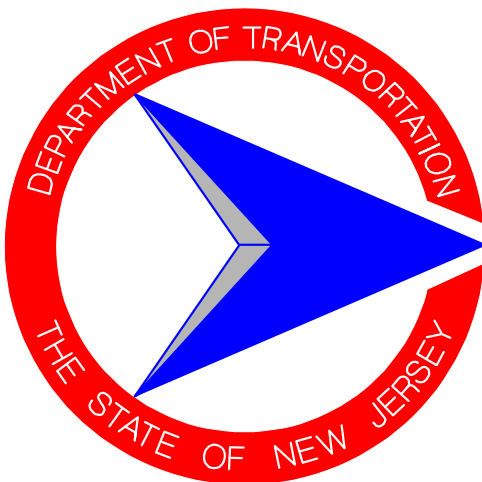


State of New Jersey Department of Transportation



Special Provisions For Locally Administered Federal Aid Projects

FY 2026 Edition

May 2026

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
WHITING-NEW EGYPT ROAD OVER RIDGE WAY
FEDERAL PROJECT NO. 0539301

SPECIAL PROVISIONS

GENERAL

All awards shall be made subject to the approval of the New Jersey Department of Transportation. No construction shall start before approval of said award by the New Jersey Department of Transportation and execution of the Federal Project Agreement between the NJDOT and the County. Prior to the start of construction, the contractor must submit the following Material Questionnaires, DC-2891 and SA-11, listing all sources of materials. Any materials used on the project from a non-approved New Jersey Department of Transportation source will be considered non-participating. The County must notify the District Office, Division of Local Aid and Economic Development of the construction commencement date at least five (5) calendar days prior to the proposed start of construction and the actual construction start date once it is known.

Award of contract and subletting will not be permitted to, material will not be permitted from, and use of equipment will not be permitted that is owned and/or operated by, firms and individuals included in the report of suspensions, debarments and disqualifications of firms and individuals as maintained by the Department of the Treasury, Division of Purchas & Property, Award of Contract Compliance & Administration, Trenton NJ 08625 (609-292-5400).

<https://www.nj.gov/labor/wageandhour/registration-permits/register/debarmentlist.shtml>

And the Federal Government's System for Award Management (SAM), located at <http://www.sam.gov/SAM/> for federally assisted contracts.

Payment for a pay item in the proposal includes all the compensation that will be made for the work of that item as described in the contract documents unless the "measurement and payment" clause provides that certain work essential to that item will be paid for under another pay item.

Whenever any section, subsection, subpart or subheading is amended by such terms as changed to, deleted or added it is construed to mean that it amends that section, subsection, subpart or subheading of the 2019 Standard Specifications unless otherwise noted.

Whenever reference to page number is made, it is construed to refer to the 2019 Standard Specifications unless otherwise noted.

Henceforth in these special provisions whenever reference to the State, Department, Regional Construction Engineer, ME, or RE is made, it is construed to mean the particular municipality or county, or their representative, executing this contract unless otherwise noted.

Whenever reference to Title 27 is made, it is construed to mean Title 40.

SPECIAL PROVISIONS

Construction of CR 539 Overpass (Str. No. 1523-031), Whiting-New Egypt Road over Ridge Way Federal Project No. 0539301

AUTHORIZATION OF CONTRACT

The Contract is authorized by the provisions of Title 40 of the Revised Statutes of New Jersey and supplements thereto, and Title 23 of the United States Code - Highways.

SPECIFICATIONS TO BE USED

The 2019 Standard Specifications for Road and Bridge Construction, of the New Jersey Department of Transportation (Department) as amended herein will govern the construction of this Project and the execution of the Contract.

These Special Provisions consist of the following:

Pages 1 to 115 inclusive.

General wage determinations issued under Davis-Bacon and related acts, published by US Department of Labor, may be obtained from the Wage Determinations online website at sam.gov. Select state, county and construction type heading: HIGHWAY where the Project is to be performed then click Search.

Pay the prevailing wage rates determined by the United States Secretary of Labor and the New Jersey Department of Labor and Workforce Development. If the prevailing wage rate prescribed for any craft by the United States Secretary of Labor is not the same as the prevailing wage rate prescribed for that craft by the New Jersey Department of Labor and Workforce Development, pay the higher rate.

State wage rates may be obtained from the New Jersey Department of Labor & Workforce Development (Telephone: 609-292-2259) or by accessing the Department of Labor & Workforce Development's website at https://www.nj.gov/labor/wagehour/wagerate/prevailing_wage_determinations.html. The State wage rates in effect at the time of award are part of this Contract, pursuant to Chapter 150, Laws of 1963 (N.J.S.A. 34:11-56.25 et seq.)

If an employee of the Contractor or subcontractor has been paid a rate of wages less than the prevailing wage, the Department may suspend the Work and declare the Contractor in default.

The NJDOT must report all suspected or reported violations to the federal agency providing the funding for the project.

Contractor's compliance is required with the Copeland "Anti-Kickback" Act, (40 U.S.C. 3145), as supplemented by the Department of Labor regulations (29 CFR Part 3, "Contractors and subcontractors on Public Building or Public Work Financed in Whole or In Part by Loans or Grants from the United States"). Each contractor or subcontractor is prohibited from inducing by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The NJDOT must report all suspected or reported violations to the federal agency providing the funding for the project.

The following information is located at the end of these Special Provisions:

1. Disadvantaged Business Enterprise Utilization. (Federal Aid Project Attachment 1)
2. Specific Equal Employment Opportunity Responsibilities on NJDOT Federal Aid Projects. (Federal Aid Project Attachment 2)
3. Requirements for Affirmative Action to Ensure Equal Employment Opportunity on NJDOT Federal Aid Projects. (Federal Aid Project Attachment 3)
4. Federal Equal Employment Opportunity Contract Specifications for NJDOT Federal Aid Projects. (Federal Aid Project Attachment 4)

5. State of New Jersey Mandatory Equal Employment Opportunity Language on NJDOT Federal Aid Projects. (Federal Aid Project Attachment 5)
6. Investigating, Reporting and Resolving Employment Discrimination and Sexual Harassment Complaints on NJDOT Federal Aid Projects. (Federal Aid Project Attachment 6)
7. Payroll Requirements for NJDOT Federal Aid Projects. (Federal Aid Project Attachment 7)
8. FHWA-1273 Required Contract Provisions, Federal Aid Construction Contracts. (Federal Aid Project Attachment 8)
9. State Mandatory Addendum to FHWA 1273 Required Contract Provision, Federal Aid Construction Contracts as Amended or Supplemented. (Federal Aid Project Attachment 9)
10. Federal Mandatory Equal Opportunity Language on Federal Aid Projects. (Federal Aid Project Attachment 10)
11. Byrd Anti-Lobbying Certification. (Federal Aid Project Attachment 11)

The following additional project specific Attachments are located at the end of these Special Provisions:

Appendix A – Easement Documents

Appendix B – Geotechnical Data

Appendix C – Soil Sampling Test Results

Appendix D – SESC Certification and 5G3 Authorization

DIVISION 100 – GENERAL PROVISIONS

SECTION 101 – GENERAL INFORMATION

101.01 INTRODUCTION

THE FOLLOWING IS ADDED:

The Federal FY begins October 1 of the previous calendar year and the State FY begins July 1 of the previous calendar each year.

101.03 TERMS

THE FOLLOWING TERM IS ADDED:

Full Traffic Access. All work is complete to allow safe unencumbered use of the final paved portion of roadway throughout the project including but not limited to striping, RPMs, rumble strips, highway lighting, and traffic signals as determined by the RE.

Completion. When all of the following have occurred:

PART (1) IS CHANGED TO:

1. The Work has been satisfactorily completed in all respects according to the Contract including landscaping Items listed in 811.04, removal of SESC measures, FINAL CLEANUP, and repair of unacceptable work.

101.04 INQUIRIES REGARDING THE PROJECT

THIS SUBSECTION IS CHANGED TO:

Submit inquiries regarding discrepancies, errors, omissions, or concerns regarding the intent or meaning of the Contract to the County as follows:

1. Before Award of Contract.

Submit inquiries and view other questions/answers by following the format prescribed on the project's electronic bidding page.

Include the name of the bidder and contact information. Specify the nature of the inquiry, including anticipated results.

The deadline for submitting inquiries shall be as prescribed on the project's electronic bidding page.

The County will investigate the information provided in the inquiry and if it is determined that a change or response is necessary, the County will issue an addendum.

Requests for postponement of bids will not receive a response. The County will issue an addendum postponing bids if warranted.

2. After Award of Contract.

Submit inquiries through the office of the County Engineer:

Mark Jehnke, PE
Ocean County Engineering Department

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129 Hooper Avenue
PO Box 2191
Toms River, NJ 08754
732.929.2130
mjehnke@co.ocean.nj.us

SECTION 102 – BIDDING REQUIREMENTS AND CONDITIONS

102.01 QUALIFICATION TO BID

THE FIRST PARAGRAPH IS CHANGED TO:

The Bidder is an individual, firm, or corporation submitting a bid for the advertised Work. The Department will not accept bids from Bidders who fail to meet all of the following criteria:

1. For Local Aid Projects- If pre-qualification of bidders is required, the Bidder has been pre-qualified as per the requirements of NJSA 40A:11-1 *et seq.*
2. Before the receipt of the bid or accompanying the bid, the Bidder has disclosed ownership as required by N.J.S.A. 52:25-24.2.
3. At the time the bid is delivered, the Bidder has an effective maximum and project ratings of not less than the amount of its bid.
4. If the Bidder is a corporation not incorporated in the State, the Bidder has been authorized to do business in the State as required by N.J.S.A. 14A:15-2, *et seq.*
5. The Bidder has a valid, current registration with the New Jersey Department of Labor, Division of Wage and Hour Compliance as required by “Public Works Contractor Registration Act,” N.J.S.A. 34:11-56.48, *et seq.*

102.02 BIDDER REGISTRATION AND DOWNLOADING OF THE PROPOSAL DOCUMENTS

THE FIRST PARAGRAPH IS CHANGED TO:

The Contract is being bid by use of an electronic bidding process. Electronic bidding information is available on the County’s purchasing website.

102.04 EXAMINATION OF CONTRACT AND PROJECT LIMITS

THE FIRST SENTENCE OF ITEM 1 IS CHANGED TO:

Soil borings are attached as an appendix to these Special Provisions.:

THE FOLLOWING IS ADDED:

Address all inquiries concerning the contract and the project limits as indicated in 101.04.

102.07 PREPARATION OF THE BID

THIS SUBSECTION IS CHANGED TO:

The bid is the completed Proposal documents that are submitted electronically by the Bidder to the County at the time for the opening of bids, as stipulated in the Notice to Bidders. The Bidder must submit a bid electronically through the County’s OpenGov Electronic Bid Portal. Please do not submit a paper bid submission. Paper bid submissions and/or multiple submissions will be cause for rejection. The Bidder shall include all addenda in the bid. The Bidder shall specify a price in numerals for each Item. The Bidder shall insert the price in the box provided for the lump sum Item under the column

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designated as "Unit Cost." For unit price Items, the Bidder shall insert the per unit price under the column designated "Unit Cost" in the appropriate box at the location provided therefore. When the Bidder intends to bid zero (\$0.00) for an Item, the Bidder shall insert a "0" in the "Unit Cost" column for unit price Items.

When the Proposal contains alternate Items, the Bidder shall insert only the unit price and amount for the lowest priced alternate Item. When alternate Items in the Proposal have a lump sum pay quantity, the Bidder shall insert only the amount for the lowest priced alternate Item. The Bidder shall construct the alternate Item for which a price has been provided. When the Proposal contains groups of alternate Items, the Bidder shall insert only the unit price and amount for each Item within the lowest priced alternate group. The Bidder shall construct the alternate group of Items for which a price has been provided.

The only entries permitted in the bid are the unit or lump sum prices for Items to be bid. The software will perform all extensions of the unit or lump sum prices and calculate the total bid amounts.

The Bidder shall check the bid before submission.

On Federal Aid Projects, all Bidders shall keep records of all DBE and non-DBE firms that provide a bid or quote to the Bidder for the Contract for use in providing the information to the Department in the development of a Bidder's List. The records will include the name, address, phone number, email address, DBE/ESBE status of the firm, NAICS Code(s) applicable to the kind of work the firm would perform on the project and type of work for subcontracted work for each DBE and non-DBE firm that provides a bid or quote for the Contract. This information shall be made available to the Department upon request.

For each Federal Aid Project that they submit a Bid, each Bidder shall prepare a CR-261-DBE and non-DBE Firms Providing a Bid or Quote for the Contract form. All Bidders are required to submit this information on a yearly basis to the Department, with the information submitted to the DCR/AA by September 30 of each year.

102.09 PROPOSAL BOND

THE SECOND PARAGRAPH IS CHANGED TO:

With the bid submission, the Bidder shall submit a guarantee in the amount of not less than ten percent (10%) of the total sum bid, provided such guarantee shall be for no more than twenty thousand (\$20,000.00) dollars. The guarantee may be in one of the following three forms: cashier's check, certified check or Proposal Bond. Make guarantee payable to the County of Ocean. In the event that a cashier's check or certified check is used, evidence of ability to furnish a Performance Bond and a Payment Bond in accordance with Subsection 151.03.01 must also accompany each bid.

102.10 SUBMISSION OF BIDS

THE FIRST AND SEVENTH PARAGRAPHS ARE DELETED.

THE SECOND PARAGRAPH IS CHANGED TO:

The Bidder shall ensure delivery of its bid with all required components and attachments, including, but not limited to the following:

1. Schedule of Items.
2. Proposal Bond form.
3. Other related documents as specified in the Contract.
4. For Federal Aid Projects exceeding a bid amount of \$100,000 or more, Bidder shall certify to the Byrd Anti-Lobbying Act requirements under 31 USC 1352.
5. For Projects subject to the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 to .98, an acknowledgement that the Bidder accounted for the prevailing wage rate in their bid pricing and that the Bidder agrees to pay the prevailing wage rate if awarded the Contract.

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THE FOLLOWING IS ADDED:

A directory of certified Disadvantaged Small Businesses Enterprise firms can be found in the New Jersey Unified Certification Program Vendor Certification database, online at <https://njucp.dbesystem.com/>.

A directory of certified Emerging Small Business Enterprise firms can be found in the Emerging Small Business Program online directory at <http://www.state.nj.us/transportation/business/civilrights/pdf/ESBEDirectory.pdf>.

A directory of registered Small Businesses Enterprise firms can be found in the New Jersey Selective Assistance Vendor Information (NJSAVI) database online at https://www20.state.nj.us/TYTR_SAVI/vendorSearch.jsp.

All of the above directories are to be used as a source of information only and does not relieve the Bidder of their responsibility to seek out Enterprises not listed, prior to bidding.

When the Bidder submits bids for 2 or more Contracts that the Department will open on the same day, the Bidder may submit a single Updated Financial Statement instead of a separate statement for each Contract.

The Bidder is solely responsible for any and all errors and for timely submission of the bid, all components thereof, and all attachments thereto, through the electronic bidding system; the Department assumes no responsibility for any claim arising from the failure of any Bidder or of the electronic delivery system to cause any bid, bid component, or attachment to not be delivered to the Department on or before the time set for the opening of bids.

By submitting its bid to the Department, the Bidder warrants that no person or selling agency has been employed or retained by the Bidder to solicit or secure such Contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by the Bidder for the purpose of securing business, for the breach or violation of which warranty the Department shall have the right to annul such Contract without liability or in its discretion to deduct from the contract price or consideration the full amount of such commission, percentage, brokerage or contingent fee as required by N.J.S.A. 52:34-15.

THE FOLLOWING IS ADDED:

By submitting its bid to the Department, the Bidder warrants that no person or selling agency has been employed or retained by the Bidder to solicit or secure such Contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by the Bidder for the purpose of securing business, for the breach or violation of which warranty the Department shall have the right to annul such Contract without liability or in its discretion to deduct from the contract price or consideration the full amount of such commission, percentage, brokerage or contingent fee as required by N.J.S.A. 52:34-15.

102.13 CONSIDERATION OF BIDS

102.13.01 Bidder Pre-Award Requirements

PART A IS CHANGED TO:

A. Federal Aid Projects

- 1. Contract DBE Goal.** On projects having a Contract DBE goal, all Bidders shall ensure that DBEs have an equal opportunity to receive and participate in the performance of contracts and subcontracts in Federal Aid Projects with the Department. All Bidders shall take all necessary and reasonable steps in accordance with 49 CFR, Part 26 to ensure that DBEs are given equal opportunity to compete for and to perform on the Department's Federal Aid Projects. All Bidders shall not discriminate in the award and performance of any Contract obligation

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including, but not limited to, their performance of their obligations on USDOT assisted contracts as specified in Section 107.

a. All Bidders shall demonstrate commitment of meeting the Contract DBE goal that is specified in the Contract.

- (1) Submit to DCR/AA at time of Bid, or within 5 days after bid opening as a matter of responsibility:
 - (i) a completed and signed Form CR-266 – Schedule of DBE/ESBE/SBE Participation listing each DBE firm being used to meet the Contract goal. Revisions to the CR-266 will not be accepted after its initial submission and before award of the Contract.
 - (ii) a completed and signed Verification of DBE/ESBE/SBE Firm (Form CR-273) for each firm listed on the CR-266 to demonstrate direct written confirmation from each DBE firm of 12 willingness to participate on the Contract, confirming the kind and amount of work that was provided on the Contractor's CR-266, and, if applicable,
 - (iii) a completed and signed DBE/ESBE/SBE Regular Dealer/Supplier Verification (Form CR-272) for all Regular Dealers/Suppliers listed on the CR-266 form, and, if applicable,
 - (iv) a completed and signed DBE/ESBE/SBE Trucking Verification (Form CR-274) for all DBE trucking firms listed on the CR-266.

Firms listed on the CR-266 will not be counted toward the Contract DBE goal unless completed and signed CR-273 form(s), and applicable CR-272 and CR-274 form(s) are submitted to the DCR/AA within the 5 days after bid opening. The CR-273, CR-272, and CR-274 forms must be completed and signed by each respective DBE firm. The Bidder shall not complete any portion of the CR-273, CR-272, and CR-274 forms.

These forms must be submitted through a designated email - DOT-CR.Verifications@dot.nj.gov.

If the last day for a Bidder's submission of the CR-266, CR-273, and applicable CR-272 and CR-274 forms falls on a Saturday, Sunday, or Federal holiday, the CR-266, CR-273, and applicable CR-272 and CR-274 forms are due on the next day that is not a Saturday, Sunday, or Federal holiday. In circumstances where the Department is closed for all or part of the day the forms are due, the submission of the forms is due on the next day.

- (2) If, at time of Submission, the commitment to meet the Contract DBE goal is not shown on the CR-266, the Bidder must submit at time of Bid, or within 5 days after bid opening, documented evidence of good faith effort(s) to attain the Contract DBE goal, for review and approval by the DCR/AA. Submittal of such information does not imply DCR/AA approval. The Department's DCR/AA has sole authority to determine whether the Bidder met the Contract DBE goal or made adequate good faith efforts to do so.
 - (i) Good faith efforts are actions taken to achieve a DBE goal or other requirement of the DBE Program which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement, including affirmative action measures designed to implement the established objectives of an affirmative action plan that a Bidder may utilize to obtain DBE participation. Efforts to include firms not certified as DBEs in New Jersey are consequently not good faith efforts to meet the DBE Contract goal. A promise to use DBEs after contract award is not considered to be responsive and does not constitute good faith efforts. Good faith effort actions include, but are not limited to:
 - (a) Conducting market research to identify small business contractors and suppliers and soliciting through all reasonable and available means the interest of all certified DBEs that have the capability to perform the work of the Contract. This may include attendance at pre-bid and business matchmaking meetings and events, advertising and/or written notices, posting of Notices of Sources Sought and/or Requests for Proposals, written notices or emails to all DBEs listed in the New Jersey Unified Certification Program Vendor Certification database of transportation firms that

specialize in the areas of work desired (as identified by the North American Industry Classification system (NAICS) code noted in the New Jersey Unified Certification Program Vendor Certification database) and which are located in the area or surrounding areas of the project. The Bidder shall solicit this interest as early in the bidding process as practicable to allow the DBEs to respond to the solicitation and submit a timely offer for the subcontract. The Bidder should determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

- (b) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out Contract work items into economically feasible units (for example, smaller tasks or quantities) to facilitate DBE participation, even when the Bidder might otherwise prefer to perform these work items with its own forces. This may include, where possible, establishing flexible timeframes for performance and delivery schedules in a manner that encourages and facilitates DBE participation.
- (c) Providing interested DBEs with adequate information about the Plans, specifications, and requirements of the Contract in a timely manner to assist them in responding to a solicitation with their offer for the subcontract.
- (d1) Negotiating in good faith with interested DBEs. It is the Bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional Agreements could not be reached for DBEs to perform the work.
- (d2) Bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as Contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a Bidder's failure to meet the Contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a Bidder to perform the work of a Contract with its own organization does not relieve the Bidder of the responsibility to make good faith efforts. Bidders are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
- (e1) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union status) are not legitimate causes for the rejection or non-solicitation of bids in the Bidder's efforts to meet the Contract DBE goal. Another practice considered an insufficient good faith effort is the rejection of the DBE because its quotation for the work was not the lowest received. However, nothing in this paragraph shall be construed to require the Bidder to accept unreasonable quotes in order to satisfy the Contract goals.
- (e2) A Bidder's inability to find a replacement DBE at the original price is not alone sufficient to support a finding that good faith efforts have been made to replace the original DBE. The fact that the Bidder has the ability and/or desire to perform the Contract work with its own forces does not relieve the Bidder of the obligation to make good faith efforts to find a replacement DBE, and it is not a sound basis for rejecting a prospective replacement DBE's reasonable quote.
- (f) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Bidder.

- (g) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services, but not directly or indirectly providing equipment, supplies or materials to the DBE.
 - (h) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.
- (3) If the Department determines that the apparent lowest responsive Bidder has failed to commit to meet the Contract DBE Goal and made adequate good faith efforts to do so, the Department must, before awarding the Contract, provide the Bidder an opportunity for Administrative Reconsideration.

The apparent lowest responsive Bidder will have the opportunity to provide written documented evidence or argument concerning the issue of whether it met the Contract DBE goal or made adequate good faith efforts to do so to an official who did not take part in the original determination that the Bidder failed to meet the Contract DBE goal or made adequate good faith effort to do so, pursuant to 49 C.F.R. 26.53(d). The apparent lowest responsive Bidder has the opportunity to meet in person with the Reconsideration Official to discuss the issue of whether it met the Contract DBE goal or made adequate good faith efforts to do so.

Within 1 working day of being notified by the Department that it is not a responsible Bidder because it failed to meet the Contract DBE goal and made adequate good faith efforts to do so, a Bidder may make a request for administrative reconsideration in writing to the New Jersey Department of Transportation, Director, Division of Procurement, PO Box 605, Trenton, New Jersey, 08625-0605. The Bidder must specify one of the following types of administrative reconsideration in its request:

- (i) **Written Review by the Department.** If the Bidder seeks written review by the Department, it must submit written documented evidence or argument proving the Bidder met the Contract DBE goal at time of Bid or submitted adequate good faith efforts to do so within 5 days after bid opening, to the Department within 2 working days of the Bidder's request for Administrative Reconsideration.
- (ii) **In-Person Meeting.** If the Bidder seeks an in-person meeting by the Department it must submit written documented evidence or argument proving the Bidder met the Contract DBE goal at time of Bid or submitted adequate good faith efforts to do so within 5 days after bid opening, to the Department within 2 working days of the Bidder's request for Administrative Reconsideration. The in-person meeting will be scheduled by the Department as soon as time permits.

If the timeframe for a Bidder's request for Administrative Reconsideration, or submission of written documented evidence or argument proving the Bidder met the Contract DBE goal or submitted adequate good faith effort to do so falls on a weekend or holiday, the written requests are due to the Department on the next working day. The Department, at its discretion, may not review or consider any documentation or argument in its administrative reconsideration that was not contained in the Bidder's request for written review or in-person meeting with the Department.

Once the Reconsideration Official has made a determination, the Department will send the Bidder a written decision on reconsideration, explaining the basis for finding that the Bidder did or did not meet the DBE goal or make an adequate good faith effort to do so.

Failure to follow this request procedure may result in the Bidder's waiver of the right for Administrative Reconsideration under this Section.

The result of the reconsideration process is not administratively appealable to the USDOT.

2. **Contract ESBE Goal.** Where a Contract ESBE goal is set, the Bidder shall follow all requirements and the same administrative reconsideration procedure of 102.13.

PART B IS DELETED.

PART C IS CHANGED TO:

B. All Projects. Prior to the time of contract award:

1. Submit proof of business registration with the Division of Revenue and Enterprise Services in the New Jersey Department of Treasury as required by N.J.S.A. 52:32-44. Information on how a business can register and obtain proof of business registration can be accessed on the internet at www.nj.gov/njbgs.
2. On the Disclosure of Investment Activities in Iran (Form DC-16) provided by the Department, certify pursuant to N.J.S.A. 52:32-58, that neither the Bidder, nor one of its parents, subsidiaries, and affiliates (as defined in N.J.S.A. 52:32-56(e)(3)), is listed on the Department of the Treasury's List of Persons or Entities Engaging in Prohibited Investment Activities in Iran and that neither is involved in any of the investment activities set forth in N.J.S.A. 52:32-56(f). If the Bidder is unable to certify, the Bidder shall provide a detailed and precise description of such activities to the Department.
3. **FOR LOCAL AID PROJECTS:** The Bidder must certify, in writing, pursuant to NJSA 52:32-44.1, to the County that neither the Bidder nor its affiliates are debarred at the federal level from contracting with a federal government agency. The County shall not make, negotiate, or award to any Bidder that does not provide the above certification. In addition, all Bidders must register with the federal System for Award Management (SAM) prior to contract award. In order to comply with this requirement, Bidders must register in SAM at sam.gov and the Department will verify the successful Bidder's registration in SAM prior to contract award.
4. On the "Certification of Non-Involvement in Prohibitive Activities in Russia or Belarus Form" provided by the Department, certify pursuant to N.J.S.A. 52:32-60.1, that neither the Bidder nor its affiliates are engaged in prohibited activities in Russia or Belarus as defined therein.
5. Submit proof of valid Public Works Contractor Registration issued by the New Jersey Department of Labor, Division of Wage and Hour Compliance according to N.J.S.A. 34:11-56.48, *et seq.*
6. N.J.S.A. 34:1A-1.16 authorized the New Jersey Department of Labor and Workforce Development (NJDOLE) to create a list on its website, dubbed the Workplace Accountability in Labor List (WALL), of any person found in violation of any State wage, benefit, and tax laws and against whom a final order has been issued by the NJDOLE for such violation. Any person or business named on the WALL is prohibited from contracting with the Department until that person or business has been removed from the WALL. The WALL is found at <https://www.nj.gov/labor/ea/osec/wall.shtml>

102.15 DISQUALIFICATION OF BIDDERS

THIS SUBSECTION IS CHANGED TO:

The Department will disqualify a Bidder and reject a bid submitted by that Bidder if the Bidder is determined by the Department to lack responsiveness. Failure of a Bidder to follow the requirements of 102.10 demonstrates a lack of responsiveness.

The Department will disqualify a Bidder and reject a bid submitted by that Bidder if the Bidder is determined by the Department to lack responsibility. Factors demonstrating a lack of responsibility include, but are not limited to:

1. Evidence of collusion among Bidders.
2. Uncompleted work, which in the opinion of the Department, might hinder or prevent completion of additional work if awarded.

3. Failure to submit at time of bid or within 5 days of bid opening, a completed and signed CR-266 – Schedule of Disadvantaged Business Enterprise/Emerging Small Business Enterprise/Small Business Enterprise Participation.
4. Failure to submit within 5 days of bid opening, proof of documented evidence of good faith efforts to meet the Contract goal, if the Bidder fails to meet the Contract DBE, ESBE or SBE goal.
5. Failure to submit within 5 days of bid opening, a completed and signed Confirmation of DBE/ESBE/SBE Firm (Form CR-273) for each DBE/ESBE/SBE firm listed on the CR-266. The Bidder shall not complete any portion of the CR-273 form.
6. Failure to submit within 5 days of bid opening, a completed and signed DBE/ESBE/SBE Trucking Verification (Form CR-274) for each DBE/ESBE/SBE firm listed on the CR-266, if applicable. The Bidder shall not complete any portion of the CR-274 form.
7. Failure to submit within 5 days of bid opening, a completed and signed DBE/ESBE/SBE Regular Dealer/Supplier Verification (Form CR-272) for each DBE/ESBE/SBE Regular Dealer/Supplier listed on the CR-266, if applicable. The Bidder shall not complete any portion of the CR-272 form.
8. Failure of the Bidder to meet the Contract DBE, ESBE, or SBE goal as determined by the DCR/AA, or make adequate good faith efforts to do so.
9. Failure of the Bidder to acknowledge that the prevailing wage rate is accounted for in their bid pricing and that the Bidder agrees to pay the prevailing wage rate, if awarded the Contract, for Projects subject to the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 to .98,
10. Submission of a materially unbalanced bid. A materially unbalanced bid is a bid where there is a reasonable doubt that award to the Bidder submitting a mathematically unbalanced bid, which is structured on the basis of nominal prices for some work and inflated prices for other work, will result in the lowest ultimate cost to the Department.
11. Lack of competency or lack of adequate machinery, plant, or other equipment.
12. Unsatisfactory performance on previous or current contracts.
13. Questionable moral integrity as determined by the Attorney General of New Jersey or the Department.
14. Any other outward actions or lack of action that demonstrates the Bidder is not responsible.
15. Disqualification, suspension, or debarment of an individual firm, partnership, corporation, joint venture, or any combination as required by N.J.A.C. 16:44-11.1 or Federal Government's System for Award Management (SAM), located at <https://www.sam.gov/SAM/> for federally assisted contracts.
16. If the bidder is Federally debarred pursuant to N.J.S.A. 52:32-44.1.
17. The Bidder is listed on the Workplace Accountability in Labor List (WALL), prohibiting the Bidder from public contracting under N.J.S.A. 34:1A-1.16, the law establishing the WALL.

SECTION 103 – AWARD AND EXECUTION OF CONTRACT

103.01 AWARD OF CONTRACT

THE FIRST PARAGRAPH IS CHANGED TO:

The County will award the Contract to the lowest responsible bidder whose bid conforms in all respects to the requirements set forth in the Contract. The County will award the Contract or reject all bids within 60 days after the bids are received. When the County cannot make an unconditional award, this time limit may be extended by mutual agreement for one 30-day interval.

THE FOLLOWING IS ADDED:

The County will post public announcement of award on the County's electronic procurement website at: <https://procurement.opengov.com/portal/oceancounty>

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
WHITING-NEW EGYPT ROAD OVER RIDGE WAY
FEDERAL PROJECT NO. 0539301

SECTION 104 – SCOPE OF WORK

104.01 INTENT

THE FOLLOWING IS ADDED:

The Work on this contract includes, but is not limited to, the realignment and widening of CR 539, the grade separation of CR 539 and Ridge Way via construction of a new overpass bridge and retaining walls, and construction of stormwater management basins.

104.02 VALUE ENGINEERING

THE SUBSECTION IS CHANGED TO:

104.02 VALUE ENGINEERING CHANGE PROPOSAL

104.02.01 Purpose and Scope

The intent of Value Engineering Change Proposal (VECP) is to promote Contractor innovation, for which the Department will share with the Contractor 50 percent of the value of cost savings generated as a result of a Department approved VECP.

The Department will only consider VECPs that produce a cost savings to the Department without, in the sole judgment of the Department, impairing essential functions or characteristics of the Project. Essential functions that cannot be adversely impacted include, but are not limited to, safety, service life, economy of operation, ease of maintenance, environmental compliance, and desired appearance. The Department will not consider VECPs that change the Project's original design criteria, merely eliminate work, are based on an unknown factor, do not show a cost savings; or extend Contract Time.

