEAL Rates Expiration Date : 02/28/2018

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:

03/01/2016			03/01/2017
Rate	Fringe	Total	Total
35.75	20.35	56.10	57.77

CLASSIFICATIONS:

Foreman

Effective Dates:

03/01/2016			03/01/2017
Rate	Fringe	Total	Total
33.10	20.35	53.45	55.07

CLASSIFICATIONS:

Box man

Effective Dates:

03/01/2016			03/01/2017
Rate	Fringe	Total	Total
31.10	20.35	51.45	53.02

CLASSIFICATIONS:

Microsurface/Slurry Preparation

Effective Dates:

03/01/2016			03/01/2017
Rate	Fringe	Total	Total
31.10	20.35	51.45	53.02

CLASSIFICATIONS:

Squeegee man

TERRITORY
ENTIRE STATE

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

MICROSURFACING/SLURRY SEAL Rates Expiration Date : 02/28/2018

Effective Dates:

03/01/2016			03/01/2017
Rate	Fringe	Total	Total
29.60	20.35	49.95	51.57

CLASSIFICATIONS:

Cleaner, Taper

ASPHALT LABORERS - SOUTH Rates Expiration Date : 08/31/2017

"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 \$2.50 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:

	09/01/2016		03/01/2017
Rate	Fringe	Total	Total
39.85	27.78	67.63	70.03

CLASSIFICATIONS:

Paving Foreman

Effective Dates:

	09/01/2016		03/01/2017
Rate	Fringe	Total	Total
38.40	27.78	66.18	68.58

CLASSIFICATIONS:

Head Raker

Effective Dates:

	09/01/2016		03/01/2017
Rate	Fringe	Total	Total
38.25	27.78	66.03	68.43

CLASSIFICATIONS:

Raker, Screedman, Luteman

TERRITORY
ENTIRE STATE

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

ASPHALT LABORERS - SOUTH Rates Expiration Date : 08/31/2017

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
38.00	27.78	65.78	68.18

CLASSIFICATIONS:

Tampers, Smoothers, Kettlemen,
Painters, Shovelers, Roller Boys

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
38.10	27.78	65.88	68.28

CLASSIFICATIONS:

Milling Controller

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
38.30	27.78	66.08	68.48

CLASSIFICATIONS:

Traffic Control Coordinator

TEST BORING PRELIMINARY TO CONSTRUCTION-NORTH **Rates Expiration Date : 10/16/2018**

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 \$1.00 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 10% 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:

11/01/2016			10/17/2017
Rate	Fringe	Total	Total
30.96	24.76	55.72	57.17

CLASSIFICATIONS:

Helper (4th year helper)

Effective Dates:

11/01/2016			10/17/2017
Rate	Fringe	Total	Total
38.82	24.76	63.58	65.24

CLASSIFICATIONS:

Driller

Effective Dates:

11/01/2016			10/17/2017
Rate	Fringe	Total	Total
44.64	24.76	69.40	71.28

CLASSIFICATIONS:

Foreman

HEAVY & GENERAL LABORERS - NORTH **Rates Expiration Date : 08/31/2017**

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 \$2.50 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:

	09/01/2016		03/01/2017
Rate	Fringe	Total	Total
37.60	27.78	65.38	67.78

CLASSIFICATIONS:

"D" Rate:

basic, landscape, asphalt, slurry seal, or railroad track laborer; utility meter installer; traffic director/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:

	09/01/2016		03/01/2017
Rate	Fringe	Total	Total
38.30	27.78	66.08	68.48

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 : 08/31/2017**

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
38.55	27.78	66.33	68.73

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:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
42.10	27.78	69.88	72.28

CLASSIFICATIONS:

"A" Rate:

blaster

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
39.85	27.78	67.63	70.03

CLASSIFICATIONS:

"FOREMAN" Rate:

labor foreman, asphalt foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
40.85	27.78	68.63	71.03

CLASSIFICATIONS:

"GENERAL FOREMAN" Rate

HEAVY & GENERAL LABORERS - SOUTH **Rates Expiration Date : 08/31/2017**

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 \$2.50 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:

	09/01/2016		03/01/2017
Rate	Fringe	Total	Total
37.60	27.78	65.38	67.78

CLASSIFICATIONS:

basic, landscape, or railroad track laborer; utility meter installer; traffic director/flagman; salamander tender; pitman; dumpman; rakers or tampers on cold patch work; wrappers or coaters of pipe; waterproofers

tree cutter, timberman

Effective Dates:

	09/01/2016		03/01/2017
Rate	Fringe	Total	Total
38.30	27.78	66.08	68.48

CLASSIFICATIONS:

wagon drill or drill master helper; powder carrier; magazine tender; signal man

HEAVY & GENERAL LABORERS - SOUTH **Rates Expiration Date : 08/31/2017**

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
38.30	27.78	66.08	68.48

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:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
38.30	27.78	66.08	68.48

CLASSIFICATIONS:

wagon or directional drill operator; drill master

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
42.10	27.78	69.88	72.28

CLASSIFICATIONS:

blaster

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
39.85	27.78	67.63	70.03

CLASSIFICATIONS:

labor foreman, drill foreman, pipe foreman, grade foreman, finisher foreman, concrete foreman

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
40.85	27.78	68.63	71.03

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 : 08/31/2017

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
38.55	27.78	66.33	68.73

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 : 06/04/2017

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: \$42.50; Pipeline Journeyman Welder: \$102.50; and Pipeline Helper: \$42.50. 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:

06/01/2016

Rate	Fringe	Total
54.56	26.59	81.15

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 : 06/04/2017

Effective Dates:

06/01/2016

Rate	Fringe	Total
54.56	26.59	81.15

CLASSIFICATIONS:

Pipeline Journeyman

Effective Dates:

06/01/2016

Rate	Fringe	Total
32.99	18.73	51.72

CLASSIFICATIONS:

Pipeline Helper

PIPELINE - GAS DISTRIBUTION **Rates Expiration Date : 10/31/2017**

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:

11/01/2016

Rate	Fringe	Total
57.58	21.55	79.13

CLASSIFICATIONS:

Pipeline Journeyman Welder

Effective Dates:

11/01/2016

Rate	Fringe	Total
57.58	21.55	79.13

CLASSIFICATIONS:

Pipeline Journeyman

Effective Dates:

11/01/2016

Rate	Fringe	Total
37.16	15.74	52.90

CLASSIFICATIONS:

Pipeline Helper

ASPHALT LABORERS- NORTH **Rates Expiration Date : 08/31/2017**

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 \$2.50 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:

	09/01/2016		03/01/2017
Rate	Fringe	Total	Total
39.85	27.78	67.63	70.03

CLASSIFICATIONS:

Asphalt Foreman

Effective Dates:

	09/01/2016		03/01/2017
Rate	Fringe	Total	Total
38.55	27.78	66.33	68.73

CLASSIFICATIONS:

Asphalt Screedman

Effective Dates:

	09/01/2016		03/01/2017
Rate	Fringe	Total	Total
38.30	27.78	66.08	68.48

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 : 08/31/2017

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
37.60	27.78	65.38	67.78

CLASSIFICATIONS:

Asphalt Laborer

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date : 12/03/2017**

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 7:00 AM and 6:30 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:

	11/29/2015		12/04/2016
Rate	Fringe	Total	Total
50.52	33.84	84.36	87.27

CLASSIFICATIONS:

Chief Lineman

Effective Dates:

	11/29/2015		12/04/2016
Rate	Fringe	Total	Total
47.66	31.93	79.59	82.34

CLASSIFICATIONS:

Journeyman Lineman

ELECTRICIAN- UTILITY WORK (NORTH) **Rates Expiration Date : 12/03/2017**

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
47.66	31.93	79.59	82.34

CLASSIFICATIONS:

Special License Operator

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
47.18	31.61	78.79	81.51

CLASSIFICATIONS:

Transit Man

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
45.75	30.65	76.40	79.04

CLASSIFICATIONS:

Line Equipment Operator

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
40.03	26.82	66.85	69.17

CLASSIFICATIONS:

Dynamite Man

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
56.24	37.68	93.92	97.16

CLASSIFICATIONS:

General Foreman

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
54.81	36.72	91.53	94.68

CLASSIFICATIONS:

Assistant General Foreman

ELECTRICIAN- UTILITY WORK (NORTH) Rates Expiration Date : 12/03/2017

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
53.38	35.76	89.14	92.21

CLASSIFICATIONS:

Line Foreman

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
38.60	25.86	64.46	66.69

CLASSIFICATIONS:

Straight Light Mechanical Leader

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
36.70	24.58	61.28	63.40

CLASSIFICATIONS:

Groundman Winch Operator

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
36.70	24.58	61.28	63.40

CLASSIFICATIONS:

Groundman Truck Operator

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
36.22	24.26	60.48	62.57

CLASSIFICATIONS:

Straight Light Mechanic

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
36.22	24.26	60.48	62.57

CLASSIFICATIONS:

Line Equipment Mechanic

TERRITORY
ENTIRE STATE

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

ELECTRICIAN- UTILITY WORK (NORTH) Rates Expiration Date : 12/03/2017

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
30.98	20.75	51.73	53.52

CLASSIFICATIONS:

Groundman 2nd Year

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
28.60	19.16	47.76	49.39

CLASSIFICATIONS:

Groundman 1st Year

Effective Dates:

11/29/2015			12/04/2016
Rate	Fringe	Total	Total
47.18	31.61	78.79	81.51

CLASSIFICATIONS:

Line Equipment Foreman

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date : 12/02/2017**

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:

	12/01/2015		12/04/2016
Rate	Fringe	Total	Total
57.01	43.16	100.17	103.57

CLASSIFICATIONS:

General Foreman

ELECTRICIAN- UTILITY WORK (SOUTH) **Rates Expiration Date : 12/02/2017**

Effective Dates:

12/01/2015			12/04/2016
Rate	Fringe	Total	Total
50.78	39.48	90.26	93.37

CLASSIFICATIONS:

Foreman

Effective Dates:

12/01/2015			12/04/2016
Rate	Fringe	Total	Total
48.10	37.90	86.00	89.00

CLASSIFICATIONS:

Small Job Foreman

Effective Dates:

12/01/2015			12/04/2016
Rate	Fringe	Total	Total
44.54	35.82	80.36	83.15

CLASSIFICATIONS:

Heavy Equipment Operator

Effective Dates:

12/01/2015			12/04/2016
Rate	Fringe	Total	Total
44.54	35.82	80.36	83.15

CLASSIFICATIONS:

Cable Splicer

Effective Dates:

12/01/2015			12/04/2016
Rate	Fringe	Total	Total
44.54	35.82	80.36	83.15

CLASSIFICATIONS:

Journeyman Lineman

Effective Dates:

12/01/2015			12/04/2016
Rate	Fringe	Total	Total
44.54	35.82	80.36	83.15

CLASSIFICATIONS:

Journeyman Welder

ELECTRICIAN- UTILITY WORK (SOUTH) Rates Expiration Date : 12/02/2017

Effective Dates:

12/01/2015			12/04/2016
Rate	Fringe	Total	Total
44.54	35.82	80.36	83.15

CLASSIFICATIONS:

Journeyman Painter

Effective Dates:

12/01/2015			12/04/2016
Rate	Fringe	Total	Total
35.63	30.58	66.21	68.57

CLASSIFICATIONS:

Light Equipment Operator

Effective Dates:

12/01/2015			12/04/2016
Rate	Fringe	Total	Total
31.18	27.97	59.15	61.30

CLASSIFICATIONS:

Groundman Truck Driver

Effective Dates:

12/01/2015			12/04/2016
Rate	Fringe	Total	Total
28.95	26.65	55.60	57.64

CLASSIFICATIONS:

Groundman 3rd Year

Effective Dates:

12/01/2015			12/04/2016
Rate	Fringe	Total	Total
26.72	25.33	52.05	54.03

CLASSIFICATIONS:

Groundman 2nd Year

Effective Dates:

12/01/2015			12/04/2016
Rate	Fringe	Total	Total
24.50	24.04	48.54	50.38

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 : 12/02/2017

Effective Dates:

12/01/2015			12/04/2016
Rate	Fringe	Total	Total
19.60	21.16	40.76	42.34

CLASSIFICATIONS:

Flagman

HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS Rates Expiration Date : 08/31/2017

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 \$2.50 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:

	09/01/2016		03/01/2017
Rate	Fringe	Total	Total
60.53	27.78	88.31	91.28

CLASSIFICATIONS:

Walking Boss & Superintendent

Effective Dates:

	09/01/2016		03/01/2017
Rate	Fringe	Total	Total
60.08	27.78	87.86	90.83

CLASSIFICATIONS:

Heading Foreman, Shaft Foreman, Rod Foreman, Electrical Foreman, Rigging Foreman

HEAVY & GENERAL LABORERS- NEW TRANS HUDSON TUNNELS **Rates Expiration Date : 08/31/2017**

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
59.33	27.78	87.11	90.08

CLASSIFICATIONS:

Iron Foreman, Caulking Foreman, Form Foreman, Cement Finishing Foreman, Concrete Foreman, Track Foreman, Clean-up Foreman, Grout Foreman

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
63.08	27.78	90.86	93.83

CLASSIFICATIONS:

Blaster

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
58.50	27.78	86.28	89.26

CLASSIFICATIONS:

Top Labor Foreman

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
57.98	27.78	85.76	88.73

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:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
57.75	27.78	85.53	88.51

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 : 08/31/2017

Effective Dates:

09/01/2016			03/01/2017
Rate	Fringe	Total	Total
57.00	27.78	84.78	87.76

CLASSIFICATIONS:

All others (including Powder Watchman, Change House Attendant, Top Laborer, Job Steward)

**TECHNICAL
SPECIFICATIONS**

FOR THE

**REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be-19)
TOWNSHIP OF BERKELEY HEIGHTS
COUNTY OF UNION, NEW JERSEY**

NOVEMBER 2016

Prepared by
Dewberry Engineers Inc.
200 Broadacres Drive, Suite 410
Bloomfield, New Jersey 07003-3154
Manuel J. Vera Caraballo, P.E.
New Jersey License No. 24GE05009600

TABLE OF CONTENTS

	<u>Page</u>
TECHNICAL SPECIFICATIONS.....	T-1 TO T-5
SUPPLEMENTARY SPECIFICATIONS FOR ROADWAY WORK.....	RS -1 TO RS-50
SUPPLEMENTARY SPECIFICATIONS FOR BRIDGE WORK.....	SS-1 TO SS-21

TECHNICAL SPECIFICATIONS

ITEM 0. CONDITIONS SPECIFIC TO THIS PROJECT

This project will replace the superstructure of the existing Springfield Avenue Bridge (Be-19) built circa 1963. The existing structure is a single span bridge with an approximate span length of 21'-0". The bridge provides a 40' roadway width and 8'-7" (+/-) wide sidewalks and 1'-0" parapets along each side, for an overall width of 59'-2". The structure is abutted on the south side by an adjacent bridge structure. This structure supports the adjacent private parking lot.

The contractor is notified that the adjacent structure is privately owned and is intended to remain in its current condition. Any damage to the structure is to be repaired immediately by the Contractor at his own cost as directed by the County.

The existing superstructure consists of 12" solid slab beams supporting a bituminous concrete wearing surface. The existing substructure consists of nominally reinforced concrete abutments and wingwalls founded on spread footings. Bridge railing consists of reinforced concrete parapets. The streambed consists of natural streambed materials over a 6", nominally reinforced invert slab.

Presently, the bridge supports nine (9) telephone conduits in two banks of 4 and 5 conduits under the southern sidewalk. Aerial utility lines, including electric, cable and telephone lines, are present at the bridge along the south curblin of Springfield Avenue. The contractor is advised that numerous underground utilities, including water, gas and sanitary sewer, are present at the site. Plans for the original bridge are available at the County Engineer's office for inspection.

The proposed superstructure will consist of 12" solid prestressed concrete slab beams with a span length of approximately 21'-0", supporting a 6" minimum reinforced concrete deck slab and 1'-0" suspended backwall. Sidewalks will be provided along both sides of Springfield Avenue. The sidewalk width at the bridge is 7'-9". A 1'-10" stone faced concrete parapet will be provided along both sides of Springfield Avenue. The nine (9) telephone conduits will be temporarily supported by Verizon and will be subsequently repositioned within the proposed structure. Substructure work will consist of the reconstruction of the bridge seats and the wingwalls. Approximately 110 linear feet of approach roadway will be milled and resurfaced, and 55 linear feet reconstructed. Eight (8) storm drain inlets and associated drainage work is also included under the roadway work.

This superstructure replacement will be constructed while traffic on Springfield Avenue is detoured around the site. The Contractor will not be able to commence with removing the existing structure until Verizon temporarily supports the existing nine (9) telephone conduits, the proposed superstructure elements are approved and fabricated, and the detour has been approved by the County.

The duration of construction for this project is six (6) months from the notice to proceed and it includes lead time for approval of working drawings as well as for furnishing the required materials for the project. The Contractor is notified that detouring Springfield

Avenue traffic will not be permitted until after the proposed bridge components are fabricated to the approval of the engineer. Traffic detour is limited to two (2) months within the six (6) month construction duration. The Contractor shall schedule his work taking into consideration lead time for furnishing materials, coordination with utilities, and time restrictions in these specifications. Included in the six (6) months is an approximate one (1) month period, divided in two (2) 2-week phases, for Verizon to temporarily support and reposition the telephone conduits in the proposed superstructure. The Contractor is notified that his work may be limited during these two (2) 2-week periods since the structure may not be fully demolished prior to the utility being temporarily supported and the deck slab may not be completed prior to the repositioning of the utilities on the proposed structure. The Contractor shall ensure that he is prepared to start construction and continue through without disruption, except for the time period for Verizon to reposition their lines on the bridge. The Contractor will be expected to adhere to the Construction Project Schedule that he submits at the preconstruction meeting. If during construction the Contractor determines that additional time is needed due to inclement weather, utility relocation, or any other unforeseen problems that may arise, he shall notify the County immediately of the delay and request an extension to the project time length.

In order to protect the warmwater fishery within Stream 3-55, also known as the Snyder Avenue Brook, no regulated activities including grading, construction or clearing is permitted within the brook between **May 1 and June 30**. In addition, any activity within 50' from the top of bank which could introduce sediment into the brook and/or increase turbidity is also prohibited during this period. The Department reserves the right to suspend all regulated activities on site should it be determined that the applicant has not taken proper precautions to ensure continuous compliance with this condition.

Shop drawings and/or cut sheets are required for the following items:

- Item 67. Prestressed Concrete Slab Beam (Type SI-36), 36"x12"
- Item 68. Prestressed Concrete Slab Beam (Type SI-48), 48"x12"
- Item 69. Structural Steel (Approx. 375 Lbs.)
- Item 70. Reinforced Elastomeric Bearing Assembly
- Item 75. Bridge Combination Railing (1-Rail, Aluminum)
- Item 76. Rubble Stone Facing
- Item 77. Bluestone Cap
- Item 78. Name Plaque

In addition to the items above, submit a Demolition and Erection Plan for review.

Utilities at this site are as follows:

<u>Utility</u>	<u>Name, Address, Contact Person</u>	<u>Phone No.</u>
Water	New Jersey American Water 120 Raider Blvd. Hillsborough, NJ 08844 Attn: Ken Taylor	973-564-5713

Gas	Public Service Electric & Gas 444 St. Paul's Avenue Jersey City, NJ 07306 Attn: Keith Wilson	201-420-3950
Electric (Aerial)	Jersey Central Power & Light 300 Madison Avenue Morristown, NJ 07962 Attn: Baxter Turley	732-401-8143
Telephone (Aerial)	Verizon – New Jersey, Inc. 6000 Hadley Road South Plainfield, NJ 07080 Attn: Krzysztof Ogrodnik	908-412-6161
Telephone (Underground)	Verizon – New Jersey, Inc. 6000 Hadley Road South Plainfield, NJ 07080 Attn: Daniel Nigro	908-412-6162
Cable (Aerial)	Comcast Cable of New Jersey 800 Rahway Avenue Union, NJ 07083 Attn: Robert Knoepfl	732-602-7444 Ext 6202293
Sanitary	Berkeley Heights Township Public Works Department 29 Snyder Avenue Berkeley Heights, NJ 07922 Attn: Robert Bocchino, P.E.	908-668-8300

Overhead:

The overhead lines, electric, cable and telephone, along Springfield Avenue are located over the south curblineline. Site constraints prevent the relocation of these facilities. Temporary support of pole no. JC524BHT on the southwest quadrant of the bridge may be necessary as its location is within the limits of the bridge and roadway being replaced. It is the Contractor's responsibility to coordinate the temporary support of the pole with the utilities to allow for the construction of the bridge. The Contractor shall familiarize himself with the NJ High Voltage Proximity Act and utilize means and methods of construction to comply with these requirements. The Contractor shall also be familiar with the Occupational Safety and Health Act of 1970 (OSHA) and the Underground Facility Protection Act.

Telephone:

There are 9 conduits supported by the existing bridge superstructure under the south sidewalk. These are separated in two (2) banks, one bank with five (5) conduits and the other with four (4). The two (2) banks of conduits will be maintained under the south sidewalk of the proposed superstructure. Prior to demolition of the existing bridge, Verizon will remove the conduits from the existing bridge and temporarily support them. The Contractor will be responsible for installing steel support members on the slab beams as well as for installing split sleeves provided by Verizon through the suspended backwall. Verizon will be responsible for reposition and supporting the conduits from the steel support members. The plans outline the responsibilities for furnishing materials and for work associated with the installation of the telephone conduits.

Water:

There is an underground 8" water main along Springfield Avenue located within the westbound shoulder. The main penetrates both abutments above the concrete invert slab but below the stream bed. New Jersey American Water upgraded their main on Springfield Avenue by installing a 12" line approximately 3' south offset from the 8" main. The 12" main passes under the structure's footing and stream bed. There is no work associated with these utilities other than the resetting of water valve boxes as indicated on the Construction Plan.

Gas:

There is an underground 6" gas main along Springfield Avenue located within the eastbound shoulder. The main penetrates both abutments above the concrete invert slab but below the stream bed. There is no work associated with this utility other than the resetting of gas valve boxes as indicated in the Construction Plan.

Sanitary Sewer:

There are two (2) 8" underground gravity sanitary sewers along Springfield Avenue, one under each sidewalk. These lines pass through the existing bridge foundation below the concrete invert slab. There is no work associated with this utility other than the resetting of sanitary sewer manholes as identified on the Construction Plan.

Ample time must be appropriated for all utility work. Union County will not be responsible for any delays caused by utility work. The Contractor is responsible for coordinating the utility work and cooperating with all utilities so that his work, as well as the utilities' work, can proceed in an orderly and efficient manner. Prior to submitting a bid, the Contractor shall contact all utility companies involved in the project to ascertain their anticipated relocation/work schedules and durations.

A preconstruction meeting will be held to enable full coordination of parties involved in this project. The County will arrange this meeting shortly after award of contract and prior to start of any work. The County will send an agenda and written invitations to municipal officials, utility owners and any other interested parties. At this meeting, the Contractor

will present his proposed work schedule. This schedule shall include utility relocations with appropriate durations.

The Contractor will supply the County the following in writing at or prior to the preconstruction meeting:

1. Proposed work schedule
2. List of subcontractors
3. List of material suppliers
4. Breakdown of lump sum items

SUPPLEMENTARY SPECIFICATIONS FOR ROADWAY WORK

INDEX

<u>Contents</u>	<u>Page No.</u>
DIVISION 100 – GENERAL PROVISIONS	3
SECTION 105 – CONTROL OF WORK.....	3
SECTION 108 – PROSECUTION AND COMPLETION	3
DIVISION 150 – CONTRACT REQUIREMENTS	5
SECTION 154 – MOBILIZATION	5
SECTION 155 – CONSTRUCTION FIELD OFFICE	5
SECTION 157 – CONSTRUCTION LAYOUT AND MONUMENTS	5
SECTION 158 – SOIL EROSION AND SEDIMENT CONTROL AND WATER QUALITY CONTROL	6
SECTION 159 – TRAFFIC CONTROL	6
SECTION 160 – PRICE ADJUSTMENTS.....	9
SECTION 161 – FINAL CLEANUP	10
DIVISION 200 – EARTHWORK.....	11
SECTION 201 – CLEARING SITE	11
SECTION 202 – EXCAVATION.....	11
SECTION 203 – EMBANKMENT.....	12
DIVISION 300 – SUBBASE AND BASE COURSES.....	13
SECTION 302 – AGGREGATE BASE COURSE	13
DIVISION 400 – PAVEMENTS.....	14
SECTION 401 – HOT MIX ASPHALT (HMA) COURSES	14
DIVISION 500 – BRIDGES AND STRUCTURES	19
SEE SUPPLEMENTARY BRIDGE SPECIFICATIONS.....	19
DIVISION 600 – MISCELLANEOUS CONSTRUCTION	20
SECTION 601 – PIPE	20
SECTION 602 – DRAINAGE STRUCTURES	20
SECTION 605 – FENCE.....	20
SECTION 606 – SIDEWALKS, DRIVEWAYS, AND ISLANDS.....	20
SECTION 607 – CURB.....	21
SECTION 610 – TRAFFIC STRIPES, TRAFFIC MARKINGS, AND RUMBLE STRIPS	21
SECTION 612 – SIGNS	24
DIVISION 600 – MISCELLANEOUS CONSTRUCTION	26
SECTION 651 – WATER.....	26
SECTION 652 – SANITARY SEWERS.....	26
SECTION 653 – GAS.....	26
DIVISION 800 – LANDSCAPING.....	27

SECTION 804 – TOPSOILING	27
SECTION 806 – FERTILIZING AND SEEDING.....	27
SECTION 809 – MULCHING.....	27
DIVISION 900 – MATERIALS.....	28
SECTION 901 – AGGREGATES	28
SECTION 902 – ASPHALT	28
SECTION 909 – DRAINAGE.....	38
SECTION 911 – SIGNS, SIGN SUPPORTS, AND DELINEATORS.....	38
SECTION 912 – PAINTS, COATINGS, TRAFFIC STRIPES, AND TRAFFIC MARKINGS.....	39
SECTION 913 – GUIDE RAIL, FENCE, AND RAILING	40
SECTION 913 – GUIDE RAIL, FENCE, RAILING AND BOX BEAM.....	40
SECTION 919 – MISCELLANEOUS.....	41
DIVISION 1000 – EQUIPMENT	43
SECTION 1001 – TRAFFIC CONTROL EQUIPMENT.....	43
SECTION 1009 – HMA PLANT EQUIPMENT.....	45
SECTION 1012 – PAVEMENT PRESERVATION EQUIPMENT.....	45
NJDOT TEST METHODS	48
NJDOT B-3 – SELECTING CORES FOR MAXIMUM SPECIFIC GRAVITY TESTING IN AIR VOIDS DETERMINATION	48
NJDOT B-10 – OVERLAY TEST FOR DETERMINING CRACK RESISTANCE OF HMA	48
NJDOT C-2 – QUICK-SETTING PATCH MATERIALS	50

THE FOLLOWING SECTIONS OF THE STANDARD SPECIFICATIONS ARE DELETED:

SECTION 101 – GENERAL PROVISIONS
SECTION 102 – BIDDING REQUIREMENTS AND CONDITIONS
SECTION 103 – AWARD AND EXECUTION OF CONTRACT
SECTION 104 – SCOPE OF WORK
SECTION 105 – CONTROL OF WORK
SECTION 106 – CONTROL OF MATERIAL
SECTION 107 – LEGAL RELATIONS
SECTION 108 – PROSECUTION AND COMPLETION
SECTION 109 – MEASUREMENT AND PAYMENT

THESE SECTIONS OF THE STANDARD SPECIFICATIONS ARE CHANGED TO THE REQUIREMENTS OF THE COUNTY OF UNION, EXCEPT FOR CONDITIONS SPECIFIC FOR THIS PROJECT IN SECTIONS 105 AND 108.

DIVISION 100 – GENERAL PROVISIONS

SECTION 105 – CONTROL OF WORK

THIS SECTION OF THE STANDARD SPECIFICATIONS IS CHANGED TO THE REQUIREMENTS OF THE COUNTY OF UNION AS STATED IN THE GENERAL SPECIFICATIONS “G” SHEETS INCLUDED IN THESE SUPPLEMENTARY SPECIFICATIONS, ALONG WITH THE FOLLOWING ADDITIONS:

105.07 COOPERATION WITH UTILITIES

Coordination of the work with the various utilities is an intrinsic part of this project and the level of cooperation and coordination necessary is dependent upon the means and methods selected by the Contractor to complete the project. The Contractor shall be responsible to coordinate all utility relocations.

It is understood and agreed that the Contractor is cognizant of the limited ability of the County to control the actions of the Utility Companies and in his bid has made allowance for the fact that additional compensation will not be granted for any delays, inconvenience or damage sustained by him due to any interference from the said utility facilities or the operation of moving them. The Contractor shall cooperate fully with the utility companies and render any assistance, within its means, necessary to facilitate the temporary and final relocation of utilities. Construction layout with respect to the locations of any proposed temporary or permanent utility relocations shall be provided for by the Contractor and paid for under the pay item “Construction Layout.”

SECTION 108 – PROSECUTION AND COMPLETION

THIS SECTION OF THE STANDARD SPECIFICATIONS IS CHANGED TO THE REQUIREMENTS OF THE COUNTY OF UNION AS STATED IN THE GENERAL SPECIFICATIONS “G” SHEETS INCLUDED IN THESE SUPPLEMENTARY SPECIFICATIONS, ALONG WITH THE FOLLOWING ADDITIONS:

108.10 CONTRACT TIME

The Contractor shall prepare his bid and construction schedule in accordance with the project construction as shown on the project plans and as specified herein. It shall include the time required by the various Utility Companies to relocate their facilities during construction of the project as well as the required advanced written notices that each utility company requires and is to be provided prior to performing their work. No additional payments will be made for coordinating the Contractor’s work with that of the various Utility Companies.

The Contractor shall anticipate working during adverse weather conditions to complete construction by the deadlines. No additional payments will be made for cost associated with working during adverse weather conditions.

The Contractor shall prepare his bid and construction schedule based on the construction of ALL items listed in the Proposal including the construction of any and all "If and Where Directed" items and quantities. Extensions of time will not be granted due to construction of "If and Where Directed" quantities.

108.12 RIGHT-OF-WAY RESTRICTIONS

The Contractor shall obtain from the Engineer all information regarding Easements acquired for the Project as well as the nature and type of title acquired. The Contractor shall make periodic requests for updates to this information during the course of the Contract.

The Contractor shall make no claim for delays by reason that entry upon an Easement or right which is lesser than a fee interest is limited in duration; the Contractor is required to schedule accordingly and take such limitations into account when planning performance of the Work.

Temporary Easements and/or temporary construction rights will in most cases contain a limitation as to the length of time that they are extant. The Contractor shall schedule the Work so as to accommodate the particular time limitations of an Easement or right which is lesser than a fee interest. The Contractor shall provide a written request to the Engineer that the County procure an extension from the owner of a particular temporary easement or right, which is lesser than a fee simple interest, so as to enable the Contractor to continue occupancy of or re-enter same in the future, beyond the initial time period set forth in the respective property description prior to the expiration thereof.

Where the Contractor fails to complete the work within an area of a temporary easement or right lesser than a fee interest during the time allowed under the property description, by reason of the Contractor's own fault; the Contractor shall reimburse the County for the sum payable to the owner of the underlying fee interest for the extended period of occupancy use. The Resident Engineer may deduct an amount equal to such payments from the monthly estimate of the Work performed after providing 30 day written notice to the Contractor of such action, including a breakdown of the costs sought or to be sought by reason of the delay in timely vacating a temporary easement or right lesser than a fee interest.

DIVISION 150 – CONTRACT REQUIREMENTS

ITEM 1. MOBILIZATION

SECTION 154 – MOBILIZATION

NO REVISIONS TO THIS SUBSECTION

ITEM 2. FIELD OFFICE TYPE A SETUP

ITEM 3. FIELD OFFICE TYPE A MAINTENANCE

SECTION 155 – CONSTRUCTION FIELD OFFICE

155.03.01 Field Office

4. Communication Equipment.

THE CONTENT OF THIS SUBSECTION IS DELETED

6. Office Equipment. Provide the following:

THE ENTIRE TEXT IS CHANGED TO:

1. An HP LaserJet Pro M277dw Wireless All-In-One color printer or approved equal.

7. Inspection Equipment.

THE CONTENT OF THIS SUBSECTION IS DELETED

155.03.03 Telephone Service

THE CONTENT OF THIS SUBSECTION IS DELETED

155.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS ADDED:

Item

Pay Unit

THE THIRD PARAGRAPH IS DELETED.

ITEM 4. CONSTRUCTION LAYOUT

SECTION 157 – CONSTRUCTION LAYOUT AND MONUMENTS

157.03.01 Construction Layout

THE SEVENTH PARAGRAPH IS CHANGED TO:

Provide the Utilities with the layout needed to install relocated utility facilities and coordinate the Work. Ensure that relocated facilities do not conflict with proposed construction, including High Voltage Proximity Act conflicts.

157.04 MEASUREMENT AND PAYMENT

THE SECOND PARAGRAPH IS DELETED

ITEM 5. HEAVY DUTY SILT FENCE, ORANGE
ITEM 6. INLET FILTER, TYPE 2, 2' X 4'
ITEM 7. CONCRETE WASHOUT SYSTEM
ITEM 8. OIL-ONLY EMERGENCY SPILL KIT, TYPE 1

**SECTION 158 – SOIL EROSION AND SEDIMENT CONTROL
AND WATER QUALITY CONTROL**

158.03.02 SESC Measures

19. Oil-Only Emergency Spill Kit.

THE SECOND SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Include Oil-only Emergency Spill Kit, Type 1 consisting of the following:

- ITEM 9. BREAKAWAY BARRICADE**
ITEM 10. DRUM
ITEM 11. CONSTRUCTION IDENTIFICATION SIGNS, 4' X 8'
ITEM 12. CONSTRUCTION SIGNS
ITEM 13. CONSTRUCTION BARRIER CURB
ITEM 14. POLICE TRAFFIC DIRECTOR
ITEM 15. TEMPORARY CRASH CUSHION, INERTIAL BARRIER SYSTEM, 10
MODULES
ITEM 16. FLASHING ARROW BOARD, 4' X 8'
ITEM 17. TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION
ITEM 18. REMOVABLE BLACK LINE MASKING TAPE, 6"

SECTION 159 – TRAFFIC CONTROL

159.02.01 Materials

THE FOLLOWING IS ADDED TO THE LIST OF MATERIALS REFERENCES:

Box Beam for Construction Barrier Curb 913.04

THE FOLLOWING IS ADDED:

Provide temporary crash cushions, inertial barrier systems as specified in 611.02. Provide temporary compressive crash cushions as specified for compressive crash cushions in 611.02.

159.03.02 Traffic Control Devices

2. Construction Barrier Curb.

THE ENTIRE TEXT IS CHANGED TO:

Alternate A or B construction barrier curb may be used interchangeably in any location. The Contractor may use construction barrier curb that is constructed using gray or white concrete. Do not place different colors of construction barrier curb in a continuous run. Do not use construction barrier curb having any of the following deficiencies:

1. Exposed steel at the connector flangeway.
2. Exposed reinforcement steel.
3. Cracking through the cross section.
4. An area of concrete missing larger than a 3-inch by 3-inch right triangle.
5. Debris in the keyway.

6. Non-functioning anchor bolt holes.
7. Non-functioning anchor rod hole.
8. Paint applied to the surface.
9. Objects protruding from the surface.
10. Previous repairs.
11. Do not use damaged, kinked or bent connection key or box beam stiffener.

At least 30 days before delivering construction barrier curb to the Project Limit, provide the RE notice that the barrier curb is available for inspection. The RE will inspect the barrier curb and approve individual pieces for delivery to the Project Limits.

Ensure that anchor pins do not project above the plane of the barrier curb. Install the Construction Barrier Curb stiffened with box beams as indicated in the contract documents.

Replace construction barrier curb that does not meet the specified requirements. Do not patch or repair construction barrier curb.

Provide top and side mounted flexible delineators on the construction barrier curb. For delineators located on the right side when facing in the direction of traffic, ensure that the retroreflective sheeting is white. For delineators located on the left side when facing in the direction of traffic, ensure that the retroreflective sheeting is yellow. Attach flexible delineators according to the manufacturer's recommendations.

Starting at the beginning of the construction barrier curb section mount top delineators at 100-foot intervals on tangent sections, or curves of radii greater than 1,910 feet, and at 50-foot intervals on curves of radii of 1,910 feet or less.

Mount side delineators at the lead end of each barrier segment with the top of the delineator 3 inches from the top of the barrier.

5. Temporary Crash Cushion

THE SECOND SENTENCE IS CHANGED TO:

Install temporary compressive crash cushions as specified for compressive crash cushions in 611.03.02.

6. Traffic Control Truck with Mounted Crash Cushions.

THE LAST SENTENCE IS CHANGED TO:

Submit drawings to the RE detailing the manner of securing the ballast, signed and sealed by a Professional Engineer, certifying that it is capable of withstanding the impact forces for which the impact attenuator is

159.03.06 Temporary Traffic Stripes and Temporary Traffic Markings

THE ENTIRE TEXT IS CHANGED TO:

Apply temporary traffic stripes and markings when the ambient and surface temperatures are at least 45 °F and rising and the surface temperature is no more than 140 °F. Apply the traffic paint in a wet film thickness of 6 ± 1 mil. Apply glass beads to the wet paint in a uniform pattern and at the rate of 12 pounds per gallon of paint. Ensure TRAFFIC STRIPES and TRAFFIC MARKINGS are applied within 14 days of placing temporary traffic stripes and markings unless directed by the RE.

159.03.08 Traffic Direction

A. Flagger.

THE LAST SENTENCE IS CHANGED TO:

Ensure that the flagger is equipped with a STOP/SLOW paddle and follows MUTCD flagging procedures.

B. Police.

THE ENTIRE TEXT IS CHANGED TO:

Police Traffic Directors shall be off-duty police officers from within the Township of Berkeley Heights where the work is being performed. Police Traffic Directors shall be located where shown on the plans or at specific

locations designated by the Engineer during construction hours. Township of Berkeley Heights to be contacted in order to obtain the services of Police Traffic Directors. The name, address and telephone number of their local representative is listed below:

Township of Berkeley Heights
Berkeley Heights Police Department
Capt. Thomas J. Schafer
29 Park Avenue
Berkeley Heights, NJ 07922
908-464-1111

An allowance for Police Traffic Directors has been fixed at \$12,000.00 in the Bidding Sheet for all bidders. The Contractor will keep records of the actual amount spent for Police Traffic Directors and shall submit proof, in the form of receipts for such Police Traffic Directors. The County will adjust the final cost based on the actual cost of the Police Traffic Directors.

The Contractor shall obtain the rate with the perspective Police Department.

No payment will be made for hours of Police Traffic Directors which are not approved by the County. No specific payment will be made for any costs of the Police Traffic Directors in excess of actual costs incurred by the contractor and supported by municipal receipts.

The Contractor shall be responsible for paying the prevailing wage rate for the Police Traffic Directors. Payment for the Police Traffic Directors by the Contractor shall be reimbursed under this contract, in accordance with the requirements stated hereon and those of the respective municipality. The Contractor shall be required to produce proof of both payment and hours worked for each officer at each post for each assignment. Should the Contractor fail to produce said proof, the County will withhold payment on this item until such time that adequate and satisfactory proof can be provided.

159.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEMS ARE ADDED:

<i>Item</i>	<i>Pay Unit</i>
TEMPORARY CRASH CUSHION, COMPRESSIVE BARRIER, TYPE ____, WIDTH ____	UNIT
POLICE TRAFFIC DIRECTOR	ALLOWANCE

THE FOLLOWING ITEM IS DELETED:

<i>Item</i>	<i>Pay Unit</i>
TEMPORARY CRASH CUSHION, ____	UNIT

THE SECOND PARAGRAPH IS CHANGED TO:

For traffic control devices measured by the linear foot or unit basis that are specified in 159.03.02, the Department will make payment for the maximum quantity in service at one time as required by the Contract. For CONSTRUCTION SIGNS, the Department will make payment for the maximum quantity of specific sign types in service at one time as required by the Contract. If a particular sign type has more than one unique text, each sign with a unique text will be considered to be a specific sign type. The Department will make payment for 50 percent of the Contract bid price for traffic control devices specified in 159.03.02 that are measured on a linear foot, square foot or unit basis upon approved placement. The Department will prorate the balance of payment over the duration of the Contract.

THE FOLLOWING IS ADDED

The Department will make payment for TRAFFIC STRIPES and TRAFFIC MARKINGS as specified in 610.04.

ITEM 19. FUEL PRICE ADJUSTMENT
ITEM 20. ASPHALT PRICE ADJUSTMENT

SECTION 160 – PRICE ADJUSTMENTS

160.03.01 Fuel Price Adjustment

THROUGHOUT THIS SUBPART, TABLE 161.03.01-1 IS CHANGED TO TABLE 160.03.01-1

THE THIRD PARAGRAPH IS CHANGED TO:

If the as-built quantity of an Item listed in Table 160.03.01-1 differs from the sum of the quantities in the monthly Estimates, and the as-built quantity cannot be readily distributed among the months that the Item listed in Table 160.03.01-1 was constructed, then the Department will determine fuel price adjustment by distributing the difference in the same proportion as the Item’s monthly Estimate quantity is to the total of the Item’s monthly estimates.

THE 13 TH AND 15 TH LINE IN THE TABLE 160.03.01-1 IS CHANGED TO:

SOIL AGGREGATE BASE COURSE, ___ " THICK	1 Gallon per Cubic Yard
DENSE-GRADED AGGREGATE BASE COURSE, ___ " THICK	1 Gallon per Cubic Yard

THE 25 TH LINE IN THE TABLE 160.03.01-1 IS CHANGED TO:

HOT MIX ASPHALT _____ BASE COURSE	2.50 Gallons per Ton
-----------------------------------	----------------------

THE FOLLOWING ARE ADDED TO TABLE 160.03.01-1

Items	Fuel Usage Factor
NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	2.50 Gallons per Ton
COLOR-COATED NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	2.50 Gallons per Ton

160.03.02 Asphalt Price Adjustment

NOTE 1 OF THE THIRD PARAGRAPH IS CHANGED TO:

- The Department will determine the weight of asphalt binder for price adjustment by multiplying the percentage of new asphalt binder in the approved job mix formula by the weight of the item containing asphalt binder. If a Hot Mix Asphalt item has a payment unit other than ton, the Department will apply an appropriate conversion factor to determine the number of tons used.

THE FOURTH PARAGRAPH IS CHANGED TO:

For TACK COAT and PRIME COAT, the Department will calculate asphalt price adjustments by the following formula:

$$A = B \times [(MA - BA)/BA] \times C \times M \times G$$

Where:

- A = Asphalt Price Adjustment
- B = Bid Price for Tack Coat/Prime Coat
- MA = Monthly Asphalt Price Index
- BA = Basic Asphalt Price Index
- C = Petroleum Content of the Tack Coat and Prime Coat in Percent by Volume:
 - Use 100% for cutbacks and Tack Coat 64-22
 - 60% for Polymer Modified Tack Coat
 - 60% for RS or similar type emulsions
- M = Percentage of Bid Price Applicable to Materials Only: Use 82%
- G = Gallons of Tack Coat and Prime Coat Furnished and Applied

160.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEMS' PAY UNITS ARE REVISED TO:

Item

FUEL PRICE ADJUSTMENT
ASPHALT PRICE ADJUSTMENT

Pay Unit

DOLLAR
DOLLAR

ITEM 21. FINAL CLEANUP

SECTION 161 – FINAL CLEANUP

NO REVISIONS TO THIS SUBSECTION

DIVISION 200 – EARTHWORK

ITEM 22. CLEARING SITE

SECTION 201 – CLEARING SITE

201.03.01 Clearing Site

B. Clearing and Grubbing.

THE FOLLOWING IS ADDED:

Dispose of material and debris as specified in 201.03.09.

201.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

The Department will not make payment for the Item CLEARING SITE in excess of 80% until Completion.

ITEM 23. EXCAVATION, TEST PIT
ITEM 24. EXCAVATION, UNCLASSIFIED
ITEM 25. REMOVAL OF PAVEMENT

SECTION 202 – EXCAVATION

202.02 MATERIALS

THE FIRST IN THE LIST IS CHANGED TO:

Coarse Aggregate (No. 57, or 67)..... 901.03

202.03.03 Excavating Unclassified Material

A. Excavating.

THE FIRST PARAGRAPH IS CHANGED TO:

The Department, as the generator, is solely responsible for the designation of excavated material. Unclassified excavation consists of excavation and management of material of whatever nature encountered, except for regulated material, pavement removal and acid producing soil.

202.03.07 Reuse or Disposal of Excess Material

A. Reuse.

THE THIRD PARAGRAPH IS CHANGED TO:

Upon RE’s approval, reuse excavated soil to widen or flatten slopes of embankment, to fade embankments into cuts, or as approved at other locations. Ensure that the excess material is not reused within a wetland, a transition area, a riparian zone, a flood hazard area or other regulated area without obtaining an appropriate NJDEP permit.

B. Disposal.

PARTS 1 AND 2 UNDER THE FIRST PARAGRAPH ARE CHANGED AND PART 3 IS ADDED:

1. At least 10 days before disposing, submit the disposal procedure and location to the RE for approval. Do not dispose of excavation on property proposed to be or used for parks, playgrounds, and other recreational purposes; residential facilities; educational facilities; environmentally sensitive areas such as wetlands; historic sites; or within sight of a State highway during all seasons.
2. Obtain the potential owner's notarized authorization of the acceptance of the excess material. If the potential owner requires environmental material sampling, obtain RE’s approval at least 7 days before sampling for oversight only. Approval of the sampling does not imply agreement with the sampling

- results and the Department reserves the right to sample the material for classification. Provide the RE all testing results and documentation associated with the sampling.
3. Load and transport excess material that the RE determines to be excess, unusable or unsuitable for the project according to Federal, State, and local law, rules and regulations.

ITEM 26. I-14 SOIL AGGREGATE

SECTION 203 – EMBANKMENT

203.02.01 Materials

THIS SUBPART IS CHANGED TO:

Provide materials as specified:

Soil Aggregate (I-7, I-9, I-10, I-11, I-13, and I-14)..... 901.11

DIVISION 300 – SUBBASE AND BASE COURSES

ITEM 27. DENSE-GRADED AGGREGATE BASE COURSE, 6” THICK
ITEM 28. DENSE-GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS

SECTION 302 – AGGREGATE BASE COURSE

NO REVISIONS TO THIS SUBSECTION

DIVISION 400 – PAVEMENTS

ITEM 29. HMA MILLING, 3” OR LESS

ITEM 30. TACK COAT

ITEM 31. PRIME COAT

ITEM 32. HOT MIX ASPHALT 9.5 M 64 SURFACE COURSE

ITEM 33. HOT MIX ASPHALT 19 M 64 BASE COURSE

SECTION 401 – HOT MIX ASPHALT (HMA) COURSES

401.02.01 Materials

EMULSIFIED ASPHALT UNDER TACK COAT IS REVISED TO:

Emulsified Asphalt, Grade RS-1, CRS-1, SS-1, SS-1h, Grade CSS-1 or CSS-1h 902.01.03

THE FOLLOWING IS ADDED TO THE MATERIALS LIST

Polymer Modified Tack Coat 902.01.04

401.02.02 Equipment

THE LAST PARAGRAPH IS CHANGED TO:

When an MTV is used, install a paver hopper insert with a minimum capacity of 14 tons in the hopper of the HMA paver.

401.03.01 Preparing Existing Pavement

A. Milling of HMA.

Stage	Max. time interval allowed

THE FOLLOWING IS ADDED AFTER THE FOURTH PARAGRAPH:

Sawcut at the limit of paving in driveways and at other limits requiring a neat edge between new and existing HMA.

D. Repairing HMA Pavement.

THE ENTIRE TEXT IS CHANGED TO:

If potholes are discovered, notify the RE immediately. The RE may immediately direct repairs of small areas. The RE may require further evaluation of a large area to determine the need for additional milling and paving.

Sawcut existing HMA pavement to a maximum depth of 10 inches, or to the full depth of bound layers, whichever is less. Sawcut lines parallel and perpendicular to the roadway baseline and 3 inches away, at the closest point, from the damaged area to be repaired.

Remove damaged and loose material to a depth of at least 3 and no more than 10 inches below the level of milling within the boundary of the sawcuts to form rectangular openings with vertical sides. Shape and compact the underlying surface to produce a firm, level base. Ensure that the remaining pavement is not damaged.

Apply polymerized joint adhesive or tack coat to the vertical surfaces of the openings. Spread and grade HMA in the opening as directed by the RE. Ensure that the temperature of the HMA when placed is at least 250 °F, and compact as specified in 401.03.03.F. Compact areas not accessible to rollers with a flat face compactor. Compact until the top of the patch is flush with the adjacent pavement surface.

Reuse removed material as specified in 202.03.07.A.

401.03.02 Tack Coat and Prime Coat

THE ENTIRE TEXT IS CHANGED TO:

Clean the surface where the HMA is to be placed of foreign and loose material. Immediately before beginning paving operations, ensure that the surface is dry. Do not place tack coat or prime coat unless the weather restrictions, as specified in 401.03.03.B, are met.

Do not apply tack coat or prime coat to asphalt-stabilized drainage course.

For curbs, gutters, manholes, and other similar structures, do not apply tack coat or prime coat. Clean the exposed surfaces of these structures and apply a uniform coating of polymerized joint adhesive to contact surfaces before paving.

In areas inaccessible to distributor spray bars, use hand spraying equipment for tack and prime coat. Do not allow traffic on tack coated or prime coated surfaces. Treat surfaces as follows:

- 1. Tack Coat.** Uniformly spray tack coat when placing HMA on paved surfaces. Apply tack coat only to areas to be paved in the same day. Apply tack coat as specified in Table 401.03.02-1:

Table 401.03.02-1 Tack Coat Application			
Material	Spraying Temp, °F	Gallons per Square Yard	Season
Cut-Back Asphalt:			
RC-70	120 to 190	0.05 to 0.15	Oct 15 to Apr 15
Emulsified Asphalt:			
RS-1	70 to 140	0.05 to 0.15	All year
CRS-1	125 to 185	0.05 to 0.15	All year
SS-1, SS-1h	70 to 140	0.05 to 0.15	All year
CSS-1, CSS-1h	70 to 140	0.05 to 0.15	All year

Correct uncoated or lightly coated areas. Blot areas showing an excess of tack coat with sand or other similar material. Remove blotting material before paving. Ensure that the material is not streaked or ribboned.

Before paving, allow tack coat to cure to a condition that is tacky to the touch.

- 2. Tack Coat 64-22.** When precipitation has occurred within 24 hours before application, the RE will determine whether to allow the work to proceed, or to wait until the surface is completely dry. Only apply tack coat that can be paved over in the same day. Apply tack coat 64-22 at a rate of 0.06 to 0.14 gallons per square yard and at a spraying temperature of 325 °F. Adjust the spraying temperature and application rate to produce a uniform coating, with no excess material.

Correct uncoated or lightly coated areas and remove excess tack coat from affected areas. Ensure that the material is not streaked or ribboned.

- 3. Polymer Modified Tack Coat.** Apply polymer modified tack coat with an ultra-thin paver at a temperature of 140 to 175 °F. Continuously monitor rate of spray, ensuring a uniform application rate over entire width to be overlaid. Apply at the rate of 0.20 ± 0.05 gallons per square yard. Do not allow traffic, equipment, tools, or any other disturbance to the polymer modified tack coat before placing the ultra-thin friction course.

- 4. Prime Coat.** Apply prime coat of cut-back asphalt on unpaved surfaces as follows:

Table 401.03.02-2 Prime Coat Application			
Cut-Back Asphalt	Spraying Temp, °F	Gallons per Square Yard	Season
MC-30	85 to 150	0.1 to 0.5	Oct 15 to Apr 15
MC-70	120 to 190	0.1 to 0.5	Oct 15 to Apr 15
Emulsified Asphalt:			
CSS-1	70 to 140	0.1 to 0.50	All year

Apply prime coat at least 12 hours before placement of the HMA and when the base courses are not saturated or frozen. Unless the prime coat is under asphalt-stabilized drainage course, the RE may waive the application of prime coat if more than 5 inches of HMA is placed on the unbound aggregate course before the

roadway is opened to traffic. Take measures to prevent prime coat from entering into the drainage system or extending beyond the area to be paved.

401.03.03 HMA Courses

A. Paving Plan.

THE FOLLOWING IS ADDED AT THE END OF THE FIRST PARAGRAPH:

15. If applicable, the warm mix asphalt additive or process being used.

C. Test Strip.

THE FOLLOWING IS ADDED AT THE END OF THE FIRST PARAGRAPH:

7. **Warm Mix Asphalt.** Note the warm mix asphalt additive or process, if used.

D. Transportation and Delivery of HMA.

THE FIRST PARAGRAPH IS CHANGED TO:

Deliver HMA using HMA trucks in sufficient quantities and at such intervals to allow continuous placement of the material. Do not allow trucks to leave the plant within 1 hour of sunset unless nighttime lighting is provided as specified in 108.06. The RE will reject HMA if the HMA trucks do not meet the requirements specified in 1009.02. The RE will suspend construction operations if the Contractor fails to maintain a continuous paving operation. Before the truck leaves the plant, obtain a weigh ticket from a fully automatic scale. Before unloading, submit for each truckload a legible weigh ticket that includes the following:

1. Name and location of the HMA plant.
2. Project title.
3. Load time and date.
4. Truck number.
5. Mix designation.
6. Plant lot number.
7. Tare, gross, and net weight.

E. Spreading and Grading.

THE THIRD PARAGRAPH IS CHANGED TO:

The use of an MTV is optional for the construction of intermediate and surface course in the traveled way. If an MTV is used, ensure that the MTV independently delivers HMA from the HMA trucks to the HMA paver. Operate the MTV to ensure that the axle loading does not damage structures, roadway, or other infrastructure.

G. Opening to Traffic.

THE ENTIRE TEXT IS CHANGED TO:

Remove loose material from the traveled way, shoulder, and auxiliary lanes before opening to traffic. Open HMA courses to traffic or construction equipment, including paving equipment, only after the surface temperatures meet the following requirements:

1. When using PG 64-22, do not allow traffic or construction equipment on the HMA course until the surface temperature is less than 140 °F.
2. When using PG 64E-22, do not allow traffic or construction equipment on the HMA course until the surface temperature is less than 170 °F.
3. When using Warm Mix Asphalt, do not allow traffic or construction equipment on the HMA course until the surface temperature is less than 120 °F.

H. Air Void Requirements.

THE FIRST PARAGRAPH IS CHANGED TO:

Mainline lots are defined as the area covered by a day's paving production of the same job mix formula for the traveled way and auxiliary lanes. The RE may combine daily production areas less than 1000 tons with previous or subsequent production areas. If a day's production is greater than 4000 tons, the RE may divide the area of HMA placed into 2 lots with approximately equal areas.

THE FOLLOWING IS ADDED TO THE THIRD PARAGRAPH:

Inside shoulders less than 6 feet in width will not be included in other lots unless requested by the RE.

THE FOLLOWING IS ADDED AFTER THE THIRD PARAGRAPH:

If areas of existing shoulders are found to be insufficient to support the proposed HMA pavement and the required compaction cannot be achieved, notify the RE immediately. The RE may either direct additional milling and paving to provide a suitable base to pave the proposed HMA or waive coring and air void requirements in such shoulder areas.

SUBPART 5 & 7 ARE CHANGED TO:

5 Outlier Detection. If $PD < 10$, the ME will not screen for outliers. If $PD \geq 10$, the ME will screen acceptance cores for outliers using a statistically valid procedure. The following procedure applies only for a sample size of 5 or 10.

1. The ME will arrange the core results in ascending order, in which X_1 represents the smallest value and X_N represents the largest value.
2. If X_N is suspected of being an outlier, the ME will calculate:

$$R = \frac{X_N - X_{(N-1)}}{X_N - X_1}$$

3. If X_1 is suspected of being an outlier, the ME will calculate:

$$R = \frac{X_2 - X_1}{X_N - X_1}$$

4. For $N=5$ if $R > 0.642$, the value is judged to be statistically significant and the core is excluded. For $N = 10$ if $R > 0.412$, the value is judged to be statistically significant and the core is excluded.

If an outlier is detected and no retest is warranted, the Contractor may replace that core by taking an additional core at the same offset and within 5 feet of the original station. If an outlier is detected and a retest is justified, take a replacement core for the outlier at the same time as the 5 additional retest cores are taken. If the outlier replacement core is not taken within 15 days, the ME will use the initial core results to determine PPA.

If an outlier is detected for $N = 10$, the Contractor may replace that core by taking an additional core at the same offset and within 5 feet of the original station. If the outlier replacement core is not taken within 15 days, the ME will use the initial core results to determine PPA.

7 Removal and Replacement. If the final lot $PD \geq 75$ (based on the combined set of 10 cores or 5 cores if the Contractor does not take additional cores), remove and replace the lot and all overlying work. The replacement work is subject to the same requirements as the initial work.

For shoulder lots, instead of removal and replacement, the Department will assess the calculated PPA, and the Contractor shall perform a fog seal of the lot as specified in 422.03.01.

J. Ride Quality Requirements.

THIS ENTIRE SUBPART IS CHANGED TO:

The Department will not test the longitudinal profiles of the final riding surface for pay adjustment.

401.03.04 Sawcutting and Sealing of Joints in HMA Overlays

THE TEXT OF THIS SUBPART IS DELETED.

THIS SUBPART IS INTENTIONALLY LEFT BLANK

401.03.05 Core Samples

THE LAST SENTENCE OF THE 2ND PARAGRAPH IS CHANGED TO THE FOLLOWING:

Apply an even coating of tack coat to sides of the hole. Place HMA in maximum lifts of 4 inches in the hole and compact each lift. Ensure that the final surface is 1/4 inch above the surrounding pavement surface.

401.04 MEASUREMENT AND PAYMENT

THE FOURTH PARAGRAPH IS CHANGED TO:

The Department will measure TACK COAT, TACK COAT 64-22, PRIME COAT and POLYMER MODIFIED TACK COAT by the volume delivered, converted to the number of gallons at 60 °F as calculated by the temperature-volume correction factors specified in 902.01.

THE FOLLOWING IS ADDED:

The Department will make a payment adjustment for HMA air void quality by the following formula:

$$\text{Pay Adjustment} = Q \times \text{BP} \times \text{PPA}$$

Where:

BP = Bid Price

Q= Air Void Lot Quantity

PPA= air void PPA as specified in 401.03.03H.

The Department will make a payment adjustment for HMA thickness quality by the following formula:

$$\text{Pay Adjustment} = Q \times \text{BP} \times \text{PPA}$$

Where:

BP = Bid Price

Q= Thickness Lot Quantity

PPA= thickness PPA as specified in 401.03.03I

The Department will make a payment adjustment for HMA ride quality, as specified in 401.03.03J.

DIVISION 500 – BRIDGES AND STRUCTURES

SEE SUPPLEMENTARY BRIDGE SPECIFICATIONS.

DIVISION 600 – MISCELLANEOUS CONSTRUCTION

ITEM 34. 15” REINFORCED CONCRETE PIPE

SECTION 601 – PIPE

601.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

The Department will make payment for restoring the pavement structure for trenches in the traveled way and shoulder under various Items of the Contract.

ITEM 35. INLET TYPE B

ITEM 36. INLET TYPE B-1

ITEM 37. INLET TYPE B-2

ITEM 38. RESET EXISTING CASTING

ITEM 39. SET INLET TYPE B, CASTING

ITEM 40. RECONSTRUCTED INLET, TYPE B, USING EXISTING CASTING

ITEM 41. RECONSTRUCTED INLET, TYPE B, USING NEW CASTING

ITEM 42. RECONSTRUCTED INLET, TYPE E, USING NEW CASTING

SECTION 602 – DRAINAGE STRUCTURES

NO REVISIONS TO THIS SUBSECTION

ITEM 43. TEMPORARY CHAIN-LINK FENCE, 6’ HIGH

SECTION 605 – FENCE

NO REVISIONS TO THIS SUBSECTION

ITEM 44. CONCRETE SIDEWALK, 4” THICK

ITEM 45. HOT MIX ASPHALT DRIVEWAY, 9” THICK

ITEM 46. CONCRETE DRIVEWAY, 6” THICK

SECTION 606 – SIDEWALKS, DRIVEWAYS, AND ISLANDS

606.03.02 Concrete Sidewalks, Driveways, and Islands

F. Placing Concrete.

THE ENTIRE PART F. IS CHANGED TO:

Obtain RE approval of forms and joint placement before placing concrete. Place concrete according to the limitations specified in 504.03.02.C. To place concrete between November 1 and March 15, submit to RE for approval a plan detailing the method of protecting the concrete from salt for at least 30 days after placing. Do not begin placing concrete until this plan is approved. Place concrete across the formed area to minimize rehandling. Ensure that concrete is not discharged into windrows or piles. Continuously place concrete between transverse joints without the use of intermediate bulkheads. To prevent bowing or misalignment of the transverse joints, place concrete simultaneously on both sides of transverse joints without disturbing the joints. Consolidate the concrete by hand spading or using internal

mechanical vibrators. If a slab is not completed from transverse joint to transverse joint, remove the incomplete slab and replace. Terminate each day's placement at a transverse joint. If concrete becomes segregated during placement, cease operations and correct handling operations. Protect concrete as specified in 504.03.02.I.

H. Protection and Curing.

THE LAST SENTENCE IS CHANGED TO:

Ensure vehicles and other loads are not placed on sidewalks, islands, and driveways until the concrete has attained compressive strength of 3000 pounds per square inch, as determined from 2 concrete cylinders field cured according to AASHTO T 23.

ITEM 47. 9" X 18" CONCRETE VERTICAL CURB
ITEM 48. GRANITE CURB

SECTION 607 – CURB

607.03.01 Concrete Barrier Curb

D. Placing Concrete.

THE THIRD SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

To place concrete between November 1 to March 15, submit to RE for approval a plan detailing the method of protecting the concrete from salt for at least 30 days after placing.

607.03.02 Concrete Vertical Curb and Concrete Sloping Curb

D. Placing Concrete.

THE ENTIRE TEXT IS CHANGED TO:

Place concrete for vertical curb and sloping curb as specified in 607.03.01.D, except that consolidation may be achieved by hand spading or internal mechanical vibrators.

607.03.04 Concrete Vertical Curb and Concrete Sloping Curb, Dowelled

D. Placing Concrete.

THE ENTIRE TEXT IS CHANGED TO:

Place concrete for vertical and sloping curb as specified in 607.03.02.D.

ITEM 49. TRAFFIC STRIPES, 4"
ITEM 50. TRAFFIC MARKINGS
ITEM 51. RPM, BI-DIRECTIONAL, AMBER LENS
ITEM 52. REMOVAL OF RPM

SECTION 610 – TRAFFIC STRIPES, TRAFFIC MARKINGS, AND RUMBLE STRIPS

610.02.01 Materials

THE FOLLOWING MATERIALS ARE RENAMED TO:

Traffic Stripes.....	912.03.01
Traffic Markings.....	912.03.02

610.03.01 Long-Life Traffic Stripes

THE SUBPART HEADING AND THE ENTIRE TEXT IS CHANGED TO:

610.03.01 Traffic Stripes

A. Striping Plan. At least 20 days before beginning the work, submit to the RE for approval a striping plan that includes:

1. Schedule of operations for applying traffic stripes.
2. Number and type of equipment.
3. Manufacturer's recommendations for use of the materials, including, but not limited to, mixing ratios and application temperatures.
4. Details on the means and methods for surface preparation
5. Details on the means and methods for premarking
6. Details on the proposed test strip such as location, length etc

B. Surface Preparation. Immediately before striping the pavement surface, clean the surface of dirt, oil, grease, and foreign material, including curing compound on new concrete. Clean the surface 2 inches beyond the perimeter of the stripes to be placed.

C. Striping Test Strip. Before beginning striping operations, construct 1 or more striping test strips to demonstrate the Contractor's ability to meet the requirements specified in 610.03.01.D. For each striping test strip, apply striping to approximately 500 linear feet of pavement with the same striping procedure that will be used for the Project. Construct a test strip for each applicator unit and epoxy resin material used. Provide the RE with 50 test cards made of heavy stock paper measuring 8 inches by 2 inches, and two wet film thickness gauges. Construct additional test strips when major equipment repairs or adjustments are made or when the traffic stripes are determined to be defective. Construct additional test strips when traffic striping operations are performed on multiple, non-continuous occasions. Perform additional test strips as requested by the RE. When the test strip is in compliance, as determined by the RE, proceed with striping operations. Each test strip may remain in place and become part of the finished stripes subject to the requirements of 610.03.01.E.

D. Applying Striping. Mix epoxy resin with an automatic proportioning and mixing machine, and hot-spray the compound at a temperature of between 100 and 130 °F onto dry surfaces. Apply the compound with a wet film thickness of 20 ± 1 mil. Apply the material during dry weather conditions when the ambient temperature is a minimum of 45 °F and the surface temperature is a minimum of 50 °F. Adjust operations as required for the prevailing ambient and surface conditions to achieve a no-track drying time of 30 minutes or less.

Immediately after, or in conjunction with, the compound application, uniformly apply 12 pounds of large glass beads per gallon of epoxy resin to the compound. After applying the large glass beads, uniformly apply 12 pounds of small glass beads per gallon of epoxy resin to the compound.

Remove all compound that has been tracked or spilled outside of the intended placement areas.

E. Performance. Ensure that the traffic stripes, show no fading, lifting, cracking, chipping for any reason including but not limited to traffic wear, maintenance activities including snow plowing, until Acceptance. Ensure that 60 days after application, traffic stripes have a minimum retroreflectance value of:

375 millicandelas per square meter per lux for white traffic stripe

250 millicandelas per square meter per lux for yellow traffic stripe

F. Defective work. Replace traffic stripes that are determined by the RE before Acceptance to be defective or that are damaged during construction. Remove defective stripes as specified in 610.03.08.

Replace an entire 10-foot skip line if the RE determines the stripe to have a deficiency.

If the RE determines, based upon calculated and measured yields, that the striping has a wet film thickness of less than 19 mils, restripe the entire length with 20 mils of new compound.

Provide the RE with an LTL-X Reflectometer that has been certified by the manufacturer as being calibrated within the last two years. The RE will test the retroreflectance of traffic stripes. Replace traffic stripes that do not meet the retroreflectance values indicated in 610.03.01.E. Replace the entire length of striping where improper curing or discoloration has occurred. Discoloration is localized areas or patches of brown or grayish colored compound. Where improper curing or discoloration occurs intermittently in intervals of 100 feet or less throughout the striping length, replace the entire length of striping from the beginning of the first occurrence until the end of the last occurrence, plus 5 feet on each end.

Replace the entire length of striping that has failed to bond to the pavement, or has chipped or cracked. Where more than 25 spots of chipping, cracking, or poor bonding have occurred within 1000 linear feet of striping, replace the entire 1000 foot length of striping as indicated in 610.03.01.E.

- G. Opening to Traffic.** Complete each application of all types of traffic stripes and allow to thoroughly dry before opening to traffic. At a minimum, delineate center lines on undivided roadways and broken lines between lanes before the traveled way is opened. The RE will determine when the traveled way can be opened to traffic.

610.03.02 Thermoplastic Traffic Markings

THE SUBPART HEADING AND THE ENTIRE TEXT IS CHANGED TO:

610.03.02 Traffic Markings

- A. Marking Plan.** At least 20 days before beginning the work, submit to the RE for approval a marking plan that includes:

1. Schedule of operations for applying traffic markings,
2. Number and type of equipment,
3. Manufacturer's recommendations for use of the materials, including mixing ratios and application temperatures.
4. Details on the means and methods for surface preparation
5. Details on the means and methods for premarking

- B. Surface Preparation.** Immediately before marking the pavement surface, clean the surface of dirt, oil, grease, and foreign material, including curing compound on new concrete. Clean the surface 2 inches beyond the perimeter of the marking to be placed.

- C. Applying Traffic Markings.** Place preformed thermoplastic or hot extruded thermoplastic traffic markings on thoroughly dry surfaces and during dry weather conditions. Apply using equipment and procedures that produce markings of the specified color, width, and thickness with well-defined edges, uniform retroreflectivity, and proper bonding to the pavement. Apply the thermoplastic material as follows:

1. **Preformed Thermoplastic.** Melt the preformed thermoplastic tape to bond the traffic markings permanently in position according to the manufacturer's recommendations.

Meet the minimum initial retroreflectance value, as specified in 610.03.01.D for thermoplastic tape, by applying additional glass beads to the hot-wet material in a uniform pattern as necessary.

2. **Extruded Thermoplastic.** Uniformly heat the thermoplastic material. When the ambient and surface temperatures are at least 50 °F, apply the melted material at a temperature of between 400 and 425 °F. Extrude the thermoplastic traffic markings on the HMA or concrete pavement ensuring a thickness of 90 ± 1 mils.

Immediately after, or in conjunction with the thermoplastic extrusion, uniformly apply glass beads to the wet material at a minimum rate of 10 pounds per 100 square feet of markings. Apply glass beads by mechanical means only.

- D. Performance.** Ensure that the traffic markings show no fading, lifting, cracking, chipping for any reason including but not limited to traffic wear, maintenance activities including snow plowing, until Acceptance. Ensure that 60 days after application, traffic markings have a minimum retroreflectance value of:

375 millicandelas per square meter per lux for white traffic markings

250 millicandelas per square meter per lux for yellow traffic markings

- E. Defective work.** Replace thermoplastic traffic markings that are determined by the RE before Acceptance to be defective or that are damaged during construction. Remove defective markings as specified in 610.03.08.

Replace the entire area of thermoplastic traffic markings determined to be less than the required thickness, to have incorrect color or width, to have failed to bond to the pavement, or to have chipped or cracked. The minimum replacement area is an individual word or symbol, or for longitudinal lines the entire length from where the deficiency first occurs to where it no longer exists.

The RE will determine initial retroreflectance as follows:

Provide the RE with an LTL-X Reflectometer that has been certified by the manufacturer as being calibrated within the last two years. The RE will test the retroreflectance of traffic markings. Replace traffic markings that do not meet the retroreflectance values indicated in 610.03.02.D.

F. Opening to Traffic. Complete each application of thermoplastic traffic markings and allow to thoroughly dry before opening to traffic. The RE will determine when the traveled way can be opened to traffic.

610.03.04 Removal of RPMs

THE ENTIRE TEXT IS CHANGED TO:

Remove RPMs as directed by the RE. Dispose of RPMs as specified in 201.03.09. If directed by the RE, fill the hole with HMA patch as specified in 159.03.07 except sawcutting is not required.

610.03.06 Ground Mounted Flexible Delineators

THE FIRST PARAGRAPH IS CHANGED TO:

Use white retroreflective sheeting for delineators located on the right side when facing in the direction of traffic. Use yellow retroreflective sheeting for delineators located on the left side when facing in the direction of traffic.

610.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS DELETED:

<i>Item</i>	<i>Pay Unit</i>
RPM, BI-DIRECTIONAL, WHITE LENS	UNIT

THE FOLLOWING ITEMS ARE THE RENAMED ITEMS:

<i>Item</i>	<i>Pay Unit</i>
TRAFFIC STRIPES ___ "	LINEAR FOOT
TRAFFIC MARKINGS	SQUARE FOOT

THE FOLLOWING IS ADDED AT THE END OF THE SUBSECTION:

The Department will measure rumble strip by the linear foot measured in the longitudinal direction of the rumble strip without deducting the interval spacing between rumble strips and the gaps for RPM placement and make payment under the Item RUMBLE STRIP.

The Department will not include payment for traffic stripes in RUMBLE STRIP. The Department will make payment for traffic stripes placed in conjunction with constructing a centerline rumble strip under TRAFFIC STRIPES as specified in 610.04.

The Department will not include payment for fog seal in RUMBLE STRIP. The Department will measure and make payment for FOG SEAL STRIP as specified in 422.04.

The Department will not measure the gaps such as WIM locations in the Rumble Strip.

ITEM 53. RESET SIGN USING STEEL “U” POST

SECTION 612 – SIGNS

612.02 MATERIALS

THE FOLLOWING IS DELETED FROM THE MATERIALS LIST.

Non-Breakaway Sign Supports	911.02.03
-----------------------------------	-----------

THE SECOND PARAGRAPH IS DELETED.

THE FOLLOWING SUBSECTION IS ADDED:

612.03.04 Reset Sign Using Steel “U” Post

Where signs are required for resetting, remove, store and protect the components until resetting. Reset the existing signs at their original locations or as determined by the RE.

Erect steel “U”posts in accordance with Section 911.02 or to the satisfaction of the RE.

612.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
RESET SIGN USING STEEL “U” POST	UNIT

DIVISION 600 – MISCELLANEOUS CONSTRUCTION

ITEM 54. RESET WATER VALVE BOX

SECTION 651 – WATER

NO REVISIONS TO THIS SUBSECTION

ITEM 55. RESET MANHOLE, SANITARY SEWER, USING EXISTING CASTING

SECTION 652 – SANITARY SEWERS

NO REVISIONS TO THIS SUBSECTION

ITEM 56. RESET GAS VALVE BOX

SECTION 653 – GAS

NO REVISIONS TO THIS SUBSECTION

DIVISION 800 – LANDSCAPING

ITEM 57. TOPSOILING, 4” THICK
ITEM 58. BORROW TOPSOIL

SECTION 804 – TOPSOILING

NO REVISIONS TO THIS SUBSECTION

ITEM 59. FERTILIZING AND SEEDING, TYPE A-3

SECTION 806 – FERTILIZING AND SEEDING

NO REVISIONS TO THIS SUBSECTION

ITEM 60. STRAW MULCHING

SECTION 809 – MULCHING

NO REVISIONS TO THIS SUBSECTION

DIVISION 900 – MATERIALS

SECTION 901 – AGGREGATES

THE ENTIRE SUBSECTION IS CHANGED TO:

901.07 GRIT

901.07.01 Grit for Epoxy Waterproofing. Use grit for spreading over the epoxy waterproofing that is a subangular, natural, 98 percent silica sand. Ensure that 90 percent of the total sample by weight falls between the No. 4 and No. 30 sieves, with 0 percent passing the No. 30 sieve.

901.07.02 Fine Aggregate for Fog Seal. Use fine aggregate for spreading over fog seal that conforms to 901.05.02 and the gradation requirements in Table 901.07.02-1:

Sieve Size	Percent Passing
No. 8	100
No. 16	90 - 100
No. 50	70- 100
No. 200	0 - 2

901.11 SOIL AGGREGATE

1. Composition of Soil Aggregate.

THE FOLLOWING IS ADDED TO THE LAST PARAGRAPH:

For Designation I-14, the Contractor may use up to 30 percent steel slag by weight of the coarse aggregate portion of the soil aggregate. Obtain steel slag from a source listed on the QPL as specified in 901.01. Use steel slag that was produced as a co-product of the steel making process. Ensure that the steel slag consists of tough, durable pieces that are uniform in density and quality. Stockpile steel slag as specified in 901.02. Ensure steel slag for blending with I-14 Soil Aggregate does not exceed 0.50 percent expansion from hydration when tested according to ASTM D 4792.

SECTION 902 – ASPHALT

902.01.01 Asphalt Binder

THE SECOND PARAGRAPH IS CHANGED TO:

When specified, use PG 64E-22 asphalt binder that is a storage-stable and conforms to AASHTO MP 19 (AASHTO M 332), including compliance with the elastic response requirement in Appendix 1.

THE FOLLOWING SUBPART IS ADDED:

902.01.05 Warm Mix Asphalt (WMA) Additives and Processes

Use a WMA additive or process that is listed on the Northeast Asphalt User/Producer Group (NEAUPG) Qualified WMA Technologies List which can be found at the following website: <http://www.neaupg.uconn.edu/>

If an approved HMA mix design is used, a separate mix design with WMA additives or processes is not required.

Submit information on the WMA additive or process with the Paving Plan required in 401.03.03.A. For controlled foaming systems, also submit the operating parameters of the system including accuracy of the meter, operating range, and temperature of the binder. Provide the target and operating tolerances for the percent water injection and temperatures for the binder. Provide a method for validating this with changing production rates.

Ensure that a technical representative of the manufacturer is on-site or available for consultation for the first day or night of production.

902.02.01 Mix Designations

THE ENTIRE SUBPART IS CHANGED TO:

The requirements for specific HMA mixtures are identified by the abbreviated fields in the Item description as defined as follows:

HOT MIX ASPHALT 12.5ME SURFACE COURSE

1. **“HOT MIX ASPHALT”** “Hot Mix Asphalt” is located in the first field in the Item description for the purpose of identifying the mixture requirements.
2. **“12.5”** The second field in the Item description designates the nominal maximum size aggregate (in millimeters) for the job mix formula (sizes are 4.75, 9.5, 12.5, 19, 25, and 37.5 mm).
3. **“M”** The third field in the Item description designates the design compaction level for the job mix formula based on traffic forecasts as listed in Table 902.02.03-2 (levels are L=low and M=medium).
4. **“E”** The fourth field in the Item description designates the high temperature designation of the performance-graded binder. Options are “64” for PG 64-22 and “E” for PG 64E-22.
5. **“SURFACE COURSE”** The last field in the Item description designates the intended use and location within the pavement structure (options are surface, intermediate, or base course).

902.02.02 Composition of Mixtures

THE ENTIRE SUBPART IS CHANGED TO:

Provide materials as specified:

Aggregates for Hot Mix Asphalt	901.05
Asphalt Binder	902.01.01
Warm Mix Additives and Processes (optional)	902.01.05

If a WMA additive is pre-blended in the asphalt binder, ensure that the asphalt binder meets the requirements of the specified grade after the addition of the WMA additive. If a WMA additive is added at the HMA plant, ensure that the addition of the additive will not negatively impact the grade of asphalt binder. Follow the manufacturer’s recommendations for percentage of WMA additive needed.

Mix HMA in a plant that is listed on the QPL and conforms to the requirements for HMA Plants as specified in 1009.01.

Composition of the mixture for HMA surface course is coarse aggregate, fine aggregate, and asphalt binder, and may also include mineral filler, WMA additive, and up to 15 percent Reclaimed Asphalt Pavement (RAP). For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive. Ensure that the finished mix does not contain more than a total of 1 percent by weight contamination from Crushed Recycled Container Glass (CRCG).

The composition of the mixture for HMA base or intermediate course is coarse aggregate, fine aggregate, and asphalt binder, and may also include mineral filler, WMA additive and up to 35 percent of recycled materials. For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive. The 35 percent of recycled materials may consist of a combination of RAP, CRCG, Ground Bituminous Shingle Material (GBSM), and RPCSA, with the following individual limits:

Table 902.02.02-1 Use of Recycled Materials in HMA Base or Intermediate Course

Recycled Material	Maximum Percentage
RAP	25
CRCG	10
GBSM	5
RPCSA	20

Combine the aggregates to ensure that the resulting mixture meets the grading requirements specified in Table 902.02.03-1. In determining the percentage of aggregates of the various sizes necessary to meet gradation requirements, exclude the asphalt binder.

Ensure that the combined coarse aggregate, when tested according to ASTM D 4791, has less than 10 percent flat and elongated pieces retained on the No. 4 sieve and larger. Measure aggregate using the ratio of 5:1, comparing the length (longest dimension) to the thickness (smallest dimension) of the aggregate particles.

Ensure that the combined fine aggregate in the mixture conforms to the requirements specified in Table 902.02.02-2. Ensure that the material passing the No. 40 sieve is non-plastic when tested according to AASHTO T 90.