104.02.02 Conditions

The Department will consider VECPs only after Award of the Contract and only in accordance with the following terms and conditions:

1. If the Department rejects a VECP during any step of the process, the Contractor is required to complete the Work as specified in the Contract. The Contractor recognizes that the Department has the right to reject VECPs and cannot base its bid on the anticipated approval of a VECP.
2. All VECPs, approved or not approved by the Department for use in the Contract, apply only to the ongoing Contract or Contracts referenced in the VECP. The VECPs shall become the property of the Department and shall contain no restrictions imposed by the Contractor on their use or disclosure. The Department will have the right to use, duplicate, and disclose in whole or in part any data necessary to use the VECP. The Department retains the right to use any accepted VECP or part thereof on any other or subsequent project without any obligation to the Contractor. This provision is not intended to deny rights provided by law with respect to patented materials or processes.
3. If the Department already has under consideration certain revisions to the Contract that are subsequently incorporated in a VECP, the Department will reject the Contractor's VECP and has the right to proceed with such revisions without obligation to the Contractor.
4. The RE will determine whether a VECP qualifies for consideration and evaluation by the Department, including whether the savings generated by the VECP are sufficient to warrant review and processing. The Department may still reject a final VECP after approval of the initial VECP.
5. The RE has the right to reject all or any portion of work performed according to an approved VECP if the RE determines that results do not meet the requirements of the VECP or the Contract. The RE has the right to direct the removal of such rejected work and require the Contractor to proceed according to the original Contract. If the Contractor is directed to proceed according to the original Contract, the Department will not make payment for the rejected work performed under the VECP, or for its removal. The Contractor is responsible for the consequential costs arising from the rejected work to complete the work as proposed under the original Contract, including the cost to Others.

6. The Contractor may only submit VECs based on Items scheduled to be performed by the Contractor. The Department will not consider anticipated cost savings based on revisions to utility relocations or other work to be performed by Others. The Contractor is responsible to obtain the concurrence of Utilities, property owners, governing bodies, and agencies for any work affected by the VEC. The Department has the right to reject VECs that may increase the time or cost of work done by Others.
7. In calculating the value of cost savings, the Department has the right to disregard the Contract bid prices, if such prices do not represent the value of the work to be performed or to be deleted, and has the right to calculate the savings based on reasonable costs for such work.
8. Ensure that VECs are designed according to the Department design manuals and other Department standards for the proposed work.
9. If additional information is needed to evaluate VECs, provide this information in the Department specified time period, otherwise the Department will reject the VEC. Additional information may include, where design changes are proposed, results of field investigations and surveys, design computations, and field change sheets.
10. The Department will not deduct the Department's costs for review and processing of the VEC from the cost savings.
11. The Department will not make payment for the Contractor's costs for development and submission of the VEC. The Contractor waives its right to claim for costs or delays incurred due to the Department's review or rejection of a VEC. These costs include, but are not limited to, development costs, loss of anticipated profits, or increased material or labor costs resulting from delays in the review of such VEC.
12. The Department will not use the value of cost savings for: additional vehicle operating and delay costs incurred by the traveling public, compared to normal operating conditions, resulting from the establishment of construction, maintenance, or rehabilitation work zones (road user costs), or for costs to oversee the Project (construction engineering costs).
13. The Contractor may submit VECs for an approved subcontractor, provided that payment is made by the Department to the Contractor and that the terms of the payment to the subcontractor are satisfactorily negotiated and accepted before the proposal is submitted to the Department. Submit revised agreements as specified in 108.01.1. Subcontractors may only submit a VEC through the Contractor.

104.02.03 Submittals

The Contractor may submit VECs electronically. With electronic submissions, submit the appropriate attachments and a printed copy.

If the initial VEC is only submitted in printed form, provide at least 3 sets of documents. If the final VEC is only submitted in printed form, the Department will designate the required number of sets of documents.

Submit initial and final VECs as follows:

1. **Initial VEC.** Submit to the RE an initial VEC outlining the general technical concepts associated with the VEC and the estimated savings that will result.

The Department will review the initial VEC and, if found to be conceptually acceptable, will grant approval to submit a final VEC. A finding of conceptual acceptability of the initial proposal in no way obligates the Department to approve the final VEC.
2. **Final VEC.** The Department will consider a final VEC only after the approval of the initial VEC. With each final VEC, submit, at a minimum, to the RE the following information:
 - a. A statement that the final VEC is submitted as a VEC with a reference to the approval of the initial VEC.
 - b. A description of the differences between the existing Contract requirements and the proposed change, and the comparative advantages and disadvantages of each. Document the effects on safety, service life, economy of operations, ease of maintenance, environmental requirements, and desired appearance.
 - c. Complete plans, specifications, and calculations showing the proposed changes relative to the original Contract features and requirements. Ensure that plans and engineering calculations are signed and sealed by a Professional Engineer.

- d. A complete cost analysis indicating the final estimated costs and quantities to be replaced by the VECP, the new costs and quantities generated by the final VECP, and the cost effects of the proposed changes on operational, maintenance, and other considerations.
- e. An evaluation of the effect the final VECP has on Contract Time, including a revised schedule and a time impact evaluation as specified in 108.11.01.C.
- f. A description of any previous use or testing of the final VECP on another Department project or elsewhere and the conditions and results. If the final VECP was previously submitted on another Department project, indicate the date, the project, and the action taken by the Department.
- g. A letter of concurrence to the VECP from Others that are affected.
- h. The specific date that the Change Order adopting the final VECP must be executed to obtain the maximum cost reduction. Ensure that this date allows the Department ample time, usually a minimum of 60 days, for review and processing a Change Order. If the Department finds that there is insufficient time available for review and processing, it has the right to reject the final VECP solely on such basis. If the Department fails to respond to the final VECP by the date specified, the Contractor shall consider the final VECP rejected and shall make no claim against the Department as a result thereof.
- i. Additional information requested by the Department.

104.02.04 Final Documents

If the final VECP is approved, submit working drawings for approval. The Department will designate the number of sets to be submitted.

104.02.05 Payment

If the VECP is approved, the Department will issue a Change Order incorporating the VECP and establishing payment for the cost savings.

The Department will make payment to the Contractor for 50 percent of the cost savings from the VECP. It is understood that the payment includes all costs resulting as a consequence of the change, including but not limited to quantity increases to Items, and unanticipated work or expenses arising out of the change.

104.03 CHANGES OF THE CONTRACT

104.03.01 Authority to Make Changes

THIS SUBPART IS CHANGED TO:

The Department has the right to make changes to the Work at any time, including altering the Contract, altering the requirements of an Item, increasing, or decreasing the quantities of any Item, or deleting any Item. Such changes neither invalidate the Contract, nor release the Surety. The Contractor agrees to perform the Work as changed. If the Contractor does not perform, or refuses to perform the Work as changed, the Department may perform the work with its own forces. If the Department mobilizes its forces to perform the work, the Contractor agrees to pay the Department's cost of performing the work including the cost of material and labor used and the actual costs for police traffic protection and maintenance and protection of traffic as specified in 107.16.

The Contractor may request changes to the Contract.

The Department will direct changes using a written Field Order or Change Order as follows:

1. **Field Orders.** The RE has the right to unilaterally direct Contractor performance with a written Field Order. Upon receipt of a Field Order, proceed as directed by the Field Order. A Field Order will state whether the directions provided by the Field Order are eligible for payment or modification of Contract Time. The Department will provide such payment or modification to Contract Time in a subsequent Change Order.
2. **Change Orders.** The Department will modify the Contract with a Change Order.

The Department has the right to unilaterally make the following changes: make minor increases or decreases in quantity; modify Contract Time as specified in 108.11; direct New Work to be performed on a force account basis; and establish payment modifications for damages, credits, bonuses, and penalties provided for in the Contract.

For changes that require the Contractor's assent, the RE will negotiate the terms of the change and the Department will offer a Change Order. If the Contractor accepts the offer, the Contractor will sign the Change Order, whereupon the Department may approve and issue the Change Order. By signing a Change Order, the Contractor agrees that the Change Order constitutes the full extent of the agreement between the Department and the Contractor, including the full extent of payment and modified Contract Time for the work and for any effects upon all and any part of the Work, and supersedes any prior written or oral agreement between the 23 parties. Additionally, the Contractor acknowledges the sufficiency and propriety of the consideration for the work detailed in the Change Order and understands that the agreement is binding.

Upon receipt of an approved Change Order, proceed as directed by the Change Order.

DBE or ESBE goals apply to work performed through Field Orders and Change Orders. On Federal Aid Projects, the Contractor is responsible for complying with the DBE program, rules and regulations of 49 CFR Part 26, the requirements as specified in 105.02.05, Federal Aid Project Attachments 1 through 11 for this work.

Contractor resubmission of CR-266, CR-273, CR-272, and CR-274 forms may be required on the work performed through Field Orders and Change Orders.

Do not deviate from the requirements of the Contract unless and until a Field Order is issued by the RE or a Change Order is approved by the Department.

104.03.02 Protests to Change Orders

THIS SUBPART IS CHANGED TO:

If the Contractor disagrees with any terms or conditions set forth in a Change Order, submit a written protest to the Department within 30 days after the date of receipt of the Change Order.

A protest is notice that the terms and conditions for proposed work are not in accordance with the Contract, quantity adjustments are incorrect, or that the modification for Contract Time is incorrect. A protest is not a substitute for notice as specified in 104.03.04. Providing a protest within 30 days after the date of the receipt of a Change Order may not meet the requirements of 104.03.04 or N.J.S.A. 59:13-5 and the Department will not make payment for the costs of a claim if recovery is barred by other provisions in the Contract.

In the protest, list the points of disagreement, and, if possible, the specification references, quantities, and costs involved. Ensure that the protest is a specific, detailed statement of the points of disagreement. The Department will reject general protests. If the Department rejects a protest for being a general protest, provide a specific, detailed statement within 7 days of such rejection.

Regardless of whether the Contractor's assent is required, if the Contractor refuses to sign the change order or submit an acceptable written protest within 30 days after the date of receipt of the Change Order or within 7 days of the initial rejection of a protest, the Department will make payment and modify Contract Time as set forth in the Change Order. Such payment is full payment for all work included or required by the Change Order and is conclusive as to any Contract Time modifications provided for therein or in establishing that no Contract Time modification was warranted.

When the Contractor signs a change order and the Department processes the Change Order within 15 days of receiving the Contractor's signature, the Contractor is barred from protesting the Change Order.

Protest does not relieve the Contractor from the obligation to proceed with work directed by an approved Change Order.

104.03.03 Types of Changes

1. Quantity Increases and Decreases.

THE SECOND PARAGRAPH IS CHANGED TO:

For minor changes in quantity, the Department will make payment for the quantity of the Item performed at the bid price for the Item. Construction layout is included in the price of the original work.

3. Changes in the Character of Work.

THE THIRD PARAGRAPH IS CHANGED TO:

If a modification cannot be reached by agreement, the Department will make payment, only for the change in work, by force account as specified in 104.03.08.

THE FOLLOWING IS ADDED:

The provisions set forth in N.J.S.A 40A:11-16.7 shall be deemed a part of this Contract.

104.03.07 Tracking Costs

THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

For all work directed to be paid for by force account, track and maintain complete records to provide a clear distinction between the costs for the Force Account work and the costs for other operations. For costs which the Contractor will pursue reimbursement through a Notice or Claim, track and maintain complete records in Force Account style making a clear distinction between Contract work and the work related to the alleged changed condition.

104.03.08 Force Account

THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Payment made for the work directed to be performed by force account represents full payment for that work including layout.

PART 6 IS CHANGED TO:

6. **Extraordinary Expenses.** Extraordinary Expenses will be limited to only permit and disposal fees, including any associated required soil testing. The Department will only make payment for Extraordinary Expenses if they are approved by the RE before incurring the cost and evidenced by paid invoices. If the cost is, in the opinion of the RE, excessive, then the Department will limit the payment for such expenses to reasonable costs as available in the prevailing market.

THE FIRST PARAGRAPH OF PART 7 IS CHANGED TO:

7. **Equipment.** The Department will make payment for Contractor-owned or rented equipment required for the force account work. The Department will not provide payment for equipment that is determined to be more than necessary or unsuitable by the RE for the force account work or that is inoperable due to breakdown or during periods of repair. In the event the Contractor proposes to use equipment of a higher cost, including equipment with one or more of the following: specialized functionality, features, trim levels, options, or accessories than that suitable and necessary for the work, the Department will make payment at the rate applicable to the suitable and necessary equipment. The Department will make payment for Contractor-owned or rented equipment as follows:

PART 7.B IS CHANGED TO:

- b. **Rented Equipment.** In the event that the Contractor does not own a specific type of equipment and must obtain it by rental, submit in writing to the RE for approval the need to rent the equipment and the rental

rate for that equipment before using it on the work. Ensure the rental company does not rent equipment exclusively to a single Contractor. The Department will make payment for the rental of the equipment as specified in the rental agreements and as evidenced by paid invoices for the time that the equipment is used to accomplish the work, plus the cost of moving the equipment to, on, and away from the work site.

104.03.09 Delay Damages

1. Non-Productive Activity.

PART E IS CHANGED TO:

- e. **Equipment.** If as the result of the delay, the equipment cannot be used for any active work and is directed by the RE to remain on the work site during the delay, the Department will make payment as specified in 104.03.08.7.a.5. If as the result of the delay, the RE determines that the equipment cannot be used for any active work, the RE may request the Contractor to remove the equipment. The Contractor may remove the equipment from the work site or allow it to remain. If the equipment is removed from the work site, the Department will make payment for labor and equipment costs to remove the equipment and to return it to the work site at the end of the delay period. If the equipment remains, the Department will not make payment for the equipment as specified in 104.03.08.7.

If the equipment is required for additional maintenance within the Project Limits, maintenance of traffic control devices, maintenance of SESC measures, and similar activities resulting from the delay and approved by the RE, the Department will make payment as specified in 104.03.08.7.

THE FOLLOWING IS ADDED:

- 4. **Equipment Escalation.** If, as the result of the delay, equipment use, which had a planned late-finish date occurring before an equipment rate increase date, is required to start after the equipment rate increase date, the Department will make payment for the following:
 - a. **Contractor owned equipment.** Equipment costs as specified in 104.03.08 at the higher rate as evidenced by a comparison of the Blue Book rate between the planned late finish date for the work and the Blue Book rate when the work was required because of the delay.
 - b. **Rented equipment.** Equipment costs as specified in 104.03.08 at the higher rate as evidenced by a comparison of rental agreements, including paid invoices, between the planned late finish date for the work and the date the work was required because of the delay. If rental agreements and paid invoices are not available, provide quotes from the rental company for both dates.

SECTION 105 – CONTROL OF WORK

105.02 RESPONSIBILITIES OF THE CONTRACTOR

105.02.05 Civil Rights Requirements

THIS SUBPART IS CHANGED TO:

The Contractor is obligated to comply with Title VI of the Civil Rights Act of 1964, 49 CFR Part 21 and 28 CFR Section 50.3, 2 C.F.R. Part 200 and 2 C.F.R. Part 200 Appendix II and any other Rules relative to Nondiscrimination as they may be amended from time to time, which are herein and incorporated by reference and made part of the Contract. The Contractor in the performance of the Contract agrees to comply with nondiscrimination regulations and other requirements as specified in Section 107. Failure of a Contractor to comply with the nondiscrimination provisions of the Contract may result in the actions as set forth as specified in Sections 105, 108, and 109.

The source of funding determines which EEO regulations and goals (Federal and/or State goals) apply to a specific project.

1. **Federal Aid Projects.** On contracts containing Federal funding, Federal EEO regulations and goals apply as specified in Federal Aid Project Attachments 1 through 11. The DCR/AA monitors and reviews these projects on behalf of the Federal Highway Administration (FHWA), under Federal statutes (23 USC 140) and Rules (23 CFR 230, 2 CFR Part 200).

Comply with the DBE/ESBE program, rules and regulations of 49 CFR Part 26 in the administration of the Contract. Failure to do so is a material breach of the Contract and may result in termination of the Contract, or other such actions that the Department or the FHWA deem appropriate which may include, but are not limited to, rejection of bids, denial or limit of credit toward the Contract goal, payment being delayed or withheld as specified in Section 105, assessing sanctions as set forth in 49 CFR Part 26, and default as specified in Section 108. Deliberate attempts by the Contractor or subcontractors to circumvent or commit fraud in the DBE/ESBE program may result in termination of the Contract as specified in Section 108, investigation by the Department's Inspector General or the U.S. Department of Transportation, or both, and prosecution by the State Attorney General's Office or the U.S. Department of Justice, or both.

Ensure compliance with the labor standards provisions of the Contract. Submit weekly certified payrolls and Statement of Compliance as required in the Contract to the RE. Monitor and verify the owner-operator status of all DBE and non-DBE truckers working on Federal Aid Projects used for the Contract. Submit the DBE Trucking Verification (Form CR-274) to the Department. Failure of a Contractor to meet the requirements of this paragraph may result in payment being delayed or withheld as specified in Section 105, default as specified in Section 108, disqualifying the Contractor from future bidding as non-responsible, or termination of the Contract as specified in Section 108.

Obtain executed subcontract agreements as specified in Section 108. Failure of a Contractor to meet this requirement may result in payment being delayed or withheld as specified in Section 105, default as specified in Section 108, disqualifying the Contractor from future bidding as non-responsible, or termination of the Contract as specified in Section 108.

The Contractor is responsible for compliance by any subcontractor, lower tier subcontractor as specified in Section 108. On Federal Aid construction contracts, utilize a DBE that performs a commercially useful function (CUF) and performs the work committed to at the time of Contract award. Monitor and report DBE participation on the Contract, on a monthly basis utilizing the CR-267 - Monthly Report of Utilization of DBE/ESBE or SBE form. Failure of a subcontractor or lower tier subcontractor may result in denial or limit of credit toward the Contract DBE goal, payment being delayed or withheld as specified in Section 105; default as specified in Section 108, or termination of the Contract as specified in Section 108.

The Contractor is required to make good faith effort as defined in 23 CFR Part 230 and 41 CFR Part 60 in meeting the Equal Employment Opportunity, Affirmative Action, on-the-job training and female and minority work hour goals. Ensure compliance by subcontractors and lower tier subcontractors. Failure of the Contractor, subcontractor or lower tier subcontractor to meet these requirements may result in payment being delayed or withheld as specified in Section 105; default as specified in Section 108, or termination of the Contract as specified in Section 108.

Utilize the specific DBEs listed to perform the work, manufacture the materials or goods, and furnish or supply the equipment, materials, supplies or services for which each is listed on the CR-266 unless prior written consent from the DCR/AA is obtained. Unless prior DCR/AA consent is provided, the Contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

The Contractor is responsible for Equal Employment Opportunity requirements of the Contract, including Affirmative Action, EEO workforce and On-The-Job Training. Failure by the Contractor to meet the requirements of the Affirmative Action Program for Equal Employment Opportunity may result in payment

being delayed or withheld as specified in Section 105 pending corrective and appropriate measures by the Contractor to the satisfaction of the Department.

The Contractor is responsible for compliance with the Trainee program. Failure to meet this requirement may result in payment being delayed or withheld as specified in Section 105, default as specified in Section 108, disqualifying the Contractor from future bidding as non-responsible, or termination of the Contract as specified in Section 108.

The Contractor and subcontractors are required to provide all information and reports as specified in Section 107.

a. Disadvantaged Business Enterprise/Emerging Small Business Enterprise Goals for this Contract

This Contract includes a goal of awarding a percentage of the Total Contract Price to subcontractors, transaction expeditors, regular dealers, manufacturers and truckers qualifying as certified DBEs/ESBEs as specified in Federal Aid Project Attachment 1 – Disadvantaged Business Enterprise Utilization on Federal Aid Projects or Federal Aid Project Attachment 1 – Emerging Small Business Enterprise Utilization on Federal Aid Projects, of the Special Provisions.

To receive DBE credit toward meeting a contract goal in the context of the contract award process, a DBE firm must be certified before the due date for bids or offers on the Contract, as stated in 49 CFR Part 26.81(c). There may be situations after the award of the Contract, however, in which it is appropriate to count DBE credit for the use of a DBE firm certified after the contract is executed. To be eligible to obtain DBE credit, a DBE firm must be certified before the subcontract on which it is working is executed.

A Contractor is deemed to have satisfied the requirements of the DBE Program if the Contractor meets the Contract DBE goal or the approved DBE commitment utilizing the approved, certified DBEs for the kind and type of work shown on the most recent approved CR-266 – Schedule of Disadvantaged Business Enterprise/Emerging Small Business Enterprise/Small Business Enterprise Participation form or demonstrates an adequate GFE. DCR/AA will determine whether or not the Contractor met the Contract DBE goal or demonstrated adequate GFE. Failure to meet the Contract DBE goal or the approved DBE commitment, without demonstrating an adequate GFE, is considered a material breach of the Contract.

The Contract DBE goal may be changed by the Department based on changes in the Work that increase or decrease work assigned to approved DBEs, or to create potential DBE subcontracting opportunities regarding the Contract. The Department's DCR/AA will evaluate these changes in the Work in the same manner that the original Contract DBE goal or the approved DBE commitment was established. When the Contract DBE goal or the approved DBE commitment is increased or decreased due to changes in firms, type of work, work items or subcontract value, and for each Field / Change Order that increases or decreases the Contract's dollar value, submit to DCR/AA to determine if and how these changes will apply to the Contract DBE Plan/Program:

- (i) a completed and signed Form CR-266 – Schedule of DBE/ESBE/SBE Participation listing each DBE firm being used to meet the Contract goal.
- (ii) a completed and signed Verification of DBE/ESBE/SBE Firm (Form CR-273) for each firm listed on the CR-266 to demonstrate direct written confirmation from each DBE firm of willingness to participate on the Contract, confirming the kind and amount of work that was provided on the Contractor's CR-266, and, if applicable,
- (iii) a completed and signed DBE/ESBE/SBE Regular Dealer/Supplier Verification (Form CR-272) for all Regular Dealers/Suppliers listed on the CR-266 form, and, if applicable,
- (iv) a completed and signed DBE/ESBE/SBE Trucking Verification (Form CR-274) for all DBE trucking firms listed on the CR-266.
- (v) a written explanation of each revision, and why

In such circumstances, do not complete any portion of the CR-273, CR-272, or CR-274 forms, and the Contractor shall meet the Modified DBE goal or demonstrate an adequate GFE.

If the Contractor fails to meet the Contract DBE goal, without demonstrating an adequate GFE as determined by DCRAA, the Department will make a payment reduction from the total amount of payments made to the Contractor equal to the value of the DBE goal not attained as follows:

$$\text{Value of DBE Goal Payment Reduction} = (\text{CG} - \text{AG}) \times \text{CP}$$

Where:

CG	Contract DBE Goal percentage, or approved DBE commitment, or if modified by the
=	Department, the Modified DBE Contract Goal percentage.
AG	Attained DBE Goal percentage = (total dollar amount paid to DBE suppliers and DBE
=	subcontractors divided by CP) plus the percent value attributed to the Contractor's GFE
	approved by the Department.
CP	Total Adjusted Contract Price less the payment adjustments for PERFORMANCE BOND
=	AND PAYMENT BOND, and changes not associated with actual work including but not
	limited to incentives/disincentives, bonuses/penalties, acceleration, and portions of
	settlements not associated with work.

If the Contractor fails to meet the Contract DBE goal and DCR/AA deems the Contractor's GFEs insufficient, the Department will provide the Contractor with an opportunity for an in-person meeting or written review of information and documentation provided with its Final DBE Report (Form CR 268). The Contractor will be required to make its case based on information it provided with Form CR 268. No new DBE evidence (e.g. revised CR 268 or introduction of new information/documentation) will be considered. The Contractor may make a request for an in-person meeting or written review in writing to the New Jersey Department of Transportation, Director, Division of Procurement, PO Box 605, Trenton, New Jersey, 08625-0605. The Contractor must specify one of the following in their request:

- (i) Written Review by the Department. If the Contractor seeks written review by the Department, it must submit written documented evidence or argument proving the Contractor submitted adequate good faith efforts; and include a narrative on what information DCR/AA failed to consider and/or where the regulations/rules were misapplied.
- (ii) In-Person Meeting. If the Contractor seeks an in-person meeting by the Department, it must submit a written request for a meeting along with written documented evidence or argument proving the Contractor submitted adequate good faith efforts; and include a narrative on what information DCR/AA failed to consider and/or where the regulations/rules were misapplied. The in-person meeting will be scheduled by the Department as soon as time permits.

105.05 WORKING DRAWINGS

THE THIRD SENTENCE OF THE THIRD PARAGRAPH IS CHANGED TO:

Submit three copies of the working drawings to the designated design unit for review. One copy will be returned to the Contractor, one retained by the County, and one retained by the design unit.

TABLE 105.05-1 IS CHANGED TO:

Table 105.05-1 – Working Drawing Submission Category	
Certified	Approved
Breakaway I-Beam GA Sign Support Posts	Catalog Cuts (related to landscape Items)
Bridge Drainage	Change in Structural Steel Details
Bridge Railing and Fencing Anchorage System	Change of Prestressed Concrete Strand Patterns
Catalog Cuts	Demolition Plans
Composite Piles	Erection Plans
DMS Sign Support Structure	High Load Multi-Rotational (HLMR) Bearings

DMS Standard Ground Mounted	Isolation Bearings
Elastomeric Bearings Pads	ITS System Drawings, including Block Diagrams
Electrical Items Not Pre-Qualified	Machinery and Electrical Items for Movable Bridges
Expansion Joint Assemblies (except Modular Expansion Joint Assemblies)	Mechanically Stabilized Earth (MSE) Walls
Precast Prestressed Concrete Beams and Piles Fabrication	Modular Expansion Joint Assemblies
Reinforced Elastomeric Bearings	Other work shown on the Plans as conceptual
Sign Legends	Precast Concrete Arch Structures
Sign Support Structures	Precast Concrete Box Culverts
Structural Steel Fabrication	Prefabricated Modular Walls
Bridge Plaque	Stay-In-Place Forms
	Temporary Sheet piling and Cofferdams
	Temporary Shielding
	Temporary Structures
	Value Engineering Change Proposal Plans

2. Approved Working Drawings.

THIS ITEM IS CHANGED TO:

For working drawings requiring approval, include 2 blank blocks directly above the title block. Designate one block for design unit approval, and designate the second block for the Contractor's approval stamp. The Department will require 45 days for review and approval or rejection and return of working drawings.

The designated design unit, upon receipt of working drawing submitted for approval, will review the working drawing for conformance with the Contract and the design concept of the Project. The designated design unit may approve, may conditionally approve, or may reject working drawings as submitted. The designated design unit will sign and stamp the submitted working drawings as follows:

1. "NO EXCEPTIONS TAKEN" for approval without condition.
2. "MAKE CORRECTIONS NOTED" – for conditional approval
3. "REVISE AND RESUBMIT" for rejection or non-approval.

For submitted working drawings that are stamped "REVISE AND RESUBMIT," the designated design unit or Department will return the submitted working drawings directly to the Contractor with a copy to the RE. Make the required revisions, corrections, and additions and otherwise comply with the directions of the designated design unit or Department. Ensure that revisions, corrections, additions, and other changes that were not directed are emphasized on the working drawings. Promptly re-submit the specified number of copies to the designated design unit. Only resubmit the sheets stamped "REVISE AND RESUBMIT," and other sheets that are revised with corrections, additions, and other changes that were not directed. Do not perform work or order materials relating to the submitted working drawings before the Department stamps the working drawings "MAKE CORRECTIONS NOTED" or "NO EXCEPTIONS TAKEN."

105.07.01 Working in the Vicinity of Utilities

A. Initial Notice.

THE FOLLOWING IS ADDED:

The following utility companies have identified services within the project limits:

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
WHITING-NEW EGYPT ROAD OVER RIDGE WAY
FEDERAL PROJECT NO. 0539301

Gas:

New Jersey Natural Gas Company
Attn: Dylan Rogers, Engineer
Distribution Engineering
1415 Wyckoff Road, P.O. Box 1464
Wall, NJ 07719
Telephone: 908-216-9721

Electric:

Jersey Central Power & Light Company
Attn: Harvey Lockley
101 Crawford's Corner Road, Bldg. #1, Suite 1-511
Holmdel, NJ 07733
Telephone: 732-212-4262

Telecommunications:

Verizon Engineering
Attn: Arturo Cabrera
999 West Main Street
Freehold, NJ 07728
Telephone: 732-683-5124

Cable:

Comcast Cable
Attn: Ron Boogaard
Construction Supervisor
90 Lake Drive
East Windsor, NJ 08520
Telephone: 609-947-0066

Verify the above information as its accuracy and completeness is not guaranteed by the County.

Water lines, gas lines, wire lines, service connections, water and gas meter boxes, water and gas valve boxes, utility manholes, light standards, cableways, signals, railroad lines and all other utility appurtenances within the limits of the project which are to be relocated or adjusted are to be moved by the owners at their expense, except as otherwise provided for in the Supplemental Specifications or as noted on the Plans.

B. Locating Existing Facilities.

2.

Fiber Optic Markout Form is available at:

<http://www.state.nj.us/transportation/eng/elec/ITS/requests.shtm>.

Bureau of Traffic Operations, South Region (TOCS)
1 Executive Campus-Route 70 West
Cherry Hill, NJ 08002-4106
Telephone: 856-486-6650

For Weigh-in-Motion and Traffic Volume systems contact:

Transportation Data and Safety Unit
PO Box 600
Trenton, NJ 08625

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
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609-963-1891

For Roadway Weather Information Systems contact:

Permits, Electrical Maintenance & Claims Unit
PO Box 600
Trenton, NJ 08625
609-963-1829

3.

NJDOT
Central Region Electrical
1035 Parkway Avenue
4th Floor E&O Bldg.
CN 600
Trenton, NJ 08625
Telephone: 609-963-1491

105.07.02 Work Performed by Utilities

THE SUBPART IS CHANGED TO:

The Contractor is responsible for coordinating work performed by Utilities, so that the Utilities' work does not conflict with the Contractor's own work, the operation of existing facilities, and work performed by Others. Coordination includes but is not limited to scheduling the utility work, monitoring the utility work, and ensuring that traffic control and access to the work location is as specified in the Contract. The Contractor is responsible for delays and costs resulting from failure to coordinate. Provide a written request to each Utility in the time specified for the advance notice requirements specified in the Special Provisions. Include the following:

1. Name and location of the Project.
2. Name and contact information of the Contractor and Superintendent.
3. Portion of the approved preliminary schedule or baseline schedule that affects the Utility.

Provide a copy of the notice and response to the RE.

Where Utilities jointly use poles or duct banks, coordinate the utility work to be performed sequentially.

Ensure that the work site is in a condition that allows the Utility to perform its work at the scheduled time. If the Contractor fails to provide the work site at the scheduled time, the Contractor is responsible for the resulting delays and costs to the Project. If the Contractor causes the Utility to incur additional costs, or delays the Utility without prior written approval of the RE, the Contractor is responsible for these costs and delays. The Department has the right to recover the cost of damages from the Contractor.

Ensure the progress schedule updates, as specified in 153.03, reflect impacts to project duration due to utility work progress.

Immediately notify the RE of failure by the Utility to respond or complete its work as specified in the Special Provisions.

Whenever utility services are encountered in which the private property owner also directly owns the utility service, said utility service shall be relocated by the Contractor. Separate payment will not be made for this relocation but all such costs shall be included in the unit prices bid for the various items of the Contract as listed in the Proposal.

Whenever the temporary relocation or temporary support of public or private facilities is necessitated in order to complete the Project, all such temporary relocation or temporary support costs shall be borne by the Contractor.

When water, sewer and gas house connections, boxes, cleanouts and valves must be relocated or replaced to carry out this Project, the cost of such work shall be included in the prices bid for the various pay items.

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The Contractor will be required to coordinate with the utility companies during all stages of the project. Specifically, but not limited to, at the beginning of the project for the relocation of the poles, during construction for the resetting and/or reconstruction of manholes, water valves and fire hydrants. The Contractor is responsible for all damage done to the utilities due to his work or any subconsultant's work.