Table 902.02.02-2 Additional Fine Aggregate Requirements for HMA

Tests	Test Method	Minimum Percent
Uncompacted Void Content of Fine Aggregate	AASHTO T 304, Method A	45
Sand Equivalent	AASHTO T 176	45

902.02.03 Mix Design

TABLES 902.02.03-2, AND 902.02.03-3 ARE CHANGED TO:

Table 902.02.03-2 Gyrotory Compaction Effort for HMA Mixtures

Compaction Level	ESALs ¹ (millions)	N _{des}	N _{max}
L	< 0.3	50	75
M	≥ 0.3	75	115

- Design ESALs (Equivalent (80kN) Single-Axle Loads) refer to the anticipated traffic level expected on the design lane over a 20-year period.

Table 902.02.03-3 HMA Requirements for Design

Compaction Levels	Required Density (% of Theoretical Max. Specific Gravity)		Voids in Mineral Aggregate (VMA), % (minimum)						Voids Filled With Asphalt (VFA) ¹ %	Dust-to-Binder Ratio
	@N _{des} ²	@N _{max}	37.5	25.0	19.0	12.5	9.5	4.75		
L	96.0	≤ 98.0	11.0	12.0	13.0	14.0	15.0	16.0	70 - 80	0.6 - 1.2
M	96.0	≤ 98.0	11.0	12.0	13.0	14.0	15.0	16.0	65 - 78	0.6 - 1.2

- For 37.5-mm nominal maximum size mixtures, the specified lower limit of the VFA is 64 percent for all design traffic levels.
- As determined from the values for the maximum specific gravity of the mix and the bulk specific gravity of the compacted mixture. Maximum specific gravity of the mix is determined according to AASHTO T 209. Bulk specific gravity of the compacted mixture is determined according to AASHTO T 166. For verification, specimens must be between 95.0 and 97.0 percent of maximum specific gravity at N_{des}.

THE FOURTH PARAGRAPH IS CHANGED TO:

At the ME's request, test the mix design to ensure that it meets a minimum tensile strength ratio of 80 percent, when tested according to AASHTO T 283. The ME will require tensile strength ratio testing for new aggregate sources and for aggregates or mixes suspected of stripping susceptibility.

902.02.04 Sampling and Testing

THE ENTIRE TEXT IS CHANGED TO:

- A. General Acceptance Requirements.** The RE or ME may reject and require disposal of any batch or shipment that is rendered unfit for its intended use due to contamination, segregation, improper temperature, lumps of cold material, or incomplete coating of the aggregate. For other than improper temperature, visual inspection of the material by the RE or ME is considered sufficient grounds for such rejection.

For PG 64-22, ensure that the temperature of the mixture at discharge from the plant or surge and storage bins is at least 290 °F when the ambient temperature is less than 50 °F or is at least 275 °F when the ambient temperature is greater than or equal to 50 °F. For PG 64E-22, ensure that the temperature of the mixture at discharge from the plant or surge and storage bins is at least 10 °F above the manufacturer's recommended laydown temperature. For mixes produced using a WMA additive or process, ensure that the temperature of the mixture at discharge from the plant or surge and storage bins is at least 10 °F above the WMA manufacturer's recommended laydown temperature.

Do not allow the mixture temperature to exceed 330 °F at discharge from the plant.

Combine and mix the aggregates and asphalt binder to ensure that at least 95 percent of the coarse aggregate particles are entirely coated with asphalt binder as determined according to AASHTO T 195. If the ME determines that there is an on-going problem with coating, the ME may obtain random samples from 5 trucks and will determine the adequacy of the mixing on the average of particle counts made on these 5 test portions. If the requirement for 95 percent coating is not met on each sample, modify plant operations, as necessary, to obtain the required degree of coating.

If used, ensure that the equipment for controlled asphalt foaming system is running according to the manufacturer's recommendations. Ensure that the metering of water to foam the asphalt is controlled to produce a uniform mixture.

- B. Sampling.** The ME will take a random sample from each 700 tons of production for volumetric acceptance testing and to verify composition. The ME will perform sampling according to AASHTO T 168, NJDOT B-2, or ASTM D 3665.
- C. Quality Control Testing.** The HMA producer shall provide a quality control (QC) technician who is certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Technologist, Level 2. The QC technician may substitute equivalent technician certification by the Mid-Atlantic Region Technician Certification Program (MARTCP). Ensure that the QC technician is present during periods of mix production for the sole purpose of quality control testing and to assist the ME. The ME will not perform the quality control testing or other routine test functions in the absence of, or instead of, the QC technician.

The QC technician shall perform sampling and testing according to the approved quality control plan, to keep the mix within the limits specified for the mix being produced. The QC technician may use acceptance test results or perform additional testing as necessary to control the mix.

To determine the composition, perform ignition oven testing according to AASHTO T 308 and aggregate gradation according to AASHTO T 30.

For each acceptance test, perform maximum specific gravity testing according to AASHTO T 209 on a test portion of the sample taken by the ME. Sample and test coarse aggregate, fine aggregate, mineral filler, and RAP according to the approved quality control plan for the plant.

When using RAP, ensure that the supplier has in operation an ongoing daily quality control program to evaluate the RAP. As a minimum, this program shall consist of the following:

1. An evaluation performed to ensure that the material conforms to 901.05.04 and compares favorably with the design submittal.
2. An evaluation of the RAP material performed using a solvent or an ignition oven to qualitatively evaluate the aggregate components to determine conformance to 901.05.
3. Quality control reports as directed by the ME.

- D. Acceptance Testing and Requirements.** The ME will determine volumetric properties at Ndes for acceptance from samples taken, compacted, and tested at the HMA plant. The ME will compact HMA to the number of design gyrations (Ndes) specified in Table 902.02.03-2, using equipment according to AASHTO T 312. The ME will

determine bulk specific gravity of the compacted sample according to AASHTO T 166. The ME will use the most current QC maximum specific gravity test result in calculating the volumetric properties of the HMA.

The ME will determine the dust-to-binder ratio from the composition results as tested by the QC technician.

Ensure that the HMA mixture conforms to the requirements specified in Table 902.02.04-1, and to the gradation requirements in Table 902.02.03-1. If 2 samples in 5 consecutive samples fail to conform to the gradation or volumetric requirements, immediately initiate corrective action.

The ME will test a minimum of 1 sample per 3500 tons for moisture, basing moisture determinations on the weight loss of an approximately 1600-gram sample of mixture heated for 1 hour in an oven at $280 \pm 5^\circ\text{F}$. Ensure that the moisture content of the mixture at discharge from the plant does not exceed 1.0 percent.

Table 902.02.04-1 Hot Mix Asphalt Requirements for Control

Compaction Levels	Required Density (% of Theoretical Max. Specific Gravity) @Ndes ¹	Voids in Mineral Aggregate (VMA), % (minimum)						Dust-to-Binder Ratio
		Nominal Max. Aggregate Size, mm						
		37.5	25.0	19.0	12.5	9.5	4.75	
L, M	95.0 – 97.0	11.0	12.0	13.0	14.0	15.0	16.0	0.6 - 1.3

- As determined from the values for the maximum specific gravity of the mix and the bulk specific gravity of the compacted mixture. Maximum specific gravity of the mix is determined according to AASHTO T 209. Bulk specific gravity of the compacted mixture is determined according to AASHTO T 166.

902.03.01 Composition of Mixtures

THE ENTIRE TEXT IS CHANGED TO:

Mix OGFC and MOGFC in a plant that is listed on the QPL and conforms to the requirements for HMA plants as specified in 1009.01.

Composition of mixture for OGFC and MOGFC is coarse aggregate, fine aggregate and asphalt binder and may include a WMA additive. Ensure that the mixture conforms to the following requirements:

- Use aggregate for OGFC and MOGFC that conforms to 901.05, except, for coarse aggregate, use broken stone of gneiss, granite, quartzite, or trap rock. Do not use RAP, CRCG, GBSM, or RPCSA.
- Use asphalt binder for OGFC and MOGFC that is PG 64E-22 as specified in 902.01.01.
- If used, ensure that WMA additives or processes conform to 902.01.05. If a WMA additive is pre-blended in the asphalt binder, ensure that the asphalt binder meets the requirements of the specified grade after the addition of the WMA additive. If a WMA additive is added at the HMA plant, ensure that the addition of the additive will not negatively impact the grade of asphalt binder. Follow the manufacturer's recommendations for percentage of WMA additive needed. For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive.
- For MOGFC, add a stabilizing additive consisting of mineral fiber or cellulose fiber to the mix. Use a stabilizing additive that conforms to the requirements for stabilizing additives in AASHTO M 325. Use only 1 type per mix design. If using mineral fibers, use a dosage rate of 0.4 percent by weight of total mix. If using cellulose fibers, use a dosage rate of 0.3 percent by weight of total mix. The dosage rate may be increased, as necessary, to prevent draindown as measured by the visual draindown determination of asphalt content in NJDOT B-8. Accurately control proportioning the fibers into the mixture within ± 10 percent of the required weight, and use equipment that ensures uniform dispersion of the fibers. Store fibers in a dry location with a storage temperature not to exceed 120°F . The supplier of the cellulose or mineral fibers shall provide a certification of compliance, as specified in 106.07, that the material supplied conforms to AASHTO M 325. Ensure that a technical representative from the additive supplier is at the work site for the first full day of construction for technical assistance.

902.03.02 Mix Design

THE FOURTH PARAGRAPH IS CHANGED TO:

The ME will test 2 specimens to verify that the final JMF produces a mixture that has a minimum void content as specified in Table 902.03.03-1. The ME will determine percent air voids according to AASHTO T 209, and either NJDOT B-6 or AASHTO T 331.

902.03.03 Sampling and Testing

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Ensure that the mix meets the requirements as specified in 902.02.04.A, otherwise the RE or ME will reject the material.

THE SECOND PARAGRAPH IS CHANGED TO:

During production, the ME will take one random acceptance sample from each 700 tons of production to verify composition. Conduct air voids and draindown tests as directed by the ME.

THE FOURTH PARAGRAPH IS CHANGED TO:

The ME will perform sampling according to NJDOT B-2 or ASTM D 3665, and will perform testing for composition according to AASHTO T 308 or NJDOT B-5. Perform testing for air voids according to AASHTO T 209 and either NJDOT B-6 or AASHTO T 331. Perform testing for draindown according to NJDOT B-7 or NJDOT B-8.

902.04.01 Composition of Mixture

THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

Mix ultra-thin HMA in a plant listed on the QPL conforming to the requirements for HMA plants specified in 1009.01.

Use ultra-thin HMA that consists of coarse aggregate, fine aggregate, and polymer modified asphalt binder and that may contain mineral filler and a WMA additive. Do not add RAP, CRCG, GBSM, or RPCSA. Combine the material in such proportions that the total aggregate and asphalt binder conform to the composition percentages specified in Table 902.04.02-1.

To produce the ultra-thin HMA, use aggregates and asphalt binder that conforms to the following:

1. For asphalt binder, use PG 64E-22 conforming to the requirements of 902.01.01.
2. If used, ensure that WMA additives or processes conform to 902.01.05. If a WMA additive is pre-blended in the asphalt binder, ensure that the asphalt binder meets the requirements of the specified grade after the addition of the WMA additive. If a WMA additive is added at the HMA plant, ensure that the addition of the additive will not negatively impact the grade of asphalt binder. Follow the manufacturer’s recommendations for percentage of WMA additive needed. For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive.
3. For fine aggregate, use 100 percent stone sand conforming to 901.05.02. Ensure that the combined gradation with coarse aggregate conforms to Table 902.04.02-1.
4. Use coarse aggregate that conforms to 901.05.01 and Table 902.04.01-1. Permissible geologic classifications for coarse aggregate are argillite, gneiss, granite, quartzite, or trap rock. Ensure that the combined gradation with fine aggregate conforms to Table 902.04.02-1.

Table 902.04.01-1 Coarse Aggregate Properties			
Tests	Test Method	Minimum Percent	Maximum Percent
Percentage of wear, Los Angeles Abrasion Test	AASHTO T 96	-	25
Flakiness Index	BS ¹ 812, part 105.1	-	20
Clay Lumps and Friable Particles	ASTM C 142	-	2
Asphalt Affinity*	ASTM D 3625	95	-

¹ British Standard Test Method

5. Use mineral filler, if necessary, that conforms to 901.05.03.

902.04.02 Mix Design

THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

For the mix design of the ultra-thin HMA, submit lab qualifications and references to the ME for approval prior to beginning work. Ensure that a technical representative from the lab which will perform the mix design is present during production to make adjustments as needed for mix compliance.

At least 30 days before the initial production date, submit the mix design to the ME for approval on forms supplied by the Department, including JMF for the ultra-thin HMA performed by an AASHTO accredited lab with at least five successfully completed ultra-thin HMA friction course projects greater than 5,000 tons each. Include a statement naming the source of each component and a report with the results for the criteria specified in Table 902.04.01-1 and 902.04.02-1.

If the source of any component material changes, submit a new JMF and obtain ME approval before using the new material. When unsatisfactory results or other conditions make it necessary, the ME may require a new JMF.

Design the ultra-thin HMA so that it has a draindown of less than 0.1 percent when tested according to AASHTO T 305.

When tested for moisture sensitivity according to AASHTO T 283, ensure that the ultra-thin HMA has a tensile strength ratio of at least 80 percent. Prepare specimens according to AASHTO T 312, and test according to T 283 except for the following:

1. Before compaction, condition the mixture for 2 hours according to AASHTO R 30, Section 7.1.
2. Compact specimens with 75 gyrations.
3. Extrude specimens as soon as possible without damaging.
4. Use AASHTO T 269 to determine void content.
5. Record the void content of the specimens.
6. If less than 55 percent saturation is achieved, repeat the procedure, unless the difference in tensile strength between duplicate specimens is greater than 25 pounds per square inch.
7. If visual stripping is detected, modify or readjust the mix.

Size, uniformly grade, and combine aggregate fractions in proportions so that the grading of total aggregate and asphalt binder in the JMF conform to the composition by mass percentages specified in Table 902.04.02-1.

Table 902.04.02-1 JMF Requirements for Ultra-Thin Friction Course

Sieve Size	Total % Passing By Mass	Production Control Tolerances from JMF
1/2"	100	±6.0
3/8"	75-100	±5.5
¼"	30-45	±5.5
No. 4	24-37	±5.5
No. 8	21-26	±4.5
No. 16	15-23	±4.0
No. 30	11-16	±4.0
No. 50	8-14	±4.0
No. 100	5-10	±3.0
No. 200	5.0-7.0	±2.0
Asphalt %	4.9-6.0	Ignition Oven ±0.40

During the construction of the test strip, take samples to confirm that the plant mixed material meets the requirements of the mix design. The ME will not grant final approval of the mix design until a successful verification of the plant produced mix and construction test strip.

902.04.03 Sampling and Testing

THE ENTIRE SUBSECTION TEXT IS CHANGED TO:

Ensure that the mix meets the requirements as specified in 902.02.04.A, otherwise the RE or ME will reject the material. Maintain the temperature of the mix between 300 °F and 330 °F. Perform and meet requirements for quality control testing as specified in 902.02.04.C.

Ensure that a technical representative from the lab which designed the mix is present during production to make adjustments as needed for mix compliance. During production, the ME will take one random acceptance sample from each 700 tons of production to verify composition. Conduct draindown tests as directed by the ME.

If the composition testing results are outside of the production control tolerances specified in Table 902.04.02-1 for an acceptance sample, determine if a plant adjustment is needed and immediately run a quality control sample. If the quality control sample is also outside of the control tolerances in Table 902.04.02-1, immediately take corrective action to bring the mix into compliance. Take additional quality control samples after the corrective action to ensure that the mix is within the production control tolerances. If 2 consecutive acceptance samples are outside the tolerances specified in Table 902.04.02-1, immediately stop production. Obtain ME approval of a plant correction plan before resuming production. Upon restarting production, do not transport mixture to the Project Limits before the results of a QC sample from the mixture indicate that the mixture meets JMF tolerances. The ME will reject mixture produced at initial restarting that does not meet tolerances.

The ME will perform sampling according to NJDOT B-2 or ASTM D 3665, and will perform testing for composition according to AASHTO T 308. Perform testing for draindown according to NJDOT B-7 or NJDOT B-8.

902.05.01 Composition of Mixture

THE ENTIRE TEXT IS CHANGED TO:

Mix SMA in a plant that is listed on the QPL and conforms to the requirements for HMA plants as specified in 1009.01.

The composition of the SMA mixture is coarse aggregate, fine aggregate, mineral filler, mineral fibers or cellulose fibers, and polymer modified asphalt binder and may include a WMA additive.

Use asphalt binder for SMA that is PG 64E-22 as specified in 902.01.01.

For coarse aggregate in SMA, use crushed stone conforming to 901.05.01 and Table 902.05.01-1. Use at least 2 stockpiles of crushed stone with differing gradations to allow adjustments to meet the JMF.

Table 902.05.01-1 Coarse Aggregate Properties for SMA		
Tests	Test Method	Maximum Percent
Percentage of wear, Los Angeles Abrasion Test	AASHTO T 96	30
Flat and Elongated, 5 to 1 (Material Retained on the No. 4 Sieve)	ASTM D 4791	5
Flat and Elongated, 3 to 1 (Material Retained on the No. 4 Sieve)	ASTM D 4791	20

For fine aggregate, use 100 percent stone sand conforming to 901.05.02. Ensure that the combined fine aggregate in the mixture conforms to the requirements in Table 902.02.02-2.

For mineral filler, use rock dust or crushed limestone conforming to AASHTO M 17. Ensure that the mineral filler has a plasticity index of less than 4 percent when tested according to AASHTO T 90.

Do not add RAP, CRCG, GBSM, or RPCSA to the mixture.

Add stabilizing fibers consisting of mineral fiber or cellulose fiber conforming to AASHTO M 325. Use only one type per mix design. If using mineral fibers, use between 0.4 and 0.6 percent by weight of total mix. If using cellulose fibers, use between 0.3 and 0.4 percent by weight of total mix. Provide control to accurately proportion the fibers into the mixture within ±10 percent of the required weight, and use equipment that ensures uniform dispersion of the fibers. If using pre-packaged bags of fibers added to the pugmill during the dry mix cycle, follow the manufacturer’s recommendations for the dry and wet mixing time. Store fibers in a dry location with a storage temperature not to exceed 120 °F. The supplier of the cellulose or mineral fibers shall provide a certification of compliance, as specified in 106.07, for the fibers. Ensure that a technical representative from the fiber supplier is at the HMA plant for the first full day of production for technical assistance.

If used, ensure that WMA additives or processes conform to 902.01.05. If a WMA additive is pre-blended in the asphalt binder, ensure that the asphalt binder meets the requirements of the specified grade after the addition of the WMA additive. If a WMA additive is added at the HMA plant, ensure that the addition of the additive will not negatively impact the grade of asphalt binder. Follow the manufacturer’s recommendations for percentage of WMA additive needed. For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive.

902.05.02 Mix Design

THE ENTIRE TEXT IS CHANGED TO:

Design the SMA to meet the requirements in Table 902.05.02-1 and Table 902.05.02-2. Prepare the JMF according to AASHTO R 46. Determine the JMF at 4 percent air voids and 75 gyrations of the Superpave gyratory compactor.

Table 902.05.02-1 SMA Specification Band (% passing) nominal-maximum aggregate size

Production Control Tolerances¹	Sieve Size	19 mm % Passing	12.5 mm % Passing	9.5 mm % Passing
0%	1"	100	100	100
±5%	3/4"	90-100	100	100
±5%	1/2"	50-88	90-100	100
±5%	3/8"	25-60	50-80	70-95
±4%	No. 4	20-28	20-35	30-50
±4%	No. 8	16-24	16-24	20-30
±4%	No. 16	–	–	0-21
±3%	No. 30	–	–	0-18
±3%	No. 50	–	–	0-15
±2%	No. 200	8.0-11.0	8.0-11.0	8.0-12.0
	Coarse Aggregate Fraction	Portion Retained on No. 4 Sieve	Portion retained on No. 4 Sieve	Portion retained on No. 8 Sieve
	Minimum Lift Thickness	2 inches	1-1/2 inch	1 inch

1. Production tolerances may fall outside of the wide band gradation limits.

Table 902.05.02-2 SMA Mixtures Volumetrics For Design and Plant Production

Property	Production Control Tolerances	Requirement
Air Voids	±1%	4.0%
Voids in Mineral Aggregate (VMA)	–	17.0% minimum
VCA _{mix}	–	Less than VCA _{dry}
Draindown @ production temperature	–	0.30% maximum
Asphalt Binder Content (AASHTO T 308)	±0.40%	6% minimum
Tensile Strength Ratio (AASHTO T 283)	–	80% minimum

902.05.03 Sampling and Testing

THE ENTIRE TEXT IS CHANGED TO:

Perform quality control testing as specified in 902.02.04.C. Ensure that the mix meets the requirements as specified in 902.02.04.A, otherwise the RE or ME will reject the material.

During production at the plant, the ME will take a sample from each 700 tons of production to verify composition and air voids. Conduct draindown, VCA_{mix}, VCA_{dry}, and VMA testing as directed by the ME. Perform tests according to AASHTO R 46.

If the testing results are outside of the production control tolerances specified in Table 902.05.02-1 and Table 902.05.02-2 for an acceptance sample, determine if a plant adjustment is needed and immediately run a quality control sample. If the quality control sample is also outside of the control tolerances in Table 902.05.02-1, immediately take corrective action to bring the mix into compliance. Take additional quality control samples after completing the corrective action to ensure that the mix is within tolerances. If 2 consecutive acceptance samples are outside the tolerances specified in Table 902.05.02-1 and Table 902.05.02-2, immediately stop production. Obtain ME approval of a plant correction plan before resuming production. Upon restarting production, do not transport mixture to the Project Limits before the results of a QC sample from the mixture indicate that the mixture meets JMF tolerances. The ME will reject mixture produced at initial restarting that does not meet tolerances.

The ME will perform sampling according to NJDOT B-2 or ASTM D 3665, and will perform testing for composition according to AASHTO T 308. The ME will determine bulk specific gravity of the compacted sample according to AASHTO T 166 or AASHTO T 331. The ME will use the most current QC maximum specific gravity test result,

obtained according to AASHTO T 209, in calculating the volumetric properties of the SMA. Perform testing for draindown according to AASHTO T 305.

902.06.01 Composition

THE ENTIRE TEXT IS CHANGED TO:

Mix ASDC in a plant that is listed on the QPL and conforms to the requirements specified in 1009.01.

The mixture shall consist of asphalt binder and aggregate and may contain a WMA additive. Use asphalt binder that is PG 64-22 as specified in 902.01.01. Use aggregate that conforms to 901.05.01 or 901.05.02 and the gradation requirements specified in Table 902.06.01-1.

If used, ensure that WMA additives or processes conform to 902.01.05. If a WMA additive is pre-blended in the asphalt binder, ensure that the asphalt binder meets the requirements of the specified grade after the addition of the WMA additive. If a WMA additive is added at the HMA plant, ensure that the addition of the additive will not negatively impact the grade of asphalt binder. Follow the manufacturer’s recommendations for percentage of WMA additive needed. For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive.

Table 902.06.01-1 Gradation Requirements and Tolerances for ASDC

Production Tolerance (Variation From JMF)	Sieve Size	JMF (Percent Passing)
±0.0	1"	100
±6.0	3/4"	95 - 100
±5.5	1/2"	85 - 100
±5.5	3/8"	60 - 90
±5.5	No. 4	15 - 25
±4.5	No. 8	2 - 10
±2.0	No. 200	2 - 5

Design the mixture to have an asphalt binder content of $3 \pm 1/2$ percent by weight of dry aggregate.

902.06.03 Sampling and Testing

THE ENTIRE TEXT IS CHANGED TO:

Perform quality control testing as specified in 902.02.04.C. Ensure that the mix meets the requirements as specified in 902.02.04.A, except that the temperature of the mix at discharge is required to be between 230 °F and 275 °F, otherwise the RE or ME will reject the material. For mixes produced using a WMA additive or process, ensure that the temperature of the mixture at discharge from the plant or surge and storage bins is at least 10 °F above the WMA manufacturer’s recommended laydown temperature.

During production, the ME will take one random acceptance sample from each 700 tons of production to verify composition. Conduct draindown tests as directed by the ME.

If the composition testing results are outside of the production control tolerances specified in Table 902.06.01-1 for an acceptance sample, determine if a plant adjustment is needed and immediately run a quality control sample. If the quality control sample is also outside of the control tolerances specified in Table 902.06.01-1, immediately take corrective action to bring the mix into compliance. Take additional quality control samples after the corrective action to ensure that the mix is within tolerances. If 2 consecutive acceptance samples are outside the tolerances specified in Table 902.06.01-1, immediately stop production. Obtain ME approval of a plant correction plan before resuming production. Upon restarting production, do not transport mixture to the Project before the results of a QC sample from the mixture indicate that the mixture meets JMF tolerances. The ME will reject mixture produced at initial restarting that does not meet tolerances.

The ME will perform sampling according to NJDOT B-2 or ASTM D-3665 and will perform testing for composition according to AASHTO T 308. If directed by the ME, perform testing for draindown according to AASHTO T 305.

THE FOLLOWING SUBSECTIONS ARE ADDED

SECTION 909 – DRAINAGE

909.02.01 Reinforced Concrete Pipe

THE FOLLOWING IS ADDED BEFORE THE FIRST SENTENCE:

Manufacture reinforced concrete pipe at a plant listed on the QPL.

THE LAST PARAGRAPH IS CHANGED TO:

Follow the Department approved Buy America Compliance Plan. Provide documentation of compliance when requested by the ME.

For concrete pipe that is less than 60 inches in diameter, submit a certification of compliance as specified in 106.07. The ME will randomly inspect and test small-diameter concrete pipe for quality assurance.

For concrete pipe that is 60 inches or more in diameter, notify the ME at least 2 weeks before shipping pipe to the Project. The ME will inspect and approve large-diameter pipe in the supplier’s yard after manufacture. Perform 3-point loading in the supplier’s yard as directed by the ME. If the ME does not inspect the concrete pipe, submit certifications of compliance as specified in 106.07.

909.02.02 HDPE Pipe

THE SECOND PARAGRAPH IS CHANGED TO:

Use HDPE pipe from a manufacturer who is an AASHTO NTPEP (National Transportation Product Evaluation Program) certified manufacturer. For a list of NTPEP certified manufacturer, see the following webpage: <http://data.ntpep.org/Module/PIPE/Overview.aspx> .

SECTION 911 – SIGNS, SIGN SUPPORTS, AND DELINEATORS

911.02.02 Breakaway Sign Supports for Ground Mounted Signs

THE ENTIRE SUBPART IS CHANGED TO:

Fabricate and construct breakaway sign supports for ground mounted signs using materials conforming to the requirements in Table 911.02.02-1.

Table 911.02.02-1 Materials for Breakaway Sign Supports

Item	Test Method	Type or Grade	Galvanizing
Aluminum Materials (other than bracket)	911.01.01		
Bracket	B308	6061-T6	
Structural steel shapes	ASTM A709	Grade 36	ASTM A123
Steel Sheet	ASTM A1011	Grade 36	ASTM A 653
Bolts (except special bolt for coupling)	ASTM A325		ASTM A153
Special bolt for coupling	ASTM A449		ASTM A153
Cap Screw	ASTM A307		ASTM A153
Lock Washer	ANSI B18-21-1		ASTM A153
Nut	ASTM A563	Grade DH	ASTM A153
Coupling	AMS 6378 F		ASTM A153
Steel Hinge Plate	AISI 4130		ASTM 123
Anchor Rod	AISI 1045		
Anchor Coil	AISI 1008		
Anchor Washer	908.04		
Anchor Ferrule	908.04		

Submit mill certificates for the component materials.

911.02.03 Non-Breakaway Sign Supports for Ground Mounted Signs
THE TEXT OF THIS SUBPART IS DELETED.

THIS SUBPART IS INTENTIONALLY LEFT BLANK

911.03 FLEXIBLE DELINEATORS

1. Delineator Dimensions.

b. Guide Rail Mounted.

THE ENTIRE TEXT IS CHANGED TO:

Ensure that the unit for beam guide rail mounted flexible delineators has a minimum width of 3 inches and a minimum thickness of 0.100 inch. Use units of a height that will ensure that the top of the reflective area is 5 ± 2 inches above the top of post.

Design the base of the unit to mount over the I-beam blockout or to the top of a wood or synthetic blockout, of the beam guide rail.

c. Barrier Curb Mounted.

THE ENTIRE TEXT IS CHANGED TO:

For barrier curb mounted flexible delineators, use a delineator that is $3\text{-}1/2 \times 3\text{-}1/2$ inches, with a minimum thickness of 0.100 inch, and that has a base that forms a “T” shape with the panel for mounting on the side of the barrier curb, and is flexible or hinged so as to return to its original position after being struck.

THE FOLLOWING IS ADDED:

d. Construction Barrier Curb Mounted. For construction barrier curb top mounted flexible delineators, use a delineator that is 6 x 12 inches with a minimum thickness of 0.100 inch. For construction barrier curb side mounted flexible delineators, use a delineator that is $3\text{-}1/2 \times 3\text{-}1/2$ inches with a minimum thickness of 0.100 inch, and that has a base that forms a “T” shape with the panel for mounting on the barrier curb and is flexible or hinged so as to return to its original position after being struck.

4. Retroreflective Sheeting.

b. Guide Rail Mounted.

THE ENTIRE TEXT IS CHANGED TO:

Ensure that the sheeting is a minimum of 3 inches square and is mounted on the upper portion of the delineator.

THE FOLLOWING IS ADDED:

d. Construction Barrier Curb Mounted. Ensure that the sheeting for top mounted flexible delineators is 6 x 12 inches and the sheeting for side mounted flexible delineators is $3\text{-}1/2 \times 3\text{-}1/2$ inches.

Submit a certification of compliance, as specified in 106.07, for delineators.

SECTION 912 – PAINTS, COATINGS, TRAFFIC STRIPES, AND TRAFFIC MARKINGS

912.03.01 Epoxy Traffic Stripes

THE SUBPART HEADING IS CHANGED TO:

912.03.01 Traffic Stripes

A. Epoxy Resin.

THE FIRST SENTENCE IS CHANGED TO:

For pavement striping, use an epoxy resin that is a 2 component, 100 percent solids formulation conforming to the following requirements:

B. Glass Beads.

THE FIRST PARAGRAPH IS CHANGED TO:

Submit certifications of compliance as specified in 106.07 for each lot of glass beads used on the Contract. For each lot of glass beads, submit test results indicating the parts per million of lead, antimony and arsenic as determined by testing according to Environmental Protection Agency testing method 3052 and testing method 6010B or 6010C. Ensure that glass beads do not contain more than 200 ppm of lead, 200 ppm of antimony, or 100 ppm of arsenic.

912.03.02 Thermoplastic Traffic Markings

THE SUBPART HEADING IS CHANGED TO:

912.03.02 Traffic Markings

THE ENTIRE SUBPART TEXT IS CHANGED TO:

For traffic markings, use either preformed or hot extruded thermoplastic conforming to AASHTO M 249, except that for preformed thermoplastic, the minimum thickness requirement is 90 mils. Use beads conforming to AASHTO M 247, Type 1, with a moisture resistant coating. Ensure that glass beads do not contain more than 200 ppm of lead, 200 ppm of antimony, or 100 ppm of arsenic.

Submit certifications of compliance, as specified in 106.07, for each batch of materials used on the Contract. For each lot of glass beads, submit test results indicating the parts per million of lead, antimony and arsenic as determined by testing according to Environmental Protection Agency testing method 3052 and testing method 6010B or 6010C.

912.04.01 Latex Paint

THE ENTIRE SUBPART TEXT IS CHANGED TO:

For temporary traffic stripes, use latex traffic paint that is a fast-drying white, or non-lead yellow, ready-mixed pigmented binder emulsified in water and capable of anchoring reflective glass beads that are separately applied. Ensure that the color matches FED-STD-595B color chip No. 33538 for yellow and No. 37886 for white. Ensure that the paint has a maximum no-track time of 120 seconds when applied in a wet film thickness of 15 ± 1 mil, at 140 °F, and with 12 pounds per gallon of glass beads. In addition, ensure that the finished product meets the following:

1. Volume of solids is a minimum 61 percent.
2. Total solids are a minimum of 77.5 percent total non-volatiles by weight, when tested according to ASTM D 2369.
3. Weight per gallon is a minimum 14 ± 0.2 pounds per gallon for each color.
4. Hegman Grind is a minimum of 2 Hegman when tested according to ASTM D 1210.
5. Viscosity is between 70 and 95 Krebs Units at 77 °F, when tested according to ASTM D 562.

Use glass beads conforming to AASHTO M247, Type 1, with a moisture resistance coating. Ensure that glass beads do not contain more than 200 ppm of lead, 200 ppm of antimony, or 100 ppm of arsenic.

Submit a certification of compliance, as specified in 106.07, for latex and glass beads. For each lot of glass beads, submit test results indicating the parts per million of lead, antimony and arsenic as determined by testing according to Environmental Protection Agency testing method 3052 and testing method 6010B or 6010C.

SECTION 913 – GUIDE RAIL, FENCE, AND RAILING

THIS SECTION IS RENAMED TO:

SECTION 913 – GUIDE RAIL, FENCE, RAILING AND BOX BEAM

913.01.01 Rail Element

THE SECOND PARAGRAPH IS CHANGED TO:

Submit a certification of compliance as specified in 106.07.

913.01.02 End Treatments

THE SECOND PARAGRAPH IS CHANGED TO:

Submit a certification of compliance as specified in 106.07.

913.01.03 Posts and Blockouts

THE FOURTH PARAGRAPH IS CHANGED TO:

Provide certifications of compliance, as specified in 106.07.

913.01.04 Rub Rail

THE SECOND PARAGRAPH IS CHANGED TO:

Submit a certification of compliance as specified in 106.07.

913.01.05 Miscellaneous Hardware

SUBPART 3 OF THE FIRST PARAGRAPH IS CHANGED TO:

3. Use plates for guide rail on bridges and buried guide rail terminals conforming to ASTM A 36 and galvanized according to ASTM A 123.

THE SECOND PARAGRAPH IS CHANGED TO:

Submit a certification of compliance as specified in 106.07. The ME may randomly inspect hardware for quality assurance.

913.02.01 Chain-Link Fence

THE FOLLOWING IS ADDED AFTER THE LAST SENTENCE:

Ensure that the temporary chain-link fence is erected by non-destructive methods.

THE FOLLOWING SUBSECTIONS IS ADDED:

913.04 BOX BEAM FOR CONSTRUCTION BARRIER CURB.

Ensure that the box beam is made of cold-formed welded and seamless structural tubing. Ensure that the box beam conforms to ASTM A500, Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes, Grade B.

Ensure that the box beam is tested in accordance with ASTM E436 on a 2 x 9 inch galvanized specimen at -0.4°F and provide certified test result to the ME.

The Department will reject the material if the average percent shear area falls below 50.

Ensure that the identification number/information is placed on the material at an interval of 4 feet or less.

Ensure that the box beam is galvanized in accordance with ASTM A123. Fasteners are galvanized and conform to the following unless specified otherwise in the contract documents: Bolts ASTM A307 Grade A, nuts ASTM A563 Grade A or better, and washers ASTM F844.

SECTION 919 – MISCELLANEOUS

THE FOLLOWING IS ADDED:

919.15 POLYESTER MATTING

Provide polyester matting of commercial quality that is a composite of polyester base fiber and vinyl chloride resin and is permeable to air and water, but shall prevent sunlight from reaching the soil. Ensure that the matting resists ultraviolet light, mildew and algae. Ensure that the matting is self-extinguishing when removed from flame. Ensure that the matting has a minimum thickness of 1/4 inch.

DIVISION 1000 – EQUIPMENT

SECTION 1001 – TRAFFIC CONTROL EQUIPMENT

THE FOLLOWING SUBSECTION IS ADDED:

1001.04 PORTABLE VARIABLE MESSAGE SIGN WITH REMOTE COMMUNICATION

Provide a NTCIP compliant portable variable message sign as described under 1001.02 equipped with broadband cellular modem.

THE FOLLOWING IS ADDED:

Provide a NTCIP compliant portable variable message sign as described under 1001.02 with the exceptions noted below and each equipped with broadband cellular modem.

Ensure that the sign panel is capable of displaying three lines of text with variable size characters.

Ensure nine characters are displayed per line for posting travel times. For this nine character requirement, smaller size characters may be allowed that meets MUTCD guidelines.

Ensure that the panel is also capable of displaying eight (8) characters per line with a minimum character height of eighteen (18) inches.

1001.05 PORTABLE TRAILER MOUNTED CCTV CAMERA ASSEMBLY

Provide a Portable Trailer Mounted CCTV Camera Assembly (PTMCCA) with the following:

A. Trailer Platform

1. Maximum size, including tongue, 14 feet long by 7 feet wide by 8 feet high.
2. NJDOT approved lighting package to include electrical brake and marker lights with wire connections.
3. Primed and painted with powder coated orange color.
4. Fitted with manual telescoping outriggers with adjustable jacks sized to counter full mast extension.
5. Four 3500 pounds, drop leg, top wind screw jacks.
6. All equipment secured to prevent theft or separation from platform.
7. 24/7 operation in all weather conditions.
8. One locking NEMA-4 equipment box for operational controls.
9. Removable wheels (with wheel locks) when trailer is in deployed position.
10. Operation manual with a copy placed in the storage bin.

B. Mast

1. 150 pounds payload capacity.
2. 29 feet to 32 feet of extension with capability to mount antenna at 20 feet, 25 feet or at the top, 10 feet maximum nested length of mast - 3 to 9 sections.
3. Un-guyed.
4. Driven by galvanized steel cable.
5. Spiral conduit for cables.
6. Compactly retractable when nested into storage container at the bottom & foldable for easy transport.
7. Operated by a power winch with a safety brake.
8. Capable of being raised or lowered during sustained wind speeds of 30 miles per hour.

C. Power Source

Equip the PTMCCA with either a diesel charged or a solar charged battery system. Ensure that the PTMCCA is also capable of operating on 120-volt AC electrical service. The Department may require a solar charged battery system in noise sensitive areas. Provide the power with a battery backup system capable of providing continuous operation when the primary power source fails. Ensure that the power source meets the following requirements:

1. Diesel. Ensure that the fuel tank is capable of operating the sign for a period of 72 hours without refueling. Equip with an exhaust muffler and a United States Department of Forestry approved spark arrester. Ensure that the engine is shock mounted to reduce vibration and locked in a ventilated enclosure.
2. Solar. Provide solar panels capable of recharging the batteries at a rate of 4 hours of sun for 24 hours of camera usage. Ensure that the battery capacity is capable of operating the sign for a period of 18 days without sunlight.

D. Electronics

1. Cellular (CDMA), microwave, or 802.11 bandwidth option.
2. Work lights in all cabinets.
3. Remote trailer diagnostics (battery level, charging output, etc.).

E. Camera and Software

Ensure that the camera has the following characteristics:

1. Dome Camera in a heavy duty plastic dome or with a weather resistant case.
2. Impact resistant viewing window.
3. Minimum resolution of NTSC 704 (H) x 480 (V).
4. Backlight compensation.
5. Image stabilization.
6. Light Sensitivity 0.02 lux NIR Mode.
7. Auto Focus with Manual Focus capability.
8. Auto White Balance with Manual White Balance capability.
9. Motorized Zoom up to 16x optical, 10x digital.
10. Motorized Pan-Tilt, pan 360°, tilt 180°.
11. Thermostatically controlled heater and defroster -50° to 140°F operating range.
12. Windshield wiper.
13. 24/7 operation in all weather conditions.
14. Time and date stamp.

Ensure the software provides the following functionality:

1. Remote control of pan, tilt and zoom.
2. Display of streaming video in MPEG format, motion-JPEG, and single snapshot JPEG images, remotely interchangeable by using central software.
3. Preset controls of pan/tilt/zoom combinations. Ensure all presets are accessible from a drop-down menu with descriptive name of preset. Set first 8 presets with quick-launch icons with graphical representation of the preset views.
4. Display of all the project's web cams in a single view screen.
5. Display of local time and weather conditions including temperature and humidity.

6. Saving images and sending e-mail images.
7. Viewing archived images via a graphical calendar control and storing archived images at least every five minutes.
8. Three levels of password protection: administrator, user, and guest, individual user accounts.
9. Monitoring and controlling the cameras using web access.

SECTION 1009 – HMA PLANT EQUIPMENT

1009.01 HMA PLANT

A. Requirements for HMA Mixing Plants.

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

The HMA producer is required to have a quality control (QC) program plan approved annually by the ME as per Materials Approval Procedure MAP-102. The HMA producer is required to ensure that the QC plan conforms to the requirements outlined in the report entitled “Hot Mix Asphalt Quality Control Program Plan” prepared by the Department of Transportation and New Jersey Asphalt Paving Association. Failure to follow these requirements will result in rejection of HMA materials supplied by the HMA producer and removal of the HMA supplier from the QPL.

THE FOLLOWING SUBSECTION IS ADDED AFTER 1009.02:

1009.03 ASPHALT-RUBBER BINDER BLENDING EQUIPMENT

Provide equipment for preparation of Asphalt-Rubber Binder. Ensure that the unit is equipped with a crumb rubber feed system capable of continuously supplying the asphalt cement feed system, and is capable of fully blending the individual crumb rubber particles with the asphalt cement. Use an asphalt-rubber binder storage tank that is equipped with a heating system capable of maintaining the temperature of the binder between 325 and 375 °F during the reaction. Ensure the asphalt-rubber binder storage tank is also equipped with an internal auger mixing device, oriented horizontally in the tank, capable of maintaining a uniform mixture of the asphalt-rubber binder.

Ensure that the tanks for storage of asphalt-rubber binder are equipped to uniformly heat the material to the required temperature under effective and positive control at all times. Ensure that heating is accomplished so that no flame comes in contact with the heating tank.

Provide a circulating system of sufficient capacity for the binder to ensure continuous circulation between the storage tank and proportioning units during the entire operating period. Ensure that the discharge end of the binder circulating pipe is maintained below the surface of the binder in the storage tank to prevent discharge of hot binder into the open air.

Ensure that pipe lines and fittings are steam or oil jacketed, electrically or otherwise heated, and insulated to prevent heat loss.

Provide valves according to AASHTO T 40, except ensure that a sampling valve is also located in the lowest third of each storage tank.

If the plant has been equipped with a water injection type asphalt foaming system, ensure that the system will allow the proper amount of asphalt rubber binder to be supplied continuously or provide a by-pass to ensure that the proper amount of asphalt rubber binder is supplied to the mix.

THE FOLLOWING SECTION IS ADDED:

SECTION 1012 – PAVEMENT PRESERVATION EQUIPMENT

1012.01 Micro Surfacing and Slurry Seal Paver

Provide fully automated self-propelled continuous flow type equipment that is specifically designed, equipped,

calibrated, and operated for mixing and spreading slurry seal and micro surfacing conforming to the approved mix design and application rate. Immediately correct defects that adversely affect the functioning of the equipment or quality of the mixture. Perform calibration in the presence of the ME. Ensure that the documentation includes an individual calibration of each material at various settings that can be related to the machine metering devices. Any component replacement affecting material proportioning requires that the machine be recalibrated. Do not use a machine on the project until the calibration has been completed and accepted. Ensure the paver is equipped with the following:

- 1. Mixing Equipment.** Ensure that the machine is specifically designed and manufactured to mix micro surfacing and slurry seal materials. Mix the material in an automatic-sequenced, self-propelled, micro surfacing and slurry seal mixing machine. Ensure that it is a continuous-flow mixing unit that accurately proportions and delivers the mix components, within 2 % of the required amount as per the mix design, into a revolving multi-blade double-shafted mixer. Sufficient storage capacity for all mix components is required to maintain an adequate supply to the proportioning controls.

Ensure that the machine is capable of loading materials while continuing to apply micro surfacing and slurry seal. Ensure that the continuous-run machine is equipped to provide the operator with full control of the forward and reverse speeds during application and is equipped with opposite-side driver stations to assist in alignment. Ensure that the self-loading device, opposite-side driver stations, and forward and reverse speed controls are of original-equipment-manufacturer design.

Provide material control devices, readily accessible and so placed that the inspector may determine the amount of each material used at any time.

Provide machine with a water pressure system and nozzle type spray bar to provide a water spray ahead of and outside the spreader box.

Locate mineral filler feed so the proper amount of mineral filler is dropped on the aggregate before discharge into mixer.

- 2. Spreading Equipment.** Provide spreading equipment that agitates and spreads the mixture uniformly in the surfacing box by means of twin shafted paddles or spiral augers fixed in the spreader box. Ensure that a front seal is provided such that there is no loss of the mixture at the road contact point. Ensure that there is an adjustable rear seal which will act as a final strike-off. Ensure that the spreader box and rear strike-off is designed and operated so that a uniform consistency is achieved and a free flow of material is provided to the rear strike-off. Ensure that the spreader box has suitable means provided to side shift the box to compensate for variations in the pavement geometry.

Ensure that a secondary strike-off is provided to improve surface texture. Ensure that the secondary strike-off is adjustable to match the width of the spreader box and allows for varying pressures to control the surface texture.

- 3. Electronic Mix Control and Diagnostic (EMCAD) System.** Ensure the paver is equipped with a computer mix control and diagnostic system that records, displays, and prints the following:

- 1.** Individual sensor counts for emulsion, aggregate, mineral filler, water, and additive.
- 2.** Aggregate, emulsion and mineral filler output in pounds per minute.
- 3.** Spread rate in pounds per square yard.
- 4.** Percentages of emulsion, mineral filler, water, and additive.
- 5.** Cumulative total quantities of aggregate, emulsion, mineral filler, water, and additive.
- 6.** Scale factor for all materials.

Ensure the computer system is functional and capable of printing reports.

- 4. Rut, Longitudinal Joint and Rumble Strip Filling Equipment.** Provide rut filling equipment with a steel V-configuration screed rut box commercially designed and manufactured to fill ruts as required. Ensure that the rut box can be adjusted to provide a mixture spread width of between 2 feet to 6 feet and have a moveable steel strike-off to control crown.

1012.02 Mechanical Fine Aggregate Spreader

Provide fully automated self-propelled fine aggregate spreading equipment with positive controls that is specifically designed, equipped, calibrated, and operated for spreading fine aggregate uniformly at the required width and application rate. Immediately correct defects that adversely affect the functioning of the equipment or quality of the fine aggregate

application. Perform calibration in the presence of the ME. Ensure that the calibration documentation includes the fine aggregate at various application rate settings that can be related to the machine metering devices. Any component replacement affecting application rate requires that the machine be recalibrated. Do not use a machine on the project until the calibration has been completed and accepted.

NJDOT TEST METHODS

NJDOT B-3 – SELECTING CORES FOR MAXIMUM SPECIFIC GRAVITY TESTING IN AIR VOIDS DETERMINATION

B. Procedure.

THE FOLLOWING NOTE IS ADDED AFTER STEP 3:

NOTE: For Recore Lots and Statistical Outlier Lots, do not randomly select a core for maximum specific gravity testing. The entire core lot must be tested for maximum specific gravity.

THE FOLLOWING STEP IS ADDED AFTER STEP 9:

10. If the lot has an outlier or is a recore lot, the entire lot must be tested for maximum specific gravity. Calculate air voids using each individual core maximum specific and bulk specific gravity.

NJDOT B-10 – OVERLAY TEST FOR DETERMINING CRACK RESISTANCE OF HMA

A. Scope. This test method is used to determine the susceptibility of HMA specimens to fatigue or reflective cracking. This test method measures the number of cycles to failure.

B. Apparatus. Use the following apparatus:

1. Overlay Tester. An electro-hydraulic system that applies repeated direct tension loads to specimens. The machine features two blocks, one is fixed and the other slides horizontally. The device automatically measures and records a time history of load versus displacement every 0.1 sec at a selected test temperature.

The sliding block applies tension in a cyclic triangular waveform to a constant maximum displacement of 0.06 cm (0.025 in.). This sliding block reaches the maximum displacement and then returns to its initial position in 10 sec. (one cycle).
2. Temperature Control System. The temperature chamber must be capable of controlling the test temperature with a range of 32 to 95 °F (0 to 35 °C).
3. Measurement System. Fully automated data acquisition and test control system. Load, displacement, and temperature are simultaneously recorded every 0.1 sec.
4. Linear Variable Differential Transducer (LVDT). Used to measure the horizontal displacement of the specimen (+/- 0.25 in.). Refer to manufacturer for equipment accuracy for LVDT.
5. Electronic Load Cell. Used to measure the load resulting from the displacement (5000 lb capacity). Refer to manufacturer for equipment accuracy for load cell.
6. Specimen Mounting System. Used two stainless steel base plates to restrict shifting of the specimen during testing. The mounting jig holds the two stainless steel base plates for specimen preparation.
7. Cutting Template.
8. Two Part Epoxy. Two part epoxy with a minimum 24 hour tensile strength of 600 psi (4.1 MPa) and 24 hour shear strength of 2,000 psi (13.8 MPa).
9. 10 lb weight (4.5 kg). Used to place on top of specimens while being glued to specimen platens.
10. ¼ inch Width Adhesive Tape. Placed over gap in plates to prevent the epoxy from bonding the plates together.
11. Paint or Permanent Marker. Used to outline specimens on platens for placement of epoxy.
12. 3/8-in. Socket Drive Handle with a 3-in. (7.6 cm) extension.

C. Procedure. Perform the following steps:

1. Sample Preparation.

- a. **Laboratory Molded Specimens** - Use cylindrical specimens that have been compacted using the gyratory compactor (AASHTO T 312). Specimen diameter must be 6 inches (150 mm) and a specimen height must be 4.5 inches +/- 0.2 inches (115 +/- 5 mm).

- a. Mount the specimen assembly onto the machine according to the manufacturer's instructions and the following procedural steps.
 1. Clean the bottom of the base plates and the top of the testing machine blocks before placing the specimen assembly into the blocks. If all four surfaces are not clean, damage may occur to the machine, the specimen, or the base plates when tightening the base plates.
 2. Apply 15 lb-in of torque for each screw when fastening the base plates to the machine.

6. Testing Specimen.

- a. Perform testing at a constant temperature recommended by the New Jersey Department of Transportation for the mixture in question. This is typically either 59 °F (15 °C) or 77 °F (25 °C).

Note 3 – Ensure the trimmed specimen has also reached the constant temperature required.

- b. Start the test by enabling the start button on the computer control program. Perform testing until a 93% reduction or more of the maximum load measured from the first opening cycle occurs. If 93% is not reached, run the test until a minimum of 1,200 cycles.
- c. After the test is complete, remove the specimen assembly from the Overlay Tester machine blocks.

D. Report. Include the following items in the report:

1. Date and time molded or cored.
2. NJDOT mixture identification.
3. Trimmed specimen density.
4. Starting Load.
5. Final Load.
6. Percent decline (or reduction) in Load.
7. Number of cycles until failure.
8. Test Temperature

NJDOT C-2 – QUICK-SETTING PATCH MATERIALS

C. Procedure.

2. **Tests.** Test materials according to the following:

THE B. IS CHANGED TO:

- b. **Strength Development.** For Type 1 and 2, test 2 cubes per test according to AASHTO T 106. For Type 1A and 1B, make two 4 × 8-inch cylinders per test according to AASHTO R 39. Cure specimens covered with a plastic cover over the cylinder for 3 hours and then cure without the plastic cover at 70.4 to 76.4 °F and 50 percent relative humidity until testing. Test according to AASHTO T 22

SUPPLEMENTARY SPECIFICATIONS FOR BRIDGE WORK

INDEX

In addition to the applicable provisions in the roadway portion of these Supplementary Specifications, the following provisions shall apply for the Bridge work in this contract:

<u>Contents</u>	<u>Page No.</u>
DIVISION 200 – EARTHWORK.....	2
SECTION 201 – CLEARING SITE	2
SECTION 202 – EXCAVATION.....	3
SECTION 203 – EMBANKMENT.....	3
DIVISION 500 – BRIDGES AND STRUCTURES	4
SECTION 504 – STRUCTURAL CONCRETE.....	4
SECTION 505 – PRECAST AND PRESTRESSED STRUCTURAL CONCRETE	4
SECTION 506 – STRUCTURAL STEEL	4
SECTION 507 – CONCRETE BRIDGE DECK AND APPROACHES	6
SECTION 509 – BRIDGE RAILING AND FENCE	7
SECTION 515 – HIGH EARLY STRENGTH (HES) CONCRETE.....	8
SECTION 516 – STONE FACING.....	9
DIVISION 600 – MISCELLANEOUS CONSTRUCTION	13
SECTION 613 – NAME PLAQUE	13
DIVISION 900 – MATERIALS.....	15
SECTION 901 – AGGREGATES	15
SECTION 903 – CONCRETE.....	15
SECTION 904 – PRECAST AND PRESTRESSED CONCRETE	16
SECTION 905 – REINFORCEMENT METALS.....	18
SECTION 906 – STRUCTURAL STEEL	19
SECTION 908 – BOLTS AND BOLTING MATERIAL.....	20
SECTION 915 – TIMBER AND TIMBER TREATMENT	20
SECTION 919 – MISCELLANEOUS.....	21

DIVISION 200 – EARTHWORK

ITEM 61. CLEARING SITE, BRIDGE (STR. NO. BE19)

SECTION 201 – CLEARING SITE

201.03.02 Clearing Site, Bridge and Clearing Site, Structure

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH.

Only the following equipment is permitted for the work:

- 1. Pneumatic or Electric Equivalent Hand Operated Hammers.**
 - a. When demolishing concrete not closer than 6 inches to structural members: hammers weighing no more than 90 lbs (exclusive of bit), equipped only with chisel point bits.
 - b. When demolishing concrete within 6 inches of structural members: hammers weighing no more than 30 lbs (exclusive of bit).
- 2. Saw Cutters.**
 - a. When cutting concrete within 6 inches of structural members: concrete cutters and concrete saws. While using water in the cutting operation, provide shielding beneath the cutting operation to prevent water leakage. Continuously collect slurry and dispose of as specified in 201.03.09. Ensure that the slurry does not enter the structure or highway drainage system.
- 3. Hydraulic Breakers.** Ram-hoe type breakers, hydraulic breakers, and demolition shears may be used with the following restrictions:
 - a. Submit required data to the Engineer for Department's analysis of stresses induced to the girders.
 - b. Delineate the centerline and limits of the top flange of girders before the equipment operation.
 - c. Do not use equipment within 6 inches of the delineated flanges.
 - d. Do not pull or twist the reinforcement steel.
- 4. Hydraulic Splitters.** Hydraulic splitters.
- 5. Other Equipment.** Obtain Engineer's approval before use.

THE FOLLOWING IS ADDED:

The procedure is described below:

- 1. Prestressed Concrete Stringers and Concrete Diaphragms.** Repair damage to prestressed concrete stringers and concrete diaphragms using non-shrink grout conforming to Subsection 903.08 before deck placement.

THE FOLLOWING IS ADDED:

The Contractor is advised that demolition of the existing bridge will not be permitted until demolition and erection plans have been approved by the Engineer and the proposed superstructure beams have been furnished and approved for installation by the Engineer.

201.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

The Department will not make payment for the Item CLEARING SITE, BRIDGE (STR. NO. Be19) in excess of 80% until Completion.

ITEM 62. EXCAVATION, UNCLASSIFIED

SECTION 202 – EXCAVATION

SEE SUPPLEMENTARY ROADWAY SPECIFICATIONS.

ITEM 63. I-9 SOIL AGGREGATE

SECTION 203 – EMBANKMENT

SEE SUPPLEMENTARY ROADWAY SPECIFICATIONS.

DIVISION 500 – BRIDGES AND STRUCTURES

ITEM 64. REINFORCEMENT STEEL, GALVANIZED
ITEM 65. CONCRETE WING WALL
ITEM 66. EPOXY WATERPROOFING

SECTION 504 – STRUCTURAL CONCRETE

504.02.01 Materials

THE FOLLOWING MATERIAL REFERENCE IS CHANGED TO:

Grit for Epoxy Waterproofing 901.07.01

504.03.02 Constructing Concrete

D. Placing and Consolidating Concrete.

THE FIRST SENTENCE OF THE FIFTH PARAGRAPH IS DELETED

G. Removal of Forms and Falsework.

Do not remove forms and false work until the concrete obtains a compressive strength of 3,000 psi.

ITEM 67. PRESTRESSED CONCRETE SLAB BEAM (TYPE SI-36), 36” X 12”

ITEM 68. PRESTRESSED CONCRETE SLAB BEAM (TYPE SI-48), 48” X 12”

SECTION 505 – PRECAST AND PRESTRESSED STRUCTURAL CONCRETE

505.03.01 Prestressed Concrete Structures

C. Erection Plan.

THE FIRST SENTENCE IS CHANGED TO:

Submit working drawings for certification regarding the plan of operations to the Engineer at least 30 days before the pre-erection meeting.

ITEM 69. STRUCTURAL STEEL (APPROX. 375 LBS.)

ITEM 70. REINFORCED ELASTOMERIC BEARING ASSEMBLY

SECTION 506 – STRUCTURAL STEEL

506.03.01 Structural Steel

B. Erection Plan.

THE ENTIRE TEXT IS CHANGED TO:

At least 30 days before the pre-erection meeting, submit working drawings for certification regarding the plan of operations to the Engineer. Include, at a minimum, the following in the plan:

1. Number and type of manpower and equipment.
2. Shipping procedures.
3. Lifting procedures.
4. Beam erecting sequence, including method of setting bearings and diaphragms.
5. Temporary bracing.
6. Manufacturer’s recommendations.
7. Procedures for employee safety.

8. Traffic control and protection.

E. Installing High-Strength Steel Bolts.

THE ENTIRE TEXT IS CHANGED TO:

Check galvanized bolts and nuts to verify that a visible lubricant is on the threads. Check black bolts and nuts to verify that they are oily to the touch.

Before beginning bolt installation, provide on the project site a Skidmore-Wilhelm calibrator or an acceptable equivalent tension measuring device. Ensure that the manufacturer’s representative is present during the first full day of tensioning work to provide technical assistance.

Test assemblies as follows:

1. For bolt assemblies that do not require Direct Tension Indicators (DTI’s), perform the rotational capacity test in accordance with 908.02.02.C, on 2 assemblies from each rotational-capacity lot.
2. For bolt assemblies requiring DTI’s, install in accordance with the following, and perform the rotational-capacity test as specified in NJDOT S-3 on 3 assemblies from each rotational-capacity lot.

Ensure that the bolt, nut, and washer are from the same rotational-capacity lot. If the DTI is used under the nut, place an additional washer between the nut and the protrusions on the DTI. If recommended by the bolt manufacturer, the Contractor may use wax lubricant, beeswax, or a water wax emulsion to aid in installation. Hold the bolt head stationary while tightening the nut.

Install bolts in all of the holes of the connection and tighten to a snug-tight condition to compact the joint. Ensure that the number of spaces on DTIs in which a 0.005-inch feeler gauge is refused after snugging does not exceed the maximum snug-tight refusals as specified in Table 506.03.01-1. If the number of refusals exceeds the maximum, remove the assembly, insert a new DTI, and resnug.

Tighten the assemblies successively from the most rigid part of the connection to the free edges by turning the nuts while holding the bolts stationary. Tension the assemblies until the number of spaces in which the 0.005-inch thickness gauge is refused meets or exceeds the minimum final tension refusals specified in Table 506.03.01-1.

Table 506.03.01-1 Criteria for DTI Spaces for A 325 Bolts

Bolt Diameter, Inches	1/2	5/8	3/4	7/8	1	1-1/8	1-1/4	1-3/8	1-1/2
Number of Spaces on DTIs	4	4	5	5	6	6	7	7	8
Maximum Snug Tight Refusals¹	1	1	2	2	2	2	3	3	3
Minimum Final Tension Refusals²	2	2	3	3	3	3	5	6	7

1. If the DTI is coated and under the nut, the maximum snug tight refusals is the number of spaces on the DTI minus one.
2. If the DTI is coated and under the nut, the minimum final tension refusals is the number of spaces on the DTI.

If an assembly is tightened so that there are no visible gaps remaining in any of the spaces on the DTI, the assembly has been over-tightened. Remove and replace over-tightened assemblies.

If assemblies do not meet the above rotational capacity requirements when tested at the work site, the Contractor may clean and relubricate the bolt assemblies in the rotational-capacity lot. After cleaning and relubricating, retest the assemblies for compliance to the above rotational capacity requirements.

For painted steel, apply 3 coats of an organic paint system, supplied by the same manufacturer as the originally applied inorganic zinc system, to the field bolted connections.

506.03.02 Bearings

C. Installing Bearings. Install bearings as follows:

1. Anchor Bolts.

THE SECOND SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

If using anchor bolt sleeves, ensure that they are circumferentially corrugated and are galvanized steel or plastic.

506.03.03 Shear Connectors

THE FIRST PARAGRAPH IS CHANGED TO:

Ensure that shear connectors conform to Section 7 of the ANSI/AWS D1.5 Bridge Welding Code.

506.03.06 Repair Galvanizing

THE LAST SENTENCE OF THE SECOND PARAGRAPH IS CHANGED TO:

If painting is directed, treat the galvanized surface according to the manufacturer’s recommendations, then apply the epoxy intermediate and urethane finish coats only.

ITEM 73. CONCRETE BRIDGE SIDEWALK
ITEM 74. CONCRETE BRIDGE PARAPET

SECTION 507 – CONCRETE BRIDGE DECK AND APPROACHES

THIS SECTION IS RENAMED TO:

SECTION 507 – CONCRETE BRIDGE DECK, BRIDGE PARAPET AND APPROACHES

507.02.01 Materials

THE FOLLOWING IS DELETED FROM MATERIALS LIST:

4-Bar Open Steel Parapet 906.07

THE FOLLOWING ARE ADDED TO MATERIALS LIST:

Steel Bar Bridge Railing..... 906.07

Anchor

Bolts.....908.01.03

507.03.02 Constructing Bridge Decks

A. Forms. Construct forms as follows:

2. Removable Forms.

THIS PART IS CHANGED TO:

Construct removable forms as specified in 504.03.02.B. Do not use shoring to support stringers along the span length where the superstructure, under live load and impact loads, is designed for composite action. Do not weld attachments required for placement of the removable forms to the beam.

L. Saw Cut Grooved Surfacing.

THE FIRST PARAGRAPH IS CHANGED TO:

Do not saw cut until the concrete has attained a strength of at least 4,000 psi as determined by cylinders cast during the placing of the concrete deck and which are at least 7 days old. Do not saw cut until after the Department performs Acceptance Testing as specified in Subsection 507.03.02 N. Unless otherwise approved, saw cut the concrete deck prior to opening to traffic.

N. Concrete Deck Surface Requirements

1. Acceptance Testing.

THE FIRST PARAGRAPH IS CHANGED TO:

Construct deck slabs so that less than 9 percent of the measured length of the lot exceeds 1/8 inch tolerance in 10 feet. The ME will test the surface of concrete bridge deck slabs with a Class I Walking Profiler prior to the performance of saw cut grooved surfacing. The ME will calculate the percent defective using a rolling straight edge simulator analysis of the profiler data.

THE FOLLOWING IS ADDED:

3. **Surface Cracks.** Seal surface cracks in deck slabs that do not exceed 3/8 inch in depth with a low viscosity epoxy sealer or a low viscosity methacrylate penetrating sealer that is approved by the Engineer. Cracks exceeding 3/8 inch in depth will be repaired by methods approved by the Engineer. The cost of all such corrective work shall be borne solely by the Contractor.

507.03.04 Concrete Bridge Sidewalk

THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Ensure that the concrete deck has cured for at least 3 days before beginning sidewalk construction.

507.03.05 Concrete Parapet and Barrier Curb

THE SECOND PARAGRAPH IS CHANGED TO:

Cure using curing compound as specified 504.03.02.F. If drilling is required for subsequent construction, allow the concrete to cure for a minimum of 14 days before drilling.

507.03.06 4-Bar Open Steel Parapet

SUBPART IS RENAMED AND CHANGED TO:

507.03.06 Steel Bar Bridge Railing

Ensure that the deck has cured for at least 14 days before placing concrete for steel bar bridge railing. Place concrete as specified in 504.03.02.D. Install as shown on the Plans. Construct anchor bolt system as specified in 509.03.01-1.

THE SECOND PARAGRAPH IS CHANGED TO:

The Department will include payment for epoxy coated reinforcement steel for the bridge approach under the item CONCRETE BRIDGE APPROACH; for other concrete items, the Department will make payment for reinforcement steel under REINFORCEMENT STEEL, REINFORCEMENT STEEL, EPOXY-COATED, and REINFORCEMENT STEEL, GALVANIZED as specified in 504.04.

THE FOLLOWING IS ADDED:

The Department will make a payment adjustment for concrete surface requirement quality in deck slabs and approach, by the following formula:

$$\text{Pay Adjustment} = Q \times \text{BP} \times \text{PR}$$

Where:

BP = Bid Price

Q= Surface Requirement Lot Quantity

PR= percent reduction as specified in Table 507.03.02-2

ITEM 75. BRIDGE COMBINATION RAILING (1 RAIL, ALUMINUM)

SECTION 509 – BRIDGE RAILING AND FENCE

THIS SECTION IS RENAMED TO:

SECTION 509 – BRIDGE COMBINATION RAILING, MISCELLANEOUS RAILINGS AND FENCE

509.01 DESCRIPTION

THE ENTIRE SUBSECTION IS CHANGED TO:

This Section describes the requirements for constructing metal railing, fence, and guide rail on bridges. Metal railing includes metal railing components for combination traffic railing system, combination non-traffic railing system, non-traffic pedestrian or bicycle railing, ornamental railing and other railing not subject to vehicular impact.

509.03.01 Bridge Railing

THE THIRD PARAGRAPH IS CHANGED TO WITHOUT PARTS 1 & 2:

Ensure that the railing is fabricated to allow for minor adjustments in both horizontal and vertical directions. Install 1 or 2-rail aluminum or steel railing on top of the concrete parapet as shown on the Plans. Install other types of metal railing on concrete sidewalk or deck as shown on the Plans. Do not use expansion type anchor bolts.

THE THIRD PARAGRAPH SUBPART 2 IS CHANGED TO:

- 2. **Adhesive Type.** Do not drill for installation until the concrete has cured for at least 14 days. Install adhesive anchors according to the manufacturer’s recommendations. When drilling, ensure that spalling does not occur and existing utilities are not damaged. Repair damage to the existing concrete, utilities, and reinforcement steel as a result of drilling. Clean and dry drill holes before and during installation of the adhesive anchors.

509.04 MEASUREMENT AND PAYMENT

THE ENTIRE SUBSECTION IS CHANGED TO:

The Department will measure and make payment for Items as follows:

<i>Item</i>	<i>Pay Unit</i>
BRIDGE COMBINATION RAILING (1 RAIL, ALUMINUM)	LINEAR FOOT

THE FOLLOWING SECTION IS ADDED:

ITEM 71. CONCRETE BRIDGE SEATS, HES
ITEM 72. CONCRETE BRIDGE DECK, HES

SECTION 515 – HIGH EARLY STRENGTH (HES) CONCRETE

515.01 DESCRIPTION

This section describes the requirements for constructing concrete bridge decks, and bridge seats using a concrete mixture designed for high early compressive strength (HES).

515.02 MATERIALS

Provide materials that conform to Subsections 507.02 and Section 903. Develop a concrete mix design that conforms to the design, control, and acceptance requirements of Class A, with the following additional requirements.

72-hour Design Strength (field cure)	4200 psi
72-hour Verification Strength (standard cure)	4500 psi
72-hour Retest Limit (field cure)	4000 psi

Perform additional compressive strength tests during production to verify that the 4000 psi strength is met in 72 hours. The initial sampling rate for 72 hour tests will be the same as the initial sampling rate for 28 day compressive strength acceptance.

515.03 CONSTRUCTION

Construct concrete bridge decks and bridge seat and in accordance with Sections 504 and 507 except as follows:

1. Wet cure deck slabs in accordance with Subsection 507.03.02J except that the minimum wet cure period is 72 hours.
2. Finish the deck slabs with a stiff broom finish and Saw Cut Grooved Surface in accordance with Subsection 507.03.02L.
3. Loading the deck will be in accordance with Subsection 507.03.02M except that the minimum curing time is 72 hours. If any one of the initial 72 hour compressive strength tests fail to meet the 72 hour retest limit, do not load the deck slab with construction equipment or traffic unless authorized by the Engineer.

4. Opening to traffic will be in accordance with Subsection 507.03.02O except that the minimum curing time is 72 hours. If any one of the initial 72 hour compressive strength tests fail to meet the 72 hour retest limit, do not load the deck slab with construction equipment or traffic unless authorized by the Engineer.

515.04 MEASUREMENT AND PAYMENT

The Department will measure and make payment as follows:

<i>Item</i>	<i>Pay Unit</i>
CONCRETE BRIDGE SEATS, HES	CUBIC YARD
CONCRETE BRIDGE DECK, HES	CUBIC YARD

THE FOLLOWING SECTION IS ADDED:

ITEM 76. RUBBLE STONE FACING
ITEM 77. BLUESTONE CAP

SECTION 516 – STONE FACING

515.01 DESCRIPTION

This section describes the requirements for furnishing and installing rubble stone facing and bluestone cap on the parapets at the locations shown on the plans.

515.02 MATERIALS

Provide materials that as described below:

Mortar.....	903.08.01
Bolts and Bolting Materials.....	908
Water.....	919.08

Stone facing rubble stones to be Delaware Valley Fieldstone by Delaware Quarries, 6603 Route 202, New Hope, Pennsylvania 18938, 1-800-533-4954, or approved equal. The color shall be as selected by the Township and the County.

Furnish blue stone caps with the exposed face with a rubbed finish and exposed edges diamond sawed. Joints shall be sawed and all sharp edges shall be slightly rounded. Bluestone shall meet or exceed the following requirements:

1. Absorption shall not exceed 1.5 percent after 48 hours when tested in accordance with ASTM C97;
2. Bulk Specific Gravity shall be not less than 2.68 when tested in accordance with ASTM C97;
3. Compressive Strength shall average 19.5 kips per square inch when tested in accordance with ASTM C170;
4. Flexural Strength shall average 2.6 kips per square inch when tested in accordance with ASTM C99; and
5. Abrasion Resistance – when tested in accordance with ASTM C241 shall have an Abrasion Index of 28.84.

Bluestone to be the product of Johnston & Rhodes Bluestone Co., East Branch, New York, or an approved equal. Submit two 12-inch square samples with the specified finishes, and indicating the probable range of color variation.

All metal ties, cramps, dowels, etc., used for anchoring or coming in contact with stone work to be stainless steel conforming to ASTM A666.

The gaskets within expansion joints in cap stones to be a closed cell neoprene conforming to ASTM D1056, Grade 2C2 as manufactured by Williams Products, Inc., or an approved equal.

The sealant for expansion joints to be a two-part polyurethane having a durometer of 40 plus or minus 5 and conforming to TT-S-227D, Type 2, Class A.

515.03 CONSTRUCTION

515.03.01 Test Panel

After approval of the rubble stone and bluestone samples, erect a 4-foot by 4-foot test panel or mock-up of the parapet with the rubble stone facing and bluestone cap. Prepare the panel in the field and obtain approval of the panel prior to erecting the parapet facing. Approval of the sample to be obtained from the County of Union and the Berkeley Heights Township.

Unless otherwise directed, the test panel may be erected on the parapet which is to receive the stone facing. If approved, it test panel will become part of the work, but if rejected, remove and a construct a new test panel until approved. Before providing the test panel, submit shop drawings indicating the extent and location of the proposed test panel.

515.03.02 Working Drawings

Furnish working drawings showing all stone masonry, individual stones in position, and their face dimensions, anchor clamps designating marks, and such other sections and drawings necessary to cut and set the work. Submit catalog cuts for the proprietary products, hardware and accessories.

515.03.03 Cutting and Delivery

1. Rubble Stone Facing:

Furnish stones no less than 4-inches thick. The stone width shall be no less than 1.5 times the thickness and the length no more than 3 times the thickness and no less than 1.5 times the width.

2. Bluestone Cap:

Except otherwise approved, furnish caps in sections of uniform lengths not less than 5-feet. Cut a drip groove along the underside of caps that project beyond the wall.

Deliver stone veneer using the customary precautions against damage, and properly stacked on pallets. Protect the holes in stones from the weather to prevent collection of water that might freeze. Deliver cement and mortar materials in unbroken bags, properly identified as to manufacturer and grade. All materials delivered to the site are subject to inspection by the Department. The Engineer can reject damaged or defective stones, and broken bags of cement or mortar, all replaced at the Contractor's expense.

Store stones and mortar materials off the ground and protect it properly from rain, ground moisture, and airborne contaminants. The Engineer can reject cement which for any reason has become partially set or which contains lumps of caked cement. Remove the stain or replace the stained stones if any of the stones become stained. Replace damaged stones. Store sand where directed in a neat pile so that it will require at least clean-up upon completion of the Project. Protect sand from rain and ground moisture and cover it to prevent intrusion of foreign material.

515.03.04 Mortar and Anchors

Mix setting mortar in quantities for immediate use. Mix mortar in a batch-type machine mixer for very small batches. Do not use materials which have been mixed for more than 30 minutes on any portion of the work. Do not re-temper mortar.

Place dovetail anchor slots formed of 16-gauge stainless steel in the parapets at 16-inch spacing, center to center horizontally. Place stainless steel, triangular dovetail stone anchors in each dovetail anchor slot less than 16 inch apart vertically. Provide 6-gauge (3/16-inch) stainless steel wire looped through each dovetail stone anchor. Ensure that size of this tie is as shown on the plans and it is bent so that it will lay in the stone veneer mortar joints. Embed each anchor in mortar bed and centered in the joint.

Furnish the dowels and install dowels to tie the bluestone caps directly to the concrete parapet. Use at least two dowels per stone.

515.03.05 Setting

1. Rubble Stone Facing:

Stones shall be laid so as to stagger joints and to bond together, with their bedding planes approximately horizontal, with exposed faces parallel to the face of wall. The work shall not be constructed in freezing weather or when the stones contain frost, except by written permission and subject to such conditions as may be expressed.

All stones shall be laid in a bed of mortar and all spaces between stones shall be filled with mortar and packed with spalls except that no spalls shall be used in the face. All voids shall be filled with mortar. The face joints shall be not more than 1 inch wide and shall be pointed before the mortar has set.

All joints, sinkages, holes, and any other spaces between stones, or between stones and metal parts, shall be filled with mortar, packed tightly. Hardwood wedges, soaked in water before use and removed before the mortar has set hard, may be used to facilitate proper setting. Each stone shall be cleaned by brushing or other means and drenched with water immediately before it is set, and the bed which is to receive it shall be cleaned and settled in place with a wooden maul. Stones shall not be dropped or slipped but shall be placed without jarring any stone already laid. Heavy hammering will not be allowed after a course is laid. All mortar droppings or smears on the exposed faces shall be brushed off immediately after the stone is set. Stones becoming loose after the mortar is set shall be removed, cleaned and relaid with fresh mortar.

2. Bluestone Cap:

The work shall not be constructed in freezing weather or when the stones contain frost, except by written permission and subject to such conditions as may be expressed.

All stones shall be laid in a bed of mortar with 1% wash set in the field. All voids shall be filled with mortar. The face joints shall be not more than ½ inch wide and shall be pointed before the mortar has set.

All joints, sinkages, holes, and any other spaces between stones, or between stones and metal parts, shall be filled with mortar, packed tightly. Hardwood wedges, soaked in water before use and removed before the mortar has set hard, may be used to facilitate proper setting. Each stone shall be cleaned by brushing or other means and drenched with water immediately before it is set, and the bed which is to receive it shall be cleaned and settled in place with a wooden maul. Stones shall not be dropped or slipped but shall be placed. Heavy hammering will not be allowed after a course is laid. All mortar droppings or smears on the exposed faces of the granite shall be brushed off immediately after the stone is set. Stones becoming loose after the mortar is set shall be removed, cleaned and relaid with fresh mortar.

Provide expansion joints in cap stones not less than 24 feet or more than 32 feet on center, unless otherwise approved or indicated.

1. The expansion joints shall be free of mortar. A neoprene spacer placed within the joint shall be recessed approximately 3/8 inch to receive sealant. The spacer shall be a closed cell neoprene.
2. Sealant shall be installed in accordance with the manufacturer's printed instructions. Submit standard color charts for selection by the Engineer.

515.03.06 Pointing

All joints shall be raked out to a depth of 1 inch, cleaned out, mortar set, and pointed.

Point the stones with epoxy mortar. Drive the mortar into the joints with caulking tools so as to fill all openings, and then finished with a pointing tool so as to give flush joints.

515.03.07 Protecting and Cleaning Stonework

Protect the stonework from damage from the weather or other causes, as soon as stonework is set, until final completion and acceptance of the work.

Clean all face stones of all mortar stains immediately after laying and while mortar is still fresh. Keep the stones clean until the work is completed. Clean the surface using wire brushes and muriatic acid if necessary before final acceptance.

Protect the masonry from the sun in hot or dry weather and keep the masonry wet for a period of five days after completion.

517.04 MEASUREMENT AND PAYMENT

The Department will measure and make payment as follows:

<i>Item</i>	<i>Pay Unit</i>
RUBBLE STONE FACING	SQUARE FOOT
BLUESTONE CAP	SQUARE FOOT

The Department will measure RUBBLE STONE FACING in square foot computed on the basis of the total front surface area of stone facing, including joints, measured as theoretical smooth planes along the neat and arris lines. The BLUESTONE CAP will be measured in square foot computed on the basis of the total square area of caps, including joints.

DIVISION 600 – MISCELLANEOUS CONSTRUCTION

THE FOLLOWING SECTION IS ADDED:

ITEM 78. NAME PLAQUE

SECTION 613 – NAME PLAQUE

613.01 DESCRIPTION

This section describes the requirements for furnishing, fabricating and installing name plaques for Union County. Mount plaques on the bridge parapet at the locations shown on the contract plans.

Contact the Union County Division of Operational Services to verify the names on the plaques prior to fabrication of the plaques.

613.02 MATERIALS

Fabricate the plaque out of bronze.

613.03 CONSTRUCTION

Fabricate it to the dimensions as shown on the contract plans and with the inscriptions as shown on the attached sheets. Submit working drawings for approval.

613.04 MEASUREMENT AND PAYMENT

The Department will measure and make payment as follows:

<i>Item</i>	<i>Pay Unit</i>
NAME PLAQUE	UNIT

Payment for name plaques will include all costs associated with the furnishing, fabrication and installation of the plaques.

UNION COUNTY 2017

BOARD OF CHOSEN FREEHOLDERS

BRUCE H. BERGEN, CHAIRMAN
SERGIO GRANADOS, VICE-CHAIRMAN

LINDA CARTER
CHRISTOPHER HUDAK
BETTE JANE KOWALSKI

ANGEL G. ESTRADA
MOHAMED S. JALLOH
ALEXANDER MIRABELLA

VERNELL WRIGTH

JAMES E. PELLETTIERE, CLERK OF THE BOARD
ALFRED J. FAELLA, COUNTY MANAGER
JOSEPH A. GRAZIANO, DIRECTOR OF PUBLIC WORKS
THOMAS O. MINEO, COUNTY ENGINEER/DIRECTOR

DESIGNED BY:
DEWBERRY ENGINEERS INC.

CONSTRUCTED BY:

DIVISION 900 – MATERIALS

SECTION 901 – AGGREGATES

THE ENTIRE SUBSECTION IS CHANGED TO:

901.07 GRIT

901.07.01 Grit for Epoxy Waterproofing. Use grit for spreading over the epoxy waterproofing that is a subangular, natural, 98 percent silica sand. Ensure that 90 percent of the total sample by weight falls between the No. 4 and No. 30 sieves, with 0 percent passing the No. 30 sieve.