General Notes

1. The Contractor shall provide the utility companies with the notices called for in the schedules.
2. The Contractor shall provide the utility companies with survey control and prior to the installation of company facilities, the Contractor and companies shall jointly verify the location.
3. Schedules contained herein are estimated time frames only and are to be verified by the Contractor.
4. Schedules are estimated and may change in accordance with field conditions.
5. Revisions to staging of construction may alter these schedules.
6. Where joint facilities are proposed, the Contractor shall coordinate work with the affected companies.
7. Utilities sharing joint poles shall commence work as soon as the poles are available for each of the individual company disciplines.
8. Utilities can perform their work only after the Contractor has completed its clearing and grading of site as necessary.
9. All distances, stations, offsets and lengths are approximate (plus or minus).
10. Existing facilities can be removed only after relocated facilities have been installed and are in operation.
11. Work performed by the Contractor noted herein is part of the County's overall operation and is included in the County project plans and specifications.
12. The Contractor shall provide field layout for horizontal and vertical location of proposed curb or edge of pavement and limits of disturbance.
13. The Contractor shall coordinate field meetings with all utilities to verify the field layout and to verify the limits of clearing to be provided for all utility relocation. Any remobilization required to correct clearing for utility relocation will be done at the Contractor's sole expense. Clearing site includes clearing for installation of poles, anchors, cables and appurtenances and providing necessary access for utility relocation including guide rail opening and grading as required to place new or relocated facilities.
14. The Contractor shall coordinate with the utilities to establish the location of all test pits necessary to determine conflicts. The Contractor shall perform all test pits to the satisfaction of the utility companies and the County Engineer. Traffic control for test pits is to be provided by the Contractor.
15. The Contractor shall provide the aerial utility companies with thirty (30) days notice and allow in his schedule a minimum of ninety (90) days to complete aerial relocation for each stage of construction.
16. The Contractor may not start construction within the travel way until all aerial utility relocations have been completed in a particular stage.
17. The Contractor shall provide buried utility companies with thirty (30) days notice and shall thereafter coordinate his operation with the utility schedules. The Contractor shall provide traffic control/lane closures coordination that accommodates the various utility relocations, resets and adjustments.
18. No separate measurement or payment will be made for any and all coordination and traffic control with the various utility companies.
19. The Contractor's schedule shall anticipate the minimum lead times estimated herein above or the stated time frames provided by the respective utility companies, whichever is greater.

Stage 1			
Utility Company Name	Work Description	Work Duration (Day/s)	Restriction
JCP&L	Relocation of utility poles and aerial facilities from west side of CR 539 to east side.	30	Tree clearing for new poles must be completed between October 1 and March 31.
Verizon	Relocation of aerial facilities from west side of CR539 to east side, south of ECS driveway	60	

105.08 ENVIRONMENTAL PROTECTION

THE FOLLOWING IS ADDED:

Perform the work in accordance with the environmental commitments made in the approved Categorical Exclusion Document for this project. These conditions include the following:

1. Tree clearing activities (cutting, knocking down, and trimming of live or dead trees) are not permitted between April 1 and September 30 of each calendar year.
2. Comply with all applicable Avoidance and Minimization Measures (AMMs) for Indiana Bats.
3. Direct temporary lighting (if required) away from suitable habitat for bats during the active season (April 1 to September 30).
4. Outside the active season for northern pine snakes, corn snakes, and timber rattlesnakes (i.e. between November 1 and April 15) and prior to the commencement of site preparation, storage of materials, site disturbance, grading, clearing of vegetation, and construction activities, install exclusion fence around the entire limit of disturbance, inclusive of staging and material storage areas, sufficient to preclude snakes from entering the project area. The exclusion fence shall be a heavy-duty silt fence, pulled taught (no folds in the material) and installed flush with or buried 10 inches below grade, and will reach no fewer than four feet above grade. Monitor the exclusion fence weekly and maintain in working order until project completion.
5. Prior to commencement of activities as listed in item 4, retain a qualified herpetologist, with at least five years of experience working with snakes, who has in their possession a valid Scientific Collecting Permit issued to them by the NJDEP-Division of Fish & Wildlife. The qualified herpetologist shall thoroughly inspect the fenced-in work area for snakes and other amphibian and reptile species. The qualified herpetologist shall be present during all onsite work (e.g., clearing of vegetation, demolition, excavation, site preparation, etc.) and shall survey the fenced in work area prior to commencement of work each day of activity and throughout each work day to “clear” the project limit of disturbance, temporary workspaces, and staging areas of amphibians and reptiles. Work activity shall cease where any animals are observed until the qualified herpetologist can carefully move to the animal to safety beyond the exclusion fence. Note: Gravid female snakes must not be handled or moved until guidance is provided by the Department, as this can lead to injury. Post-partum females must not be moved as this will eliminate the scent trails required by neonates to relocate their winter den site. Work within the exclusion fence that surrounds the limit of disturbance may commence only after the first project area sweep of the day is completed and the area is cleared by the qualified herpetologist.

Be aware that snake studies were performed in 2024 and 2025 by DuBois & Associates, during which at least 4 individual northern pine snakes were identified and tracked within the study area.

THE FOLLOWING SUBSECTION IS ADDED:

105.11 CONSTRUCTION LAYOUT

Perform a site investigation within the Project Limits to locate existing ROW markers, property markers, survey control markers, and monuments. Before beginning construction operations, protect ROW markers, property markers, survey control markers, and monuments from disturbance and destruction. Notify the RE of the location of property markers and monuments that are in danger of being removed or disturbed and tie to fixed points or locate from established contract control. Do not remove or disturb existing ROW markers, property markers, survey control markers, and monuments until obtaining RE approval. Record and provide a report of the findings of the site investigation to the RE.

Before removing a monument that is not owned by the Department, notify the agency to which the monument belongs of the need to remove the monument. Provide the RE with copies of correspondence with the agency, as well as the agency’s written requirements or guidelines for setting monuments.

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If a monument or marker is disturbed or removed without RE approval, the Contractor is responsible for reimbursing the Department for the cost to replace the monument.

Perform layout for the construction of the Contract using the control points and data shown on the Plans. Perform layout under the direct supervision of a licensed land surveyor. Preserve control points throughout the duration of the Project. Reset control points that are damaged, lost, displaced, or removed.

Before beginning construction operations, verify the vertical and horizontal controls provided in the Plans using, at a minimum, third-order, Class I accuracy procedural standards and equipment. Notify the RE in writing of discrepancies or errors and obtain resolution before proceeding with the work. Upon request, provide the RE with survey notes and calculations related to the field control verification.

Before beginning construction operations, establish lines for ROW, easement, and other restrictions, such as boundaries for environmentally sensitive areas to define the limits of construction and temporary operations. Establish limits of tree protection and other vegetation to be preserved. Do not encroach on private property, except as allowed by easements. Document existing site conditions, including vegetation, in areas to be used for excavation, temporary construction, storage, parking, movement of equipment, field office, etc. which will have to be later restored to pre-existing conditions. Provide documentation, including photographs, to the RE.

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.

Establish the exact location of the Work from the control points. Reference the Work to baselines that are established from the control points. Maintain baselines until Completion.

Provide and maintain offset baseline stakes for roadways, ramps, jughandles, and turnarounds outside the limits of grading and construction. Set offset stakes at a maximum interval spacing of 50 feet. Where baselines have a radius of less than 475 feet, provide offset stakes at a maximum interval spacing of 25 feet. Identify and mark each stake to show the offset distance from the baseline and provide grade sheets to the RE showing the cut or fill to the finished profile lines with reference to the offset stakes. Provide grade sheets for construction of subbase that include calculations to establish the typical cross section from the profile grade stake. Provide adequate and accurate offset lines during construction that requires occupation of the baseline points by construction operations. Provide the RE with assistance as requested for verification of lines, grades, boundaries, dimensions, and elevations.

Construct the Work to the dimensions and tolerances noted within the Contract. Except where otherwise noted, construct subbase, base courses, pavements, and structures to within 1/4 inch of the elevations, stations and offsets noted in the Contract. If work does not conform to the tolerances allowed, the Department may consider the work to not be in conformance with the work as specified in 105.03.

For each bridge and sign structure within the Project Limits, provide the RE as-built measurements of the minimum vertical underclearance at each lane line, shoulder line, curb line, and edge of pavement line under a structure to the nearest hundredth of a foot. For each bridge structure, provide vertical underclearance measurements at each fascia beam and the portions of the structure that govern the minimum vertical underclearance. Provide minimum vertical underclearance measurements prior to the completion of each stage of construction. Notify the RE in writing of any discrepancies, errors, or deviations from plan dimensions and clearances prior to opening any bridge or structure or any portion thereof to traffic.

Upon request, provide the RE with survey notes and calculations related to the alignment and horizontal and vertical control, and field notes to document the ROW, including easements and monument locations. Maintain survey notes in a bound field notebook in a professional manner.

The Department will not make payment for survey, stakeout, and layout. The cost is to be distributed across the various items of work and to be included in extra work as may be added to the Contract.

If the Department discovers survey errors, including errors that should have been detected during verification of controls provided in the plans, the Department will deduct the costs of checking and correcting these errors from any money due to the Contractor.

Upon completion of construction, furnish an As-built Bridge Plan depicting the bridge in 'elevation' view, referencing the surveyed low chord elevations at each abutment as well as the horizontal span distance between the inside faces of

abutment walls. The As-built Plan shall be prepared and certified by a New Jersey Professional Land Surveyor and shall be submitted within thirty (30) days of the completion of the project. No separate payment will be made for this survey.

In addition, furnish as-built grades at each proposed grade on the Plans. The as-built grades shall be handwritten or electronically placed adjacent to the grades on the Construction or Drainage and Grading plans. Acceptable as-builts shall consist of, but not limited to, grades, dimensions, station and offsets, inverts, pipe size, pipe material, traffic signal foundations, etc. The as-built plans shall be signed and sealed by a New Jersey Professional Land Surveyor and shall be submitted within thirty (30) days of acceptance of the substantial completion letter for the project (single work location) or each location on multiple work site projects. Two (2) paper copies and one (1) electronic copy shall be included with the submission.

SECTION 106 – CONTROL OF MATERIAL

THE SECTION HEADING IS CHANGED TO:

SECTION 106 – CONTROL OF MATERIAL AND EQUIPMENT

106.01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS

THE FIRST PARAGRAPH IS CHANGED TO:

Ensure that materials furnished for the Project are new, unless otherwise specified in the Contract. Comply with 2 CFR 200.323 – Procurement of recovered materials, ensuring that materials furnished for the Project contain, “the highest percentage of recovered materials practicable,” where the purchase price of the covered item listed exceeds \$10,000. Use materials that conform to the requirements of the Contract. When required by the Contract, use only products and suppliers listed on the QPL. Use sources of materials that have been approved by the Department on a Materials Questionnaire as specified in 106.04.

THE FOLLOWING IS ADDED:

For telecommunication and video surveillance services or equipment a certification is required to confirm that the telecommunication and video surveillance services or equipment are not from companies as listed in 2 CFR 200.216. Ensure that the certification includes the statement that all telecommunication and video surveillance services or equipment proposed in this project are not produced by companies as listed in 2 CFR 200.216.

106.02 DEPARTMENT-FURNISHED MATERIAL

THE FOLLOWING IS ADDED:

No materials are anticipated to be furnished by the Department on this project.

106.03 FOREIGN MATERIALS

THE SUBSECTION HEADING IS CHANGED TO:

106.03 FOREIGN MATERIALS AND EQUIPMENT

ITEM 2 OF THE FIRST PARAGRAPH IS CHANGED TO:

- 2. Federal Aid Projects.** Comply with the Federal statutes and regulations that establish the “Buy America” requirements applicable to the Project. These Federal requirements, which are contained in 23 CFR 635.409 and 23 CFR 635.410, mandate among other things that manufacturing processes for iron and steel materials and all iron and steel coatings must be performed in the United States.

Comply with the Infrastructure Investment and Jobs Act (“IIJA”), Pub. L. No. 117-58, which includes the Build America, Buy America Act (“the Act”). Pub. L. No. 117-58, §§ 70901-52 and implementing regulations. Comply with the requirements for IIJA’s four categories as described in 2 CFR 184.4(e): iron or steel products, manufactured products, construction materials, and exempt Section 70917(c) materials. Per 23 CFR 635.410(c)(2), an article, material, or supply is to be classified as one of the four categories as defined in 2 CFR 184.3 and must not be considered to fall into multiple categories. Ensure that:

- a. All iron or steel products as defined in 635.410(c)(1) used in the project comply with “Buy America” requirements for steel and iron per CFR 635.410(b). Ensure all iron or steel products used in the project are produced in the United States. Iron and steel products means articles, materials, or supplies that consist wholly or predominantly of iron or steel or a combination of both. Ensure all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
- b. All manufactured products permanently incorporated into the project are produced in the United States. “Produced in the United States” means both the final assembly of the product occurs in the United States and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product. Manufactured products means articles, materials, or supplies that have been processed into a specific form and shape; or combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies.
- c. All construction materials are manufactured in and manufacturing processes occurred in the United States. Construction materials includes an article, material, or supply - other than an item of primarily iron or steel; a manufactured product; or Section 70917(c) material – that is or consists primarily of non-ferrous metals, plastic and polymer-based products (including PVC, composite building materials, and polymers used in fiber optic cables), glass (including optic glass), fiber optic cable (including drop cable), optical fiber, lumber, engineered wood, or drywall. Items that consist of two or more of the listed materials that have been combined through a manufacturing process, and items that include at least one of the listed materials combined with a material that is not listed through a manufacturing process, should be treated as manufactured products, rather than as construction materials.
- d. Build America, Buy America does not extend to materials listed in Section 70917(c) of the Act. These exempt items are cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives.

THE SECOND THROUGH FOURTH PARAGRAPHS ARE CHANGED TO:

For steel and iron products incorporated into the Project, provide the RE a certification from the manufacturer stating the country where the steel or iron product was melted and manufactured including application of coatings which protect or enhance the value of the material. Ensure that 4 copies of the manufacturer’s certification are provided with each delivery of steel and iron products. Retain 1 copy and submit 3 copies to the RE. Ensure that the certification includes, materials description, quantity of material represented by the certification, country of manufacture, and notarized signature of a person having legal authority to bind the supplier. If a Certification of Compliance as specified in [106.07](#) contains a statement regarding the country of manufacture, a separate certification is not necessary.

If the use of foreign materials is allowed, the Department may require the Contractor to deliver the material to a Department-approved site for sampling, inspection, and testing. Do not use or incorporate the foreign material into the Work before the Department approves the material.

If the Department finds the Contractor failed to comply with the Federal or State provisions regarding foreign materials, the Department will require the unapproved foreign material be removed and replaced with acceptable material at no additional cost to the Department.

Comply with 2 CFR 200.216 Prohibition on Certain Telecommunication and Video Surveillance Services or Equipment.

Do not provide Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). Do not provide video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities). Do not provide Telecommunications or video surveillance services provided by such entities or using such equipment.

Do not provide Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

Do not provide any equipment assembled by others that has an integral component that was manufactured and supplied by the aforementioned companies.

Build America, Buy America domestic preferences for iron or steel products, manufactured products, and construction materials requirements are waived for projects where: 1. The total value of non-compliant products is no more than the lesser of \$1,000,000.00 or 5 percent of total applicable costs for the project. This does not apply to iron or steel subject to the requirements of 23 USC 313; or 2. The total amount of Federal financial assistance applied to the project is below \$500,000.00. Refer to the August 16, 2023 Federal Register for USDOT's issuance of a Waiver of Buy America Requirements for De Minimis Costs and Small Grants at the following link: [Federal Register: Waiver of Buy America Requirements for De Minimis Costs and Small Grants](#).

106.04 MATERIALS QUESTIONNAIRE

THE FIRST PARAGRAPH IS CHANGED TO:

At least 30 days before shipment of a material, and at least 30 days before fabrication of structural steel, precast concrete, and prestressed concrete Items, notify the RE of the proposed source of materials using the Materials Questionnaire form provided by the Department. For soil aggregate and dense-graded aggregate (DGA) material, submit a copy of recently performed test results for washed gradation test, proctor test, and other tests, as specified in 901.11, for the source with the Materials Questionnaire. For ITS systems as specified in Section 704 and machinery and electrical items for moveable bridges, obtain approval of system working drawings including individual components and Electrical material prior to submitting a materials questionnaire. Provide the approval with the materials questionnaire.

106.07.01 Certification of Compliance

THE FIRST PARAGRAPH IS CHANGED TO:

Submit manufacturer's Certifications of Compliance stating that the materials and assemblies fully comply with the requirements of the Contract when required by the Contract or requested by the Department, except for materials and assemblies that are temporary and not incorporated into the final construction and are not iron or steel such as sheeting and bridge assemblies. The State reserves the right to determine if a specific material or assembly meets this provision.

THE THIRD PARAGRAPH IS CHANGED TO:

Before incorporating the materials into the Project, obtain 3 copies of the manufacturer's Certifications of Compliance for materials, components, and manufactured items that are accepted by certification. Retain 1 copy and submit 2 copies to the RE. With the Certification of Compliance, provide a DC-1811, Certificate of Compliance Cover Sheet, identifying the Item for which it is submitted. For products that contain steel or iron, attach additional documents as required by the certification procedures as specified in 106.07.02. The Contractor may submit the Certifications of Compliance electronically to the RE in a scanned document. Include the DC-1811 and all backup documentation in the scanned document.

106.07.02 Certification for Iron and Steel

THE HEADING AND THE ENTIRE SUBPART IS CHANGED TO:

106.07.02 Certification for Iron and Steel, and Construction Materials

- A. Precast Concrete Steel and Concrete Pipe Certification of Compliance.** For precast concrete and concrete pipe items, a Buy America Compliance Plan is required to confirm that the material meets the Buy America requirements and the Infrastructure Investment and Jobs Act ("IIJA"), Pub. L. No. 117-58, which includes the Build America, Buy America Act ("the Act"). Pub. L. No. 117-58, §§ 70901-52 as specified in 106.03. The ME will periodically audit

compliance with the program at the precast plant. If the precast concrete item is not inspected by ME, submit a Certification of Compliance for the precast concrete item as required in 106.07.01. When a Certification of Compliance is submitted, ensure that the Certification of Compliance contains a statement that the reinforcing steel used in the precast concrete item complies with the Buy America requirements and the Infrastructure Investment and Jobs Act (“IIJA”), Pub. L. No. 117-58, which includes the Build America, Buy America Act (“the Act”). Pub. L. No. 117-58, §§ 70901-52 as specified in 106.03.

- B. Certification for Construction Materials.** For construction materials, a Buy America Compliance Plan is required to confirm that the material meets the Infrastructure Investment and Jobs Act (“IIJA”), Pub. L. No. 117-58, which includes the Build America, Buy America Act (“the Act”). Pub. L. No. 117-58, §§ 70901-52 as specified in 106.03. When a Certification of Compliance is submitted, ensure that the Certification of Compliance contains a statement that the construction materials used complies with the Infrastructure Investment and Jobs Act (“IIJA”), Pub. L. No. 117-58, which includes the Build America, Buy America Act (“the Act”). Pub. L. No. 117-58, §§ 70901-52 as specified in 106.03.
- C. Step Certification of Compliance.** For products that contain steel or iron components and are not covered in 106.07.02.A, step Certification of Compliance is required to confirm that the item meets the Buy America requirements and the Infrastructure Investment and Jobs Act (“IIJA”), Pub. L. No. 117-58, which includes the Build America, Buy America Act (“the Act”). Pub. L. No. 117-58, §§ 70901-52 as specified in 106.03. A step certification is a process under which each handler (e.g., supplier, fabricator, manufacturer, processor, coating facility) of the iron and steel components certifies that the steel and iron components were of domestic origin, and that their step in the process was domestically performed.

Every step in the process from melting to coating must be performed in the United States in order for the steel or iron component to be considered domestic and must be documented by step certification. If a domestic source for a steel or iron component cannot be found, submit a request for waiver to the Department. Do not purchase non-domestic steel or iron components without the express written consent of the Department.

Ensure that 3 copies of the Contractor’s Certification of Compliance (Form DC-17) and the step Certifications of Compliance are provided for items containing steel or iron. Retain 1 copy and submit 2 copies to the RE. The Contractor may submit the DC-17 and the step certifications electronically in a scanned document.

Ensure that step Certifications of Compliance contain the following information for each heat of material listed in the DC-17:

1. Name of the Company supplying the material.
2. Name and location of the Company the material was shipped to.
3. Material description.
4. Quantity of material represented by the Certification.
5. Means of identifying the consignment, such as label marking or seal number.
6. Date and method of shipment.
7. A statement that the material conforms to the Contract material requirements and to the Buy America requirements in 106.03 and the Infrastructure Investment and Jobs Act (“IIJA”), Pub. L. No. 117-58, which includes the Build America, Buy America Act (“the Act”). Pub. L. No. 117-58, §§ 70901-52.
8. A statement that all steel or iron components in the material or assembly were “melted and manufactured in the US”, unless there is non-domestic steel or iron in the material or assembly.
9. If there is non-domestic steel or iron in the assembly, describe in detail the non-domestic steel or iron material and the quantity. Attach a copy of the Department’s approval for the use of non-domestic steel or iron components.
10. Signature of a person having legal authority to bind the supplier.
11. Typed or printed name of the person who signed the certification.

The Department will not make payment for work containing steel or iron materials until the RE has received the required DC-17 and step Certifications of Compliance, has inspected and accepted the material or assembly.

SECTION 107 – LEGAL RELATIONS

107.01 LEGAL JURISDICTION

107.01.01 Applicable Law

THE FOLLOWING IS ADDED:

Particular attention is called to the following State laws and regulations:

N.J.S.A. 45:5A-1, et seq, which provides that the installation, erection, repair or alteration of electrical equipment for the generation, transmission or utilization of electrical energy, must be performed by an electrical contractor duly approved and licensed by the New Jersey Board of Examiners of Electrical Contractors.

Advise the applicable gas utility three business days (Saturdays, Sundays, and holidays excluded) before initiating any excavation in the vicinity of gas facilities.

Make available to the Contractor's employees, subcontractors, the Engineer and the public, all information pursuant to OSHA 29 CFR Part 1926.59 of the Hazard Communication Standard 29 CFR 1910.1200 and maintain a file on each job site containing all material safety data sheets (MSDS) for products in use at the project. Make these material safety data sheets available to the Engineer upon request.

107.01.02 Permits, Licenses, and Approvals

THE FOLLOWING IS ADDED:

The following have been procured by the County:

- Soil Erosion and Sediment Control Certification from the Ocean County Soil Conservation District
- NJPDES 5G3 Permit from the New Jersey Department of Environmental Protection
- A Categorical Exclusion Document (CED) by the New Jersey Department of Transportation and Federal Highway Administration.

107.02 NONDISCRIMINATION

THIS SUBSECTION IS CHANGED TO:

It is the policy of the Department that anyone performing work under any program, activity, or Contract with the Department, shall not discriminate on the basis of race, creed, color, national origin, age, ancestry, nationality, marital or domestic partnership status, gender, disability, affectional or sexual orientation, gender identity or expression, religion, liability for military service, veteran's status, income level or ability to read, write or speak English.

Pursuant to N.J.S.A. 10:2-1, the Contractor agrees that in the hiring of persons for the performance of work under this Contract or any subcontract hereunder, or for the procurement, manufacture, assembling, or furnishing of any such materials, equipment, supplies, or services to be acquired under this Contract, no contractor, nor any person acting on their behalf of such contractor or subcontractor, shall by reason of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex, discriminate against any person who is qualified and available to perform the work to which the employment relates;

No Contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee engaged in the performance of work under this contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling, or furnishing of any such materials, equipment, supplies, or services to be acquired under such contract, on account of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex.

There may be deducted from the amount payable to the contractor by the contracting public agency, under this contract, a penalty of \$50.00 for each person for each day during which such person is discriminated against or intimidated in violation of the provisions of the contract; and this contract may be terminated by the Department, and all money due or to become due hereunder may be forfeited, for any violation of this section of the contract occurring after notice to the Contractor from the Department of any prior violation of this section of the contract.

Standard Title VI Assurance. During the performance of this Contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “Contractor”), in accordance with Title VI/Nondiscrimination Assurance – Appendix A, USDOT Order 1050.2A agrees as follows:

1. **Compliance with Regulations:** The Contractor will comply with the Acts and Regulations relative to Nondiscrimination in Federally assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which herein incorporated by reference and made a part of this Contract.
2. **Nondiscrimination:** The Contractor, with regard to the Work performed by it during the Contract, will not discriminate on the grounds race, creed, color, national origin, age, ancestry, nationality, marital or domestic partnership status, gender, disability, affectional or sexual orientation, gender identity or expression, religion, liability for military service, veteran’s status, income level or ability to read, write or speak English in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and Regulations, including employment practices when the Contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurement of Materials and Equipment:** In all solicitations, either by competitive bidding, negotiation made by the Contractor for Work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor’s obligations under this Contract and the Acts and Regulations relative to nondiscrimination on the grounds of race, creed, color, national origin, age, ancestry, nationality, marital or domestic partnership status, gender, disability, affectional or sexual orientation, gender identity or expression, religion, liability for military service, veteran’s status, income level or ability to read, write or speak English.
4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the FHWA, to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Recipient or the FHWA, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Non-Compliance:** In the event of a Contractor’s noncompliance with the Nondiscrimination provisions of this Contract, the Recipient will impose such Contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to the following: a. Withholding payments to the Contractor under the Contract until the Contractor complies. b. Cancelling, terminating, or suspending a Contract, in whole or in part.
6. **Incorporation of Provisions:** The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Recipient to enter into any litigation to protect the interests of

the Recipient. In addition, the Contractor may request the United States to enter into the litigation to protect the interest of the United States.

During the performance of this Contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") in accordance with the Title VI /Nondiscrimination Assurance – Appendix E, USDOT Order 1050.2A, agrees to comply with the following nondiscrimination statutes and authorities; including but not limited to:

- a. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252); and 49 CFR Part 21.
- b. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601).
- c. Section 162(a) of the Federal Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.)
- d. Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended; and 49 C.F.R. Part 27.
- e. The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.)
- f. Airport and Airway Improvement Act of 1982, (49 U.S.C. § 471, Section 47123), as amended.
- g. The Civil Rights Restoration Act of 1987, (PL 100-209).
- h. Title II and III of the Americans with Disabilities Act (42 U.S.C. § 12131 - 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38.
- i. The Federal Aviation Administration's Nondiscrimination statute (49 U.S.C. § 47123).
- j. Executive Order 13166, Improving Access to services for Persons with Limited English Proficiency (70 Fed. Reg. at 74087 to 74100).
- k. 23 CFR Part 230 (EEO, Affirmative Action & OJT).
- l. 49 CFR Part 26.
- m. Executive Order 11246, as amended.
- n. Section 503 of the Rehabilitation Act of 1973, as amended.
- o. Section 4212 of the Vietnam Era Veteran's Readjustment Assistance Act, as amended.
- p. New Jersey Statutes N.J.S.A. 10:5-31 et seq.
- q. New Jersey P.L. 1975 Chapter 27.

107.03 AFFIRMATIVE ACTION, DISADVANTAGED BUSINESS ENTERPRISES OR EMERGING SMALL BUSINESS ENTERPRISES, AND SMALL BUSINESS ENTERPRISES

THIS SUBPART IS CHANGED TO:

It is the public policy of the State and of the United States that no individual, group, firm, corporation or joint venture working on or seeking to work on a Public Works Project should be discriminated against on the basis of race, creed, color, national origin, age, ancestry, nationality, marital or domestic partnership status, gender, disability, liability for military service, affectional or sexual orientation, atypical cellular or blood trait, or genetic information (including the refusal to submit to genetic testing). The Department has developed Affirmative Action, Disadvantaged Business Enterprise, or Emerging Small Business Enterprise Programs to implement this policy, and the regulations and requirements applicable to the Contract are contained in the Special Provisions. The Department will resolve conflicts between these regulations and requirements and the other provisions of the Contract to further the above stated public policy.

Contract Assurance. The Contractor, sub-recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this contract or such other remedy as the Department deems appropriate, which may include, but is not limited to one or more of the following:

1. Withholding monthly progress payments.
2. Assessing sanctions.
3. Liquidated damages.
4. Disqualifying the Contractor from future bidding as non-responsive.

107.11 RISKS ASSUMED BY THE CONTRACTOR

107.11.01 Risks

2. Risks of Loss or Damage to the Construction.

THE SECOND PARAGRAPH UNDER PART 2 IS CHANGED TO:

The Contractor shall not bear such risk of loss or damage for the repair or replacement of any permanent element of work and any temporary crash cushion items as specified in 159.03.02.5, if the element of the work damaged is completed and conforms to the contract as determined by the Department, and is serving its intended function, is subsequently damaged by a public traffic accident, and the Contractor provides the RE satisfactory evidence that such damage was caused by a public traffic accident. Satisfactory evidence is limited to:

- a. Accident reports filed with the New Jersey Motor Vehicle Commission.
- b. Documents supporting the damage issued by police agencies or insurance companies.
- c. Statements by reliable, unbiased eye witnesses.
- d. Identification of the vehicle involved in the accident.

107.11.02 General Insurance

B. Types

1. Comprehensive General Liability Insurance.

THE FIRST SENTENCE OF THE FOURTH PARAGRAPH IS CHANGED TO:

Ensure the policy names the County, its officers, and employees, as well as JCP&L, its officers, employees, and agents as additional insureds on a primary / non-contributory basis.

THE FOLLOWING IS ADDED:

Provide the coverage under this policy on ISO form CG 00 01 04 13 or an equivalent form. Also ensure the policy is endorsed to include Broad Form Property Damage and Advertising Injury.

2. Comprehensive Automobile Liability Insurance.

THIS FOLLOWNG IS ADDED:

Ensure the policy names the County, its officers, and employees, as well as JCP&L, its officers, employees, and agents as additional insured.

3. Owner's and Contractor's Protective Liability Insurance.

THIS FOLLOWNG IS ADDED:

Ensure the policy includes a Hold Harmless Clause that protects and indemnifies the Owner, the Engineer, their Officers and Agents against any claim or liability except a claim or liability resulting from the sole negligence of the Owner, the Engineer, their Officers and Agents or by the Owner's employees or Subcontractors; and shall reimburse the Owner, Engineer and Consultants for any costs incurred by them.

Ensure the policy names the County, its officers, and employees, as well as JCP&L, its officers, employees, and agents as additional insured.

5. Excess Liability Insurance.

THE FOLLOWING IS ADDED:

Ensure the policy names JCP&L, its officers, employees, and agents as additional insured.

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THE FIRST SENTENCE IS CHANGED TO:

Procure Excess Liability or Umbrella Liability insurance with limits in excess of the underlying policies for Comprehensive General Liability and Comprehensive Automobile Liability with minimum limits of liability of \$12,000,000.

107.12.01 Satisfying the Notice Requirements

ALL REFERENCES TO THE CONTRACTUAL NOTICE FORM SHALL BE CONSTRUED TO MEAN THE FORMAT REQUIRED BY THE COUNTY.

THE SECOND SENTENCE OF THE SECOND PARAGRAPH IS CHANGED TO:

Upon request, provide the RE with 5 copies of all documentation submitted in support of the claim.

107.12.02 Steps

THIS SUBPART IS CHANGED TO:

All construction contract documents entered into in accordance with the provisions of P.L.1971, c.198 (C.40A:11-1 et seq.) after the effective date of P.L.1997, c.371 (C.40A:11-50) shall provide that disputes arising under the contract shall be submitted to a process of resolution pursuant to alternative dispute resolution practices, such as mediation, binding arbitration or non-binding arbitration pursuant to industry standards, prior to being submitted to a court for adjudication. Nothing in this section shall prevent the contracting unit from seeking injunctive or declaratory relief in court at any time. The alternative dispute resolution practices required by this section shall not apply to disputes concerning the bid solicitation or award process, or to the formation of contracts or subcontracts to be entered into pursuant to P.L.1971, c.198 (C.40A:11-1 et seq.).