901.07.02 Fine Aggregate for Fog Seal. Use fine aggregate for spreading over fog seal that conforms to 901.05.02 and the gradation requirements in Table 901.07.02-1:

Table 901.07.02-1 Gradation Requirements for Fine Aggregate used on Fog Seal	
Sieve Size	Percent Passing
No. 8	100
No. 16	90 - 100
No. 50	70- 100
No. 200	0 - 2

901.11 SOIL AGGREGATE

1. Composition of Soil Aggregate.

THE FOLLOWING IS ADDED TO THE LAST PARAGRAPH:

For Designation I-14, the Contractor may use up to 30 percent steel slag by weight of the coarse aggregate portion of the soil aggregate. Obtain steel slag from a source listed on the QPL as specified in 901.01. Use steel slag that was produced as a co-product of the steel making process. Ensure that the steel slag consists of tough, durable pieces that are uniform in density and quality. Stockpile steel slag as specified in 901.02. Ensure steel slag for blending with I-14 Soil Aggregate does not exceed 0.50 percent expansion from hydration when tested according to ASTM D 4792.

SECTION 903 – CONCRETE

903.02.04 Viscosity Modifying Admixture

THE FIRST SENTENCE IS CHANGED TO:

Use a viscosity modifying admixture that is listed on the QPL and that, when evaluated according to the test methods and mix design proportions in AASHTO M 194, conforms to the following physical requirements:

903.03.05 Control and Acceptance Testing Requirements

E. Acceptance Testing for Strength for Pay-Adjustment Items.

THIS SUBPART IS DELETED IN ITS ENTIRETY:

F. Acceptance Testing for Strength for Non-Pay-Adjustment Items.

THIS SUBPART IS DELETED IN ITS ENTIRETY:

903.03.06 Tables

Table 903.03.06-2 Requirements for Structural Concrete Items

THE SEVENTH LINE UNDER CAST-IN-PLACE ITEMS IS CHANGED TO:

Table 903.03.06-2 Requirements for Structural Concrete Items

	Concrete Class	Slump ¹ (inches)	Percent Air Entrainment for Coarse Aggregate ¹	
			No. 57 & No. 67	No. 8
Decks, Sidewalks, Curbs, Parapets, Concrete Patch	A	3 ± 1	6.0 ± 1.5	7.0 ± 1.5

903.05.04 Control and Acceptance Testing Requirements

THE SUPERScript REFERENCE NO. 4 UNDER TABLE 903.05.04-1 IS CHANGED TO:

- For chloride permeability testing, the ME will mold 4 additional cylinders, taking 2 cylinders each from 2 randomly selected delivery trucks for testing at 56-days.

THE FOURTH PARAGRAPH IS CHANGED TO:

If, upon testing at 56 days, 1 or more individual test results exceed 2000 coulombs, the RE may:

- Require that the Contractor remove and replace the defective lot, or
- Allow the Contractor to submit a corrective action plan for approval.

903.06.02 SCC For Precast Concrete

THE ENTIRE PART B. IS CHANGED TO:

- B. Mix Design and Verification.** Design the mix, as specified in 903.03.02 or 903.05.02, to conform to the strength, water-cement ratio, and air content requirements for the specified class of concrete for the item that is being cast. In addition, ensure that the SCC conforms to the requirements specified in Table 903.06.02-1.

Table 903.06.02-1 Requirements for SCC for Precast Concrete

Property	Test Method	Requirement
Slump Flow	NJDOT C-4	16 to 24 inches
Visual Stability Index		
Plastic Concrete	NJDOT C-4	1 maximum
Hardened Concrete	NJDOT C-5	1 maximum

Perform mix design verification as specified in 903.03.02 or 903.05.02. For the verification batch, ensure that the air content is in the top half of the allowable range and the slump flow is between 22 and 24 inches. Perform air content, slump flow, and visual stability index (plastic concrete) testing on the verification batch. Make concrete cylinders for compression testing as specified in 903.03.02 or 903.05.02 and make 2 additional 4 × 8 inch cylinders for visual stability index on the hardened concrete. Saw the additional cylinders length-wise according to NJDOT C-5. The ME will perform the compressive strength testing and the visual evaluation to assign a visual stability index in order to approve the mix.

SECTION 904 – PRECAST AND PRESTRESSED CONCRETE

904.01.01 Component Materials

THE FOLLOWING SENTENCE IS ADDED AT THE END:

For Precast Concrete, the minimum cement content specified in Table 903.03.06-3 is not required for Class A or Class B concrete.

904.01.02 Fabrication

THE ENTIRE SUBPART IS CHANGED TO:

Fabricate precast concrete at a plant as specified in 1011.01 and listed on the QPL.

- Placing Reinforcement Steel.** Before placing the concrete, place reinforcement steel in position as shown on

the approved working drawings and as specified in 504.03.01. Firmly tie the reinforcement to prevent displacement during placing of the concrete.

2. **Placing Concrete.** Place concrete as specified in 504.03.02.B, 504.03.02.C, 504.03.02.D, and 504.03.02.E. Before placing concrete, ensure that reinforcement steel and any other embedded materials are free of loose rust, frost, dirt, oil, or contaminants that may prevent a bond with the concrete. Consolidate concrete with internal vibrators. The fabricator may use external vibration to supplement internal vibration. If using SCC, minimize or eliminate the use of vibrators to prevent segregation.

904.01.06 Quality Control and Acceptance Requirements

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

Follow the Department approved Buy America Compliance Plan. Provide documentation of compliance when requested by the ME.

904.02.01 Component Materials

THE FOLLOWING SENTENCE IS ADDED AT THE END:

For Precast Concrete, the minimum cement content specified in Table 903.03.06-3 is not required for Class A or Class B concrete.

904.02.02 Fabrication

THE FIRST SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Place concrete as specified in 504.03.02.C, 504.03.02.D, and 504.03.02.E.

THE SECOND SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Fabricate precast concrete at a plant as specified in 1011.01 and listed on the QPL.

904.02.06 Quality Control and Acceptance Requirements

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

Follow the Department approved Buy America Compliance Plan. Provide documentation of compliance when requested by the ME.

STEP 2 IN THE THIRD PARAGRAPH IS CHANGED TO:

2. Dimensions not conforming to the tolerances specified in Table 904.02.02-1.

904.03.01 Component Materials

THE FOLLOWING IS ADDED AT THE END:

For Precast Concrete, the minimum cement content specified in Table 903.03.06-3 is not required for Class A or Class B concrete.

904.03.02 Fabrication

THE FIRST SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Fabricate precast concrete at a plant as specified in 1011.01 and listed on the QPL.

2. Placing Concrete.

THE FIRST SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Place concrete as specified in 504.03.02.B, 504.03.02.C, 504.03.02.D, and 504.03.02.E.

904.03.06 Quality Control and Acceptance Requirements

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

Follow the Department approved Buy America Compliance Plan. Provide documentation of compliance when requested by the ME.

THE FOLLOWING IS ADDED AFTER THE LAST PARAGRAPH:

If the ME does not inspect the precast concrete item, submit certifications of compliance as specified in 106.07.

904.04.02 Fabrication

THE FIRST SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Fabricate prestressed concrete at a plant as specified in 1011.02 and listed on the QPL.

3. Placing Concrete.

THE SECOND SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

Place concrete as specified in 504.03.02.B, 504.03.02.C, 504.03.02.D, and 504.03.02.E.

904.04.06 Quality Control, Quality Assurance, and Acceptance Requirements

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

Follow the Department approved Buy America Compliance Plan. Provide documentation of compliance when requested by the ME.

THE FOLLOWING IS ADDED AFTER THE LAST PARAGRAPH:

If the ME does not inspect the precast concrete item, submit certifications of compliance as specified in 106.07.

SECTION 905 – REINFORCEMENT METALS

905.01 REINFORCEMENT STEEL

THE ENTIRE SUBPART IS CHANGED TO:

Provide reinforcement steel manufactured at an AASHTO NTPEP (National Transportation Product Evaluation Program) certified mill. For a list of NTPEP certified mills, see the following webpage: <http://data.ntpep.org/Module/REBAR/Overview.aspx> .

For reinforcement steel, submit a certification of compliance. Attach copies of the mill certifications for each heat of reinforcement steel. The ME will randomly sample and test heats of reinforcement steel for quality assurance. The ME will randomly inspect and sample galvanized and epoxy coated reinforcement steel for quality assurance.

905.01.03 Welded Wire Reinforcement

THE FIRST PARAGRAPH IS CHANGED TO:

Use plain or deformed steel welded wire reinforcement according to ASTM A1064. When used for concrete pavement, use welded wire reinforcement mats at least 5 feet in width.

THE SECOND PARAGRAPH IS CHANGED TO:

When approved as an alternate to galvanized reinforcement bars, use galvanized welded wire reinforcement that meets the requirements of ASTM A 641, Table 1, Class 1.

905.01.05 Dowels

THE ENTIRE SUBPART IS CHANGED TO:

Use plain reinforcement bars according to ASTM A 615, Grade 60. Galvanize according to ASTM A 123.

905.02.03 Post-Tensioning Reinforcement

A. Bars.

THE FIRST SENTENCE IS CHANGED TO:

For transverse ties for prestressed concrete non-voided slab beams, use steel bars according to ASTM A 722, 1 ¼-inch diameter.

905.03.03 Dowel Bars

THE FIRST PARAGRAPH IS CHANGED TO:

For dowel bars in transverse joints, use epoxy-coated, Grade 60, plain reinforcement steel according to ASTM A 615. If shown on the Plans, use dowel bars fitted with end caps. Ensure that the end caps are non-metallic and designed to prevent the entrance of grout or mortar into the expansion void.

SECTION 906 – STRUCTURAL STEEL

906.01 STRUCTURAL STEEL MATERIALS

THE ENTIRE SUBSECTION IS CHANGED TO:

Provide structural steel materials conforming to the requirements in [Table 906.01-1](#) and as shown on the Plans.

Product	Test Method	Type/Grade/Class
Structural Steel Plate ¹	ASTM A 709	Grade 36, 50, 50W, or HPS70W2
Tie rods, plate washers, tie backs, turnbuckles, plates, shapes, and shims	ASTM A 709	Grade 36
Steel tube and pipe for Sign Structures 3, 4, 5	ASTM A 53	Type S, Grade B or Type E, Grade B
	or ASTM A 500	Grade B or C
Steel Piles		
Steel H-piles	ASTM A 572	Grade 50
Steel sheet piles	ASTM A 572	Grade 50
Steel pipe piles	ASTM A 252	Grade 2
Casings for Drilled Shafts ⁶	ASTM A 252	Grade 2
Flooring		
Grid Flooring	ASTM A 709	Grade 36
Formed Steel Flooring	ASTM A 1011	Grade 30
Steel Forgings	ASTM A 668	Class C
Shear Connector Studs ⁷	ASTM A 108	Grades G1015, 1018, or 1020
Stay-In-Place (SIP) Forms ⁸	ASTM A 653	Grades 33, 37, 40, 49, or 80

1. For steel used in tension zones, ensure that the steel conforms to Zone 2 impact testing requirements.
2. For the manufacture of Grade HPS70W, the Department will allow the use of the Thermo-Mechanical Controlled Process.
3. For sizes less than or equal to 24 inches in diameter, only use electric resistance welded single seam pipe.
4. For pipe with wall thickness greater than 1/2 inch, the fabricator may substitute API Specification 5L, Grade B.
5. ASTM A 500 Grade B or C is approved for use only with equivalent tensile and yield strengths as that specified for ASTM A 53 Grade B, Type E or S, with additional CVN testing for materials with wall thickness 1/2 inch or greater. Provide mill certs for approval by the ME prior to fabrication.
6. For casings, use smooth, non-corrugated steel pipe.
7. For shear connector studs, use cold-drawn bars that are killed or semi-killed.
8. For SIP, use a galvanized coating designation G235 or Z700.

Before using, submit to the ME a representative sample of each size for material testing and approval. Provide a mill certification that indicates the chemical and physical properties for each heat of material. For SIP forms, steel forgings and shear connector studs, submit certifications of compliance, as specified in 106.07, with the mill certifications attached.

906.04.01 AISC Certification

THE ENTIRE SUBPART IS CHANGED TO:

Ensure that the structural steel fabricating plant is certified under the AISC Quality Certification Program in the applicable categories by the type of work performed. See the following web page:
<http://www.aisc.org/content.aspx?id=5388>

906.04.05 Quality Control and Acceptance

THE FOURTH PARAGRAPH IS CHANGED TO:

Inspect and test structural steel bridge members according to ANSI/ AASHTO/ AWS D1.5 Bridge Welding Code, as modified by the following:

1. Assembly and fabrication may not continue until completed work has been inspected and accepted by the ME.
2. Grind flush complete-penetration butt welds scheduled for ultrasonic testing.
3. Test 100 percent of complete joint penetration groove and butt welds, including butt welds in longitudinal stiffeners.

SECTION 908 – BOLTS AND BOLTING MATERIAL

908.03 DIRECT TENSION INDICATORS (DTI)

THE ENTIRE SUBSECTION IS CHANGED TO:

Use direct tension indicators conforming to ASTM F 959. If galvanizing of the bolt assembly is required, mechanically galvanize DTIs according to ASTM B 695, Class 50. Test DTIs according to ASTM F 959 and verify according to NJDOT S-3.

Provide manufacturer’s certification and attach test results.

SECTION 915 – TIMBER AND TIMBER TREATMENT

915.05 TIMBER TREATMENT

THE ENTIRE SUBSECTION IS CHANGED TO:

Treat wood species according to AASHTO M 133 and AWWA Standards U1-11 and T1-11 as summarized in Table 915.05-1, Table 915.05-2, and Table 915.05-3.

915.05-1 Treatment for Sawn Timber Posts			
Type of Wood	Location/Environment	Allowable Treatments	AWPA Standard Reference for Minimum Retention Level
Southern Pine	Soil or Fresh Water	CCA or Pentachlorophenol	UC4A
Douglas Fir	Soil or Fresh Water	ACZA	UC4A

915.05-2 Treatment for Round Timber Piles			
Type of Wood	Location/Environment	Allowable Treatments	AWPA Standard Reference for Minimum Retention Level
Southern Pine	Soil or Fresh Water	CCA	UC4C
Southern Pine	Marine	CCA	UC5B
Douglas Fir	Soil or Fresh Water	ACZA	UC4C
Douglas Fir	Marine	ACZA	UC5B

915.05-3 Treatment for Timber Sheet Piling and Timber for Structures

Type of Wood	Location/Environment	Allowable Treatments	AWPA Standard Reference for Minimum Retention Level
Southern Pine	Soil or Fresh Water	CCA, or Pentachlorophenol	UC4B
Southern Pine	Marine	CCA	UC5B
Douglas Fir	Soil or Fresh Water	ACZA	UC4B
Douglas Fir	Marine	ACZA	UC5B

Notify the ME at least 14 days before treating timber. If directed by the ME, perform an assay to determine the retention of preservative according to AASHTO M 133. Submit certification of compliance as specified in [106.07](#). Attach the assay report to the certification.

SECTION 919 – MISCELLANEOUS

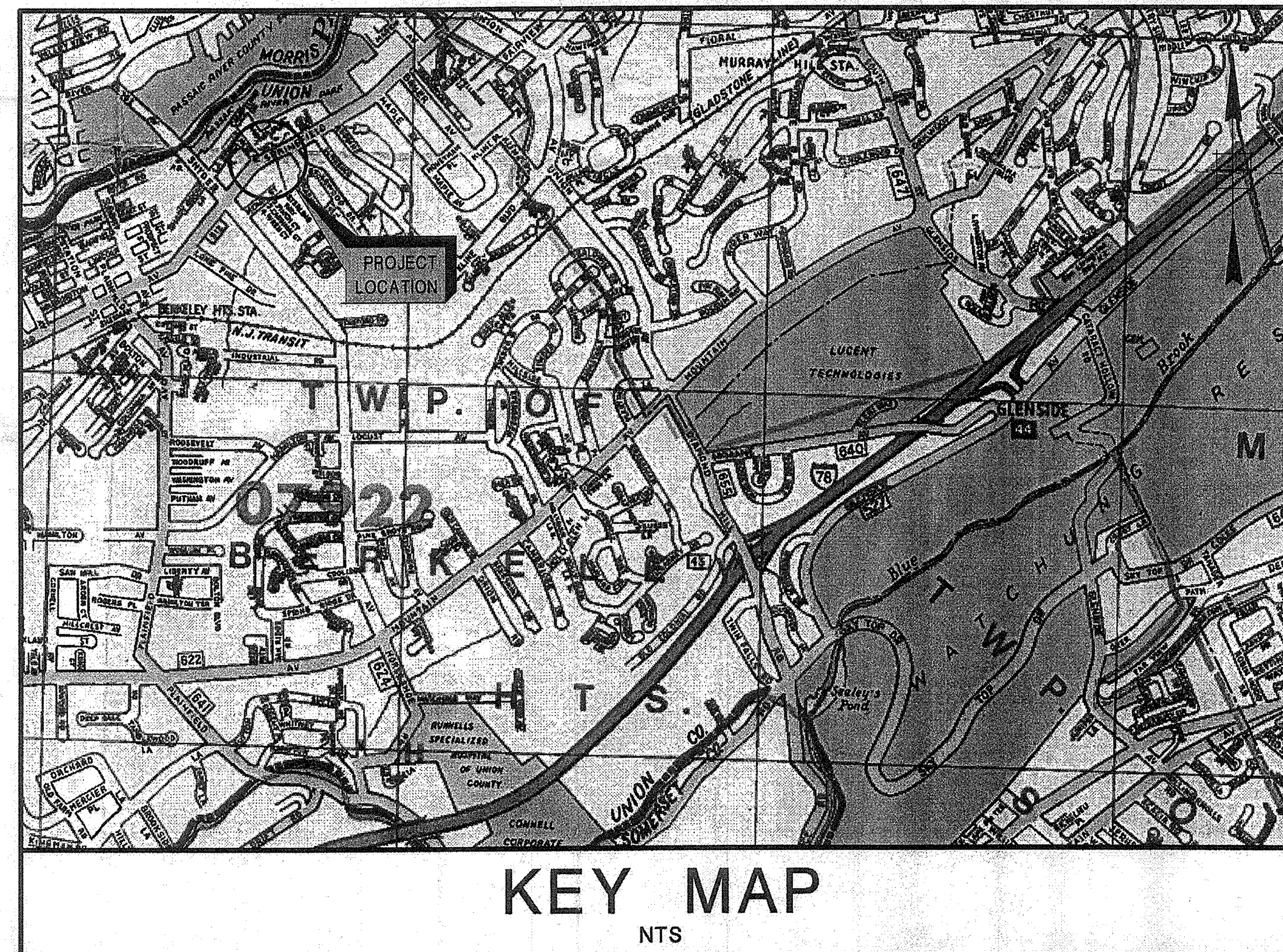
THE FOLLOWING IS ADDED:

919.15 POLYESTER MATTING

Provide polyester matting of commercial quality that is a composite of polyester base fiber and vinyl chloride resin and is permeable to air and water, but shall prevent sunlight from reaching the soil. Ensure that the matting resists ultraviolet light, mildew and algae. Ensure that the matting is self-extinguishing when removed from flame. Ensure that the matting has a minimum thickness of 1/4 inch.

COUNTY OF UNION
BOARD OF CHOSEN FREEHOLDERS
PLANS FOR
THE REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55

TOWNSHIP OF BERKELEY HEIGHTS
COUNTY OF UNION, NEW JERSEY
NOVEMBER 2016



PUBLIC UTILITIES	
WATER	NEW JERSEY AMERICAN WATER COMPANY
GAS	PUBLIC SERVICE ELECTRIC AND GAS
TELEPHONE	VERIZON - NEW JERSEY, INC.
CABLE TV	COMCAST CABLE OF NEW JERSEY
SANITARY	TOWNSHIP OF BERKELEY HEIGHTS
ELECTRIC	JERSEY CENTRAL POWER & LIGHT

INDEX OF DRAWINGS	
SHEET NO.	DESCRIPTION
1	KEY SHEET
2	ESTIMATE OF QUANTITIES
3	TYPICAL SECTIONS
4	LEGEND AND NOTES
5	CONSTRUCTION PLAN
6	DRAINAGE AND SOIL EROSION PLAN
7	PROFILE
8	HORIZONTAL ALIGNMENT AND TIES
9	GRADES AND SIGNING AND STRIPING PLAN
10-14	TRAFFIC CONTROL PLANS
15	DETOUR PLAN
16	TRAFFIC CONTROL DETAILS
17-18	ROADWAY CROSS SECTIONS
19-40	BRIDGE PLANS

N.J.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2007
 AS AMENDED BY THE SUPPLEMENTARY SPECIFICATIONS TO GOVERN

NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD
 ROADWAY CONSTRUCTION / TRAFFIC CONTROL / BRIDGE
 CONSTRUCTION DETAILS BOOKLET DATED 2016 AND STANDARD
 ELECTRICAL DETAILS BOOKLET, DATED JULY 2007 ARE
 APPLICABLE TO THIS PROJECT EXCEPT FOR THOSE DETAILS
 CONTAINED HEREIN.

RECOMMENDED BY: **ROBERT BOCCHINO, P.E.** *Robert Bocchino* DATE November 2, 2016
 ENGINEER, TOWNSHIP OF BERKELEY HEIGHTS

RECOMMENDED BY: **ROBERT WOODRUFF** *Robert Woodruff* DATE October 5, 2016
 MAYOR, TOWNSHIP OF BERKELEY HEIGHTS

RECOMMENDED BY: **THOMAS O. MINEO, P.E.** *Thomas Mineo* DATE Nov 21, 2016
 COUNTY ENGINEER, COUNTY OF UNION

APPROVED BY: **ALFRED FAELLA** *Alfred Faella* DATE Nov 19, 2016
 COUNTY MANAGER, COUNTY OF UNION

"CHANGES MADE TO THESE PLANS SINCE SIGNATURE BY THE
 CONSULTANT MAY BE DETERMINED BY COMPARISON OF THE
 PLANS FILED AT THE COUNTY WITH THOSE FILED AT THE
 OFFICE OF THE CONSULTANT"

MANUEL J. VERA CARABALLO, P.E. <small>NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600</small> <i>Manuel J. Vera</i> DATE <u>10/26/2016</u>		
Dewberry Engineers Inc. <small>Certificate of Authorization No. 24GA28047600 Bloomfield, N.J.</small>	SCALE: NONE	DATE: NOVEMBER 2016 SHEET NO. <u>1</u> OF <u>40</u>

ROADWAY

PAY ITEM	ITEM DESCRIPTION	FROM SHEET NO.						IF & WHERE DIRECTED	CONTRACT QUANTITY	UNIT	AS BUILT QUANTITY	
		5	6	9	10	12	16					17
		1	MOBILIZATION									
2	FIELD OFFICE TYPE A SET UP							1	1	UNIT		
3	FIELD OFFICE TYPE A MAINTENANCE							7	7	MONTH		
4	CONSTRUCTION LAYOUT							L.S.	L.S.			
5	HEAVY DUTY SILT FENCE, ORANGE		111					14	125	L.F.		
6	INLET FILTER, TYPE 2, 2'X4'		8						8	UNIT		
7	CONCRETE WASHOUT SYSTEM								L.S.	L.S.		
8	OIL ONLY EMERGENCY SPILL KIT, TYPE 1							1	1	UNIT		
9	BREAKAWAY BARRICADE							17	17	UNIT		
10	DRUM							39	39	UNIT		
11	CONSTRUCTION IDENTIFICATION SIGNS, 4' X 8'							2	2	UNIT		
12	CONSTRUCTION SIGNS					975		100	1075	S.F.		
13	CONSTRUCTION BARRIER CURB							260	260	L.F.		
14	POLICE TRAFFIC DIRECTOR							ALLOW	ALLOW	ALLOW		
15	TEMPORARY CRASH CUSHION, INERTIAL BARRIER SYSTEM, 10 MODULES							4	4	UNIT		
16	FLASHING ARROW BOARD, 4' X 8'							2	2	UNIT		
17	TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION							2	2	UNIT		
18	REMOVABLE BLACK LINE MASKING TAPE, 6"							200	200	L.F.		
19	FUEL PRICE ADJUSTMENT								DOLL.	DOLL.		
20	ASPHALT PRICE ADJUSTMENT								DOLL.	DOLL.		
21	FINAL CLEANUP								L.S.	L.S.		
22	CLEARING SITE								L.S.	L.S.		
23	EXCAVATION, TEST PIT							20	20	C.Y.		
24	EXCAVATION, UNCLASSIFIED				2			31	70	C.Y.		
25	REMOVAL OF PAVEMENT	275				5		20	300	S.Y.		
26	I-14 SOIL AGGREGATE	35				1		8	44	C.Y.		
27	DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK	171			5			15	191	S.Y.		
28	DENSE-GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS	9			1				10	C.Y.		
29	HMA MILLING, 3" OR LESS	568						65	633	S.Y.		
30	TACK COAT							62	62	GAL		
31	PRIME COAT							36	36	GAL		
32	HOT MIX ASPHALT 9.5 M 64 SURFACE COURSE	124			1			18	143	TON		
33	HOT MIX ASPHALT 19 M 64 BASE COURSE	60			2			14	76	TON		
34	15" REINFORCED CONCRETE PIPE		45						45	L.F.		
35	INLET, TYPE B		2						2	UNIT		
36	INLET, TYPE B-1		1						1	UNIT		
37	INLET, TYPE B-2		1						1	UNIT		
38	RESET EXISTING CASTING		1						1	UNIT		
39	SET INLET TYPE B, CASING		1						1	UNIT		
40	RECONSTRUCTED INLET, TYPE B, USING EXISTING CASTING		1						1	UNIT		
41	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING		1						1	UNIT		
42	RECONSTRUCTED INLET, TYPE E, USING NEW CASTING				1				1	UNIT		
43	TEMPORARY CHAIN-LINK FENCE, 6' HIGH							166	166	L.F.		
44	CONCRETE SIDEWALK, 4" THICK	80							80	S.Y.		
45	HOT MIX ASPHALT DRIVEWAY, 9" THICK	104							104	S.Y.		
46	CONCRETE DRIVEWAY, 6" THICK	29							29	S.Y.		
47	9"X18" CONCRETE VERTICAL CURB	224			17				241	L.F.		
48	GRANITE CURB	74							74	L.F.		
49	TRAFFIC STRIPES, 4"			900					960	L.F.		
50	TRAFFIC MARKINGS			5					5	S.F.		
51	RPM, BI-DIRECTIONAL, AMBER LENS							2	2	UNIT		
52	REMOVAL OF RPM							1	1	UNIT		
53	RESET SIGN USING STEEL "U" POST			3					3	UNIT		
54	RESET WATER VALVE BOX	7						2	9	UNIT		
55	RESET MANHOLE, SANITARY SEWER, USING EXISTING CASTING	1							1	UNIT		
56	RESET GAS VALVE BOX	5							5	UNIT		
57	TOPSOILING, 4" THICK	80							88	S.Y.		
58	BORROW TOPSOIL						8		2	10		
59	FERTILIZING AND SEEDING, TYPE A-3	80							8	88		
60	STRAW MULCHING	80							8	88		

BRIDGE

PAY ITEM	ITEM DESCRIPTION	FROM SHEET NO.		IF & WHERE DIRECTED	CONTRACT QUANTITY	UNIT	AS BUILT QUANTITY
		20					
		61	CLEARING SITE, BRIDGE (STR. NO. Be19)				
62	EXCAVATION, UNCLASSIFIED	105		10	115	C.Y.	
63	I-9 SOIL AGGREGATE	90		10	100	C.Y.	
64	REINFORCEMENT STEEL, GALVANIZED	13,300			13,300	LBS.	
65	CONCRETE WINGWALL	6			6	C.Y.	
66	EPOXY WATERPROOFING	55			55	S.Y.	
67	PRESTRESSED CONCRETE SLAB BEAM (TYPE SI-36), 36"X12"	357			357	L.F.	
68	PRESTRESSED CONCRETE SLAB BEAM (TYPE SI-48), 48"X12"	48			48	L.F.	
69	STRUCTURAL STEEL (APPROX. 375 LBS.)	L.S.			L.S.	L.S.	
70	REINFORCED ELASTOMERIC BEARING ASSEMBLY	34			34	UNIT	
71	CONCRETE BRIDGE SEATS, HES	20			20	C.Y.	
72	CONCRETE BRIDGE DECK, HES	40			40	C.Y.	
73	CONCRETE BRIDGE SIDEWALK	12			12	C.Y.	
74	CONCRETE BRIDGE PARAPET	85			85	L.F.	
75	BRIDGE COMBINATION RAILING (1 RAIL, ALUMINUM)	70			70	L.F.	
76	RUBBLESTONE FACING	445			445	S.F.	
77	BLUESTONE CAP	175			175	S.F.	
78	NAME PLAQUE	2			2	UNIT	



UNION COUNTY ENGINEERING
 REHABILITATION OF
 SPRINGFIELD AVENUE BRIDGE (Be19)
 OVER STREAM 3-55
 TOWNSHIP OF BERKELEY HEIGHTS

ESTIMATE OF QUANTITIES

PETER AGNELLO, P.E.

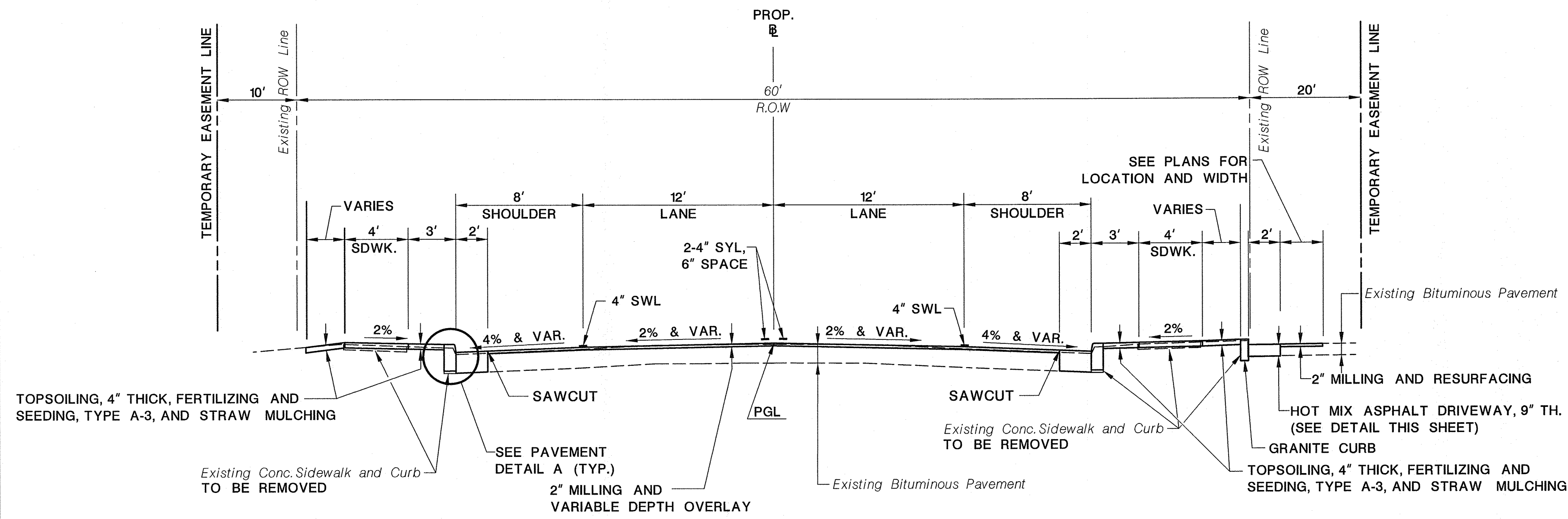
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04060100

DATE 11/15/16

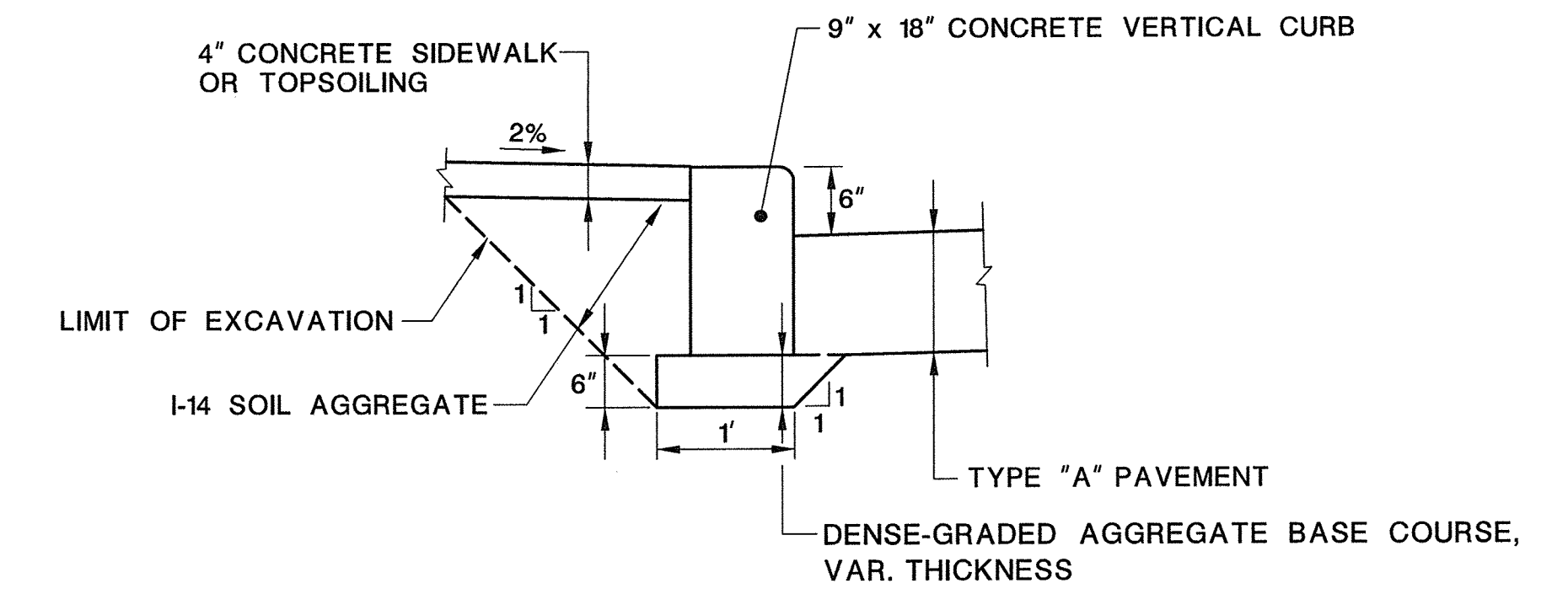
DATE	REVISION DESCRIPTION

Dewberry Engineers Inc.
 Certificate of Authorization No. 24GA28047600
 Bloomfield, N.J.

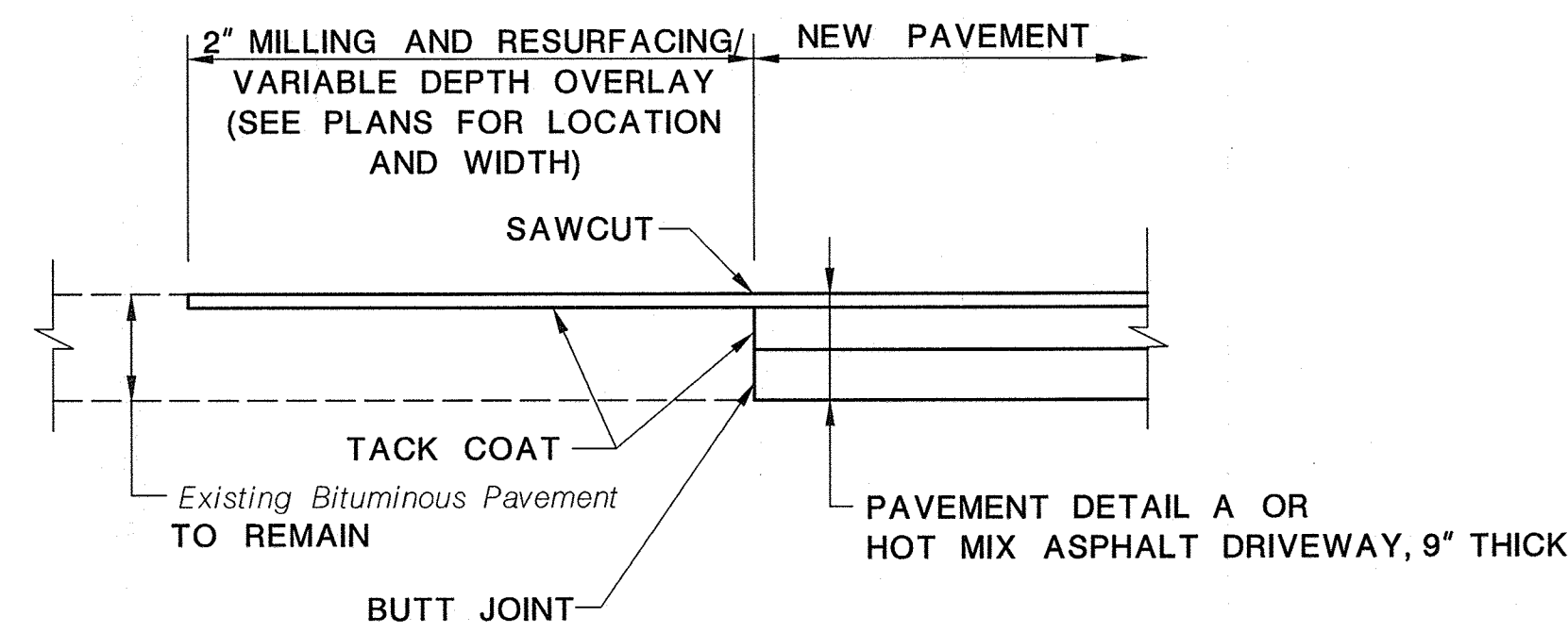
SCALE: NONE
 DATE: NOVEMBER 2016
 SHEET NO. 2 OF 40



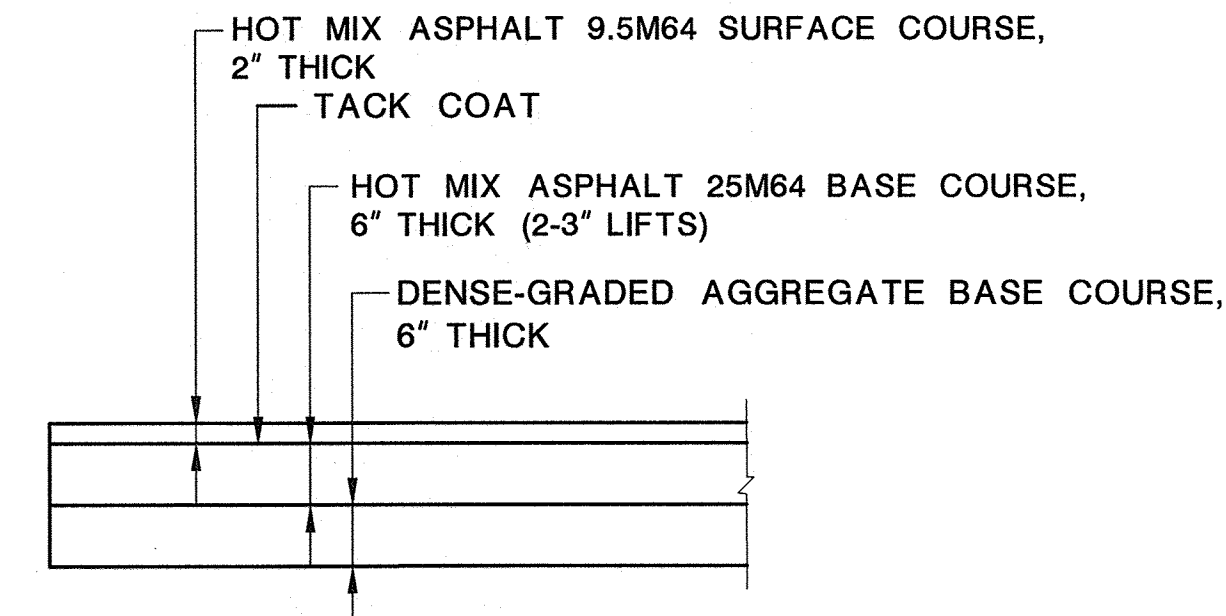
SPRINGFIELD AVENUE
NOT TO SCALE



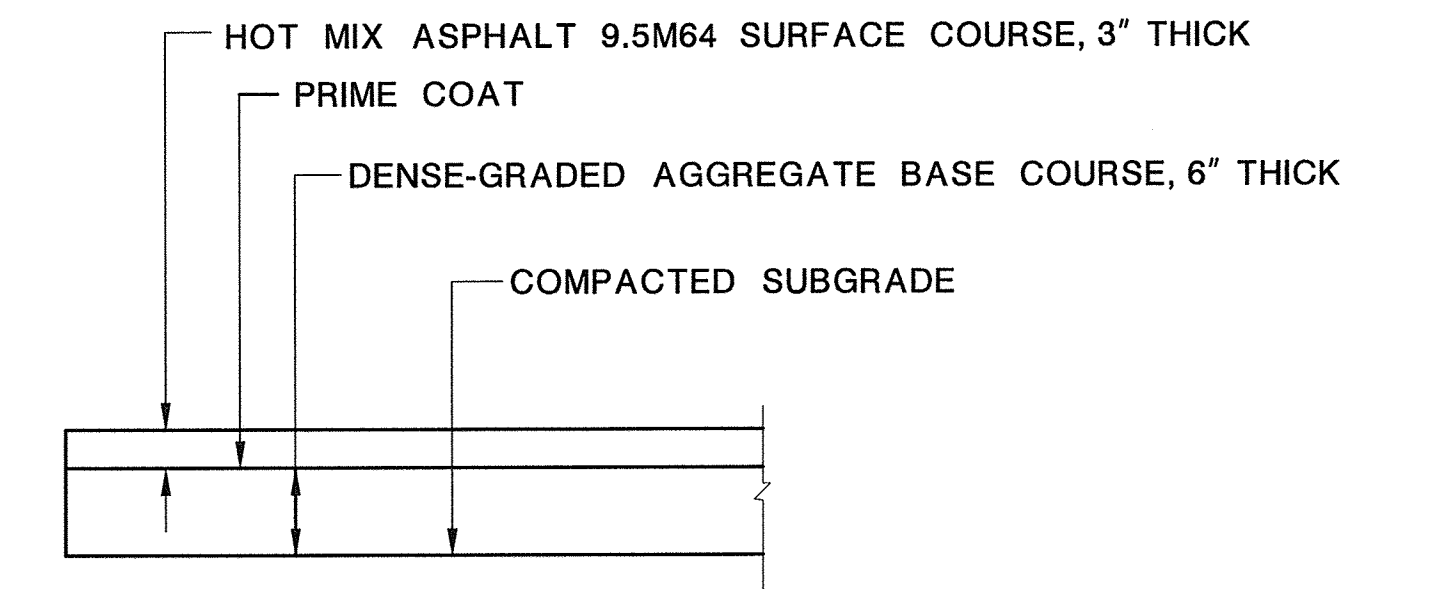
SPRINGFIELD AVE.
NOT TO SCALE



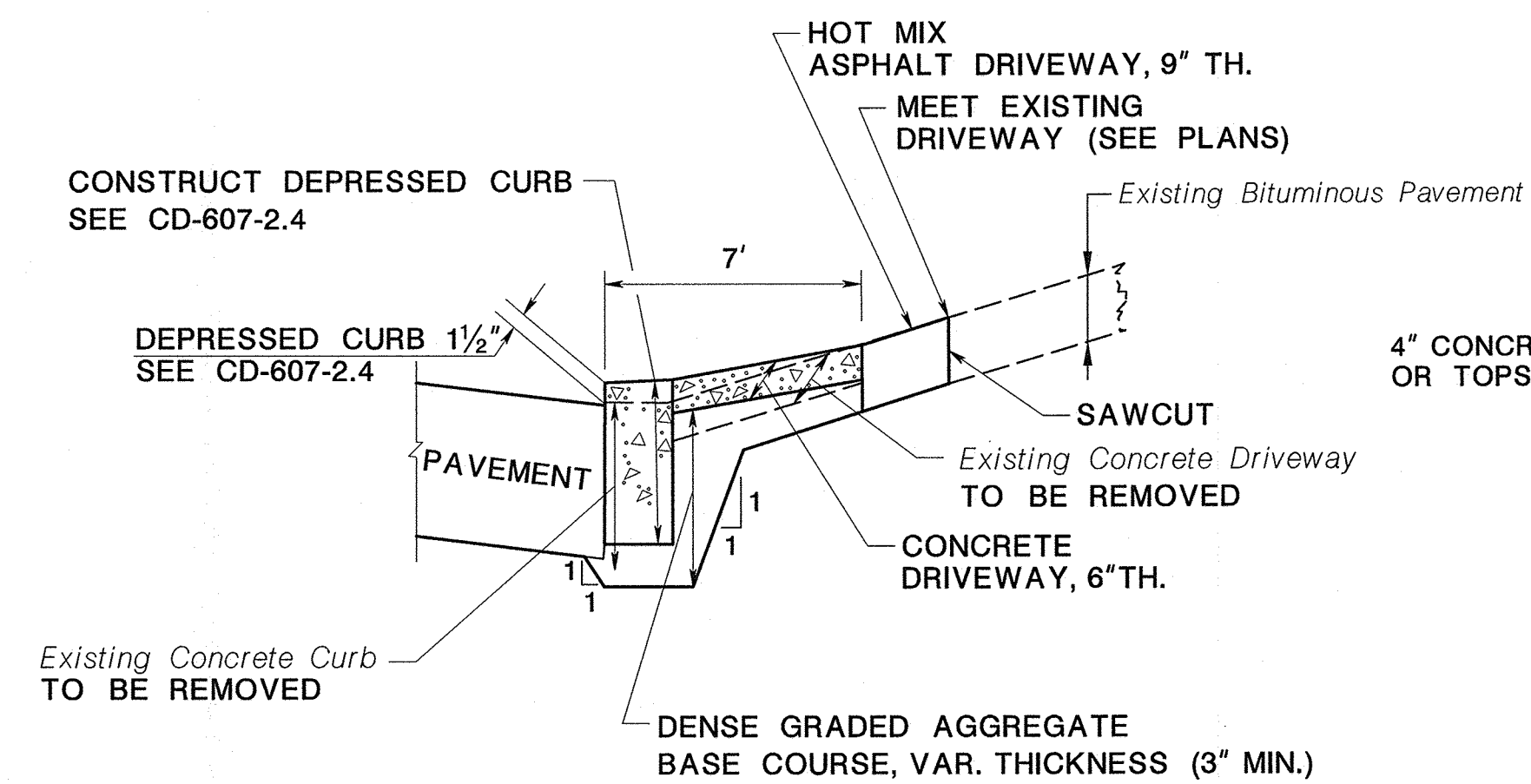
PAVEMENT JOINT DETAIL
LONGITUDINAL AND TRANSVERSE
NOT TO SCALE



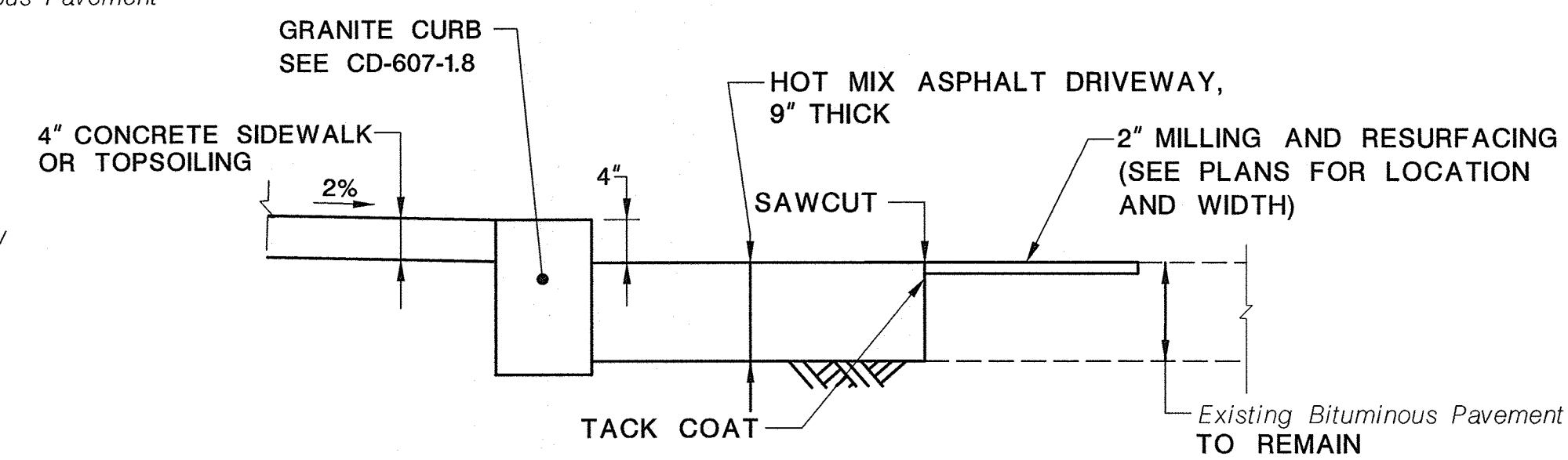
TYPE "A" PAVEMENT
NOT TO SCALE



HOT MIX ASPHALT DRIVEWAY, 9" THICK
NOT TO SCALE



CONCRETE DRIVEWAY WITH DEPRESSED CURB
NOT TO SCALE



PARKING LOT WITH CURB
NOT TO SCALE

LEGEND:
SYL - SOLID YELLOW LINE
SWL - SOLID WHITE LINE

UNION COUNTY ENGINEERING
REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

TYPICAL SECTIONS

PETER AGNELLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0408000
DATE 11/15/16

Dewberry Engineers Inc. SCALE: AS SHOWN DATE: NOVEMBER 2016
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J. SHEET NO. 3 OF 40

DATE	REVISION DESCRIPTION

SOIL EROSION AND SEDIMENT CONTROL NOTES

- 1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY... 2. ANY DISTURBED AREA THAT WILL BE LEFT EXPOSED FOR MORE THAN THIRTY (30) DAYS... 3. PERMANENT VEGETATION IS TO BE ESTABLISHED ON EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING...

GENERAL NOTES

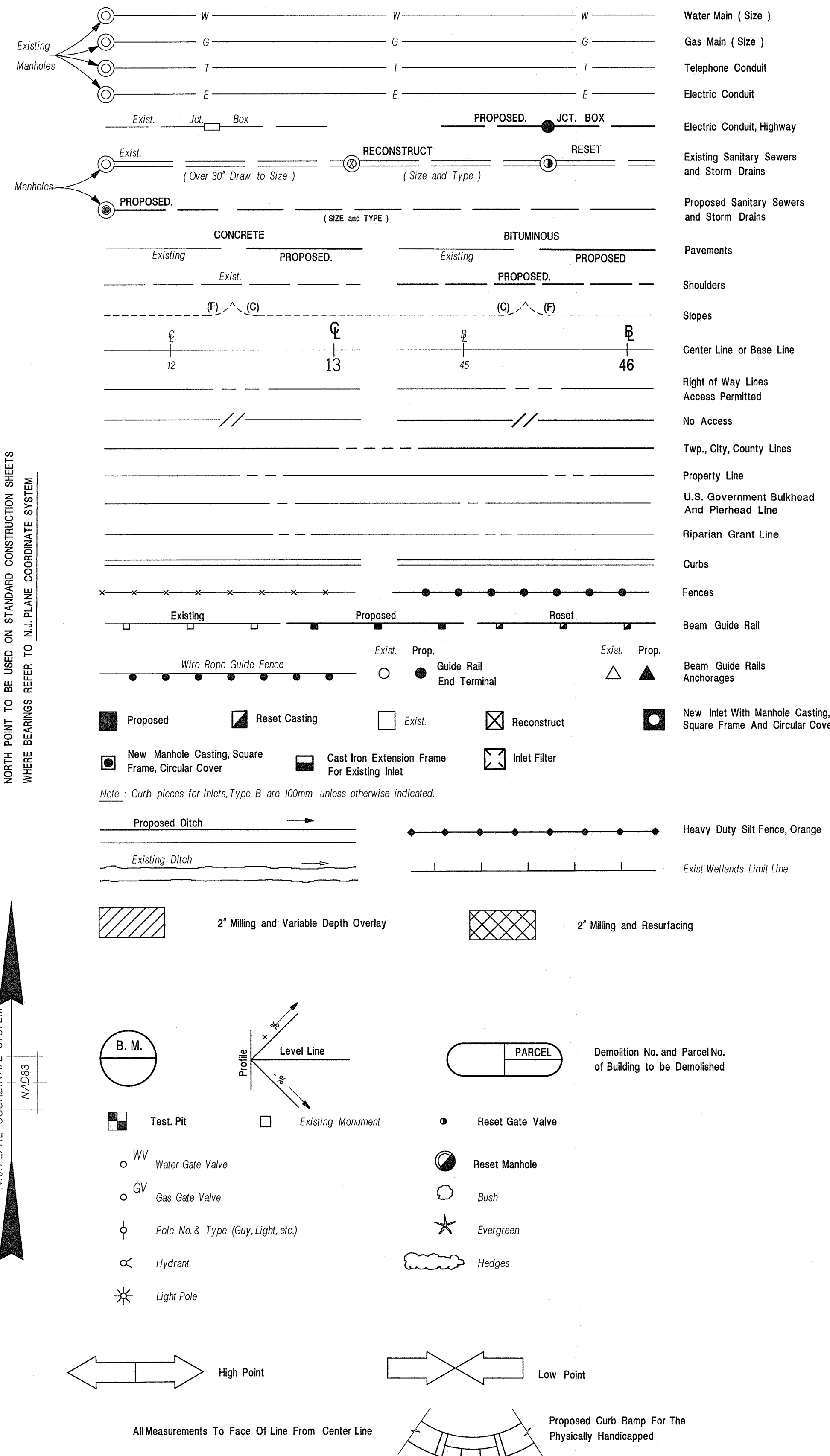
- 1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "2007 N.J.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION"... 2. THE EXISTING R.O.W. WAS SET USING FOUND PROPERTY MARKERS, DEEDS AND TAX MAPS... 3. ALL DIMENSIONS AND DETAILS SHALL BE VERIFIED AND COORDINATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION...

ABBREVIATIONS USED IN THIS CONTRACT

Table with 4 columns of abbreviations and their corresponding full names, such as AH., BK. AHEAD, BACK; IP IRON PIN; RET. RETAINING WALL; etc.

STANDARD LEGEND

NEW JERSEY DEPARTMENT OF TRANSPORTATION



NORTH POINT TO BE USED ON STANDARD CONSTRUCTION SHEETS WHERE BEARINGS REFER TO N.J. PLANE COORDINATE SYSTEM

N.J. PLANE COORDINATE SYSTEM

UNION COUNTY ENGINEERING REHABILITATION OF SPRINGFIELD AVENUE BRIDGE (Be19) OVER STREAM 3-55 TOWNSHIP OF BERKELEY HEIGHTS

LEGEND AND NOTES

PETER AGNELLO, P.E.

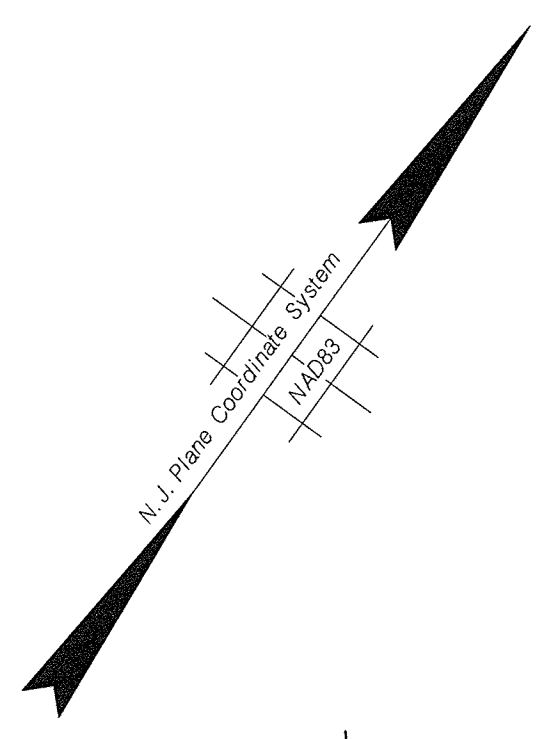
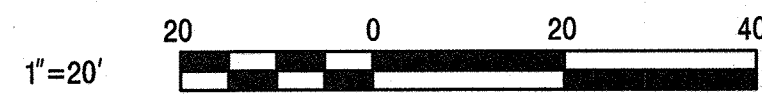
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04060100

DATE 11/15/16

Dewberry Engineers Inc. SCALE: AS SHOWN DATE: NOVEMBER 2016 SHEET NO. 4 OF 40

REVISION table with columns for DATE and DESCRIPTION.





CONSTRUCT
27 S.Y. HOT MIX ASPHALT DRIVEWAY, 9" THICK
7 C.Y. I-14 SOIL AGGREGATE
2 UNIT RESET WATER VALVE BOX

CONSTRUCT
16 S.Y. CONCRETE DRIVEWAY (22' W) WITH DEPRESSED CURB
1 UNIT RESET GAS VALVE BOX
2 C.Y. DENSE-GRADED AGGREGATE BASE COURSE, VAR. THICK.

CONSTRUCT
6 L.F. GRANITE CURB

CONSTRUCT
10 S.Y. TOPSOILING, 4" THICK
10 S.Y. FERTILIZING AND SEEDING, TYPE A-3
10 S.Y. STRAW MULCHING

CONSTRUCT
9 S.Y. CONCRETE SIDEWALK, 4" THICK
1 UNIT RESET GAS VALVE BOX
1 UNIT RESET MANHOLE, SANITARY SEWER, USING EXISTING CASTING

MEET EXIST. P.V.M.T. SIDEWALK AND CURB, END VAR. DEPTH OVERLAY, STA. 11+60

CONSTRUCT
13 S.Y. TOPSOILING, 4" THICK
13 S.Y. FERTILIZING AND SEEDING, TYPE A-3
13 S.Y. STRAW MULCHING

CONSTRUCT
25 L.F. GRANITE CURB

CONSTRUCT
70 L.F. 9" x 18" CONCRETE VERTICAL CURB
2 C.Y. DENSE-GRADED AGGREGATE BASE COURSE, VAR. THICK.

CONSTRUCT
13 S.Y. CONCRETE SIDEWALK, 4" THICK
2 UNIT RESET WATER VALVE BOX

CONSTRUCT
9 TON HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK
27 TON HOT MIX ASPHALT 25M64 BASE COURSE, 6" THICK
77 S.Y. DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK
77 S.Y. REMOVAL OF PAVEMENT

CONSTRUCT
34 S.Y. TOPSOILING, 4" THICK
34 S.Y. FERTILIZING AND SEEDING, TYPE A-3
34 S.Y. STRAW MULCHING

CONSTRUCT
57 L.F. 9" x 18" CONCRETE VERTICAL CURB
1 C.Y. DENSE-GRADED AGGREGATE BASE COURSE, VAR. THICK.

CONSTRUCT
24 S.Y. CONCRETE SIDEWALK, 4" THICK

CONSTRUCT
253 S.Y. HMA MILLING, 2" DEPTH
52 TON HOT MIX ASPHALT 9.5M64 SURFACE COURSE, VAR. THICKNESS
1 UNIT RESET WATER VALVE BOX
1 UNIT RESET GAS VALVE BOX

MEET EXIST. SIDEWALK AND CURB, 13+12.42

MEET EXIST. PAVEMENT AND CURB, STA. 12+87.08

KUNTZ AVE

SPRINGFIELD AVE.

BEGIN BRIDGE 12+21.17

END BRIDGE 12+47.10

CONSTRUCT
178 S.Y. HMA MILLING, 2" DEPTH
36 TON HOT MIX ASPHALT 9.5M64 SURFACE COURSE, VAR. THICKNESS

CURB RAMP TYPE 5 (SEE NOTE 4)

CONSTRUCT
137 S.Y. HMA MILLING, 2" DEPTH
16 TON HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK

CONSTRUCT
20 S.Y. CONCRETE SIDEWALK, 4" THICK

CONSTRUCT
43 L.F. GRANITE CURB

CONSTRUCT
48 L.F. 9" x 18" CONCRETE VERTICAL CURB
11 C.Y. DENSE-GRADED AGGREGATE BASE COURSE, VAR. THICK.

CONSTRUCT CURB AND SIDEWALK AROUND EXISTING UTILITY POLE

CONSTRUCT
16 S.Y. TOPSOILING, 4" THICK
16 S.Y. FERTILIZING AND SEEDING, TYPE A-3
16 S.Y. STRAW MULCHING
1 UNIT RESET WATER VALVE BOX

CONSTRUCT ASPHALT DRIVEWAY AROUND EXISTING LIGHTING POLE

CONSTRUCT
11 TON HOT MIX ASPHALT 9.5M64 SURFACE COURSE, 2" THICK
33 TON HOT MIX ASPHALT 25M64 BASE COURSE, 6" THICK

CONSTRUCT
94 S.Y. DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK
94 S.Y. REMOVAL OF PAVEMENT
1 UNIT RESET WATER VALVE BOX

MEET EXIST. PAVEMENT AND CURB, END VAR. DEPTH OVERLAY, STA. 13+22

MEET EXIST. PAVEMENT AND CURB, STA. 12+87.08

CONSTRUCT
49 L.F. 9" x 18" CONCRETE VERTICAL CURB
1 C.Y. DENSE-GRADED AGGREGATE BASE COURSE, VAR. THICK.

MEET EXIST. PAVEMENT AND SIDEWALK, STA. 12+81.13

CONSTRUCT
7 S.Y. TOPSOILING, 4" THICK
7 S.Y. FERTILIZING AND SEEDING, TYPE A-3
7 S.Y. STRAW MULCHING

CONSTRUCT
9 S.Y. CONCRETE SIDEWALK, 4" THICK

CONSTRUCT
13 S.Y. CONCRETE DRIVEWAY (18' W) WITH DEPRESSED CURB
1 UNIT RESET GAS VALVE BOX
2 C.Y. DENSE-GRADED AGGREGATE BASE COURSE, VAR. THICK.

CONSTRUCT
5 S.Y. CONCRETE SIDEWALK, 4" THICK

CONSTRUCT
77 S.Y. HOT MIX ASPHALT DRIVEWAY, 9" THICK
77 S.Y. REMOVAL OF PAVEMENT
28 C.Y. I-14 SOIL AGGREGATE
1 UNIT RESET GAS VALVE BOX

LEGEND:

	2" MILLING AND VARIABLE RESURFACING
	2" MILLING AND 2" RESURFACING

- NOTE:
- ADJUST SIDEWALK LIMITS TO MEET AN EXISTING JOINT.
 - PERFORM WORK IN COMPLIANCE WITH HIGH VOLTAGE PROXIMITY ACT REQUIREMENTS.
 - SEE GRADING PLAN FOR DRIVEWAY CONTROL.
 - ENSURE CURB RAMPS MEET ADA REQUIREMENTS AS SHOWN IN STANDARD CONSTRUCTION DETAILS INCLUDING BUT NOT LIMITED TO SLOPE, CROSS SLOPE AND ZERO REVEAL.
 - ASPHALT DRIVEWAY RECONSTRUCTION TO BE PERFORMED WITHOUT IMPACT TO THE EXISTING CULVERT.

UNION COUNTY ENGINEERING

REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

CONSTRUCTION PLAN

PETER AGNELLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04060100

DATE: 11/15/16

Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J.

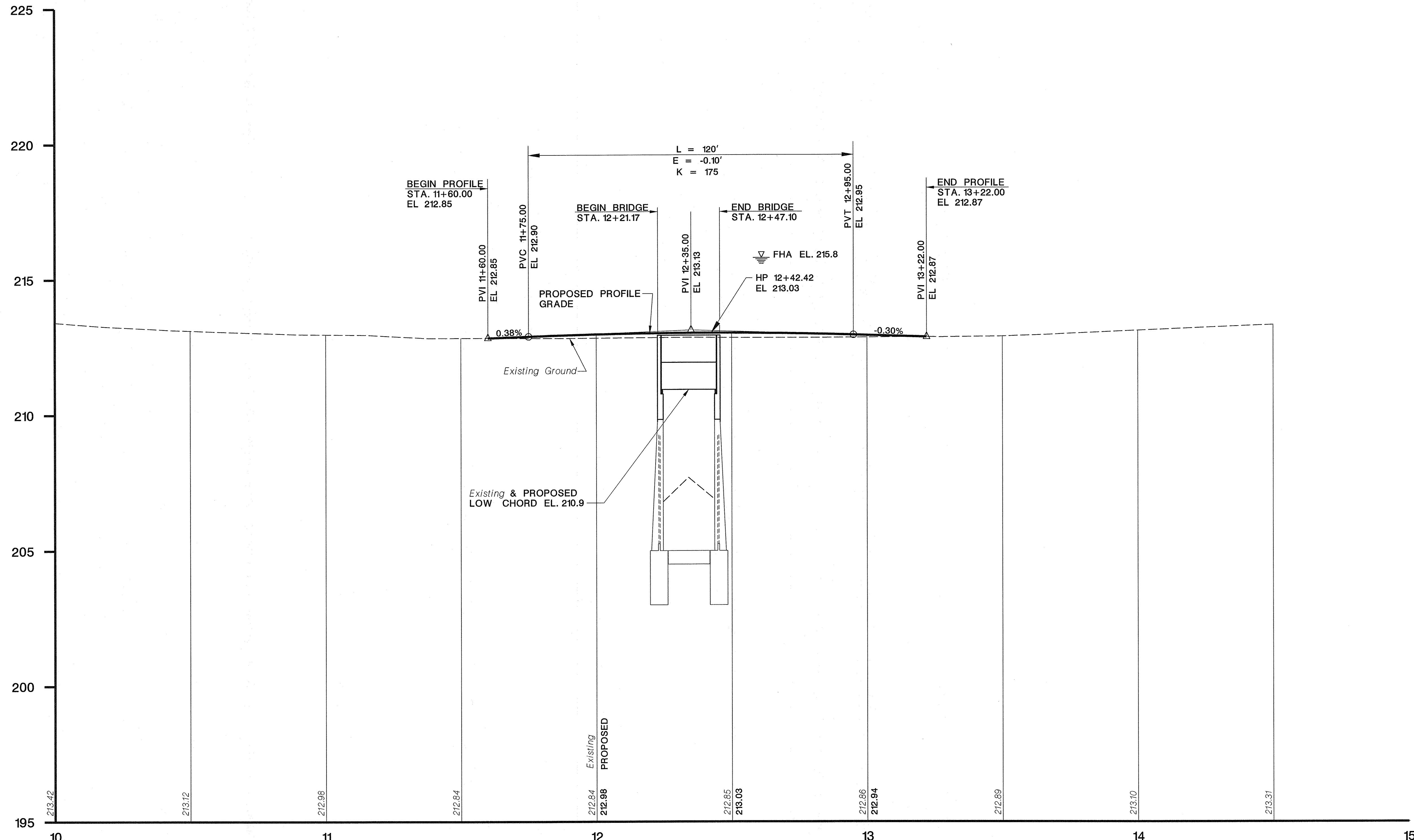
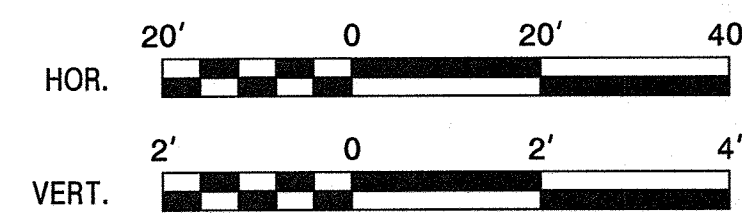
SCALE: 1"=20'

DATE: NOVEMBER 2016

SHEET NO. 5 OF 40

DATE	REVISION DESCRIPTION





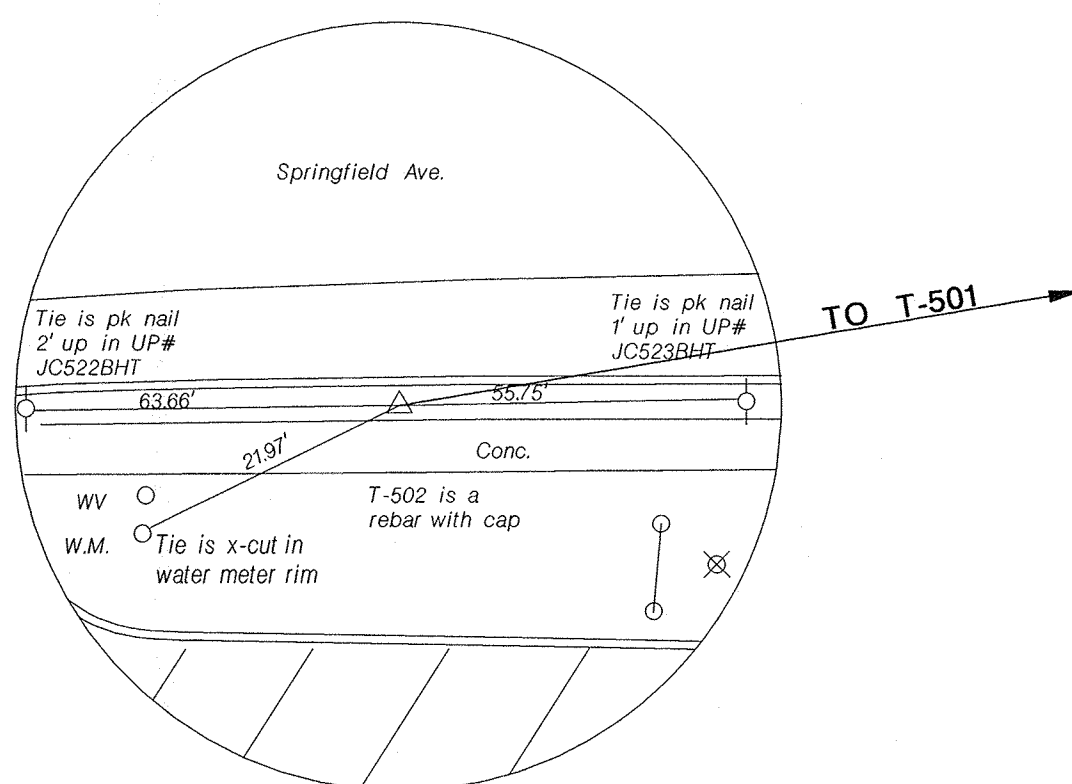
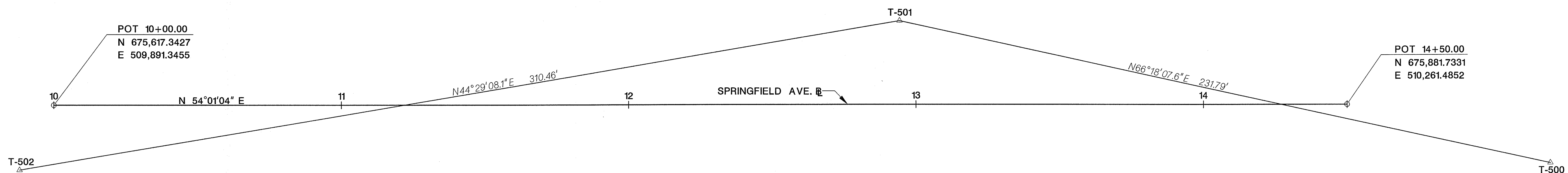
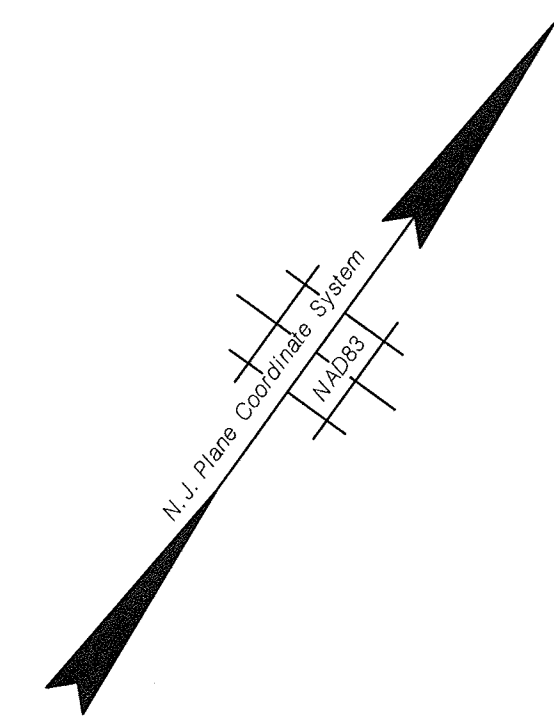
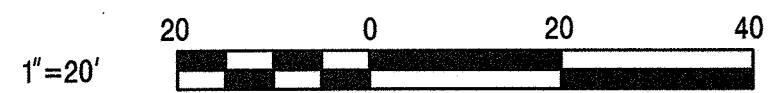
SPRINGFIELD AVE
DESIGN SPEED 40 MPH

UNION COUNTY ENGINEERING	
REHABILITATION OF SPRINGFIELD AVENUE BRIDGE (Be19) OVER STREAM 3-55 TOWNSHIP OF BERKELEY HEIGHTS	
PROFILE	
PETER AGNELLO, P.E. <small>NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0406000</small>	
DATE: <u>11/15/16</u>	DATE: <u>11/15/16</u>
Dewberry Engineers Inc. <small>Certificate of Authorization No. 24GA28047600 Bloomfield, N.J.</small>	SCALE: AS SHOWN DATE: NOVEMBER 2016 SHEET NO. <u>7</u> OF <u>40</u>

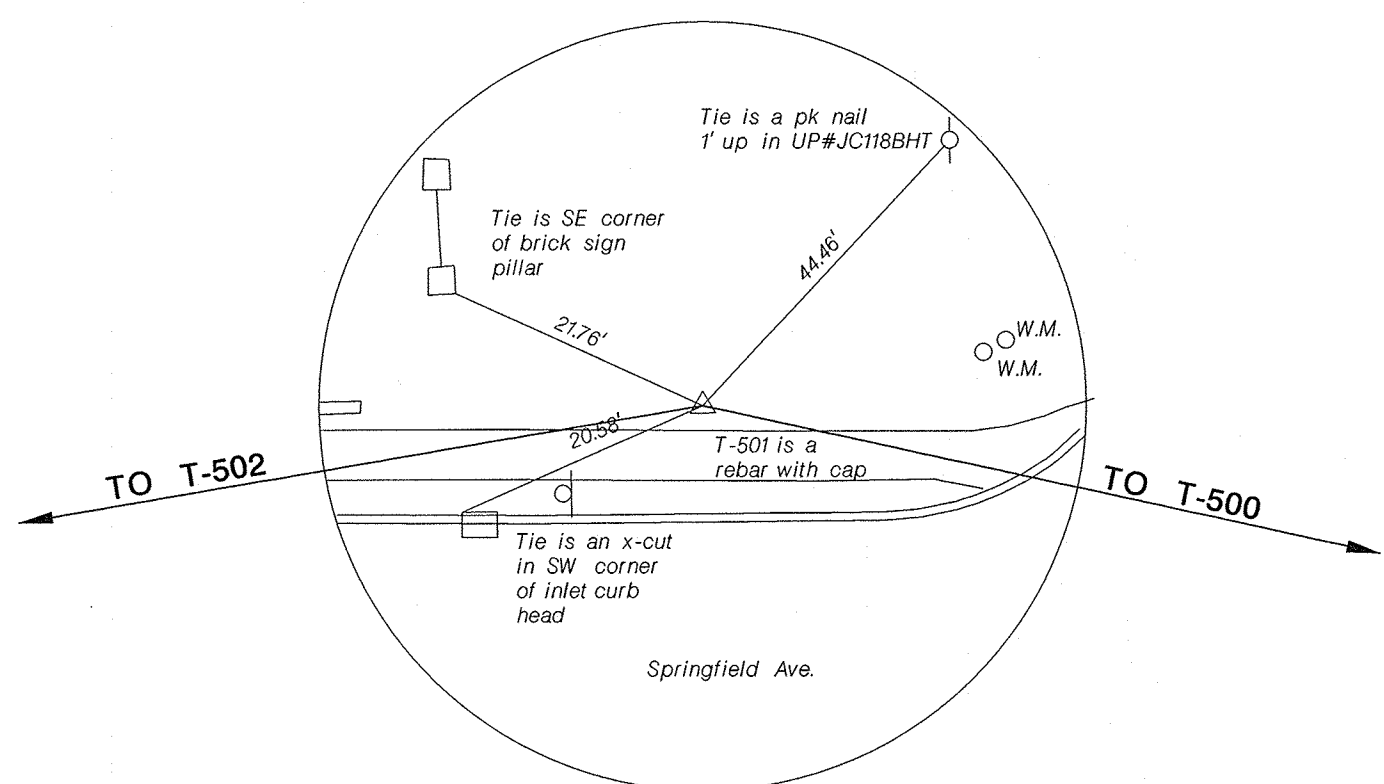
REVISION	
DATE	DESCRIPTION

NOTE:
1. ELEVATIONS ARE IN NAVD 1988.

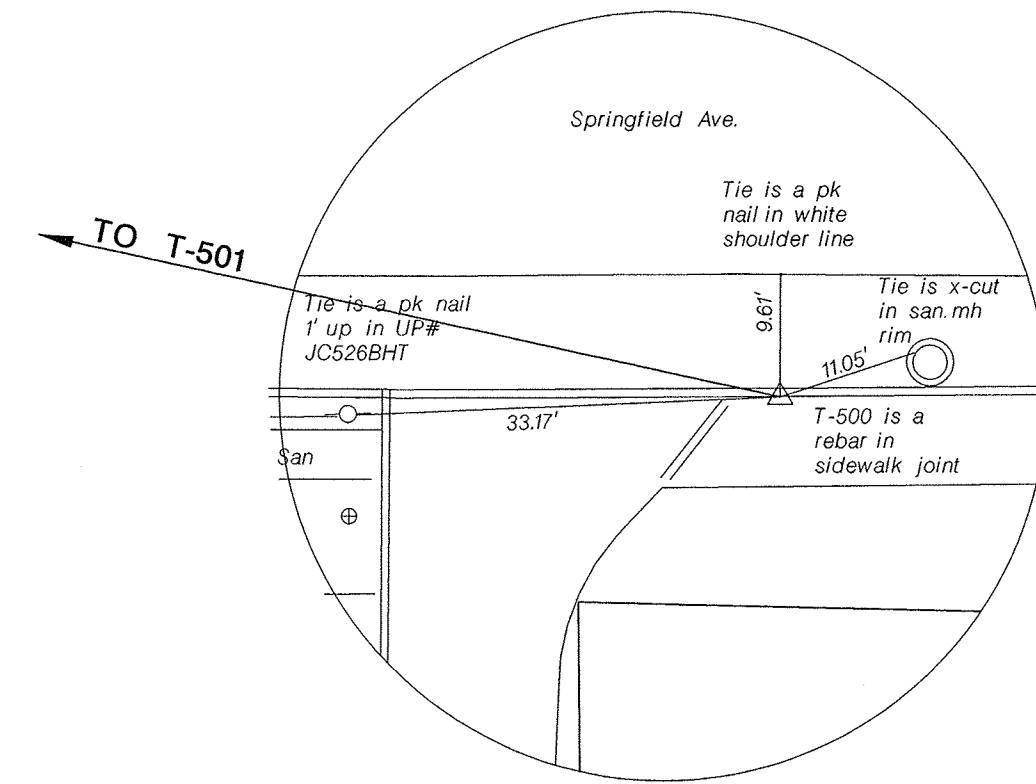




T-502
N 675592.150
E 509900.922
EL. 213.59'
N.T.S.