Notwithstanding industry rules or any provision of law to the contrary, whenever a dispute concerns more than one contract, such as when a dispute in a contract involving construction relates to a contract involving design, architecture, engineering or management, upon the demand of a contracting party, other interested parties to the dispute shall be joined unless the arbitrator or person appointed to resolve the dispute determines that such joinder is inappropriate. Notwithstanding industry rules or any provision of law to the contrary, whenever more than one dispute of a similar nature arises under a construction contract, or related construction contracts, upon the demand of a contracting party, the disputes shall be joined unless the arbitrator or person appointed to resolve the dispute determines that the disputes are inappropriate for joinder.

For the purposes of this section, the term "construction contract" means a contract involving construction, or a contract related thereto concerning architecture, engineering or construction management. P.L.1997, c. 371.

SECTION 108 – PROSECUTION AND COMPLETION

108.01 SUBCONTRACTING

THIS SUBSECTION IS CHANGED TO:

Do not discriminate on the grounds of race, creed, color, national origin, age, ancestry, nationality, marital/domestic partnership/civil union status, gender, disability, religion, affectional or sexual orientation, gender identity or expression, family status, atypical cellular or blood trait, genetic information, military service, or veterans status, in the selection and retention of subcontractors, including procurement of materials and leases of equipment. In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurement of materials, leases of equipment, or professional services, each potential subcontractor or firm will be

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notified by the Contractor of the Contractor's obligations under this Contract and the Acts and Regulations relative to Nondiscrimination.

The Department will not permit subcontracting without Department approval. The Contractor is responsible for the work performed by subcontractors. Ensure that no work is performed by a subcontractor before receiving written approval for each subcontractor from the Department. Ensure that DBEs/ESBEs have an equal opportunity to receive and participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds in performing work with the Department. Ensure that SBEs have an equal opportunity to receive and participate in the performance of contracts financed in whole with State funds in performing work with the Department. Utilize the specific DBEs, ESBEs, or SBEs listed to perform work and supply materials for which each is listed unless the written consent of DRR/AA is provided. Ensure that work reserved for a subcontractor designated as a DBE, ESBE, or SBE, is not performed by any other firm, including the Contractor's own organization. Submit requests for approval to subcontract on Department forms to the Department at least 20 days before the anticipated start of the work with the following:

1. A certified copy of the executed subcontract agreement between the Contractor and the subcontractor.
2. Proof of the subcontractor's valid business registration with the Department of Treasury, Division of Revenue according to N.J.S.A. 52:32-44.
3. Proof of the subcontractor's valid Public Works Contractor Registration with the Department of Labor, Division of Wage and Hour Compliance according to N.J.S.A. 34:11-56.18.

Make available on request, a copy of all DBE, ESBE, and SBE subcontracts. Ensure that all subcontracts or agreements with DBEs or ESBEs to supply labor or materials require that the subcontract and all lower tier subcontractors be performed in accordance with 49 CFR 26.53.

On Federal Aid Projects, the Contractor shall not terminate a DBE subcontractor, lower tier DBE subcontractor, DBE transaction expeditor, DBE regular dealer, DBE supplier, DBE manufacturer and DBE trucker or an approved substitute DBE firm without good cause as listed in 49 CFR 26.53(f)(1)(ii)(3), and prior written consent of DCR/AA. Prior to replacement of the DBE or ESBE firm, the Contractor shall in writing, notify the DBE or ESBE firm and the DCR/AA of its intent to request to terminate and/or substitute a DBE or ESBE firm, the reason for the request, and that the DBE/ESBE has 5 days to respond to the Contractor's notice and advise the DCR/AA and the Contractor of reasons why, if any, it objects to the proposed termination of its subcontract and why the Department should not approve the Contractor's action. Give the DBE or ESBE 5 days to respond to the Contractor's notice and advise the DCR/AA and the Contractor of reasons why, if any, it objects to the proposed termination of its subcontract and why the Department should not approve the Contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), the DCR/AA may provide a response period shorter than five days. At the time the Contractor requests termination or replacement of a DBE or ESBE firm, the Contractor must submit to the DCR/AA, documented evidence of its good faith efforts in accordance with 49 CFR Part 26.53 if they are replacing the terminated DBE or ESBE with a non-DBE or non-ESBE firm. The DCR/AA must approve the termination and substitution of all DBE or ESBE subcontractors, lower tier subcontractors, transaction expeditors, regular dealers, suppliers, manufacturers and truckers. The Contractor needs to show they began good faith efforts to replace or substitute with another DBE or ESBE well in advance of the request to terminate or substitute. The Department's DCR/AA has sole authority to approve the termination, replacement or substitution of DBE and ESBE subcontractors, lower tier subcontractors, transaction expeditors, regular dealers, suppliers, manufacturers and truckers.

If requesting approval for a third tier subcontract, submit a letter from the subcontractor permitting subcontracting to a third tier, and submit the request for approval to subcontract, completed by the second tier subcontractor. Ensure that no work is performed by a third tier subcontractor before receiving written approval from the Department.

The Department will allow the Contractor to subcontract work as follows:

1. **Values and Quantities.** The total value of the work subcontracted may not exceed 50 percent of the Total Contract Price, except as follows:

- a. The Contractor may deduct the value of work for Items designated as Specialty Items as specified in the Special Provisions from the value of the Total Contract Price. There are no specialty items in this project.
- b. The Contractor may deduct the value of work subcontracted to certified DBE, ESBE, and SBE firms indicated on the original DBE/ESBE/SBE Form A approved by the Department from the value of work subcontracted.

The total value of the work subcontracted may not exceed 70 percent of the Total Contract Price less the value of Specialty Items as noted above.

If a partial quantity of work for a unit price Item is subcontracted, the Department will determine the value of the work subcontracted by multiplying the price of the Item by the quantity of units to be performed by the subcontractor.

If only a portion of work of an Item is subcontracted, the Department will determine the value of work subcontracted based on the value of the work subcontracted as indicated in the subcontract agreement and as shown in a breakdown of cost submitted by the Contractor.

If a portion of a lump sum Item, an Item that includes specialty work, or a sign support structure is subcontracted, the Department will determine the value of work subcontracted based on the value of the work subcontracted as indicated in the subcontract agreement and as shown in a breakdown of cost submitted by the Contractor.

2. Limits and Restrictions. The Department will permit subcontracting of work with the following restrictions:

- a. The Contractor is barred from subcontracting MOBILIZATION.
- b. The Contractor may only subcontract electrical, clearing site electrical, blasting, asbestos removal, landscaping, and lead paint abatement work to subcontractors having the required certificates and licenses. Submit copies of required certificates and licenses with the request for approval to subcontract.
- c. The Contractor is barred from subcontracting to firms and individuals suspended or debarred by the Department or included in the State of New Jersey Consolidated Debarment Report maintained by the Department of the Treasury, Division of Building and Construction, Bureau of Contractor Prequalification. The Contractor must certify that neither the individual, partnership, corporation, joint venture, or limited liability corporation applying to do subcontract work nor any of its corporate officers, stockholders, partners, or members are collectively or individually suspended, debarred, proposed for debarment, disqualified, declared ineligible, or voluntarily excluded from doing business by this or any other State or sub-division thereof or listed in the Federal Government's System for Award Management (SAM), located at: <https://sam.gov/content/exclusions>.
- d. Subcontractors are barred from making claims against the Department, its agents, officers, or employees.

3. Subcontract Requirements. Ensure that subcontract agreements include the following Contract provisions:

- a. **Federal Aid Projects.** When subcontracting work on a Federal Aid Project, physically incorporate the following in the subcontract agreement, and inform subcontractors of their requirement to physically incorporate the information in lower tier subcontract agreements.
 - 1. Disadvantaged Business Enterprise Utilization (Federal Aid Project Attachment 1), or Emerging Small Business Enterprise Utilization (Federal Aid Project Attachment 1)
 - 2. Specific Equal Employment Opportunity Responsibilities on NJDOT Federal Aid Projects (Federal Aid Project Attachment 2).

3. Requirements for Affirmative Action to Ensure Equal Employment Opportunity on NJDOT Federal Aid Projects (Federal Aid Project Attachment 3).
4. Federal Equal Employment Opportunity Contract Specifications for NJDOT Federal Aid Projects (Federal Aid Project Attachment 4).
5. State of New Jersey Mandatory Equal Employment Opportunity Language on NJDOT Federal Aid Projects (Federal Aid Project Attachment 5).
6. Investigating, Reporting, and Resolving Employment Discrimination and Sexual Harassment Complaints on NJDOT Federal Aid Projects (Federal Aid Project Attachment 6).
7. Payroll Requirements for NJDOT Federal Aid Projects (Federal Aid Project Attachment 7).
8. FHWA-1273 Required Contract Provisions, Federal Aid Construction Contracts as amended or supplemented (Federal Aid Project Attachment 8).
9. State Mandatory Addendum to FHWA-1273 Required Contract Provisions, Federal Aid Construction Contracts as Amended or Supplemented (Federal Aid Project Attachment 9).
10. Federal Mandatory Equal Opportunity Language on Federal Aid Projects (Federal Aid Project Attachment 10).
11. Byrd Anti-Lobbying Certification (Federal Aid Project Attachment 11).
12. The Standard Title VI Assurance found in Subsection 107.02, as amended or supplemented.
13. General Wage Determinations Issued Under the Davis-Bacon and Related Acts.
14. New Jersey Department of Labor Prevailing Wage Rate Determination.
15. New Jersey Department of Transportation Code of Ethics for Vendors.
16. Subsection 107.04 as amended or supplemented.
17. Subsection 106.10 as amended or supplemented.
18. The Contract Assurance found in Subsection 107.03, as amended or supplemented.

2. Limits and Restrictions.

PART C IS CHANGED TO:

- c. The Contractor is barred from subcontracting to firms and individuals suspended or debarred by the Department or included in the State of New Jersey Consolidated Debarment Report maintained by the Department of the Treasury, Division of Building and Construction, Bureau of Contractor Prequalification. The Contractor must certify that neither the individual, partnership, corporation, joint venture, or limited liability corporation applying to do subcontract work nor any of its corporate officers, stockholders, partners, or members are collectively or individually suspended, debarred, proposed for debarment, disqualified, declared ineligible, or voluntarily excluded from doing business by this or any other State or sub-division thereof or listed in the Federal Government's System for Award Management (SAM), located at: <https://sam.gov/content/exclusions>.

108.02 COMMENCEMENT OF WORK

THE FOLLOWING IS ADDED:

Work shall not begin before the agreement between the NJDOT and the County has been fully executed and the contractor has received written Notice to Proceed.

THE THIRD PARAGRAPH IS CHANGED TO:

Do not perform construction layout and FIELD OFFICE TYPE ____ SET UP until the Department has approved the insurance certificates and the safety program. Do not begin other construction operations until after the following actions:

1. A preconstruction conference with the Department has been held.
2. Approval of the progress schedule as specified in 153.03.

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3. The field office has been established.
4. The ROW limits, limits of construction, environmentally restricted areas, and trees or other vegetation designated to be preserved have been laid out.

THE FOLLOWING IS ADDED:

Where permits are being awaited as indicated under Subsection 107.01.02, the fully executed Contract will be forwarded to the Contractor upon execution by the County but Notice to Proceed will be withheld until all permits are received.

Time requirements listed in the fifth paragraph of this Subsection shall, in the above instance, be interpreted to be counted from the date of mailing the Notice to Proceed to the Contractor.

Do not leave the roadway in a milled surface condition at the end of the working day. Place the final pavement course over the milled surface by the end of each working day. It will be the Contractor's responsibility to coordinate their milling and paving crews to achieve this requirement.

108.05.02 Safety Program

PART 3 IS CHANGED TO:

3. **Elements of the Program.** Include information and procedures for the following elements:
 - a. **Chain of Command.** Include the responsibilities of the management, supervisor, safety officer, and employees.
 - b. **Traffic Control Coordinator.** Include the name and contact information. Ensure that the traffic control coordinator meets the requirements specified in 159.03.01.
 - c. **Environmental Manager.** Include the name and contact information. Ensure that the environmental manager meets the requirements specified in 158.03.01.
 - d. **Local Emergency Telephone Numbers.** Include police, fire, medical, and, NJDEP hotline 1-877-WARN DEP (1-877-927-6337).
 - e. **Procedures for Handling Emergencies.** Provide guidelines for handling emergencies, including emergency action plans for accidents involving death or serious injury, property damage, fires, explosions, and severe weather. Include the emergency contact information of the Contractor's personnel responsible for handling emergencies.
 - f. **Training Topics.** Include regulatory and jobsite toolbox meetings. Include the documentation from the training and an attendance sheet for each.
 - g. **Contractor's Safety Rules.** Include housekeeping procedures and personal protective equipment requirements.
 - h. **Employee Disciplinary Policy.** Include the violation forms.
 - i. **Safety Checklists.** Include project safety-planning, emergency plans and procedures, documentation, and protective materials and equipment.
 - j. **Forms.** Include OSHA 300 Log and New Jersey Department of Labor L&I-1.
 - k. **Security Policy Guidelines.** Provide a copy for the office and for the Project Limits.
 - l. **Hazard Communication Program.** Provide the following:
 1. The location of and instructions for understanding the MSDS. Ensure that the location and instruction are available to anyone within the Project Limits.
 2. The person responsible for the hazard communication program and the method of informing personnel of the hazardous communication program. Include attendance sheets of hazard communication meetings.

3. When performing work that generates airborne crystalline silica, include engineering and work practice controls to limit exposure levels to at or below the permissible exposure limit according to 29 CFR 1910.1000 Table Z-3. Ensure that the program includes employee training and respiratory protection measures according to 29 CFR 1910.134 and control of the area when the permissible exposure limit is exceeded. Provide a trained and competent person, according to 29 CFR 1926.30, within the Project Limits at all times when performing work that produces airborne crystalline silica.

m. Additional Requirements. Provide additional procedures for Project specific topics including:

1. Compressed gas cylinders.
2. Confined spaces.
3. Cranes.
4. Electrical.
5. Equipment operators.
6. Fall protection.
7. Hand and power tools.
8. Hearing conservation.
9. Highway safety.
10. Lead.
11. Lock out/tag out.
12. Materials handling, storage, use, and disposal.
13. Night work.
14. Personal protective equipment.
15. Project entry and exit.
16. Respiratory protection.
17. Sanitation.
18. Signs, signals, and barricades.
19. Subcontractors.
20. Trenching.

n. Internal Traffic Control Plan (ITCP). Develop, submit, implement, and maintain an ITCP according to ANSI/ASSP A10.47 Section 6.5 and 6.6. At a minimum, ensure the plan includes:

1. A diagram showing internal vehicle and pedestrian routes, site layout, and hazard zones.
2. A listing of type and number of all on-site personnel and mobile equipment. Provide names of personnel upon request if needed after an accident.
3. A site-specific hazard identification checklist with corresponding mitigation measures aimed at reducing struck-by and related risks.
4. Safety notes emphasizing backing procedures, spotter usage, visibility aids, and run-over/back-over prevention.
5. A communication plan to ensure the ITCP is effectively communicated to all relevant workers, operators, subcontractors, and personnel. Distribute the communication plan at an onsite meeting or as otherwise directed by the RE.

Submit an updated ITCP plan during construction if any substantial changes, as determined by the RE, to site layout, access, or equipment occur. Ensure the updated plan is approved by the RE before implementation. Ensure plan modifications are communicated to affected personnel.

Provide a certification that the plan complies with ANSI/ASSP A10.47 Section 6.5, 6.6, and all associated requirements.

Within 15 days of receiving the safety program, the Department will determine if the safety program meets the requirements of the Contract. If the safety program does not meet the requirements, the Department will return the safety program for revision. Do not begin work within the Project Limits until the Department has approved the safety program.

The Contractor is responsible for implementing, monitoring, updating, and revising the safety program until Acceptance. Submit updates and revisions to the safety program to the RE for approval when new information,

new practices or procedures, or changing site and environmental conditions necessitate modifications to protect site personnel.

Maintain a copy of the updated safety program, including the appropriate documentation associated with each element, within the Project Limits so that it is available to workers and other authorized persons entering the Project Limits. Provide copies of updates to the safety program to the RE.

If an incident occurs that requires a New Jersey Department of Labor & Workforce Development Form (L&I-1) to be submitted, send a copy to the Office of Capital Project Safety, New Jersey Department of Transportation, 1035 Parkway Avenue, P.O. Box 600, Trenton, NJ 08625-0600.

Failure to comply with the requirements set forth in the Elements of the Program will result in the RE suspending the Work wholly or in part as specified in 108.13 and suspending Estimates, as specified in 109.05, for failure of the Contractor to correct conditions unsafe for the workers or the general public, for failure to carry out provisions of the Contract, including but not limited to failure to develop, submit, implement, and maintain the ITCP.

THE FOLLOWING IS ADDED:

The southern end of the project west of CR539 has been identified as a "Use Caution" area for ordnance due to historical use of ordnance in the Lakehurst area. All individuals working in these areas must be trained to recognize and report potential unexploded ordnance (UXO) if encountered. Training provided by the Joint Base is required and should be included as part of the Safety Program.

108.07.01 Interference

THE SECOND PARAGRAPH IS CHANGED TO:

Schedule and perform the Work so that successive construction operations and lane or roadway openings follow preceding operations as closely as possible. Limit work zones according to the Special Provisions. Confine construction operations adjacent to traffic to one side of the roadway at a time unless otherwise specified by the Contract. Where the Work is performed in stages adjacent to traffic, ensure that the road opened to traffic adequately accommodates traffic. Do not interfere with existing traffic access, except when required to perform the Work or as approved by the RE.

THE FIFTH PARAGRAPH IS CHANGED TO:

The RE has the right to reject or rescind approval of lane or shoulder closures because of the following:

1. Weather conditions.
2. The closure is unnecessary to perform the work.
3. Emergency conditions either on or off the Project that result in an unacceptable impact to the traveling public.
4. There is an active snow event in progress.
5. If the National Weather Service (<https://www.weather.gov>) locally forecasts, 12 hours prior to the lane closure, a 40 percent or greater chance of snow precipitation, tropical storms, or hurricanes during the requested lane closure hours.

108.08 LANE OCCUPANCY CHARGES

THIS SECTION IS DELETED.

108.09 MAINTENANCE WITHIN THE PROJECT LIMITS

THIS FOLLOWING IS ADDED:

If and when proposed work alters natural surface flow of stormwater, perform such temporary measures as necessary to control accumulation of stormwater. No separate payment will be made for these measures.

108.10 CONTRACT TIME

THIS FOLLOWING IS ADDED:

- A. Complete all work required for Substantial Completion in 670 calendar days.
- B. Achieve Completion in 730 calendar days.

No additional payment will be made for multiple demobilizations or remobilizations.

108.11.01 Extensions to Contract Time

108.13 SUSPENSION OF WORK

THE FOLLOWING IS ADDED:

The provisions set forth in N.J.S.A. 40A:11-16.7 shall be deemed a part of this Contract.

108.14 DEFAULT AND TERMINATION OF CONTRACTOR'S RIGHT TO PROCEED

THIS SUBSECTION IS CHANGED TO:

The Department will provide written notice to the Contractor and the Surety of the cause for default, and demand elimination of such cause for default, if the Contractor does any of the following:

1. Fails to begin construction operations within 40 days of execution of the Contract.
2. Fails to perform the Work with sufficient workers and equipment or with sufficient materials to ensure its completion within the Contract Time specified, or any modification thereof.
3. Fails to complete the Contract within the Contract Time specified, as modified. 78
4. Performs the Work unsuitably or neglects or refuses to remove materials or to again perform such Work as may be rejected as unacceptable and unsuitable.
5. Fails to follow the direction of the RE.
6. Works in a reckless or unsafe manner or fails to correct unsafe conditions.
7. Discontinues the prosecution of the Work.
8. Fails to resume Work which has been discontinued within a reasonable time after notice to do so.
9. Becomes insolvent or is declared bankrupt or commits any act of bankruptcy or insolvency.
10. Allows any final judgment to stand against it unsatisfied for a period of 10 days.
11. Makes an assignment for the benefit of creditors.
12. Fails to acquire or maintain the required insurance.
13. Fails to comply with Contract requirements regarding minimum wage payments, 49 CFR Part 26 et seq., the DBE program requirements, SBE program requirements, and equal employment opportunity requirements.
14. Is a party to fraud.
15. For any other cause whatsoever, fails to carry out the Work in an acceptable manner.

If the Contractor or Surety, within a period of 10 days after such notice, does not proceed as specified in the notice, then the Department has full power and authority, without violating the Contract, to declare the Contractor in default and notify the Contractor to discontinue the Work. The Department will provide, in writing, the declaration of default to the Contractor and Surety. The Department has the right to appropriate any or all materials and equipment within the Project Limits to complete the Contract. The Department has the right to direct the Surety to complete the Contract or may enter into an agreement for the completion of the Contract with the Surety or another contractor, or use such other methods required for the completion of the Contract, including completion of the Work by the Department.

If the Department directs the Surety to complete the Contract, the Department will provide to the Surety the Contract as defined in 101.03 and the completion status of the Contract. If the Surety elects to use a completion-contractor to perform the Work, the Surety must promptly submit to the Department a request for approval of the proposed completion-contractor as a subcontractor as specified in 108.01 within 45 days of receipt of the Contract provided by the Department pursuant to

this Section. The Department, in its sole discretion, has the right to reject a request by the Surety to use the Contractor or another contractor as the completion-contractor, either directly or under the direction of a consultant to the Surety.

If the Department approves the Surety's request to use the Contractor as the completion-contractor, the Surety shall cause the Contractor to begin Work, as defined in 101.03, within 45 days of notice of the Department's approval or as directed by the Department based on factors including but not limited to weather, seasonal restrictions, permits or at its sole discretion. The failure of the Surety to comply with the deadlines set forth in this Section shall be deemed a material breach of the Contract.

If the Department does not approve the Surety's proposed completion-contractor, the Surety must submit to the Department a request for approval of an alternative completion-contractor within 60 days of notice of the Department's disapproval. If the Department does not approve the Surety's alternative completion-contractor, the Department may continue to request approval of another alternative completion-contractor. Within 60 days of notice of the Department's approval of the Surety's proposed completion-contractor, the Surety shall cause the completion-contractor to begin Work, as defined in 101.03, or as directed by the Department based on factors including but not limited to weather, seasonal restrictions, permits or at its sole discretion. The failure of the Surety to comply with the deadlines set forth in this Section shall be deemed a material breach of the Contract.

The Contractor and Surety are not relieved of the assessment of liquidated damages, as specified in 108.20, because of the Contractor's default.

The Department will recover the costs and charges incurred by the Department, together with the cost of completing the Work from the Contractor or Surety.

The rights and remedies of the Department are in addition to any other rights and remedies provided by law or under the Contract and the bonds.

If, after declaration of default, the Department determines for any reason that the Contractor was not in default or that the delay was excusable, the rights and obligations of the parties are the same as if the Department had issued an order of termination for convenience as specified in 108.15.01.

If, after declaration of default, a court determines for any reason that the Department's default of the Contract was legally improper, the rights and obligations of the parties are the same as if the Department had issued an order of termination for the convenience as specified in 108.15.01.

108.19 COMPLETION AND ACCEPTANCE

THE FOLLOWING IS ADDED:

No Incentive Payment for Early Completion is specified for this project.

108.20 LIQUIDATED DAMAGES

THE FOLLOWING IS ADDED:

Liquidated damages are as follows:

- A. For each calendar day that the Contractor fails to complete the work as specified in Subsection 108.10 of these Special Provisions, for Substantial Completion, the County will assess liquidated damages in the amount of \$1,250.00.
- B. For each calendar day that the Contractor fails to achieve Completion as specified in Subsection 108.10 of these Special Provisions, the County will assess liquidated damages in the amount of \$750.00.

Anytime after the Engineer notifies the Contractor in writing, that Substantial Completion of the Project has been actually achieved, the County may elect, to waive the imposition of liquidated damages as described in this section and, in lieu thereof, require the Contractor to pay the actual costs incurred by the County for engineering, inspection, and

administration (including overhead) between the actual date of Substantial Completion or such subsequent date as the County may determine and the actual date of Completion of all Work, as established by the Certificate of Completion. The Contractor hereby waives the right to challenge this election by the County even if such costs exceed the amount of liquidated damages specified in Subsection 108.20.

The County will recover all damages specified above by deducting the amount thereof from any monies due or that may become due the Contractor, or from the Contractor or from its surety.

THE FOLLOWING SUBSECTION IS ADDED:

108.22 Working Hours

The following depicts limitations on working hours for construction activities. Construction activities may not deviate from these requirements unless prior approval from the County Engineer has been given. Lane Closures will not be allowed without prior written approval from the County Engineer and Municipality. Any deviation from the traffic control provided in the Plans and Specifications shall have prior approval by the County Engineer.

- Work which will interfere with traffic or restrict the width of traveled way available for traffic shall not be performed on Saturdays, Sundays, or Legal Holidays.
- There shall be no construction activity later than 5:00 P.M. on any given Friday unless prior approval from the County Engineer has been given.
- There shall be no lane closures permitted for greater than 15 minutes within each hour during daytime work hours.
- No full roadway closures will be permitted. Temporary night-time lane closures with alternating traffic may be permitted with at least 72 hours advance written notice and prior approval by the County Engineer
- There shall be no detours unless approved by the Ocean County Engineer.

SECTION 109 – MEASUREMENT AND PAYMENT

109.01 MEASUREMENT OF QUANTITIES

THE LAST PARAGRAPH IS CHANGED TO:

All items are to be measured for payment except those designated as lump sum and earthwork (excavation and soil aggregate items). Earthwork will be measured for payment only at the request of the Contractor or the RE. If making a request submit drawings, calculations, and other information demonstrating the as-built quantity. If the difference between the measured quantity and the Contract quantity is less than or equal to 10 percent of the Proposal quantity, the Department will make payment based on the Contract quantity. If the difference is more than 10 percent of the Contract quantity, the Department will make payment based on the measured quantity. For each Item that the Contractor requests a Proposal Item be measured, and it is determined that the difference between the quantity measured and the Contract quantity is less than or equal to 10 percent of the Proposal quantity, the Department will deduct \$500.00.

109.03 PAYMENT FOR FORCE ACCOUNT

PART 11 IS CHANGED TO:

11. For each subcontractor, provide and certify the subcontractor's documentation for items 1 through 10 above to be complete, accurate, and true.

109.04 PAYMENT FOR DELAY DAMAGES

THIS SUBSECTION IS DELETED.

109.05 ESTIMATES

THIS SUBSECTION IS CHANGED TO:

The Department will make monthly payments to the Contractor for work performed and for materials delivered, as specified in 109.06. The RE will calculate the payment in an Estimate consistent with the provisions of the Contract. If not otherwise described in the Contract, the RE will be the sole judge of the amount of progress payment due for partially completed work. The quantities provided in the Estimate may be approximations and may not be based on as-built quantity measurements. The Department will establish the date of the month that the Estimate is processed.

Pay subcontractors and suppliers for satisfactory performance of their work no later than 10 days from receipt of each payment made by the Department.

Pay subcontractors and suppliers the full amount of retainage no later than 10 days from receipt of payment made by the Department for the subcontractor's or supplier's work.

The RE will provide a summary of the Estimate to the Contractor. Before the issuance of each payment, certify, on forms provided by the Department, whether:

A. On Federally Funded Projects

1. No subcontractor or supplier was used on the project; or
2. Each subcontractor and supplier used on the project has been paid the amount due, from the previous progress payment; retainage is not being held, and
3. Each subcontractor and supplier used on the project will be paid the amount due from the current progress payment, for the subcontractor or supplier's work that was paid by the Department; or
4. There exists a valid basis under the terms of the subcontractor's or supplier's contract to withhold payments from the subcontractor or supplier. Therefore, the subcontractors and suppliers listed on the DL-72 Contractor Certification of Payment to Subcontractors and Suppliers have not been paid for work performed or materials supplied to the project from the proceeds of the previous progress payment or will not be paid for work performed or materials supplied to the project from the proceeds of the current progress payment, or both.

If the certification indicates that the Contractor has withheld or will withhold payment from a subcontractor or supplier, provide written notice, according to N.J.S.A. 52:32-40 and N.J.S.A. 52:32-41, of such non-payment to the subcontractor or supplier. Provide a copy of the notice to the Department and to the Surety that holds the performance bond. Include the reason for withholding payment and state the amount of payment withheld in the notice.

The date that the Department receives the certification will initiate the 20 day approval period under N.J.S.A. 2A:30A-1, et seq. The Department will not accept the certification before being requested by the RE.

If the Contractor fails to pay the subcontractor or supplier within 30 days after the subcontractor or supplier satisfactorily completes the specified work, the Department may withhold progress payments from the Contractor, until the Contractor pays the subcontractor or supplier all delinquent amounts due, or the Contract is terminated, or the matter is resolved under N.J.S.A. 52:32-40 and N.J.S.A. 52:32-41.

If the Department receives an allegation from a subcontractor or a supplier that the Contractor has not paid the subcontractor or supplier the amount due from a previous progress payment, including retainage, submit to the RE within 10 days of a request made by the RE, evidence that payment has been made.

If no valid basis exists for withholding payment, N.J.S.A. 52:32-40 and N.J.S.A. 52:32-41 authorize any subcontractor or supplier from whom payment is withheld to receive from the Contractor, in addition to any amount due, interest at a rate 84 equal to the prime rate plus 1 percent if the subcontractor or supplier is not paid within 10 days after receipt by the Contractor of payment by the Department for completed work that is the subject of a subcontract or a material supply agreement. This interest begins to accrue on the tenth day after receipt of payment by the Contractor.

If court action is taken by a subcontractor or supplier to collect payments withheld by a Contractor and it is determined that a valid basis existed for the withholding of those payments, the subcontractor or supplier shall be liable for any court costs incurred by the Contractor in connection with the action.

The Department will not make payment for an Estimate having a value less than \$5,000.00, unless it is for the Final Certificate.

The Department will deduct and withhold 2 percent in retainage from the total Estimate amount for State Funded Projects. On State Funded Projects, the Contractor may not withhold subcontractor retainage that exceeds the amount of retainage that the Department withholds from the Contractor.

Regarding Federally Funded Projects, the Department will deduct and withhold 2 percent in retainage from the total Estimate amount, excluding amounts for subcontracted work, until Substantial Completion. Pursuant to 49 C.F.R. § 26.29(b)(1), the Contractor may not withhold retainage from a subcontractor on Federally Funded Projects.

In the first Estimate following Substantial Completion, the Department will reduce the retainage withheld to one percent of the Total Adjusted Contract Price, excluding subcontracted work on Federal Aid Projects, unless it has been determined by the Department that the withholding of additional retainage is required. If retainage is held in cash withholdings, the reduction is to be accomplished by payment under the next Estimate. If retainage is held in bonds, the Department will authorize a reduction in the escrow account.

The RE has the right to not process an Estimate when, in the judgment of the RE, the Work is not performed or proceeding as specified in the Contract or following the Department giving the Contractor and Surety notice of default as specified in 108.14.

The Department's processing or payment of an Estimate is not an approval of defective or improper work. The Department, upon determining that any payment under a previous Estimate was improper or unwarranted for any reason, has the right to recover erroneous payment from the Contractor

109.06 MATERIALS PAYMENTS AND STORAGE

THE SUBSECTION IS CHANGED TO:

The Contractor may request payment for the cost of materials, including the storage cost, not incorporated into the Work. If approved by the RE, the Department will make payment for the cost of materials, including storage costs if such payment exceeds \$25,000.00; however, the amount of payment may not exceed 85 percent of the bid price for the associated Item. The Department may also direct the Contractor to purchase materials ahead of schedule for this purpose. The Department will not make payment for such materials until the RE is satisfied that:

1. The Contractor has properly stored and protected materials within the Project Limits or at locations owned or leased by the Contractor or the Department within the State, except that the Contractor may store structural steel outside the State with the prior approval of the Department. Provide and comply with manufacturers', suppliers', and fabricators' storing and handling recommendations for each material, as specified in 108.04.
2. The RE has inspected the materials and they appear to be acceptable based upon available supplier's certification and materials test reports.
3. The Contractor has provided the RE with the paid invoice or paid bill of sale for the materials, a certification from the supplier that the material was paid for, including the transfer of ownership to the Department.
4. For material stored on property not belonging to the Department, the material is stored in a fenced area with access limited to the Department and the Contractor. Additionally, the Contractor has posted a sign at the location clearly identifying, and printed in large letters, that the materials are without encumbrances and are to be solely used for the Project.
5. When materials are stored in a leased area, the lease is made out to the Contractor and provides that it shall be canceled only with the written permission of the Department. Submit a copy of the lease to the RE.

Payment for materials does not constitute Department approval or Acceptance of the materials or work. If materials paid for are damaged, stolen, or prove to be unacceptable, the Department has the right to recover the costs from the Contractor. Stored materials are not to be removed from storage except for incorporation into the project. The Department will not make payment for plant materials until they are planted or installed.

109.09 AUDIT

THE FIRST SENTENCE IN THE FIRST PARAGRAPH IS CHANGED TO:

All claims filed as specified in 107.12 and force account work are subject to audit at any time following the filing, whether or not part of a suit pending in the courts of this State pursuant to N.J.S.A. 59:13-1, *et seq.*

THE LAST PARAGRAPH IS CHANGED TO:

Pursuant to N.J.S.A. 52:15C-14(d) and N.J.A.C. 19:70-1.6(b), relevant records of private vendors or other persons entering into contracts with the Department are subject to audit or review by the New Jersey Office of the State Comptroller. Therefore, the Contractor shall maintain all documentation related to products, transactions or services under the Contract for a period of 5 years from the date of final payment. Such records shall be made available to the New Jersey Office of the State Comptroller upon request.

THE FOLLOWING SUBSECTION IS ADDED:

109.13 WARRANTY AGAINST DEFECTIVE WORK

Before final payment is made, the Contractor shall furnish a Surety Corporation Bond to the County in a sum equal to five percent (5%) of the adjusted Contract price on a form acceptable to the County, which bond shall remain in effect for a period of one (1) year from the date of acceptance of the work as surety for the warranties indicated in Subsection 108.21 of the Standard Specifications. This one (1) year period does not apply to the plantings where a two (2) year planting period is required as indicated in Section 811 of the Standard Specifications.

DIVISION 150 – CONTRACT REQUIREMENTS

SECTION 151 – PERFORMANCE BOND AND PAYMENT BOND

151.03.01 Performance Bond and Payment Bond

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

The performance and payment bonds should also be conditioned upon acceptance of the project by Department.

151.04 MEASUREMENT AND PAYMENT

THE SECOND AND THIRD PARAGRAPHS ARE CHANGED TO:

The County will make payment for PERFORMANCE BOND AND PAYMENT BOND on a dollar basis at the bid price or the actual cost (gross premium), whichever is lower. Payment will be made upon delivery of the paid bill and the report of execution issued by the surety showing the gross premiums of the bonds.

SECTION 152 – INSURANCE

152.03.02 Pollution Liability Insurance

THE FIRST SENTENCE OF THE FIFTH PARAGRAPH IS CHANGED TO:

Ensure the policy names the County, its officers, and employees, as well as JCP&L, its officers, employees, and agents as additional insured.

SECTION 153 – PROGRESS SCHEDULE

153.03.01 CPM Progress Schedule

THE FIRST PARAGRAPH IS CHANGED TO:

Provide a detailed CPM schedule in XER format to the RE in accordance with the current edition of “CPM in Construction Manual of Associate General Contractors (or approved equal). Employ a scheduler who is thoroughly trained and experienced in compiling construction schedule data, in analyzing by use of Critical Path Method, and in preparation and issue of period reports are required by this section.

THE FOURTH PARAGRAPH IS CHANGED TO:

If the Contractor proposes alternate staging, submit a plan detailing the proposed alternate. Submit a schedule showing the original staging and a schedule showing the proposed alternate staging. The RE may extend its review of the schedule submissions by a reasonable length of time. The Department will not grant time extensions or make payment for delays to construction resulting from extended review time of the proposed alternate staging by the RE, regardless of whether the Department accepts or rejects it. The RE may require the Contractor to submit the proposed alternate staging as a VECP as specified in 104.02.

THE FOLLOWING IS ADDED TO THE FIFTH PARAGRAPH:

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17. Indicate and account for the requirement of milling and paving operations occurring during the same day so as not to leave a milled surface at the end of each working day.

SECTION 154 – MOBILIZATION

154.04 MEASUREMENT AND PAYMENT

THE SUBSECTION IS CHANGED TO:

The Department will measure and make payment for Items as follows:

<i>Item</i>	<i>Pay Unit</i>
MOBILIZATION	LUMP SUM

The Department will make payment for MOBILIZATION on a lump sum basis, regardless of the number of times the Contractor shuts down and returns to the Project. The Department will make payment as follows:

Work Completed	Payment
5% of the Work ¹	Lesser of 25% of bid price or 3% of Total Contract Price
10% of the Work ¹	Lesser of 50% of bid price or 7% of Total Contract Price
15% of the Work ¹	Lesser of 75% of bid price or 11% of Total Contract Price
20% of the Work ¹	Lesser of 100% of bid price or 15% of Total Contract Price
100% of the Work	Amount of bid price not previously paid
1. If the baseline schedule is not approved, the Department will not make payment for MOBILIZATION.	

The Department will calculate the percentage of Work completed from the total of payments compared to the Total Contract Price. The total of payments excludes the amount paid for Mobilization and the amount paid for materials furnished but not incorporated into the Work as specified in 109.06.

If mobilization is not included in the Proposal, include the costs in the various Items scheduled in the Proposal.

SECTION 155 – CONSTRUCTION FIELD OFFICE

155.03.01 Field Office

THE FIRST PARAGRAPH IS CHANGED TO:

Provide and maintain a safe and secure field office for the exclusive use of the Department, until no longer required by the Department, at a location within or in the immediate vicinity of the Project Limits and approved by the RE. Do not lock out, or make the field office inaccessible to, the RE or any Department employees, consultants, or representatives at any time. Do not use any building scheduled for demolition under the Contract as a field office. If the field office is a temporary structure within State ROW, secure necessary permits from the New Jersey Department of Community Affairs, and remove the structure when directed by the RE.

4. Communication Equipment.

ITEMS A AND B ARE DELETED.

ITEMS C AND D ARE SUPPLEMENTED AS FOLLOWS:

- c. **Cell Phones.** Provide 1 cellular phones. Ensure the cellular phone plan provides for unlimited mobile to mobile in-network usage and an anticipated monthly usage of 900 anytime minutes for each phone. Ensure the phones are on the same plan. Ensure the cellular phone plan has a home rate with no roaming charges within the state. Ensure each cellular phone has the following features:

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1. Camera with 4 megapixel picture capability.
2. Battery life capable of 180 minutes of continuous use and 72 hours of standby use.
3. Equipped with a hands-free headset.
4. Base charger and car charger.

d. Computer System. Provide the following equipment:

1. Keyboard, optical mouse and 2 piece desktop speakers.
2. Wired Router with appropriate number of ports and cables and a print server. Ensure there is at least 1 wired Ethernet switch.
3. High-speed broad band connection and service with a minimum speed of 100 Megabits per second (mbps) with dynamic IP address for the duration of the project.
4. 19 inch or larger Flat Screen LCD monitor with tilt/swivel capabilities.
5. 500 Gigabyte or larger external drive with backup software for MS-Windows.
6. 1 Flatbed USB version 2.0 or greater Color Scanner with automatic document feed.
7. Uninterruptible power supply (UPS).
8. Surge protector for the entire computer configuration to be used in conjunction with the UPS.
9. Computer workstation, chair, printer stand, and/or table having both appropriate surface and chair height.
10. One can of compressed air and screen cleaning solution every other month of the duration of the contract.

Also provide:

10 USB 8 GB Flash/Jump memory drives

1 laser printer and supplies as follows:

1. Minimum of 192 Megabytes of expanded memory, printer cable, and legal-size paper tray.
2. One set of printer ink cartridges every other month for the duration of the construction project for each printer.

6. Office Equipment.

ITEMS C AND D ARE DELETED.

ITEM B IS SUPPLEMENTED AS FOLLOWS:

- b. 1 digital camera(s). Ensure each digital camera has auto-focus, with rechargeable batteries and charger, 32 GB memory card, USB Memory Card Reader compatible with camera and field office computer, 3.0 inch LCD monitor, 8 mega pixel resolution, 3X optical zoom lens, built in flash, image stabilization, computer connections, and a carrying case. Ensure the camera has video recording capabilities.

7. Inspection Equipment.

ITEM 7 IS SUPPLEMENTED AS FOLLOWS:

1. 1 Calculators with trigonometric capability.
2. 1 Electronic Smart level, 4 foot.
3. 1 Carpenter rulers.
4. 1 Steel tape, 25 feet.
5. 1 Cloth tape, 100 feet.
6. 1 Illuminated measuring wheel.
7. 1 Digital infrared thermometer.
8. 3 Hard hats - orange, reflectorized hard hats according to ANSI Z89.1.
9. 3 Safety garments – orange, reflectorized, 360° high visibility safety garments according to ANSI/ISEA Class 3, Level 2 standards. To be replaced yearly for the duration of the contract.
10. 2 Sets of rain gear with reflective sheeting.
11. 1 Sets of hearing protection with a NRR rating of 22 dB.

12. 3 Sets of eye protection according to ANSI Z87.1.
13. 1 Lantern flashlight, 6V with monthly battery replacements.

155.03.02 Field Office Maintenance

THE FIRST PARAGRAPH IS CHANGED TO:

Maintain the field office including furnishings, equipment, lavatories including toiletries, and utilities until no longer required by the Department. Provide services for utilities specified in 155.03.01.2. Provide for utility disconnection when the field office is no longer required by the RE. Assume that the field office will be required for a minimum of 3 months after Completion. Provide weekly janitorial and waste disposal service, and snow removal service as needed. Provide 1 case of letter, legal, and ledger sized paper every 2 months.

SECTION 157 – CONSTRUCTION LAYOUT AND MONUMENTS

THE SECTION IS RENAMED TO:

SECTION 157 – MONUMENTS

157.01 DESCRIPTION

THE FIRST PARAGRAPH IS CHANGED TO:

This Section describes the requirements for constructing monuments and monument boxes.

157.03.01 Construction Layout

THE ENTIRE SUBPART HAS BEEN REVISED, MOVED, AND RENAMED TO SUBSECTION 105.11

157.03.02 Monument

THE SUBPART IS RENUMBERED:

157.03.01 Monument

THE SUBPART IS CHANGED TO:

Comply with the Map Filing Law N.J.S.A. 46:26B-1 through 8 and N.J.A.C. 13:40-5.1 through 2. Set non-Department monuments according to the requirements of the agency. Set Department monuments at the specified location and elevation and ensure that the monuments are held firmly in place. Excavate so that concrete for the monument base and sides can be placed against undisturbed in-situ material, ensuring that the base is wider than the shaft. If rock is encountered, drill into the rock to provide a rock socket to the satisfaction of the RE. Reuse excess excavated material as specified in 202.03.03.C.1. Place concrete, as specified in 504.03.02.D, and set the reinforcement steel and the monument marker at the time of the concrete pour. Ensure that the top surface of the monument is level, and the disk is in the true position. After the concrete has attained strength, punch the disk.

After the monuments have been set, obtain the current horizontal and vertical control datum values on the monument and submit these values, signed and sealed by the land surveyor, to the RE.

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157.03.03 Monument Box

THE SUBPART IS RENUMBERED:

157.03.02 Monument Box

157.04 MEASUREMENT AND PAYMENT

THE CONSTRUCTION LAYOUT PAY ITEM AND PAYMENT CALCULATION ARE DELETED:

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

158.03.02 SESC Measures

THE FOLLOWING IS ADDED TO THE FIFTH PARAGRAPH:

When calcium chloride is used for dust control, the calcium chloride shall be Grade 2 in the form of loose dry granules or flakes and be fine enough to feed through commonly used spreaders at a rate of application of approximately 1.5 pounds per square yard. Exercise care when using calcium chloride on steep slopes in order to prevent the calcium chloride from washing into streams or accumulating around plants. Calcium chloride shall not be applied in solution.

THE FOLLOWING SUBPART IS ADDED:

158.03.04 Biological Surveys

Retain a qualified herpetologist, with at least five years of experience working with snakes. Obtain and maintain a valid Scientific Collecting Permit issued by the NJDEP-Division of Fish & Wildlife throughout construction. The herpetologist shall thoroughly inspect the fenced-in work area for snakes and other amphibian and reptile species prior to commencement of work each day of activity and throughout each work day for the full construction duration to “clear” the project limit of disturbance, temporary workspaces, and staging areas of amphibians and reptiles. Refer to subsection 105.08 for additional information.

158.04 MEASUREMENT AND PAYMENT

THE FOLLOWING PAY ITEMS ARE ADDED:

<i>Item</i>	<i>Pay Unit</i>
BIOLOGICAL SURVEYS	LUMP SUM

THE FOLLOWING IS ADDED:

The County will make payment for BIOLOGICAL SURVEYS on a pro-rated basis over the duration of the Contract.

SECTION 159 – TRAFFIC CONTROL

159.02.01 Materials

THE FIRST ITEM IS CHANGED TO:

Tack Coat 64-22..... 902.01.01

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
WHITING-NEW EGYPT ROAD OVER RIDGE WAY
FEDERAL PROJECT NO. 0539301

159.02.02 Equipment

THE FOLLOWING EQUIPMENT IS CHANGED TO:

Arrow Board 1001.01

159.03.01 Traffic Control Coordinator

THE FIRST PARAGRAPH BEFORE THE LIST IS CHANGED TO:

Before starting Work, submit to the RE the name, training, work experience, and contact information of an employee assigned as the on-site Traffic Control Coordinator (TCC). The TCC must be certified as having successfully completed the Rutgers CAIT Traffic Control Coordinator Program. A copy of the TCC's Rutgers CAIT Certification is to be provided to the RE. The TCC must also successfully complete an approved Traffic Coordinator refresher course every 2 years. The TCC is a full-time position, and the employee designated as TCC must be available on a 24 hour a day, 7 days a week basis. The TCC shall have the responsibility for and authority to implement and maintain all traffic operations for the Project on behalf of the Contractor. Ensure that the TCC is present at the work site at all times while the Work is in progress. The TCC's responsibilities and duties shall include the following:

159.03.02 Traffic Control Devices

THE FIRST PARAGRAPH IS CHANGED TO:

Ensure that FHWA category 1, 2, 3, and 4 traffic control devices (TCDs) conform to the requirements of the 2016 Edition of the Manual for Assessing Safety Hardware (MASH), except that TCDs manufactured on or before December 31, 2019 must have been purchased by the Contractor on or before December 31, 2019, and conform to the requirements of NCHRP 350, MASH 2009, or MASH 2016. Provide each device's applicable MASH 2016, MASH 2009, or NCHRP 350 test results and FHWA Eligibility letter, if issued by the FHWA, to the RE. Provide the RE with the purchase date certification for devices not meeting the MASH 2016 requirements upon delivery to the site. Ensure that traffic control devices meet or exceed an acceptable condition as described in the ATSSA guide Quality Standards for Work Zone Traffic Control Devices. Traffic control devices need not be new but must be in good condition. Provide traffic control devices according to MUTCD.

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

No separate payment will be made for relocating traffic devices as required or as directed.

2. Construction Barrier Curb.

THE SECOND PARAGRAPH IS CHANGED TO:

At least 30 days before delivering construction barrier curb to the Project Limits, provide the RE notice that the barrier curb is available for inspection. Ensure the barrier curb is not stacked for this inspection. The RE will inspect the barrier curb, along with a Contractor representative, to determine what pieces are not approved for delivery to the Project Limits. Final determination of construction barrier approval will be made at the time of placement at the Project.

PART 3 IS CHANGED TO:

3. Arrow Board. Provide an arrow board as specified in 1001.01.

THE FOLLOWING IS ADDED TO PART 4:

Provide Portable Variable Message Signs, as specified in 1001.02, at each end of the project no less than five (5) calendar days prior to the start of construction. The signs shall read "Road Construction to Begin On or About _____, Expect Delays" (date to be determined at the preconstruction meeting). After construction has begun, the signs shall read "Road Construction Ahead, Expect Delays". The signs shall have the ability to

display different messages if and when necessary throughout the duration of the project, at the discretion of the County Engineer, including detour messages if applicable, and approved by the County Engineer.

PART 5 IS CHANGED TO:

5. **Temporary Crash Cushion.** Install inertial barrier systems as specified in 611.03.01. Install temporary compressive crash cushions as specified in 611.03.02. Immediately repair or replace crash cushions that become damaged or become inoperable. Begin repair or replacement of the temporary crash cushion within 1 hour of receiving notice of damage from the Department. Ensure that workers assigned to such repair or replacement work continuously until the temporary crash cushion is repaired or replaced. If the Contractor fails to respond to a damage notification and begin work within 1 hour of notification or does not continue to work until the temporary crash cushion is repaired or replaced, the Department, will require closure of the adjacent live lane. Lane occupancy charges will be imposed as specified in 108.08 for the period of time the adjacent lane is closed. Should the Department have to respond to a repair with its own forces because of a Contractor's lack of response to a damage notification, the Contractor agrees to pay the Department a sum of \$3,000 for costs of mobilizing its forces and equipment. In addition, the Contractor must pay the Department the actual cost of material used for the repair and pay the actual costs of police traffic protection. Maintain an adequate number of replacement parts to repair damaged units at all times. Keep the areas in front, atop, and around the crash cushions clear of snow accumulation of more than 4 inches in depth.

Upon removal of the crash cushion, cut anchor bolts at least 3 inches below the surface of the surrounding roadway. Repair HMA pavement as specified in 401.03.03. Repair concrete pavement as specified in Section 452.

PART 6 IS CHANGED TO:

6. **Traffic Control Truck with Mounted Crash Cushions.** Provide the RE with a copy of the crash cushion manufacturer's recommendations. Provide the RE a certified weigh ticket of the Traffic Control Truck with arrow board and mounted Crash Cushion. Position the traffic control truck to ensure that there is adequate stopping distance after impact and to prevent errant vehicles from traveling around the truck and endangering workers. When used in a fixed position, place manual transmission vehicles in second gear and place automatic transmission vehicles in park. Ensure that the parking brake is set and the wheels are set straight. Do not use traffic control trucks in place of other temporary impact attenuators for more than 24 hours. Relocate the traffic control truck as specified by the TCP, or as directed by the RE. Do not use the truck to carry additional equipment, materials, or debris. When using ballast, ensure that it is secured to the truck. 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 rated.

159.03.03 Removable Black Line Masking Tape

THE SUBPART IS CHANGED TO:

Apply black line masking tape over existing traffic stripes as specified in 159.03.05. Ensure that the black line masking tape completely covers existing stripes. Replace black line masking tape that becomes loose after placement within 2 hours. When black line masking tape is no longer required or directed by the RE, carefully and completely remove without using heat, solvents, grinding, sanding, or water.

159.03.06 Traffic Stripes, Latex ,Traffic Markings Lines, Latex and Traffic Markings Symbols, Latex

THE SUBPART IS CHANGED TO:

Apply latex traffic stripes and latex markings when they are required for 14 days or less. Apply epoxy traffic stripes and thermoplastic markings as specified in 610.03.01 and 610.03.02 when they are required for more than 14 days. For Contractor convenience, on pavement preservation projects, the Department will allow the Contractor to refresh latex traffic stripes and latex markings for stripes and markings required to be in place for more than 14 days and for each 14 day period thereafter. Do not refresh these stripes with epoxy or thermoplastic material. Apply latex traffic stripes and

latex 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 latex 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.

Where temporary traffic stripes and markings are used to reopen a roadway ahead of final striping, lay out those markings in accordance with the final striping locations and colors. Install them immediately upon completion of final paving. Installation of paving tabs is not permitted.

All conflicting striping and marking shall be removed between the various stages of construction as shown on the Plans.

159.03.08 Traffic Direction

PART A IS CHANGED TO:

- A. Flagger.** Provide a flagger that has received formal training in flagging operations and the proper use of the STOP/SLOW paddle. The flagger must be able to demonstrate the abilities indicated in the current MUTCD and, when requested, demonstrate competency to the RE. Immediately replace flaggers who fail to demonstrate competency with a competent flagger. Ensure that flaggers wear a 360 degree high-visibility retroreflective orange safety garment meeting ANSI/ISEA Class 3, Level 2 standards. Ensure that the flagger is equipped with a STOP/SLOW paddle and follows MUTCD flagging procedures. Minimize interruptions to vehicular traffic to the extent feasible.

PART B IS CHANGED TO:

- B. Police.** Assignment and use of police to be used in the enforcement of the approved Traffic Control Plan (TCP) will follow applicable state law. The Contractor will be responsible for obtaining local police for use on the project. The use of police services by the RE does not relinquish or diminish the Contractor's responsibilities for work zone safety.

The Contractor will submit a request for police services to the local police department per their requirements. The RE will be notified at the time of the request.

Activities requiring police services include:

1. Traffic direction through signalized intersections, where the integrity of the existing traffic signal system is impacted or where an override of the signal is required.

Emergency situations may prevent police from arriving at the scheduled date or time. The RE will not permit construction operations that, by law, require police services if police are unavailable. The Department will not accept claims for interruptions or delays resulting from any failure of police to arrive as requested.

The Contractor must notify local police of cancellations 24 hours in advance. At least 24 hours before the scheduled start of work, notify the RE of any work cancellation for which police services were requested.

Uniformed police officers shall only be required for construction work as directed by the Engineer. Use of uniformed police officers are not compensable without prior written approval of the Engineer for any activity.

The use of Uniformed Officers is under the County Engineer's discretion. Uniformed Officers are only required for work performed at a fully operational traffic signal. If the Contractor prefers to use Uniformed Officers in lieu of flaggers for flagging operations, the County will pay for the hourly rate stated in the bid for Traffic Director, Flagger when utilized for operations as seen in NJDOT standard specification 159.03.08. Use of officers without prior written County approval or not utilized for flagging operations/traffic direction at an operational traffic signal will not be paid for by the County.

THE FOLLOWING SUBPART IS ADDED:

159.03.10 Bypass Roadways

Per the traffic control shown on the Plans, Stage 1 shows construction of temporary bypass roadways for use during Stage 2. At least 30 days before the start of this work, prepare final design for these roadways and submit working drawings signed and sealed by a Professional Engineer licensed in the State of New Jersey for approval. Include the following:

1. Horizontal and vertical geometry of bypass roadways, including tie ins to the existing or newly constructed roadway as appropriate.
2. Typical section(s) of bypass roadways. A 12 ft minimum width lane with 1 ft shoulders on each side must be provided.
3. Critical cross sections along bypass roadways showing existing and proposed grade lines, slopes, and interactions with other elements. Limits of work must remain within the limits of disturbance shown on the Plans.
4. Temporary traffic control devices for bypass roadways where they differ from the Plans.
5. Work plan and sequence for constructing bypass roadways and for restoring the site after completion of the Stage 2 work.
6. Means of maintaining access to adjacent driveways if and where required.

Design bypass roadways in accordance with all applicable codes and standards including, but not limited to, the latest editions of the Manual on Uniform Traffic Control Devices, the AASHTO Policy on Geometric Design of Highways and Streets, and the NJDOT Roadway Design Manual. The design speed shall be as shown on the Plans (or higher). In no case shall it be less than 35 miles per hour.

159.04 MEASUREMENT AND PAYMENT

THE SUBSECTION IS CHANGED TO:

The Department will measure and make payment for Items as follows:

<i>Item</i>	<i>Pay Unit</i>
BREAKAWAY BARRICADE	UNIT
DRUM	UNIT
TRAFFIC CONE	UNIT
CONSTRUCTION SIGNS	SQUARE FOOT
CONSTRUCTION IDENTIFICATION SIGN, ___' X ___'	UNIT
CONSTRUCTION BARRIER CURB	LINEAR FOOT
ARROW BOARD, ___' X ___'	UNIT
PORTABLE VARIABLE MESSAGE SIGN	UNIT
TEMPORARY CRASH CUSHION, INERTIAL BARRIER SYSTEM, ___ MODULES	UNIT
TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION	UNIT
TRAFFIC STRIPES, LATEX ___"	LINEAR FOOT
TRAFFIC MARKINGS LINES, LATEX ___"	LINEAR FOOT
TRAFFIC MARKINGS SYMBOLS, LATEX	SQUARE FOOT
REMOVABLE BLACK LINE MASKING TAPE, ___"	LINEAR FOOT
TRAFFIC DIRECTOR, FLAGGER	HOURLY

The Department will not make payment for repair or replacement of temporary crash cushion items under TEMPORARY CRASH CUSHION, INERTIAL BARRIER SYSTEM, ___ MODULES; TEMPORARY CRASH CUSHION, COMPRESSIVE BARRIER, TYPE___, WIDTH___, and TEMPORARY CRASH CUSHION, LOW MAINTENANCE COMPRESSIVE BARRIER, TYPE___, WIDTH___. The Department will make payment for repair or replacement of temporary crash cushion items as specified in 109.03.

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 Department will measure TRAFFIC STRIPES, LATEX and TRAFFIC MARKINGS LINES, LATEX by the linear foot for each specified width of stripe. The Department will not measure gaps in striping.

The Department will measure REMOVABLE BLACK LINE MASKING TAPE by the linear foot for each 4 inch width of existing stripe that is to be covered. The Department will not measure replacement temporary pavement stripes and markers for payment.

The Department will not include payment for epoxy traffic stripes and thermoplastic traffic markings and symbols under TRAFFIC STRIPES LATEX, TRAFFIC MARKINGS LINES, LATEX, and TRAFFIC MARKINGS SYMBOLS, LATEX. The Department will make payment for epoxy traffic stripes and thermoplastic traffic markings under TRAFFIC STRIPES, TRAFFIC MARKINGS LINES, and TRAFFIC MARKINGS SYMBOLS as specified in 610.04. The Department will not make payment under TRAFFIC STRIPES LATEX, TRAFFIC MARKINGS LINES, LATEX, and TRAFFIC MARKINGS SYMBOLS, LATEX when latex stripes, markings, and symbols are refreshed for Contractor convenience.

Unit prices for the items in this section shall include cost of furnishing and installing the device complete at the locations shown on the Plans or directed by the Engineer, replacing defective devices as directed; maintaining the device in good and clean condition; removing or covering the device when it is no longer needed; and all labor, equipment and material necessary therefor and incidental thereto. No specific payment will be made for relocating the device to the various locations shown on the Plans or directed by the Engineer and all costs thereof shall be included in the price bid in the Proposal for the device.

Any traffic control devices which are lost, stolen, destroyed or deemed unacceptable while their use is required on the Project shall be replaced by the Contractor without additional compensation.

Separate payment will not be made for escape ramps provided at the edges of pavement lifts or at excavations, but all costs thereof shall be included in the prices bid for the various items of maintenance of traffic.

Uniformed Traffic Directors shall be paid at a manhour rate. The County shall reimburse the Contractor an equivalent number of hours to match the total labor cost shown on payment records paid to the local Police Department. Separate payment shall not be made for a vehicle or any administrative fees. These costs shall be the responsibility of the Contractor. For multi-jurisdictional projects, the Contractor shall be responsible for payment to the local Police Departments at the hourly rate for each Township. The Contractor shall not exceed the hour quantity designated on the plans and specifications without the prior approval of the County Engineer. Uniformed Traffic Directors used without written approval from the Engineer are not compensable.

All traffic control devices, including striping, pavement markings and signing, that are in conflict with a specific stage of construction shall be removed. No separate payment will be made for removal of traffic control devices, but shall be paid under the items Traffic Stripes, Latex 4"; Traffic Markings Lines, Latex 24"; Traffic Markings Symbols, Latex; Breakaway Barricade; Drum; Traffic Cone; Construction Signs, Arrow Board, ____; Portable Variable Message Sign; and Traffic Control Truck with Mounted Crash Cushion.

No separate payment will be made for the design of temporary bypass roadways. Include costs in the various traffic control items. Pavement, dense-graded aggregate base course, temporary striping, and embankment for temporary bypass roadways will be measured and paid for separately under the associated items.

SECTION 160 – PRICE ADJUSTMENTS

THE ENTIRE SECTION 160 IS CHANGED TO:

160.01 DESCRIPTION

This Section describes the requirements for price adjustments for fuel and asphalt usage.

160.02 MATERIALS

(Intentionally Blank)

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
WHITING-NEW EGYPT ROAD OVER RIDGE WAY
FEDERAL PROJECT NO. 0539301

160.03 PROCEDURE

160.03.01 Fuel Price Adjustment

The Department will make price adjustments for fuel usage for Items listed in Table 160.03.01-1 and the Special Provisions. Each month may be divided into two periods. Period one includes the first day of the month through the fourteenth day of the month. Period two includes the fifteenth day of the month through the last day of the month. Work starting within period one and continuing past midnight of the fourteenth day into the fifteenth day of the month will be included in period one for any price adjustments. Work continuing past midnight of the last day of the month into the first day of the next month will be included in period two.

The Department will calculate fuel price adjustments based on the pay quantities of listed Items using the fuel usage factors listed in Table 160.03.01-1 and the Special Provisions.

Price adjustments may result in an increased payment to the Contractor for increases in the price index and may result in a reduction in payment for decreases in the price index.

If the as-built quantity of an Item eligible for fuel price adjustment differs from the sum of the quantities in the Estimates and the as-built quantity cannot be readily distributed among the time periods that the Item was constructed, then the Department will determine fuel price adjustment by distributing the difference in the same proportion as the Item's Estimate quantity is to the total of the Item's time period estimates.