T-501
N 675813.643
E 510118.473
EL. 212.66'
N.T.S.

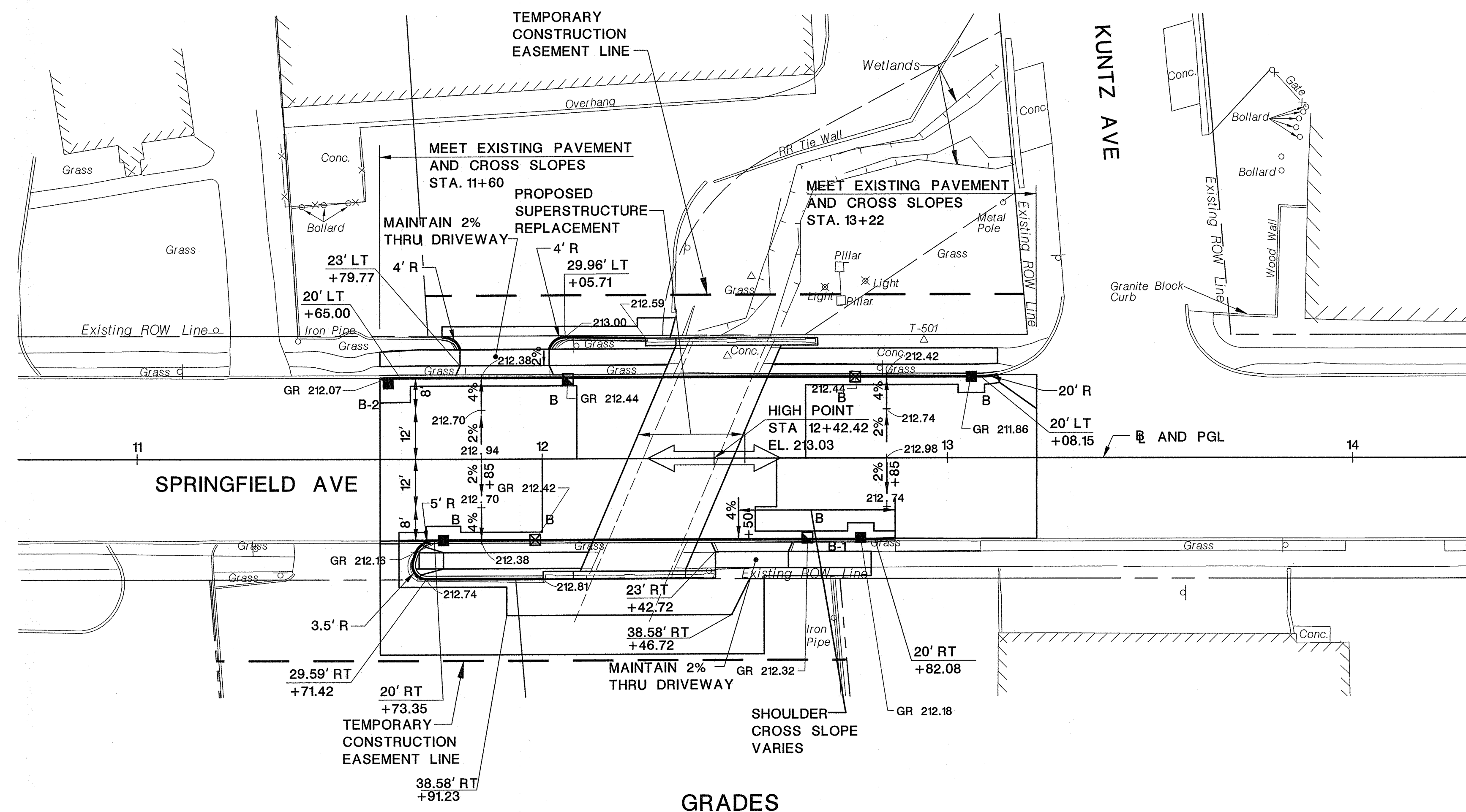
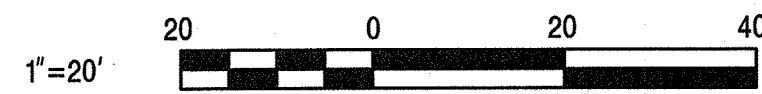


T-500
N 675906.801
E 510330.714
EL. 213.62
N.T.S.

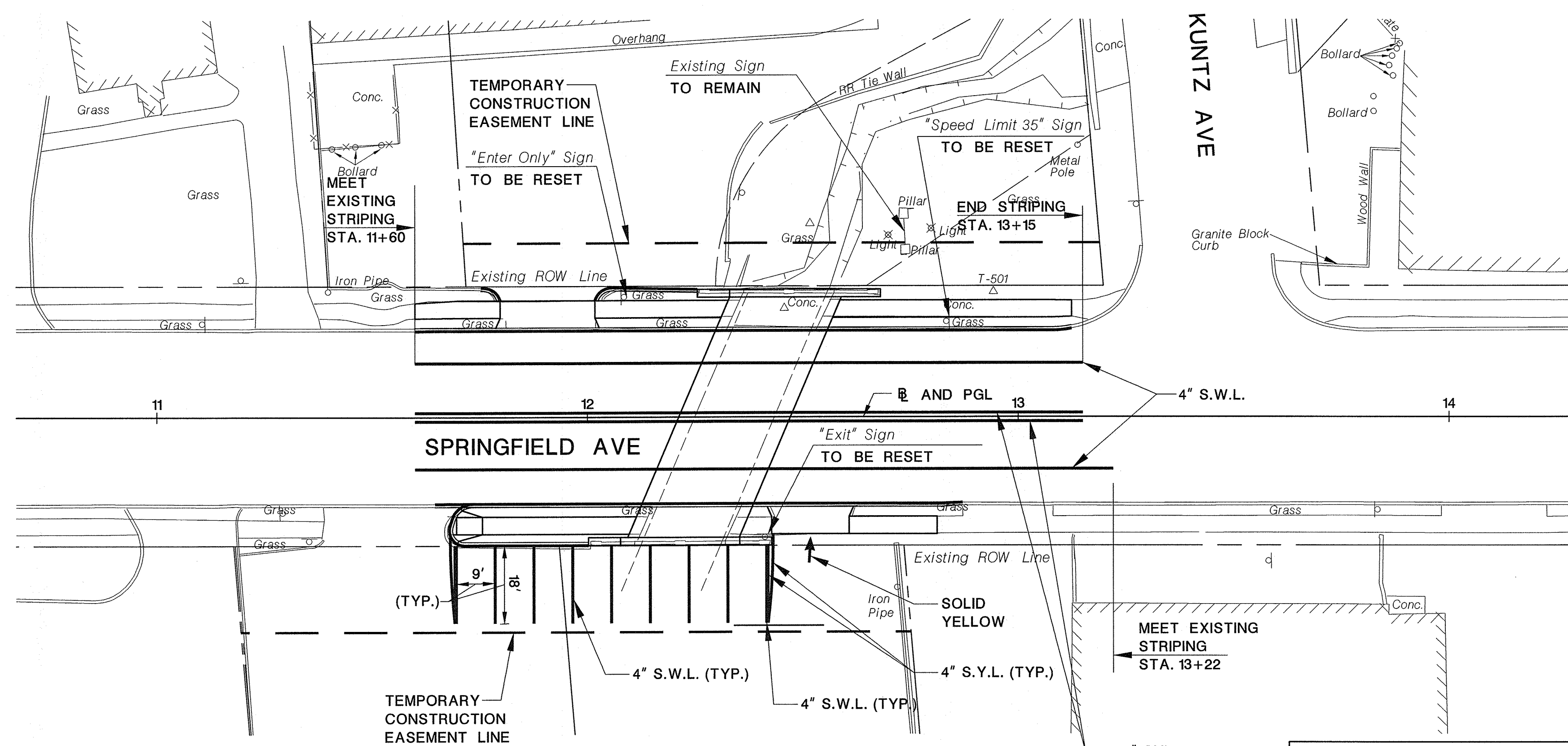
UNION COUNTY ENGINEERING									
REHABILITATION OF SPRINGFIELD AVENUE BRIDGE (Be19) OVER STREAM 3-55 TOWNSHIP OF BERKELEY HEIGHTS									
HORIZONTAL ALIGNMENT AND TIES									
SCOTT M. BLEEKER, PLS NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GS03622900									
DATE	DATE 11/18/16								
<table border="1"> <tr> <th>DATE</th> <th>REVISION</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>		DATE	REVISION						
DATE	REVISION								
Dewberry Engineers Inc. Certificate of Authorization No. 24GA28047800 Bloomfield, N.J.	SCALE: 1"=20' DATE: NOVEMBER 2016 SHEET NO. 8 OF 40								

HORIZONTAL DATUM
NORTH AMERICAN DATUM OF 1983
VERTICAL DATUM
NORTH AMERICAN VERTICAL DATUM OF 1988

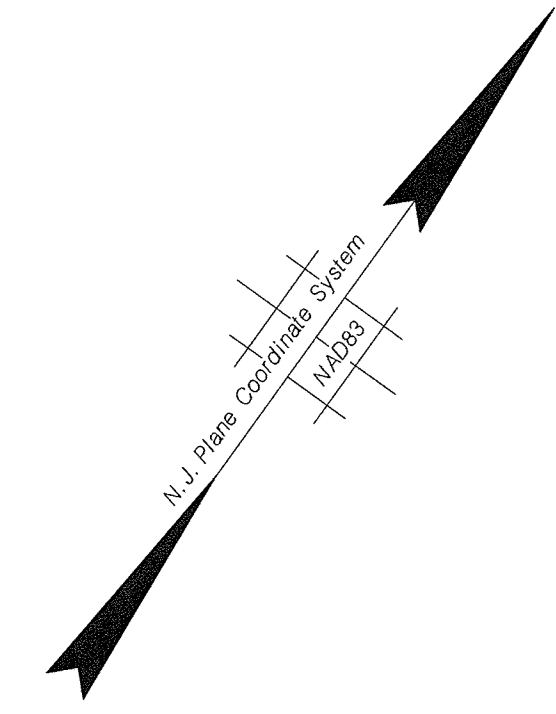
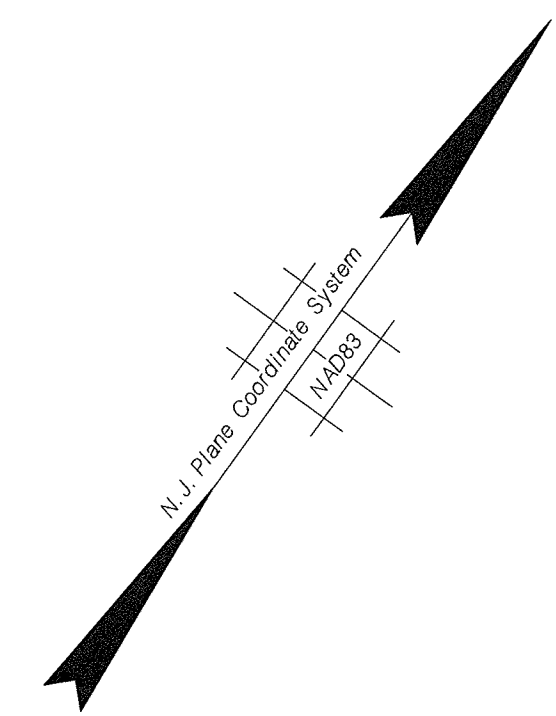




GRADES



SIGNING AND STRIPING



NOTE: 1. REMOVE EXISTING SIGNS WHERE SHOWN ON PLANS, STOCKPILE AND RESET ON STEEL "U" POST UPON COMPLETION OF BRIDGE CONSTRUCTION.

UNION COUNTY ENGINEERING

REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

GRADES AND
SIGNING AND STRIPING PLAN

PETER AGNELLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04060100
DATE 11/15/16

Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J.

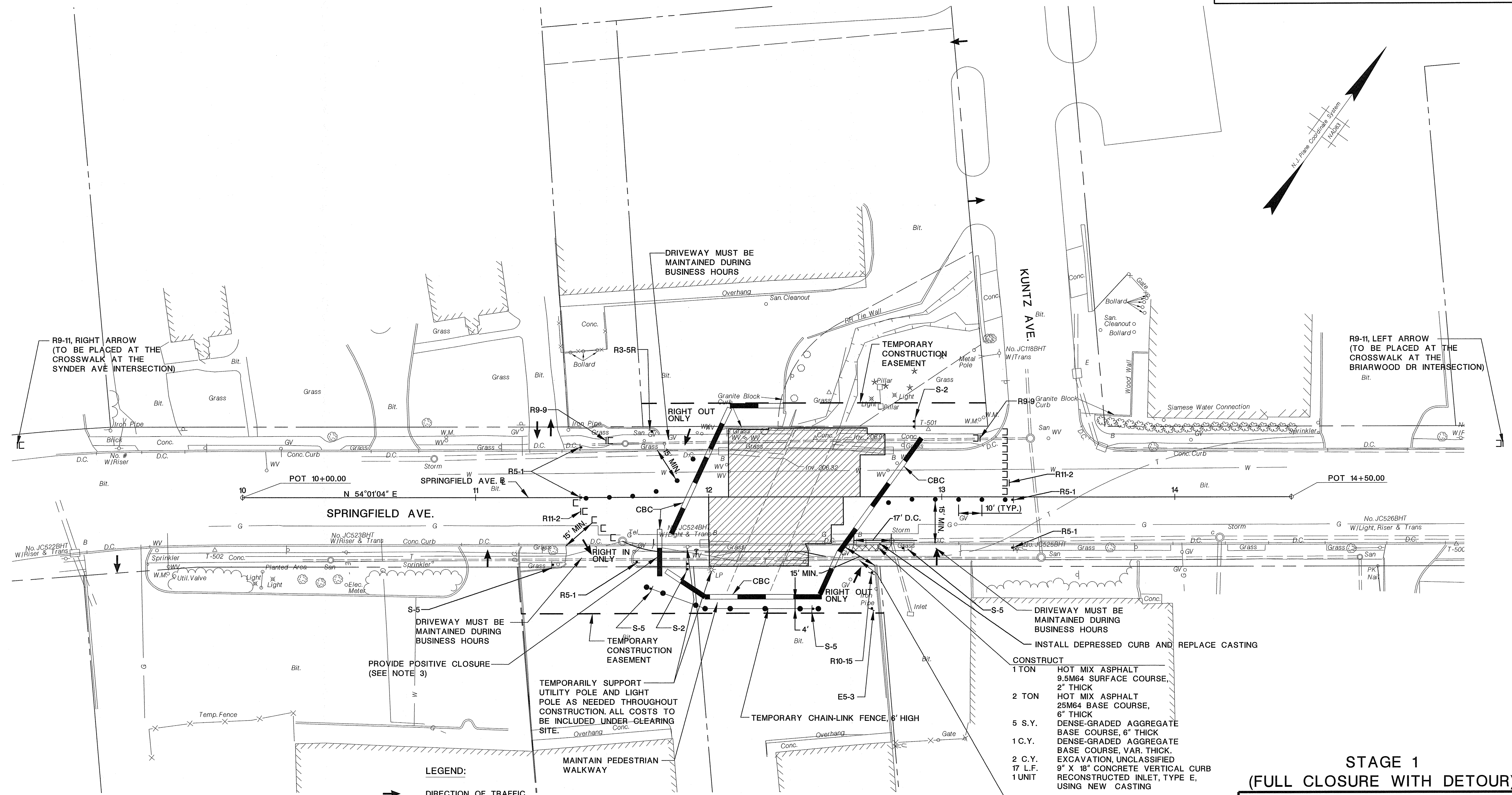
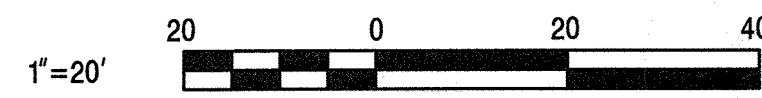
SCALE: 1"=20'

DATE: NOVEMBER 2016

SHEET NO. 9 OF 40

DATE	REVISION DESCRIPTION





STAGE 1
(FULL CLOSURE WITH DETOUR)

UNION COUNTY ENGINEERING
REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

TRAFFIC CONTROL PLAN

PETER AGNELLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04060100
DATE 11/15/16

Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J. SCALE: 1"=20' DATE: NOVEMBER 2016 SHEET NO. 10 OF 40

STAGING NOTES
STAGE 1

- COORDINATE WITH VERIZON THROUGHOUT CONSTRUCTION.
- PLACE ADVANCE WARNING SIGNS AND EROSION CONTROL DEVICES.
- INSTALL TRAFFIC CONTROL DEVICES.
- CONSTRUCT TEMPORARY PAVEMENT DURING NON-BUSINESS HOURS.
- CLOSE BRIDGE AND DETOUR TRAFFIC AS SHOWN ON SHEET 15.
- DEMOLISH EXISTING SUPERSTRUCTURE.
- CONSTRUCT NEW SUPERSTRUCTURE, TELEPHONE AND ROADWAY AS SHOWN ON THIS STAGE.

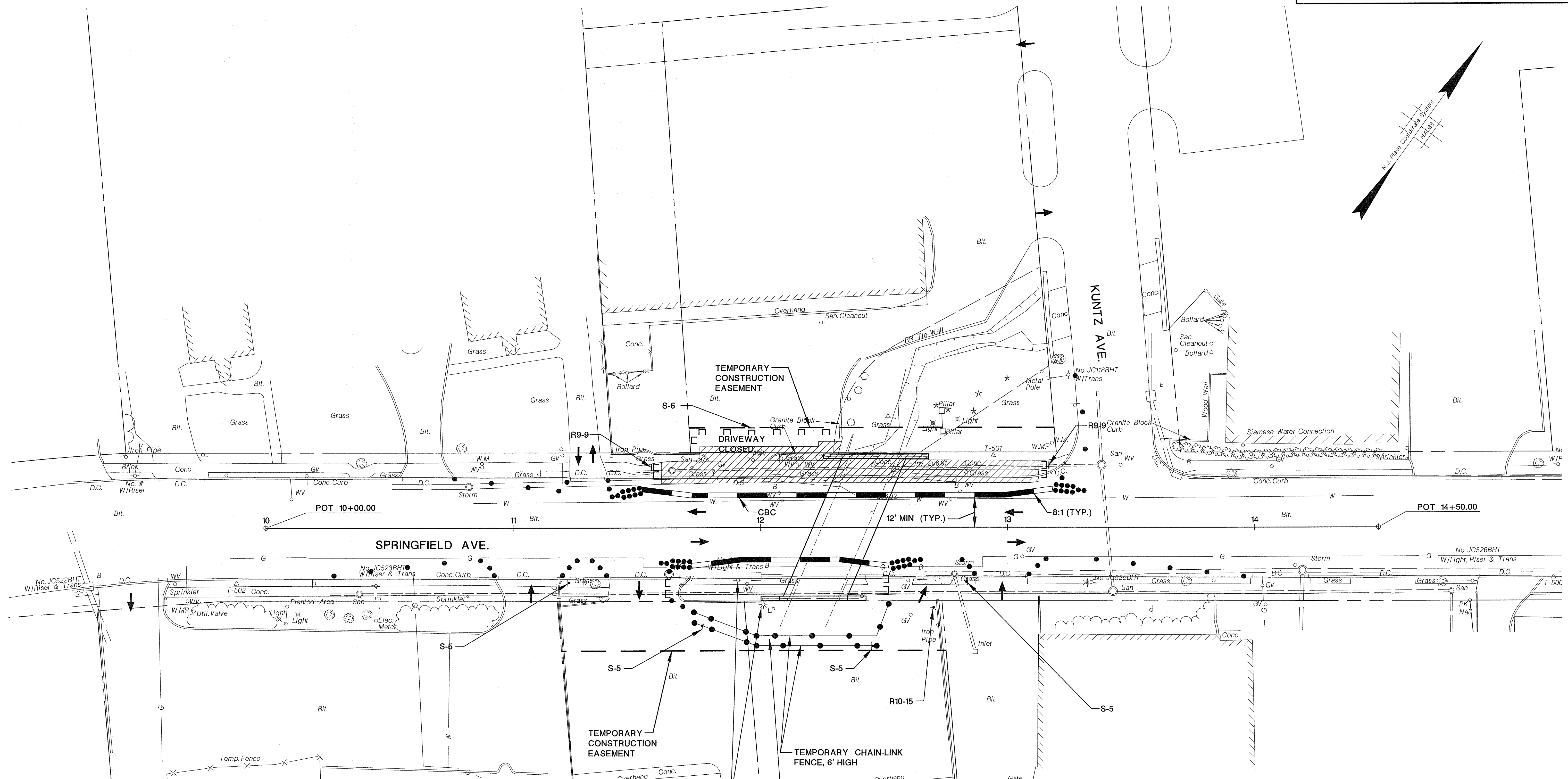
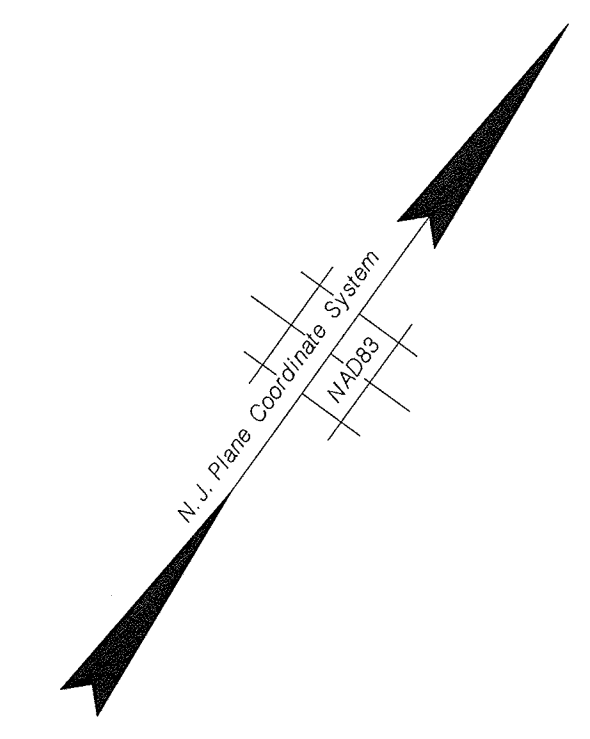
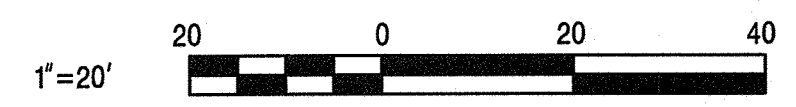
- LEGEND:
- DIRECTION OF TRAFFIC
 - DRUMS
 - BREAKAWAY BARRICADES
 - BREAKAWAY BARRICADES W/ SIGN
 - CONSTRUCTION THIS STAGE
 - TEMPORARY PAVEMENT THIS STAGE
 - CONSTRUCTION BARRIER CURB, CONNECTION TYPE B
 - TEMPORARY CRASH CUSHION INERTIAL BARRIER SYSTEM
 - CONSTRUCTION SIGNS
 - TEMPORARY FENCE

NOTES:

- SEE SHEET 16 FOR SIGN DETAILS.
- SEE SHEET 15 FOR DETOUR.
- RELOCATE BARRIER TO PROVIDE CONSTRUCTION ACCESS. ENSURE WORK ZONE IS ENCLOSED DURING NON WORKING HOURS.
- APPLY REMOVABLE BLACK LINE MASKING TAPE OVER EXISTING TRAFFIC STRIPES AND MARKINGS AS DIRECTED.

DATE	REVISION DESCRIPTION





LEGEND:

- CONSTRUCTION THIS STAGE
- TEMPORARY PAVEMENT THIS STAGE
- TEMPORARY PAVEMENT CONSTRUCTED IN PREVIOUS STAGE
- DIRECTION OF TRAFFIC
- DRUMS
- BREAKAWAY BARRICADES
- BREAKAWAY BARRICADES W/ SIGN
- CONSTRUCTION BARRIER CURB, CONNECTION TYPE B
- TEMPORARY CRASH CUSHION INERTIAL BARRIER SYSTEM
- CONSTRUCTION SIGNS
- TEMPORARY FENCE

TEMPORARILY SUPPORT UTILITY POLE AND LIGHT POLE AS NEEDED THROUGHOUT CONSTRUCTION. ALL COSTS TO BE INCLUDED UNDER CLEARING SITE.

- STAGING NOTES:**
STAGE 2A
1. OPEN BRIDGE TO TRAFFIC AND REMOVE DETOUR.
 2. INSTALL ADVANCE WARNING SIGNS AS SHOWN ON SHEET 13.
 3. MAINTAIN PEDESTRIAN TRAFFIC ON THE SOUTH SIDE OF SPRINGFIELD AVE.
 4. INSTALL SHOULDER CLOSURES AND CLOSE DRIVEWAY AS SHOWN.
 5. CONSTRUCT NORTH SIDE IMPROVEMENTS INCLUDING BRIDGE PARAPET AND SIDEWALK.

- NOTES:**
1. SEE SHEET 13 FOR ADVANCE WARNING SIGNS.
 2. SEE SHEET 16 FOR SIGN DETAILS.

REVISION	
DATE	DESCRIPTION

STAGE 2A

UNION COUNTY ENGINEERING

REHABILITATION OF
 SPRINGFIELD AVENUE BRIDGE (Be19)
 OVER STREAM 3-55
 TOWNSHIP OF BERKELEY HEIGHTS

TRAFFIC CONTROL PLAN

PETER AGNELLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0406000

DATE 11/15/16

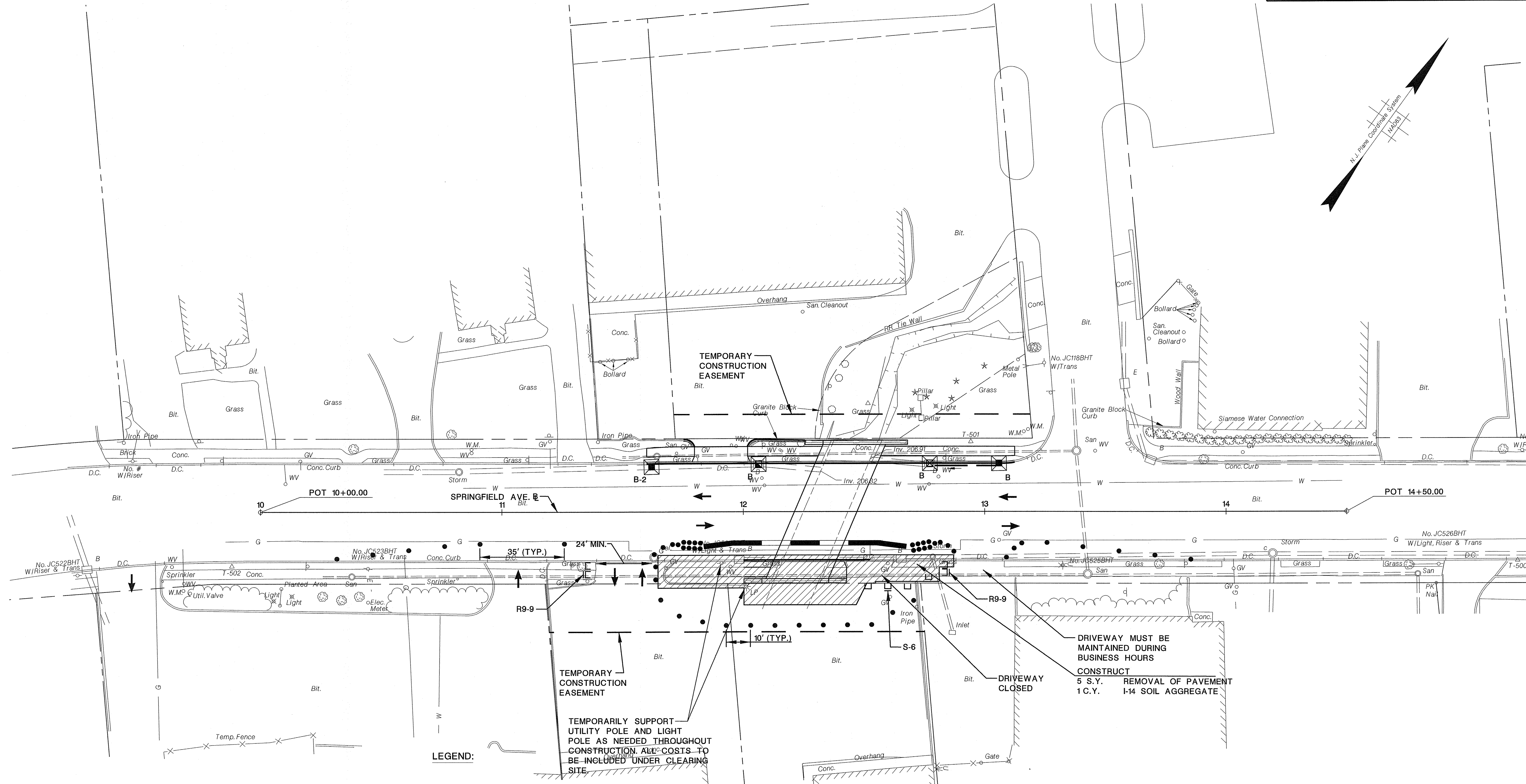
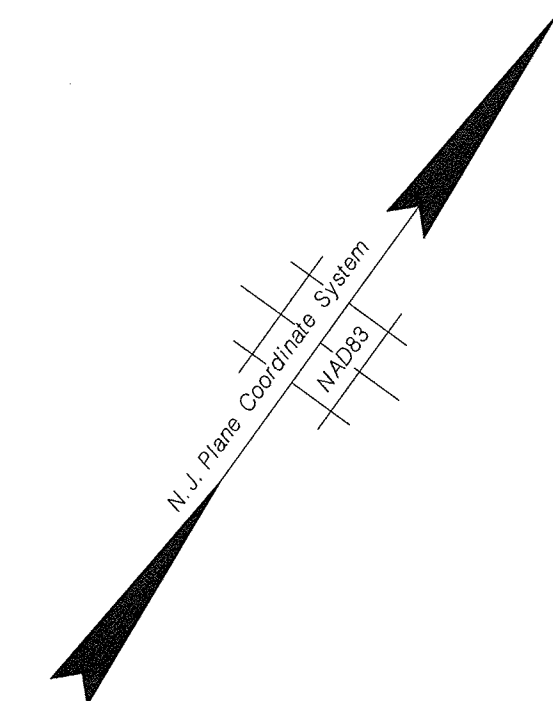
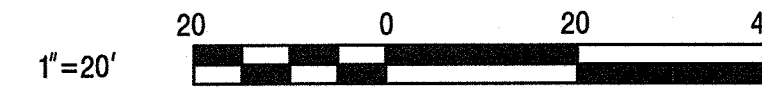
Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
 Bloomfield, N.J.

SCALE: 1"=20'

DATE: NOVEMBER 2016

SHEET NO. 11 OF 40





LEGEND:
 TEMPORARILY SUPPORT UTILITY POLE AND LIGHT POLE AS NEEDED THROUGHOUT CONSTRUCTION. ALL COSTS TO BE INCLUDED UNDER CLEARING SITE

STAGING NOTES:

STAGE 2B

1. REMOVE TRAFFIC CONTROL DEVICES FOR STAGE 2A. INSTALL ADVANCE WARNING SIGNS AS SHOWN ON SHEET 14 AND OPEN NORTH SIDE SIDEWALK TO PEDESTRIAN TRAFFIC.
2. INSTALL EASTBOUND SHOULDER CLOSURE AND CLOSE DRIVEWAY ACCESS AS SHOWN.
3. REMOVE TEMPORARY PAVEMENT.
4. COMPLETE SOUTH SIDE IMPROVEMENTS INCLUDING CURB AND SIDEWALK.
5. REMOVE TRAFFIC CONTROL DEVICES AND OPEN SOUTHERLY SIDEWALK TO PEDESTRIAN TRAFFIC.
6. COMPLETE RESURFACING ON SHOULDER, TRAVEL LANES AND PRIVATE PARKING AREAS. INSTALL PERMANENT PAVEMENT MARKINGS.
7. REMOVE EROSION CONTROL DEVICES AND PERFORM FINAL CLEANUP.

- CONSTRUCTION THIS STAGE
- TEMPORARY PAVEMENT THIS STAGE
- TEMPORARY PAVEMENT CONSTRUCTED IN PREVIOUS STAGE
- DIRECTION OF TRAFFIC
- DRUMS
- BREAKAWAY BARRICADES
- BREAKAWAY BARRICADES W/ SIGN
- CONSTRUCTION BARRIER CURB, CONNECTION TYPE B
- TEMPORARY CRASH CUSHION INERTIAL BARRIER SYSTEM
- CONSTRUCTION SIGNS
- TEMPORARY FENCE

DRIVEWAY MUST BE MAINTAINED DURING BUSINESS HOURS
 CONSTRUCT
 5 S.Y. REMOVAL OF PAVEMENT
 1 C.Y. I-14 SOIL AGGREGATE

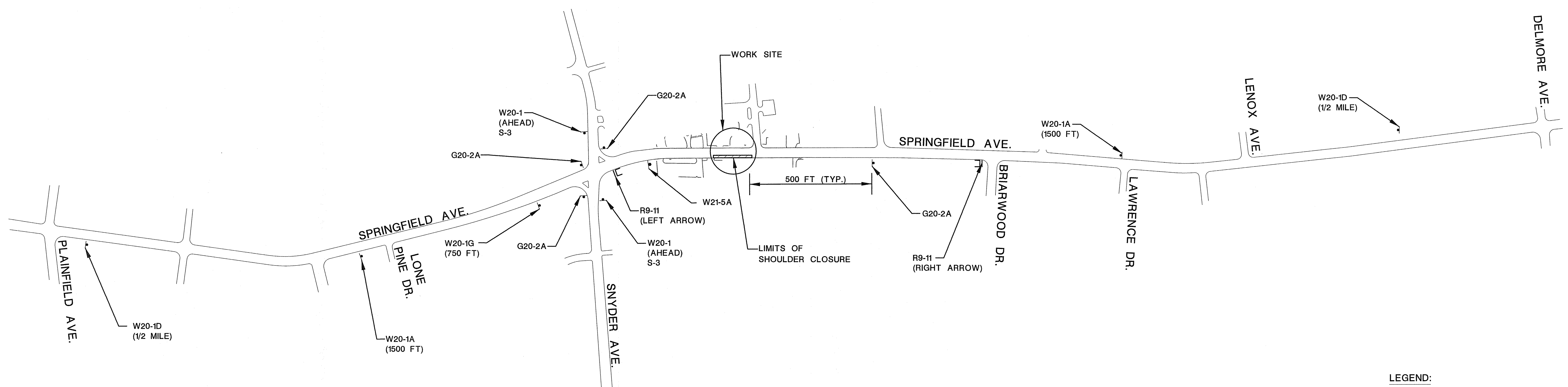
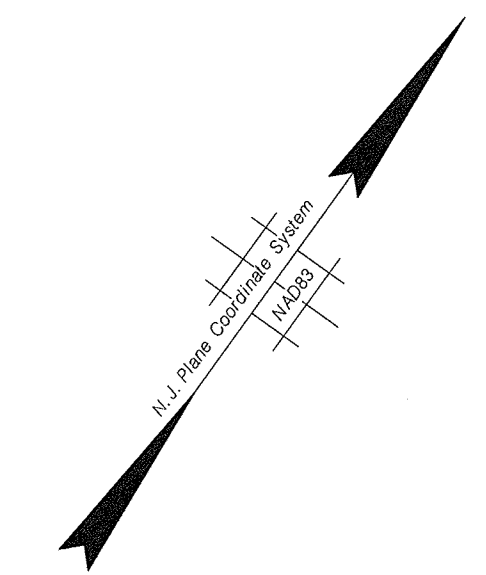
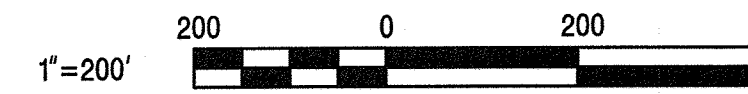
- NOTES:**
1. SEE SHEET 14 FOR ADVANCE WARNING SIGNS.
 2. SEE SHEET 16 FOR SIGN DETAILS.

REVISION	
DATE	DESCRIPTION



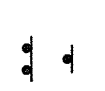
STAGE 2B

UNION COUNTY ENGINEERING	
REHABILITATION OF SPRINGFIELD AVENUE BRIDGE (Be19) OVER STREAM 3-55 TOWNSHIP OF BERKELEY HEIGHTS	
TRAFFIC CONTROL PLAN	
PETER AGNELLO, P.E. NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04060100	
	DATE 11/15/16
Dewberry Engineers Inc. Certificate of Authorization No. 24GA28047600 Bloomfield, N.J.	SCALE: 1"=20' DATE: NOVEMBER 2016 SHEET NO. 12 OF 40





LEGEND:

-  WORK AREA
-  BREAKAWAY BARRICADES W/ SIGN
-  CONSTRUCTION SIGNS

STAGE 2B
ADVANCE WARNING SIGNS

UNION COUNTY ENGINEERING
REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

TRAFFIC CONTROL PLAN

PETER AGNELLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04060100
DATE 11/15/16

- NOTES:
1. SEE SHEET 16 FOR SIGN DETAILS.

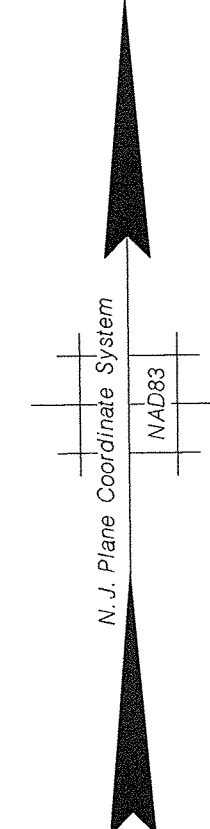
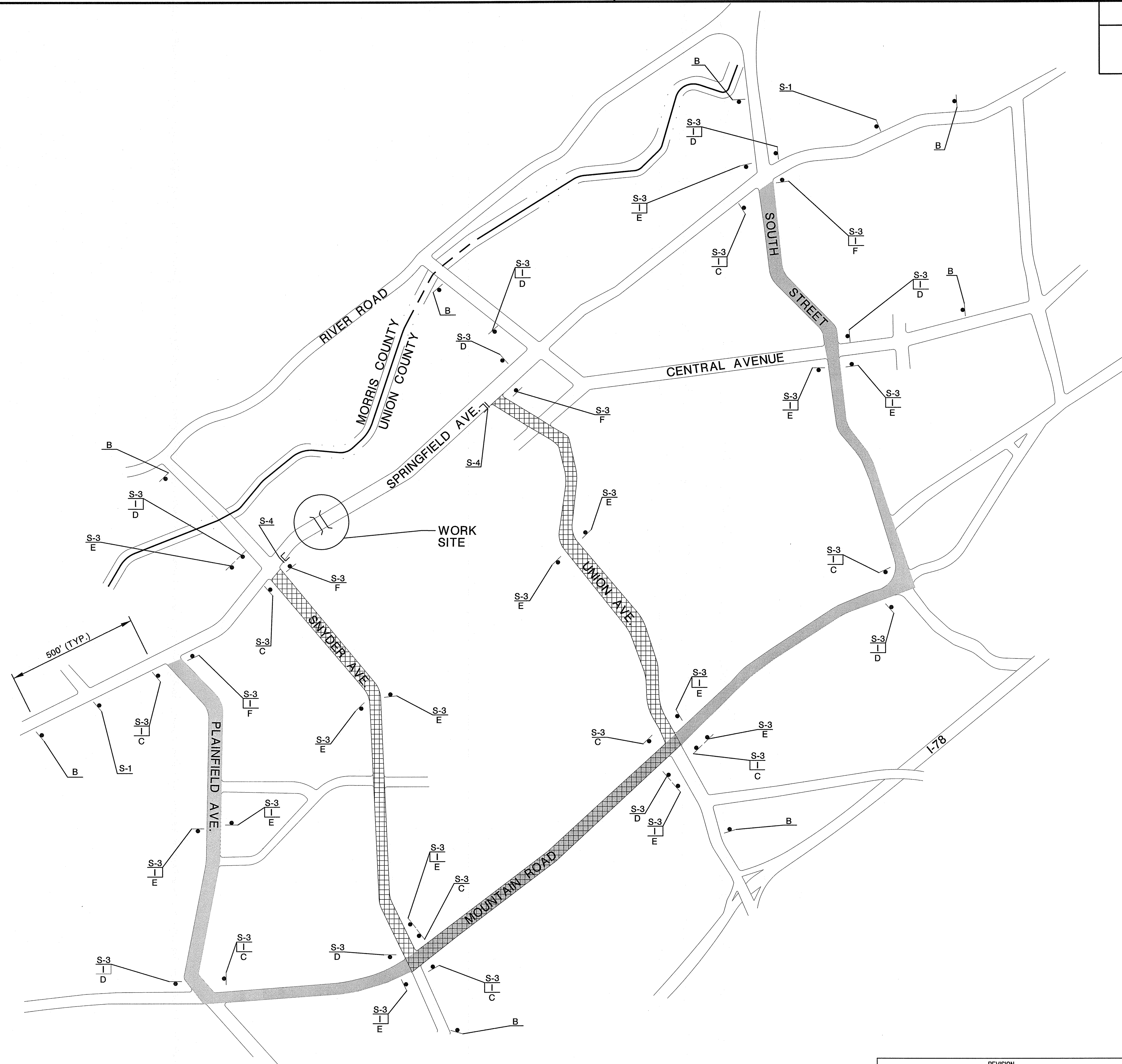
DATE	REVISION DESCRIPTION

Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J.





SCALE: 1"=200'

DATE: NOVEMBER 2016
SHEET NO. 14 OF 40





LEGEND:

-  DETOUR ROUTE
-  DETOUR ROUTE FOR TRUCK TRAFFIC
-  BREAKAWAY BARRICADES W/ SIGN
-  CONSTRUCTION SIGNS

UNION COUNTY ENGINEERING
 REHABILITATION OF
 SPRINGFIELD AVENUE BRIDGE (Be19)
 OVER STREAM 3-55
 TOWNSHIP OF BERKELEY HEIGHTS

DETOUR PLAN

PETER AGNELLO, P.E.

NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04060100

DATE 11/15/16

Dewberry Engineers Inc.
 Certificate of Authorization No. 24GA28047600
 Bloomfield, N.J.

SCALE: AS SHOWN
 DATE: NOVEMBER 2016
 SHEET NO. 15 OF 40

REVISION	
DATE	DESCRIPTION

NOTES:

- SEE SHEET 16 FOR SIGN DETAILS.
- TRAFFIC DETOUR DURATION SHALL NOT EXCEED 2 MONTHS.

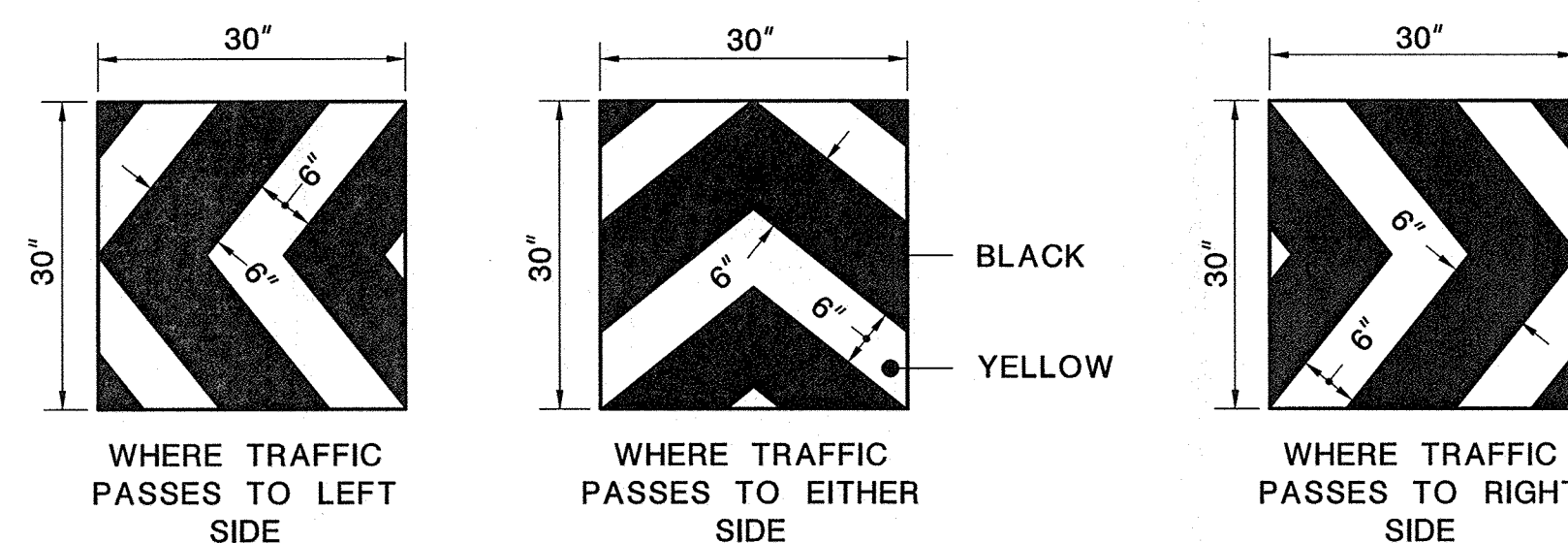
NTS

GENERAL NOTES

- 1) ENSURE SIGNS MEET REQUIREMENTS FOR THE CURRENT PUBLICATION ENTITLED, "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," (MUTCD), YEAR 2009 RELEASE, STANDARD N.J.D.O.T. TRAFFIC CONTROL DETAILS, AND "STANDARD HIGHWAY SIGNS" BY THE FEDERAL HIGHWAY ADMINISTRATION, BUREAU OF PUBLIC WORKS, WASHINGTON, D.C.
- 2) THE CONTRACTOR SHALL NOTIFY THE UNION COUNTY ENGINEER A MINIMUM OF 48 HOURS PRIOR TO THE INSTALLATION OF DETOUR SIGNING.
- 3) ALL SIGNS AND BARRICADES SHALL BE FURNISHED AND PLACED BY THE CONTRACTOR AT THE LOCATIONS DESIGNATED BY THE ENGINEER, UNLESS OTHERWISE NOTED.
- 4) IF AND WHEN DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL SUPPLY AND PLACE ADDITIONAL SIGNS AND BARRICADES AT THE UNIT BID PRICE.
- 5) S-2 SIGNS TO BE ERECTED A MINIMUM OF 2 WEEKS PRIOR TO THE BRIDGE CLOSURE, AND REMOVED ONCE DETOUR IS IN PLACE.
- 6) THE CONTRACTOR IS DIRECTED TO NOTIFY THE TOWNSHIP OF BERKELEY HEIGHTS POLICE AND FIRE DEPARTMENTS ONE WEEK PRIOR TO START OF CONSTRUCTION AND 48 HOURS PRIOR TO IMPLEMENTATION OF DETOUR.
- 7) FLASHING WARNING LIGHTS SHALL NOT BE AFFIXED TO ANY SIGN OR BARRICADE.
- 8) CONSTRUCTION SIGNS LOCATED IN CONCRETE OR BITUMINOUS AREAS SHALL BE PLACED ON TEMPORARY SIGN SUPPORTS.
- 9) WOODEN SIGNS AND/OR WOODEN POST SUPPORTS SHALL NOT BE PERMITTED.
- 10) ALL "CONSTRUCTION SIGN" MATERIALS SHALL BE OF ALUMINUM CONSTRUCTION AS THE STANDARD SIGNS AS PER N.J.D.O.T. REQUIREMENTS.
- 11) ALL "CONSTRUCTION SIGN" POSTS AND SUPPORTS SHALL BE OF THE BREAKAWAY/BENDAWAY TYPE OF METAL/ALUMINUM AS PER N.J.D.O.T. REQUIREMENTS.
- 12) ALL SIGNS FACES SHALL BE RETROREFLECTIVE SHEETING, TYPE II EXCEPT FOR THE W-20 SERIES WHICH SHALL BE TYPE IV-B SHEETING.
- 13) THE CONTRACTOR SHALL NOT STORE MATERIAL OR EQUIPMENT OVER EXISTING MANHOLE/CHAMBER COVERS. ACCESS TO EXISTING MANHOLE/CHAMBER COVERS SHALL BE MAINTAINED AT ALL TIMES.
- 14) ADVANCE WARNING SIGNS ARE TO REMAIN IN PLACE FOR DURATION OF EACH STAGE AND COVERED WHEN NOT IN USE OR AS DIRECTED BY THE ENGINEER.
- 15) ALL EXISTING SIGNS IN CONFLICT WITH PROPOSED CONSTRUCTION SHALL BE REMOVED OR COVERED.
- 16) TRAFFIC CONTROL ITEMS AND QUANTITIES SHOWN ARE INTENDED ONLY AS A GUIDE TO THE CONTRACTOR AND ARE SUGGESTED MINIMUMS FOR THE MAINTENANCE AND PROTECTION OF TRAFFIC.
- 17) ALL SHORT TERM TRAFFIC PATTERNS NOT SHOWN ON TRAFFIC CONTROL PLANS SHALL FOLLOW STANDARD N.J.D.O.T. TRAFFIC CONTROL DETAILS.
- 18) ALL ROADWAY ITEMS OF WORK ARE TO BE COMPLETED PRIOR TO FINAL PAVING OF THE BITUMINOUS CONCRETE SURFACE COURSES UNLESS DIRECTED BY THE ENGINEER.
- 19) ANY UTILITY RELOCATIONS ARE TO BE COORDINATED BY THE CONTRACTOR AND MADE IN CONJUNCTION WITH ROADWAY AND BRIDGE CONSTRUCTION.
- 20) ERECT TEMPORARY FENCING IN A NON-DESTRUCTIVE MANNER IN ACCORDANCE WITH INDUSTRY STANDARDS.

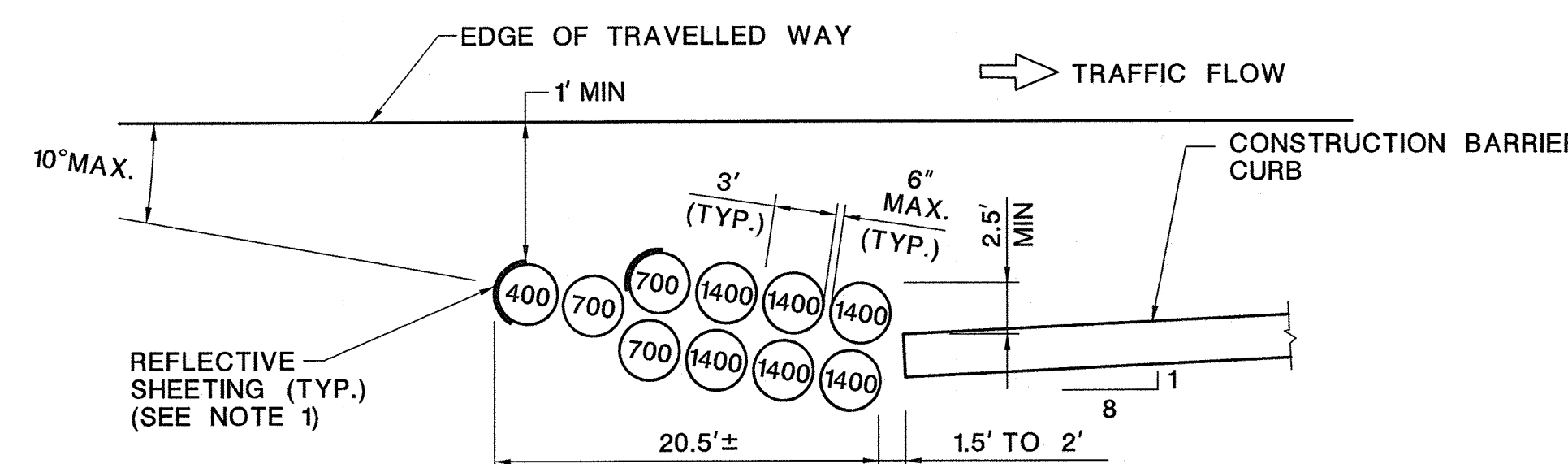
SPECIAL SIGNS					
LEGEND	DESIGN	SIZE	COLOR	MOUNTING	
S-1	SPRINGFIELD AVE BRIDGE CLOSED FOLLOW DETOUR	5" C 6" C 4" C	60" X 30"	BLACK ON ORANGE	2 POSTS
S-2	ON OR ABOUT 2017 THIS BRIDGE WILL BE CLOSED PLAN ALT. ROUTE	4" C 4" C 4" C 4" C	60" X 42"	BLACK ON ORANGE	2 POSTS
S-3	SPRINGFIELD AVE	4" C	30" X 12"	BLACK ON ORANGE	2 POSTS
S-4	SPRINGFIELD AVE BRIDGE CLOSED LOCAL TRAFFIC ONLY	5" C 6" C 4" C	60" X 30"	BLACK ON WHITE	2 POSTS
S-5	WATCH FOR TURNING VEHICLES	4" C 4" C 4" C	30" X 30"	BLACK ON ORANGE	2 POSTS
S-6	DRIVEWAY CLOSED	4" C	24" X 12"	BLACK ON ORANGE	BARRICADE

STANDARD SIGNS				
LEGEND	DESIGN	MUTCD CODE	SIZE	MOUNTING
A	BRIDGE CLOSED	R11-2	48" X 30"	BARRICADE
B	DETOUR 500 FT	W20-2	48" X 48"	2 POSTS
C	DETOUR →	M4-9R	30" X 24"	1 POST
D	DETOUR ←	M4-9L	30" X 24"	1 POST
E	DETOUR ↑	M4-9X	30" X 24"	1 POST
F	END DETOUR	M4-11	30" X 24"	1 POST
G	SIDEWALK CLOSED	R9-9	24" X 12"	1 POST
H	ROAD CLOSED	W20-3	36" X 36"	2 POSTS
I	TRUCK	M4-4	24" X 12"	1 POST
J	SIDEWALK CLOSED AHEAD ← CROSS HERE	R9-11	24" X 18"	1 POST
K	ROAD WORK	W20-1	36" X 36"	2 POSTS
L	END ROAD WORK	G20-2	36" X 18"	1 POST
M	RIGHT SHOULDER CLOSED	W21-5a	36" X 36"	2 POSTS
N	TURNING VEHICLES STOP	R10-15	30" X 30"	2 POSTS
O	EXIT ONLY	E5-3	48" X 36"	2 POSTS
P	DO NOT ENTER	R5-1	30" X 30"	2 POSTS
Q	RIGHT TURN ONLY	R3-5R	30" X 36"	2 POSTS
R	SHOULDER CLOSED	W21-5a	36" X 36"	2 POSTS



REFLECTIVE SHEETING DETAIL
N.T.S.

AT ALL LOCATIONS WHERE TEMPORARY CRASH CUSHIONS ARE USED, ON THE SMOOTH SURFACE OF THE "BELLY BAND" OF ENERGITE TYPE BARRELS, INSTALL A 30"x30" PIECE OF HIGH INTENSITY, COLD APPLICATION, HITACK OR SUPER HITACK SHEETING WITH EITHER OF THE THREE APPROPRIATE CROSS HATCHING SCHEMES SHOWN ABOVE. ON "FITCH" TYPE BARRELS, DUE TO THE RIDGED SURFACE, THE SHEETING MAY HAVE TO BE MOUNTED ON "LIGHT" STOCK (2') AND BE POP-RIVETED ONTO THE LEAD DRUM. THESE PANELS MAY BE USED ON BEAM GUIDE RAIL ENDS.



LAYOUT A
(10 BARREL SYSTEM)
(DESIGN SPEED 40 MPH)

TEMPORARY CRASH CUSHION, INERTIAL BARRIER SYSTEM, LAYOUT TYPE A

N.T.S.

- NOTES:**
1. SEE REFLECTIVE SHEETING DETAIL FOR APPROPRIATE CROSS HATCHING SCHEME.
 2. PLACE MODULES ON PAVED SURFACES. SLOPE NOT TO EXCEED 8%. LOCATION AS DIRECTED BY THE RE AND MANUFACTURER'S REPRESENTATIVE.

⊗ WEIGHT OF SAND IN POUNDS

UNION COUNTY ENGINEERING
REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

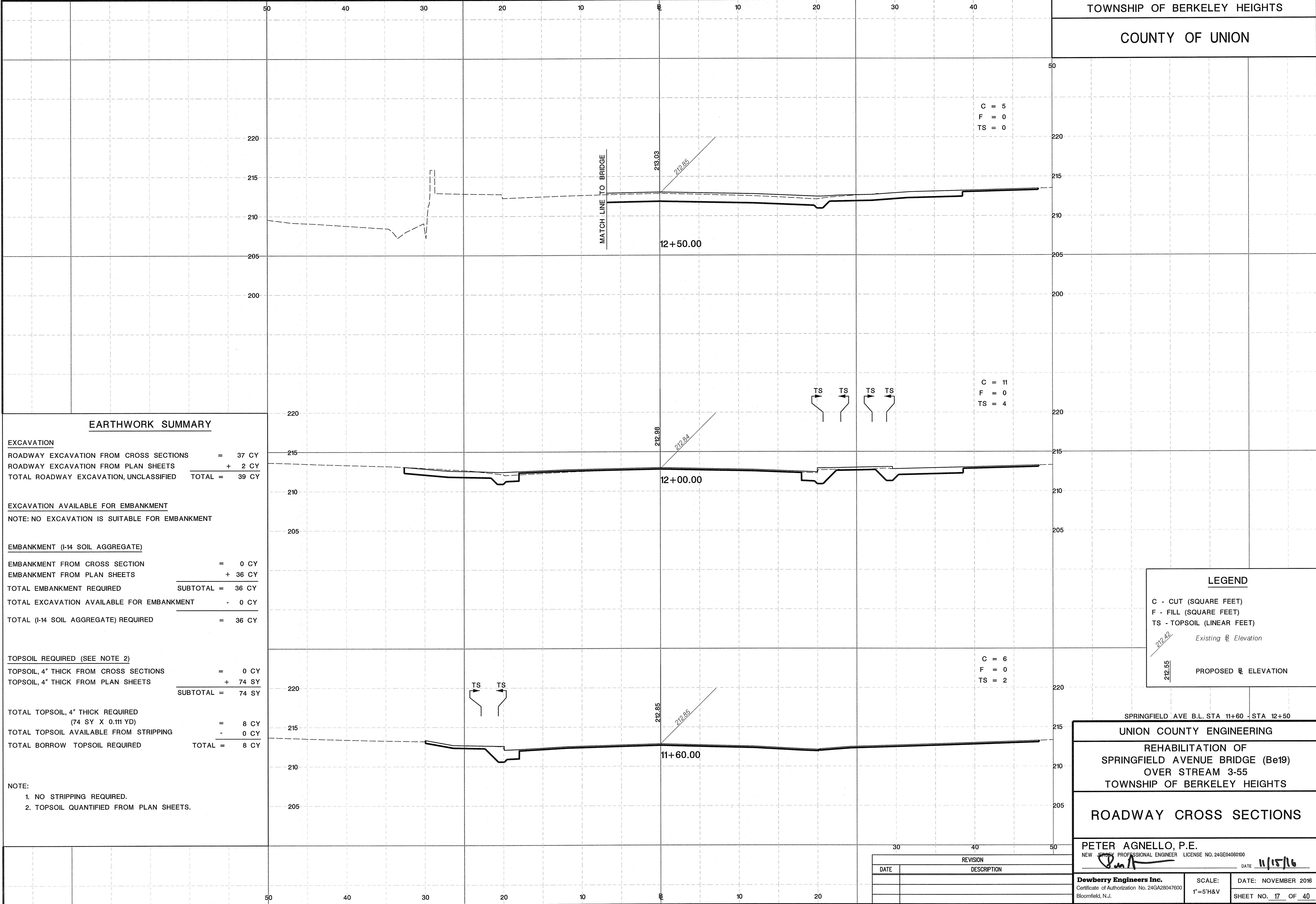
TRAFFIC CONTROL DETAILS

PETER AGNELLO, P.E.

NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04060100

DATE 11/15/16

Dewberry Engineers Inc. SCALE: DATE: NOVEMBER 2016
Certificate of Authorization No. 24GA28047600 AS SHOWN SHEET NO. 16 OF 40
Bloomfield, N.J.



C = 5
F = 0
TS = 0

C = 11
F = 0
TS = 4

C = 6
F = 0
TS = 2

EARTHWORK SUMMARY

EXCAVATION
ROADWAY EXCAVATION FROM CROSS SECTIONS = 37 CY
ROADWAY EXCAVATION FROM PLAN SHEETS + 2 CY
TOTAL ROADWAY EXCAVATION, UNCLASSIFIED TOTAL = 39 CY

EXCAVATION AVAILABLE FOR EMBANKMENT
NOTE: NO EXCAVATION IS SUITABLE FOR EMBANKMENT

EMBANKMENT (I-14 SOIL AGGREGATE)
EMBANKMENT FROM CROSS SECTION = 0 CY
EMBANKMENT FROM PLAN SHEETS + 36 CY
TOTAL EMBANKMENT REQUIRED SUBTOTAL = 36 CY
TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT - 0 CY
TOTAL (I-14 SOIL AGGREGATE) REQUIRED = 36 CY

TOPSOIL REQUIRED (SEE NOTE 2)
TOPSOIL, 4" THICK FROM CROSS SECTIONS = 0 CY
TOPSOIL, 4" THICK FROM PLAN SHEETS + 74 SY
SUBTOTAL = 74 SY
TOTAL TOPSOIL, 4" THICK REQUIRED (74 SY X 0.111 YD) = 8 CY
TOTAL TOPSOIL AVAILABLE FROM STRIPPING - 0 CY
TOTAL BORROW TOPSOIL REQUIRED TOTAL = 8 CY

NOTE:
1. NO STRIPPING REQUIRED.
2. TOPSOIL QUANTIFIED FROM PLAN SHEETS.

LEGEND

C - CUT (SQUARE FEET)
F - FILL (SQUARE FEET)
TS - TOPSOIL (LINEAR FEET)

Existing Elevation
PROPOSED ELEVATION

SPRINGFIELD AVE B.L. STA 11+60 - STA 12+50

UNION COUNTY ENGINEERING

REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

ROADWAY CROSS SECTIONS

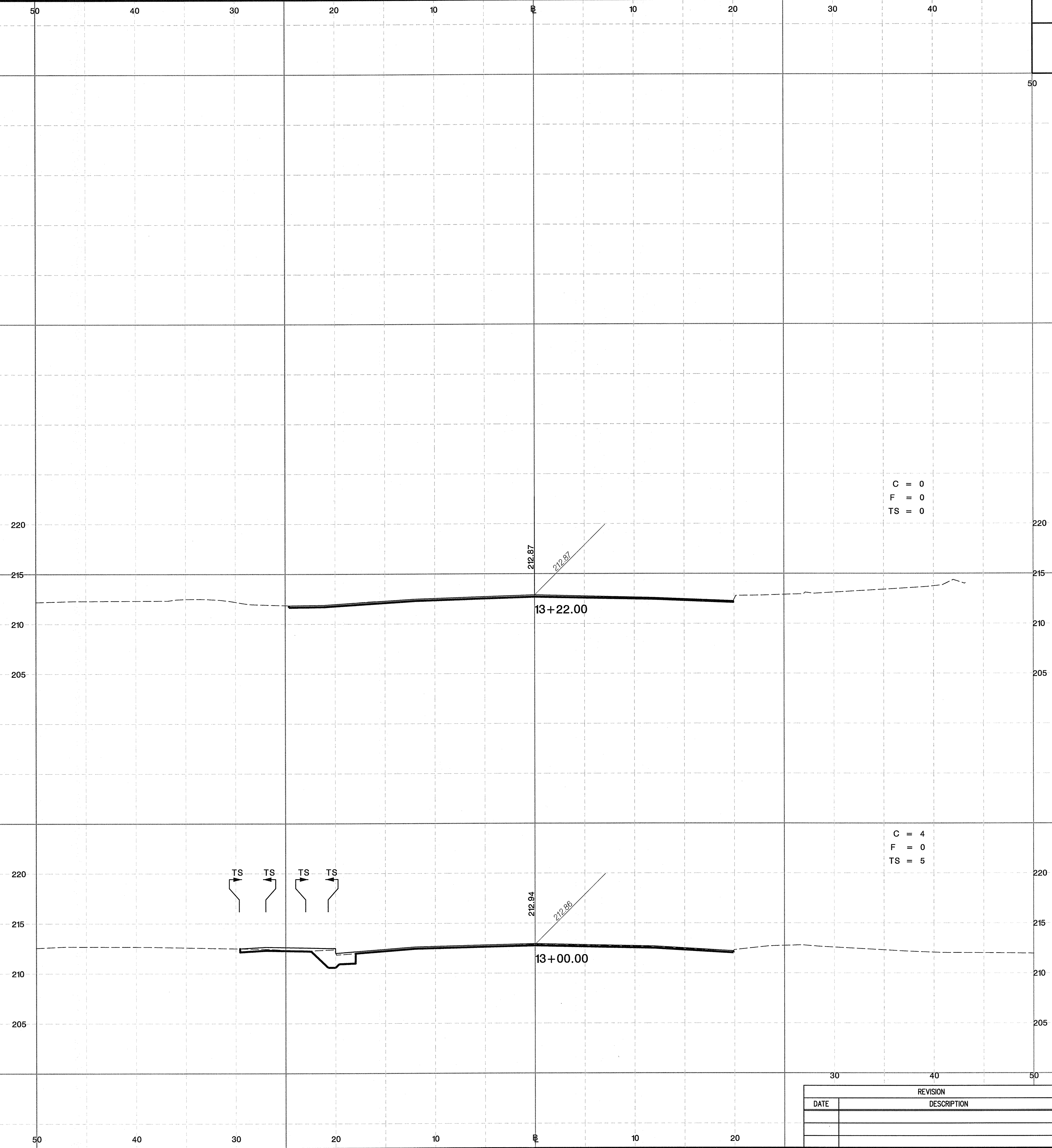
PETER AGNELLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0406000
DATE 11/15/16

Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J.

SCALE: 1"=5'H&V
DATE: NOVEMBER 2016
SHEET NO. 17 OF 40

DATE	REVISION DESCRIPTION





C = 0
 F = 0
 TS = 0

C = 4
 F = 0
 TS = 5

UNION COUNTY ENGINEERING
 REHABILITATION OF
 SPRINGFIELD AVENUE BRIDGE (Be19)
 OVER STREAM 3-55
 TOWNSHIP OF BERKELEY HEIGHTS

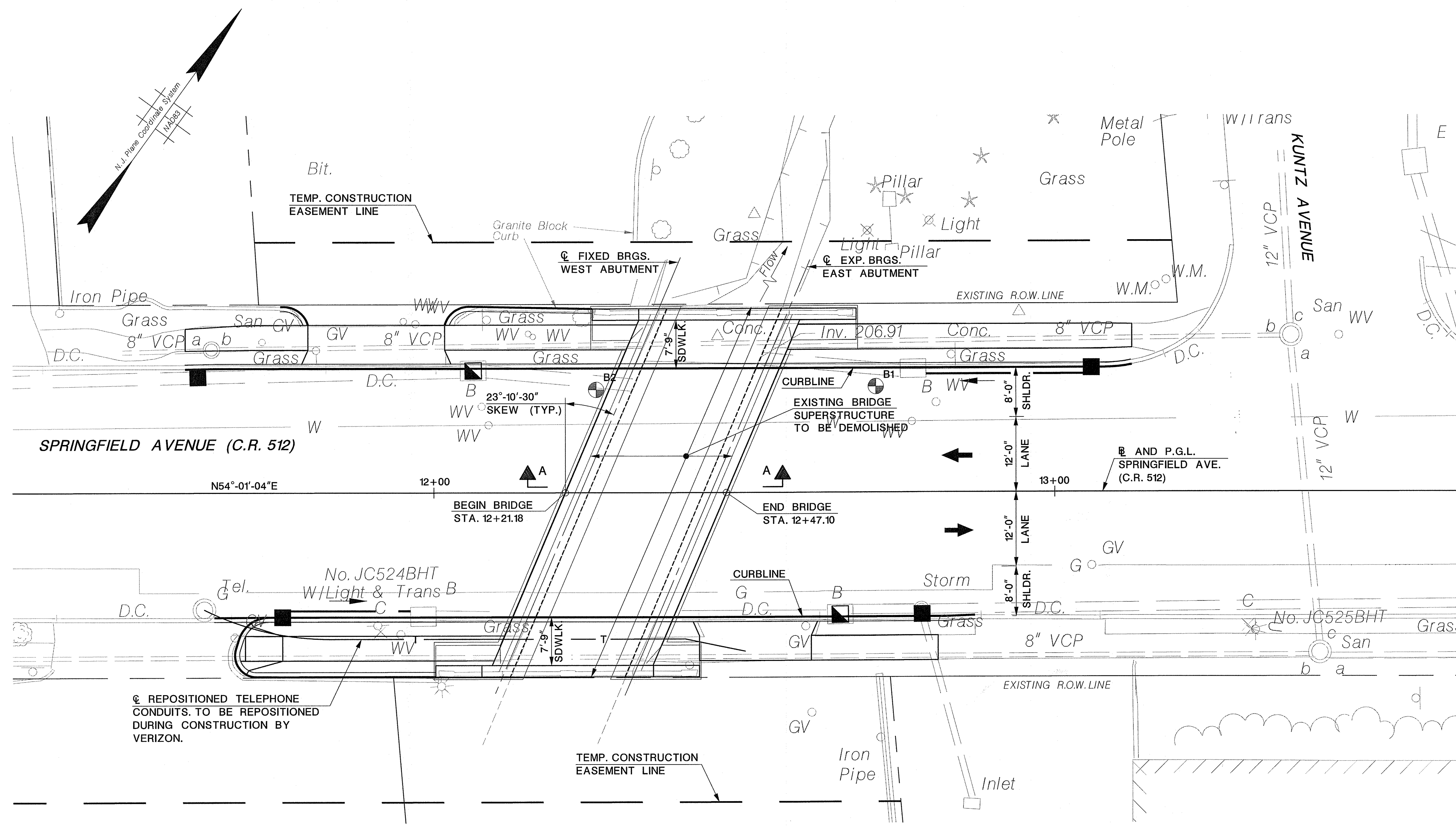
ROADWAY CROSS SECTIONS

PETER AGNELLO, P.E.
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04080100
 DATE 11/15/16

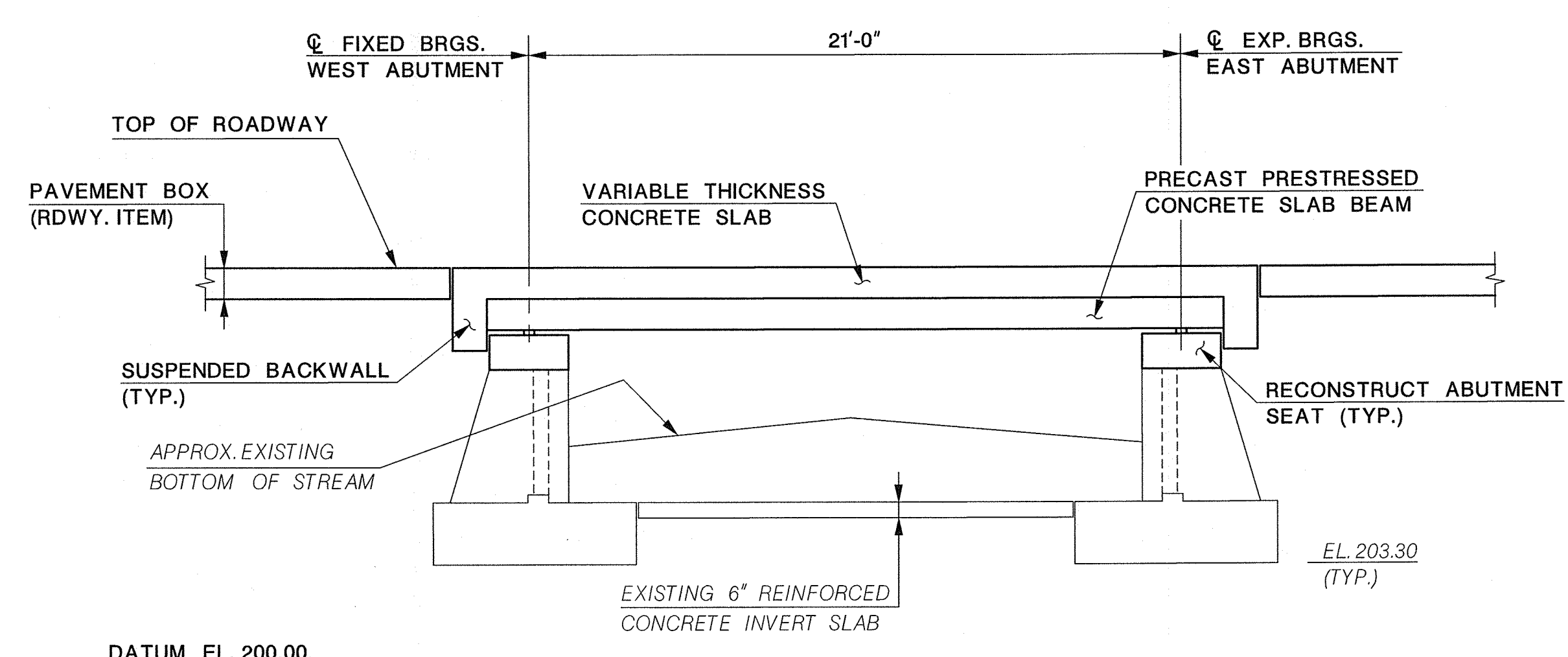
Dewberry Engineers Inc.
 Certificate of Authorization No. 24GA28047600
 Bloomfield, N.J.
 SCALE: 1"=5'H&V
 DATE: NOVEMBER 2016
 SHEET NO. 18 OF 40

DATE	REVISION DESCRIPTION





PLAN
SCALE: 1"=10'



SECTION A-A
SCALE: 1/4"=1'-0"

- LEGEND:**
- ➔ DIRECTION OF TRAFFIC
 - ⊙ BORING LOCATION
 - PROPOSED INLET (RDWY. ITEM)
 - ◻ RESET INLET (RDWY. ITEM)

GENERAL NOTES:

1. **DESIGN SPECIFICATIONS:**
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH EDITION, 2014 WITH CURRENT INTERIMS, AS MODIFIED BY SECTION 3 OF THE NJDOT DESIGN MANUAL FOR BRIDGES AND STRUCTURES, 5TH EDITION, 2009.
2. **CONSTRUCTION SPECIFICATIONS:**
THE NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2007 AS MODIFIED BY THE SUPPLEMENTARY SPECIFICATIONS.
3. **LIVE LOAD:**
AASHTO LRFD HL-93 VEHICULAR LIVE LOADING.
4. **CONCRETE COMPRESSIVE STRESSES:**
SPECIFIED DESIGN COMPRESSIVE STRENGTH (f'_c)

HES	4,000 PSI
CLASS A	4,000 PSI
CLASS B	3,000 PSI
CLASS P	5,000 PSI
5. **STRUCTURAL STEEL:**
STRUCTURAL STEEL: AASHTO M 270, GR. 36 (ASTM A709 GR. 36). HIGH STRENGTH BOLTS: AASHTO M 164 (ASTM A325). ALL STRUCTURAL STEEL AND BOLTS TO BE GALVANIZED.
6. **REINFORCEMENT STEEL:**
ASTM A615 (GRADE 60)
7. **SUPERSTRUCTURE:**
PRECAST PRESTRESSED CONCRETE SLAB BEAMS WITH COMPOSITE REINFORCED CONCRETE DECK SLAB.
8. **PRESTRESSED CONCRETE DESIGN STRENGTHS:**
DESIGN COMPRESSIVE STRENGTH (CLASS P) (f'_c): 5,000 PSI
COMPRESSIVE STRENGTH AT TRANSFER (f'_{ci}): 4,000 PSI

STRESS AT SERVICE LOAD AFTER LOSSES: TENSION IN THE PRECOMPRESSED TENSION ZONE SHALL BE ZERO.
9. **PRESTRESSING STEEL:**
AASHTO M 203 (ASTM A416) 0.6" DIAMETER, SEVEN WIRE, GR. 270 LOW RELAXATION STRANDS.
10. **SEISMIC DESIGN NOTES:**
SEISMIC DESIGN CATEGORY (SDC) = A
ACCELERATION COEFFICIENT "A_s" = 0.24
SITE CLASS DEFINITION = E
11. **CONSTRUCTION NOTES:**
PROVIDE ACCESS TO ALL PROPERTIES AT ALL TIMES DURING CONSTRUCTION.

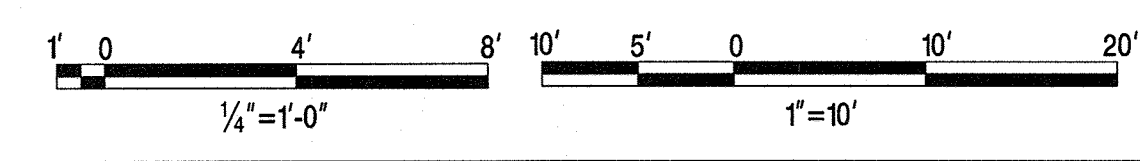
THE CONTRACTOR IS ADVISED THAT THE OVERHEAD WIRES MAY IMPOSE RESTRICTIONS ON HIS OPERATIONS. BE AWARE THAT RELOCATION OF THE OVERHEAD UTILITIES IS NOT POSSIBLE AND LOW PROFILE METHODS AND EQUIPMENT MAY BE REQUIRED. NO SPECIFIC COMPENSATION WILL BE MADE TO THE CONTRACTOR FOR THIS RESTRICTION AND THE COST THEREOF IS TO BE INCLUDED IN THE VARIOUS ITEMS OF THE CONTRACT.

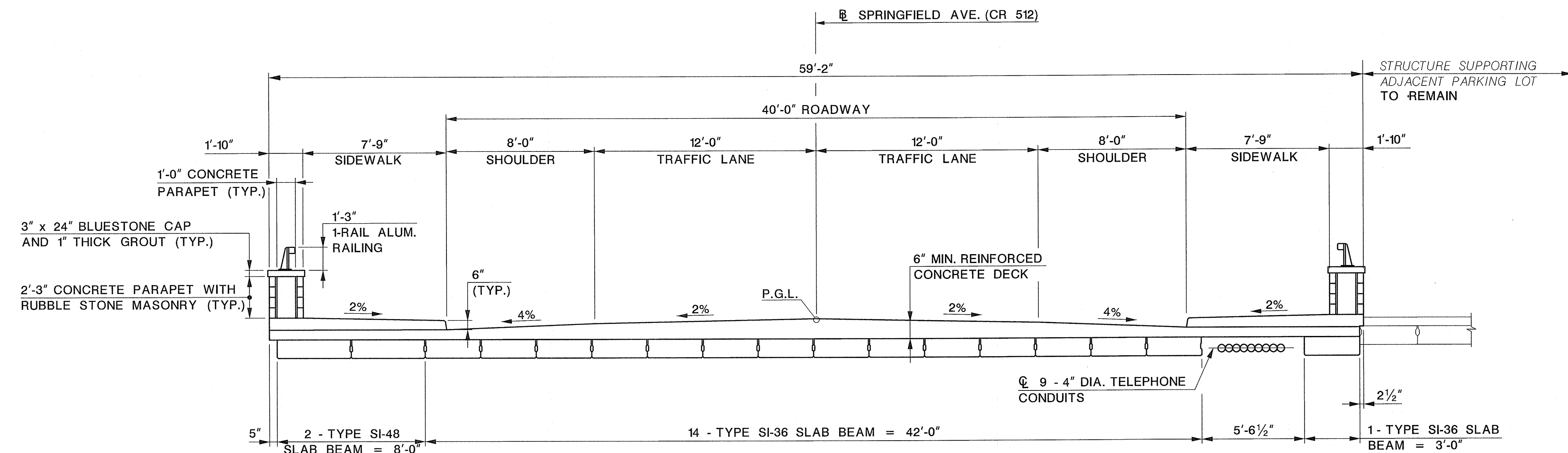
REFERENCES:

1. FOR TYPICAL BRIDGE SECTION, WORKING POINT LAYOUT, INDEX OF BRIDGE SHEETS, AND SUMMARY OF BRIDGE QUANTITIES, SEE SHEET NO. 20.
2. FOR DEMOLITION PLAN, SEE SHEET NO. 21.