Table 160.03.01-1 Fuel Price Adjustments	
Items	Fuel Usage Factor
EXCAVATION, UNCLASSIFIED	0.50 Gallons per Cubic Yard
EXCAVATION, REGULATED MATERIAL	0.50 Gallons per Cubic Yard
EXCAVATION, ACID PRODUCING SOIL	0.50 Gallons per Cubic Yard
REMOVAL OF PAVEMENT	0.25 Gallons per Square Yard
MICRO-MILLING	0.25 Gallons per Square Yard
HMA MILLING, 3" OR LESS	0.25 Gallons per Square Yard
HMA MILLING, MORE THAN 3" TO 6"	0.25 Gallons per Square Yard
CONCRETE MILLING	0.25 Gallons per Square Yard
HMA PROFILE MILLING	0.25 Gallons per Square Yard
BREAKING PAVEMENT	0.25 Gallons per Square Yard
RUBBLIZATION	0.25 Gallons per Square Yard
SUBBASE	1.00 Gallon per Cubic Yard
I- SOIL AGGREGATE	1.00 Gallon per Cubic Yard
SOIL AGGREGATE BASE COURSE, ____ " THICK	1.00 Gallon per Cubic Yard
SOIL AGGREGATE BASE COURSE, VARIABLE THICKNESS	1.00 Gallon per Cubic Yard
DENSE-GRADED AGGREGATE BASE COURSE, ____ " THICK	1.00 Gallon per Cubic Yard
DENSE-GRADED AGGREGATE BASE COURSE, VARIABLE THICKNESS	1.00 Gallon per Cubic Yard
CONCRETE BASE COURSE, ____ " THICK	0.25 Gallons per Square Yard
CONCRETE BASE COURSE, REINFORCED ____ " THICK	0.25 Gallons per Square Yard
ASPHALT-STABILIZED DRAINAGE COURSE	2.50 Gallons per Ton
OPEN-GRADED ____ FRICTION COURSE	2.50 Gallons per Ton
HOT MIX ASPHALT ____ SURFACE COURSE	2.50 Gallons per Ton
HOT MIX ASPHALT ____ SURFACE COURSE HIGH RAP	2.50 Gallons per Ton
HOT MIX ASPHALT ____ INTERMEDIATE COURSE	2.50 Gallons per Ton
HOT MIX ASPHALT ____ INTERMEDIATE COURSE HIGH RAP	2.50 Gallons per Ton
HOT MIX ASPHALT ____ BASE COURSE	2.50 Gallons per Ton

Table 160.03.01-1 Fuel Price Adjustments

Items	Fuel Usage Factor
HOT MIX ASPHALT _____ BASE COURSE HIGH RAP	2.50 Gallons per Ton
MODIFIED OPEN-GRADED _____ FRICTION COURSE _____	2.50 Gallons per Ton
ULTRA-THIN FRICTION COURSE	2.50 Gallons per Ton
STONE MATRIX ASPHALT _____ SURFACE COURSE	2.50 Gallons per Ton
HIGH PERFORMANCE THIN OVERLAY	2.50 Gallons per Ton
BINDER RICH INTERMEDIATE COURSE	2.50 Gallons per Ton
BRIDGE DECK WATERPROOFING SURFACE COURSE	2.50 Gallons per Ton
NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	2.50 Gallons per Ton
NON-VEGETATIVE SURFACE COURSE, POROUS HOT MIX ASPHALT	2.50 Gallons per Ton
COLOR-COATED NON-VEGETATIVE SURFACE, HOT MIX ASPHALT	2.50 Gallons per Ton
CONCRETE SURFACE COURSE, _____ " THICK	0.25 Gallons per Square Yard
CONCRETE SIDEWALK, 4" THICK	0.25 Gallons per Square Yard
CONCRETE SIDEWALK, 5" THICK	0.25 Gallons per Square Yard
CONCRETE SIDEWALK, 6" THICK	0.25 Gallons per Square Yard
CONCRETE SIDEWALK, 8" THICK	0.25 Gallons per Square Yard
CONCRETE SIDEWALK, REINFORCED, 6" THICK	0.25 Gallons per Square Yard
CONCRETE SIDEWALK, REINFORCED, 8" THICK	0.25 Gallons per Square Yard
DIAMOND GRINDING OF CONCRETE SURFACE COURSE	0.25 Gallons per Square Yard
DIAMOND GRINDING EXISTING CONCRETE PAVEMENT	0.25 Gallons per Square Yard
SLURRY SEAL AGGREGATE, TYPE II	2.5 Gallons per Ton
SLURRY SEAL EMULSION	0.10 Gallons per Gallon
CONCRETE BRIDGE APPROACH	0.50 Gallons per Cubic Yard
CONCRETE CULVERT	1.00 Gallon per Cubic Yard
CONCRETE FOOTING	1.00 Gallon per Cubic Yard
CONCRETE WING WALL	1.00 Gallon per Cubic Yard
CONCRETE PIER COLUMN PROTECTION, HPC	1.00 Gallon per Cubic Yard
CONCRETE PIER COLUMNS AND CAP	1.00 Gallon per Cubic Yard
CONCRETE ABUTMENT WALL	1.00 Gallon per Cubic Yard
CONCRETE PIER SHAFT	1.00 Gallon per Cubic Yard
CONCRETE PEDESTRIAN BRIDGE	1.00 Gallon per Cubic Yard
CONCRETE BRIDGE DECK	1.00 Gallon per Cubic Yard
CONCRETE BRIDGE DECK, HPC	1.00 Gallon per Cubic Yard
CONCRETE BRIDGE SIDEWALK	1.00 Gallon per Cubic Yard
CONCRETE BRIDGE SIDEWALK HPC	1.00 Gallon per Cubic Yard
CONCRETE BRIDGE PARAPET	1.00 Gallon per Cubic Yard
CONCRETE BRIDGE PARAPET HPC	1.00 Gallon per Cubic Yard
15" BY 32" CONCRETE BARRIER CURB, BRIDGE	0.12 Gallon per Linear Foot
24" BY 32" CONCRETE BARRIER CURB, BRIDGE	0.17 Gallon per Linear Foot
21" BY 34" CONCRETE BARRIER CURB, BRIDGE	0.15 Gallon per Linear Foot
24" BY 42" CONCRETE BARRIER CURB, BRIDGE	0.21 Gallon per Linear Foot
CAST-IN-PLACE CONCRETE PILES, DRIVEN _____ " DIAMETER	1.00 Gallon per Cubic Yard
RETAINING WALL, LOCATION NO. _____	0.10 Gallon per Square Foot
CONCRETE MEDIAN BARRIER, HPC	0.16 Gallon per Linear Foot

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
WHITING-NEW EGYPT ROAD OVER RIDGE WAY
FEDERAL PROJECT NO. 0539301

Table 160.03.01-1 Fuel Price Adjustments

Items	Fuel Usage Factor
15" BY 41" CONCRETE BARRIER CURB	0.28 Gallon per Linear Foot
24" BY 32" CONCRETE BARRIER CURB	0.17 Gallon per Linear Foot
15" BY 54" CONCRETE BARRIER CURB	0.15 Gallon per Linear Foot
38" BY 79" CONCRETE BARRIER CURB	0.40 Gallon per Linear Foot
24" BY 39" CONCRETE BARRIER CURB	0.18 Gallon per Linear Foot
18 5/8" BY 65" CONCRETE BARRIER CURB	0.20 Gallon per Linear Foot
32" BY 41" CONCRETE BARRIER CURB	0.24 Gallon per Linear Foot
24" BY 41" CONCRETE BARRIER CURB	0.19 Gallon per Linear Foot
24" BY 45" CONCRETE BARRIER CURB	0.19 Gallon per Linear Foot
15" BY 35" CONCRETE BARRIER CURB, DOWELLED	0.09 Gallon per Linear Foot
15" BY VARIABLE HEIGHT CONCRETE BARRIER CURB	0.28 Gallon per Linear Foot
24" BY VARIABLE HEIGHT CONCRETE BARRIER CURB	0.15 Gallon per Linear Foot
15" BY VARIABLE HEIGHT CONCRETE BARRIER CURB, DOWELLED	0.24 Gallon per Linear Foot
24" BY VARIABLE HEIGHT CONCRETE BARRIER CURB, DOWELLED	0.15 Gallon per Linear Foot
19" BY 32" CONCRET BARRIER CURB, DOWELLED	0.10 Gallon per Linear Foot
24" BY 32" CONCRETE BARRIER CURB, DOWELLED	0.13 Gallon per Linear Foot
24 1/2" BY 53" CONCRETE BARRIER CURB, DOWELLED	0.18 Gallon per Linear Foot
24 1/2" BY VARIABLE HEIGHT CONCRETE BARRIER CURB, DOWELLED	0.15 Gallon per Linear Foot
24" BY 35" CONCRETE BARRIER CURB, DOWELLED	0.13 Gallon per Linear Foot
GROUND MOUNTED BARRIER CURB	0.15 Gallon per Linear Foot
15" BY 51" F SHAPE CONCRETE BARRIER CURB	0.34 Gallon per Linear Foot
24 1/2" BY 51" F SHAPE CONCRETE BARRIER CURB	0.23 Gallon per Linear Foot
24 1/2" BY ____ " F SHAPE CONCRETE BARRIER CURB, DOWELLED	0.23 Gallon per Linear Foot
15" BY VARIABLE HEIGHT F SHAPE CONCRETE BARRIER CURB, DOWELLED	0.34 Gallon per Linear Foot
15" BY ____ " F SHAPE CONCRETE BARRIER CURB, DOWELLED	0.34 Gallon per Linear Foot
VARIABLE WIDTH BY VARIABLE HEIGHT F SHAPE CONCRETE BARRIER CURB	0.34 Gallon per Linear Foot
9" BY 16" CONCRETE VERTICAL CURB	0.04 Gallon per Linear Foot
9" BY 18" CONCRETE VERTICAL CURB	0.04 Gallon per Linear Foot
9" BY 20" CONCRETE VERTICAL CURB	0.04 Gallon per Linear Foot
9" BY 22" CONCRETE VERTICAL CURB	0.05 Gallon per Linear Foot
9" BY 14" CONCRETE VERTICAL CURB	0.03 Gallon per Linear Foot
9" BY 4" CONCRETE VERTICAL CURB, DOWELLED	0.01 Gallon per Linear Foot
9" BY 6" CONCRETE VERTICAL CURB, DOWELLED	0.01 Gallon per Linear Foot
9" BY 8" CONCRETE VERTICAL CURB, DOWELLED	0.02 Gallon per Linear Foot
9" BY 10" CONCRETE VERTICAL CURB, DOWELLED	0.02 Gallon per Linear Foot
12" BY 13" CONCRETE SLOPING CURB	0.04 Gallon per Linear Foot
12" BY 3" CONCRETE SLOPING CURB, DOWELLED	0.01 Gallon per Linear Foot
____ " BY ____ " CONCRETE SLOPING CURB, DOWELLED	0.01 Gallon per Linear Foot
9" BY VARIABLE HEIGHT CONCRETE VERTICAL CURB	0.04 Gallon per Linear Foot
9" BY VARIABLE HEIGHT CONCRETE VERTICAL CURB, DOWELLED	0.02 Gallon per Linear Foot

Table 160.03.01a-1 Additional Fuel Price Adjustments

Items	Fuel Usage Factor

If an item listed in Table 160.03.01-1 or the Special Provisions has a payment unit which differs from that listed in Table 160.03.01-1 or the Special Provisions, the Department will apply an appropriate conversion factor to determine the number of gallons of fuel used.

The Department will calculate fuel price adjustment using the following formula:

$$F = (MF - BF) \times G$$

Where:

F = Fuel Price Adjustment

MF = Fuel Price Index for work performed in the time period immediately before the estimate cutoff date.

BF = Basic Fuel Price Index

G = Gallons of Fuel for Price Adjustment

The Department will post the Fuel Price Index every month on the Department's website: <https://www.state.nj.us/transportation/business/aashtoware/PriceIndex.shtm>.

The Basic Fuel Price Index is the Index which is listed for the month prior to the receipt of bids. For new work added that is eligible for Fuel Price Adjustment, the Basic Fuel Price Index is the index which is listed for the month the new work was added to the Contract. If the month prior to the receipt of bids or the month the new work was added has two Indices, the Index in effect for the first day of that month will govern for the Basic Fuel Price Index. If the Fuel Price Index increases by 50 percent or more over the Basic Fuel Price Index, do not perform any work involving Items listed in Table 160.03.01-1 or the Special Provisions without written approval from the RE.

Fuel price adjustments will not be made for pay items in the bid specifications calling for less than 500 gallons of fuel, If more than one pay item has the same nomenclature but with different thicknesses, depths or types, each individual pay item must require 500 gallons or more of fuel to be eligible for a fuel price adjustment. If more than one pay item has the exact same nomenclature, similar pay items shall be combined and this combination must require 500 gallons or more of fuel to be eligible for the fuel price adjustment.

Fuel price adjustments will not be made in those months for which the monthly fuel price index has changed by less than five percent from the basic fuel price.

160.03.02 Asphalt Price Adjustment

The Department will make price adjustments for asphalt binder usage. The Department will calculate asphalt price adjustments based on the quantities of Items containing asphalt binder constructed.

Each month may be divided into two periods. Period one includes the first day of the month through the fourteenth day of the month. Period two includes the fifteenth day of the month through the last day of the month. Work starting on the fourteenth day of the month and continuing past midnight into the fifteenth day of the month will be included in period one for any price adjustments. Work continuing through midnight of the last day of the month into the first day of the next month will be included in period two.

The price used for both the Basic and Monthly Price Indexes will be determined based on the performance grade of asphalt binder in the approved mix design for the asphalt mixture.

Price adjustments may result in an increased payment to the Contractor for increases in the price index and may result in a reduction in payment for decreases in the price index.

The Department will calculate the asphalt price adjustment by the following formula:

$$A = (MA - BA) \times T$$

Where:

A = Asphalt Price Adjustment

MA = Asphalt Price Index for work performed in the time period immediately before the estimate cutoff date.

BA = Basic Asphalt Price Index

T = Tons of New Asphalt Binder¹

1. 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 of asphalt binder used.

For Tack Coat, Prime Coat, MICRO SURFACING EMULSION, SLURRY SEAL EMULSION, and FOG SEAL SURFACE TREATMENT, the Department will calculate the weight of asphalt as follows:

$$T = G \times C \times 0.00428$$

C = Petroleum content of the product

Use 100% for Tack Coat 64-22 and Tack Coat 64E-22

Use 60% for Polymer Modified Tack Coat, and all other emulsified asphalts

G = Gallons furnished

The constant 0.00428 is derived from the conversion factor of tons per gallon using 8.345 lbs/gallon for water and a factor of 1.025 for the specific gravity of asphalt binder.

The Department will not calculate an asphalt price adjustment for FOG SEAL STRIP.

The monthly asphalt price index, as determined by the Department, will be the average of quotations from suppliers serving the area in which the Project is located, and will be determined by the Department. The Department will post the asphalt price index every month on the Department's website: <https://www.state.nj.us/transportation/business/aashtoware/PriceIndex.shtm>.

The Basic Asphalt Price Index will be the Index which is listed for the month prior to the receipt of bids. If the month prior to the receipt of bids has two Indexes, the Index in effect for the first day of the month will govern for the Basic Asphalt Price Index.

The Monthly Asphalt Price Index will be that for the month that the work is constructed in. If work is constructed over the course of two or more months for a particular pay estimate, then multiple Monthly Indexes will be used corresponding to the date that the work was performed.

If the Asphalt Price Index increases 50 percent or more over the basic asphalt price index, do not perform work on Items containing asphalt binder without written approval from the RE.

For projects with original contract bid quantities of hot mix asphalt below 1000 tons, there will not be any asphalt price adjustment if the total hot mix asphalt used on the project remains under 1000 tons.

For projects with original contract bid quantities of hot mix asphalt below 1000 tons which, during construction, it is necessary to exceed 1000 tons, an asphalt price adjustment will be applied to only that amount over 1000 tons.

For projects with original contract bid quantities of hot mix asphalt over 1000 tons, an asphalt price adjustment will be applied to the total amount of asphalt used on the job.

THE FOLLOWING SUBPART IS ADDED:

160.03.03 Steel Price Adjustment

The Department will make a steel price adjustment for Items listed in table 160.03.03-1 using the price index indicated for the Item. The Contractor may opt out of a steel price adjustment for one or more of the categories of structural steel, reinforcement steel, or piles, shown in table 160.03.03-1, by providing the Regional Construction Engineer with a list of

those categories to which the Contractor does not want to apply the steel price adjustment. Provide the list within 5 days of award of the Contract. Ensure the list identifies all items in each opt out category by description and Item number. Only entire categories will be considered. Only the items listed will be excluded for a price adjustment. Failure to submit the list within the specified time will result in losing the opportunity to opt out of the steel price adjustment. The steel price adjustment will always apply to beam guide rail, rub rail, and sign structures. This adjustment is based solely on the mill provided steel.

Table 160.03.03-1 Steel Price Adjustment Items

Item	Price Index (BS & MS)
BEAM GUIDE RAIL	US Dept. of Labor, Bureau of Labor Statistics - Producer Price Index for Semifinished Steel Mill Products WPU 101702

Price adjustments may result in an increased payment to the Contractor for increases in the price index and may result in a reduction in payment for decreases in the price index.

A steel price adjustment will only be made for price increases when $\frac{(MS-BS)}{BS} > 10\%$ and a price adjustment will only be made for price decreases when $\frac{(BS-MS)}{BS} > 15\%$.

When the Monthly Steel Price Index is greater than the Benchmark Steel Price Index, the Department will calculate STEEL PRICE ADJUSTMENT using the following formula:

$$S = \frac{[(BS - MS) + (BS \times 0.10)]}{-BS} \times CB \times W$$

When the Monthly Steel Price Index is less than the Benchmark Steel Price Index, the Department will calculate STEEL PRICE ADJUSTMENT using the following formula:

$$S = \frac{[(MS - BS) + (BS \times 0.10)]}{BS} \times CB \times W$$

Where:

- S = Steel Price Adjustment (Dollars).
- BS = Benchmark Steel Price Index – the steel preliminary price index for the month before the project is bid.
- MS = Monthly Steel Price Index – the steel price index for the month steel is shipped from the mill.
- CB = Cost Basis (\$/lb).
- W = Weight of Steel (lb).

The Department will post the BS, MS and CB value every month at <https://www.state.nj.us/transportation/business/aashtoware/SteelPriceIndex.shtm>.

With each delivery of steel, submit to the RE documentation from the fabricator or supplier, which details the following information:

1. Weight of the steel shipped from the mill to the fabricator or supplier
2. Name of the mill, fabricator or supplier or both.
3. Identifying transmittal or invoice number for each shipment.
4. Date of the shipment
5. Item description and Item number(s) for which the steel is associated.

If the documented steel weight is for more than one Item, provide the RE with the weight attributed to each Item.

Provide the documentation to the RE within 60 days of the date of the shipment. The Department will not make a price adjustment for steel shipped before the bid date.

The Department will make a price adjustment for BEAM GUIDE RAIL (including posts) based on the weight of steel furnished. The weight does not include coating. The weight does not include associated hardware and the weight of end treatments.

If the preliminary Monthly Steel Price Index increases 100percent or more over the Benchmark Steel Price Index, do not order more steel without written approval from the RE. The RE will determine if work will continue based on the Steel Price Index increase.

There will be no increase to STEEL PRICE ADJUSTMENT if the work is behind schedule by fault of the Contractor and the steel was not purchased prior to the delay.

160.04 MEASUREMENT AND PAYMENT

THE SUBSECTION IS CHANGED TO:

The Department will measure and make payment for Items as follows:

<i>Item</i>	<i>Pay Unit</i>
FUEL PRICE ADJUSTMENT	DOLLAR
ASPHALT PRICE ADJUSTMENT	DOLLAR
STEEL PRICE ADJUSTMENT	DOLLAR

THE SECOND PARAGRAPH IS CHANGED TO:

The items FUEL PRICE ADJUSTEMENT and ASPHALT PRICE ADJUSTMENT must be included in the Proposal or added to the Contract to qualify for payment.

DIVISION 200 – EARTHWORK

SECTION 201 – CLEARING SITE

201.03.01 Clearing Site

PART A IS CHANGED TO:

A. Preparation. Construct SESC measures, as specified in 158.03.02, before clearing site.

THE FIRST PARAGRAPH IN PART B IS CHANGED TO:

B. Clearing and Grubbing. Before beginning excavation or embankment construction, clear the site within the limits of construction. Clear the ground surface of vegetation (trees of various caliper, brush, weeds, roots, matted leaves), small structures not shown on the Plans for demolition, debris, and other objectionable material where its existing position conflicts with the limits of construction. In cut sections, grub out tree stumps within the limits of the total cut area. In fill sections, the Contractor may leave tree stumps extending less than 1 foot above the original ground surface in those areas where the proposed subgrade, or proposed finished grade in non-pavement sections, is greater than 3 1/2 feet above the original ground surface. Grub out tree stumps that lie within 5 feet horizontally or vertically from any proposed structure, pipe, or duct.

201.03.02 Clearing Site, Bridge and Clearing Site, Structure

THE FIRST PARAGRAPH IS CHANGED TO:

Submit a demolition plan detailing the work area, methods, and equipment to be used to the RE for approval 30 days before demolition operations. Clear site within work area as specified in 201.03.01. Remove the substructures of existing structures to at least 3 feet below the natural stream bottom, and remove those parts outside of the stream to at least 2 feet below natural ground surface. Where such portions of existing structures lie wholly or in part within the limits of a new structure, remove them to accommodate the construction of the proposed structure. Only the following equipment is permitted for the work:

201.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

The Department will not make payment for the Item CLEARING SITE in excess of \$300,000 until Completion.

SECTION 202 – EXCAVATION

202.02 MATERIALS

THE FOLLOWING MATERIALS ARE ADDED:

Dense-Graded Aggregate.....	901.10
HMA	902.02

202.03.03 Excavation, Unclassified

THE FOLLOWING IS ADDED TO PART A, ITEM 1:

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
WHITING-NEW EGYPT ROAD OVER RIDGE WAY
FEDERAL PROJECT NO. 0539301

Dewatering required to install the proposed elements shall be done by using well points. The use of “trash pumps” or other pumps that are not part of the well point system and not approved by the Engineer will not be permitted. Submit dewatering plan to the Engineer for approval before initiating dewater work.

202.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEMS ARE DELETED:

<i>Item</i>	<i>Pay Unit</i>
STRIPPING	ACRE
EXCAVATION, TEST PIT	CUBIC YARD
EXCAVATION, ACID PRODUCING SOIL	CUBIC YARD
DISPOSAL OF ACID PRODUCING SOIL	TON

THE FOLLOWING IS ADDED:

No separate payment shall be made for the excavation of any acid producing soils the Contractor encounters. The cost of this work shall be included in the unit price bid for Excavation, Unclassified.

No separate payment shall be made for stripping. The cost of this work shall be included in the unit price bid for Excavation, Unclassified.

No separate payment shall be made for the testing of acid producing soils. The costs associated with this shall be included in the unit price bid for Excavation, Unclassified.

Investigatory soil sampling was performed in 2025 and the results are included as an attachment to these Specifications. While not anticipated, if regulated materials are discovered, payment will be made on an if and where directed basis under the associated regulated material items.

DIVISION 300 – SUBBASE AND BASE COURSES

SECTION 302 – AGGREGATE BASE COURSE

302.02.01 Materials

THE FOLLOWING MATERIAL IS ADDED:

Coarse Aggregate (Size No 57)..... 901.03

THE FOLLOWING IS ADDED:

Use only virgin dense-graded aggregate on this project conforming to 901.10.01.

THE FOLLOWING SUBPART IS ADDED:

302.03.02 Coarse Aggregate Base Course

- A. **Preparing Subgrade or Subbase.** Before placing base course on subgrade or subbase, prepare surfaces as specified in 301.03.01.
- B. **Aggregate Base Course Placement.** Place and spread the base course as specified in 301.03.01.B Place the base course and compact within a tolerance of $\pm 1/2$ inch of the required elevation. For base courses greater than 8 inches thick, construct the base course in 2 or more lifts of approximately equal thickness.

302.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
COARSE AGGREGATE, SIZE NO. 57	CUBIC YARD

DIVISION 400 – PAVEMENTS

SECTION 401 – HOT MIX ASPHALT (HMA) COURSES

401.02.01 Materials

THE FIRST ITEM IS CHANGED TO:

Tack Coat 64-22, PG 64S-22 902.01.01

THE FOLLOWING ITEM IS ADDED:

Geotextiles 919.01

401.03.01 Milling

A. HMA Milling.

THE FOLLOWING IS ADDED:

If, during milling operations, the milling machine breaks through the existing HMA surface and exposes gravel or soil aggregate, mill an additional four (4) inches and construct 4” Hot Mix Asphalt Base Course as listed in the proposal. If the exposed gravel or soil aggregate is unacceptable, at the direction of the Engineer, excavate an additional six (6) inches and construct 6” Dense Graded Aggregate Base Course and the additional 4” Hot Mix Asphalt Base Course.

The time interval for resurfacing shall be zero. Schedule the milling and paving operations so that the HMA Surface Course shall be constructed immediately following the milling operation. The Contractor shall end the milling operations each day to allow time for the paving operation to pave all areas that were milled.

401.03.05 Tack Coat

THE FOLLOWING IS ADDED AFTER THE FOURTH PARAGRAPH:

The Department will perform verification testing of tack coat application rate according to ASTM D2995, Option A, within the first 300 feet of each paving operation for each lane of paving, except that only one pad assembly will be used for the transverse application rate and the longitudinal application rate will not be verified. Prior to tack coat application, allow the RE access to set geotextile pads for the initial verification test. After passing over the pads with the tack distributor, allow the RE time to perform the verification test and calculation. If the application rate is determined to be outside the rate specified in Table 401.03.05-1, stop the tack coat and paving operations, make the required adjustments to achieve a proper application rate, and allow the RE to perform an additional verification test within the next 300 feet. Allow the RE to perform additional tests until the correct application rate is achieved. Retack areas that are insufficiently coated. The frequency of testing may be increased based on a visual inspection or at the discretion of the RE.

ITEM 1 IS CHANGED TO:

1. **Tack Coat.** Apply Trackless Tack Coat SS 1vh as specified below:

Parameter	Test Method	Min.	Max.
Saybolt Furol Viscosity, SFS @ 25°C	ASTM D88	15	100
Storage Stability, 24 hrs., %	ASTM D244	--	1
Storage Stability, 5 days, %	ASTM D244	--	5
Residue by Distillation, %	ASTM D244	50	--
Oil Distillate, %	ASTM D244	--	1
Sieve Test, %	ASTM D244	--	0.3

Test on Residue

Penetration, @ 25°C	ASTM D5	--	20
Softening Point Range Deg. C	ASTM D36	65	--
Solubility, %	ASTM D2042	97.5	--
Original Binder DSR @ 82°C			
G*/SIN δ, 10 rad./sec.	AASHTO T111	1	--

Note: Product should not contain filler such as clay, etc.

Keep from freezing.

Supply certified test data to the Engineer showing material supplied was tested for and meets the above properties.

In areas inaccessible to distributor spray bars, use hand spraying equipment for tack coat. Do not allow traffic or construction vehicles on tack coated surfaces.

Only apply tack coat that can be paved over in the same day. Apply trackless tack coat SS-vh at a rate of 0.1 gallons per square yard and at a spraying temperature of 175°F. To avoid clogging of the distributor truck, the tack coat must be maintained at a constant temperature of 175°F.

Do not allow traffic or construction vehicles on tack coated surfaces until the emulsion has broken, or as otherwise directed by the Engineer.

Only apply tack coat that can be paved over in the same day.

See manufacturer's representative for correct distributor settings.

Uniformly apply the asphalt material as noted above.

Dilution is not permitted.

If product is stored for an extended period of time, prior to application, agitate or gently circulate the material.

All nozzles and spray patterns shall be identical to one another along the distributor spray bar. The angle of the nozzles should be a 15 to 30 degree angle to the spray bar axis to maximize overlap, or as recommended by the nozzle manufacturer. Contact the manufacturer's representative for required spray nozzle size, and distributor and nozzle settings.

The Engineer will determine the actual application in gallons per square yard by a check on the project.

The application is considered satisfactory when the material is applied uniformly with no visible evidence of streaking or ridging, and the application rate is $\pm 10\%$ of the specified rate.

401.03.07 HMA Courses

A. Paving Plan.

PART (4) IS CHANGED TO:

4. Lighting plan for night operations as specified in 108.06.

C. Test Strip

THE FIRST PARAGRAPH IS CHANGED TO:

Construct a test strip for each HMA mix for contracts with more than a total of 5,500 tons of HMA. For HMA HIGH RAP, construct the test strip at least 14 days prior to production. Test strips are not necessary for temporary pavement. Ensure that the tack coat or prime coat has been placed as specified in [401.03.05](#) and [401.03.06](#), before placing HMA. Transport and deliver, spread and grade, and compact as specified in [401.03.07.D](#), [401.03.07.E](#), and [401.03.07.F](#), respectively, and according to the approved paving plan. Construct a test strip for the first 700 to 1,200 square yards placed for each job mix formula. If the paving lot area is less than 700 square yards, the may make

a request in writing to the District Local Aid Office to waive the coring requirements. While constructing the test strip, record the following information and submit to the RE:

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.

THE SECOND PARAGRAPH IS CHANGED TO:

Ensure that weigh tickets are signed and sealed by a certified weighmaster. Individual weigh tickets do not need to be signed and sealed if using an automated batching plant or automated drum plant.

THE FOURTH PARAGRAPH IS CHANGED TO:

When using an automated batching plant, obtain weigh tickets from the printer used in conjunction with an automated batching and mixing system. Ensure the printed ticket shows the individual weights of the various components of the HMA in a batch, the total weight of each batch, and the sum of all batch weights in the truckload. If using an automated batching plant or automated drum plant, at the completion of each day's work, provide certification from the weighmaster that the total net weight supplied was correct.

E. Spreading and Grading.

THE FOLLOWING IS ADDED TO THE THIRD PARAGRAPH:

Operate the MTV to ensure that the axle loading does not damage structures, roadway, or other infrastructure.

THE FOLLOWING IS ADDED TO ITEM 2:

Offset transverse joints between the base course and the surface course by a minimum of twenty-five feet.

F. Compacting.

THE FOLLOWING IS ADDED:

After compaction has been completed, the pavement shall be free of all visible defects such as segregation, bleeding, ruts, ridges, roller marks, cracking, tearing, raveling, open or segregated transverse or longitudinal joints, depressed or raised areas around manholes or raised areas around inlets in the traveled way or any other defects, as determined by the Resident Engineer. All visible defects shall be repaired to the satisfaction of the Resident Engineer at no additional cost to the County.

At the discretion of the Resident Engineer, where it is deemed to be impractical to repair such visible defects, a payment reduction due to nonconformance will be applied according to this Subsection.

G. Opening to Traffic.

THE FOLLOWING IS ADDED:

Ensure that RPMs are installed and rumble strips are constructed within 14 days of opening each day's surface paving to traffic.

H. Air Void Requirements

THIS PART IS CHANGED TO:

Pavement lots are defined as approximately 15,000 square yards of pavement in Surface area. If pavement lot area is less than 5000 square yards, the may make a request in writing to the Local Aid District Office to waive the air voids requirements.

The RE will designate an independent testing agency (Laboratory) to perform the quality assurance sampling, testing and analysis. The Laboratory is required to be accredited by the AASHTO Accreditation Program (www.amrl.net). The Laboratory's accreditation must include AASHTO T 166 and AASHTO T 209.

The Laboratory Technician who performs the quality assurance sampling shall be certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Plant Technologist, Level 2.

The Laboratory will determine air voids from 5 (Five) 6-inch diameter cores taken from each lot in random locations within the traveled way and at least one core in each travel lane. The HMA Core Sampling Plan form provided on the [Local Aid Website](#) must be utilized by the Laboratory to determine the random locations of the cores. The Laboratory may rerun the random location functions on the HMA Core Sampling Plan form to resolve any conflicts generated by the HMA Core Sampling Plan form and physical limitations of the HMA lot, such as utility conflicts, or the specifications defined herein. The coring locations must be designated by a station and offset, and offsets are taken from the left edge of the pavement in the direction of travel within the lane lines. The Laboratory must disclose the contents of the HMA Core Sampling Plan with the Contractor to assist in the schedule of construction.

The Laboratory will determine air voids of cores from the values for the maximum specific gravity of the mix and the bulk specific gravity of the core. The Laboratory will determine the maximum specific gravity of the mix according to NJDOT B-3 and AASHTO T 209, except that minimum sample size may be waived in order to use a 6-inch diameter core sample. The Laboratory will determine the bulk specific gravity of the compacted mixture by testing each core according to AASHTO T 166.

The Laboratory will calculate the percent defective (PD) as the percentage of the lot outside the acceptable range of 2 percent air voids to 8 percent air voids. The acceptable quality limit is 15 percent defective. For lots in which PD > 15, the Department will assess a negative pay adjustment.

The Laboratory will use and submit to the RE the DS8S-PD form provided on the [Local Aid Website](#) and verify manually the PD calculation.

The Laboratory will calculate pay adjustments based on the following:

- 1. Sample Mean ($\bar{X}$) and Standard Deviation (S) of the N Test Results (X1, X2,..., XN).**

$$\bar{X} = \frac{(X_1 + X_2 + \dots + X_N)}{N}$$

$$S = \sqrt{\frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 + \dots + (X_N - \bar{X})^2}{N - 1}}$$

2. **Quality Index (Q).**

$$Q_L = \frac{(\bar{X} - 2.0)}{S}$$

$$Q_U = \frac{(8.0 - \bar{X})}{S}$$

3. **Percent Defective (PD).** Using NJDOT ST for the appropriate sample size, the Laboratory will determine PD_L and PD_U associated with Q_L and Q_U, respectively. PD = PD_L + PD_U

4. **Reduction Per Lot.** Calculate the reduction per lot as specified in Table 401.03.07-3:

Table 401.03.07-3	
Reduction in Payment for Nonconformance to Air Void Requirements	
Percent Defective (PD) Per Lot	Reduction Per Lot (%)
0 < PD ≤ 15	0
15 < PD ≤ 30	0.5
30 < PD ≤ 35	2
35 < PD ≤ 40	10
40 < PD ≤ 45	15
45 < PD ≤ 50	20
50 < PD ≤ 60	30
60 < PD ≤ 75	45
PD > 75	Remove & Replace

5. **Outlier Detection.** If PD < 10, the Laboratory will not screen for outliers. If PD ≥ 10, the Laboratory 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 Laboratory will arrange the core results in ascending order, in which X₁ represents the

smallest value and X_N represents the largest value.