UNION COUNTY ENGINEERING	
REHABILITATION OF SPRINGFIELD AVENUE BRIDGE (Be19) OVER STREAM 3-55 TOWNSHIP OF BERKELEY HEIGHTS	
GENERAL PLAN AND SECTION	
MANUEL J. VERA CARABALLO, P.E. NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600 <i>Manuel J. Vera</i> DATE: 11/15/16	
Dewberry Engineers Inc. Certificate of Authorization No. 24GA28047600 Bloomfield, N.J.	SCALE: AS SHOWN DATE: NOVEMBER 2016 SHEET NO. 19 OF 40

REVISION	
DATE	DESCRIPTION

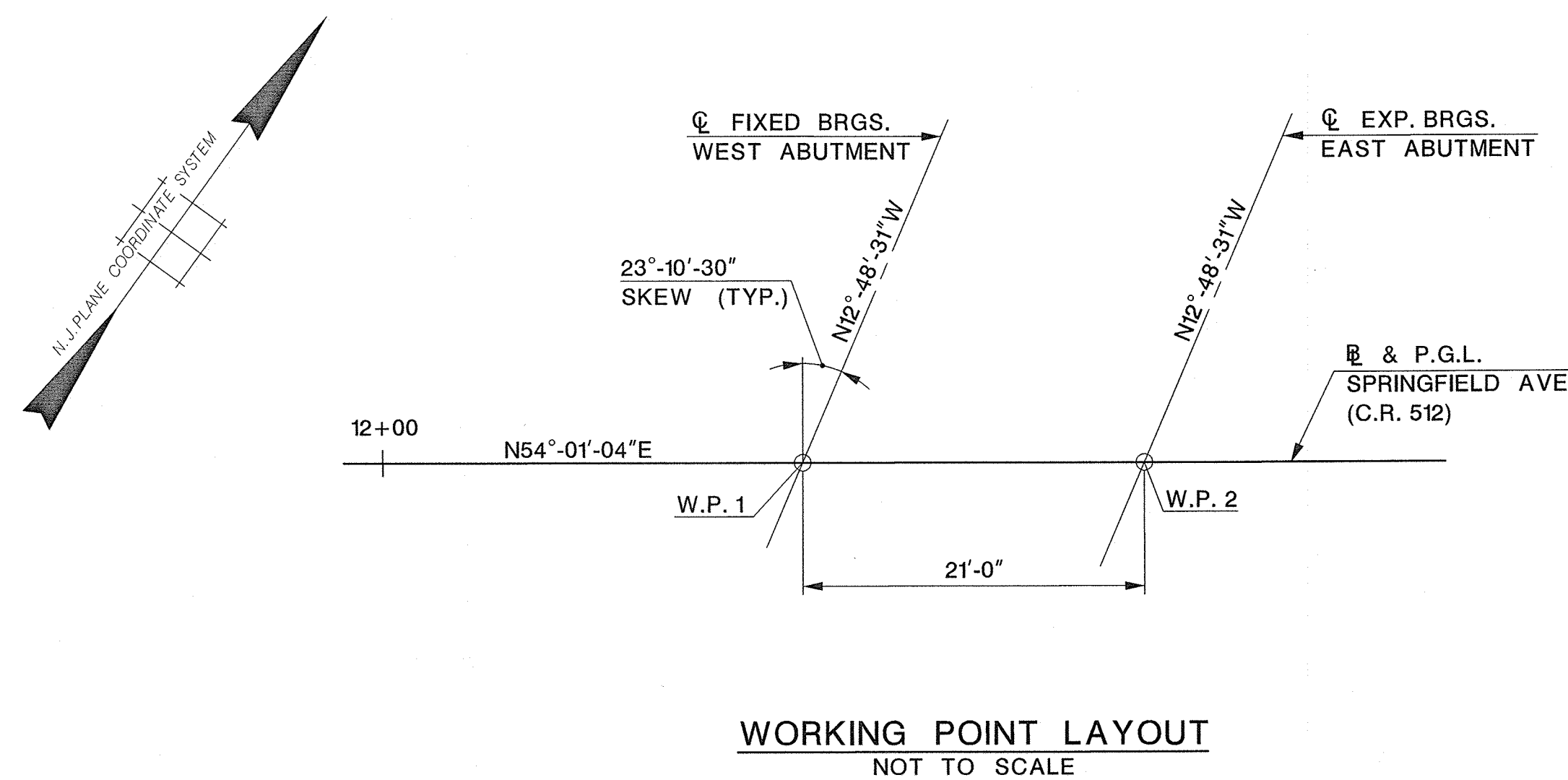




TYPICAL BRIDGE SECTION
SCALE: 1/4" = 1'-0"

NOTE:
SIDEWALKS AND PARAPETS TO BE CONSTRUCTED UNDER STAGE 2A AND 2B. SEE ROADWAY PLANS FOR STAGING AND TRAFFIC CONTROL.

INDEX OF BRIDGE SHEETS	
SHEET NO.	DESCRIPTION
19	GENERAL PLAN AND SECTION
20	TYPICAL SECTION, W.P. LAYOUT AND INDEX OF BRIDGE SHEETS
21	DEMOLITION PLAN
22	ABUTMENT DEMOLITION
23	WEST ABUTMENT PLAN AND ELEVATION
24	EAST ABUTMENT PLAN AND ELEVATION
25	WINGWALL ELEVATIONS
26	ABUTMENT SECTIONS 1
27	ABUTMENT SECTIONS 2
28	SUBSTRUCTURE PAY LIMITS AND DETAILS
29	FRAMING PLAN
30	TYPE SI-48 PRESTRESSED CONCRETE SLAB BEAM
31	TYPE SI-36 PRESTRESSED CONCRETE SLAB BEAM
32	SUPERSTRUCTURE DETAILS
33	UTILITY SUPPORT DETAILS
34	DECK PLAN
35	DECK DETAILS 1
36	DECK DETAILS 2
37	SUPERSTRUCTURE CROSS SECTION
38	DECK GRADING PLAN
39	ARCHITECTURAL DETAILS
40	BAR LIST



W.P.	STATION	OFFSET	COORDINATES	
			NORTH	EAST
1	12+23.64	0.00	675748.738	510078.313
2	12+44.64	0.00	675761.080	510095.312

SUMMARY OF BRIDGE QUANTITIES			
PAY ITEM	DESCRIPTION	UNIT	QUANTITY
61	CLEARING SITE, BRIDGE (STR. NO. Be19)	L.S.	L.S.
62	EXCAVATION, UNCLASSIFIED	C.Y.	105
63	I-9 SOIL AGGREGATE	C.Y.	90
64	REINFORCEMENT STEEL, GALVANIZED	LBS.	13,300
65	CONCRETE WINGWALL	C.Y.	6
66	EPOXY WATERPROOFING	S.Y.	55
67	PRESTRESSED CONCRETE SLAB BEAM (TYPE SI-36), 36"x12"	L.F.	357
68	PRESTRESSED CONCRETE SLAB BEAM (TYPE SI-48), 48"x12"	L.F.	48
69	STRUCTURAL STEEL (APPROX. 375 LBS.)	L.S.	L.S.
70	REINFORCED ELASTOMERIC BEARING ASSEMBLY	U	34
71	CONCRETE BRIDGE SEATS, HES	C.Y.	20
72	CONCRETE BRIDGE DECK, HES	C.Y.	40
73	CONCRETE BRIDGE SIDEWALK	C.Y.	12
74	CONCRETE BRIDGE PARAPET	L.F.	85
75	BRIDGE COMBINATION RAILING (1 RAIL, ALUMINUM)	L.F.	70
76	RUBBLE STONE FACING	S.F.	445
77	BLUE STONE CAP	S.F.	175
78	NAME PLAQUE	U	2

UNION COUNTY ENGINEERING

REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

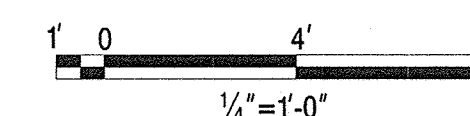
TYPICAL SECTION, W.P. LAYOUT,
AND INDEX OF BRIDGE SHEETS

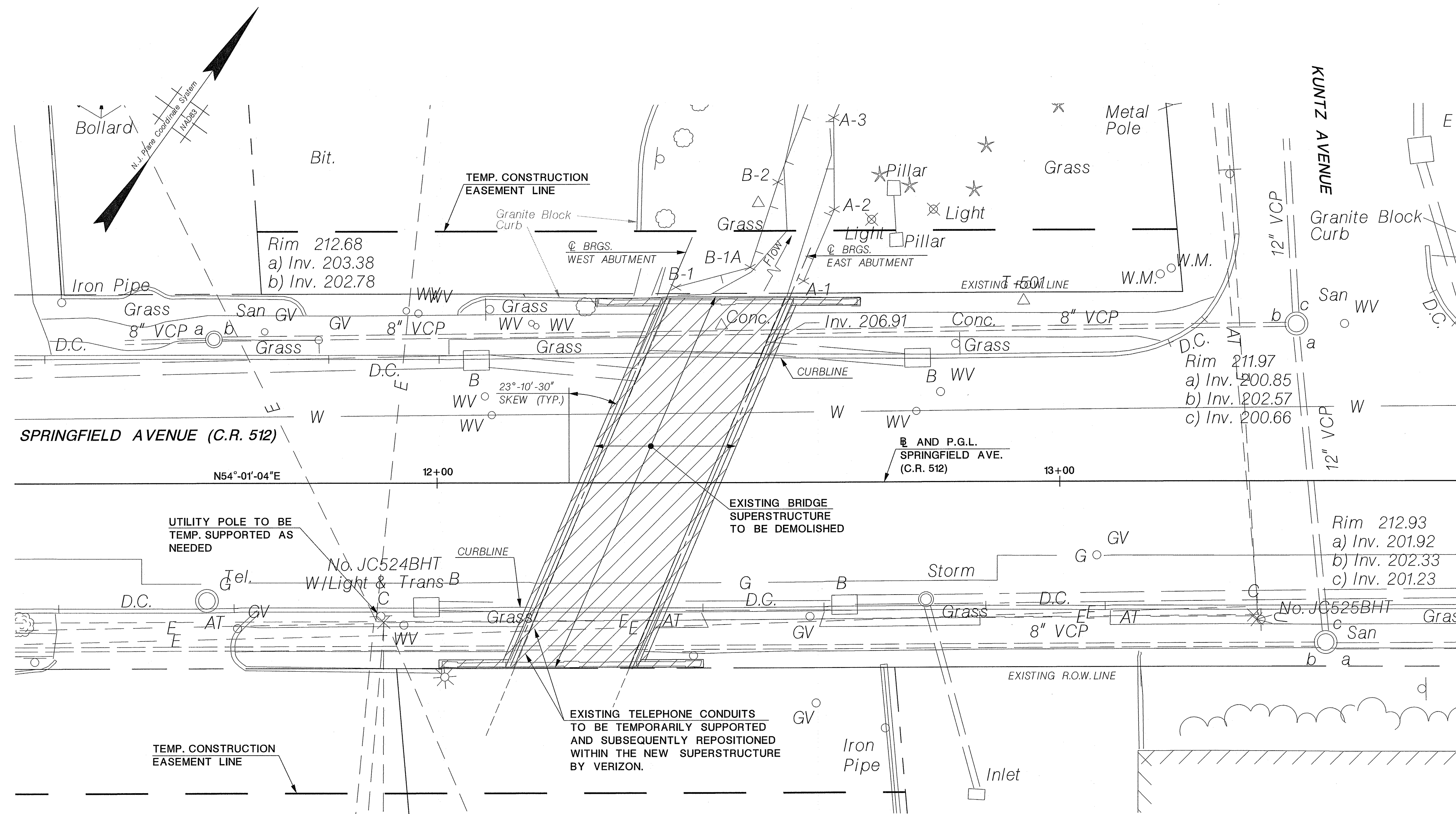
MANUEL J. VERA CARABALLO, P.E.

NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600
DATE 11/15/16

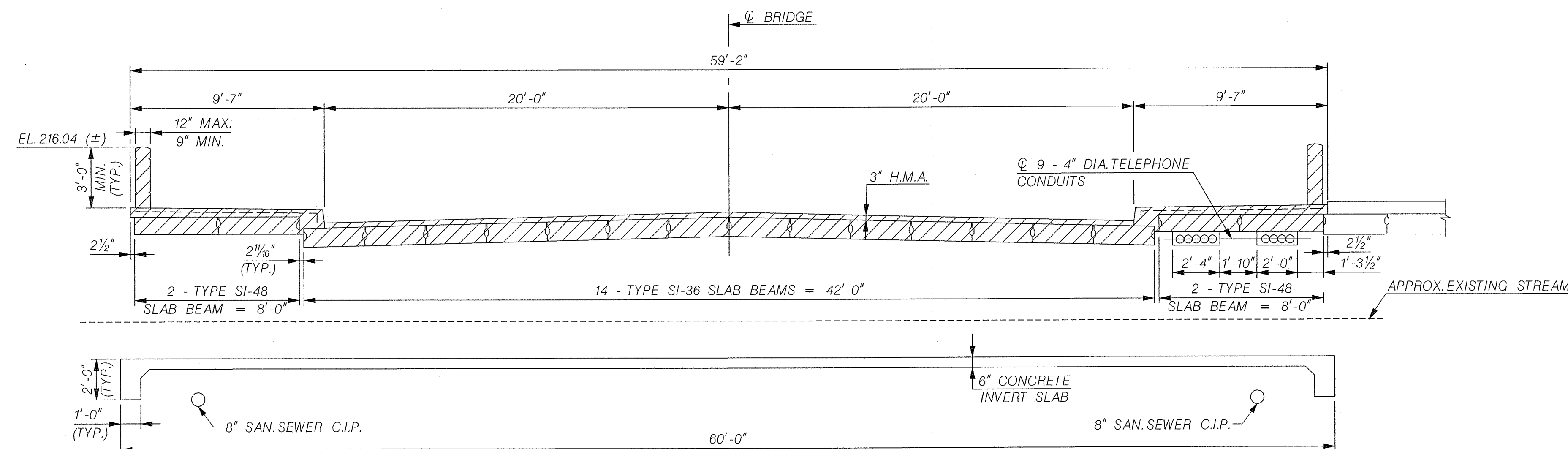
Dewberry Engineers Inc. SCALE: AS SHOWN DATE: NOVEMBER 2016
Certificate of Authorization No. 24GA28047600 SHEET NO. 20 OF 40
Bloomfield, N.J.

REVISION	
DATE	DESCRIPTION

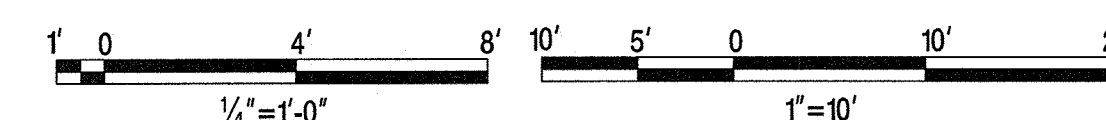




PLAN
SCALE: 1"=10'



EXISTING BRIDGE SECTION
SCALE: 1/4" = 1'-0"



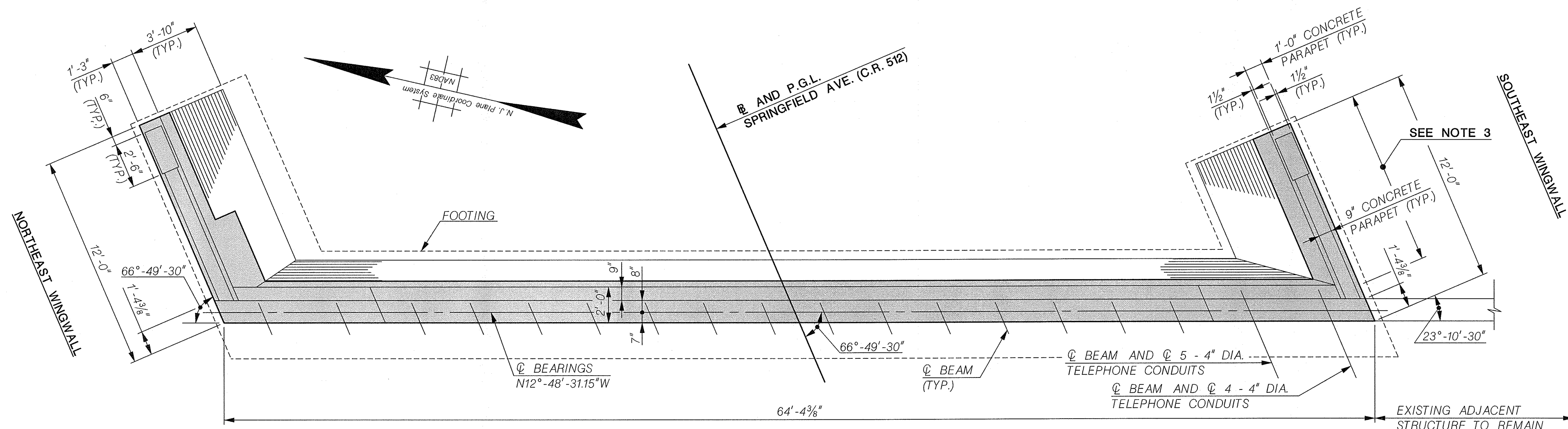
LEGEND:
 - LIMITS OF STRUCTURE REMOVAL

- DEMOLITION NOTES:**
1. INFORMATION SHOWN ON THIS PLAN IS TAKEN FROM EXISTING PLANS AVAILABLE AT THE UNION COUNTY ENGINEER'S OFFICE AND IS FOR INFORMATIONAL PURPOSES ONLY. THE DATA SHOWN IS NOT GUARANTEED TO BE CORRECT, AND IS NOT INTENDED TO BE COMPLETE OR ALL INCLUSIVE. BIDDERS SHALL VISIT THE SITE PRIOR TO SUBMITTING BIDS TO ASCERTAIN FULL EXTENT OF WORK.
 2. THE INFORMATION SHOWN SHALL NOT BE CONSTRUED IN ANY WAY AS A WAIVER FOR THE BIDDER TO MAKE SUCH INDEPENDENT INVESTIGATION AND EXAMINATION AS THE BIDDER DEEMS NECESSARY TO BE SATISFIED AS TO THE CONDITIONS TO BE ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
 3. SUBMIT A DEMOLITION PLAN TO THE ENGINEER PRIOR TO INITIATING DEMOLITION. DO NOT START DEMOLITION UNTIL THE COMPONENTS OF THE PROPOSED BRIDGE ARE FURNISHED AND APPROVED. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 4. REMOVE THE EXISTING SUPERSTRUCTURE IN ITS ENTIRETY AND THE SUBSTRUCTURE TO THE LIMITS SHOWN ON THE PLANS.
 5. DURING DEMOLITION ACTIVITIES TAKE EXTREME CARE SO AS NOT TO DROP DEBRIS INTO THE WATERWAY. IMMEDIATELY REMOVE ANY DEBRIS DROPPED INTO THE WATERWAY.
 6. INCLUDE THE REMOVAL AND DISPOSAL OF THE EXISTING BRIDGE, INCLUDING THE EXISTING CONCRETE ABUTMENTS, WINGWALLS, PRESTRESSED CONCRETE BEAMS, BITUMINOUS CONCRETE PAVEMENT ON THE BRIDGE, AND THE CONCRETE PARAPETS, UNDER THE PRICE BID FOR THE ITEM "CLEARING SITE, BRIDGE (STR. NO. Be19)".

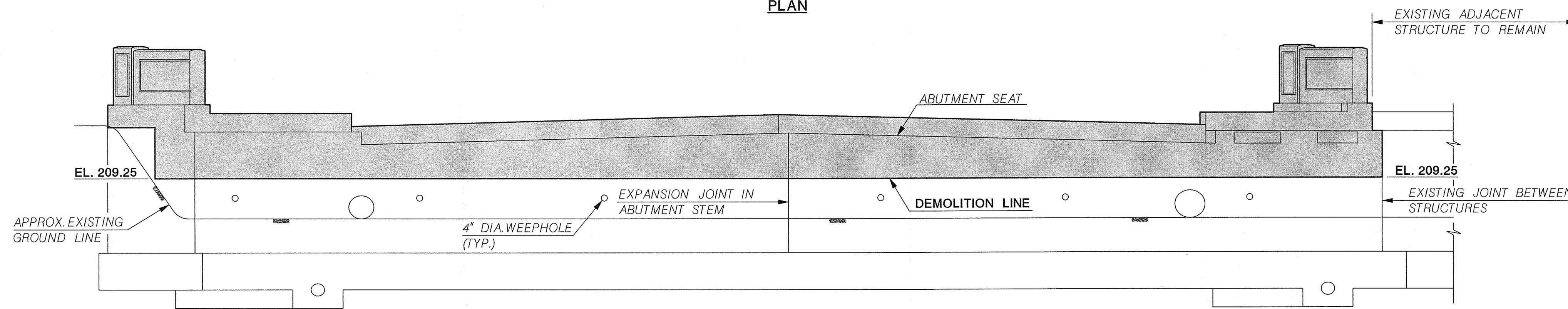
- REFERENCES:**
1. FOR ABUTMENT DEMOLITION LIMITS, SEE SHEET NO. 22.

UNION COUNTY ENGINEERING									
REHABILITATION OF SPRINGFIELD AVENUE BRIDGE (Be19) OVER STREAM 3-55 TOWNSHIP OF BERKELEY HEIGHTS									
DEMOLITION PLAN									
MANUEL J. VERA CARABALLO, P.E. NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009800									
DATE: 11/15/16									
<table border="1"> <tr> <th colspan="2">REVISION</th> </tr> <tr> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>		REVISION		DATE	DESCRIPTION				
REVISION									
DATE	DESCRIPTION								
Dewberry Engineers Inc. Certificate of Authorization No. 24GA28047600 Bloomfield, N.J.	SCALE: AS SHOWN DATE: NOVEMBER 2016 SHEET NO. 21 OF 40								



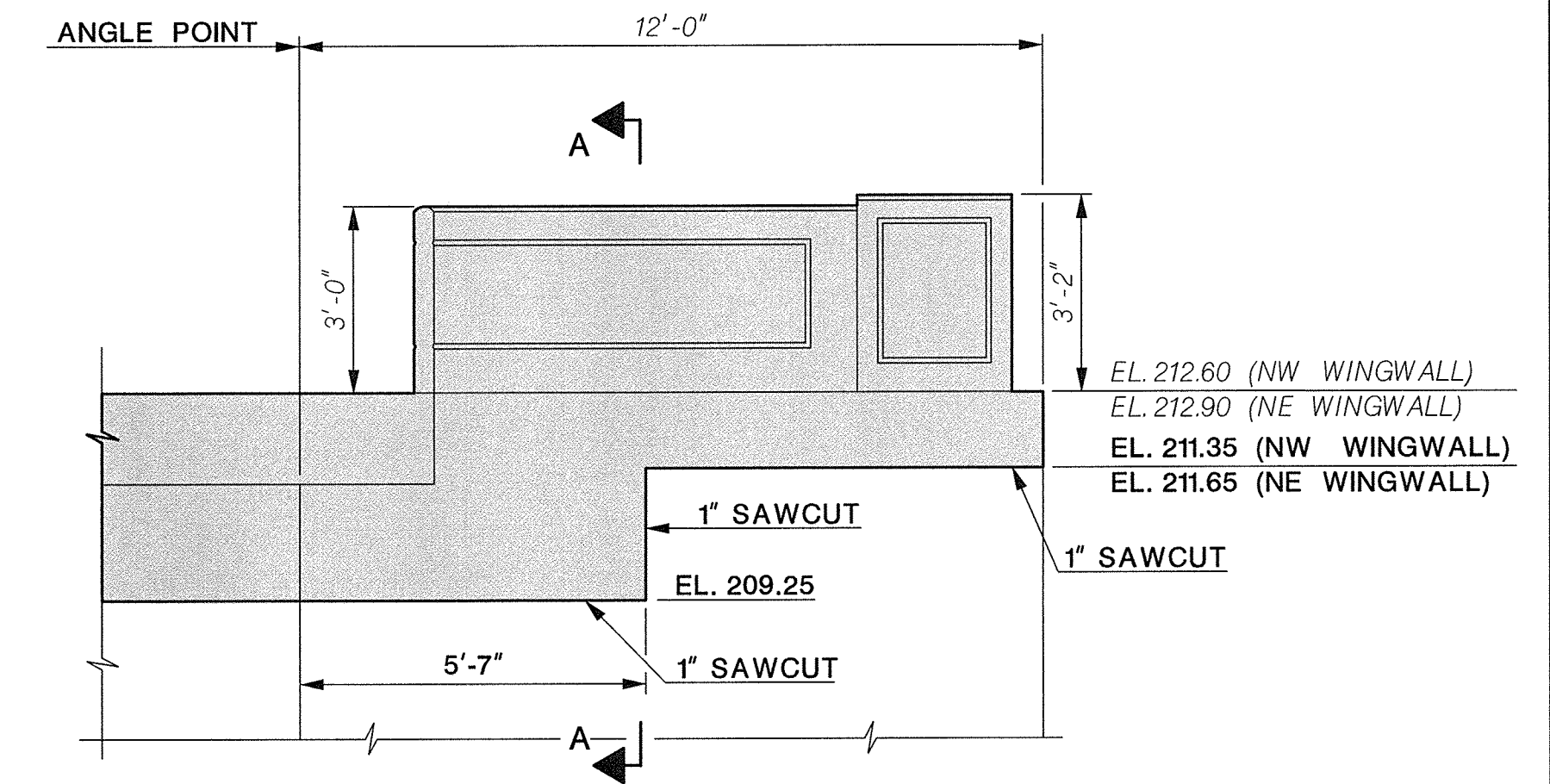


PLAN

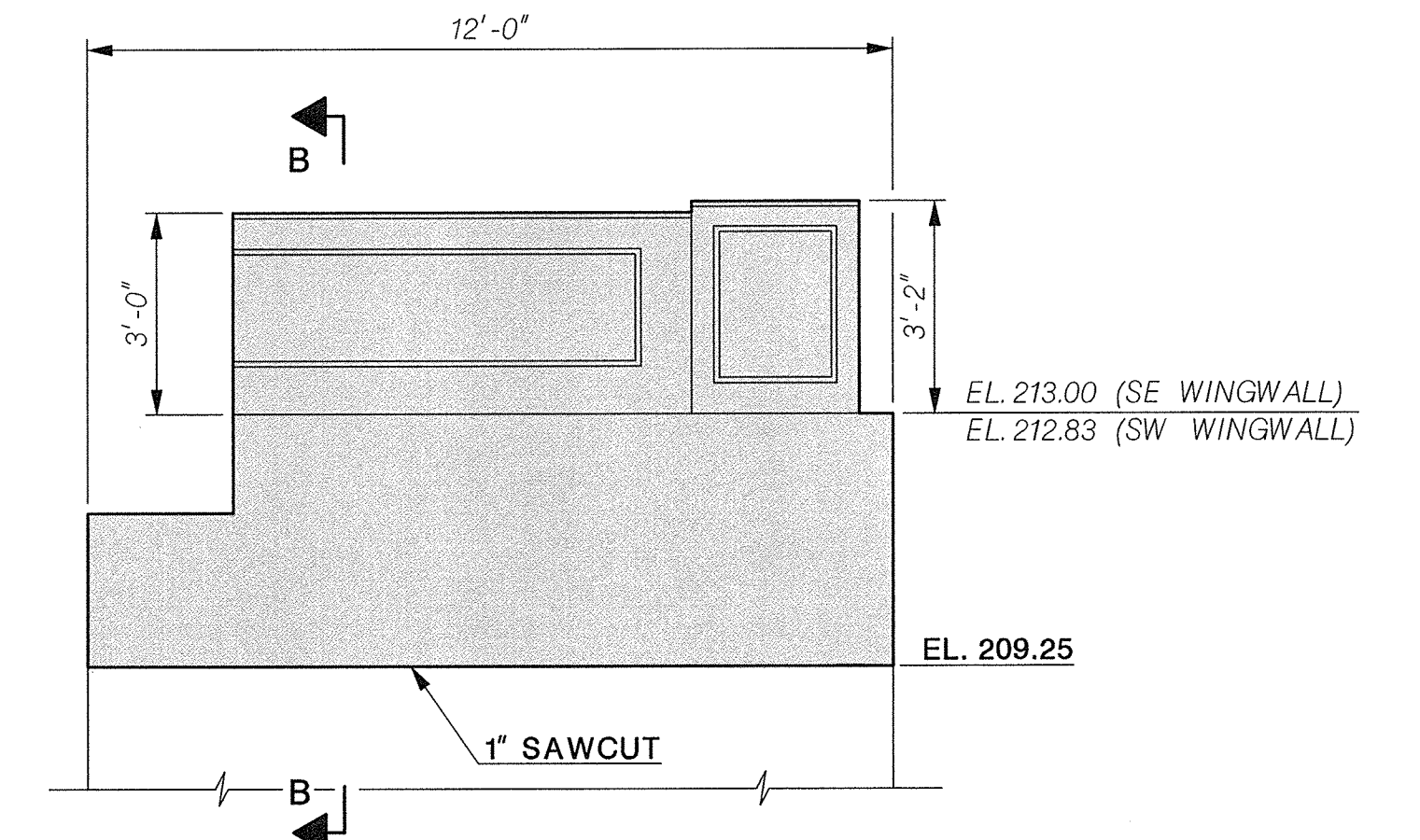


ELEVATION

ABUTMENT REMOVALS
(EAST ABUTMENT SHOWN, WEST ABUTMENT SIMILAR)
SCALE: 1/4" = 1'-0"



NORTH WINGWALL REMOVALS
(NW WINGWALL SHOWN, NE WINGWALL SIMILAR BY OPPOSITE HAND)
SCALE: 3/8" = 1'-0"



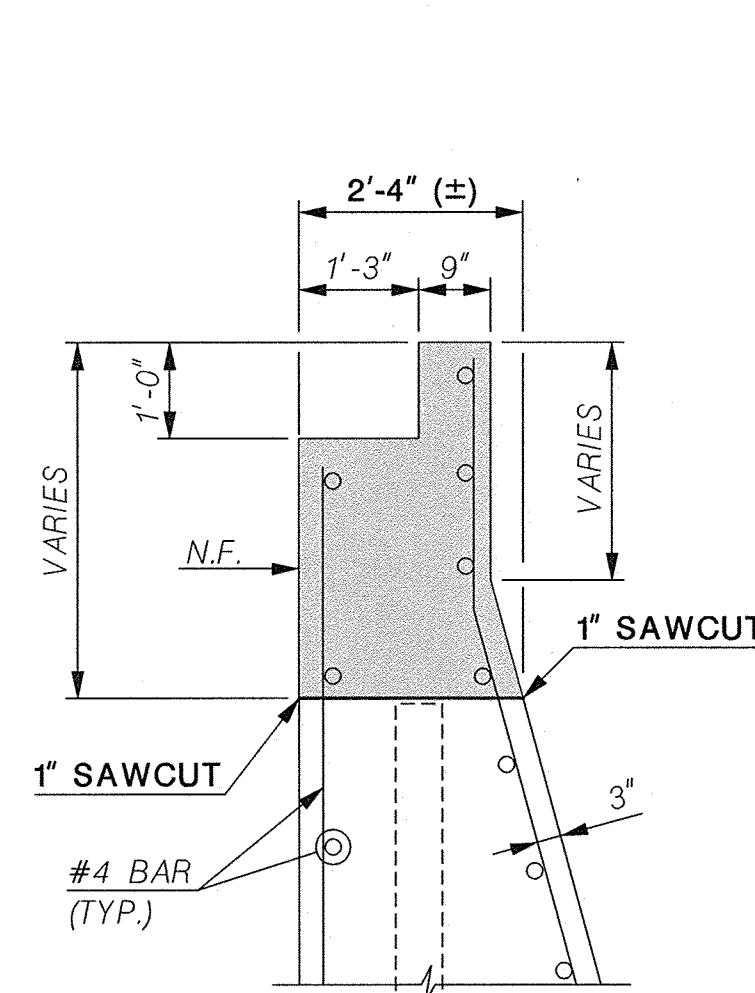
SOUTH WINGWALL REMOVALS
(SE WINGWALL SHOWN, SW WINGWALL SIMILAR BY OPPOSITE HAND)
SCALE: 3/8" = 1'-0"

NOTES:

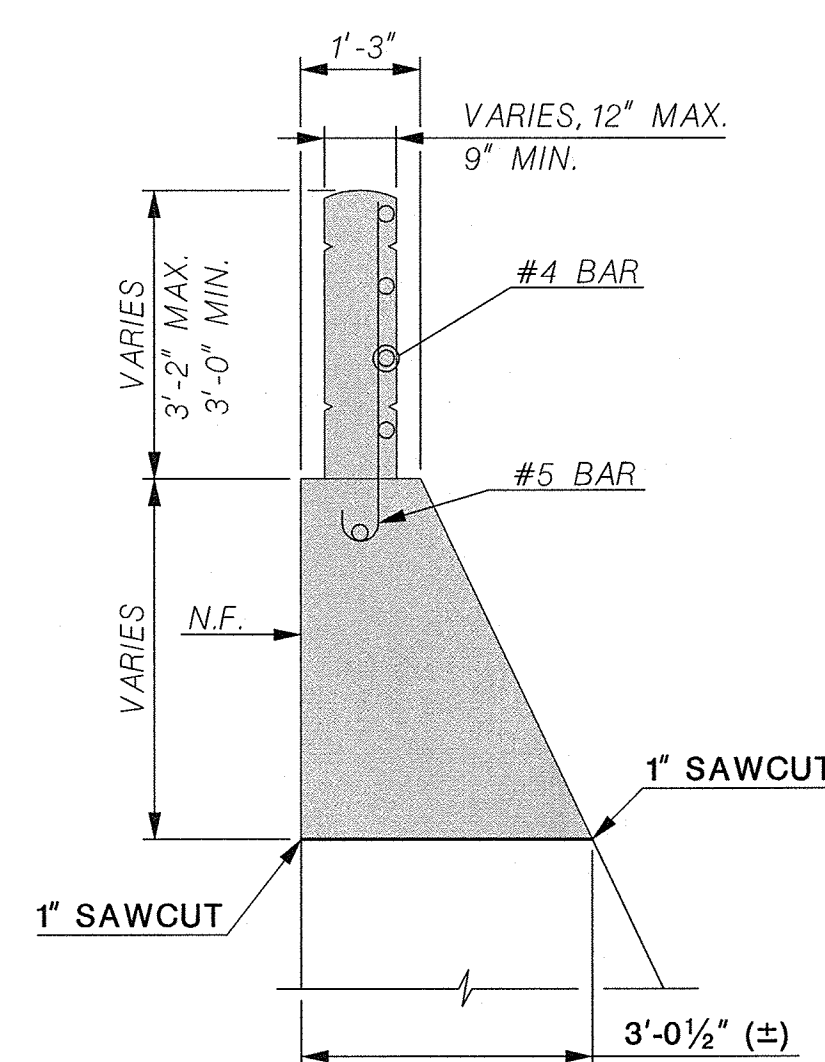
- EXISTING ABUTMENT AND WINGWALL DIMENSIONS AND ELEVATIONS ARE BASED ON THE EXISTING BRIDGE PLANS (NOT AS-BUILTS), DATED 1962, AND THE SURVEY PERFORMED IN 2015. VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO STARTING CONSTRUCTION.
- INCLUDE ALL WORK RELATED TO DEMOLITION ACTIVITIES AND DISPOSAL OF DEMOLITION MATERIALS UNDER THE PRICE BID FOR THE ITEM "CLEARING SITE, BRIDGE (STR. NO. Be19)".
- RETAIN ADJACENT EMBANKMENT DURING DEMOLITION AND CONSTRUCTION ACTIVITIES. INCLUDE COST IN THE PRICE BID FOR THE ITEM "CLEARING SITE, BRIDGE (STR. NO. Be19)".

REFERENCES:

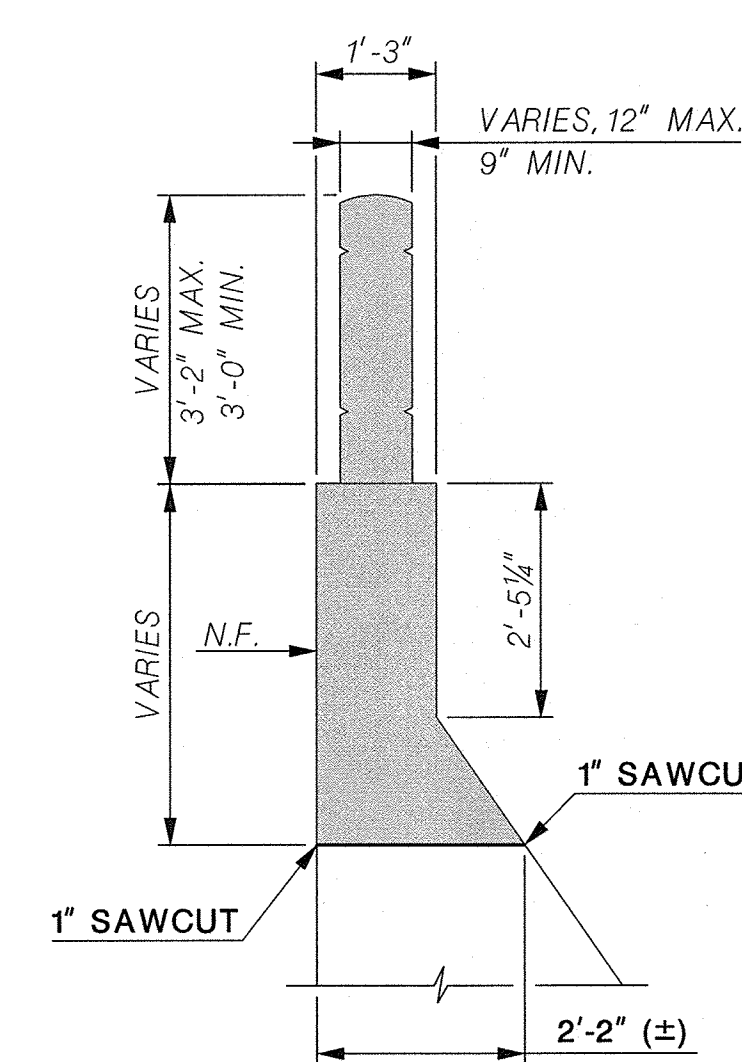
- FOR PROPOSED ABUTMENT PLAN AND ELEVATION, SEE SHEET NOS. 23 AND 24.



ABUTMENT SECTION
SCALE: 1/2" = 1'-0"



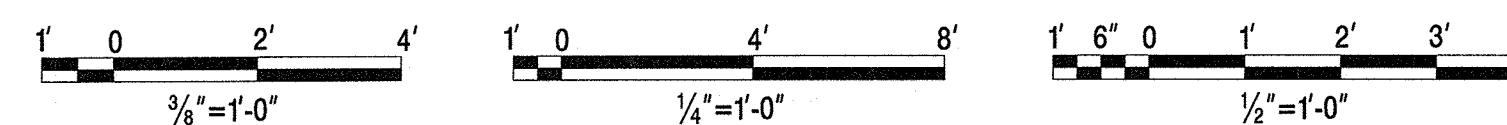
SECTION A-A
SCALE: 1/2" = 1'-0"



SECTION B-B
SCALE: 1/2" = 1'-0"

LEGEND:

- [Shaded Area] - LIMITS OF STRUCTURE REMOVAL
- N.F. - NEAR FACE



DATE	REVISION DESCRIPTION

UNION COUNTY ENGINEERING

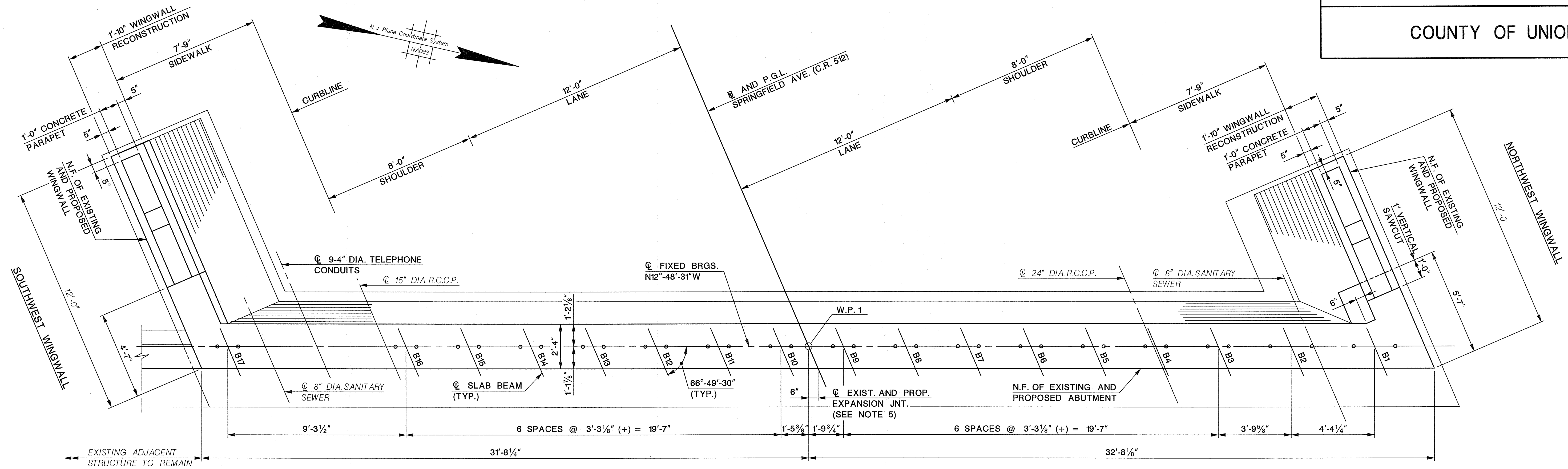
REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

ABUTMENT DEMOLITION

MANUEL J. VERA CARABALLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0509800

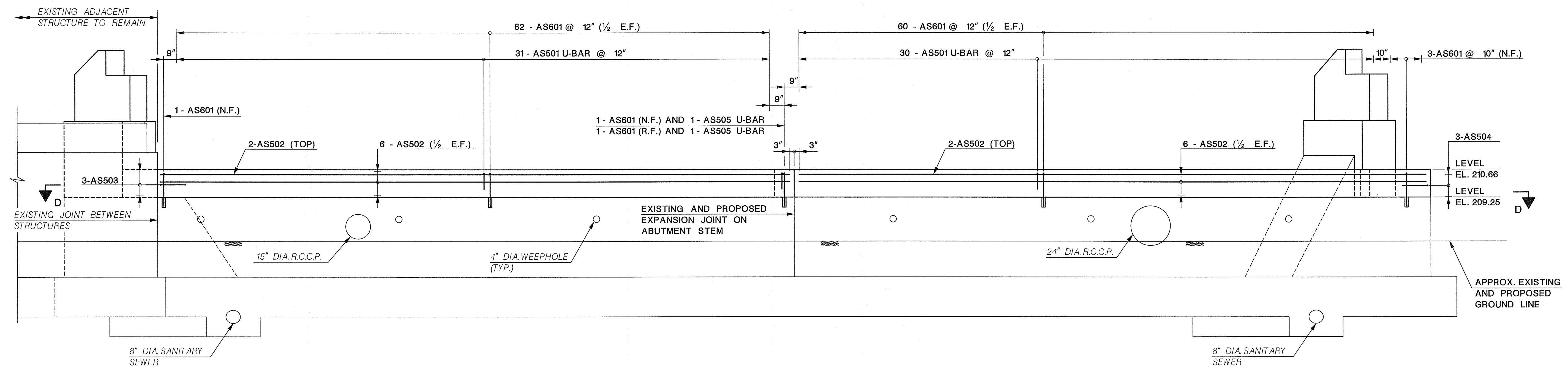
DATE: 11/15/16

<p>Dewberry Engineers Inc. Certificate of Authorization No. 24GA28047600 Bloomfield, N.J.</p>	<p>SCALE: AS SHOWN</p>	<p>DATE: NOVEMBER 2016 SHEET NO. 22 OF 40</p>
--	------------------------	---



PLAN

SCALE: 3/8" = 1'-0"



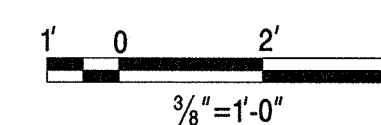
ELEVATION

SCALE: 3/8" = 1'-0"

- NOTES:**
- EXISTING ABUTMENT AND WINGWALL DIMENSIONS AND ELEVATIONS ARE BASED ON THE EXISTING BRIDGE PLANS (NOT AS-BUILTS), DATED 1962, AND THE SURVEY PERFORMED IN 2015. VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO STARTING CONSTRUCTION.
 - ALL REINFORCEMENT TO BE GALVANIZED.
 - SPACE REBAR TO AVOID BEAM DOWELS AND R.C.C.P.
 - DOWEL LENGTHS DETAILED ASSUME A 6" EMBEDMENT DEPTH. IF EMBEDMENT DEPTH IS ADJUSTED PER GROUT MANUFACTURER'S RECOMMENDATION, ADJUST THE DOWEL LENGTHS ACCORDINGLY AT NO COST TO THE COUNTY.
 - PROPOSED EXPANSION JOINT TO MATCH EXISTING.

- REFERENCES:**
- FOR WORKING POINT LAYOUT, SEE SHEET NO. 20.
 - FOR WINGWALL ELEVATIONS, SEE SHEET NO. 25.
 - FOR TYPICAL ABUTMENT SECTION AND SECTION D-D, SEE SHEET NO. 26.
 - FOR INTERFACE DETAIL BETWEEN PROPOSED AND EXISTING ABUTMENT TO REMAIN, SEE SHEET NO. 27.
 - FOR SUBSTRUCTURE PAY LIMITS AND DETAILS, SEE SHEET NO. 28.
 - FOR BEARING DETAILS, SEE SHEET NO. 32.
 - FOR BAR LIST, SEE SHEET NO. 40.

- LEGEND:**
- N.F. - NEAR FACE
 - R.F. - REAR FACE
 - E.F. - EACH FACE
 - R.C.C.P. - REINFORCED CONCRETE CULVERT PIPE



REVISION	
DATE	DESCRIPTION

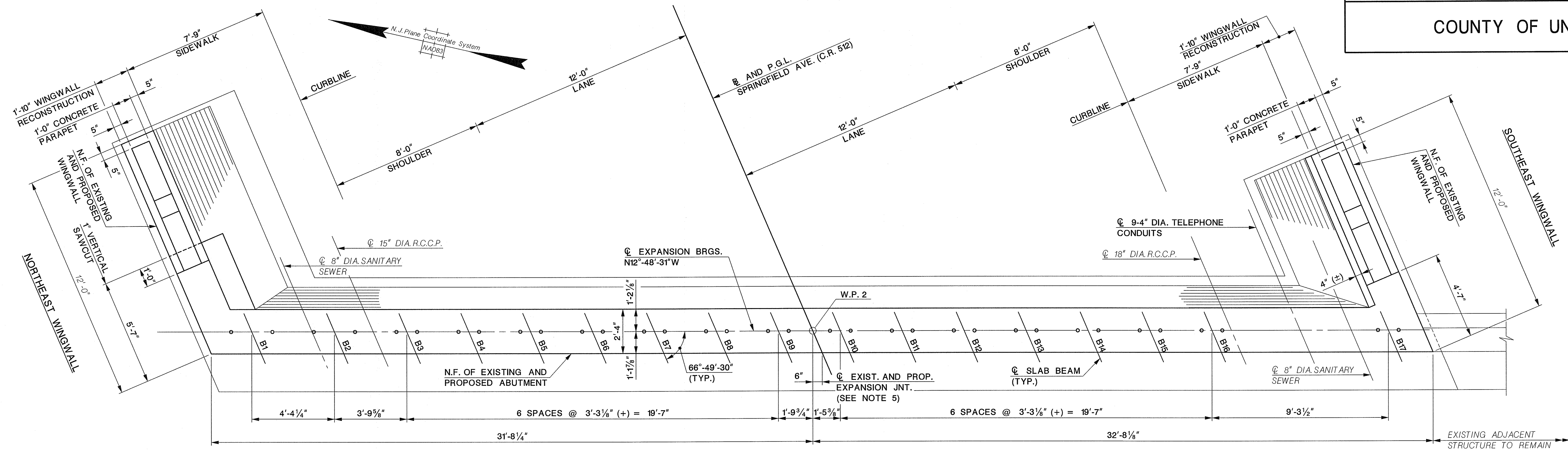
UNION COUNTY ENGINEERING
 REHABILITATION OF
 SPRINGFIELD AVENUE BRIDGE (Bø19)
 OVER STREAM 3-55
 TOWNSHIP OF BERKELEY HEIGHTS

WEST ABUTMENT
 PLAN AND ELEVATION

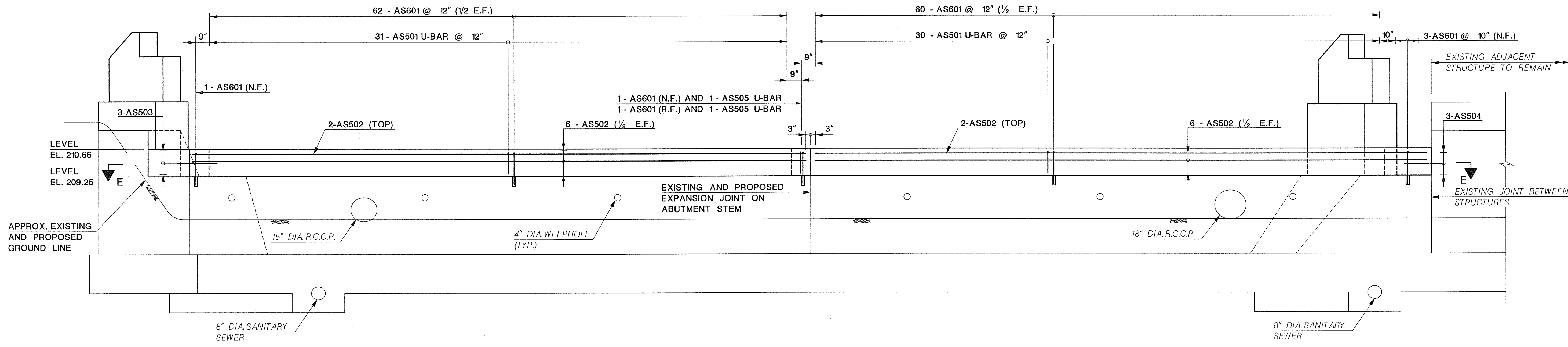
MANUEL J. VERA CARABALLO, P.E.

NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0008600
 DATE 11/15/16

Dewberry Engineers Inc. SCALE: DATE: NOVEMBER 2016
 Certificate of Authorization No. 24GA28047600 AS SHOWN SHEET NO. 23 OF 40
 Bloomfield, N.J.



PLAN
SCALE: 3/8" = 1'-0"

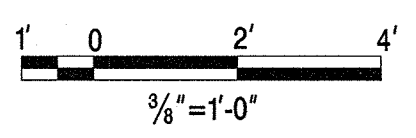


ELEVATION
SCALE: 3/8" = 1'-0"

- NOTES:**
- EXISTING ABUTMENT AND WINGWALL DIMENSIONS AND ELEVATIONS ARE BASED ON THE EXISTING BRIDGE PLANS (NOT AS-BUILTS), DATED 1962, AND THE SURVEY PERFORMED IN 2015. VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO STARTING CONSTRUCTION.
 - ALL REINFORCEMENT TO BE GALVANIZED.
 - SPACE REBAR TO AVOID BEAM DOWELS AND R.C.C.P.
 - DOWEL LENGTHS DETAILED ASSUME A 6" EMBEDMENT DEPTH. IF EMBEDMENT DEPTH IS ADJUSTED PER GROUT MANUFACTURER'S RECOMMENDATION, ADJUST THE DOWEL LENGTHS ACCORDINGLY AT NO COST TO THE COUNTY.
 - PROPOSED EXPANSION JOINT TO MATCH EXISTING.

- REFERENCES:**
- FOR WORKING POINT LAYOUT, SEE SHEET NO. 20.
 - FOR WINGWALL ELEVATIONS, SEE SHEET NO. 25.
 - FOR TYPICAL ABUTMENT SECTION AND SECTION E-E, SEE SHEET NO. 26.
 - FOR INTERFACE DETAIL BETWEEN PROPOSED AND EXISTING ABUTMENT TO REMAIN, SEE SHEET NO. 27.
 - FOR SUBSTRUCTURE PAY LIMITS AND DETAILS, SEE SHEET NO. 28.
 - FOR BEARING DETAILS, SEE SHEET NO. 32.
 - FOR BAR LIST, SEE SHEET NO. 40.

- LEGEND:**
- N.F. - NEAR FACE
 - R.F. - REAR FACE
 - E.F. - EACH FACE
 - R.C.C.P. - REINFORCED CONCRETE CYLINDER PIPE



REVISION	
DATE	DESCRIPTION

UNION COUNTY ENGINEERING

REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

**EAST ABUTMENT
PLAN AND ELEVATION**

MANUEL J. VERA CARABALLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0509800

DATE: 11/15/16

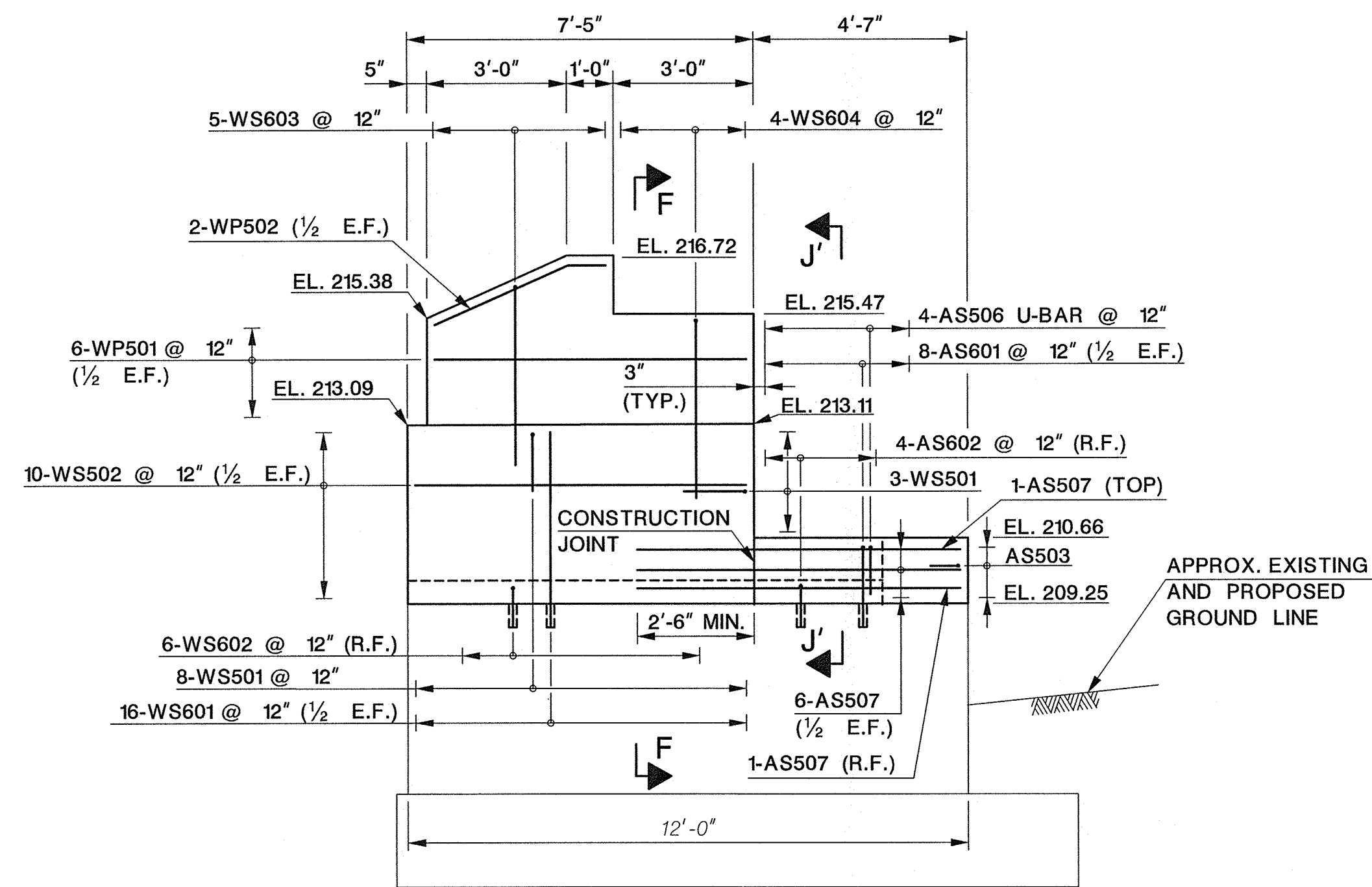
Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J.

SCALE: AS SHOWN

DATE: NOVEMBER 2016

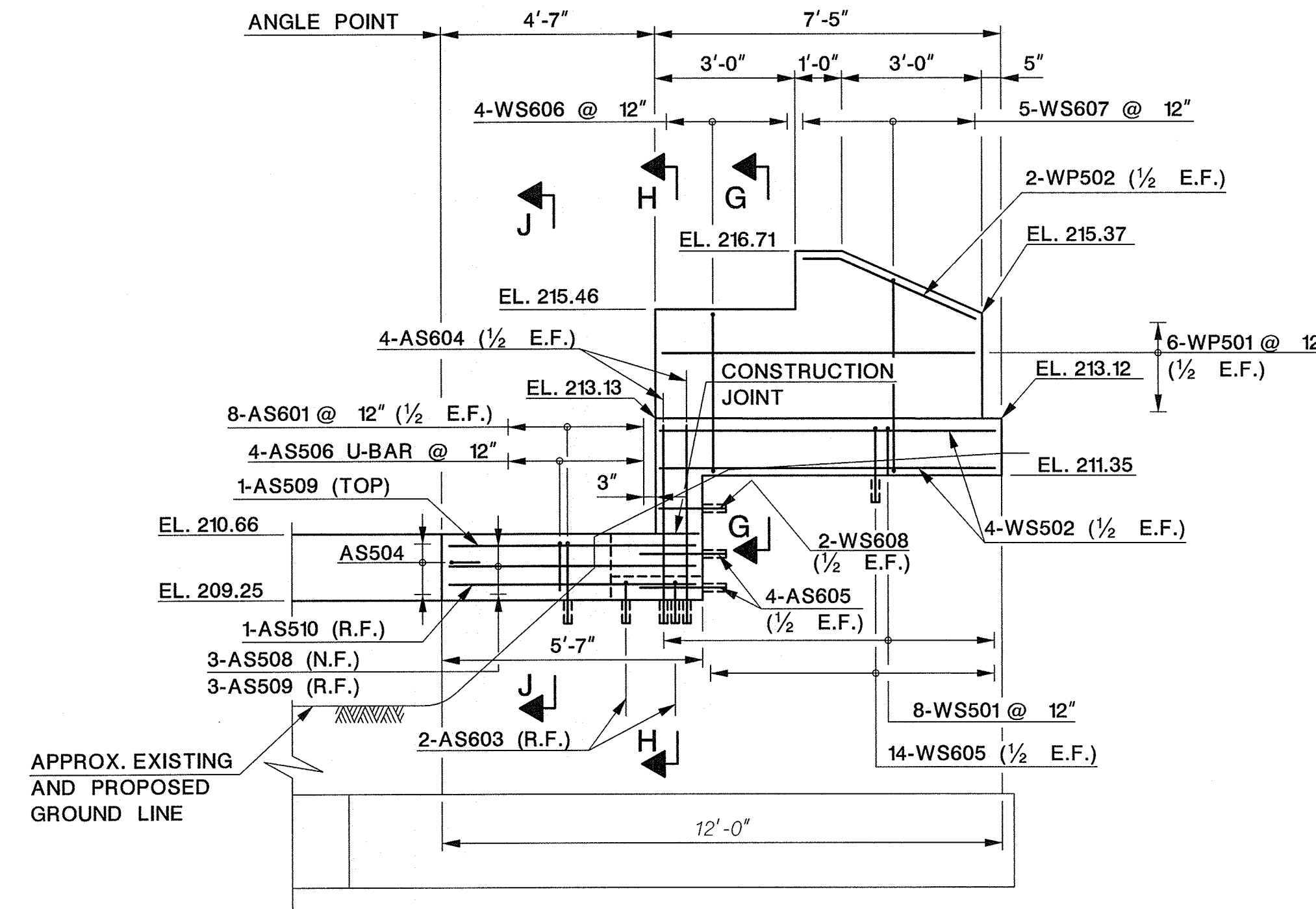
SHEET NO. 24 OF 40





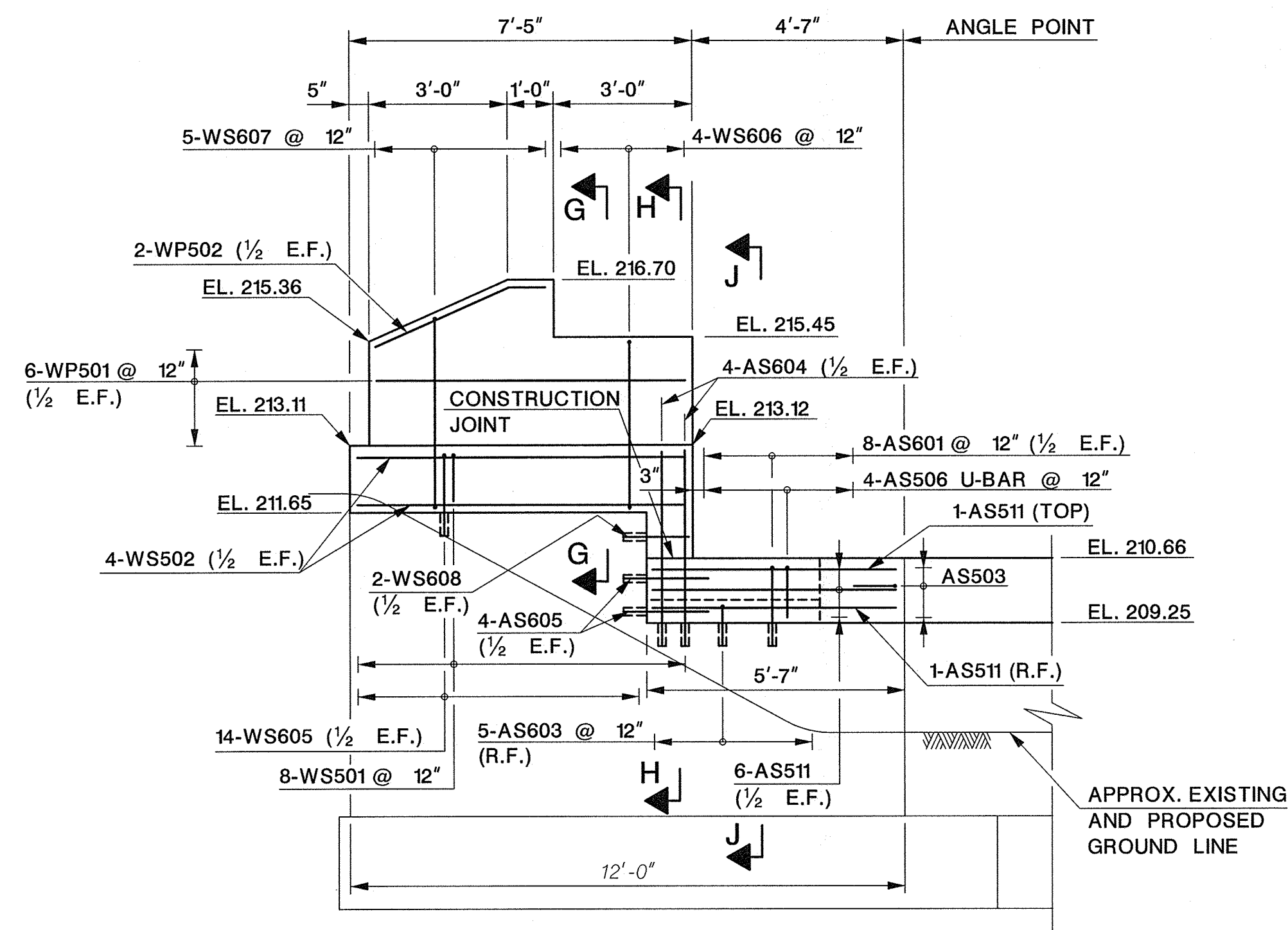
DATUM EL. 200

SOUTHWEST WINGWALL ELEVATION
SCALE: 3/8" = 1'-0"



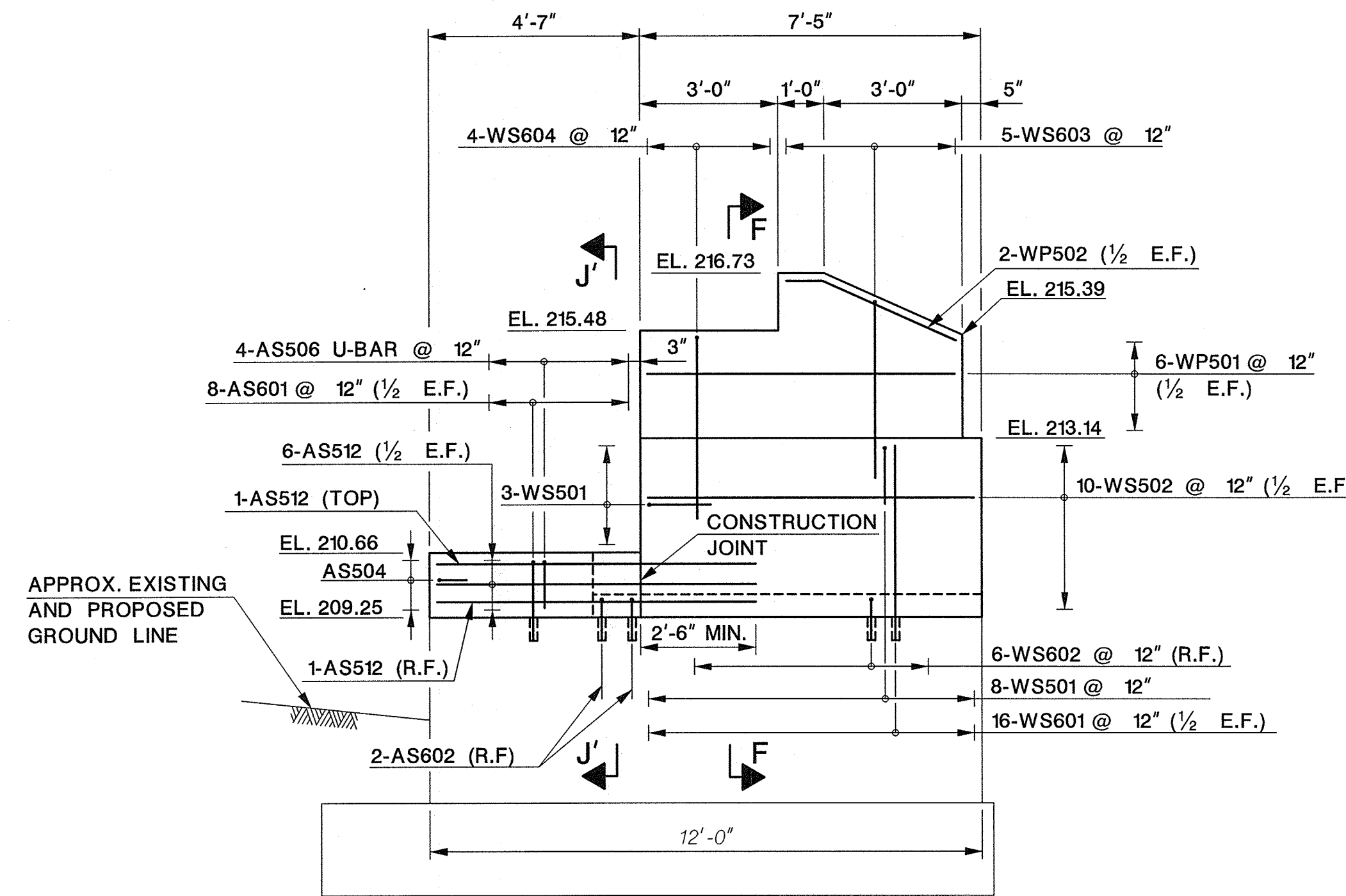
DATUM EL. 200

NORTHWEST WINGWALL ELEVATION
SCALE: 3/8" = 1'-0"



DATUM EL. 200

NORTHEAST WINGWALL ELEVATION
SCALE: 3/8" = 1'-0"



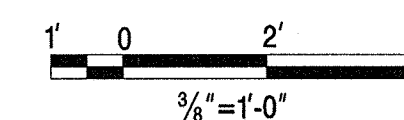
DATUM EL. 200

SOUTHEAST WINGWALL ELEVATION
SCALE: 3/8" = 1'-0"

- NOTES:**
- EXISTING ABUTMENT AND WINGWALL DIMENSIONS, AND ELEVATIONS ARE BASED ON THE EXISTING BRIDGE PLANS (NOT AS-BUILTS), DATED 1962, AND THE SURVEY PERFORMED IN 2015. VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO STARTING CONSTRUCTION.
 - ALL REINFORCEMENT TO BE GALVANIZED.
 - DOWEL LENGTHS DETAILED ASSUME A 6" EMBEDMENT DEPTH. IF EMBEDMENT DEPTH IS ADJUSTED PER GROUT MANUFACTURER'S RECOMMENDATION, ADJUST THE DOWEL LENGTHS ACCORDINGLY AT NO COST TO THE COUNTY.
 - PARAPET ARCHITECTURAL DETAILS NOT SHOWN FOR CLARITY.
 - ELEVATIONS SHOWN ARE TOP OF CONCRETE. BLUESTONE CAP ON PARAPET NOT SHOWN.

- REFERENCES:**
- FOR SECTIONS F-F THRU J'-J', SEE SHEET NO. 27.
 - FOR SUBSTRUCTURE PAY LIMITS AND DETAILS, SEE SHEET NO. 28.
 - FOR REINFORCEMENT AT NAME PLAQUE AND ARCHITECTURAL DETAILS, SEE SHEET NO. 39.
 - FOR BARLIST, SEE SHEET NO. 40.

LEGEND:
N.F. - NEAR FACE
R.F. - REAR FACE
E.F. - EACH FACE



REVISION	
DATE	DESCRIPTION

UNION COUNTY ENGINEERING

REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

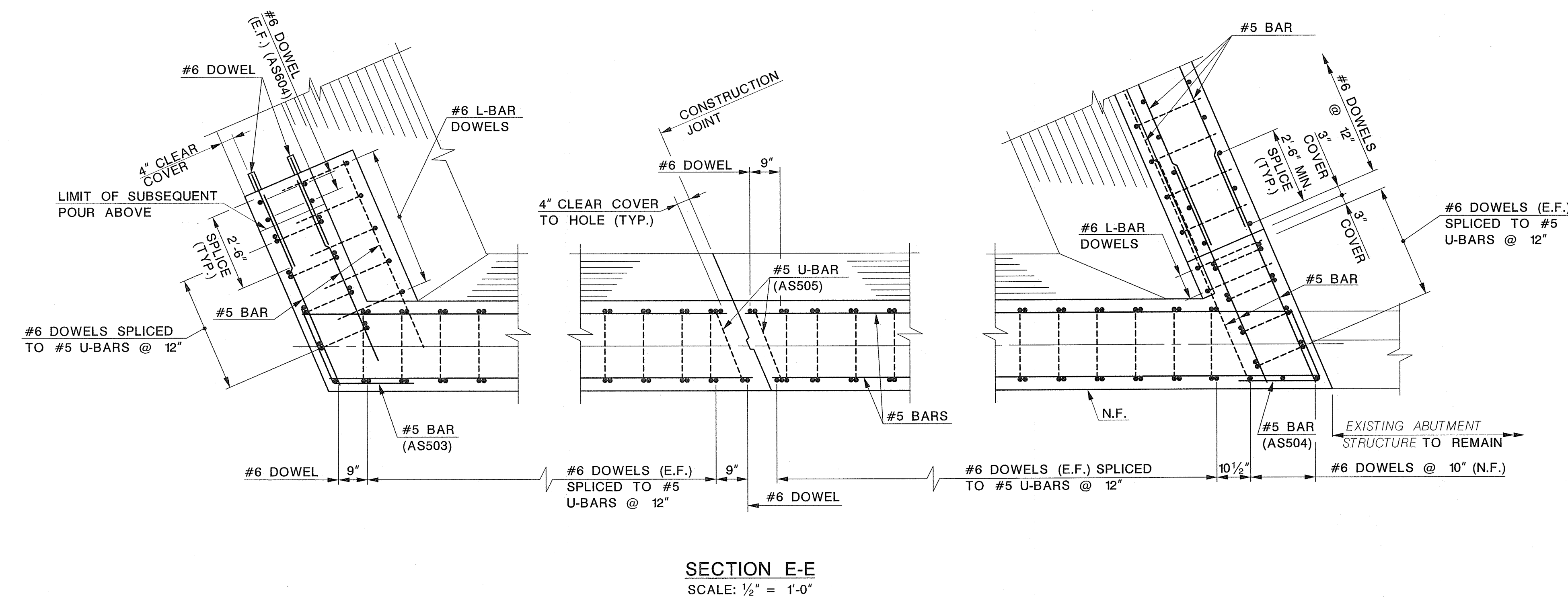
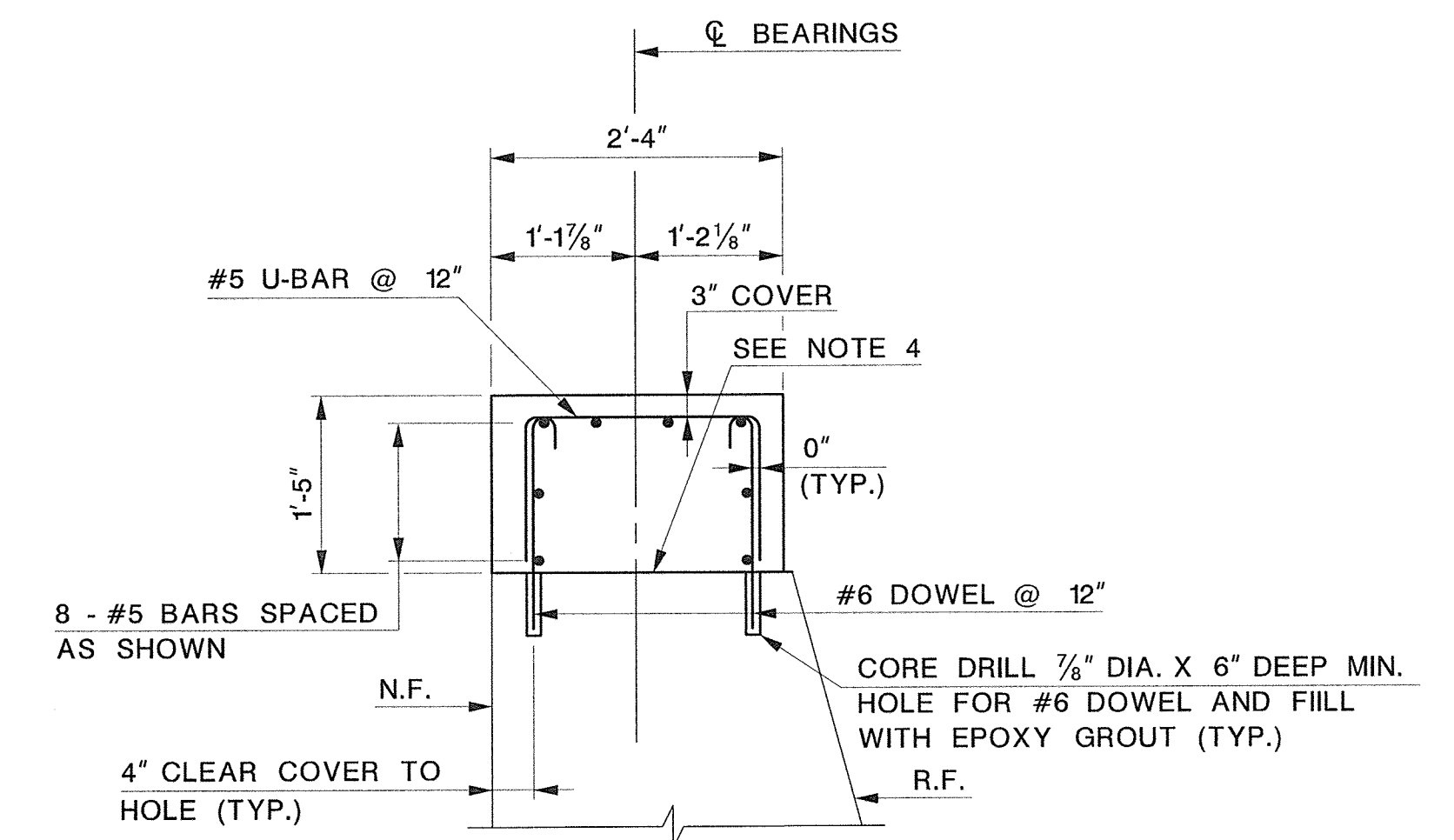
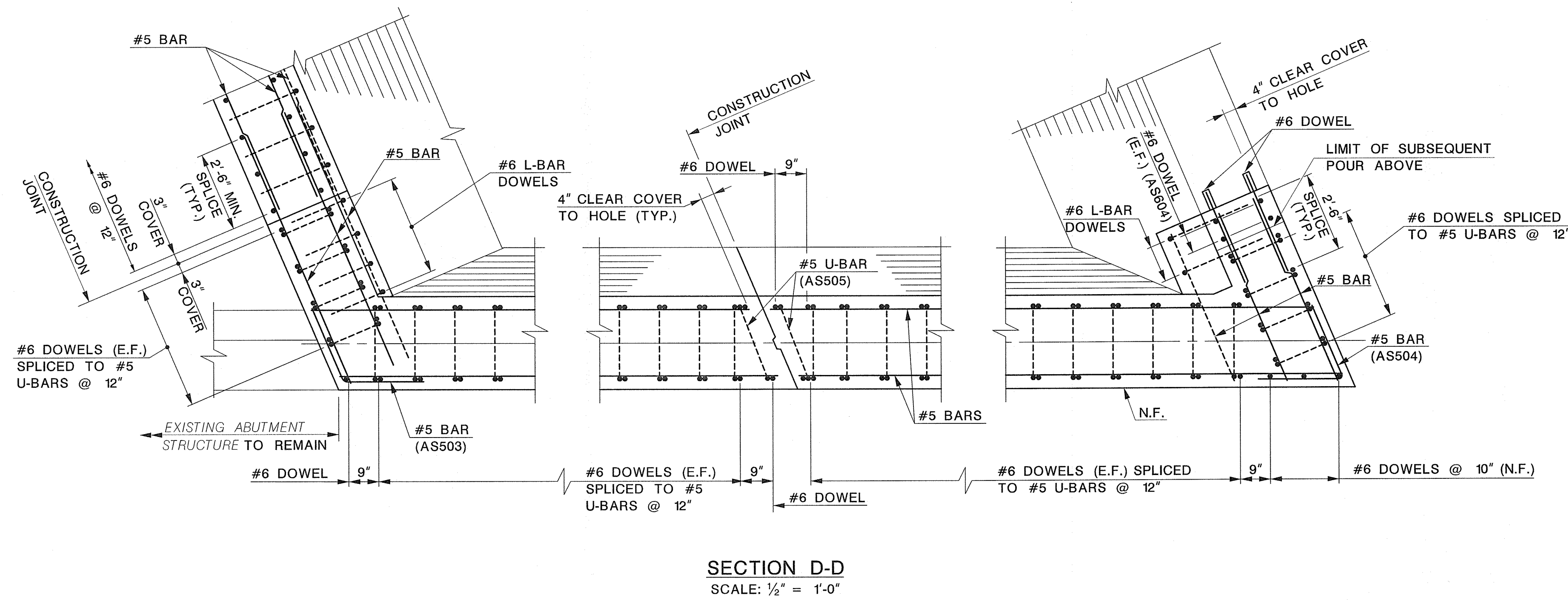
WINGWALL ELEVATIONS

MANUEL J. VERA CARABALLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600

DATE: 11/15/16

Dewberry Engineers Inc. Certificate of Authorization No. 24GA28047600 Bloomfield, N.J.	SCALE: AS SHOWN	DATE: NOVEMBER 2016 SHEET NO. 25 OF 40
---	--------------------	---



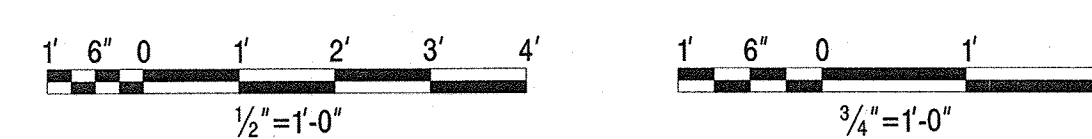


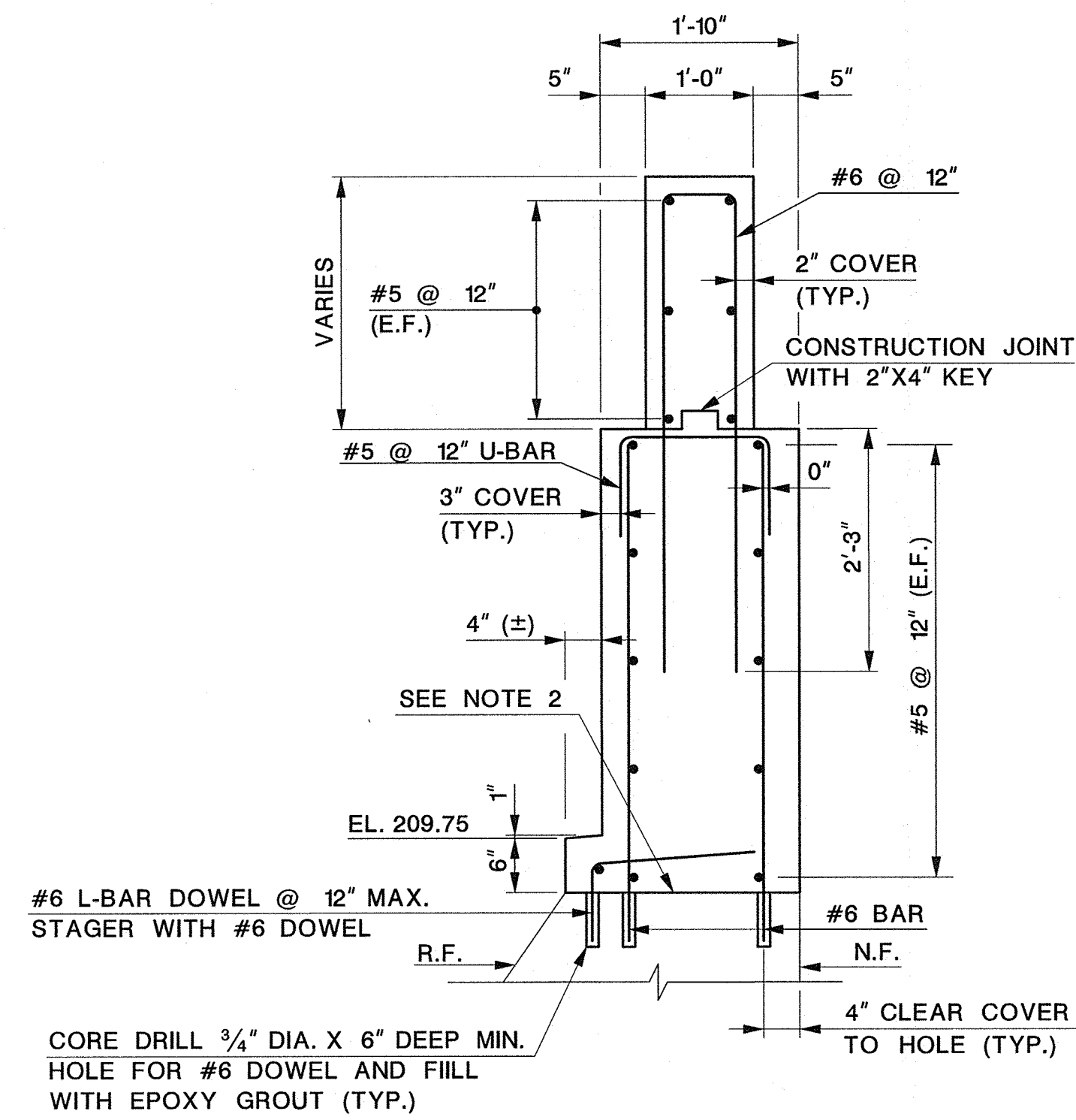
- NOTES:**
1. ALL REINFORCEMENT TO BE GALVANIZED.
 2. SPACE REBAR TO AVOID BEAM DOWELS.
 3. DOWEL LENGTHS DETAILED ASSUME A 6" EMBEDMENT DEPTH. IF EMBEDMENT DEPTH IS ADJUSTED PER GROUT MANUFACTURER'S RECOMMENDATION, ADJUST THE DOWEL LENGTHS ACCORDINGLY AT NO COST TO THE COUNTY.
 4. CONCRETE SURFACE TO BE CLEAN AND FREE OF LAITANCE BEFORE PLACING EPOXY BONDING COMPOUND AND SUBSEQUENT CONCRETE. EPOXY BONDING COMPOUND TO BE TYPE V, GRADE 1, CLASS B OR C ACCORDING TO ASTM C881. INCLUDE COST IN THE PRICE BID FOR THE ITEM "CONCRETE BRIDGE SEATS, HES".

LEGEND:
N.F. - NEAR FACE
R.F. - REAR FACE
E.F. - EACH FACE

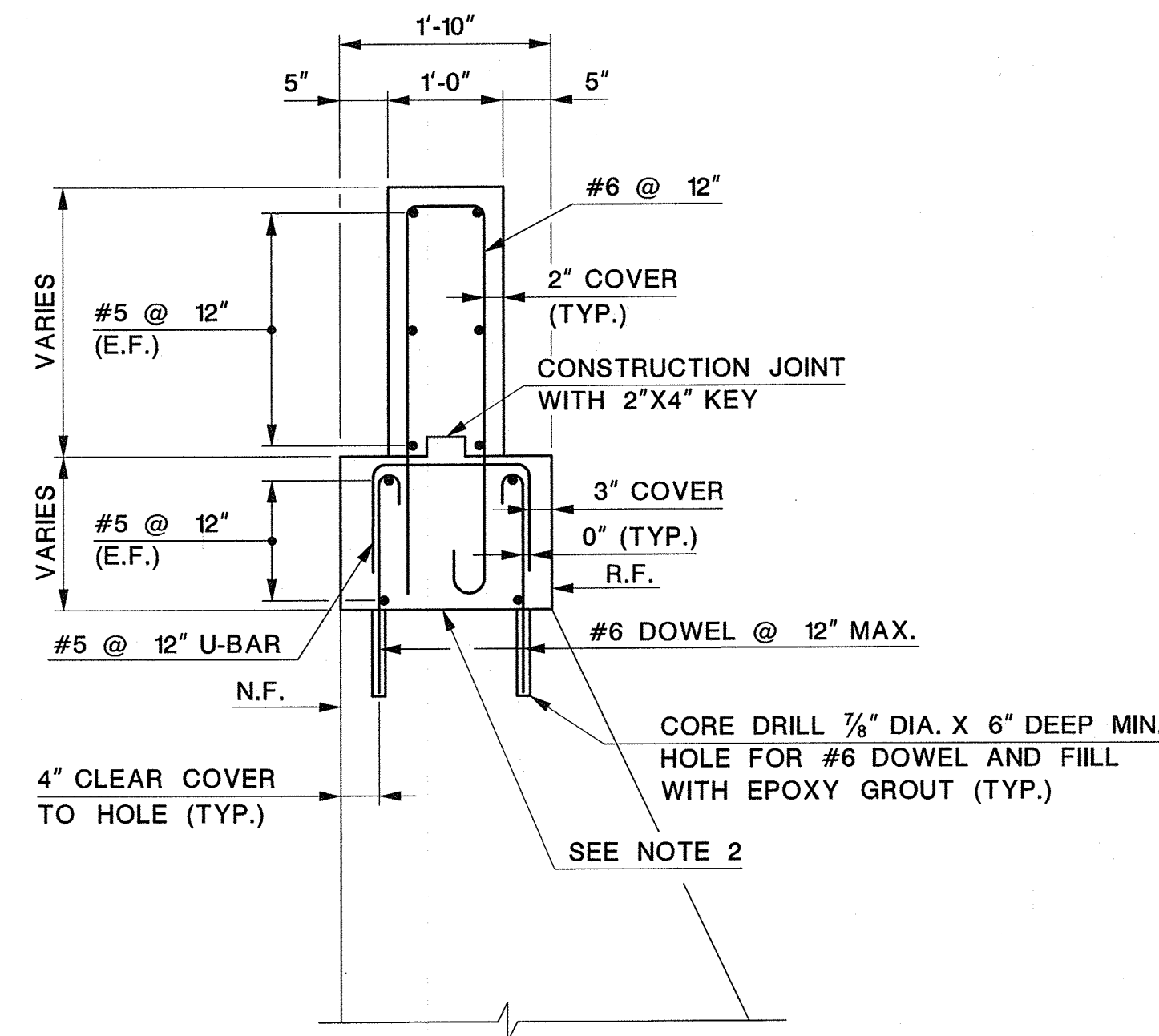
UNION COUNTY ENGINEERING	
REHABILITATION OF SPRINGFIELD AVENUE BRIDGE (Be19) OVER STREAM 3-55 TOWNSHIP OF BERKELEY HEIGHTS	
ABUTMENT SECTIONS 1	
MANUEL J. VERA CARABALLO, P.E. NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05008600 <i>Manuel Vera</i> DATE 11/15/16	
Dewberry Engineers Inc. Certificate of Authorization No. 24GA28047600 Bloomfield, N.J.	SCALE: AS SHOWN DATE: NOVEMBER 2016 SHEET NO. 26 OF 40

DATE	REVISION DESCRIPTION

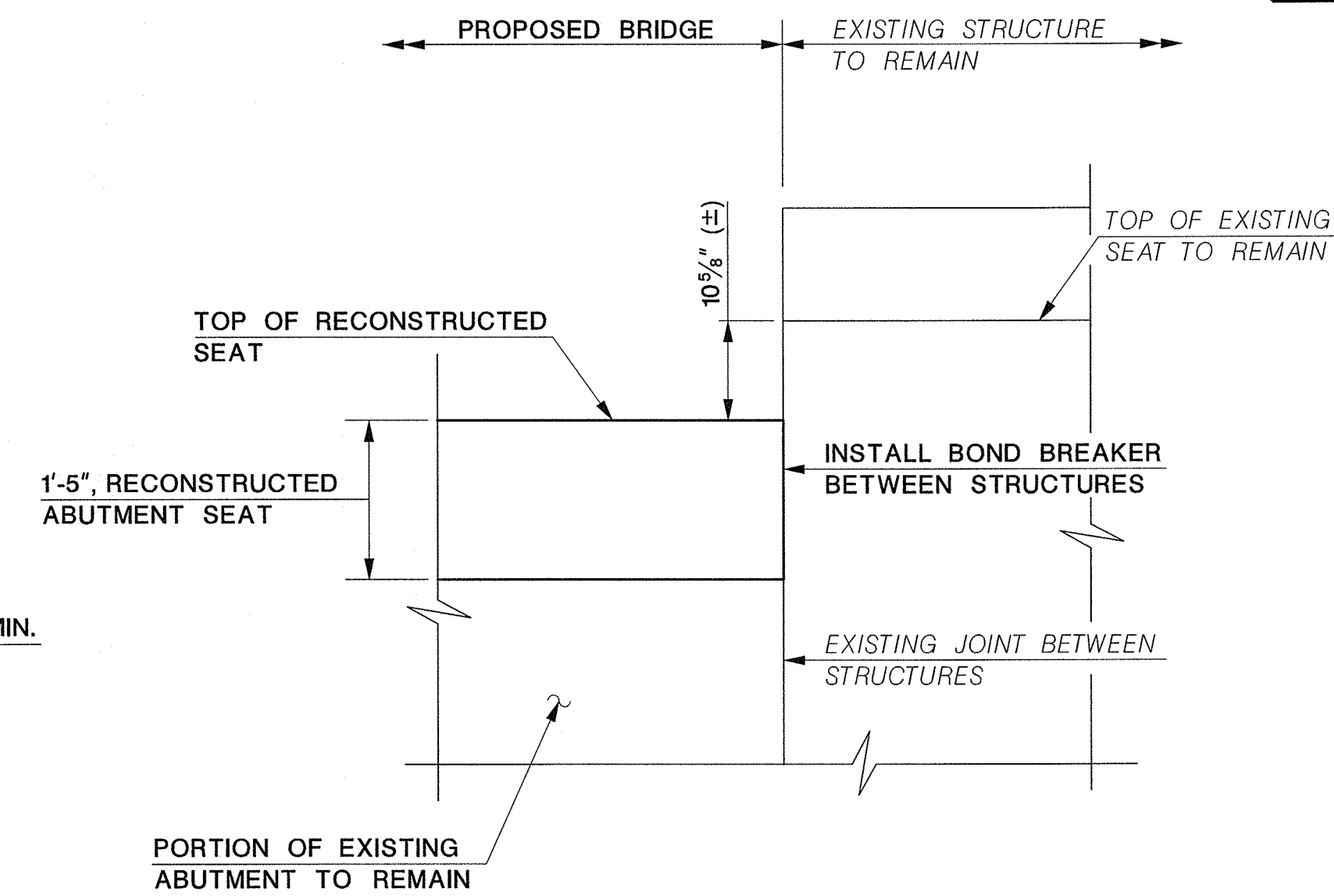




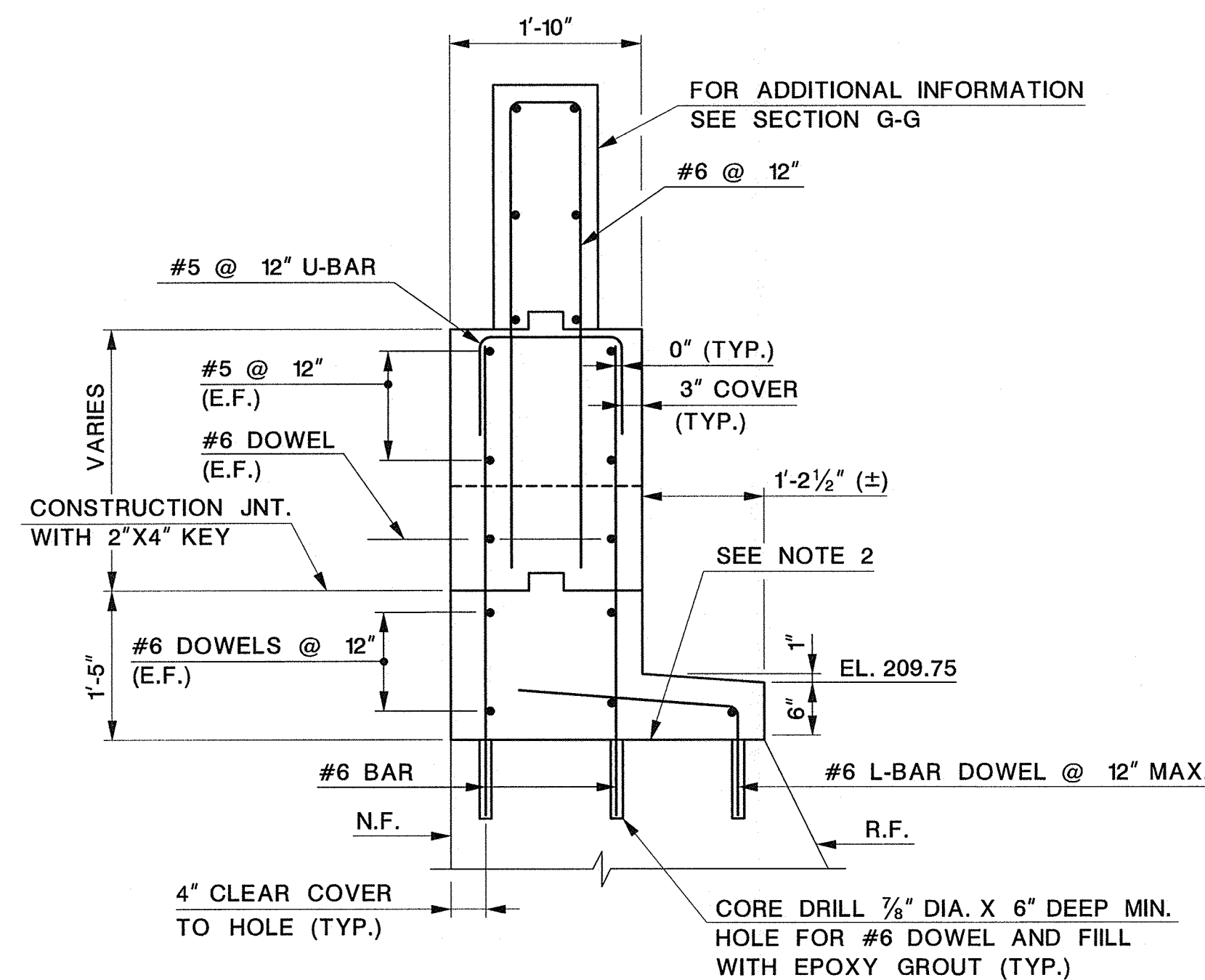
SECTION F-F
SCALE: 3/4" = 1'-0"



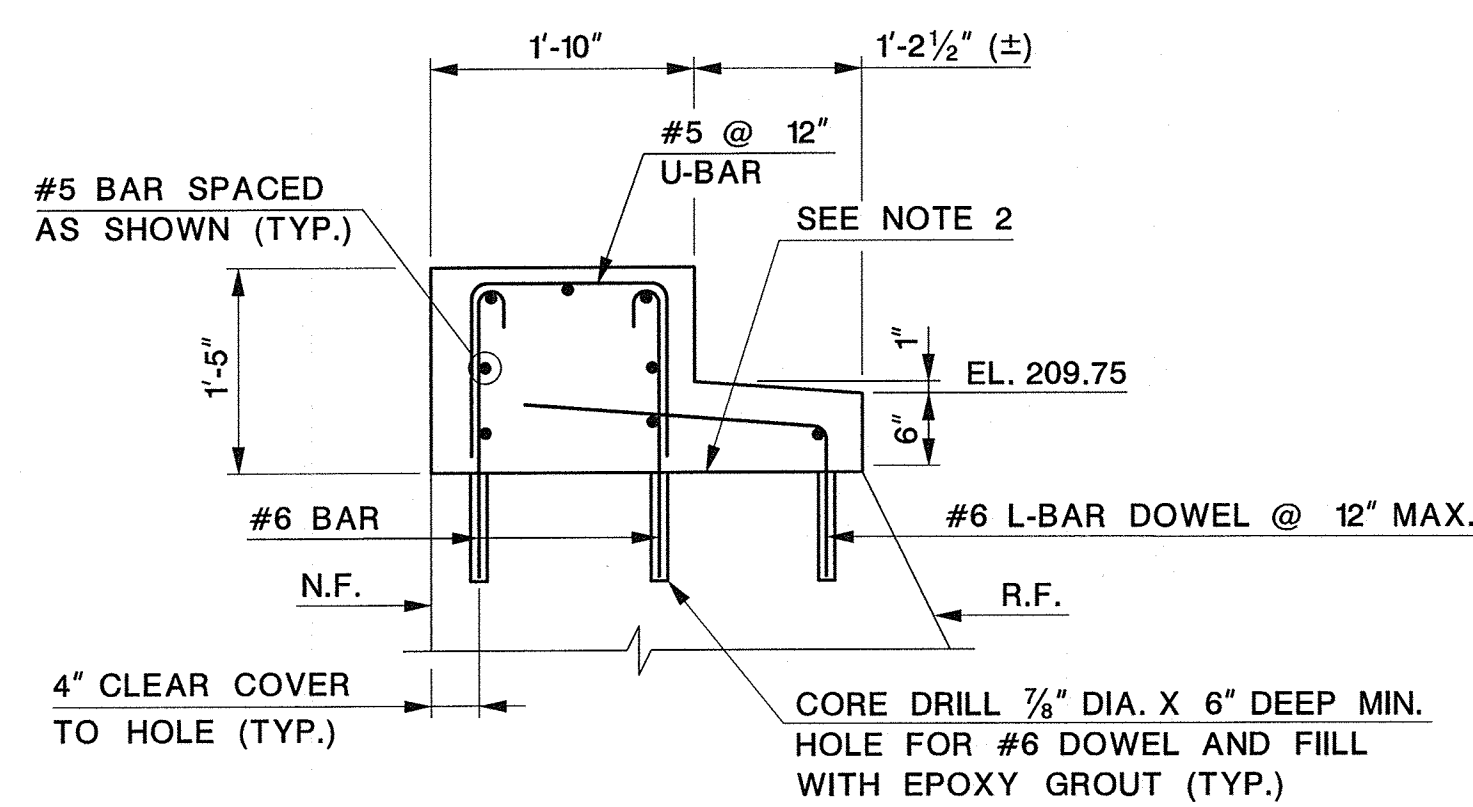
SECTION G-G
SCALE: 3/4" = 1'-0"



INTERFACE WITH ADJACENT STRUCTURE
SCALE: 3/4" = 1'-0"



SECTION H-H
SCALE: 3/4" = 1'-0"



SECTION J-J
(SECTION J'-J' SIMILAR)
SCALE: 3/4" = 1'-0"

LEGEND:
N.F. - NEAR FACE
R.F. - REAR FACE
E.F. - EACH FACE

- NOTES:
1. ALL REINFORCEMENT TO BE EPOXY COATED.
 2. CONCRETE SURFACE TO BE CLEAN AND FREE OF LAITANCE BEFORE PLACING EPOXY BONDING COMPOUND AND SUBSEQUENT CONCRETE. EPOXY BONDING COMPOUND TO BE TYPE V, GRADE 1, CLASS B OR C ACCORDING TO ASTM C881. INCLUDE COST IN THE PRICE BID FOR THE RESPECTIVE CONCRETE ITEM.
 3. BOND BREAKER TO BE APPROVED BY THE ENGINEER.
 4. BOND BREAKER BETWEEN THE PROPOSED AND EXISTING STRUCTURE TO REMAIN WILL NOT BE MEASURED FOR PAYMENT. INCLUDE THE COST IN THE PRICE BID FOR THE ITEM "CONCRETE BRIDGE SEAT, HES".
 5. DOWEL LENGTHS DETAILED ASSUME A 6" EMBEDMENT DEPTH. IF EMBEDMENT DEPTH IS ADJUSTED PER GROUT MANUFACTURER'S RECOMMENDATION, ADJUST THE DOWEL LENGTHS ACCORDINGLY AT NO COST TO THE COUNTY.

- REFERENCES:
1. FOR ARCHITECTURAL DETAILS, SEE SHEET NO. 39.

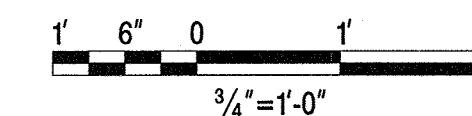
UNION COUNTY ENGINEERING
REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

ABUTMENT SECTIONS 2

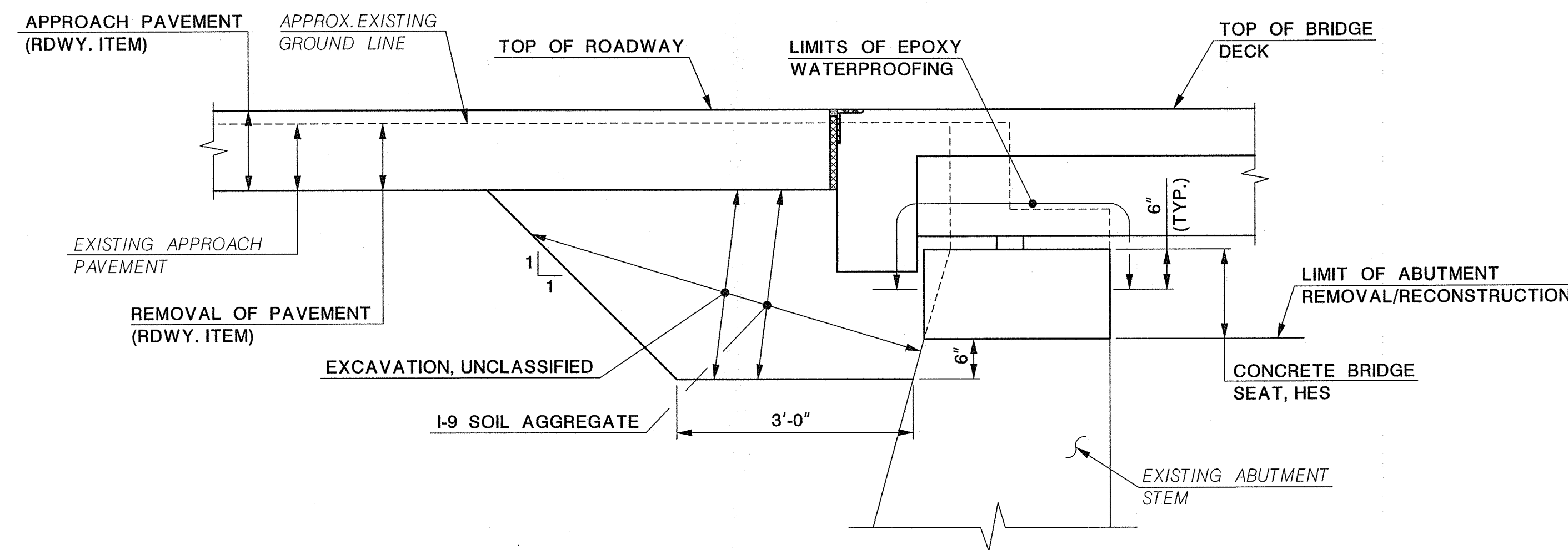
MANUEL J. VERA CARABALLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600

DATE 11/15/16

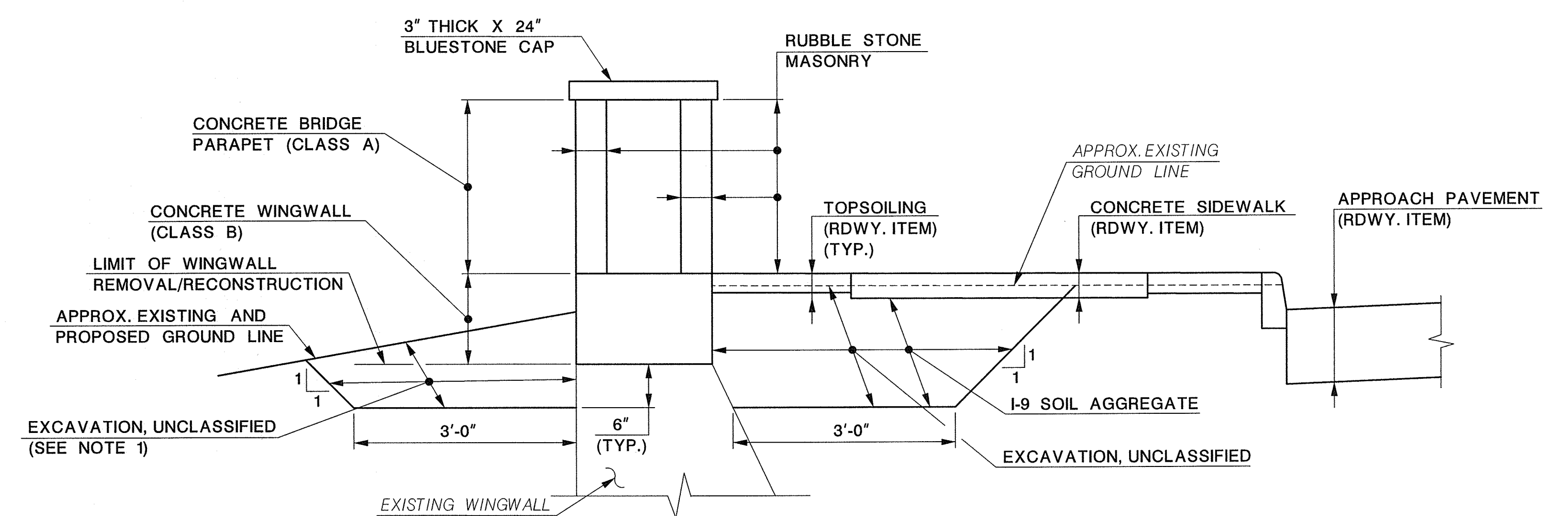
Dewberry Engineers Inc. SCALE: AS SHOWN DATE: NOVEMBER 2016
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J. SHEET NO. 27 OF 40



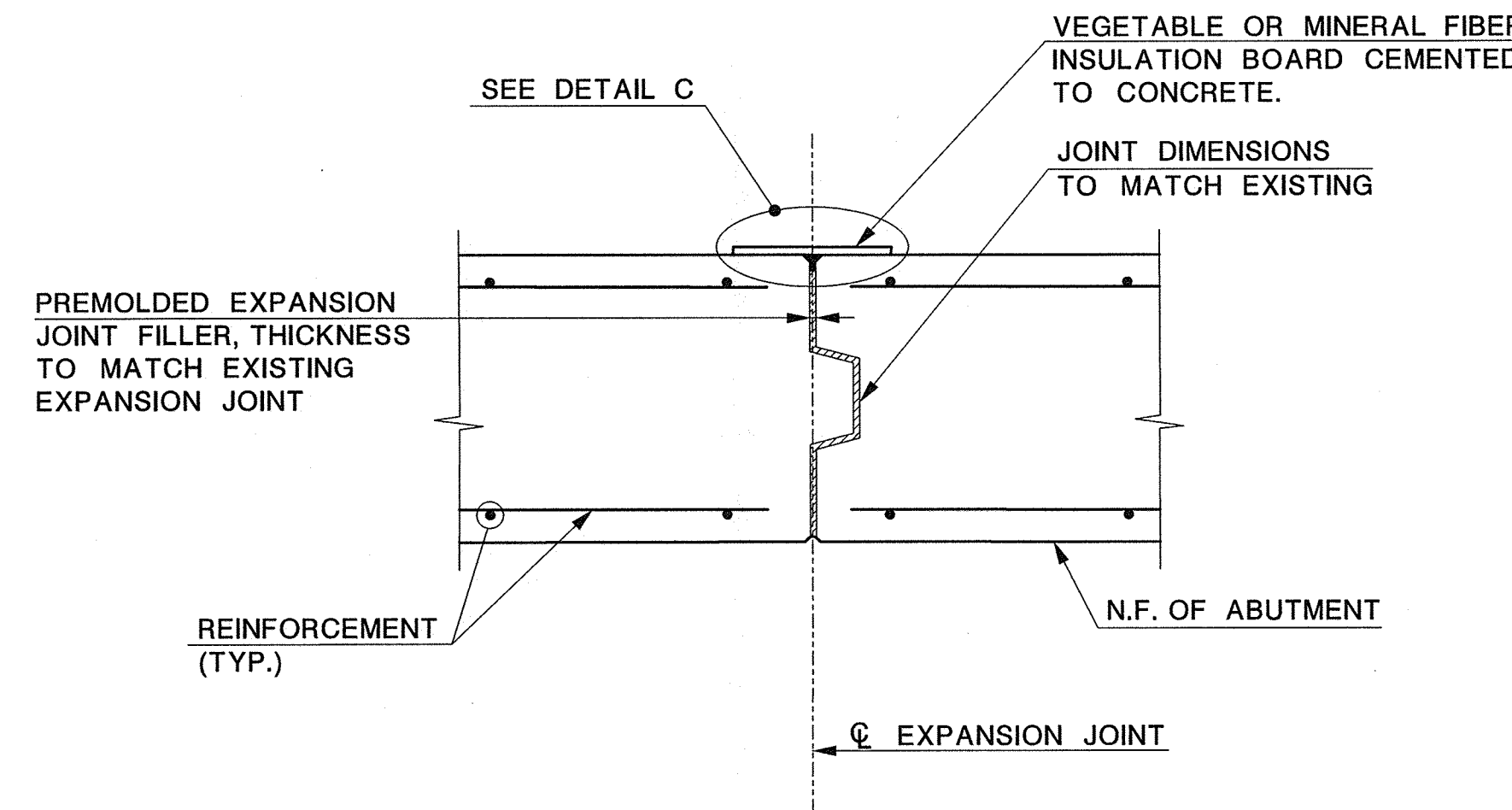
REVISION	
DATE	DESCRIPTION



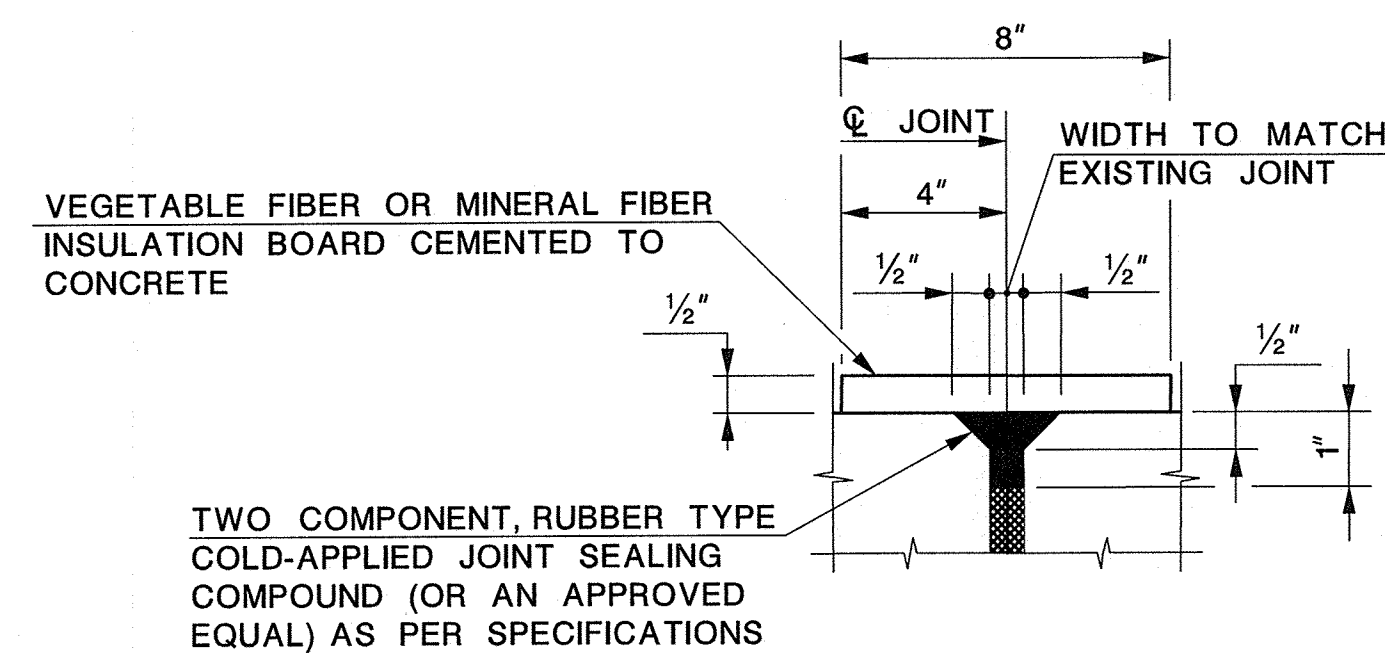
ABUTMENT PAY LIMITS
NOT TO SCALE



WINGWALL PAY LIMITS
(NORTH WINGWALLS SHOWN, SOUTH WINGWALLS SIMILAR)
NOT TO SCALE



EXPANSION JOINT
NOT TO SCALE



DETAIL C
NOT TO SCALE

- NOTES:
1. BACKFILL WITH EXCAVATED MATERIAL WHEN FINAL GRADE IS UNPAVED AND INCLUDE COST IN THE ITEM "EXCAVATION, UNCLASSIFIED". OTHERWISE BACKFILL WITH I-14 SOIL AGGREGATE (RDWY. ITEM) TO BOTTOM OF PAVEMENT BOX.



UNION COUNTY ENGINEERING											
REHABILITATION OF SPRINGFIELD AVENUE BRIDGE (Be19) OVER STREAM 3-55 TOWNSHIP OF BERKELEY HEIGHTS											
SUBSTRUCTURE PAY LIMITS											
MANUEL J. VERA CARABALLO, P.E. NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05008600 <i>Manuel J. Vera</i> DATE 11/15/16											
<table border="1"> <thead> <tr> <th>DATE</th> <th>REVISION DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	DATE	REVISION DESCRIPTION					<table border="1"> <tr> <td>SCALE: AS SHOWN</td> <td>DATE: NOVEMBER 2016</td> </tr> <tr> <td colspan="2">SHEET NO. 28 OF 40</td> </tr> </table>	SCALE: AS SHOWN	DATE: NOVEMBER 2016	SHEET NO. 28 OF 40	
DATE	REVISION DESCRIPTION										
SCALE: AS SHOWN	DATE: NOVEMBER 2016										
SHEET NO. 28 OF 40											

SUPERSTRUCTURE NOTES:

- PRESTRESSING STEEL:**
THE PRETENSIONING STEEL SHALL BE 0.6" DIAMETER, SEVEN WIRE, GRADE 270 K, LOW RELAXATION, UNCOATED STEEL STRANDS CONFORMING TO AASHTO M203 (ASTM A416) WITH A MINIMUM ULTIMATE STRENGTH OF 58.1K PER STRAND. INITIAL TENSION ON EACH STRAND TO BE 43.6 K.

ANY CHANGES IN THE PRESTRESSING SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER AND MUST BE ACCOMPANIED BY COMPLETE CALCULATIONS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY.
- CONCRETE:**
DESIGN COMPRESSIVE STRENGTH, $f'_c = 5,000$ PSI (CLASS P CONCRETE), COMPRESSIVE STRENGTH AT TRANSFER, $f'_{ci} = 4,000$ PSI.

PERFORM GROUTING BETWEEN PRECAST SECTIONS IN ACCORDANCE WITH THE SPECIFICATIONS.

CHAMFER ALL EXPOSED CORNERS $\frac{3}{4}"$ OR ROUNDED TO $\frac{3}{4}"$ RADIUS. ROUGHEN THE TOP OF THE BEAMS TO A FULL AMPLITUDE OF APPROXIMATELY $\frac{1}{4}"$ WITH A STIFF WIRE BRUSH PERPENDICULAR TO THE LENGTH OF BEAMS. AT THE APPROXIMATE TIME OF INITIAL SET, REMOVE ALL LAITANCE WITH A STIFF WIRE BRUSH.
- MILD STEEL REINFORCEMENT:**
REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60. INCLUDE THE COST OF FURNISHING AND PLACING REINFORCEMENT STEEL IN PRESTRESSED BEAMS IN THE PRICE BID FOR PRESTRESSED CONCRETE BEAMS.
- TRANSVERSE TIES:**
TRANSVERSE TIES SHALL BE $\frac{1}{4}"$ DIA. HIGH TENSILE STRENGTH STEEL ROD BARS CONFORMING TO AASHTO M275 (ASTM A722) OR 3-0.6" DIAMETER 270 KSI STRANDS. TENSION THE TRANSVERSE BARS TO 120 K. INSTALL AND TIGHTEN TIE RODS AFTER ERECTION OF PRESTRESSED SLAB BEAMS AND PRIOR TO POURING OF THE DECK SLAB. AFTER TENSIONING THE RODS, FILL KEYWAYS WITH NON-SHRINK, NON-METALLIC GROUT.

FURNISH PLATES FOR TRANSVERSE TIES ANCHORAGE CONFORMING TO ASTM A36. GALVANIZE THE PLATES IN CONFORMANCE TO ASTM A123.

FURNISH PLATES FOR UTILITY SUPPORTS CONFORMING TO ASTM A709, GRADE 36. BOLTS TO BE HIGH STRENGTH BOLTS PER ASTM A325. ALL STEEL TO BE HOT-DIPPED GALVANIZED AFTER FABRICATION.

REFERENCES:

- FOR WORKING POINT LAYOUT, SEE SHEET NO. 20.
- FOR PRESTRESSED CONCRETE BEAM DETAILS, TRANSVERSE TIES AND BEARING PAD DETAILS, SEE SHEET NOS. 30 THRU 32.
- FOR SECTION 1-1 AND INTERFACE DETAIL BETWEEN EXISTING AND PROPOSED SLAB BEAMS, SEE SHEET NO. 32.
- FOR TELEPHONE CONDUIT SUPPORT DETAILS, SEE SHEET NO. 33.
- FOR SUPERSTRUCTURE CROSS SECTION, SEE SHEET NO. 37.

UNION COUNTY ENGINEERING

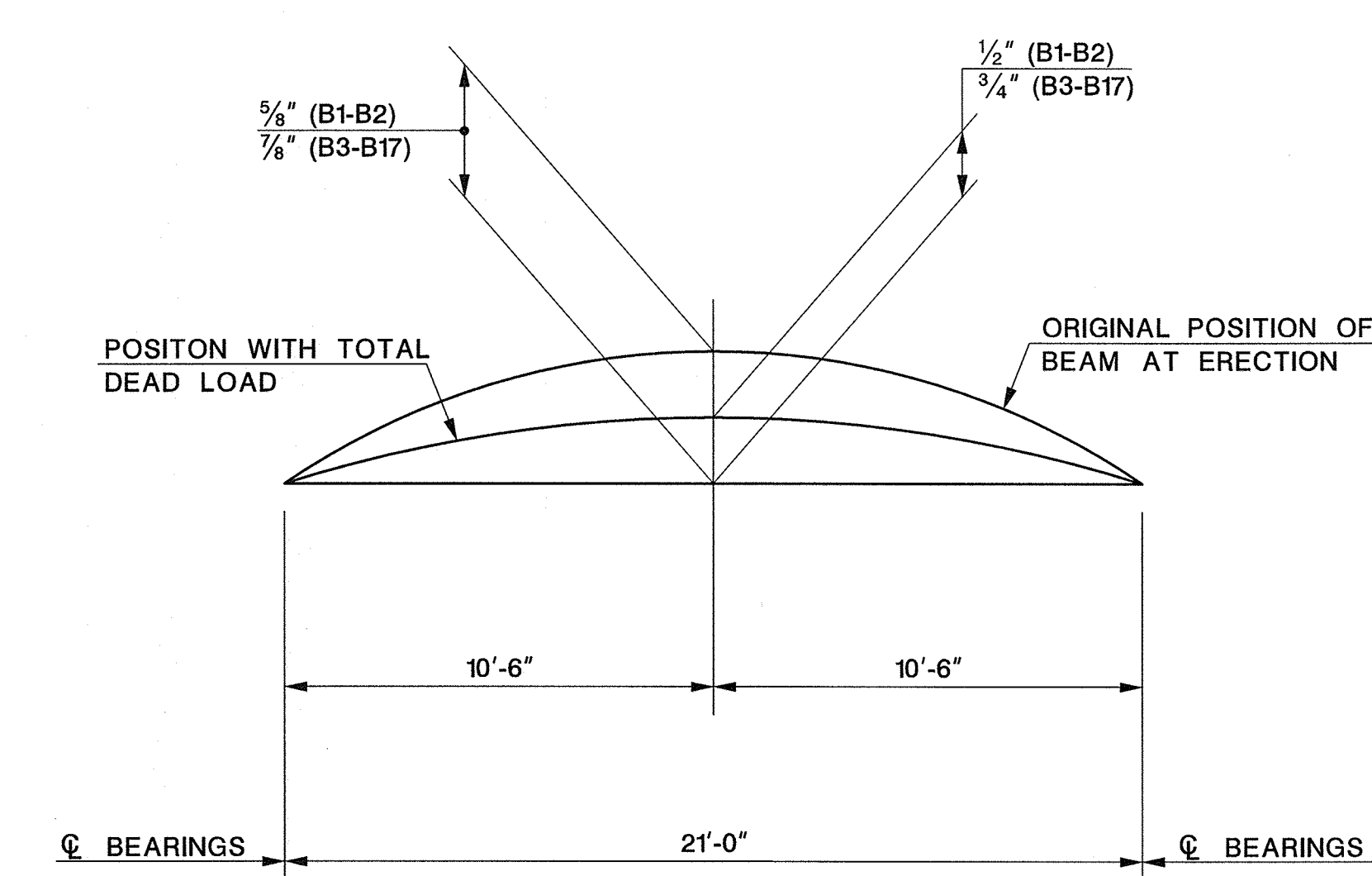
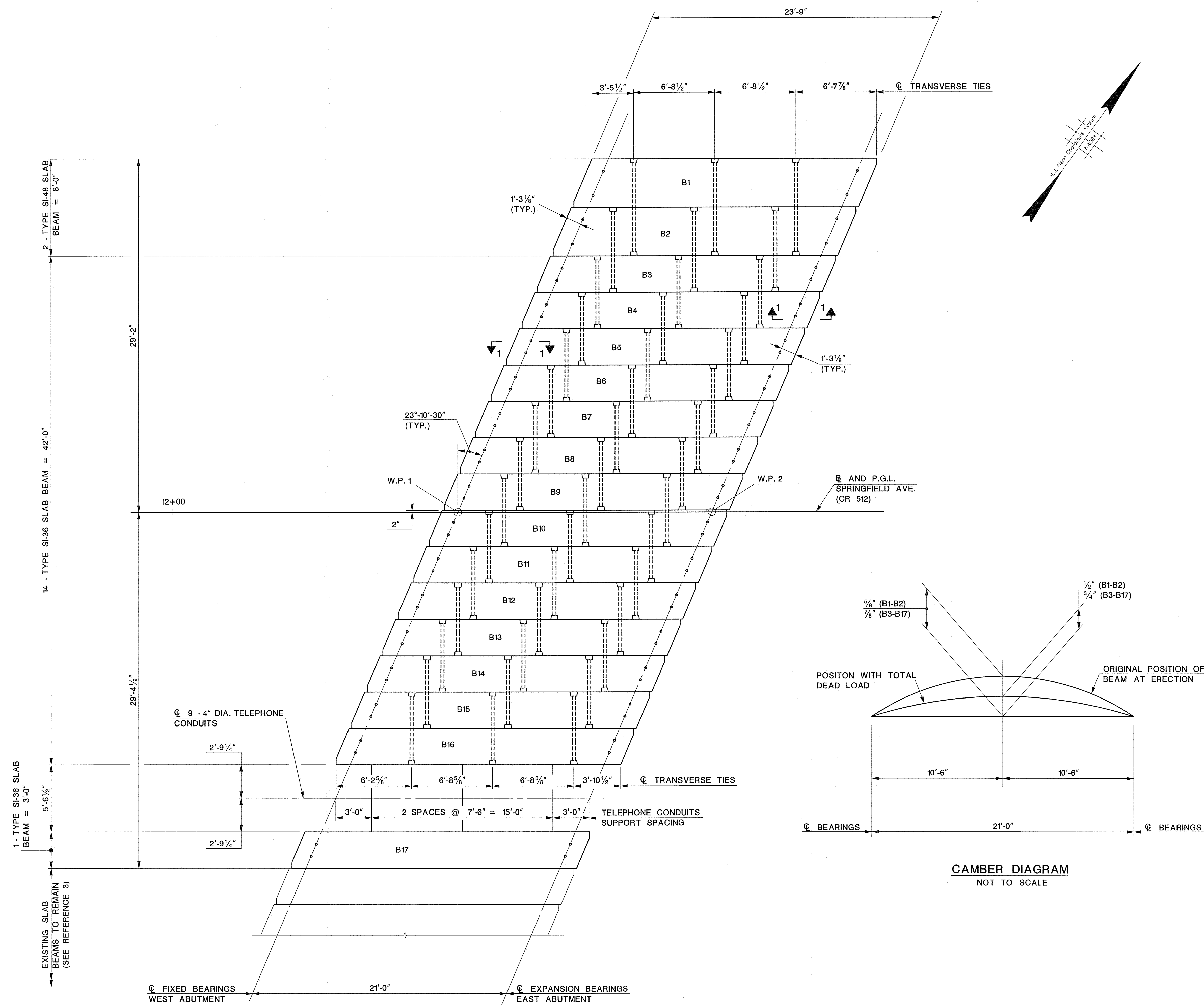
REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

FRAMING PLAN

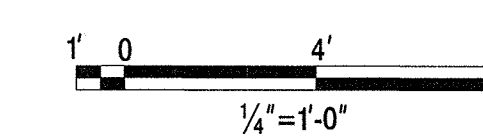
MANUEL J. VERA CARABALLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05008600

DATE 11/15/16

Dewberry Engineers Inc. SCALE: AS SHOWN DATE: NOVEMBER 2016
Certificate of Authorization No. 24GA28047600 AS SHOWN SHEET NO. 29 OF 40
Bloomfield, N.J.



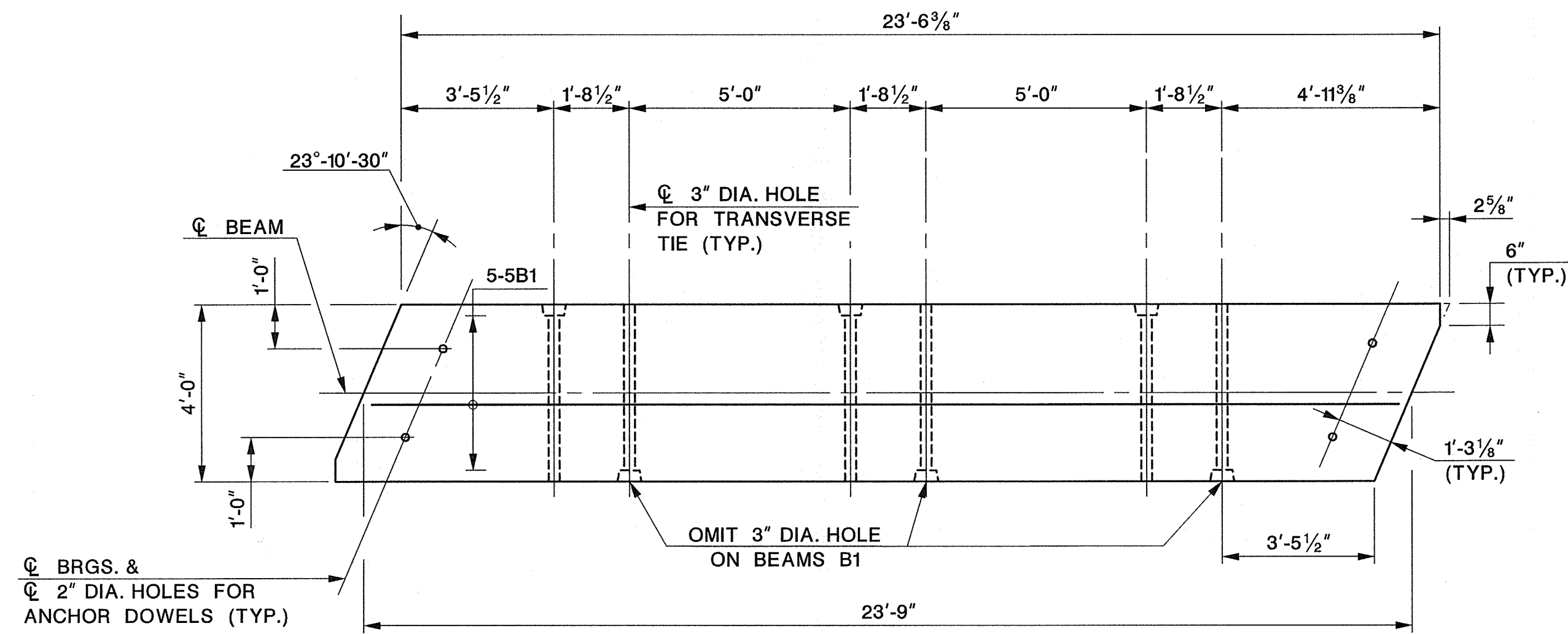
CAMBER DIAGRAM
NOT TO SCALE



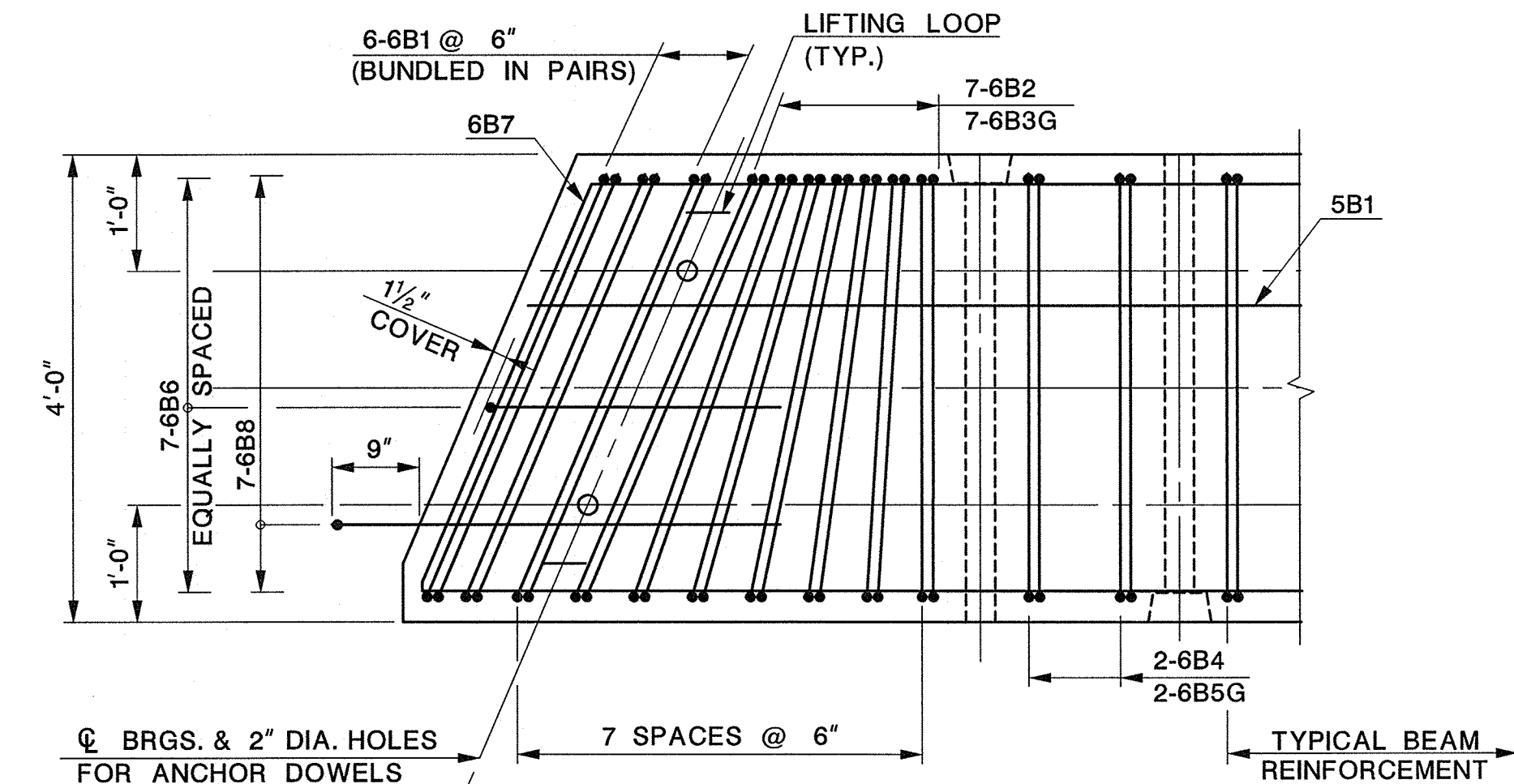
REVISION	
DATE	DESCRIPTION



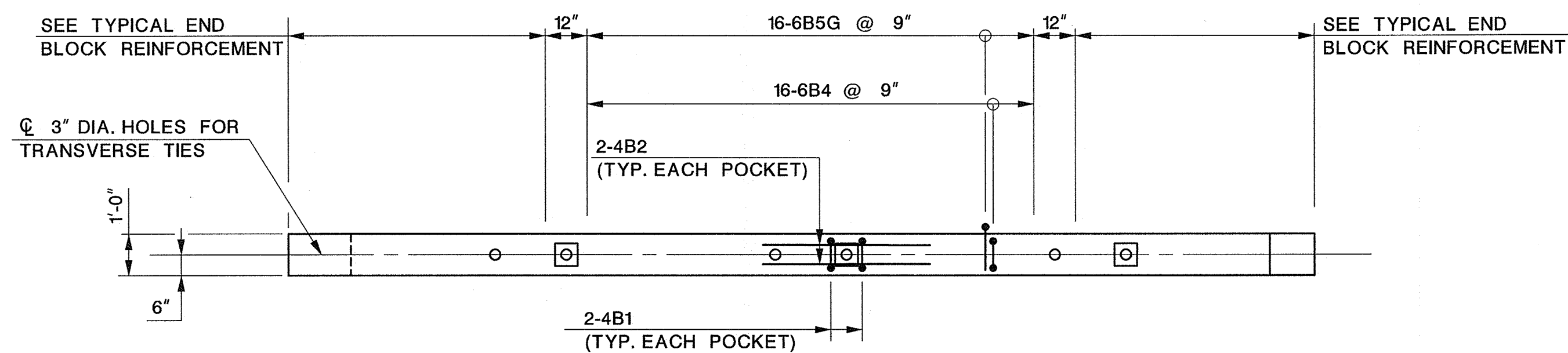
FRAMING PLAN
SCALE: $\frac{1}{4}" = 1'-0"$



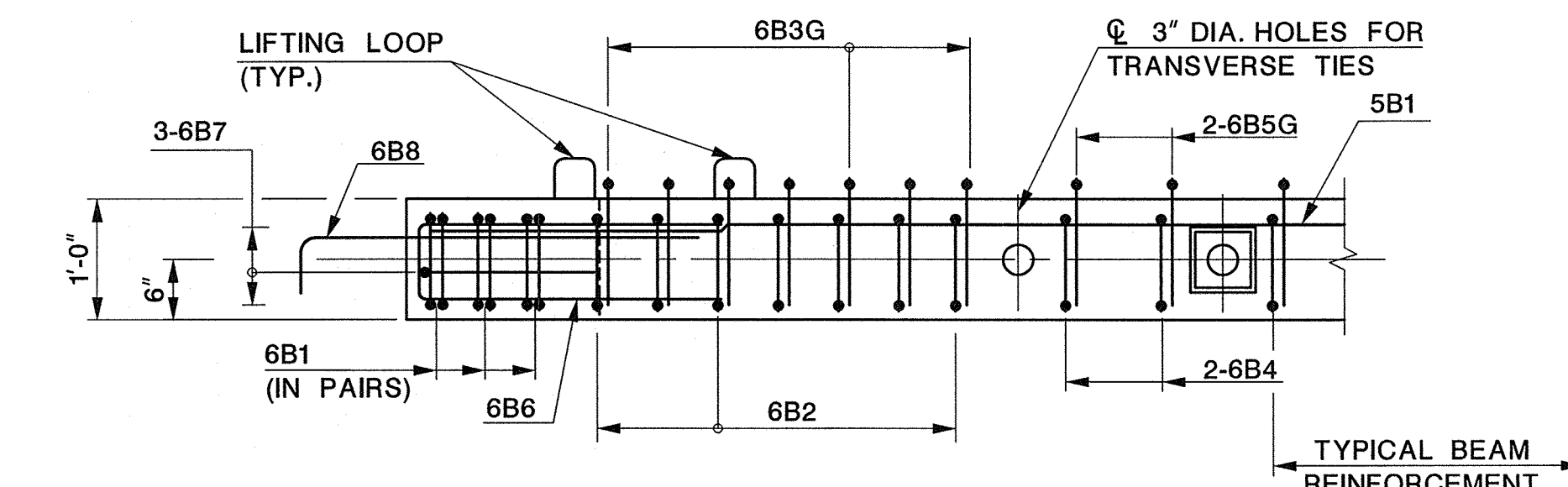
PLAN



PLAN



ELEVATION



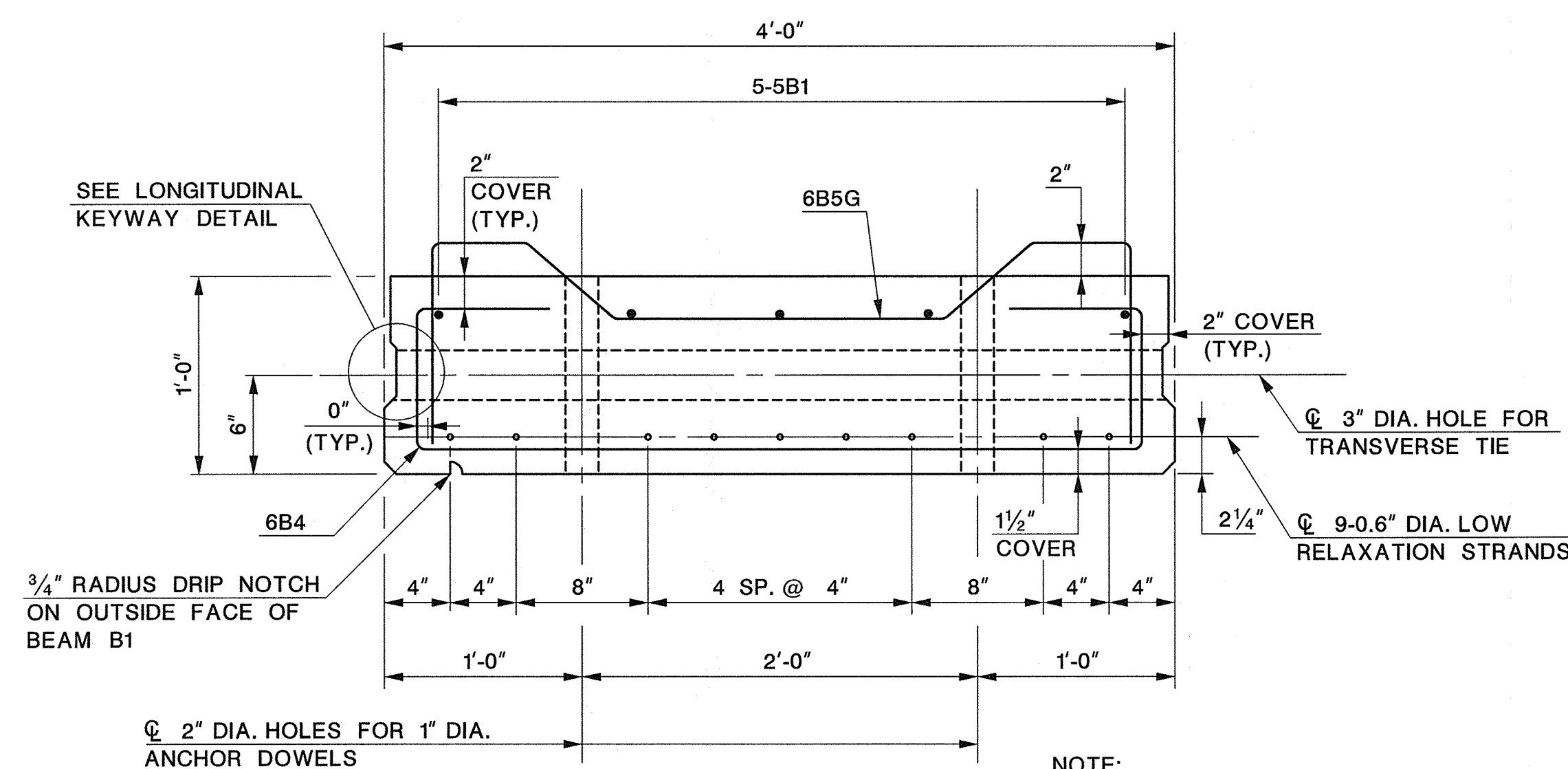
ELEVATION

END BLOCK REINFORCEMENT

SCALE: 3/4\"/>

TYPE SI-48 SLAB BEAM (B1-B2)

SCALE: 3/8\"/>

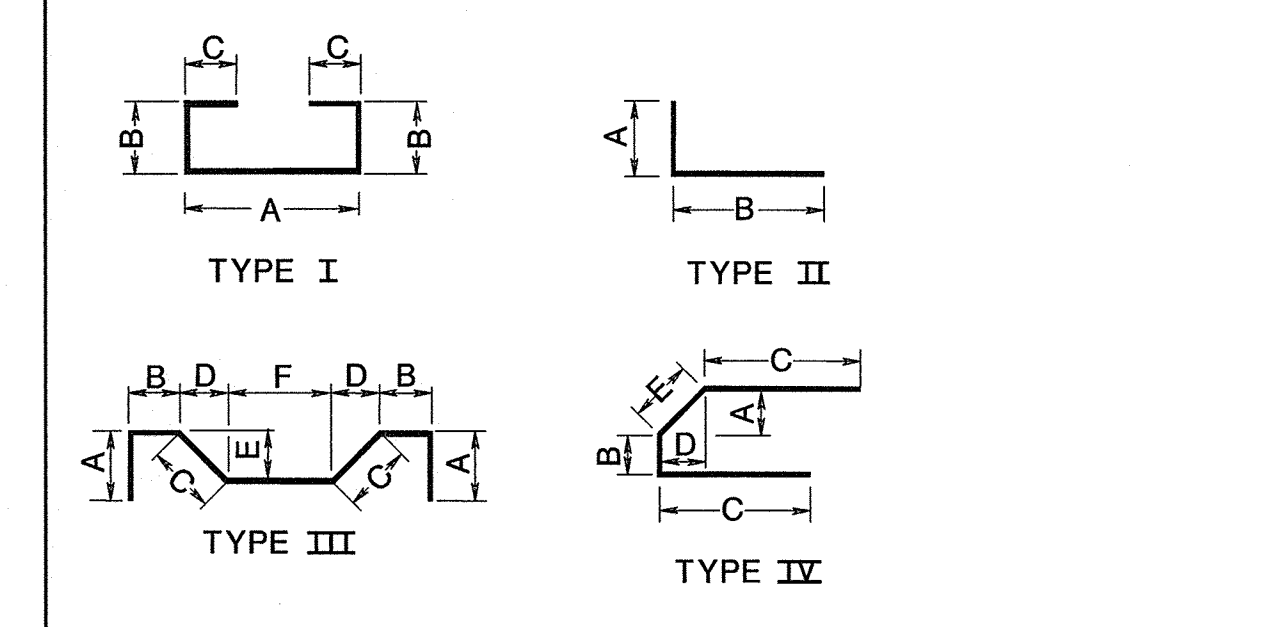


TYPE SI-48 SLAB BEAM SECTION

SCALE: 1/2\"/>

BAR LIST - MILD STEEL REINFORCEMENT

MARK	SIZE	LENGTH	TYPE	A	B	C	D	E	F
4B1	4	2'-2"	I	0'-8"	0'-9"	-			
4B2	4	4'-0"	STR						
5B1	5	23'-3"	STR						
6B1	6	7'-5"	I	4'-0"	0'-8 1/2"	1'-0"			
6B2	6	7'-5"	I	4'-0"	0'-8 1/2"	1'-0"			
		TO	TO	TO	TO	TO			
		7'-1"	I	3'-8"	0'-8 1/2"	1'-0"			
6B3G	6	6'-3"	III	1'-0"	0'-6"	0'-7"	0'-5 3/8"	0'-5"	2'-1"
		TO	TO	TO	TO	TO	TO	TO	TO
		5'-10"	III	1'-0"	0'-6"	0'-7"	0'-5 3/8"	0'-5"	1'-8"
6B4	6	7'-1"	I	3'-8"	0'-8 1/2"	1'-0"			
6B5G	6	5'-10"	III	1'-0"	0'-6"	0'-7"	0'-5 3/8"	0'-5"	1'-8"
6B6	6	5'-8 1/2"	I	0'-8 1/2"	0'-6"	2'-6"			
6B7	6	8'-11"	IV	3'-4"	0'-3 1/2"	2'-6"	1'-5"	3'-7 1/2"	
6B8	6	4'-0"	II	0'-9"	3'-3"				



- NOTES:
- SPACE REINFORCEMENT TO CLEAR TRANSVERSE TIES AND RECESS POCKETS.
 - FABRICATION OF PRESTRESSED BEAMS SHALL BE IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS AND ALL APPLICABLE SUPPLEMENTARY SPECIFICATIONS.
 - AFTER TRANSFER OF PRESTRESS, PROVIDE A 1" DEEP RECESS POCKET AT THE ENDS OF THE BEAMS AND CUT STRANDS BACK 1/2". FILL RECESS POCKET WITH POLYMER CEMENT GROUT.
 - PRESTRESSED BEAMS TO BE ERECTED BY MEANS OF LIFTING LOOPS/HOOKS LOCATED AT THE ENDS. FABRICATOR TO DESIGN LIFTING LOOPS/HOOKS.

- MILD STEEL REINFORCEMENT NOTES:
- BAR MARKS ENDING WITH THE LETTER "G" DESIGNATE GALVANIZED REINFORCEMENT STEEL. ALL OTHER MILD STEEL REINFORCEMENT IN BEAMS TO BE EPOXY COATED.
 - INCLUDE THE COST OF FURNISHING AND PLACING THE MILD STEEL IN THE PRICE BID FOR PRESTRESSED CONCRETE BEAMS.

- REFERENCES:
- FOR FRAMING PLAN AND CAMBER DIAGRAM, SEE SHEET NO. 29.
 - FOR RECESS POCKET DETAILS, TRANSVERSE TIE DETAILS, LONGITUDINAL KEYWAY DETAILS, WATERPROOFING LIMITS, DRIP NOTCH DETAIL, AND BEARING DETAILS, SEE SHEET NO. 32.

UNION COUNTY ENGINEERING

REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

**TYPE SI-48 PRESTRESSED
CONCRETE SLAB BEAM**

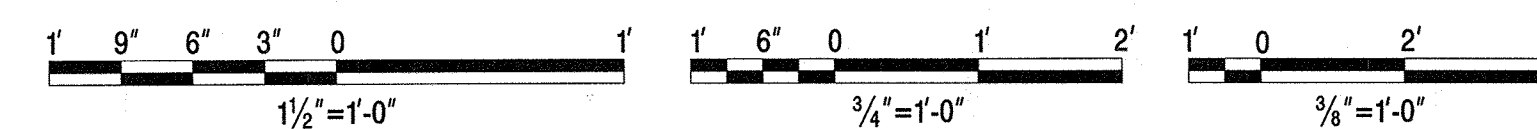
MANUEL J. VERA CARABALLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600

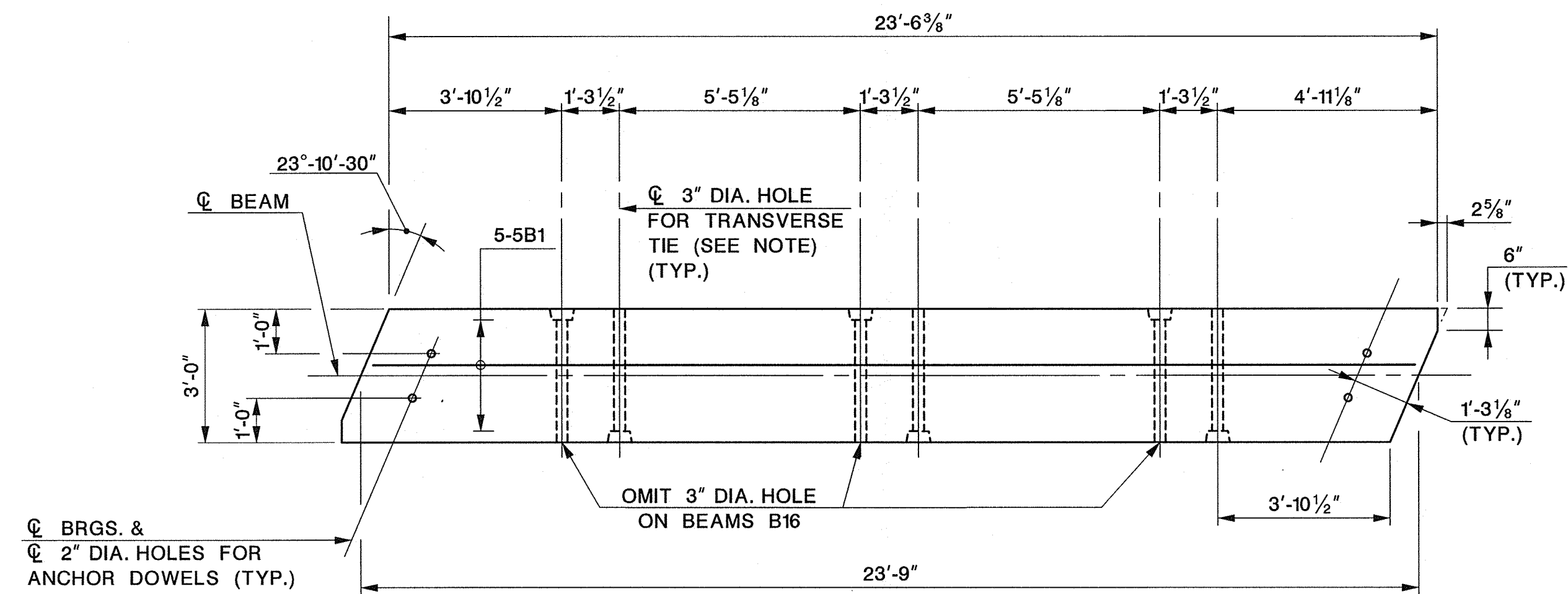
DATE: 11/15/16

Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J.

SCALE: AS SHOWN
DATE: NOVEMBER 2016
SHEET NO. 30 OF 40

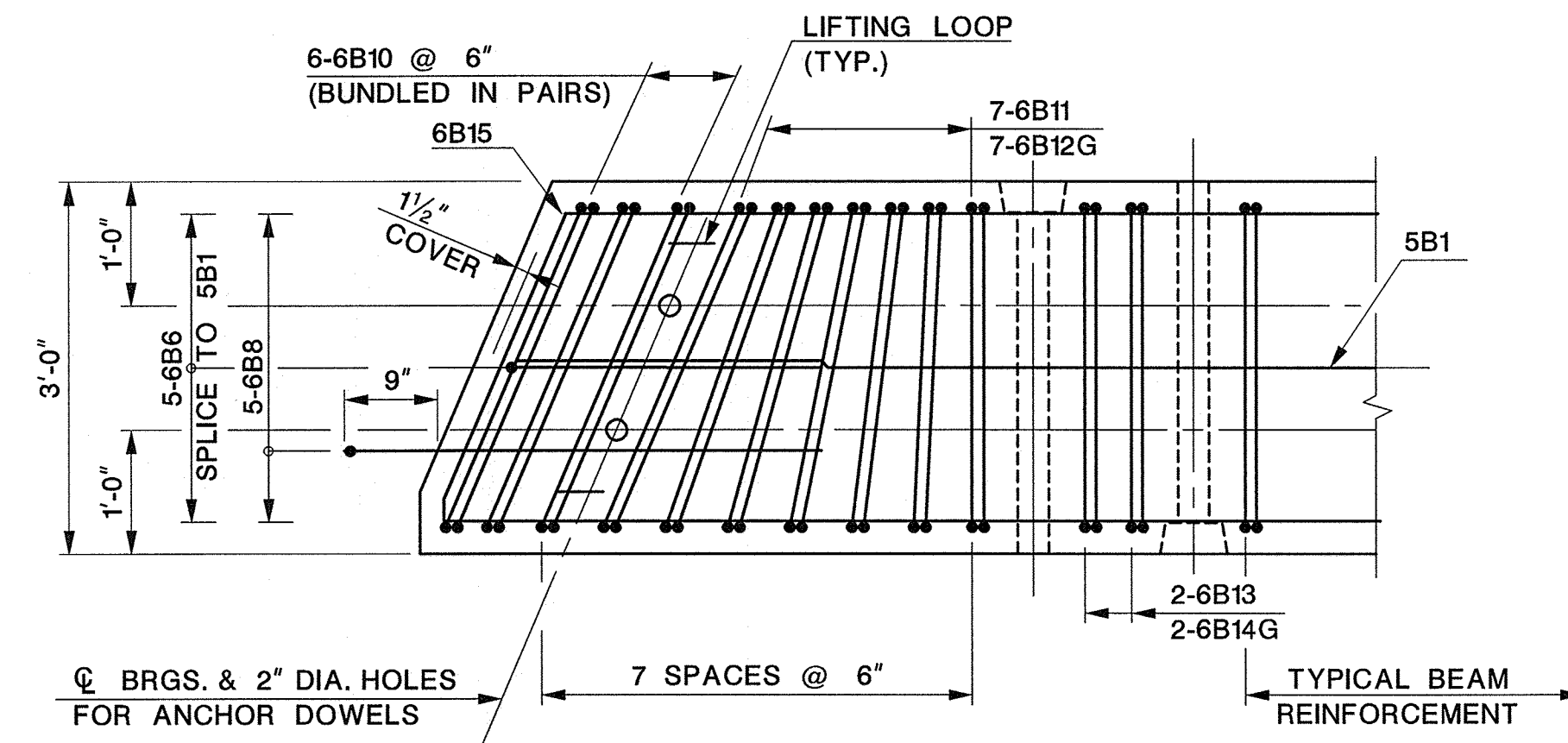
DATE	REVISION DESCRIPTION



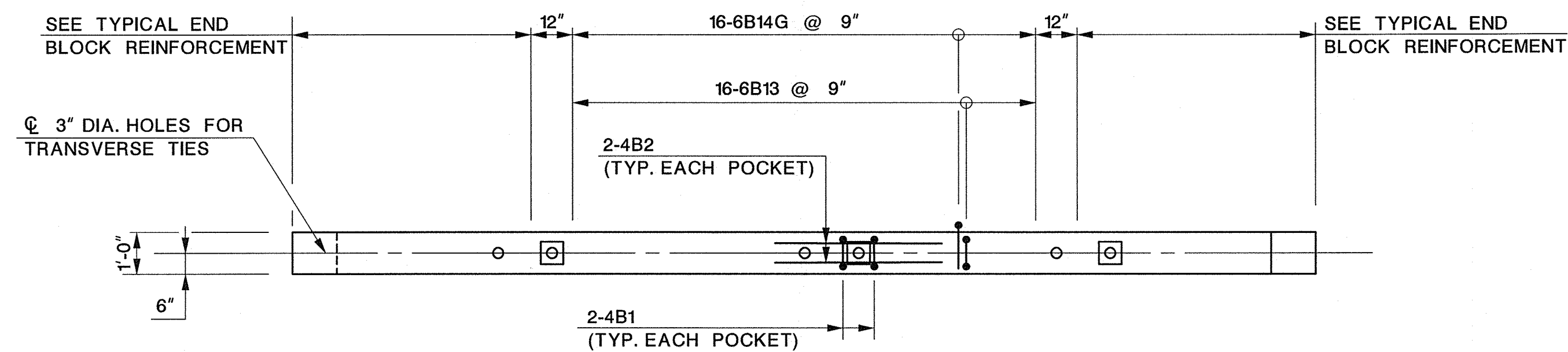


NOTE:
OMIT ALL TRANSVERSE TIES FOR BEAM B17.