2. If X_N is suspected of being an outlier, the Laboratory will calculate:

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

3. If X_1 is suspected of being an outlier, the Laboratory 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 for $N = 5$ 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 Laboratory will use the initial core results to determine reduction per lot.

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 Laboratory will use the initial core results to determine the reduction per lot.

6. **Retest.** If the initial series of 5 cores produces a percent defective value of $PD \geq 30$ for mainline or ramp lots, or $PD \geq 50$ for other pavement lots, the Contractor may elect to take an additional set of 5 cores at random locations chosen by the HMA Core Sampling Plan form. Take the additional cores within 15 days of receipt of the initial core results. If the additional cores are not taken within the 15 days, the Laboratory will use the initial core results to determine the PPA. If the additional cores are taken, the Laboratory will recalculate the reduction per lot using the combined results from the 10 cores.

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, the Department will assess the calculated reduction per lot instead of removal and replacement. Fog seal the lot as specified in 422.03.01.

I. Thickness Requirements

THIS PART IS CHANGED TO:

Thickness requirements will apply when full-depth, uniform-thickness HMA pavement construction is shown.

Pavement lots are defined as approximately 15,000 square yards of pavement area. The RE will not include areas consisting of different HMA mixtures or thicknesses in the same lot. If thickness lot area is less than 5000 square yards, the may make a request in writing to the District Local Aid Office to waive the thickness requirements.

The RE or will designate an independent testing agency (Laboratory) to perform the quality assurance sampling, testing and analysis. The Laboratory is required to be accredited by the AASHTO Accreditation Program (www.amrl.net). The Laboratory's accreditation must include AASHTO T 166 and AASHTO T 209.

The Laboratory Technician who performs the quality assurance sampling shall be certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Plant Technologist, Level 2.

The Laboratory will test for thickness using the full-depth cores taken for surface course air voids, evaluated according to NJDOT B-4. The Laboratory will base acceptance on total thickness and thickness of the surface course.

1. **Total Thickness.** The Laboratory will calculate the percent defective (PD) as the percentage of the lot that is less than the design thickness. The Laboratory will consider 25 percent defective as the acceptable quality limit. For lots where $PD < 25$, the Department will award a positive pay adjustment. For lots where $PD > 25$, the Department will assess a negative pay adjustment.

The Department will base total thickness acceptance on the percentage of the lot estimated to fall below the specified thickness as follows:

- a. **Sample Mean ($\bar{X}$) and Standard Deviation (S) of the N Test Results ($X_1, X_2, \dots, X_N$).** Calculate as specified in 401.03.07.H.1.

$$\bar{X} = \frac{(X_1 + X_2 + \dots + X_N)}{N}$$

$$S = \sqrt{\frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 + \dots + (X_N - \bar{X})^2}{N - 1}}$$

- b. **Quality Index (Q_L)**

$$Q_L = \frac{(\bar{X} - T_{des})}{S}$$

Where T_{des} = design thickness.

- c. **Percent Defective (PD).** Using NJDOT ST for the appropriate sample size, determine the percentage of material (PD) falling below the design thickness associated with Q_L (lower limit).
- d. **Reduction in Payment.** The Department will determine the reduction in payment based on the quantity of the surface course multiplied by the percent reduction in payment from Table 401.03.07-5.

Table 401.03.07-5 Reduction in Payment for Nonconformance to Requirements for Total Thickness

Percent Defective	Percent Reduction
0 to 25.0	0
25.1 to 30.0	2
30.1 to 35.0	5
35.1 to 40.0	10
40.1 to 45.0	20
Over 45.0	Remove & Replace

- e. **Retest.** If the initial series of 5 cores produces a percent defective value of $PD \geq 30$, the Contractor may elect to take an additional set of 5 cores at random locations chosen by the RE. Notify the RE within 15 days of receipt of the initial core results to take the additional cores. If the RE is not notified within the 15 days, the Laboratory will use the initial core results to determine the reduction in payment for nonconformance requirements. If the additional cores are taken, the ME will recalculate the reduction in payment for nonconformance requirements using the combined results from the 10 cores.
- f. **Removal and Replacement.** If the lot $PD \geq 45$, remove and replace, or mill and overlay, the lot. The replacement work is subject to the same requirements as the initial work.
2. **Surface Course Thickness.** The Laboratory will evaluate the surface course solely to determine whether a remove- and-replace or an overlay condition exists, not for pay adjustment. The Laboratory will calculate the percent defective (PD) as the percentage of the lot that is less than the allowable thickness for the nominal maximum aggregate used in the surface course. The Laboratory will accept pavement lots with $PD \leq 30$ and will reject pavement lots with $PD > 30$.

The Laboratory will base surface thickness acceptance on the percentage of the lot estimated to fall below the allowable thickness as follows:

- a. **Sample Mean (X) and Standard Deviation (S) of the N Test Results (X1, X2,..., XN).**
Calculate using the formula as specified in 401.03.03.I.1.

- b. **Quality Index (Q).**

$$Q_L = (X - T_{all})/S, \text{ where } T_{all} \text{ is the minimum allowable thickness from Table 401.03.07-6.}$$

Table 401.03.07-6 Surface Course Thickness Requirements

HMA Mix Design Size Designation	Minimum Allowable Compacted Lift Thickness (T_{all})
4.75 MM	0.50 inch
9.5 MM	1.00 inch
12.5 MM	1.25 inches
19 MM	2.00 inches

- c. **Percent Defective.** Using NJDOT ST - Statistical Tables (NJDOT Standard Specs for Roads and Bridges 2019-NJDOT TEST METHODS) for the appropriate sample size, determine the percentage of material (PD) falling below the allowable thickness associated with QL (lower limit).
- d. **Retest.** If the initial series of 5 cores produces a percent defective value of $PD > 30$, the Contractor may take an additional 5 cores at random locations determined by the Laboratory. Notify the RE within 15 days of receipt of the initial core results to take the additional cores. If the RE is not notified within the 15 days, the Laboratory will use the initial core results to determine the PPA. When the additional cores are taken, the Laboratory will recalculate the reduction in payment for nonconformance requirements using the combined results from the 10 cores to obtain the total PD.
- e. **Removal and Replacement.** If the surface course fails to meet the acceptance requirement with a $PD \leq 45$, the Department will require removal and replacement of the lot. The replacement work is subject to the same requirements as the initial work.

J. Ride Quality Requirements.

THIS PART IS CHANGED TO

The Department will evaluate the ride quality of the final riding surface of all constructed pavement on the project, for routes designated as National Highway System (NHS) and routes under NJDOT jurisdiction, using the International Roughness Index (IRI) according to ASTM E 1926. All NHS roadways are listed on the Department's website [here](#). The Department may evaluate ride quality of other routes not designated as NHS or under NJDOT jurisdiction. The final riding surface is defined as the last lift of the pavement structure where traffic will be allowed. The pavement will be evaluated using the current average IRI (C) to select the target IRI (T) from Table 401.03.07-8. The current average IRI (C) is defined as the preconstruction ride quality measured not more than two years from the start of the project pavement construction.

The or RE will designate an independent testing agency to perform the ride quality testing and analysis. The testing agency is required to comply with testing and certification requirements according to NJDOT R-1. If the current average IRI (C) is not available, then the testing agency will test, analyze and report ride quality before pavement construction to measure current average IRI (C). The testing agency will use and submit to the RE the [IRI Testing Summary Report form](#) provided from the Local Aid District Office and verify manually the pay adjustment calculation.

Current IRI data for paving routes designated NHS or NJDOT jurisdiction can be made available by request by contacting Shahid Haji and Peter Brzostowski at Shahid.Haji@dot.nj.gov and Peter.Brzostowski@dot.nj.gov.

Municipal or county officials may request IRI information through this process. Contractors, consultants, and bidding parties shall not request IRI values through this process for their own benefit.

For projects paving routes designated NHS or NJDOT jurisdiction on mainline travel lanes equal to or greater than 2,500 feet length and any lane within the project of at least 1,000 feet length, the Department will evaluate the ride quality of the final riding surface of the mainline travel lanes using IRI. The Department will use the measured IRI to calculate the pay adjustment (PA) using pay adjustment equation (PAE) type PA1 as specified in Table 401.03.07-7. PA will be based on lots of 0.01 mile length. The PA will be zero for acceptable quality and negative for inferior quality work.

For projects paving routes designated NHS or NJDOT jurisdiction on mainline travel lanes of less than 2,500 feet length, the RE will visually inspect the final riding surface. Based on visual inspection, if the RE determines that the work may not conform to the ride quality requirements, then the Department will evaluate the ride quality of the final riding surface using IRI. Visual inspection by the RE is considered sufficient grounds for such evaluation. The Department will use the measured IRI to calculate the PA using pay equation type PA1 as specified in Table 401.03.07-7.

For paving on ramps and shoulders, the RE will visually inspect the final riding surface. Based on visual inspection, if the RE determines that the work may not conform to the ride quality requirements, then the Department will evaluate the ride quality of the final riding surface using IRI. Visual inspection by the RE is considered sufficient grounds for such evaluation. The Department will use the measured IRI to calculate the pay adjustment using pay equation type PA2 as specified in Table 401.03.07-7.

When paving over bridge structures on NHS or NJDOT jurisdiction roadways, the Department will use the measured IRI to calculate the pay adjustment using pay equation type PA3 as specified in Table 401.03.07-7.

For paving on Local roadways other than NHS and NJDOT jurisdiction on mainline travel lanes equal to or greater than 2,500 feet length and any lane within the project of at least 1,000 feet length, the Department may evaluate the ride quality of the final riding surface of the mainline travel lanes using IRI. Local roadways are defined as municipal and county roads that are not designated as part of the NHS. The Department will use the measured IRI to calculate the pay adjustment (PA) using pay adjustment equation (PAE) type PA4 as specified in Table 401.03.07-7.

1. **Smoothness Measurement.** The Department will test the longitudinal profile of the final riding surface for ride quality with a Class 1 Inertial Profiling System according to NJDOT R-1. If project conditions preclude the use of the Class 1 Inertial Profiling System, the Department will use a Class 1 Walking Profiler or lightweight profiler.
2. **Quality Control Testing.** Perform quality control testing during lift placement to ensure compliance with the ride quality requirements specified in Table 401.03.07-8.
3. **Preparation for IRI Testing.** Notify the RE when all paving is complete, and the RE or will request IRI testing by independent testing agency. Provide traffic control when the independent testing agency performs IRI testing. Perform mechanical sweeping of the surface before IRI testing. To facilitate auto triggering on laser profilers, place a single line of temporary pavement marking tape perpendicular to the roadway baseline at the beginning and end of each lane, shoulder, and ramp to be tested or as per direction of the independent testing agency. Submit the actual stationing for each temporary pavement marking tape location to the RE.
4. **Quality Acceptance.** The Department will determine acceptance and provide PA based on the following:
 - a. **Pay Adjustment.** The acceptable IRI for the roadway pavement will be the target IRI (T) from Table 401.03.07-8 rounded to the nearest whole number for which full payment will be made and will be determined using the latest available current average IRI (C) data. The number of lots for final pay adjustment will be reduced by the number of lots excluded for each segment shown in Table 401.03.07-7. Lots excluded from final PA will be those with the highest recorded IRI numbers for respective roadway and bridge deck segments. A single average IRI value and the corresponding PA for each 0.01 mile lot will be reported. IRI units are in inches per mile.

Table 401.03.07-7 Pay Adjustment Equations (PAE) for Ride Quality			
Pay Equation Type	Exclusions	Pay Equations	
PA1	As shown in the Special Provisions Table 401.03.07-7A	IRI < T	PA1 = PAE (see note 2)
		T ≤ IRI ≤ 170	PA1 = PAE
		IRI > 170	PA1 = -A or Corrective action
PA2	Will include, if tested	IRI ≤ 120	PA2 = 0
		120 < IRI ≤ 170	PA2 = (IRI - 120) x (-\$5.00)
		IRI > 170	Maximum Negative Pay or Corrective action
PA3	Will include, if tested	IRI ≤ 120	PA3 = 0
		120 < IRI ≤ 170	PA3 = PAE
		IRI > 170	PA3 = -A or Corrective action
PA4	Will include, if tested	IRI ≤ T	PA4 = 0

	T < IRI ≤ T+80 or 170 whichever is higher	PA4 = (IRI – T) x (–\$1.25)
	IRI > T+80 or 170 whichever is higher	Maximum Negative Pay or Corrective action

$$PAE = \frac{A}{-37.75347 \times \log_e(T) + 194.87} - \frac{A}{-37.75347 \times \log_e(IRI) + 194.87}$$

$$A = 1267.2 \left[\frac{M}{9} + \frac{PD}{150} \right]$$

P = Bid price of last lift of the pavement structure to be evaluated or price listed in table 401.03.07-7B, whichever is higher, per Ton

D¹ = Design thickness of last lift to be evaluated, Inch

M = Bid price of Milling, per Square Yard

T = Target IRI

- For various design thicknesses of last lift to be evaluated within a segment, calculate the thickness using the following equation:

$$\text{Design thickness of last lift to be evaluated (D)} = \frac{D_1 N_1 + D_2 N_2 + \dots D_N N_N}{N_1 + N_2 + N_3 + \dots N_N}$$

Where:

D_N = Design thickness of the last lift to be evaluated of N sections having same mix, Inch

N_N = Number of lots of N section with design thickness D_N of last lift to be evaluated

- Positive pay adjustment will be used to offset negative pay adjustment. Total pay adjustment for each lane will not be greater than zero, but may result in a negative pay adjustment.

THE FOLLOWING IS ADDED:

Table 401.03.07-7B Minimum Value of P	
Surface Course Mix	P
Hot Mix Asphalt (Dense Graded) with PG 64-22 binder	\$60.00
Hot Mix Asphalt (Dense Graded) with PG 64E-22 binder	\$70.00
Stone Matrix Asphalt, High Performance Thin Overlay, Ultra-Thin Friction Course, Open Graded or Gap Graded Mixes not specified in this table	\$80.00
Bridge Deck Waterproof Surface Course	\$250.00

Table 401.03.07-8 Target IRI for Resurfacing or Reconstruction (T) ³						
Roadway Type	Current average IRI (C)	New Construction or Reconstruction	Number of Operation for other than New Construction or Reconstruction ⁵			
			One ⁴	Two ⁴	Three ⁴	Four or More ⁴
Target IRI (T)						
NHS & NJDOT Freeways or Limited Access Highways	≤ 60	50	50	50	50	50
	61 to ≤95		53	50	50	50
	96 to ≤170		55	53	50	50
	171 to ≤200		0.64C ⁷	55	53	50
	201 to ≤285			58	55	50
	>286 ⁸			60	58	53
NHS & NJDOT Roadways other than	≤ 60	60	60	60	60	60
	61 to ≤95		63	60	60	60

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
WHITING-NEW EGYPT ROAD OVER RIDGE WAY
FEDERAL PROJECT NO. 0539301

Freeways or Limited Access Highways with speed limit > 35 MPH	96 to ≤170		66	63	60	60
	171 to ≤200		0.64C ⁷	66	63	60
	201 to ≤285			69	66	60
	>286 ⁸			72	69	63
NHS & NJDOT Roadways other than Freeways or Limited Access Highways with speed limit ≤ 35 MPH	≤ 60	70	70	70	70	70
	61 to ≤95		74	70	70	70
	96 to ≤170		77	74	70	70
	171 to ≤200		0.64C ⁷	77	74	70
	201 to ≤285			81	77	70
	>286 ⁸			84	81	74
Local Roadway with Posted Speed ≥45 MPH	C	80	0.7C or 80 whichever is higher	0.49C or 80 whichever is higher	0.34C or 80 whichever is higher	0.24C or 80 whichever is higher
Local Roadway with Posted Speed <45 MPH	C	100	0.84C or 100 whichever is higher	0.59C or 100 whichever is higher	0.41C or 100 whichever is higher	0.29C or 100 whichever is higher

- The Department will determine target IRI (T) of roadways containing multiple speed limits of greater than 35 MPH and less than or equal to 35 MPH based on the following equation:

$$\text{Target IRI of a roadway consists of N Roadway type (T)} = \frac{T_1 L_1 + T_2 L_2 + \dots T_N L_N}{L_1 + L_2 + L_3 + \dots L_N}$$

Where T_N is the Target IRI of N section and L_N is the length of N section in miles to the nearest 0.01 mile

- Current average IRI (C) is the average of the latest available preconstruction IRI data.
- The target IRI (T) is selected or calculated from the table and rounded to the nearest whole number.
- Multiply T with 1.05 for HMA over Concrete, if total HMA after proposed treatment is less than 8 inch thick.
- Milling is one operation. Paving each layer of asphalt mix is an individual operation unless plans specify paving a mix in two lifts. In such case, each lift is considered as an operation.
- Construction or reconstruction of full pavement box on subgrade is new construction or reconstruction.
- Use Pay Equation as below:

$$\begin{array}{ll} \text{IRI} \leq T & \text{PA} = \text{PAE}^* \\ \text{IRI} > T & \text{PA} = \text{PAE} \end{array}$$

*Positive Pay adjustment will be used to offset negative pay adjustment. Total pay adjustment for each lane will not be greater than zero, but may result in a negative pay adjustment.
- For paving over rubblized concrete, use C >286 to determine target IRI, then multiply T with 1.05 if total HMA after proposed treatment is less than 8-inch thick.
- Paving in one lift with no corrective work such as milling, grinding or pre-levelling of at least 25 percent of surface area of existing pavement is one operation.

- b. Corrective Action.** The Department may require corrective action or assess the maximum negative pay adjustment as computed in Table 401.03.07-7, if the average IRI after testing is performed of NHS or NJDOT jurisdiction roadway is greater than 170 inches per mile, or average IRI local roadway is greater than T+80 or 170 whichever is higher. If the Department requires corrective action submit a plan for corrective action. If the plan for corrective action is approved and the lot is corrected, the Department will retest and evaluate the corrected area as a new lot that must meet the same requirements as the initial work. If the plan for corrective action is not approved, the Department may require removal and replacement. The replacement work is subject to the same requirements as the initial work.

401.03.08 Core Samples

THIS SUBPART IS CHANGED TO:

The will designate an independent testing agency (Laboratory) to perform the quality assurance sampling, testing and analysis. The Laboratory is required to be accredited by the AASHTO Accreditation Program (www.amrl.net). The Laboratory's accreditation must include AASHTO T 166 and AASHTO T 209. The Laboratory Technician who performs the quality assurance sampling shall be certified by the Society of Asphalt Technologists of New Jersey as an Asphalt Plant Technologist, Level 2.

Upon completion of an HMA lot, the Laboratory shall drill cores at random locations at least 12 hours after paving. Take cores in the presence of the RE. The Laboratory will determine air voids from 5 (Five) 6 inch diameter cores taken from each lot in random locations within the traveled way and at least one core in each travel lane. The HMA Coring Layout Sheet provided on the [Local Aid Website](#) must be utilized by the Laboratory to determine the random locations of the cores. The Laboratory may rerun the random location functions on the HMA Coring Layout Sheet to resolve any conflicts generated by the HMA Core Sampling Plan form and physical limitations of the HMA lot, such as utility conflicts, or the specifications defined herein. The Laboratory must disclose the contents of the HMA Core Sampling Plan with the Contractor to assist in the schedule of construction.

The Laboratory shall use drilling equipment with a water-cooled, diamond-tipped masonry drill bit that produces 6 inch nominal diameter cores for the full depth of the pavement. The Laboratory shall remove the core from the pavement without damaging it. After the Laboratory removes the core, the Laboratory shall remove all water from the hole. The Laboratory shall apply an even coating of tack coat to sides of the hole. The Laboratory shall place cold patching material or HMA in maximum lifts of 4 inches in the hole and compact each lift. If cold patching material is utilized to fill the coring hole, then it is not necessary to apply tack coat to the sides of the hole. The Laboratory shall ensure that the final surface is 1/4 inch above the surrounding pavement surface.

HMA cores are to be taken from the HMA lot for quality assurance sampling, testing and analysis within seven (7) days of completing the HMA lot. For test strip lots and the first traveled way lot, the Laboratory shall deliver cores from the field to the testing Laboratory within 48 hours of completing the lot. The Laboratory shall deliver all other acceptance cores within 7 days of completing the lot.

After each air void lot is placed, the Laboratory shall drill cores so that the full depth of the course is recovered for air void acceptance testing. If thickness acceptance testing is required as specified in 401.03.07.I, the Laboratory shall drill the surface course air void cores for the full depth of pavement.

The Laboratory shall utilize a tamper proof core sample box for core storage and transportation. The Laboratory shall ensure that the core sample box can be locked and sealed and is tamper proof in such a manner that it cannot be opened without removing the seals. The Laboratory shall ensure that the core sample box provides protection for the cores from being disturbed or damaged during transit. The Laboratory shall mark the assigned core number on the side of the sample. The Laboratory shall place core samples in the core sample box. The Laboratory shall transport the sealed core sample boxes to the testing Laboratory.

The Laboratory will not accept damaged core samples for testing. If the core sample box exhibits indications of tampering, the core samples will be rejected. If any core samples are rejected, drill a replacement core at the same offset and within 5 feet of the original station and deliver to the Laboratory as specified above within 48 hours.

If the project is utilizing quality control cores, the Laboratory shall provide the results of the quality control core testing to the Contractor in a timely manner which will not unnecessarily impede construction.

401.04 MEASUREMENT AND PAYMENT

THIS SUBSECTION IS CHANGED TO:

The Department will measure and make payment for Items as follows:

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
WHITING-NEW EGYPT ROAD OVER RIDGE WAY
FEDERAL PROJECT NO. 0539301

<i>Item</i>	<i>Pay Unit</i>
HMA MILLING, 3" OR LESS	SQUARE YARD
POLYMERIZED JOINT ADHESIVE	LINEAR FOOT
TACK COAT	GALLON
PRIME COAT	GALLON
HOT MIX ASPHALT _____ SURFACE COURSE	TON
HOT MIX ASPHALT _____ INTERMEDIATE COURSE	TON
HOT MIX ASPHALT _____ BASE COURSE	TON

The specified depth of the milling is measured from the original surface to the top of the high spots of the textured surface.

The RE 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 RE will measure HOT MIX ASPHALT _____ SURFACE COURSE, HOT MIX ASPHALT _____ INTERMEDIATE COURSE, and HOT MIX ASPHALT _____ BASE COURSE by the ton as indicated on the certified weigh tickets, excluding unused material. When nominal maximum aggregate size 3/8 inch HMA surface course is directed for use in transition (run out) areas, the Department will include this weight with the weight for HOT MIX ASPHALT _____ SURFACE COURSE.

The Department will not include payment for polymerized joint adhesive in the various paving Items. The Department will make payment for polymerized joint adhesive under POLYMERIZED JOINT ADHESIVE.

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

$$\text{Pay Adjustment Per HMA Lot} = - Q \times \text{BP} \times \text{Reduction Per Lot (\%)}$$

Where:

BP = Bid Price of HMA
Q = Quantity of HMA in lot receiving payment adjustment
Reduction Per Lot (%) = Air void Reduction (%) per lot as specified in 401.03.07.H.

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

$$\text{Pay Adjustment Per HMA Lot} = - Q \times \text{BP} \times \text{Percent Reduction (\%)}$$

Where:

BP = Bid Price of HMA
Q = Quantity of HMA in lot receiving payment adjustment
Percent Reduction (%) = Thickness Percent Reduction (%) per lot as specified in 401.03.07.I.

The Department will make a payment adjustment for HMA ride quality, as specified in 401.03.07.J.

DIVISION 420 – PAVEMENT PRESERVATION TREATMENTS

DIVISION 450 – CONCRETE PAVEMENT REHABILITATION

DIVISION 500 – BRIDGES AND STRUCTURES

SECTION 501 – SHEETING AND COFFERDAMS

501.03.01 Temporary Sheeting

THE FOLLOWING IS ADDED:

Select and design temporary sheeting system such that impacts to the existing New Jersey Natural Gas main are minimized to the extent feasible. Coordinate with utility owner as required.

SECTION 504 – STRUCTURAL CONCRETE

504.02 Materials

THE FOLLOWING IS ADDED:

Use Type I, IA, III, or IIIA cement for concrete on this project. If Type I or Type III cement is used, add an air-entrainment admixture as specified in 905.01 at the mixer. If Type I or IA cement is used, increase the cement content to match the strength of the mix at seven (7) days had Type III cement been used.

504.03 CONSTRUCTION

504.03.01 Reinforcement Steel

PART G IS CHANGED TO:

G. Field Repairing of Coatings. The RE will allow field repair when there is no greater than 2 percent of the surface area in each linear foot of each bar damaged. The RE will reject material with more than 2 percent of the surface area in each linear foot of each bar and any material with a damaged area more than 4 square inches in size. Repairable damage is any bare or loose spots or breaks in the coating that affect an area smaller than 4 square inches. Ensure that grease, dirt, mortar, concrete, mill scale, injurious rust, or any other foreign substance is removed before repairing.

1. **Epoxy-Coating.** Repair damage to epoxy-coating according to ASTM D3963.
2. **Galvanized-Coating.** Repair damage to the galvanized coating according to ASTM A780.

504.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

Concrete in the various structures, substructures and superstructures will be measured by the cubic yard. Deduction will only be made for the volume occupied by pipe more than 18 inches in diameter.

Reinforcement steel will be measured by the pound. The weight of the steel bar reinforcement will be computed from cutting lists at the weight per foot specified in ASTM A615.

No additional payment will be made for cold weather or hot weather concreting. These costs are considered incidental to the respective concrete pay items.

SECTION 505 – PRECAST AND PRESTRESSED STRUCTURAL CONCRETE

505.03.01 Pretensioned Prestressed Concrete Beam and Prestressed Concrete Beam

THE FIRST PARAGRAPH IN PART A IS CHANGED TO:

- A. Working Drawings.** Submit working drawings for certification, as specified in 105.05, that include the class of concrete, the pattern and schedule for releasing strands before detensioning, detensioning concrete strength, and tensioning and detensioning patterns.

PART C IS CHANGED TO:

- C. Erection Plan.** Submit working drawings for approval, as specified in 105.05, regarding the plan of operations to the RE at least 30 days before the pre-erection meeting. Include, at a minimum, the following in the plan:
1. Number and type of manpower and equipment.
 2. Shipping procedures.
 3. Lifting procedures.
 4. Erecting sequence.
 5. Temporary bracing.
 6. Manufacturer's recommendations.
 7. Procedures for employee safety.
 8. Traffic control and protection.
 9. Method of post-tensioning and determining friction loss.
 10. Anchorage details and design calculations, signed and sealed by a Professional Engineer.

505.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

No separate payment will be made for reinforcing steel included within precast beams. The costs for this steel and its placement are to be included in the cost per unit bid for the specific precast units included in the Proposal.

SECTION 506 – STRUCTURAL STEEL

506.03.01 Structural Steel

PART B IS CHANGED TO:

- B. Erection Plan.** At least 30 days before the pre-erection meeting, submit working drawings for approval, as specified in 105.05, regarding the plan of operations to the RE. 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.

SECTION 507 – CONCRETE BRIDGE DECK, BRIDGE PARAPET, AND APPROACHES

507.02.01 Materials

THE FOLLOWING MATERIALS ARE ADDED:

PREFORMED CLOSED CELL FOAM.....	914.05
POLYETHYLENE SHEETING	919.12

THE FOLLOWING IS ADDED:

Provide and use a penetrating type of protective sealer as directed by the RE.

Ensure the protective sealer does not contain an aqueous solvent or carrier.

507.03.01 Joint Assemblies

A. Working Drawings.

PART A IS CHANGED TO:

Submit working drawings for approval, as specified in 105.05, for modular expansion joint assemblies. Submit working drawings for certification, as specified in 105.05, for strip seal expansion joint assemblies, preformed elastomeric joint assemblies, and other types of expansion joint assemblies. Finger joint assemblies are not allowed. As a minimum, indicate the following information on the working drawings:

1. Plan, elevation, and section of the joint system for all movement ratings and roadway width limitations, as well as relative dimensions and tolerances.
2. All ASTM, AASHTO, or other material designations.
3. Method of installation including sequence of installation, relative temperature settings, setting anchorage, and installation at curb lines.
4. Corrosion protection system or material.
5. Details of temporary supports for shipping and handling. Include lifting mechanisms and locations.
6. Design calculations for all structural elements. As warranted, include fatigue design calculations and strength design calculations. Indicate locations of all welded splices.
7. Design the joint system as one continuous unit without field splices. If due to shipping or construction requirements, splices are necessary indicate that the locations of the splices are to be in areas outside the main traffic lanes. Provide field splicing procedures.
8. Ensure that the removal and reinstallation of the strip seal can be accomplished from above the joint without full closure of the roadway.
9. Ensure that the expansion joint assembly seals do not protrude above the top of the joint. Use preformed neoprene strip seals that are mechanically held in place.

In addition, for modular expansion joint assemblies, incorporate the following requirements:

1. Provide the modular expansion joint assembly to accommodate all expected longitudinal movements as well as vertical and horizontal rotations. Incorporate strip seal glands with a maximum movement range of 3.15 inches per seal. Support centerbeam(s) with an independent support bar that is welded to the centerbeam. Suspend the support bars over the joint opening by sliding elastomeric bearings. Incorporate an equidistant control system that develops its maximum compressive force when the joint is at its maximum opening. Do not use bolted connections between the centerbeams and support bars unless approved by the Designer. If bolted connections are approved, lock them into position after tightening. Provide tightening procedure for Designer's approval to ensure all bolts cannot loosen during the service life.
2. Provide continuous centerbeams without any field splice unless approved by the Designer. If a field splice is inevitable due to a manufacturing constraint, provide a fatigue resistant field splice (welded or bolted, and located away from potential wheel paths) and installation procedure. Submit welding procedure specification (WPS), welder qualification, weld procedure, and QC inspection plans for field welds for Designer's approval.

Installation is to be supervised by the Manufacturer and Contractor. If bolted connections are used, provide a bolt tightening procedure and ensure bolt loosening does not happen during service life. Provide continuous strip seals even if centerbeams are spliced.

Verify the blockout location, dimensions, and details shown on contract plans, and ensure that installation of a modular expansion joint assembly shall fit in the blockouts on site.

3. Fatigue test the modular expansion joint assembly, including the transverse centerbeams, support bars, and other structural elements and connections, according to Section 19/A19 of AASHTO LRFD Construction Specifications. Submit prequalification fatigue test report. Ensure welded (or bolted, if approved) details used in project products match those that have been fatigued tested. When a fatigue test report is not available, welded, or bolted details may be fatigue designed in accordance with Section 14 of AASHTO LRFD Bridge Design Specifications as approved by the Designer.
4. Perform prequalification tests, Open Movement and Vibration (OMV) testing and Seal Push-Out (SPO) testing as specified in 914.04.03 for review and approval by the Designer.
5. Provide the elastomeric springs and bearings to be removable and replaceable in the event maintenance is necessary.

Verify the blockout location, dimensions, and details shown on contract plans, and ensure that installation of a modular expansion joint assembly shall fit in the blockouts on site.

B. Installation.

PART 3 IS CHANGED TO:

3. **Modular Expansion Joint Assemblies.** Modular expansion joint assemblies include preformed neoprene strip seals that are held in place by steel edgebeams and centerbeams, support bars to support the centerbeam and sliding elastomeric bearings. These assemblies contain no bolted connections unless approved by the Designer.

507.03.02 Concrete Bridge Deck

ITEM 1 IN PART A IS CHANGED TO:

1. **Stay-In-Place (SIP) Forms.** Submit working drawings for approval, as specified in 105.05, that include the following:
 - a. Deck reinforcement location.
 - b. Grade of steel.
 - c. Galvanizing specification.
 - d. Physical and section properties for all permanent steel bridge deck form sheets.
 - e. Locations where the forms are supported by steel flanges subject to tensile stresses.