PLAN



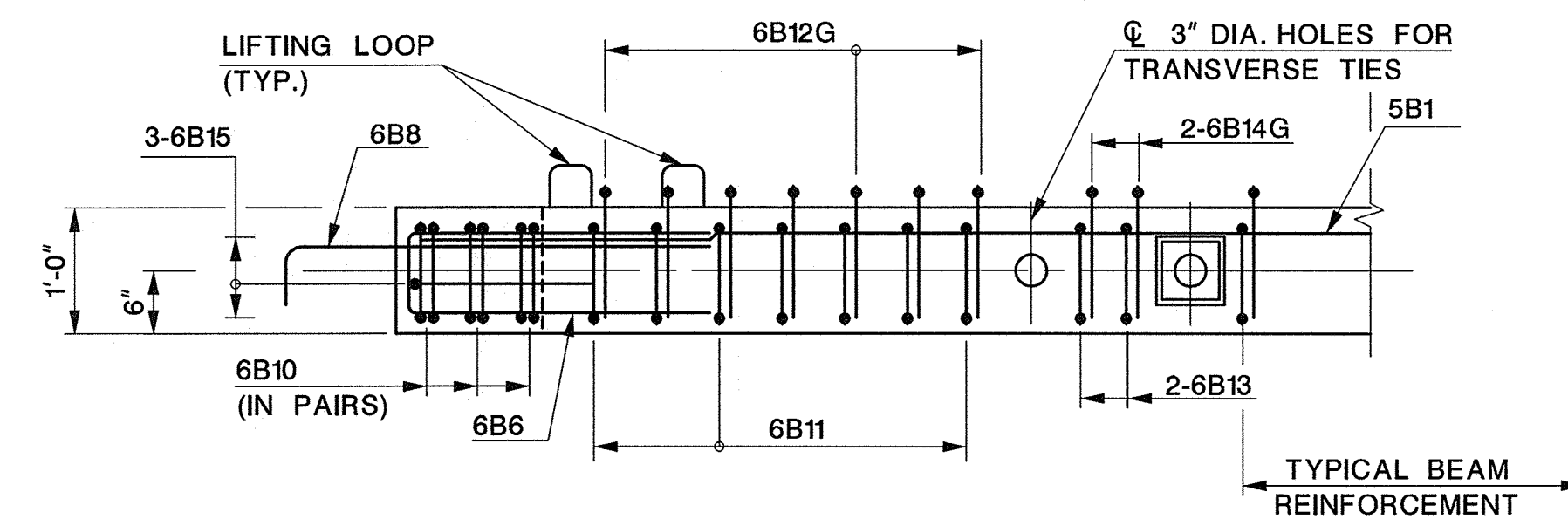
PLAN



ELEVATION

TYPE SI-36 SLAB BEAM (B3-B17)

SCALE: 3/8" = 1'-0"



ELEVATION

END BLOCK REINFORCEMENT

SCALE: 3/4" = 1'-0"

- NOTES:
1. SPACE REINFORCEMENT TO CLEAR TRANSVERSE TIES AND RECESS POCKETS.
 2. FABRICATION OF PRESTRESSED BEAMS SHALL BE IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS AND ALL APPLICABLE SUPPLEMENTARY SPECIFICATIONS.
 3. AFTER TRANSFER OF PRESTRESS, PROVIDE A 1" DEEP RECESS POCKET AT THE ENDS OF THE BEAMS AND CUT STRANDS BACK 1/2". FILL RECESS POCKET WITH POLYMER CEMENT GROUT.
 4. PRESTRESSED BEAMS TO BE ERECTED BY MEANS OF LIFTING LOOPS/HOOKS LOCATED AT THE ENDS. FABRICATOR TO DESIGN LIFTING LOOPS/HOOKS.

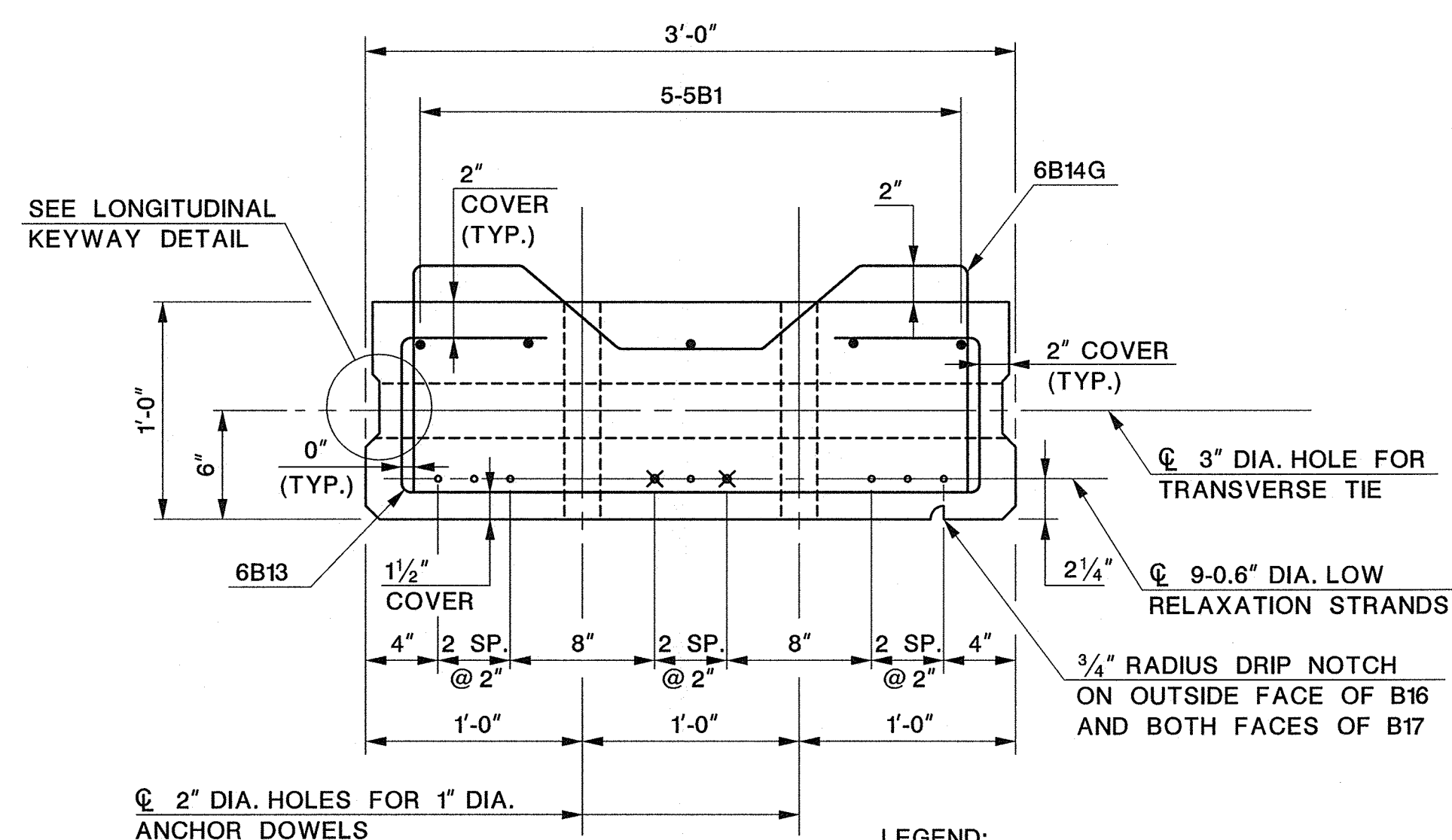
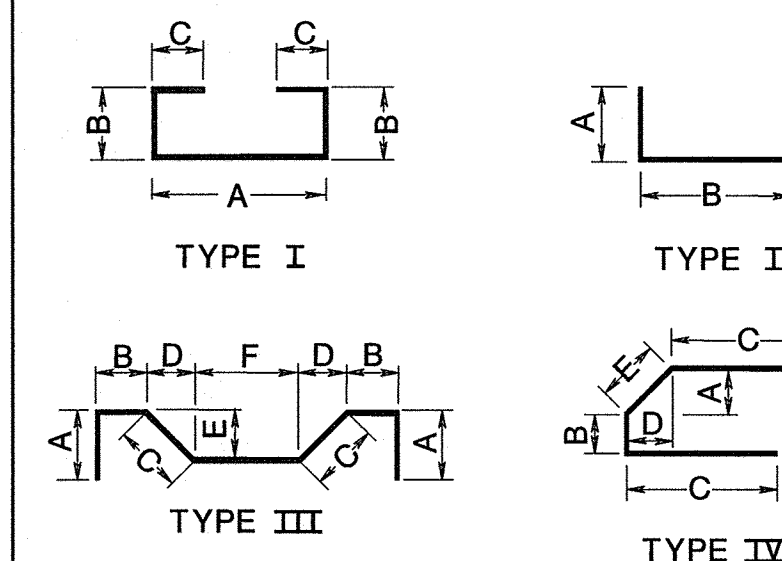
MILD STEEL REINFORCEMENT NOTES:

1. BAR MARKS ENDING WITH THE LETTER "G" DESIGNATE GALVANIZED REINFORCEMENT STEEL. ALL OTHER MILD STEEL REINFORCEMENT IN BEAMS TO BE EPOXY COATED.
2. INCLUDE THE COST OF FURNISHING AND PLACING THE MILD STEEL IN THE PRICE BID FOR PRESTRESSED CONCRETE BEAMS.

REFERENCES:

1. FOR FRAMING PLAN AND CAMBER DIAGRAM, SEE SHEET NO. 29.
2. FOR RECESS POCKET DETAILS, TRANSVERSE TIE DETAILS, LONGITUDINAL KEYWAY DETAILS, WATERPROOFING LIMITS, DRIP NOTCH DETAIL, AND BEARING DETAILS, SEE SHEET NO. 32.

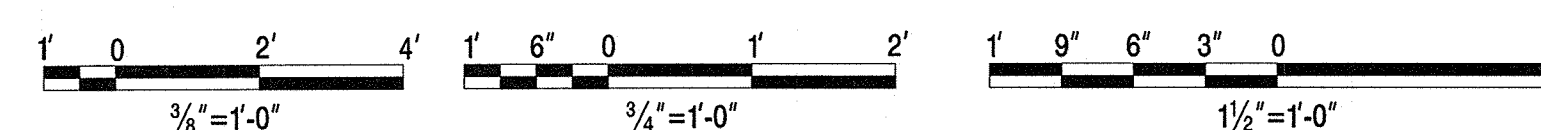
BAR LIST - MILD STEEL REINFORCEMENT									
MARK	SIZE	LENGTH	TYPE	A	B	C	D	E	F
4B1	4	2'-2"	I	0'-8"	0'-9"	-			
4B2	4	4'-0"	STR						
5B1	5	23'-3"	STR						
6B6	6	5'-8 1/2"	I	0'-8 1/2"	2'-6"	-			
6B8	6	4'-0"	II	0'-9"	3'-3"				
6B10	6	6'-4"	I	2'-11"	0'-8 1/2"	1'-0"			
6B11	6	6'-4"	I	2'-11"	0'-8 1/2"	1'-0"			
		TO	TO	TO	TO				
6B12G	6	5'-2"	III	1'-0"	0'-6"	0'-7"	0'-5 3/8"	0'-5"	1'-0"
		TO	TO	TO	TO	TO	TO	TO	TO
		4'-10"		1'-0"	0'-6"	0'-7"	0'-5 3/8"	0'-5"	0'-8"
6B13	6	6'-1"	I	2'-8"	0'-8 1/2"	1'-0"			
6B14G	6	4'-10"	III	1'-0"	0'-6"	0'-7"	0'-5 3/8"	0'-5"	0'-8"
6B15	6	7'-9 1/2"	IV	2'-4"	0'-3 1/2"	2'-6"	1'-0"	0'-5"	2'-6"



LEGEND:
 ○ - FULLY BONDED STRAND
 × - DEBONDED STRAND AT END OF BEAM FOR 4'-0" LENGTH

TYPE SI-36 SLAB BEAM SECTION

SCALE: 1/2" = 1'-0"



REVISION	
DATE	DESCRIPTION

UNION COUNTY ENGINEERING

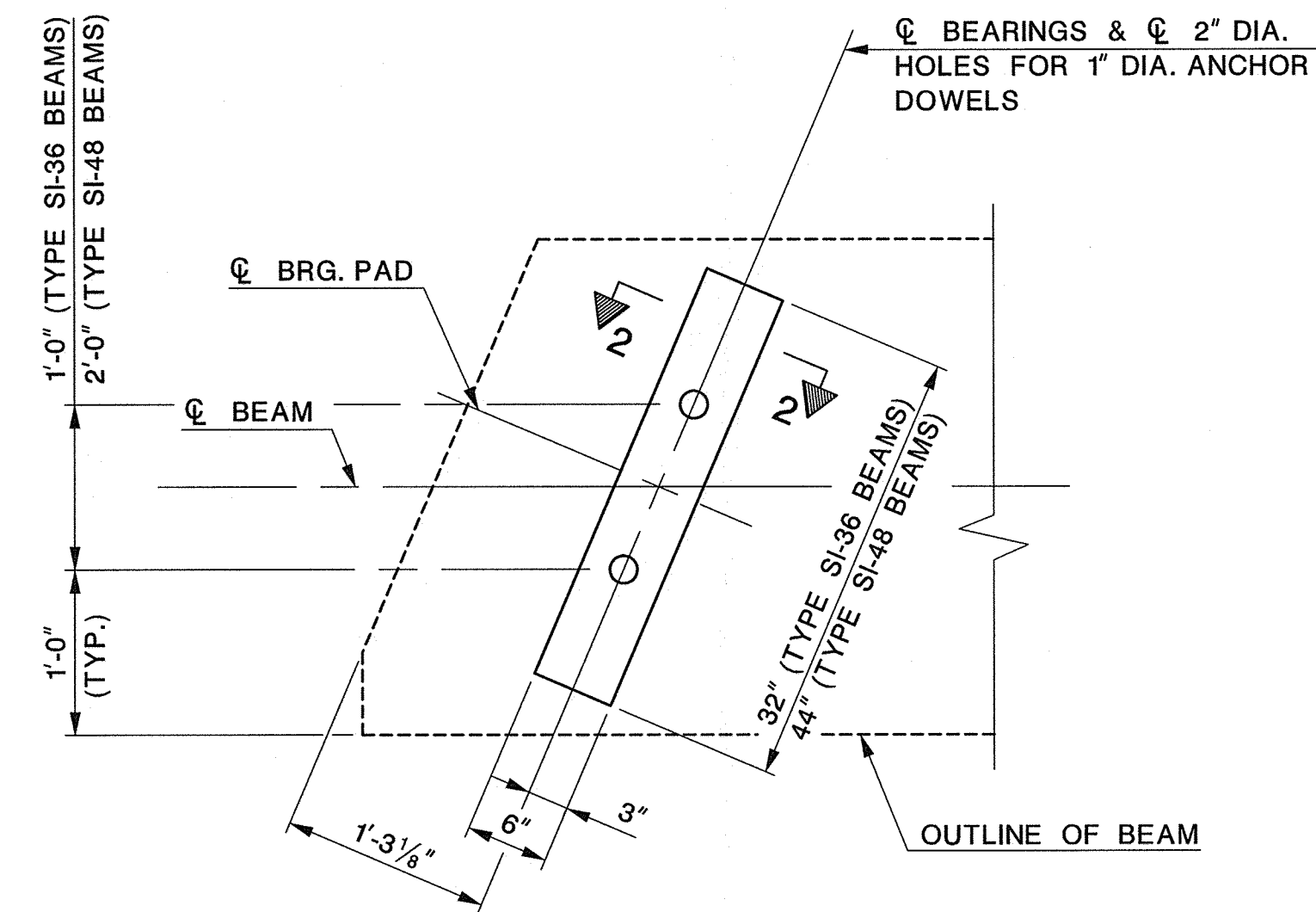
REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

**TYPE SI-36 PRESTRESSED
CONCRETE SLAB BEAM**

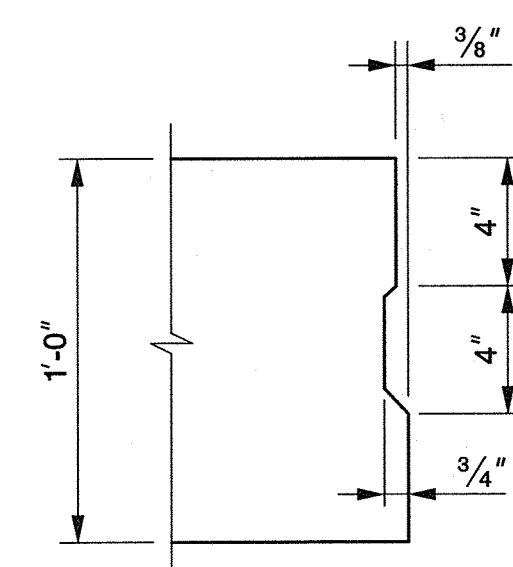
MANUEL J. VERA CARABALLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600

DATE: 11/15/16

Dewberry Engineers Inc. SCALE: DATE: NOVEMBER 2016
 Certificate of Authorization No. 24GA28047600 AS SHOWN
 Bloomfield, N.J. SHEET NO. 31 OF 40

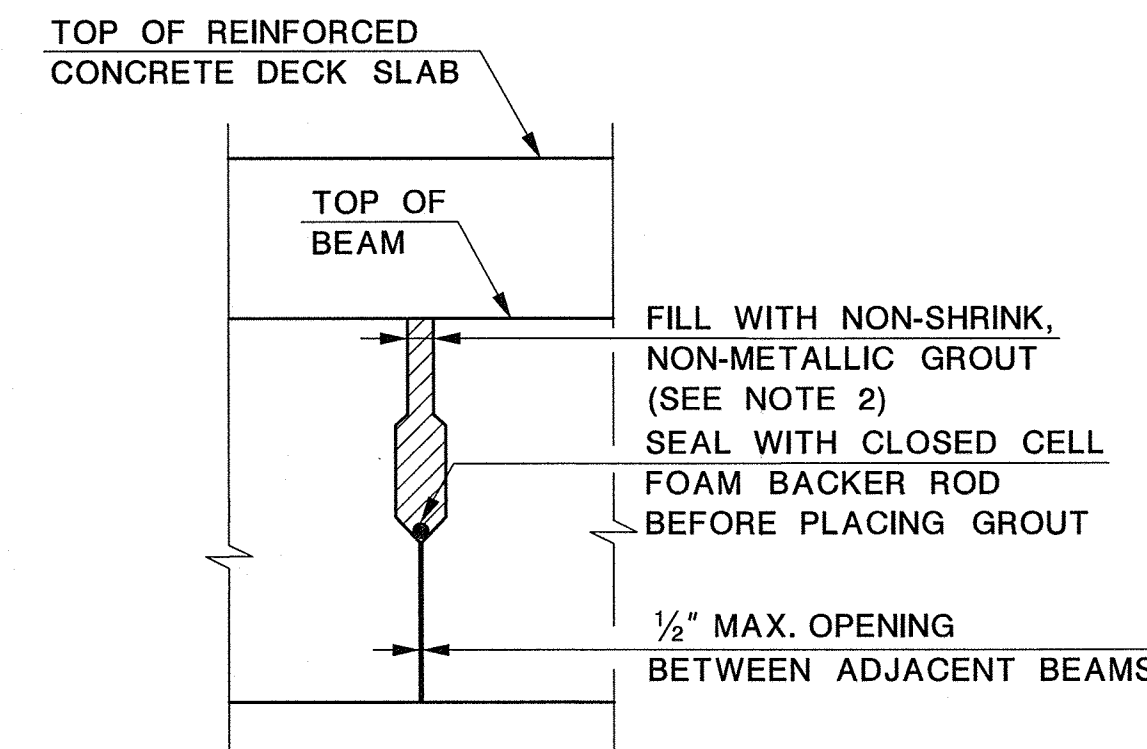


PLAN
SCALE: 1"=1'-0"

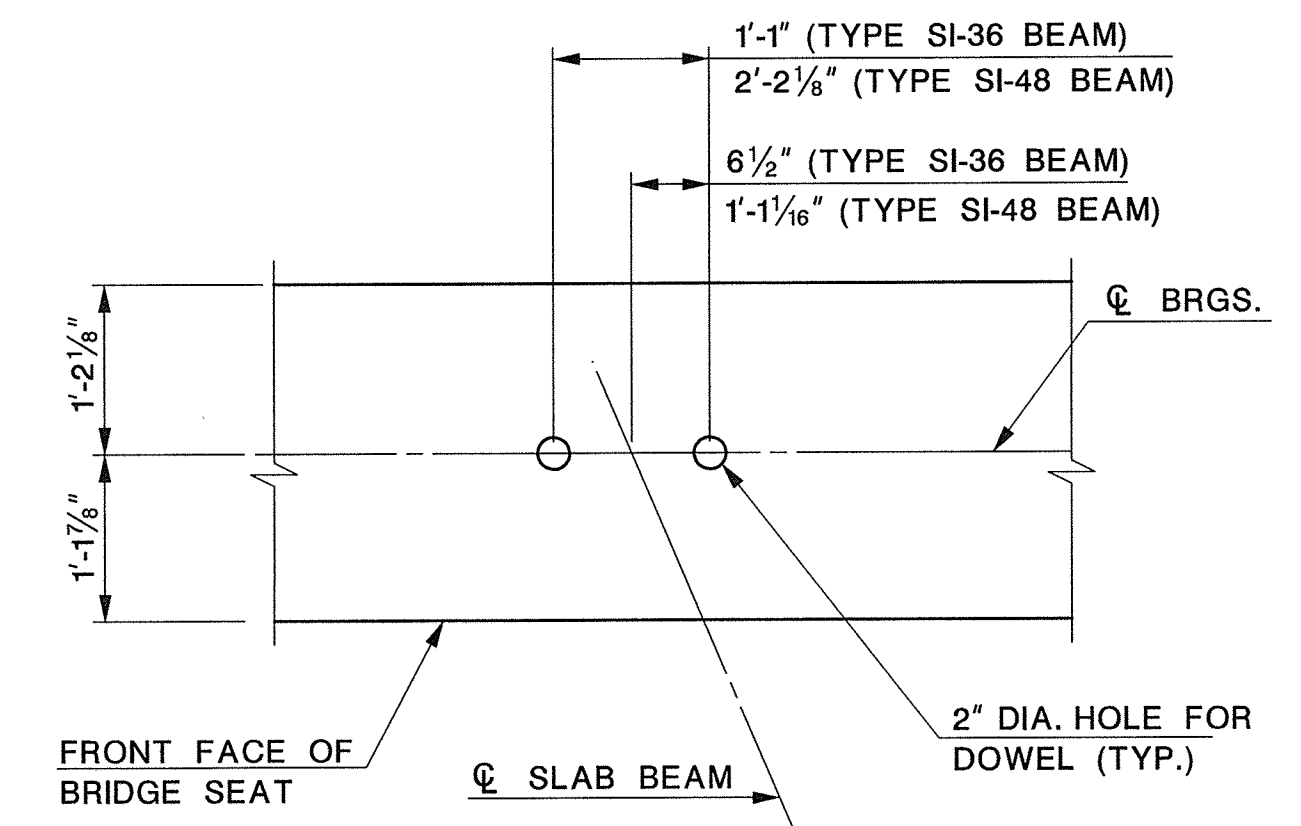


NOTE:
OMIT ON OUTSIDE FACE OF BEAMS B1 AND B16.
OMIT ON BOTH FACE OF BEAM B17.

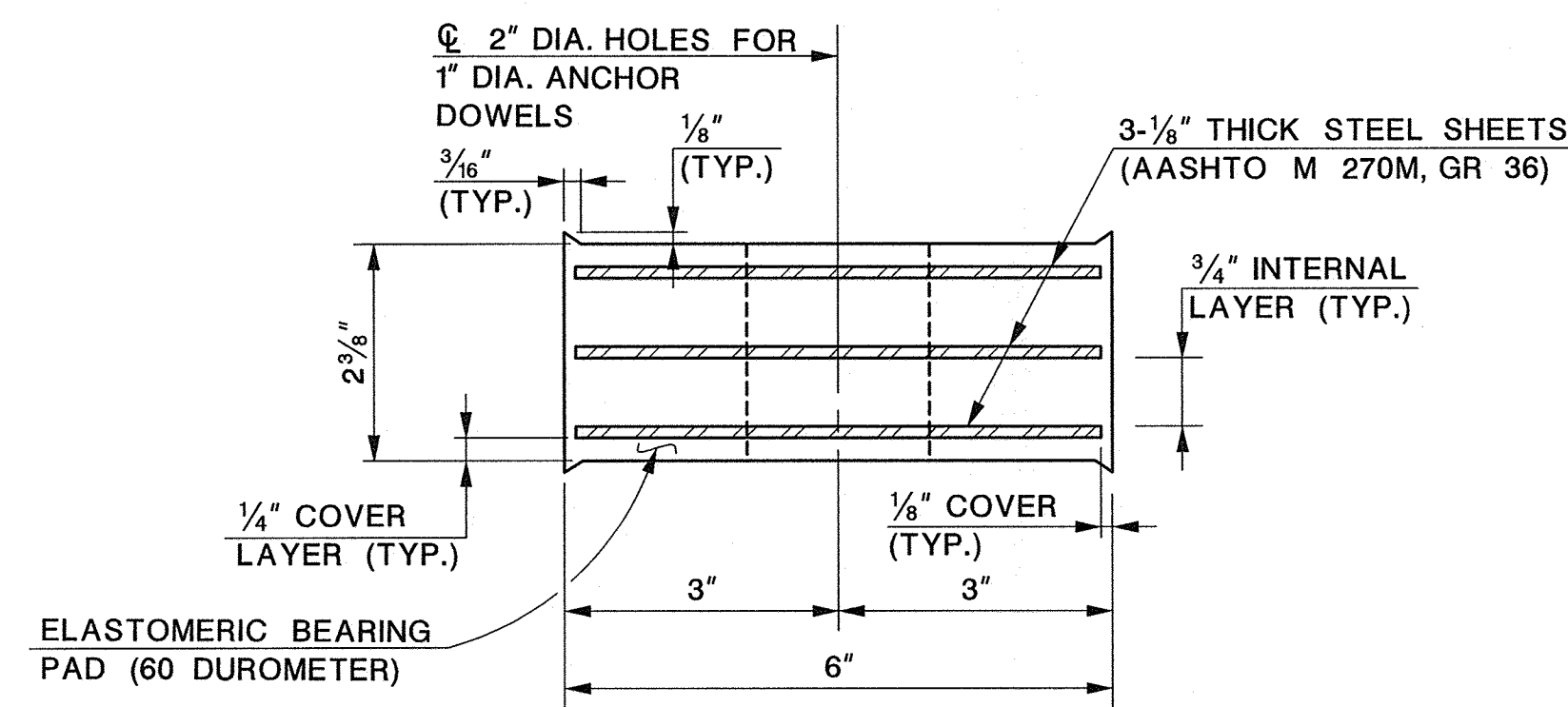
TYPICAL KEYWAY DETAIL
NOT TO SCALE



GROUTED KEYWAY DETAIL
NOT TO SCALE

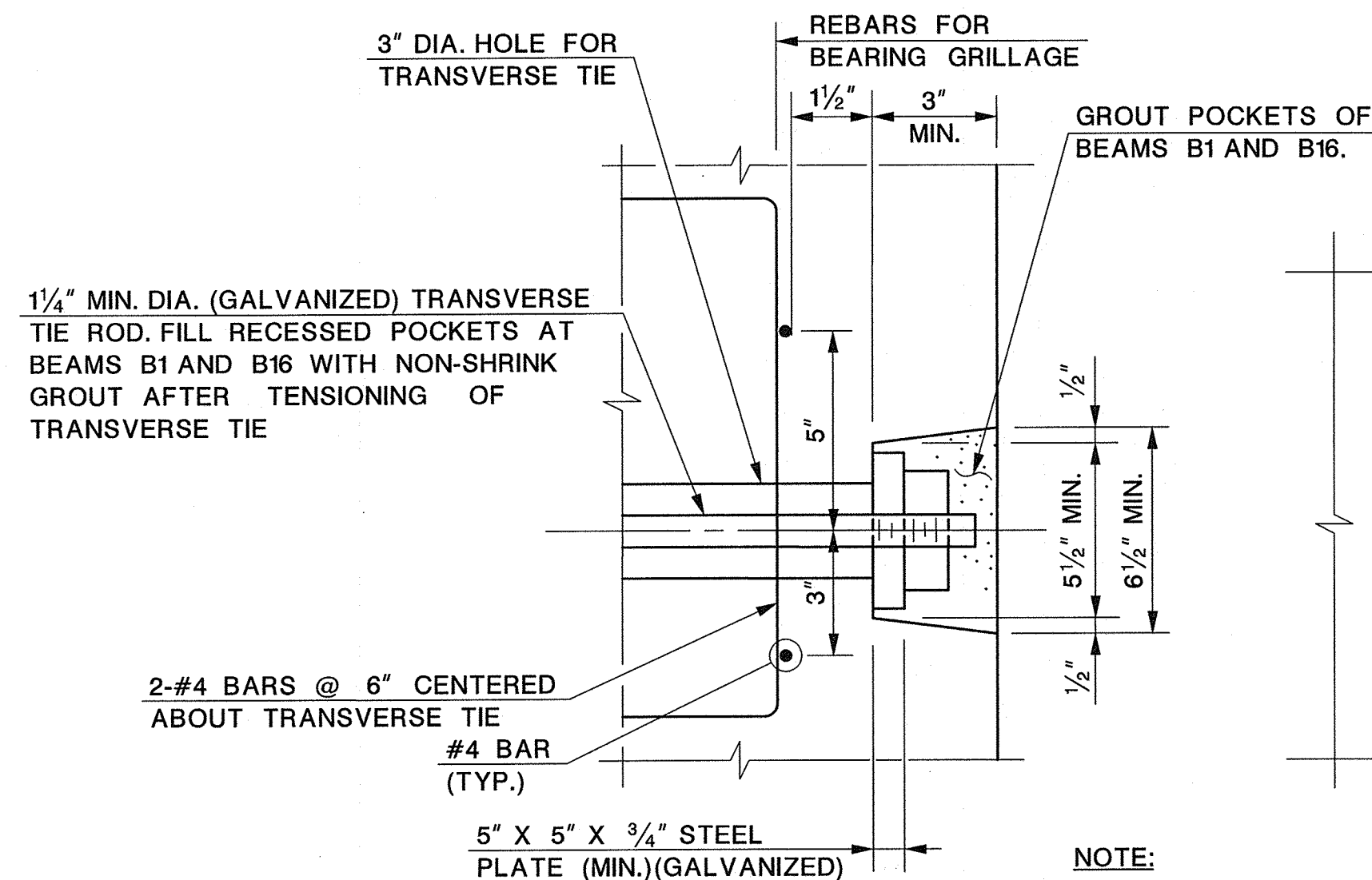


BEAM DOWEL LAYOUT
SCALE: 3/4" = 1'-0"

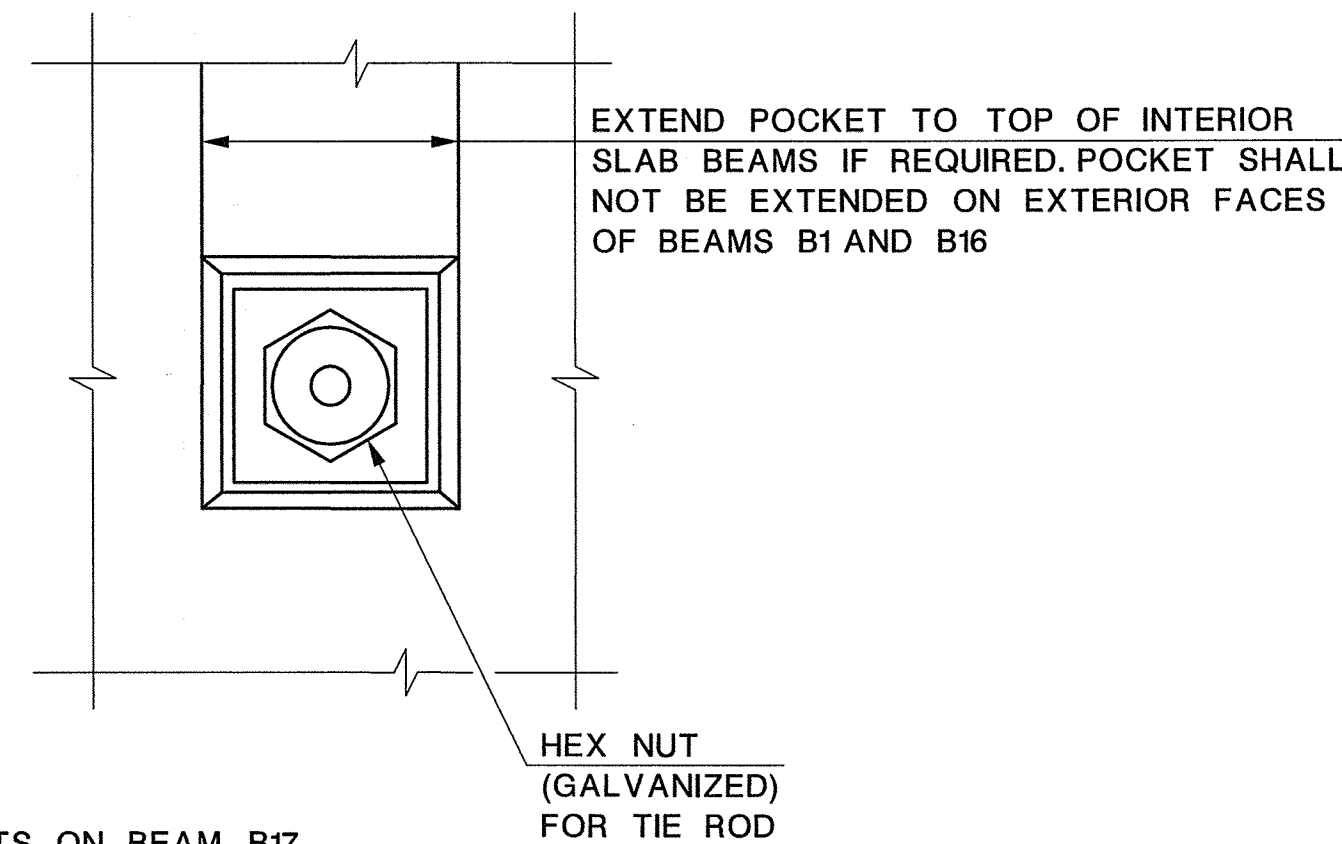


SECTION 2-2
SCALE: 6"=1'-0"

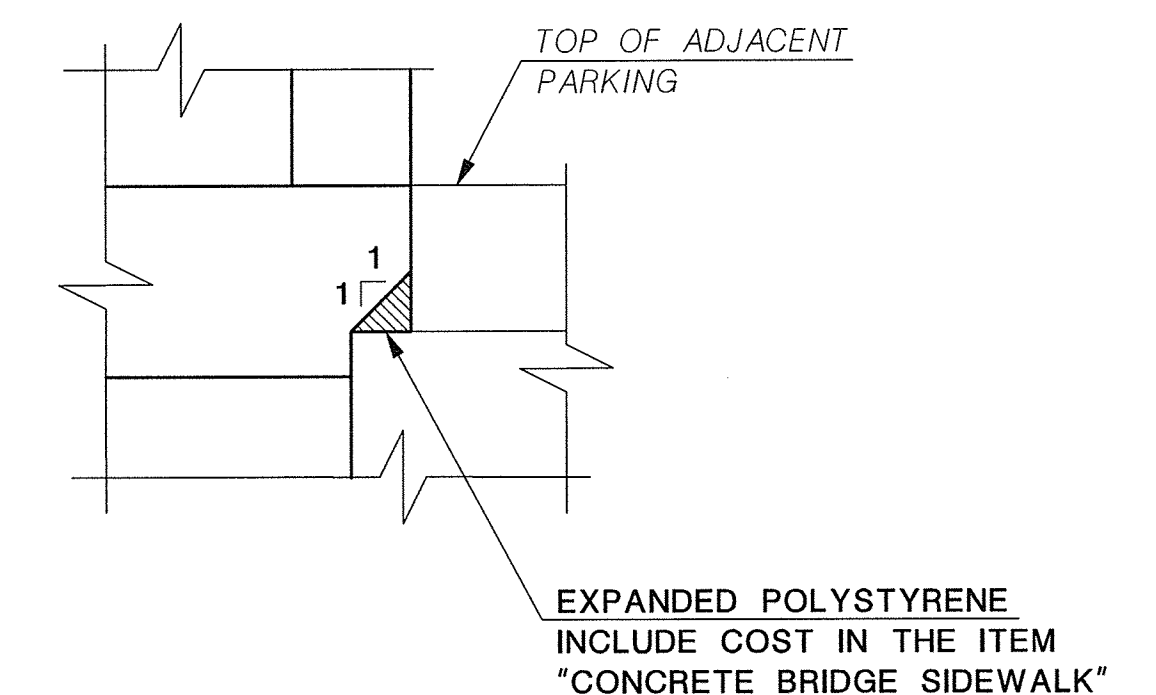
BEARING PAD DETAIL
AS NOTED



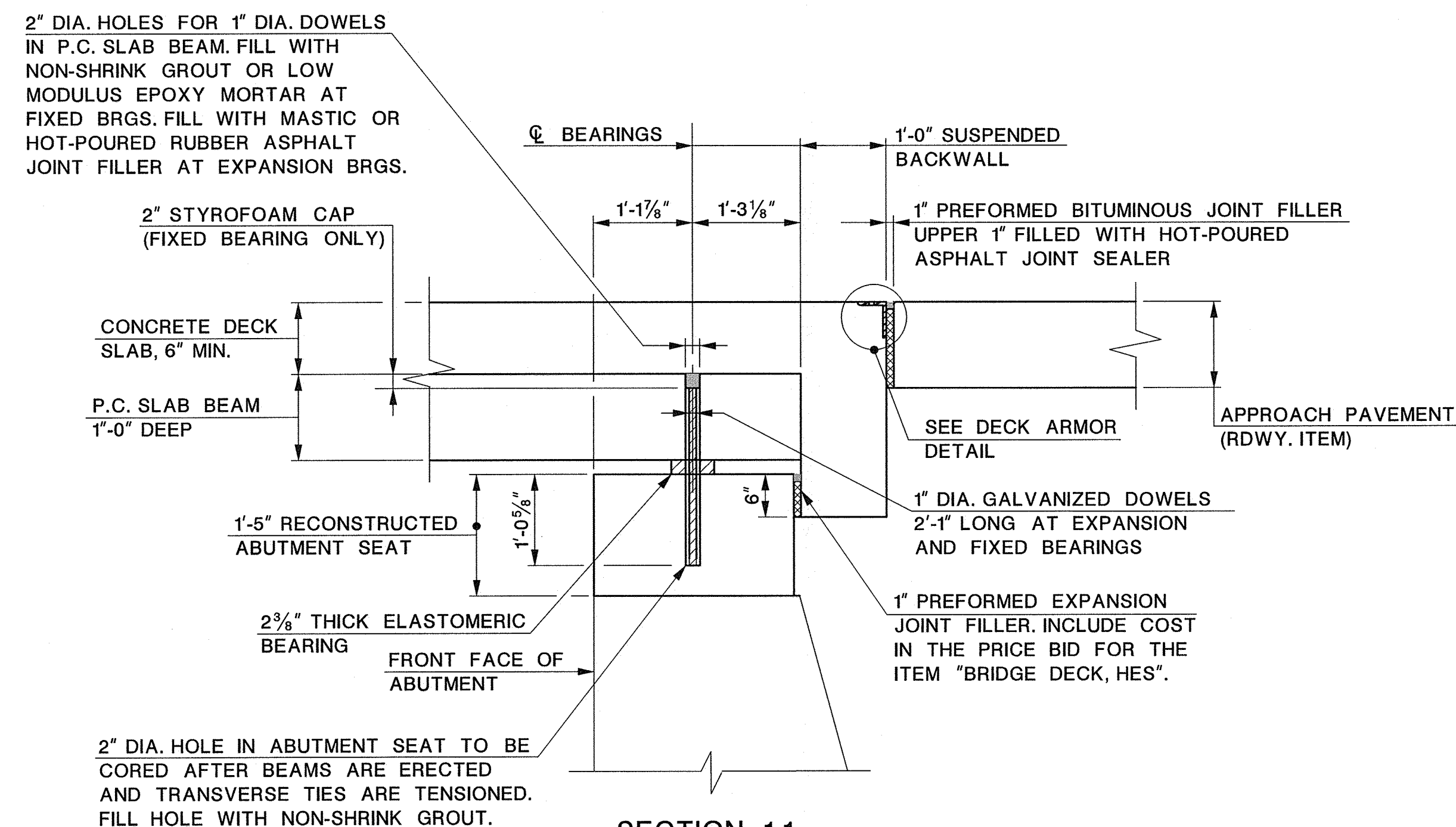
SECTION
ELEVATION
RECESSED POCKET AND TRANSVERSE TIE DETAIL
NOT TO SCALE



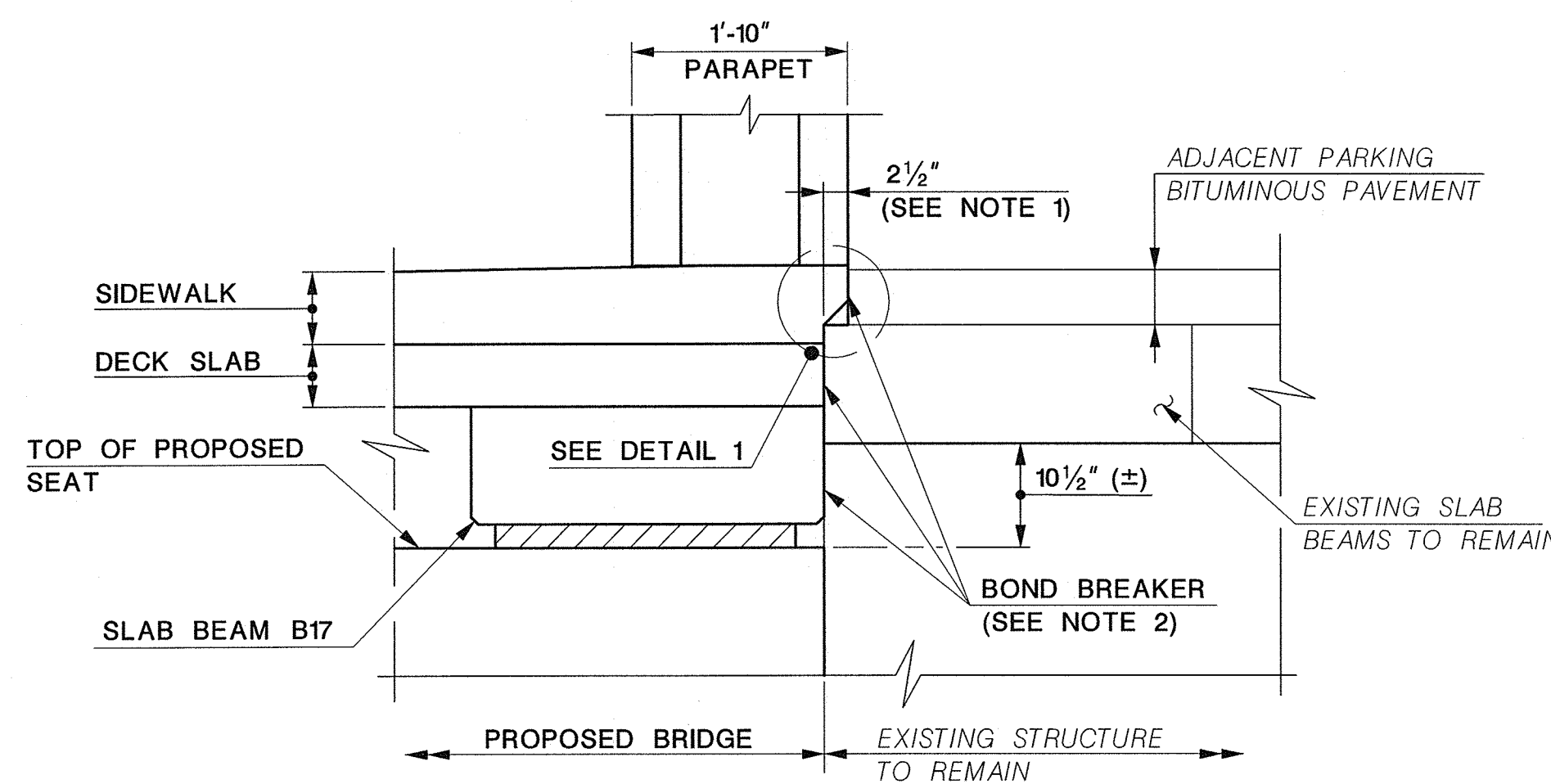
NOTE:
OMIT POCKETS ON BEAM B17.



DETAIL 1
NOT TO SCALE



SECTION 1-1
SCALE: 3/4" = 1'-0"



INTERFACE WITH ADJACENT STRUCTURE
SCALE: 3/4" = 1'-0"

- NOTES:**
- REMOVE EXISTING ADJACENT PARKING LOT BITUMINOUS PAVEMENT AND POUR THE PROPOSED SIDEWALK OVER THE EXISTING SLAB BEAM TO REMAIN. WHERE IN CONTACT INSTALL A BOND BREAKER BETWEEN ALL SURFACES OF THE EXISTING AND PROPOSED STRUCTURES.
 - BOND BREAKER TO BE APPROVED BY THE ENGINEER. INCLUDE COST OF BOND BREAKER IN THE PRICE BID FOR THE RESPECTIVE ITEM WHERE INSTALLED.

- REFERENCES:**
- FOR DECK ARMOR DETAIL, SEE SHEET NO. 36.

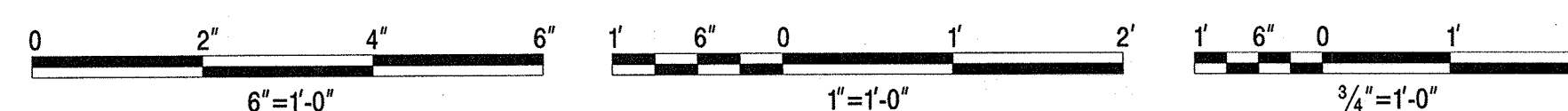
UNION COUNTY ENGINEERING
REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

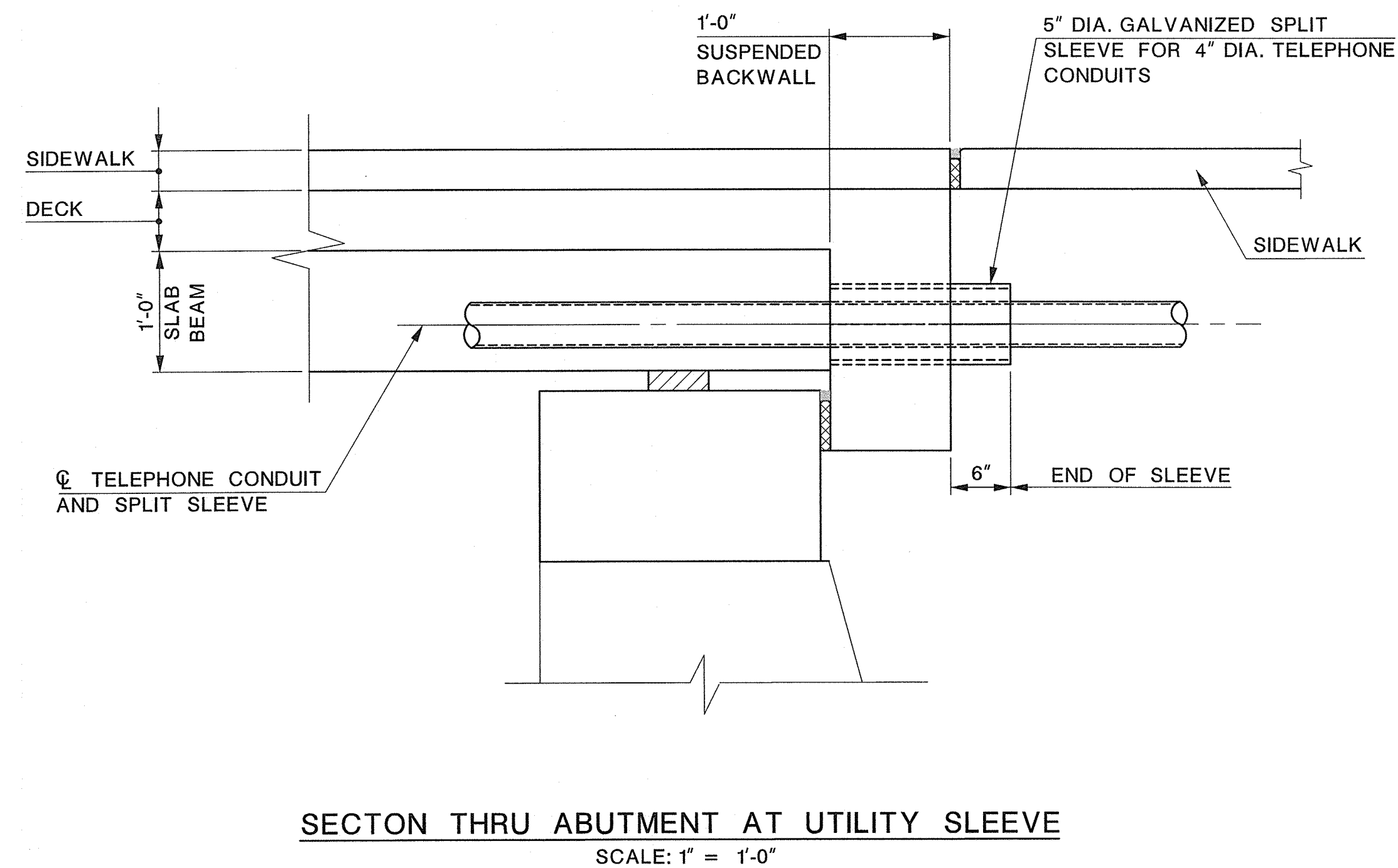
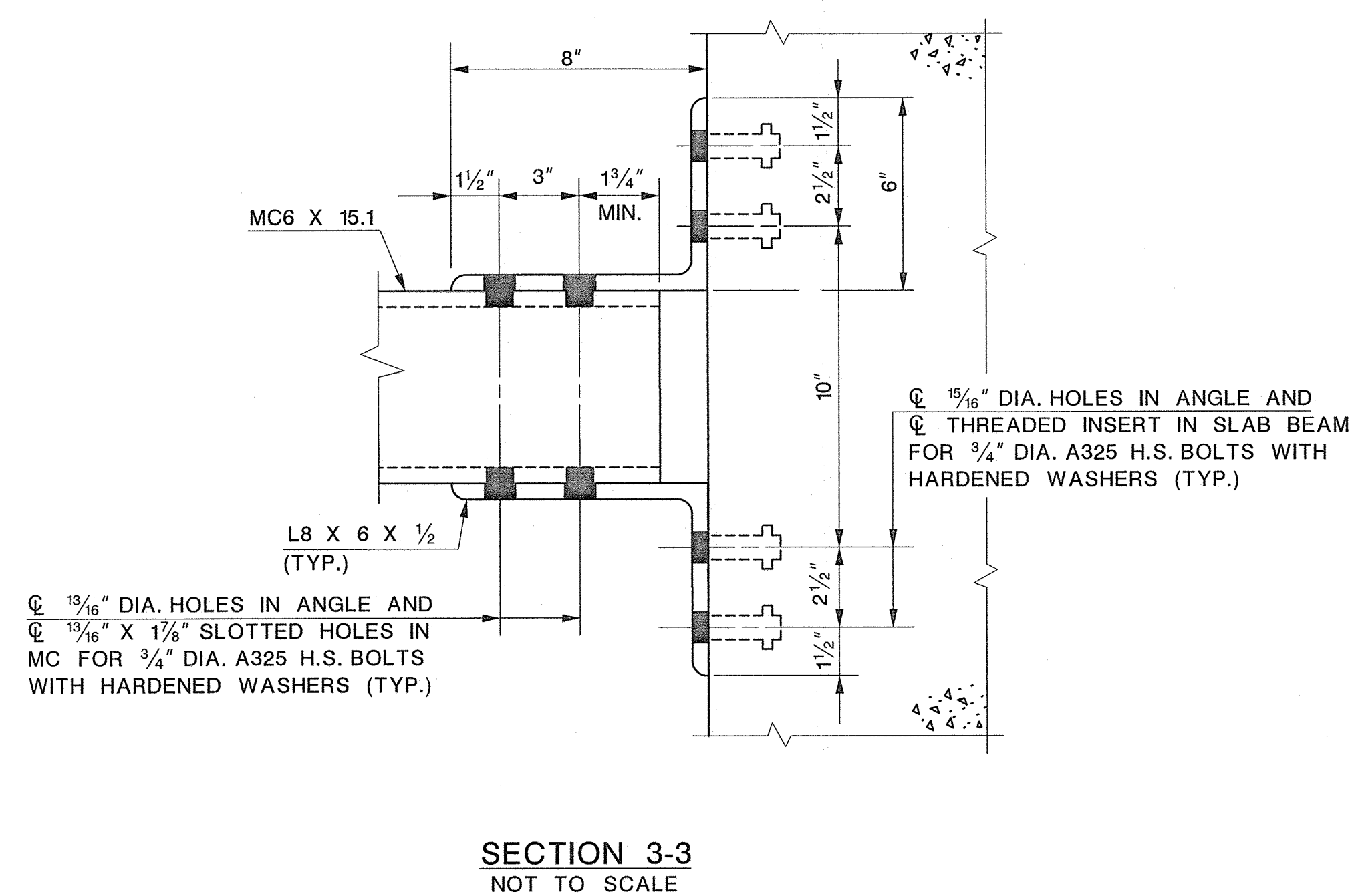
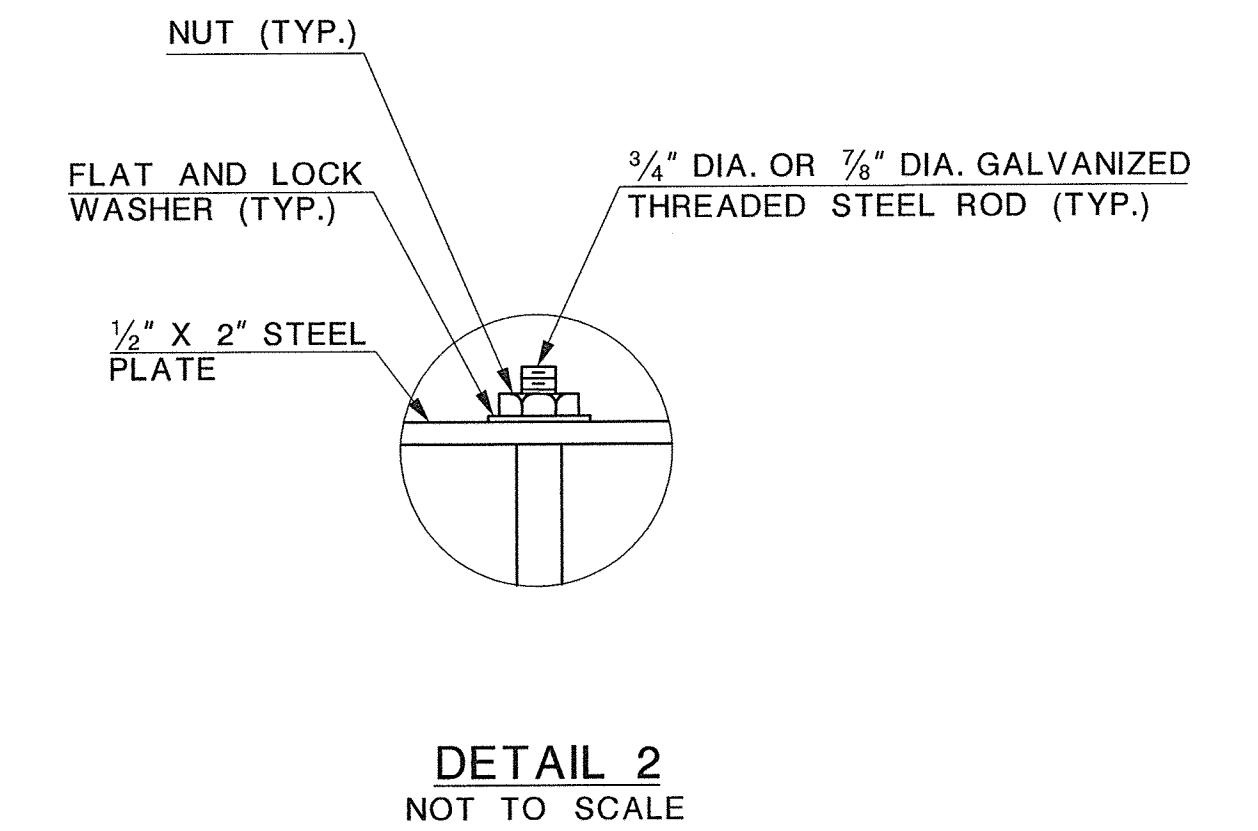
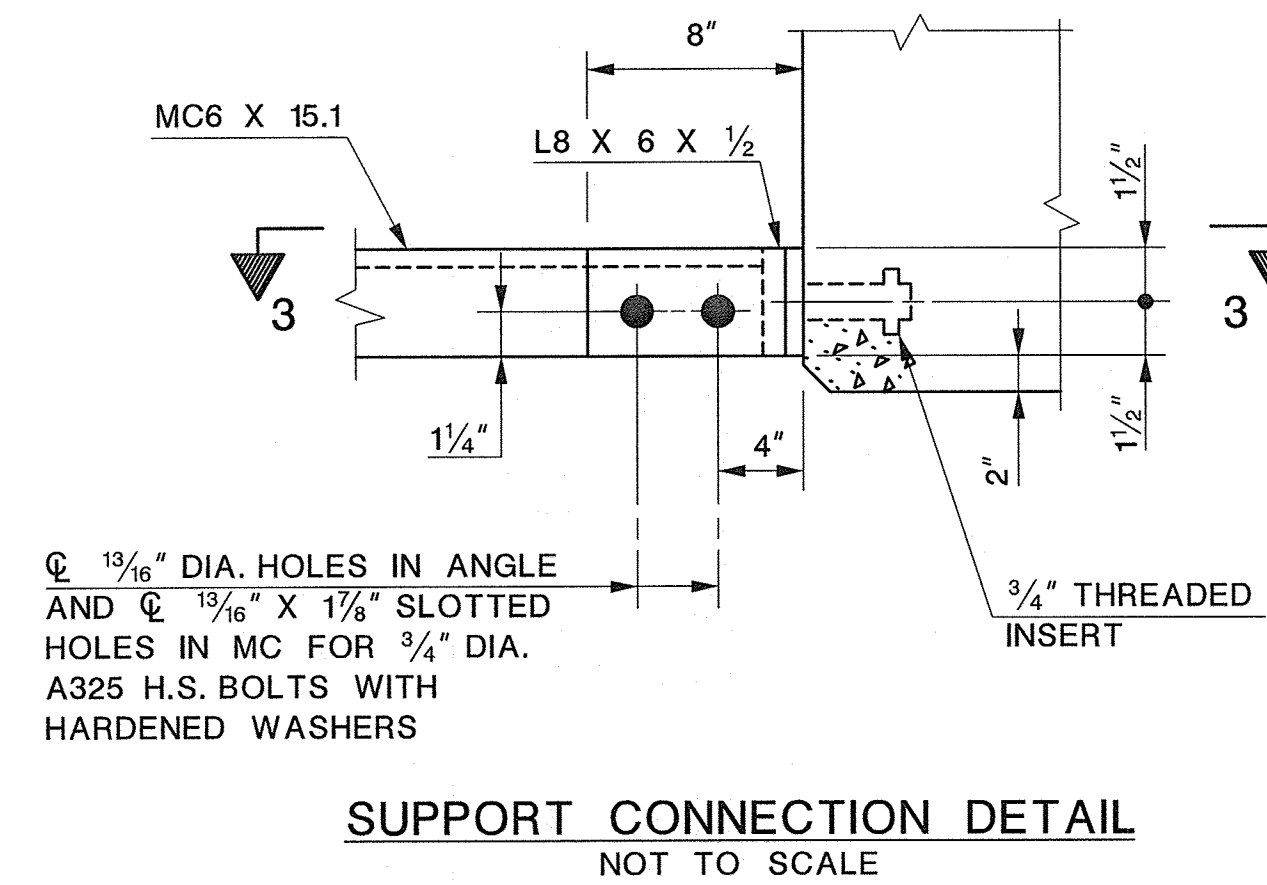
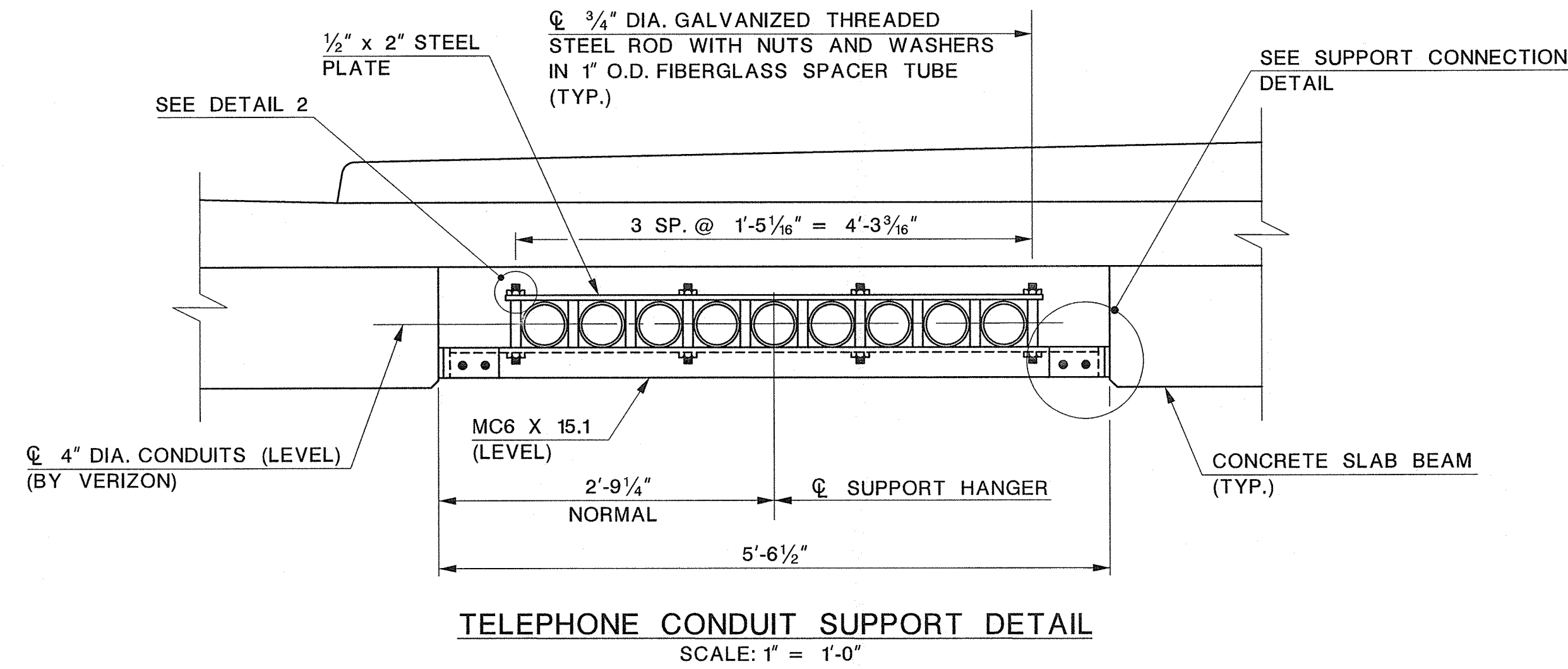
SUPERSTRUCTURE DETAILS

MANUEL J. VERA CARABALLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE08008600

Dewberry Engineers Inc. SCALE: AS SHOWN DATE: NOVEMBER 2016
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J. SHEET NO. 32 OF 40

DATE	REVISION DESCRIPTION





NOTES:

1. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL STEEL SUPPORT MEMBERS (CHANNELS, ANGLES AND HARDWARE). INCLUDE ALL COSTS FOR THE STEEL SUPPORTS UNDER THE PRICE BID FOR THE ITEM "STRUCTURAL STEEL".
2. STRUCTURAL STEEL FOR THE UTILITY SUPPORTS TO BE ASTM A709, GR. 36. BOLTS TO BE ASTM A325 GALVANIZED HIGH STRENGTH BOLTS. HOT DIP GALVANIZE ALL COMPONENTS AFTER FABRICATION.
3. THE CONTRACTOR SHALL INSTALL SPLIT SLEEVES FOR THE UTILITY CONDUITS TO PASS THROUGH THE SUSPENDED BACKWALLS. SPLIT SLEEVES TO BE FURNISHED BY VERIZON. INCLUDE THE COST OF INSTALLING THE SLEEVES UNDER THE PRICE BID FOR THE ITEM "CONCRETE BRIDGE DECK, HES".
4. LONGITUDINAL GRADE (SLOPE) OF SLEEVES THROUGH THE SUSPENDED BACKWALL TO MATCH THE SLOPE OF THE CONDUITS.
5. THE CONTRACTOR SHALL COORDINATE WITH VERIZON PRIOR TO AND THROUGHOUT CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH VERIZON THE TEMPORARY SUPPORT OF THE EXISTING NINE (9) TELEPHONE CONDUITS AND THEIR SUBSEQUENT REPOSITIONING ON THE PROPOSED SUPERSTRUCTURE.
6. VERIZON WILL FURNISH AND INSTALL ALL CONDUITS, SUPPORT / HANGER SYSTEM COMPONENTS AND PERFORM ALL WORK ASSOCIATED WITH THE RELOCATION OF THEIR EXISTING CONDUITS.
7. CONDUITS TO BE REPOSITIONED ON PROPOSED STRUCTURE PRIOR TO POURING THE DECK SLAB.

REFERENCES:

1. FOR UTILITY SUPPORT SPACING, SEE SHEET NO. 29.

UNION COUNTY ENGINEERING

REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

UTILITY SUPPORT DETAILS

MANUEL J. VERA CARABALLO, P.E.

NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600

Manuel J. Vera DATE 11/15/16

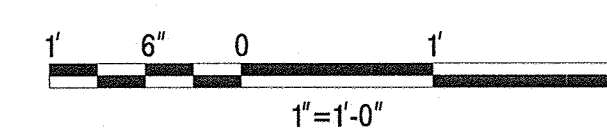
Dewberry Engineers Inc.

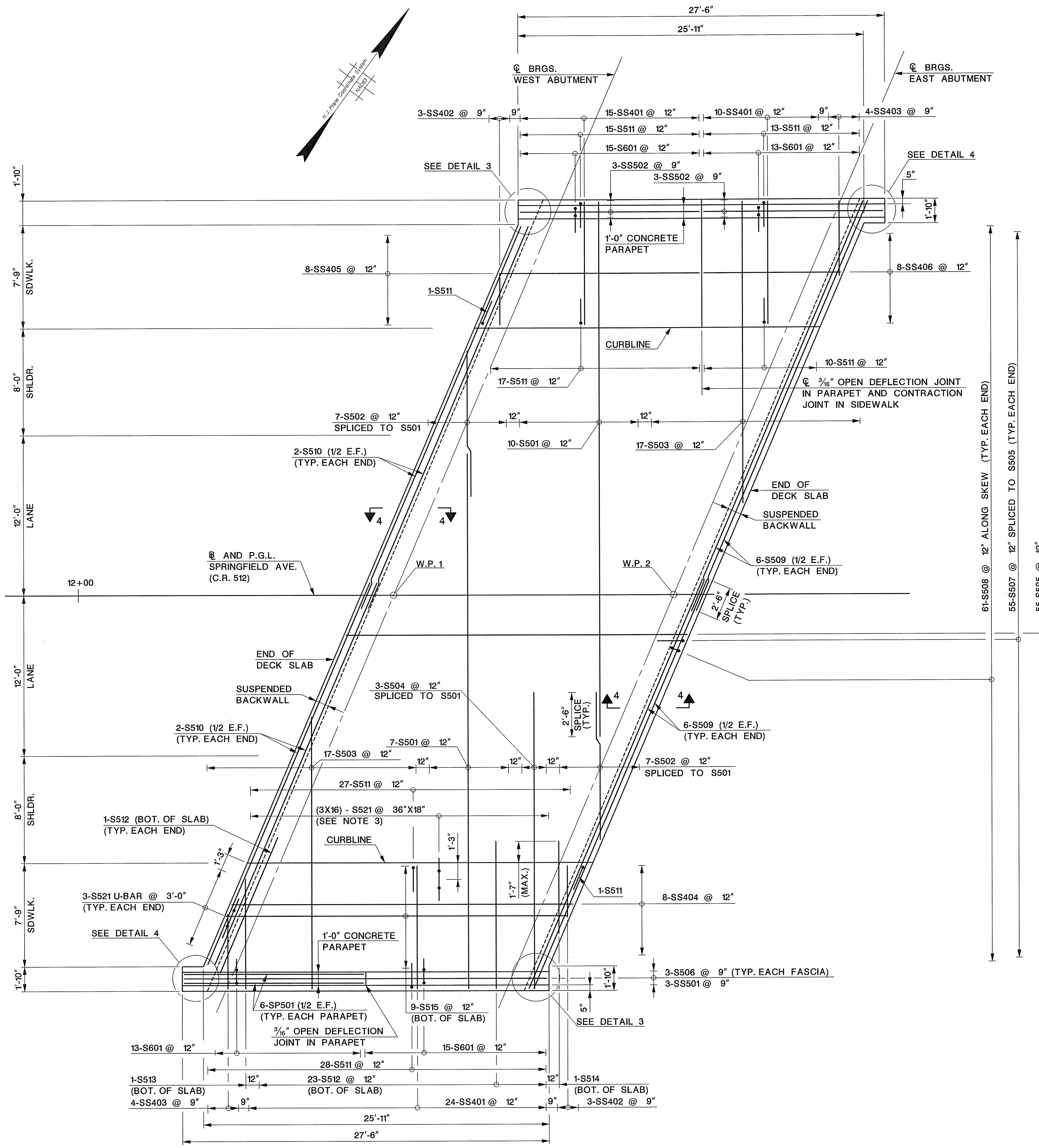
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J.

SCALE: AS SHOWN DATE: NOVEMBER 2016

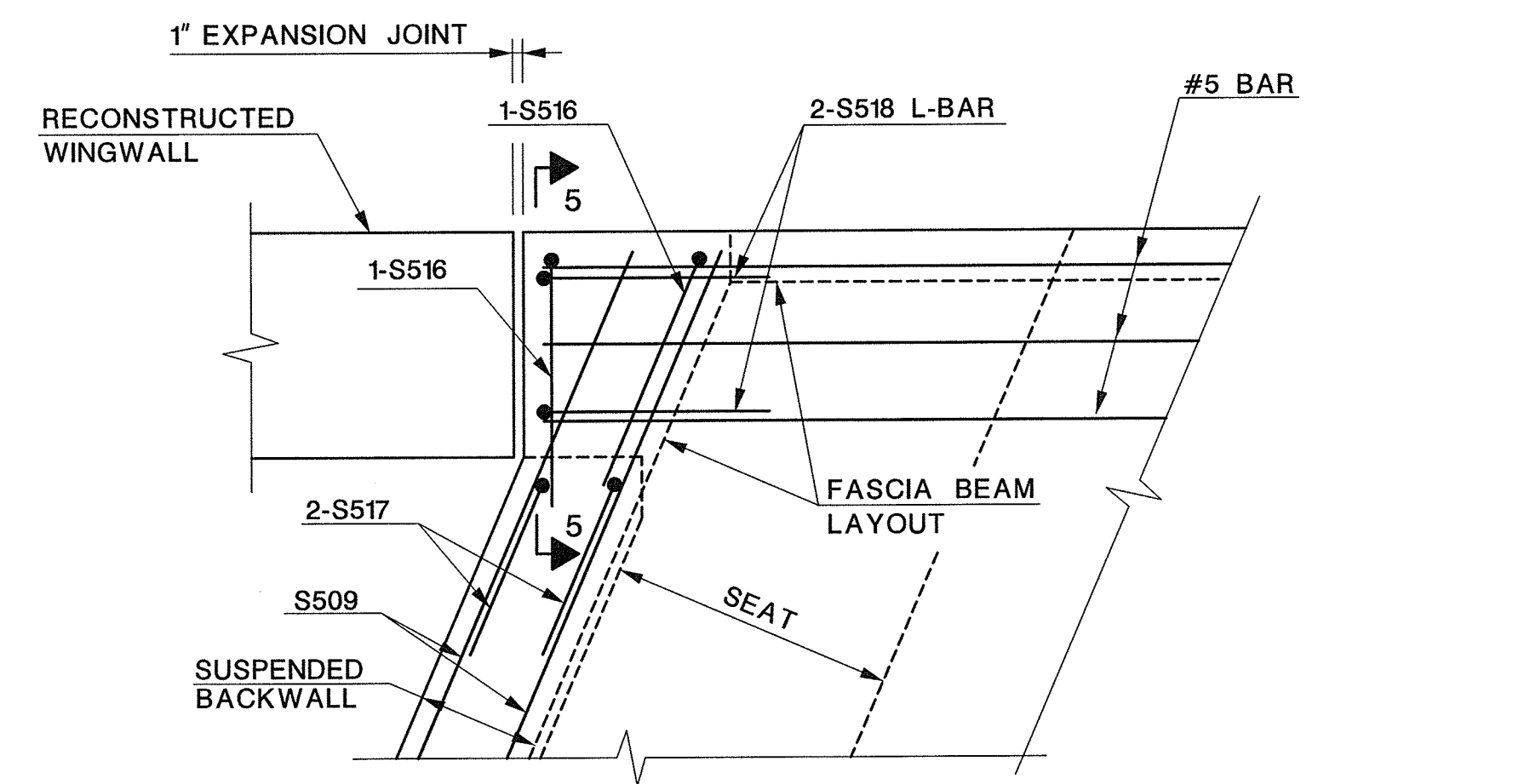
SHEET NO. 33 OF 40

REVISION	
DATE	DESCRIPTION

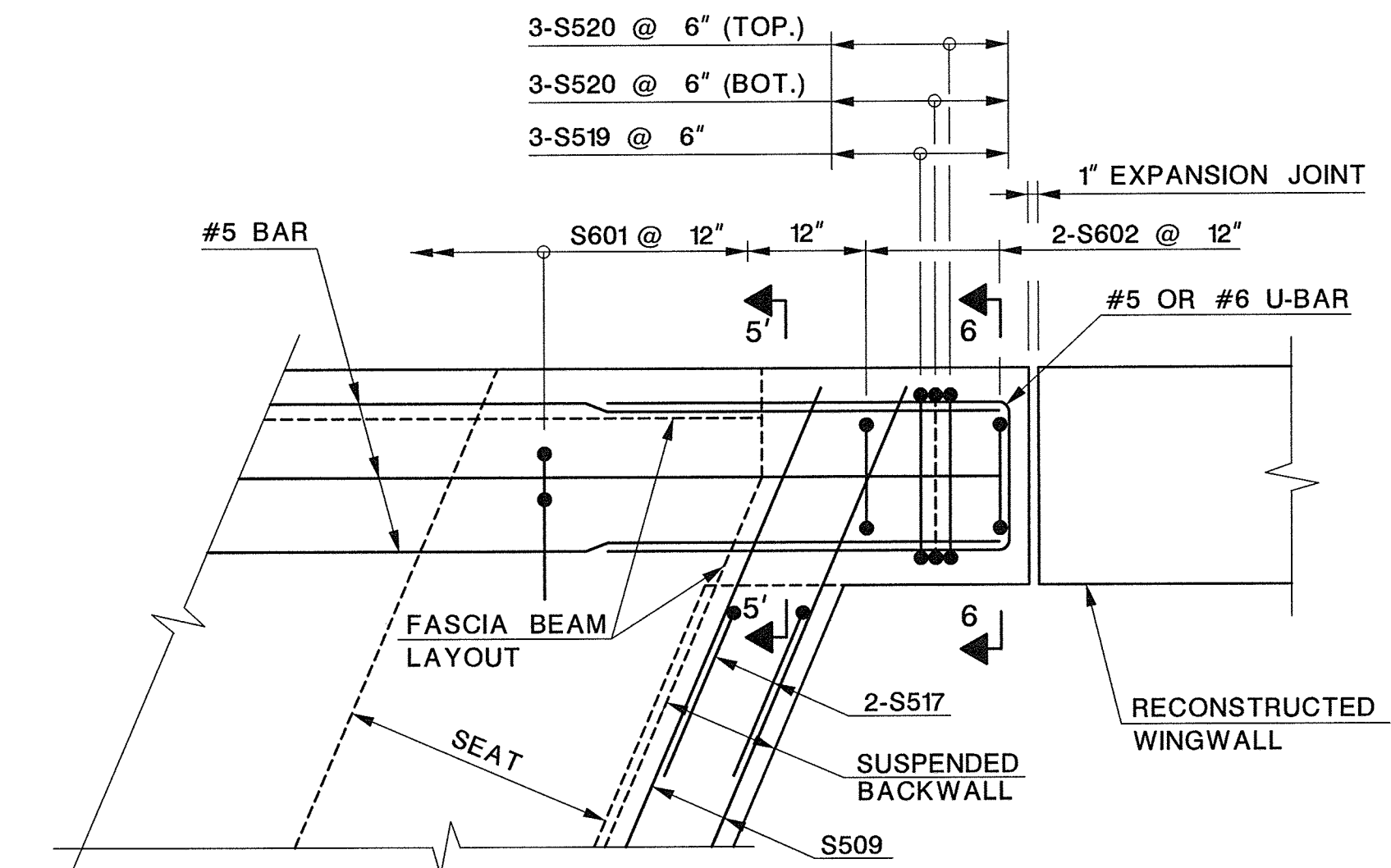




DECK PLAN
SCALE: 1/4" = 1'-0"



DETAIL 3
(NW CORNER SHOWN, SE CORNER SIMILAR)
SCALE: 3/4" = 1'-0"



DETAIL 4
(NE CORNER SHOWN, SW CORNER SIMILAR)
SCALE: 3/4" = 1'-0"

- NOTES:
1. ALL REINFORCEMENT TO BE GALVANIZED.
 2. SAWCUT TOP OF DECK.
 3. PLACE BARS IN A TWO-DIMENSIONAL ARRAY. SPACE VERTICAL LEGS OF BAR TO BE 18" MAX. IN BOTH DIRECTIONS.

- REFERENCES:
1. FOR WORKING POINT LAYOUT, SEE SHEET NO. 20.
 2. FOR SECTIONS 4-4 THRU 6-6, ADDITIONAL DECK REINFORCEMENT AND DETAILS, SEE SHEET NO. 35.
 3. FOR DECK ARMOR DETAIL, SEE SHEET NO. 36.
 4. FOR SUPERSTRUCTURE CROSS SECTION, PARAPET, AND SIDEWALK DETAILS, SEE SHEET NO. 37.
 5. FOR DECK GRADING PLAN, PARAPET JOINT DETAILS, AND SAWCUT GROOVE DETAIL, SEE SHEET NO. 38.
 6. FOR ARCHITECTURAL DETAILS, SEE SHEET NO. 39.
 7. FOR BAR LIST, SEE SHEET NO. 40.

LEGEND:
E.F. - EACH FACE

DATE	REVISION DESCRIPTION

UNION COUNTY ENGINEERING

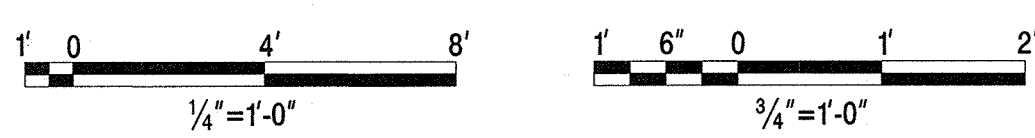
**REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS**

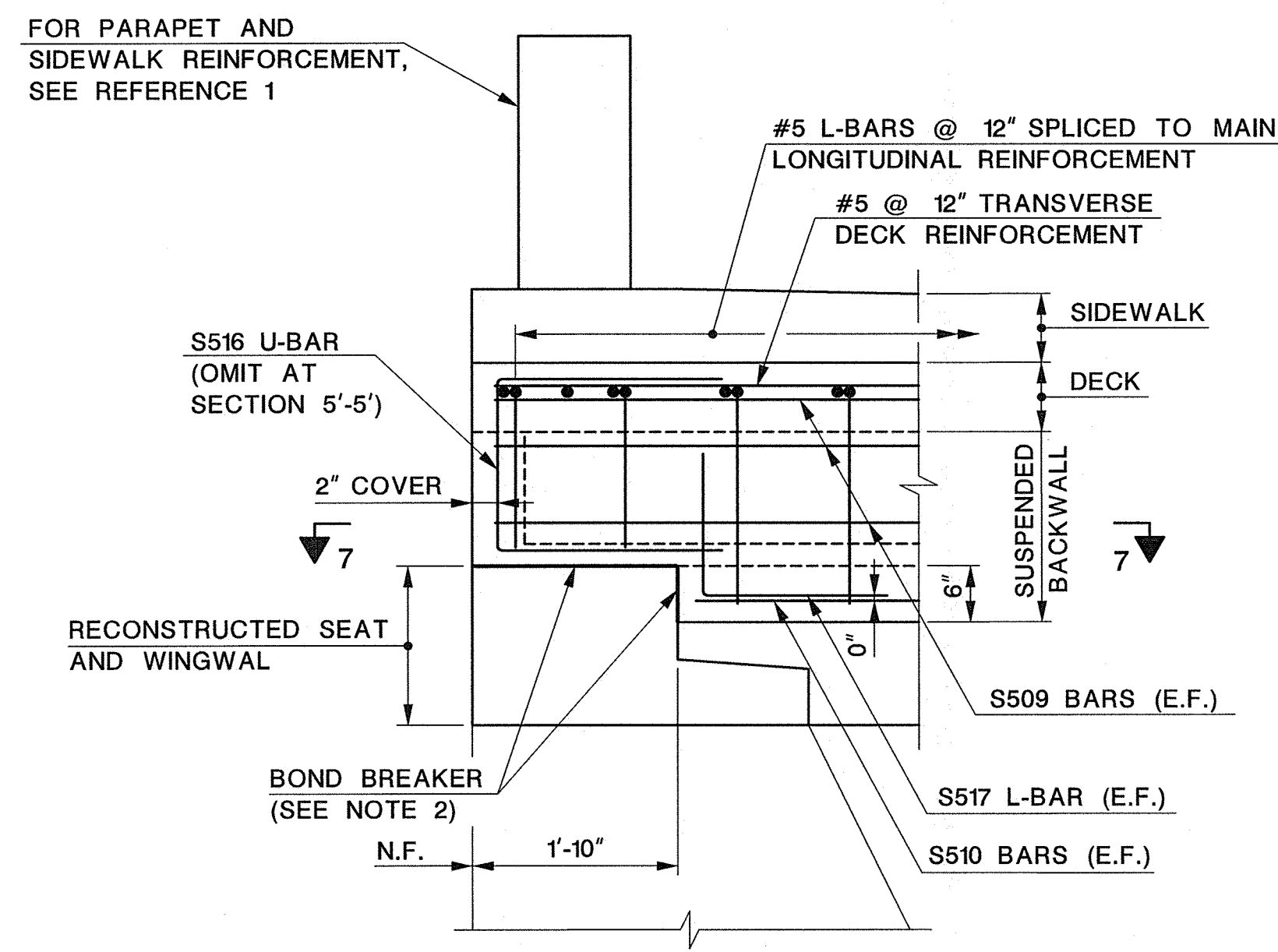
DECK PLAN

MANUEL J. VERA CARABALLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600
Manuel J. Vera DATE 11/15/16

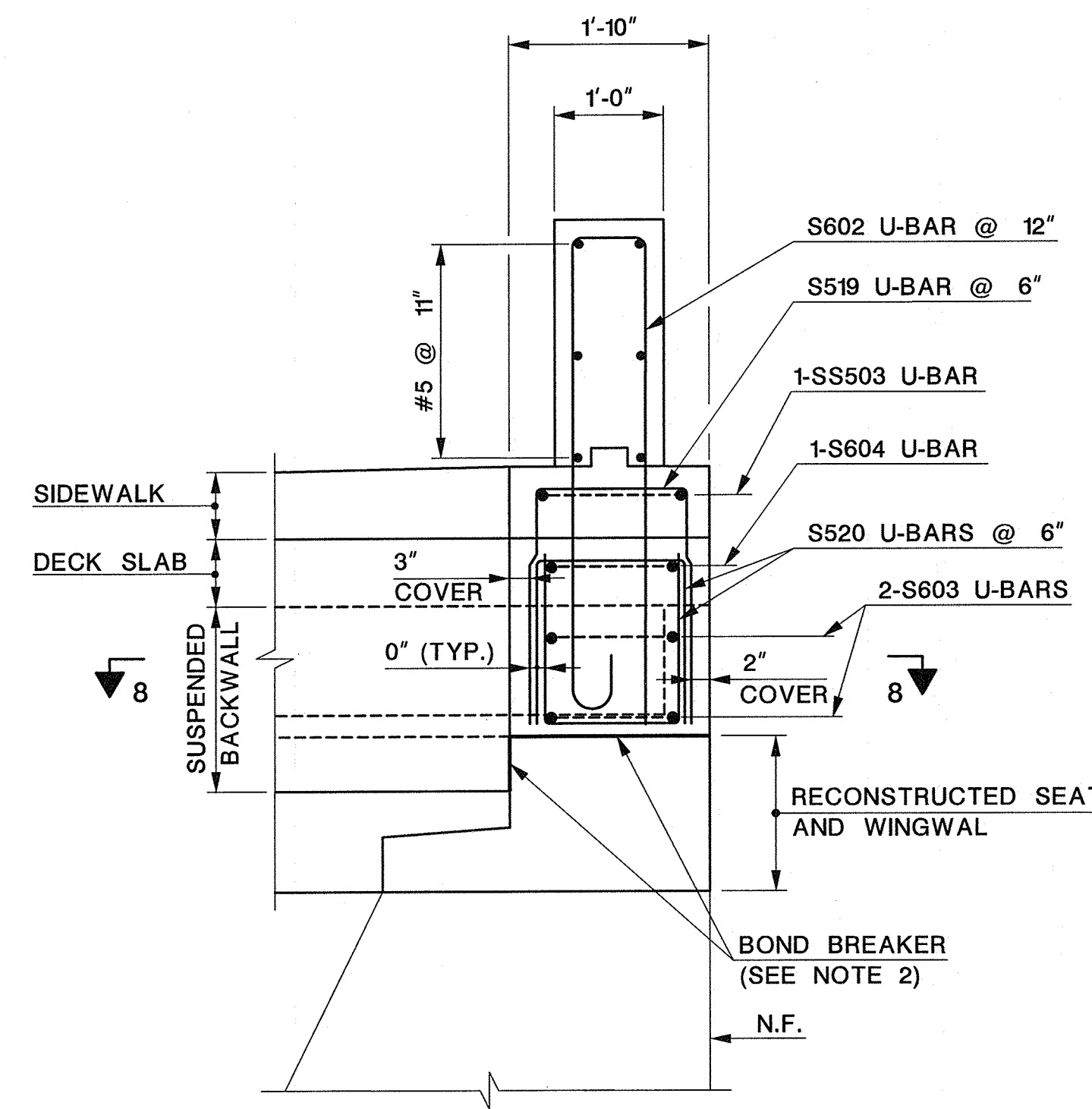
Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J.

SCALE: AS SHOWN DATE: NOVEMBER 2016
SHEET NO. 34 OF 40

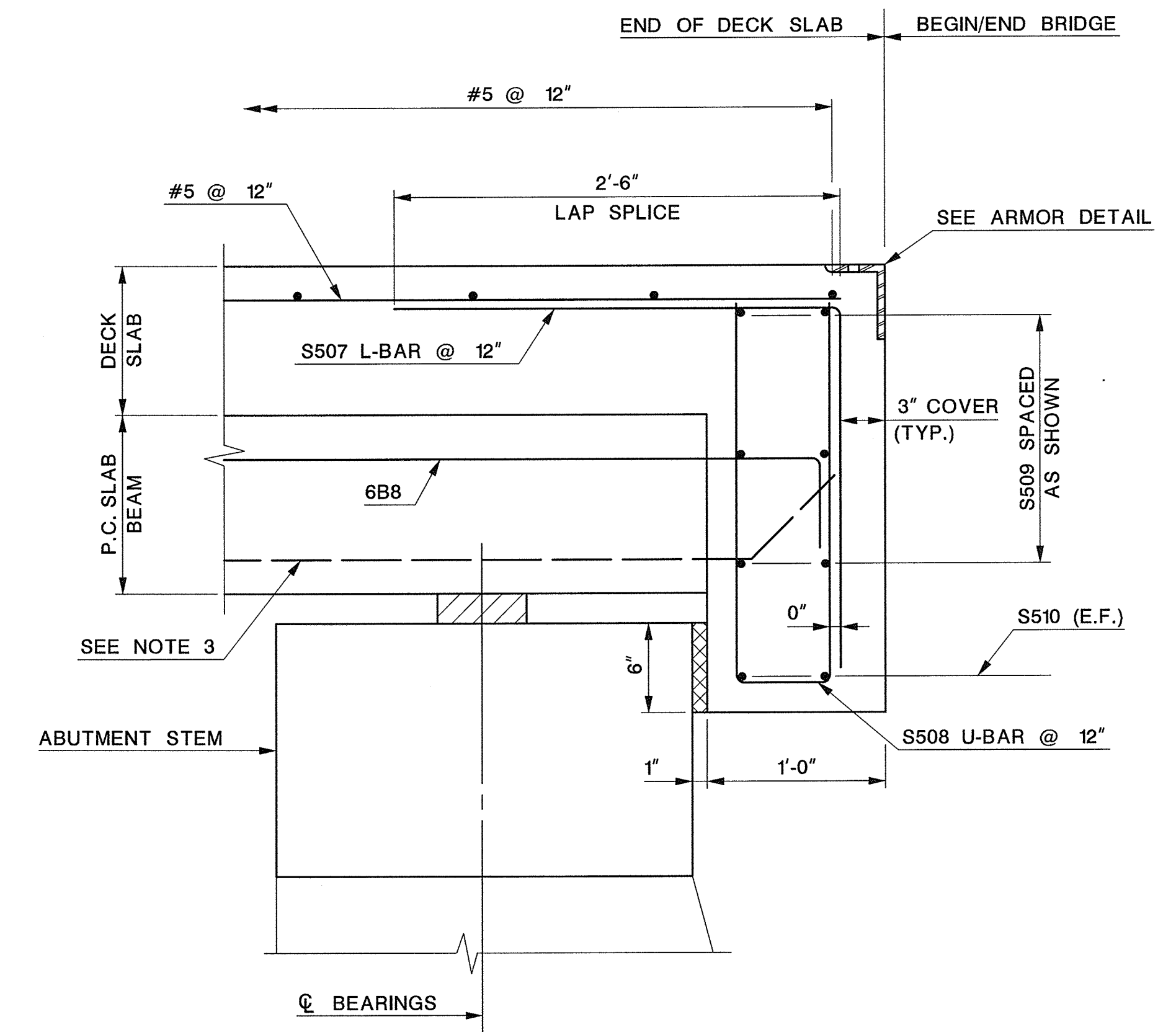




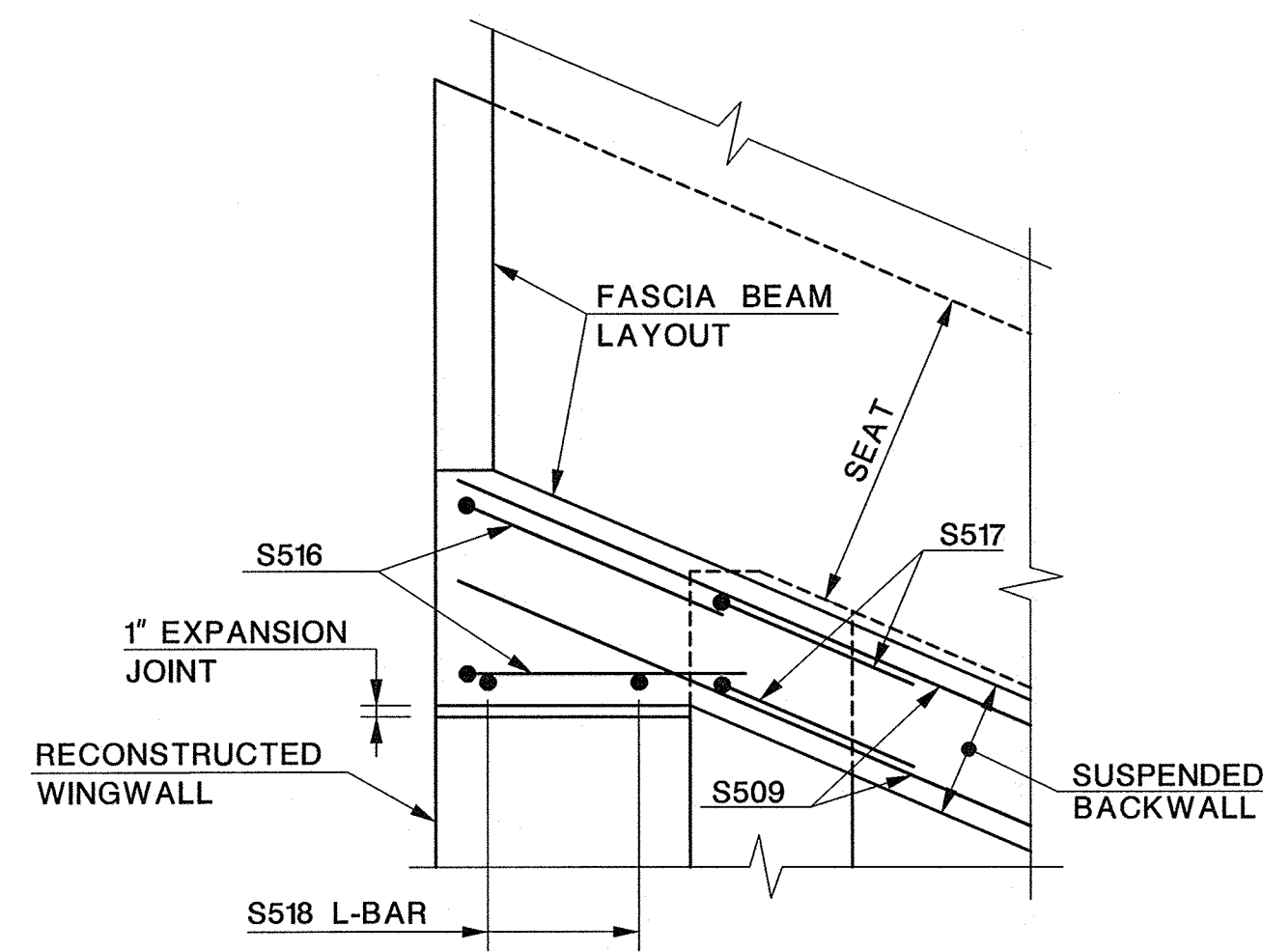
SECTION 5-5
(SECTION 5'-5" OPPOSITE HAND)
SCALE: 3/4" = 1'-0"



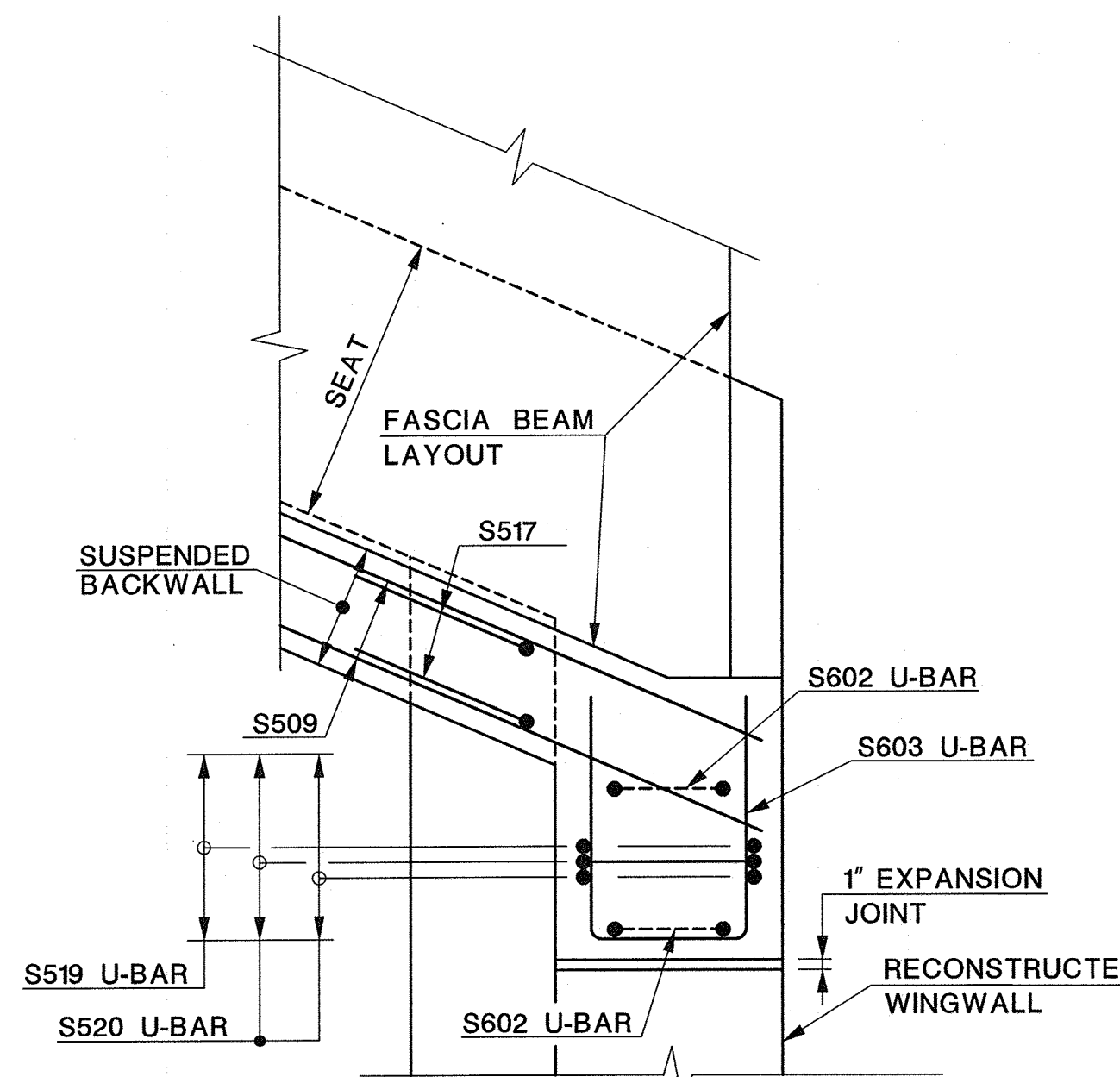
SECTION 6-6
SCALE: 3/4" = 1'-0"



SECTION 4-4
SCALE: 1/2" = 1'-0"



SECTION 7-7
SCALE: 3/4" = 1'-0"



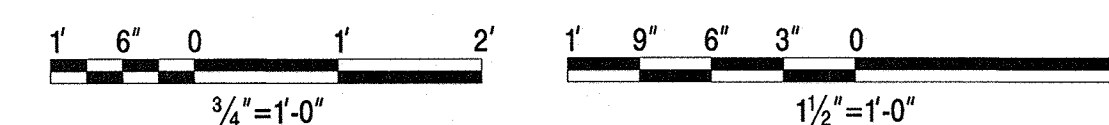
SECTION 8-8
SCALE: 3/4" = 1'-0"

- NOTES:**
1. ALL REINFORCEMENT TO BE GALVANIZED.
 2. BOND BREAKER WILL NOT BE MEASURED FOR PAYMENT, INCLUDE THE COST IN THE PRICE BID FOR THE ITEM "CONCRETE DECK, HES". BOND BREAKER TO BE APPROVED BY THE ENGINEER.
 3. EXTEND PRESTRESSED STRANDS 9" INTO THE SUSPENDED BACKWALL (5 STRANDS PER BEAM), IN LIEU OF EXTENDING THE STRANDS, THE CONTRACTOR MAY PROPOSE AN ALTERNATE DETAIL.

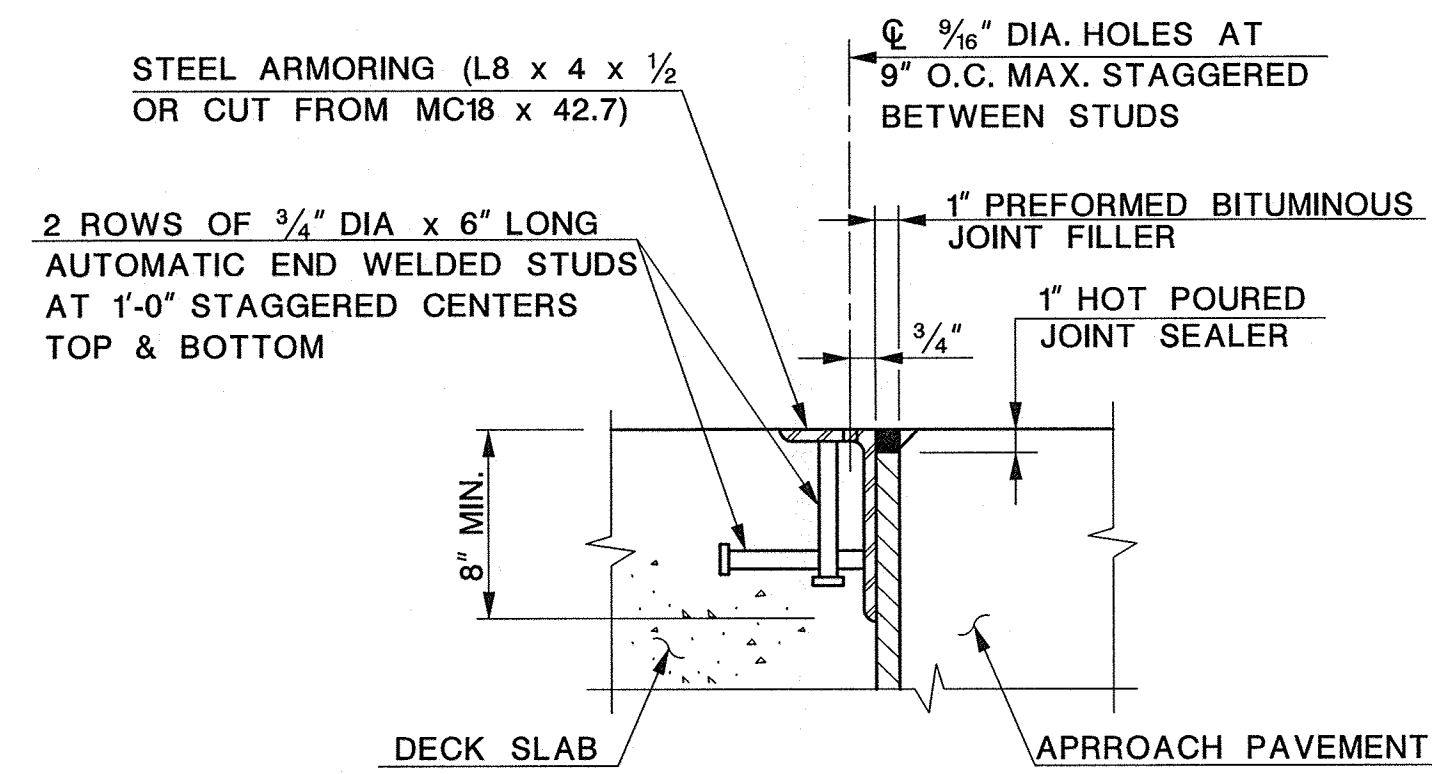
- REFERENCES:**
1. FOR SUPERSTRUCTURE CROSS SECTION, PARAPET AND SIDEWALK DETAILS, SEE SHEET NO. 37.

LEGEND:
E.F. - EACH FACE
N.F. - NEAR FACE

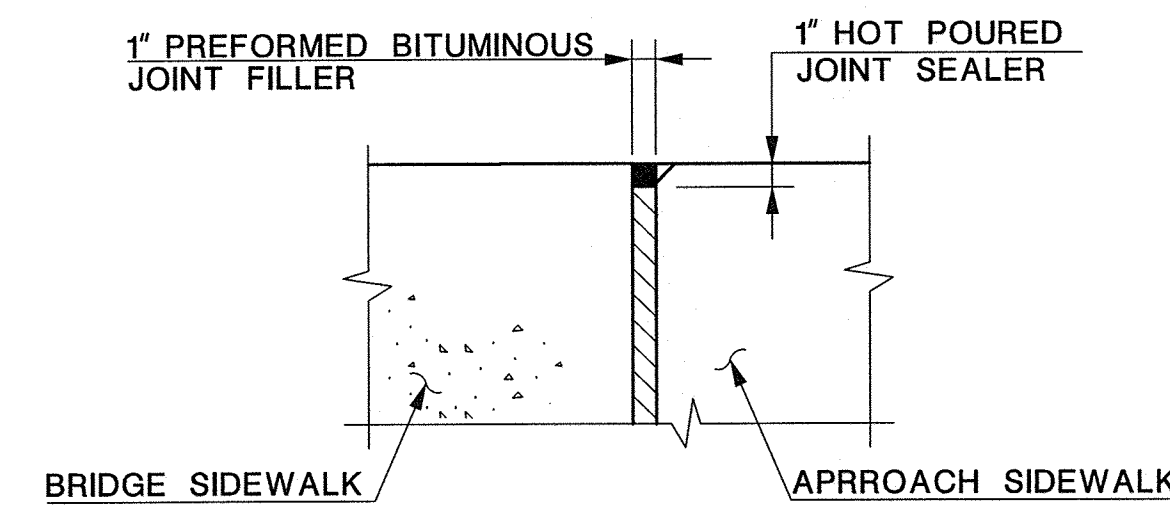
DATE	REVISION DESCRIPTION



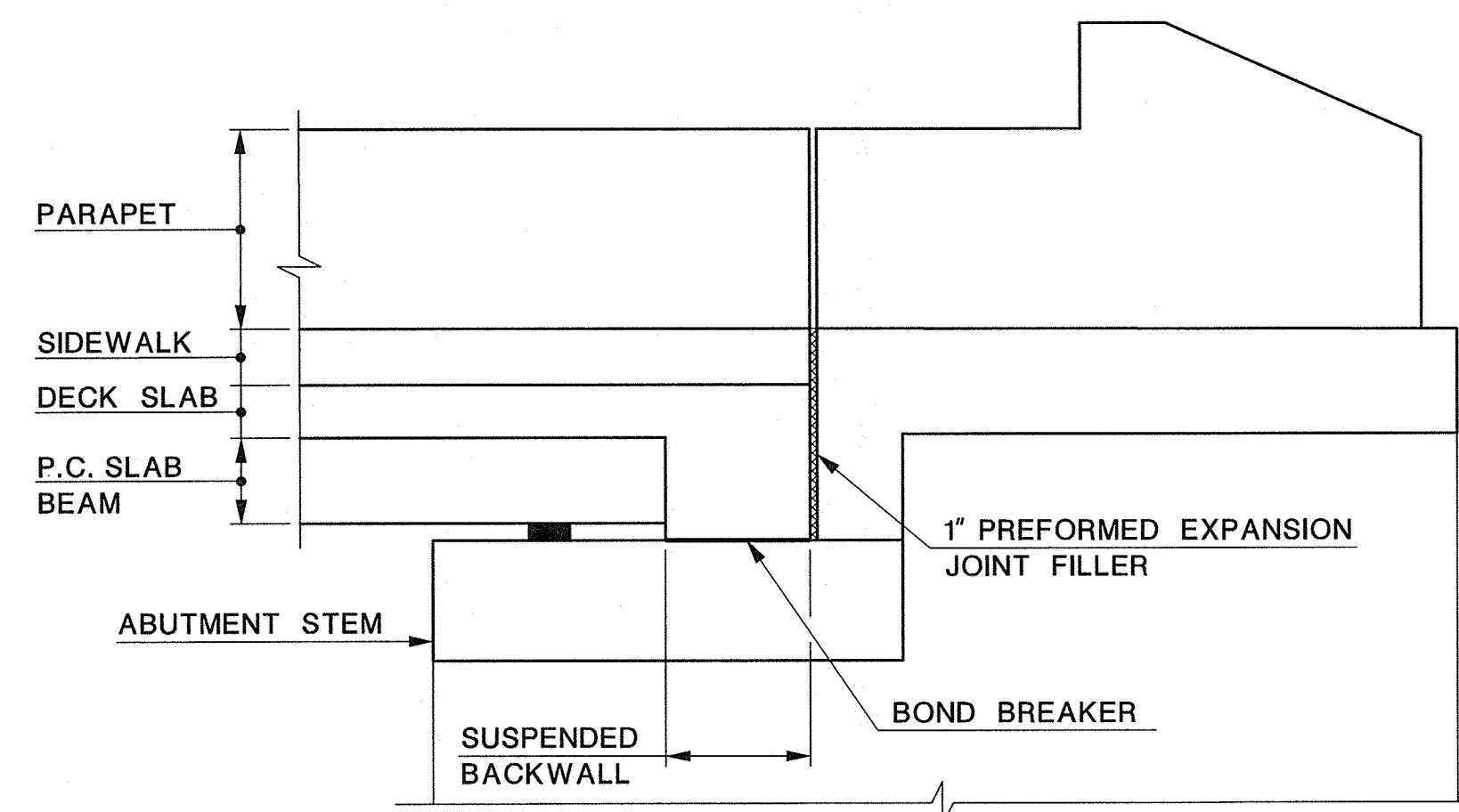
UNION COUNTY ENGINEERING	
REHABILITATION OF SPRINGFIELD AVENUE BRIDGE (Be19) OVER STREAM 3-55 TOWNSHIP OF BERKELEY HEIGHTS	
DECK DETAILS 1	
MANUEL J. VERA CARABALLO, P.E. NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600 <i>Manuel Vera</i> DATE 11/15/16	
Dewberry Engineers Inc. Certificate of Authorization No. 24GA28047600 Bloomfield, N.J.	SCALE: AS SHOWN DATE: NOVEMBER 2016 SHEET NO. 35 OF 40



DECK ARMOR DETAIL
SCALE: 1/2" = 1'-0"



JOINT DETAIL AT SIDEWALK
SCALE: 1/2" = 1'-0"



BRIDGE PARTIAL ELEVATION
(NW WINGWALL SHOWN, ALL OTHERS SIMILAR)
SCALE: 1/2" = 1'-0"

NOTES:

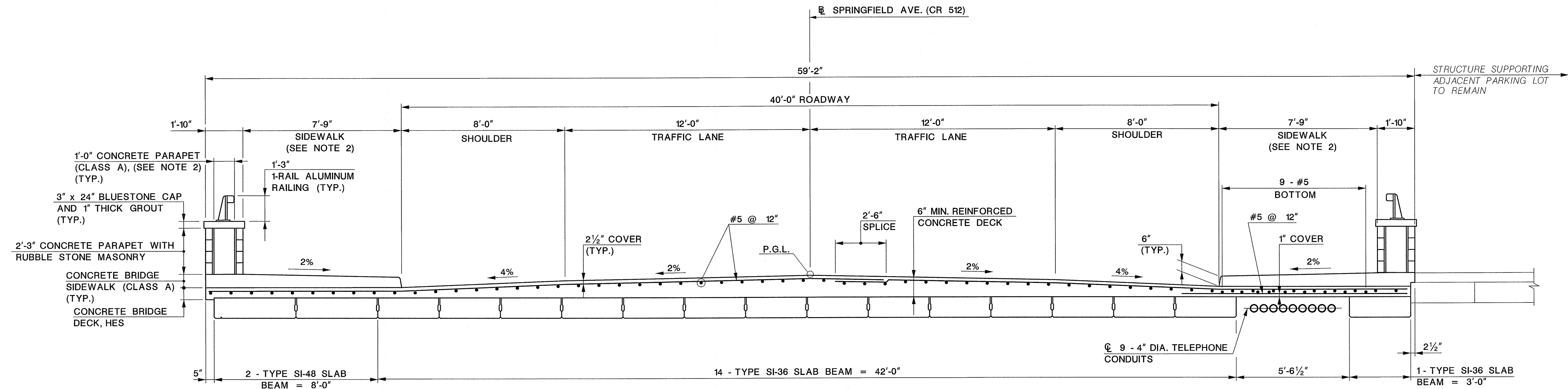
1. DECK ARMOR STEEL TO BE AASHTO M270, GR. 36 (ASTM A709, GR. 36). HOT DIP GALVANIZE AFTER FABRICATION. INCLUDE COST OF DECK ARMOR, JOINT FILLER AND SEALER IN THE PRICE BID FOR THE ITEM "CONCRETE BRIDGE DECK, HES".
2. INSTALL AUTOMATIC END WELDED STUDS BEFORE ZINC COATING OF ASSEMBLY. CLEAN RUST AND SCALE BY GRINDING AREAS WHERE THE STUDS ARE TO BE WELDED.
3. FABRICATE ARMOR JOINT AS ONE UNIT. NO FIELD WELDING WILL BE ALLOWED.
4. BOND BREAKER FOR THE SUSPENDED BACKWALL AND PREFORMED JOINT EXPANSION JOINT SEALER WILL NOT BE MEASURED FOR PAYMENT. INCLUDE THE COST IN THE PRICE BID FOR THE ITEM "CONCRETE DECK, HES". BOND BREAKER TO BE APPROVED BY THE ENGINEER.

LEGEND:
E.F. - EACH FACE
N.F. - NEAR FACE

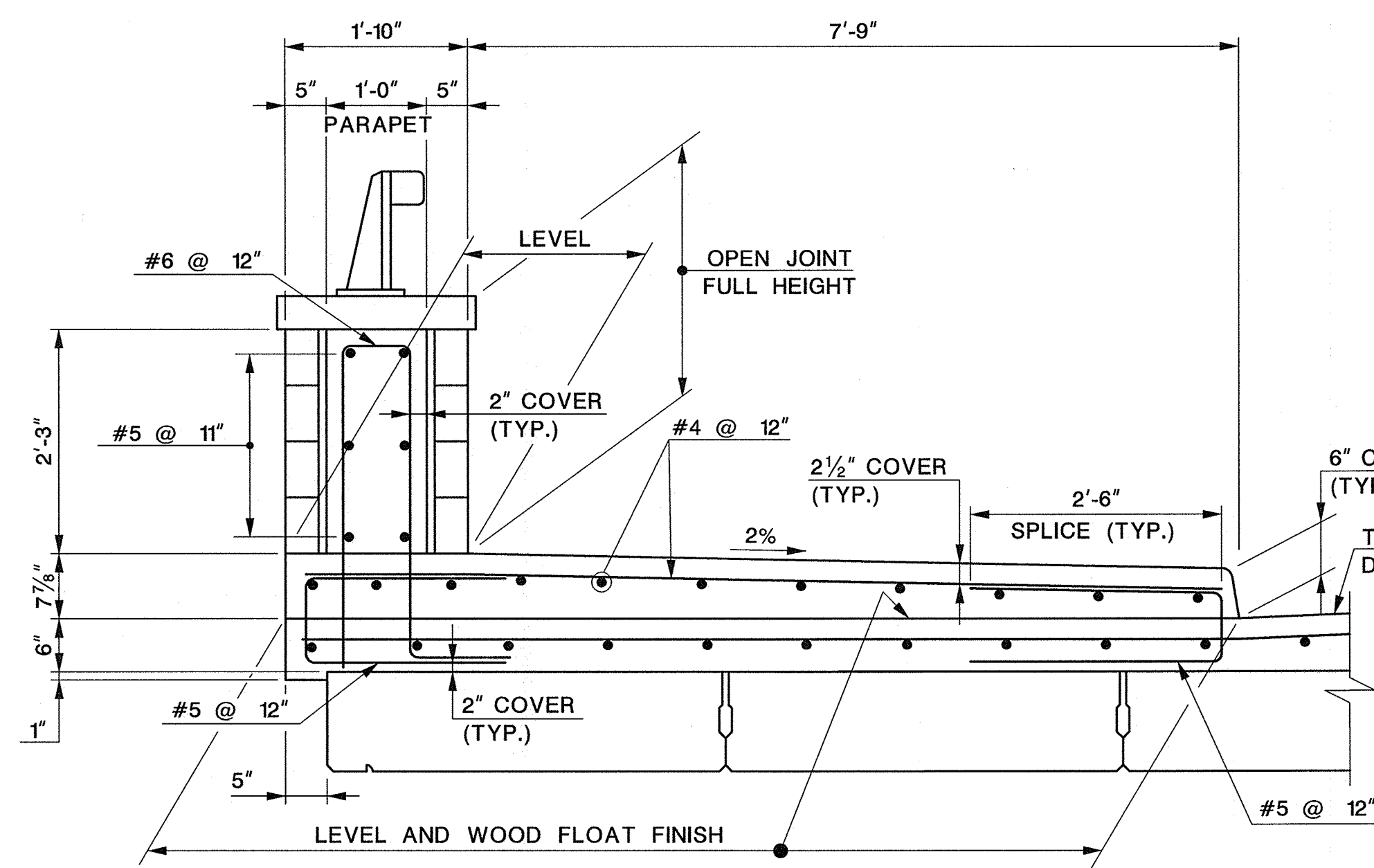


REVISION	
DATE	DESCRIPTION

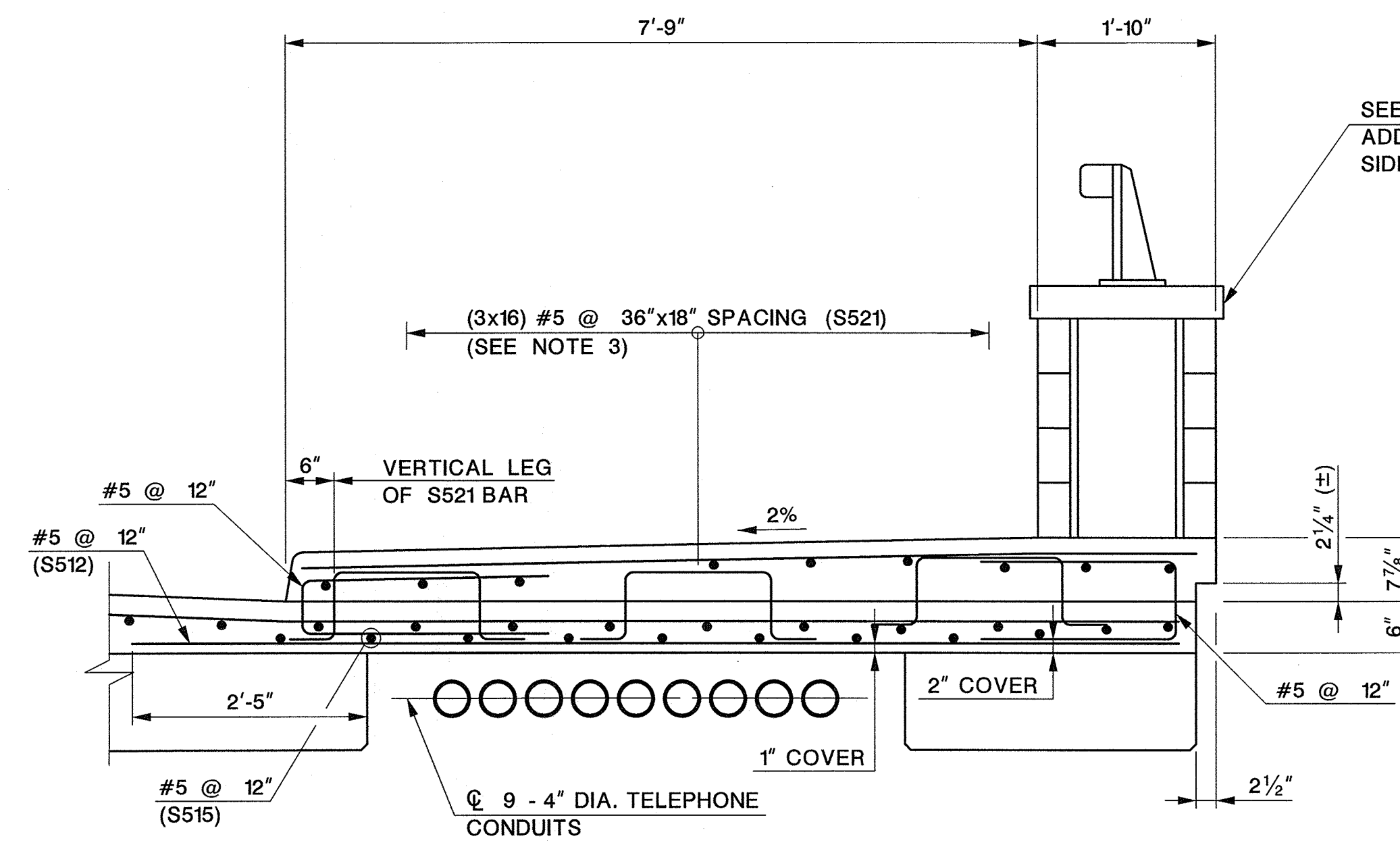
UNION COUNTY ENGINEERING	
REHABILITATION OF SPRINGFIELD AVENUE BRIDGE (Be19) OVER STREAM 3-55 TOWNSHIP OF BERKELEY HEIGHTS	
DECK DETAILS 2	
MANUEL J. VERA CARABALLO, P.E. <small>NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600</small>	
<i>Manuel J. Vera</i>	DATE 11/15/16
Dewberry Engineers Inc. <small>Certificate of Authorization No. 24GA28047600 Bloomfield, N.J.</small>	SCALE: AS SHOWN DATE: NOVEMBER 2016 SHEET NO. 36 OF 40



TYPICAL BRIDGE SECTION
SCALE: 3/8" = 1'-0"



NORTH SIDEWALK



SOUTH SIDEWALK

SIDEWALK REINFORCEMENT DETAIL
SCALE: 3/4" = 1'-0"

SEE NORTH SIDEWALK FOR ADDITIONAL PARAPET AND SIDEWALK INFORMATION

- NOTES:
1. ALL REINFORCEMENT STEEL TO BE GALVANIZED.
 2. TO BE CONSTRUCTED UNDER STAGE 2A AND 2B. SEE ROADWAY PLANS FOR STAGING AND TRAFFIC CONTROL.
 3. PLACE BARS IN A TWO DIMENSIONAL ARRAY. SPACE VERTICAL LEGS TO BE 18" MAX. IN BOTH DIRECTIONS.
 4. LIMIT LOAD OVER UTILITY BAY TO 250 PSF PRIOR TO SIDEWALK CONSTRUCTION.

- REFERENCES:
1. FOR INTERFACE WITH ADJACENT STRUCTURE DETAIL, SEE SHEET NO. 32.
 2. FOR ARCHITECTURAL DETAILS, SEE SHEET NO. 39.

UNION COUNTY ENGINEERING
REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

SUPERSTRUCTURE
CROSS SECTION

MANUEL J. VERA CARABALLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600

DATE 11/15/16

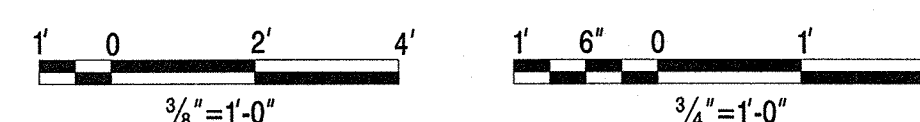
Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J.

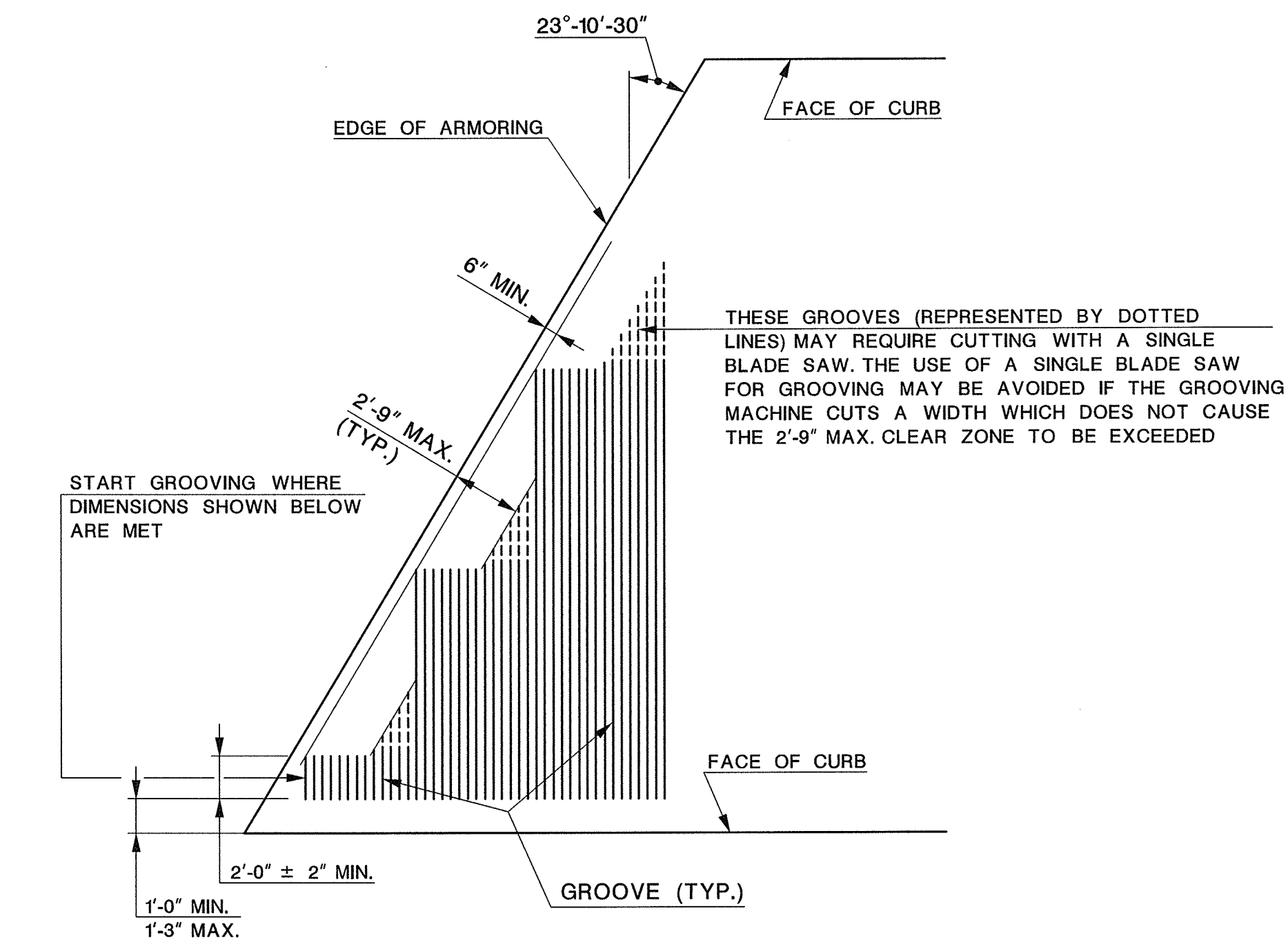
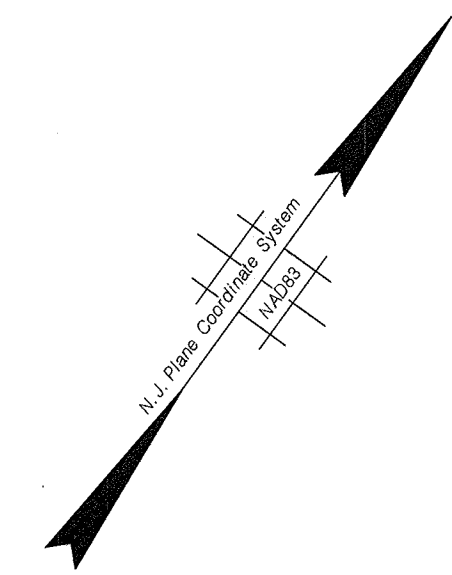
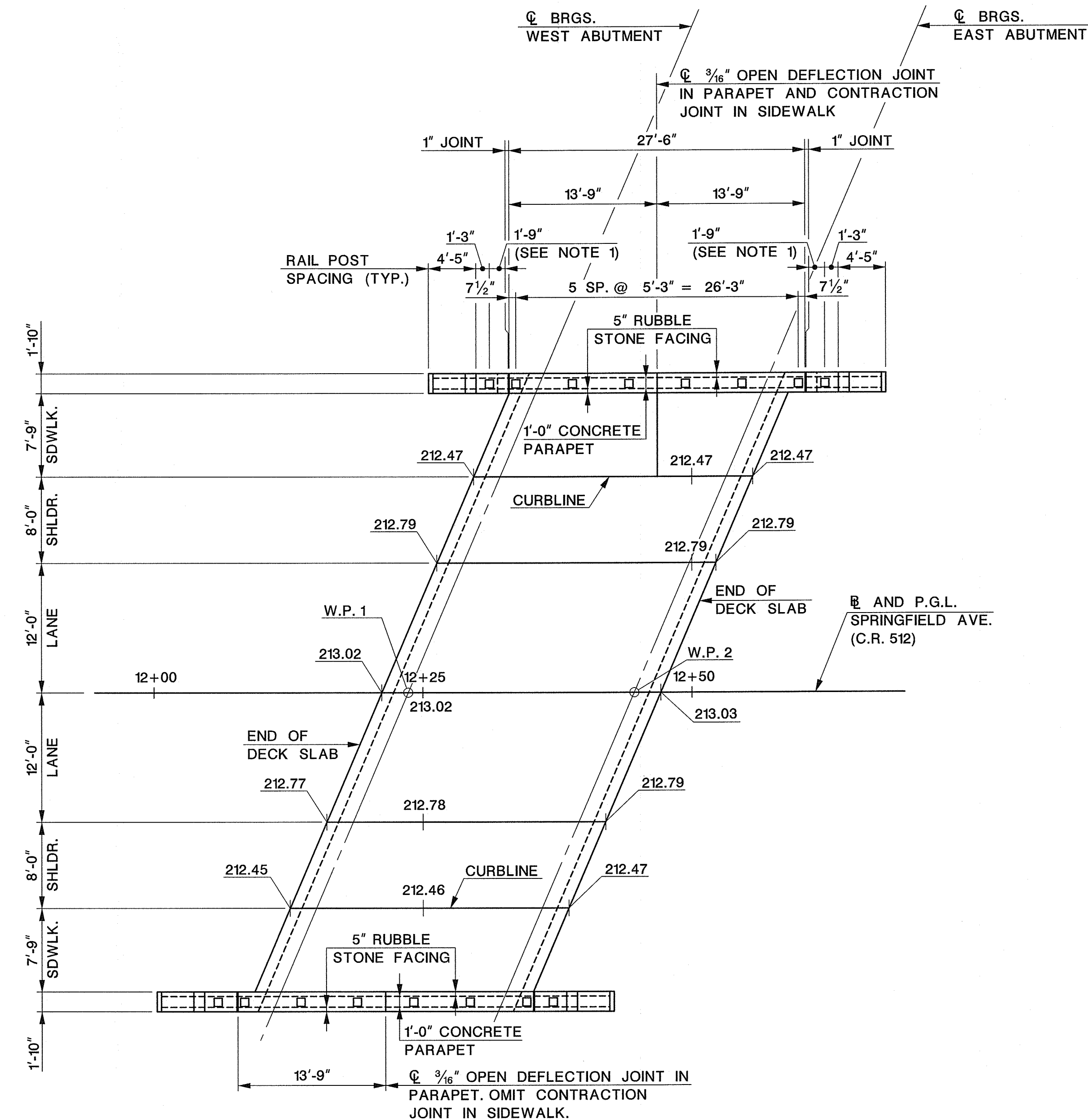
SCALE: AS SHOWN

DATE: NOVEMBER 2016

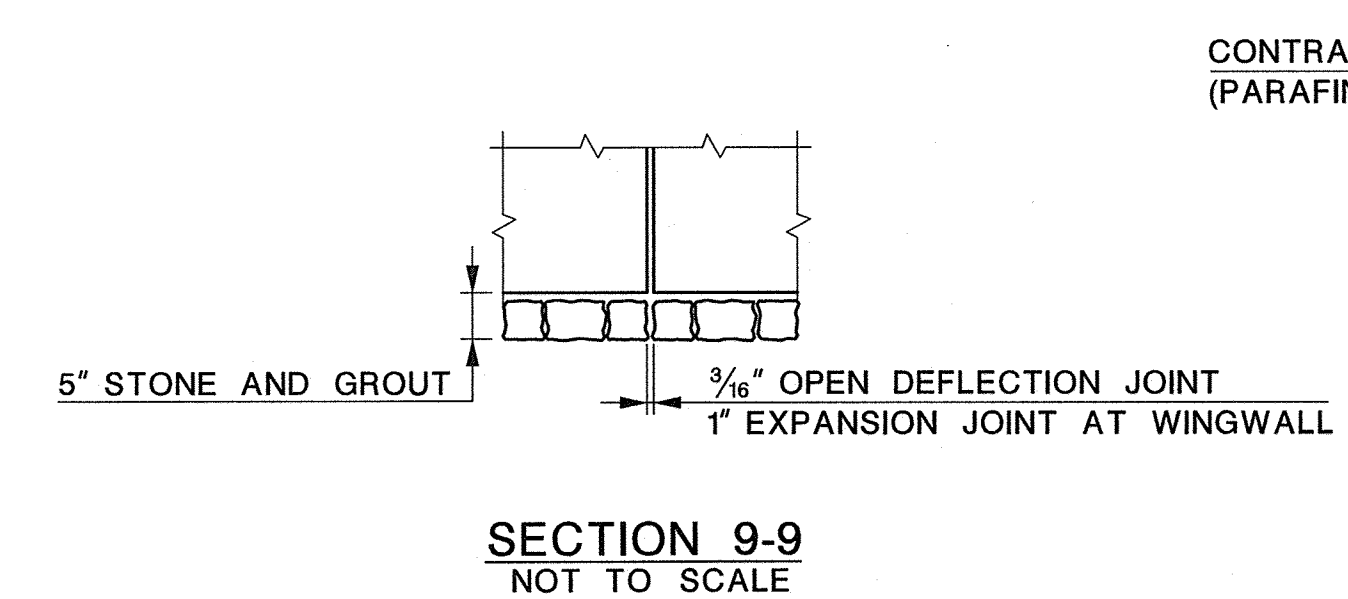
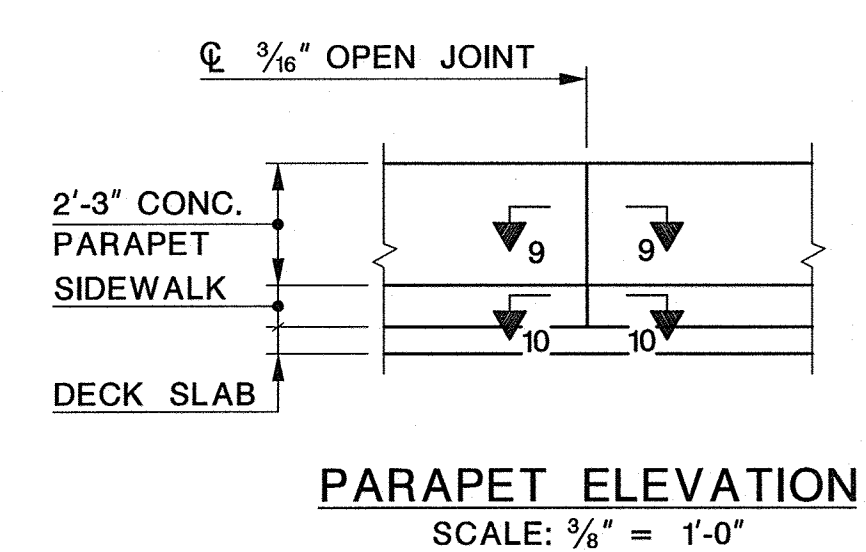
SHEET NO. 37 OF 40

DATE	REVISION DESCRIPTION





NOTE:
SAWCUT GROOVES SHALL BE RECTANGULAR IN CROSS SECTION.



NOTES:
1. PROVIDE RAIL EXPANSION SPLICE THIS BAY.
2. OMIT CONTRACTION JOINTS IN SOUTH SIDEWALK.

REFERENCES:
1. FOR ARCHITECTURAL DETAILS, SEE SHEET NO. 39.

UNION COUNTY ENGINEERING

REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

DECK GRADING PLAN

MANUEL J. VERA CARABALLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009800

DATE: 11/15/16

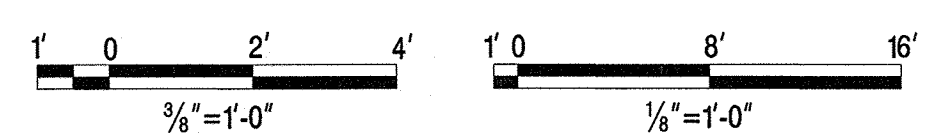
Dewberry Engineers Inc.
Certificate of Authorization No. 24GA28047800
Bloomfield, N.J.

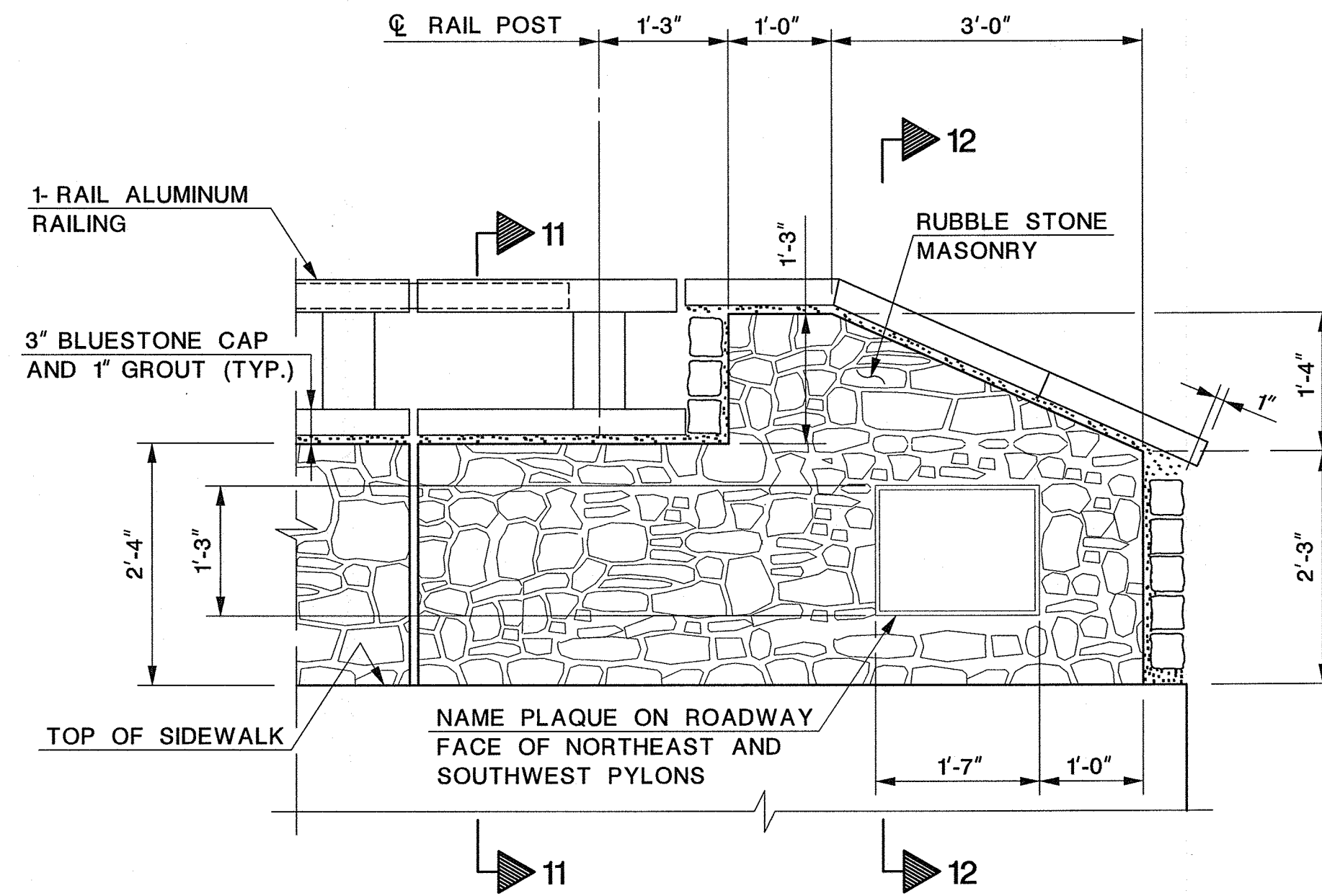
SCALE: AS SHOWN

DATE: NOVEMBER 2016

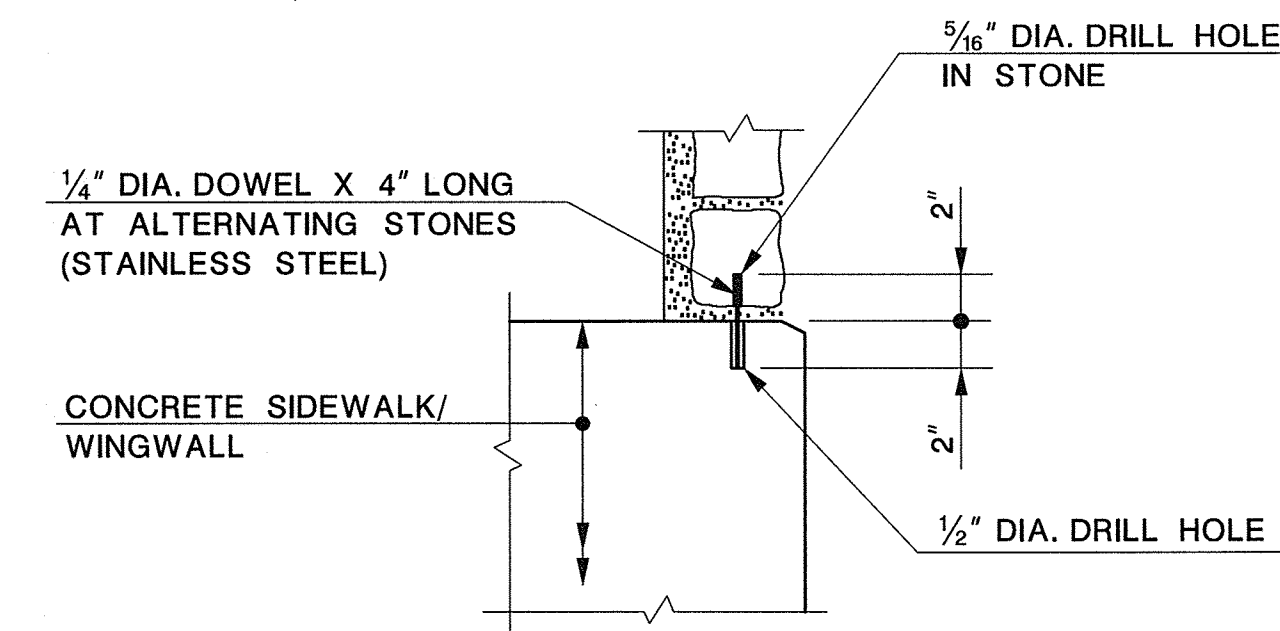
SHEET NO. 38 OF 40

REVISION	
DATE	DESCRIPTION

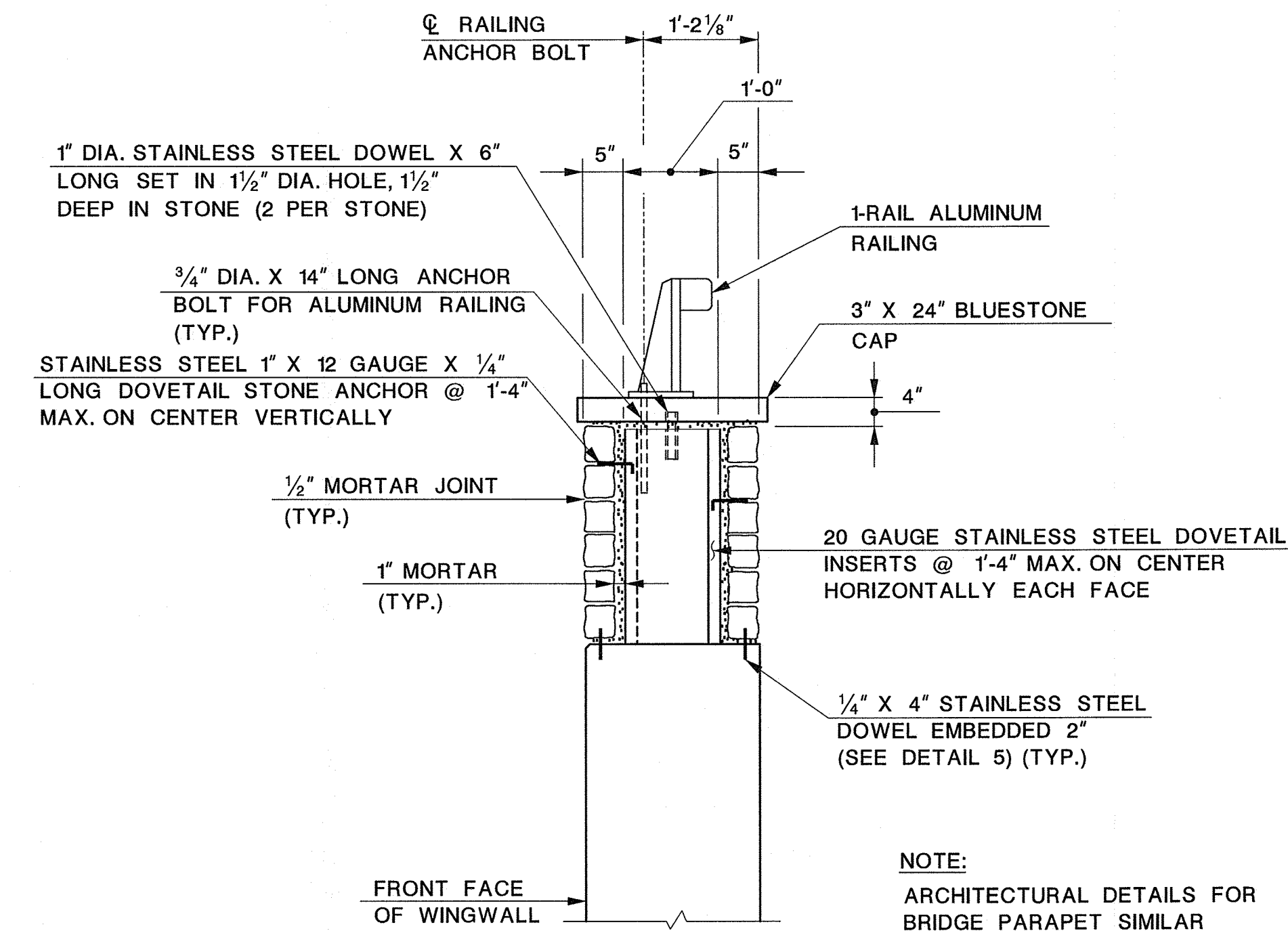




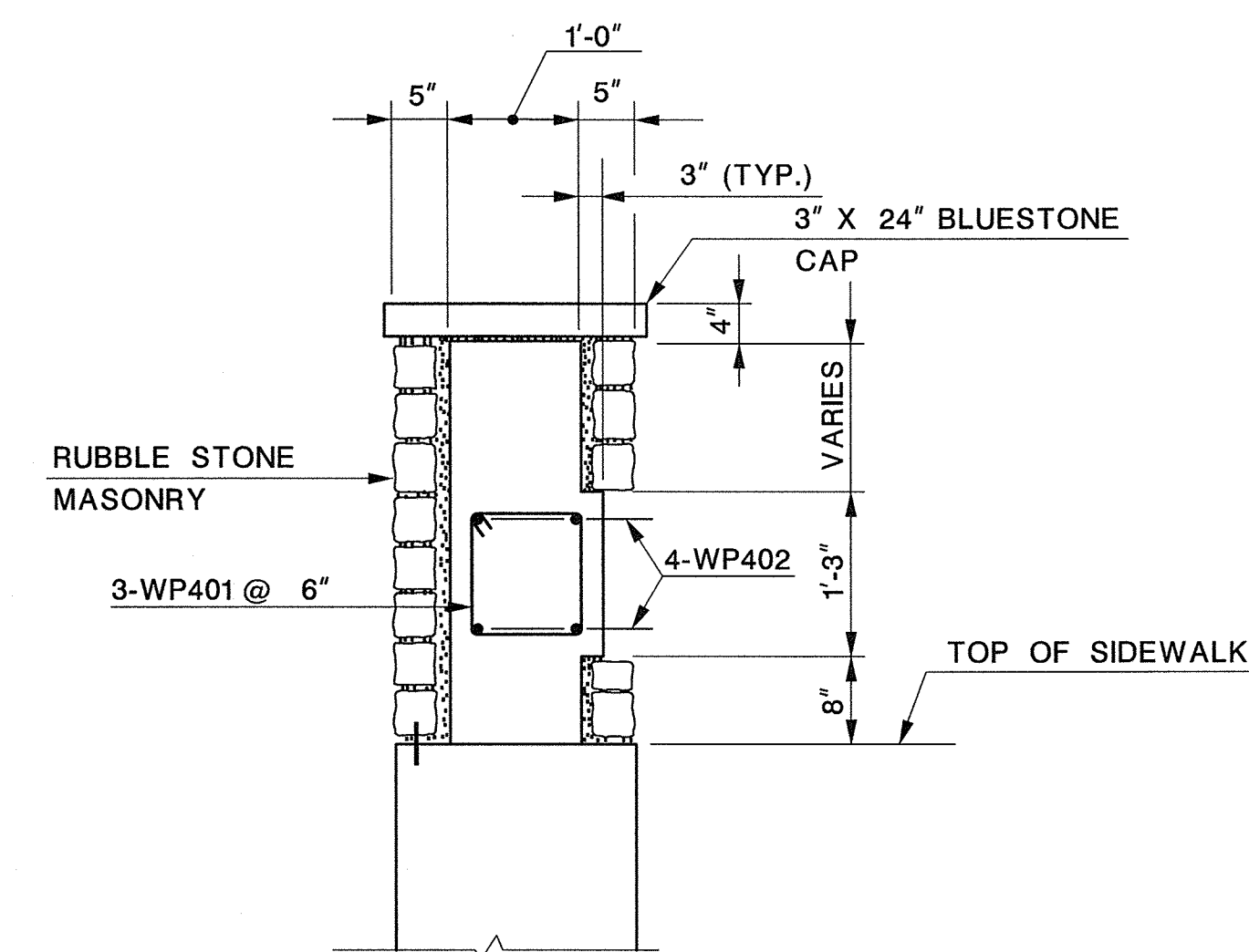
PYLON ELEVATION
SCALE: 3/4" = 1'-0"



DETAIL 5
NOT TO SCALE



SECTION 11-11
SCALE: 3/4" = 1'-0"



SECTION 12-12
SCALE: 3/4" = 1'-0"

- NOTES:**
1. ARCHITECTURAL DETAILS FOR WINGWALL PARAPET SHOWN, DETAILS FOR BRIDGE PARAPET SIMILAR.
 2. STEEL FOR MASONRY SHELF TO BE AASHTO M270 (ASTM A709) HOT DIPPED GALVANIZED.

- REFERENCES:**
1. FOR RAILING DETAILS, SEE NJDOT STANDARD DRAWING BCD-509-3 WITH MODIFICATIONS AS SHOWN IN THESE PLANS.

UNION COUNTY ENGINEERING
REHABILITATION OF
SPRINGFIELD AVENUE BRIDGE (Be19)
OVER STREAM 3-55
TOWNSHIP OF BERKELEY HEIGHTS

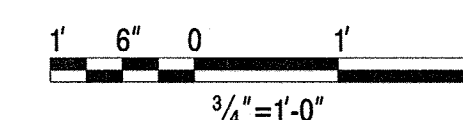
ARCHITECTURAL DETAILS

MANUEL J. VERA CARABALLO, P.E.
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600

DATE: 11/15/16

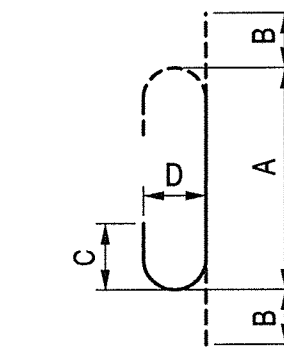
Dewberry Engineers Inc. SCALE: AS SHOWN DATE: NOVEMBER 2016
Certificate of Authorization No. 24GA28047600
Bloomfield, N.J. SHEET NO. 39 OF 40

REVISION	
DATE	DESCRIPTION

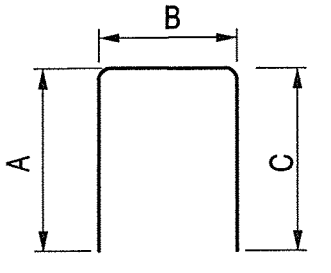


BAR BENDING DIAGRAMS

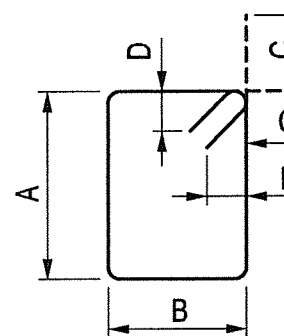
ALL DIMENSIONS ARE OUT TO OUT OF BARS. ALL REINFORCEMENT TO BE GALVANIZED



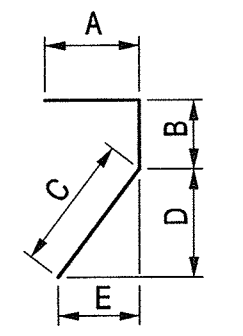
TYPE 1



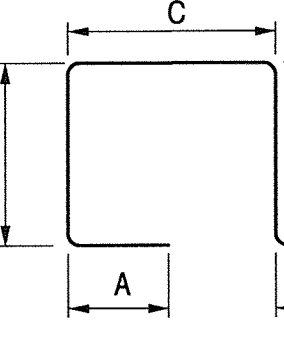
TYPE 2



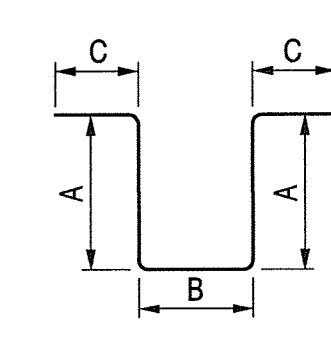
TYPE 6



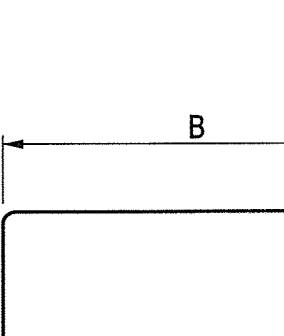
TYPE 10



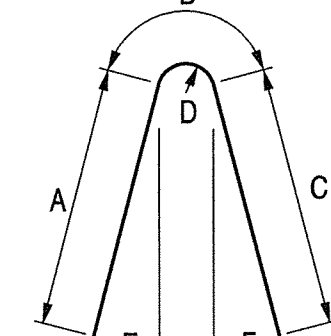
TYPE 11



TYPE 13



TYPE 16



TYPE 22

- NOTES: 1. DOWEL LENGTHS DETAILED ASSUME A 6" EMBEDMENT DEPTH. IF EMBEDMENT DEPTH IS ADJUSTED PER GROUT MANUFACTURER'S RECOMMENDATION, ADJUST THE DOWEL LENGTHS ACCORDINGLY.

UNION COUNTY ENGINEERING

REHABILITATION OF SPRINGFIELD AVENUE BRIDGE (Be19) OVER STREAM 3-55 TOWNSHIP OF BERKELEY HEIGHTS

BAR LIST

MANUEL J. VERA CARABALLO, P.E. NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE05009600

DATE 11/15/16

Dewberry Engineers Inc. SCALE: DATE: NOVEMBER 2016 AS SHOWN SHEET NO. 40 OF 40

Table with 2 columns: REVISION, DATE, DESCRIPTION

Table with columns: MARK, SIZE, TYPE, LENGTH, QTY, A, B, C, D, E, F, G, REMARKS. Section: WEST ABUTMENT

Table with columns: MARK, SIZE, TYPE, LENGTH, QTY, A, B, C, D, E, F, G, REMARKS. Section: EAST ABUTMENT (CONTINUED)

Table with columns: MARK, SIZE, TYPE, LENGTH, QTY, A, B, C, D, E, F, G, REMARKS. Section: EAST ABUTMENT

Table with columns: MARK, SIZE, TYPE, LENGTH, QTY, A, B, C, D, E, F, G, REMARKS. Section: DECK

- LEGEND: E.F. - EACH FACE, N.F. - NEAR FACE, R.F. - REAR FACE, NW - NORTHWEST, NE - NORTHEAST, SW - SOUTHWEST, SE - SOUTHEAST, TRANS. - TRANSVERSE, LONG. - LONGITUDINAL, HORIZ. - HORIZONTAL, VERT. - VERTICAL, UTIL. - UTILITY