ITEM 4 IN PART B IS CHANGED TO:

4. Sequence and rate of placing concrete, including the suspended backwalls, relief slabs, and sleeper slabs.

THE FOLLOWING IS ADDED:

- P. **Suspended Backwall.** Install preformed closed cell foam as shown on the Plans. Construct removable forms as specified in 504.03.02B. Ensure that reinforcement steel is installed as specified in 504.03.01. Deliver, place, and consolidate the concrete as specified in 504.03.02D.

THE FOLLOWING SUBPART IS RENAMED:

507.03.07 Concrete Bridge Approach, Relief, and Sleeper Slabs

507.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

The Department will measure and make payment for sleeper and relief slabs under CONCRETE BRIDGE DECK, HPC.

SECTION 513 – RETAINING WALLS

513.02.01 Materials

THE FOLLOWING MATERIAL IS ADDED:

HDPE Pipe 909.02.02

THE FIRST SENTENCE OF THE LAST PARAGRAPH IS CHANGED TO:

For MSE Walls, use Soil Aggregate, I-15.

513.03.01 Retaining Walls

THE FIRST SENTENCE OF PART E IS CHANGED TO:

Place a stone pocket, subsurface drainage geotextile, and an 8 inch corrugated HDPE underdrain pipe as shown on the Plans.

DIVISION 600 – MISCELLANEOUS CONSTRUCTION

SECTION 601 – PIPE

601.03.01 Pipe

B. Excavating.

THE FIFTH PARAGRAPH IN PART B IS CHANGED TO:

If the material at the bottom of the trench is rock or other hard material, remove at least 6 inches of the material for RCP or at least 12 inches of the material below the bottom of the pipe for corrugated metal, steel, aluminum alloy pipe, HDPE or polypropylene (PP) pipe. Backfill the undercut with Class C bedding.

D. Installing Pipe

THE FIRST PARAGRAPH IN PART D IS CHANGED TO:

Before the installation of HDPE and polypropylene (PP) pipe and as directed by the RE, provide a technical representative from the pipe manufacturer on the work site for the first day of pipe installation to ensure proper installation procedures.

THE LAST PARAGRAPH IN PART D IS CHANGED TO:

When using heavy construction equipment (100 kips axle load) over, or within 10 feet of HDPE and polypropylene (PP) pipe or corrugated aluminum alloy pipe, place the manufacturer recommended temporary compacted cover over the top of the pipe. Ensure that the temporary cover is free from stones larger than 1 inch.

E. Joining Pipe.

THE LAST PARAGRAPH IN PART E IS CHANGED TO:

Do not use split couplings to join field-cut HDPE and polypropylene (PP) pipe unless approved by the RE. Ensure that joints are bell and spigot type, or bell and spigot type with a gasket, according to ASTM F 477, to provide a silt-tight seal. Construct pipe connections according to the manufacturer's recommendations for assembly of joint components, lubrications, and making of joints. Ensure that the pipe fittings are free of inclusions and visible defects. Cut the ends of the pipe squarely so as not to adversely affect joining.

F Backfilling.

THE FIRST PARAGRAPH IN PART F IS CHANGED TO:

When using corrugated aluminum pipe, backfill from the bottom of the trench to 2 feet above the top of the pipe with Class C bedding. When using HDPE and polypropylene (PP) pipe, backfill from the bottom of the trench to 1 foot above the top of the pipe with Class C bedding. When using pipe other than corrugated aluminum, HDPE or polypropylene (PP) pipe, backfill from the bottom of the trench to 2 feet above the top of the pipe with suitable excavated material free from stones and rock larger than 2 inches in any dimension. For distances 2 feet above the top of the pipe, backfill using suitable excavated material.

601.03.03 End Section

THE SECOND PARAGRAPH IS CHANGED TO:

Use end sections of the same material as the adjoining pipe or pipe arch, except use concrete end sections for HDPE and polypropylene (PP) pipe.

THE FOLLOWING SUBPART IS ADDED:

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
WHITING-NEW EGYPT ROAD OVER RIDGE WAY
FEDERAL PROJECT NO. 0539301

601.03.09 Perforated HDPE Underdrain Pipe

- A. **Storing and Handling.** Handle and store pipe to prevent damage such as cracking, denting, and breaking. Store pipe in an area where it will not be damaged during construction operations. Use blocks or straps when stacking pipe. The RE will reject pipe that is damaged, bowed, or considered unacceptable for other reasons.
- B. **Installing.** Begin constructing at the lowest elevation of the drain. Ensure that perforations are at the bottom and that the pipe is centered in the coarse aggregate pocket and wrapped with geotextile as shown on the Plans. Ensure that the pipe is in firm contact with the bottom of the bedding throughout its full length. Join underdrains according to the manufacturer's recommendations. Seal the dead ends of underdrains with a pipe cap. Provide solid HDPE outlet pipes as shown on the Plans.
- C. **Backfilling.** Backfill using coarse aggregate around the underdrains and aggregate fill around the outlet pipes. Compact with a vibratory pad compactor. When using heavy equipment over or within 10 feet of HDPE pipe, place the manufacturer recommended temporary compacted cover over the top of the pipe first.

601.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEMS ARE ADDED:

<i>Item</i>	<i>Pay Unit</i>
___" PERFORATED HIGH DENSITY POLYETHYLENE PIPE	LINEAR FOOT

THE FOLLOWING IS ADDED:

Solid HDPE outlet pipe for back of wall underdrains will not be measured for payment. Include cost in ___" PERFORATED HIGH-DENSITY POLYETHYLENE PIPE item.

No separate payment shall be made to connect pipe to existing and proposed drainage structures, maintaining drainage flow, temporary plugging, or staging if and where required.

SECTION 602 – DRAINAGE STRUCTURES

602.03.03 Set Casting, Reset Casting, and Reconstructed Inlet and Manhole

THE FIRST PARAGRAPH IS CHANGED TO:

When modifying less than 1 foot of an inlet or manhole, set a new casting, or reset the existing casting. When modifying 1 foot or more of an inlet or manhole, reconstruct the inlet or manhole.

SECTION 603 – SLOPE AND CHANNEL PROTECTION

603.03.03 Riprap Stone Slope Protection

THE FOLLOWING IS ADDED:

Place stone for riprap on the prepared slope or area in a manner which will produce a reasonably well-graded mass of stone with the minimum practicable percentage of voids. Place entire mass of stone so as to be in conformance with the lines, grades, and thicknesses shown on the Plans. Place riprap to its full course thickness at one operation and in such a manner as to avoid displacing the underlying material. Placing of riprap in layers, or by dumping into chutes, or by similar methods likely to cause segregation, will not be permitted.

The larger stones shall be well distributed and the entire mass of stone shall conform to the gradation specified in Subsection 901.08. All material going into riprap protection shall be so placed and distributed that there will be no large accumulations of either the larger or smaller sizes of stone. Hand placing or rearranging of individual stones by mechanical equipment may be required to the extent necessary to secure the results specified.

Unless otherwise authorized by the Engineer, the riprap protection shall be placed in conjunction with the construction of the embankment with only sufficient lag in construction of the riprap protection as may be necessary to allow for proper construction of the portion of the embankment protected and to prevent mixture of embankment and riprap.

SECTION 605 – FENCE

605.02.01 Materials

THE FOLLOWING IS ADDED:

Chain link for security fences must be 9-gauge or heavier wire, zinc coated, and have a mesh opening not larger than 2 inches per side with twisted and barbed top selvages and knuckled bottom selva.

All materials for security fences must meet the standards described in UFGS 32 31 13.53.

THE FOLLOWING SUBPART IS ADDED:

605.03.05 Security Fence

At least 30 days before beginning work, submit working drawings for certification to Engineer and to JBMDL. The Engineer will not certify the submission without confirmed written acceptance from JBMDL. Working drawings shall include layout and proposed materials for security fence, as well as construction sequence and method of maintaining perimeter security at all times. Proposed fence must be installed prior to removal of existing fence. Proposed fence should match existing fence to the extent feasible.

Construct fence in accordance with United Facilities Criteria (UFC) Publication 4-022-03. Securely fasten chain link fabric to rigid steel posts set in concrete reaching within 2 inches of hard ground or pavement. On soft ground, the wire must reach below the surface deep enough to compensate for shifting soil or sand. Assume soft ground unless otherwise noted by JBMDL. Tension wires shall either be interwoven or clipped along the top and bottom row of fabric diamonds. Secure to posts and tension wires as specified in Federal Specification (FS) RR-F-191/4.

Provide top guard consisting of an overhang of barbed wire or tape with supporting arms permanently affixed to the top of the fence posts facing outward and upward at about a 45 degree angle and increasing the overall height of the fence by at least 1 foot. Three strands of barbed wire spaced 6 inches apart should be installed on the supporting arms. The number of strands of wire or tape may be increased when required to match existing.

601.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
SECURITY FENCE, 8' HIGH	LINEAR FOOT

SECTION 606 – SIDEWALKS, DRIVEWAYS, AND ISLANDS

606.02.01 Materials

THE FOLLOWING MATERIAL IS ADDED:

Coarse Aggregate (No. 57)	901.03
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THE FOLLOWING SUBPART IS ADDED:

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606.03.04 Stone or Gravel Driveway

Excavate or place embankment as specified in sections 202.03.03 or 203.03.02. Obtain RE approval before finishing excavation. If the RE determines that the bottom of the excavation is unstable, undercut, backfill, and compact as directed by the RE.

Prepare subgrade as per 301.03.01. Install and compact coarse aggregate.

606.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS ADDED:

<i>Item</i>	<i>Pay Unit</i>
STONE OR GRAVEL DRIVEWAY, __" THICK	SQUARE YARD

THE FOLLOWING IS ADDED:

No separate payment will be made for dense-graded aggregate used under driveways if and where directed by the Engineer. Include cost in the associated driveway items.

SECTION 607 – CURB

607.01 DESCRIPTION

THE PARAGRAPH IS CHANGED TO:

This Section describes the requirements for constructing concrete curb, granite curb, and HMA curb, for resetting granite curb, and for cutting concrete vertical curb.

607.02.01 Materials

THE FOLLOWING IS ADDED:

Epoxy Waterproofing.....	912.02.02
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607.02.02 Equipment

THE FOLLOWING IS ADDED:

Concrete Vertical Curb Saw.....	1008.07
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THE FOLLOWING SUBPART IS ADDED:

607.03.08 Sawcut Vertical Curb

The RE will determine if the existing concrete vertical curb is suitable for sawcutting. Construct cast in place curb as specified in 607.03.02 if the existing curb exhibits visible cracking or deterioration or both.

Provide a concrete vertical curb saw as specified in 1008.07. Construct erosion control measures as specified in 158.03.02. Set the concrete vertical curb saw height to the desired vertical curb face height. Sawcut the vertical curb to within $\pm 1/2$ inch of the desired curb face dimension. Sawcut grooves as specified in 507.03.02.L to transition height differentials.

Finish the sawcut concrete vertical curb as specified in 607.03.01.E. Seal sawcut concrete with epoxy waterproofing as specified in 504.03.03. Prepare sawcut surface of concrete vertical curb according to manufacturer's directions before applying epoxy waterproofing.

Dispose of cut material as specified in 201.03.01.H.

607.04 MEASUREMENT AND PAYMENT

THE FOLLOWING IS ADDED:

No separate payment will be made for sawcutting existing curb.

SECTION 609 – BEAM GUIDE RAIL

609.03.01 Beam Guide Rail

THE FOLLOWING IS ADDED:

Remove trees and shrubs as specified in 801.03 and 802.03 from the entire guide rail element extending 4 feet behind the guide rail post.

After completing guide rail installation, provide to the RE, coordinates in the New Jersey State Plane Coordinate System, based on the latest realization of the North American Datum of 1981, currently NAD83 (2011) with units of measure in US Survey feet (EPSG Code-3424). Provide coordinates every 50 feet along the face of the as-built guide rail including at both ends to the accuracy of 3 feet (submeter) or better. For guide rail runs of 100 feet or less provide coordinates at the beginning, midpoint or point of flares, and end of the run. For guide rail runs of 1000 feet or more provide coordinates every 100 feet. Ensure coordinates are collected at every location of change in horizontal and vertical geometry.

Provide the following digital photos tied to the coordinate location where each photo was taken:

1. At least one digital photo of guide rail viewing the rail splice and at least one post.
2. Three photos at each end of the guide rail. Ensure photos of guide rail ends are taken at 3 view angles to present perspective view (front, back and side) of the end terminal, crash cushion, or connection with parapet, barrier, or abutment.

Submit coordinate data in excel format compatible with the Department's version, and digital photos, electronically to the RE on forms provided by the Department after the guide rail installations have been constructed and accepted.

Set wood posts in excavated holes and firmly compact backfill in layers not more than 6 inches in a manner satisfactory to the Engineer.

PARAGRAPHS SIX AND SEVEN ARE CHANGED TO:

On two-way roadways, install two-way, butterfly-type guide rail delineators. The delineators shall be bolt-on type with a white reflector on one side and a yellow reflector on the other. Install the delineators with the white side facing the right side of the direction of traffic. Install the delineators with the yellow side facing the left side of the direction of traffic.

Mount the delineators on all W-beam guide rail at an interval of 12.5 feet (1 guide rail section) for continuous guide rail runs 25 feet or less. For continuous guide rail runs greater than 25 feet, mount the delineators at an interval of 25 feet (2 guide rail sections). A minimum of two guide rail delineators shall be mounted at each continuous guide rail run unless otherwise specified by the Engineer.

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

610.03.02 Traffic Markings Lines, Traffic Markings Symbols, and Traffic Markings Route Symbols

THIS SUBPART IS CHANGED TO:

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

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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. Applying Transverse Rumble Markings.** Install transverse rumble markings as follows:
1. Ensure the HMA or concrete pavement is clean and dry before applying thermoplastic materials as specified in 610.03.02.B.
 2. Heat thermoplastic material as specified in 610.03.02.C.2.
 3. Apply one layer of thermoplastic material on the HMA or concrete pavement surface at a thickness of 125 ± 1 mils. Then while the material is hot, apply a second layer of thermoplastic material at 125 ± 1 mils.
 4. Uniformly apply glass beads as specified in 610.03.02.C.2.
 5. The Contractor will ensure that there is no separation between the first and second layer of thermoplastic material before the RE's final acceptance of transverse rumble markings.
 6. The Contractor will ensure that the appropriate thickness of 125 ± 1 mils per layer of thermoplastic material is installed, any markings found by the RE to be thinner than 125 ± 1 mils will be removed and reinstalled by the Contractor at no additional cost to the Department.
 7. The Department will make payment for transverse rumble markings by square feet under TRAFFIC MARKINGS SYMBOLS as specified in 610.04. 8. Thermoplastic material for transverse rumble markings shall be white in color.
- E. 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
- F. 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 a Reflectometer that meets a 30 meter geometry as specified in ASTM E 1710, capable of measuring wet and dry conditions as specified in ASTM E 2176 and ASTM E 2177, and that has been certified by the manufacturer as being calibrated within the last 2 years. The RE will test the retroreflectance of traffic markings with the provided reflectometer according to the manufacturer's recommendations. Replace traffic markings that do not meet the retroreflectance values indicated in 610.03.02.E.

- G. 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.

610.03.03 RPMs (Raised Pavement Markers)

THE FOLLOWING IS ADDED AFTER THE LAST PARAGRAPH:

Ensure that RPMs are installed within 14 days of opening each day's surface paving to traffic.

610.03.07 Rumble Strip

THE FOURTH PARAGRAPH IS CHANGED TO:

Ensure that after cutting centerline rumble strips, the centerline rumble strips are cleaned, all debris is collected and the surface is prepared as specified in 610.03.01.B before placing traffic stripes.

THE FOLLOWING IS ADDED AFTER THE LAST PARAGRAPH:

Ensure that rumble strips are constructed within 14 days of opening each day's surface paving to traffic.

610.04 MEASUREMENT AND PAYMENT

THE SUBSECTION IS CHANGED TO:

The Department will measure and make payment for Items as follows:

<i>Item</i>	<i>Pay Unit</i>
TRAFFIC STRIPES, ___"	LINEAR FOOT
TRAFFIC MARKINGS LINES, ___"	LINEAR FOOT
TRAFFIC MARKINGS SYMBOLS	SQUARE FOOT
RPM, BI-DIRECTIONAL, AMBER LENS	UNIT
RUMBLE STRIP	LINEAR FOOT
REMOVAL OF TRAFFIC STRIPES	LINEAR FOOT

The Department will measure TRAFFIC STRIPES and TRAFFIC MARKINGS LINES by the linear foot for each specified width of stripe. The Department will not measure gaps in striping.

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 measure the gaps such as WIM locations in the Rumble Strip.

SECTION 612 – SIGNS

612.02 MATERIALS

THE FOLLOWING MATERIAL IS CHANGED TO:

Steel “U” and Square Tube Post Sign Supports 911.02.01

THE FOLLOWING IS ADDED:

Bronze plaque shall be 15” x 20” cast bronze with a single line border. Lettering shall be raised and have a satin finish. Background shall be brown with a matted/leatherette finish.

612.03 CONSTRUCTION

612.03.01 Regulatory and Warning Signs, and Guide Sign, Type GA Steel “U” Post Supports

THE SUBPART IS RENAMED TO:

612.03.01 Regulatory and Warning Signs, and Guide Sign, Type GA Steel “U” and Square Tube Post Supports

THE SECOND PARAGRAPH IS CHANGED TO:

Mount sign panels on breakaway steel “U” or square tube post sign supports. For signs located behind guide rails or other roadside barriers, mount sign panels on steel “U” or square tube post sign supports without the breakaway assembly.

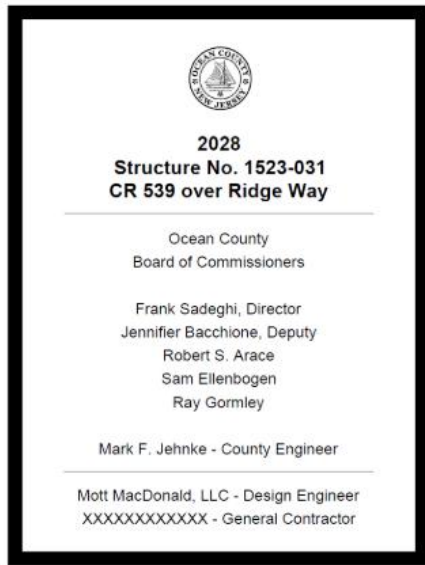
THE FOLLOWING IS ADDED:

Install reflector units on all “U” post sign supports.

THE FOLLOWING SUBPART IS ADDED:

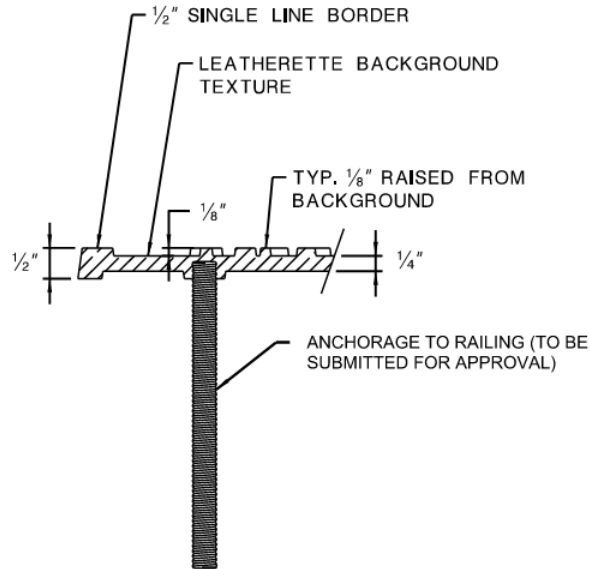
612.03.05 Bronze Plaque

Submit working drawings for approval showing size, coloring, surface finish, attachment, and lettering of the plaque. Refer to Figures 612-1 and 612-2 for sample details.



BRIDGE PLAQUE DETAIL
N.T.S.

Figure 612-1



BRIDGE PLAQUE MOUNTING DETAIL
N.T.S.

Figure 612-2

Fabricate panel true and straight. Use year of completion of the structure for the date.

Install plaque at a location as directed by the RE. Plaque anchorage shall be either cast in place or post installed. If post installed, locate reinforcement prior to drilling.

612.04 MEASUREMENT AND PAYMENT

THE FOLLOWING ITEM IS ADDED:

Item
BRONZE PLAQUE

Pay Unit
UNIT

DIVISION 650 – UTILITIES

DIVISION 700 – ELECTRICAL

DIVISION 800 – LANDSCAPING

SECTION 801 – SELECTIVE VEGETATION REMOVAL

801.03.02 Selective Clearing

THE FIRST PARAGRAPH OF ITEM B IS CHANGED TO:

Remove all live and dead trees within the limits shown on the Plans including stumps and branches, understory vegetation, debris and trash in forested wooded areas to create space for construction and provide necessary clearances for overhead utilities. Perform in accordance with ANSI A 300 Standards.

THE FOLLOWING IS ADDED TO ITEM C:

In accordance with Department of Defense Instruction 4715.03 and Department of the Air Force Manual 32-7003, selling or otherwise profiting from cleared vegetation and trees or their byproducts within the limits of the Joint Base is strictly prohibited.

SECTION 806 – FERTILIZING AND SEEDING

806.03 CONSTRUCTION

ITEM 1 UNDER PART C IS DELETED.

THE FOLLOWING IS ADDED:

Water seed with sufficient frequency and quantity to ensure that the soil in seeded areas remains moist, but not saturated.

DIVISION 900 – MATERIALS

SECTION 901 – AGGREGATES

901.01 SOURCE

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

Do not source aggregates from other Department projects unless approved by the ME. Ensure that aggregates sourced from other Department projects or non-QPL sites are not classified as regulated or hazardous according to NJDEP Solid Waste Regulations, N.J.A.C. 7:26-1 et seq. or N.J.A.C 7:26 E-1-8. Provide test results to the Department upon request.

901.03.01 Broken Stone

THE FOLLOWING IS ADDED:

Do not use carbonate rock for concrete surface courses, bridge structures, retaining walls, or culverts.

901.08 RIPRAP STONES

THE FOLLOWING IS ADDED:

Stone used for dumped riprap shall be hard, durable, angular in shape; resistant to weathering and to water action; free from overburden, spoil, shale and organic material; and shall meet the gradation requirements for the class specified. Neither breadth nor thickness of a single stone should be less than one-third its length. Rounded stone or boulders will not be accepted unless authorized by special provisions. Broken concrete may be substituted for stone when authorized by special provisions. Shale and stone with shale seams are not acceptable. The minimum weight of the stone shall be 155 pounds per cubic foot as computed by multiplying the specific gravity (bulk-saturated-surface-dry basis, AASHTO Test T 85) times 62.3 pounds per cubic foot.

The sources from which the stone will be obtained shall be selected well in advance of the time when the stone will be required in the work. The acceptability of the stone will be determined by service records and/or by suitable tests. If testing is required, suitable samples of stone shall be taken in the presence of the Engineer at least 25 days in advance of the time when the placing of riprap is expected to begin. The approval of some rock fragments from a particular quarry site shall not be constructed as constituting the approval of all rock fragments taken from that quarry.

In the absence of service records, resistance to disintegration from the type of exposure to which the stone will be subjected will be determined by any or all of the following tests as stated in the special provisions:

1. When the riprap must withstand abrasive action from material transported by the stream, the abrasion test in the Los Angeles machine shall also be used. When the abrasion test in the Los Angeles machine (AASHTO T96) is used, the stone shall have a percentage loss of not more than 40 after 500 revolutions.
2. In locations subject to freezing or where the stone is exposed to salt water, the sulfate soundness test (AASHTO Test T 104 for ledge rock using sodium sulfate) shall be used. Stones shall have a loss not exceeding 10 percent with the sulfate test after five cycles.
3. When the freezing and thawing test (AASHTO Test 103 for ledge rock procedure A) is used as a guide to resistance to weathering, the stone should have a loss not exceeding 10 percent after 12 cycles of freezing and thawing.

Stone shall be free from overburden, spoil, shale, and organic material and shall meet the following gradation requirements for the class specified:

Approximate stone diameter (inches)	Size of stone	Percent of total weight smaller than the given size
--	------------------	--

4" Stone		
9	40 lb.	100
6	15 lb.	80
4	3 lb.	50
2	0.5 lb.	10
6" Stone		
11	100 lb.	100
9	40 lb.	80
6	15 lb.	50
3	2 lb.	not to exceed 10
Class I (Amended)		
13	100 lb.	100
11	60 lb.	80
9	37 lb.	50
3	2 lb.	not to exceed 10
Class II		
24	700 lb.	100
22	500 lb.	80
16	200 lb.	50
7	20 lb.	not to exceed 10
Class III		
34	2,000 lb.	100
30	1,400 lb.	80
24	700 lb.	50
9	40 lb.	not to exceed 10

Each load of riprap shall be reasonably well graded from the smallest to the maximum size specified. Stones smaller than the specified 10 percent size and spalls will not be permitted in an amount exceeding 10 percent by weight of each load.

Control of gradation will be by visual inspection. The Contractor shall provide two samples of rock of at least 5 tons each, meeting the gradation for the class specified. The sample at the construction site may be a part of the finished riprap covering. The other sample shall be provided at the quarry. These samples shall be used as a frequent reference for judging the gradation of the riprap supplied. Any difference of opinion between the Engineer and the Contractor shall be resolved by dumping and checking the gradation of two random truckloads of stone. Mechanical equipment, a sorting site, and labor needed to assist in checking gradation shall be provided by the Contractor at no additional cost to the County.

901.11 SOIL AGGREGATE

THE SECOND PARAGRAPH IS CHANGED TO:

The Contractor may use soil aggregate produced from RPCSA produced by a NJDEP approved "Class B" recycling center operating pursuant to N.J.A.C. 7:26A. Ensure soil aggregates are not comprised of material designated as regulated or hazardous as specified in 901.01.

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SECTION 902 – ASPHALT

902.01.01 Asphalt Binder

THE FIRST TWO PARAGRAPHS ARE CHANGED TO:

Use an asphalt binder that is storage-stable and conforms to AASHTO M 332. Include compliance with the elastic response requirement in Figure 1 of AASHTO R 92, if applicable.

902.01.04 Warm Mix Asphalt (WMA) Additives and Processes

THE FIRST PARAGRAPH IS CHANGED TO:

Use a WMA additive or process that is listed on the QPL.

902.02.01 Mix Designations

PART (4) IS CHANGED TO:

4. “E” The fourth field in the Item description designates the high temperature designation of the performance-graded binder. Options are “64” for PG 64S-22 and “E” for PG 64E-22.

902.02.02 Composition of Mixtures

THE FIRST SENTENCE OF THE FOURTH PARAGRAPH IS CHANGED TO:

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 10 percent Reclaimed Asphalt Pavement (RAP).

THE FIFTH PARAGRAPH IS CHANGED TO:

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 15 percent of recycled materials. For controlled asphalt foaming system WMA, the Department may require an anti-stripping additive. The 15 percent of recycled materials may consist of up to 10 percent of RAP, and up to 5 percent of CRCG.

TABLE 902.02.02-1 IS DELETED:

902.02.03 Mix Design

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Unless otherwise approved by the engineer, only one source of supply for hot mix asphalt surface course may be used on the project.

902.02.04 Sampling and Testing

A. General Acceptance Requirements.

THE SECOND PARAGRAPH OF SECTION (A) IS CHANGED TO:

For PG 64S-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.

D. Acceptance Testing and Requirements.

PART D IS CHANGED TO:

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 the test results are outside of the gradation or volumetric requirements specified in Table 902.02.03-1 or Table 902.02.04-1 for an acceptance sample, immediately run a quality control sample. If the quality control sample is also outside of the requirements specified in Table 902.02.03-1 or Table 902.02.04-1, determine if a plant adjustment is needed and take corrective action to bring the mix into compliance. Take an additional quality control sample immediately after completing the corrective action to ensure that the mix is within the requirements. If the mix is within the requirements based on the quality control sample results, then the ME will immediately take an acceptance sample to test and verify that the composition meet gradation and volumetric requirements specified in Table 902.02.03-1 and Table 902.02.04-1. If 2 consecutive acceptance or quality control samples are outside the gradation or volumetric requirements specified in Table 902.02.03-1 or Table 902.02.04-1, immediately stop production and shipping.

After a production stop, 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 quality control sample from the mixture indicate that the mixture meets gradation and volumetric requirements specified in Table 902.02.03-1 and Table 902.02.04-1 and ME approval. The ME will reject mixture produced at initial restarting that does not meet gradation and volumetric requirements specified in Table 902.02.03-1 and Table 902.02.04-1.

The ME will test a minimum of 1 sample per 3,500 tons for moisture, basing moisture determinations on the weight loss of an approximately 1,600 gram sample of mixture heated for 1 hour in an oven at 280 ± 5 °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)	Voids in Mineral Aggregate (VMA), % (minimum)						Dust-to-Binder Ratio
		Nominal Max. Aggregate Size, mm						
	@N _{des} ¹	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

1. 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.

SECTION 903 – CONCRETE

903.01 CEMENT

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
WHITING-NEW EGYPT ROAD OVER RIDGE WAY
FEDERAL PROJECT NO. 0539301

THE ENTIRE SUBSECTION IS CHANGED TO:

Use cement, listed on the QPL, that is either portland cement or blended hydraulic cement and conforms to the following:

Portland Cement, Type I, II, and Type III.....	ASTM C 150
Blended Hydraulic Cement, Type IS, IP, and IL	ASTM C 595

Only use Type III portland cement for Class V concrete, prestressed Items, and precast Items.

Use portland cement pre-blended with a maximum of 25 percent fly ash, by weight, or a maximum of 5 percent silica fume by weight, or with a maximum of 50 percent slag by weight for blended hydraulic cement Type IS or IP. Use portland cement pre-blended with a minimum of 5 percent limestone content and a maximum of 15 percent limestone content by weight for blended hydraulic cement Type IL. Ensure that a scaling test according to ASTM C 672 is completed on the mix design if more than 30 percent slag is used and that the concrete has a visual rating less than 3 after 50 cycles.

Do not add additional mineral admixtures to blended hydraulic cements Type IS or IP at the concrete plant unless approved by the ME. The use of additional mineral admixtures in blended hydraulic cement Type IL at the concrete plant is permitted if the mineral admixture is listed on the QPL

Do not mix different brands of cement, the same brand of cement from different mills, or different types of cement.

Provide suitable means for storing and protecting the cement against dampness. The ME will reject cement that has become partially set or that contains lumps of caked cement. Ensure that the temperature of the cement at the time of delivery to the mixer does not exceed 160 °F.

903.03.05 Control and Acceptance Testing Requirements

E. Acceptance Testing for Strength for Pay-Adjustment Items.

Concrete Items which are subject to pay adjustment and the base prices are as follows:

ITEMS	DESCRIPTION	UNIT	BASE PRICE
507021P	CONCRETE BRIDGE DECK	CY	\$500.00
507036P	CONCRETE BRIDGE PARAPET	LF	\$305.00
505039P	PRESTRESSED CONCRETE SLAB BEAM, (TYPE SII-36), 36" X 15"	LF	\$125.00
505042P	PRESTRESSED CONCRETE SLAB BEAM, (TYPE SIII-36), 36" X 18"	LF	\$130.00
505015P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BI-36), 36" X 27"	LF	\$170.00
505045P	PRESTRESSED CONCRETE SLAB BEAM, (TYPE SIV-36), 36" X 21"	LF	\$160.00
505018P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BII-36), 36" X 33"	LF	\$170.00
505021P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BIII-36), 36" X 39"	LF	\$175.00
505024P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BIV-36), 36" X 42"	LF	\$185.00
505003P	PRETENSIONED PRESTRESSED CONCRETE BEAM, 45"	LF	\$155.00
505006P	PRETENSIONED PRESTRESSED CONCRETE BEAM, 54"	LF	\$155.00
505048P	PRESTRESSED CONCRETE SLAB BEAM, (TYPE SII-48), 48" X 15"	LF	\$160.00
505051P	PRESTRESSED CONCRETE SLAB BEAM, (TYPE SIII-48), 48" X 18"	LF	\$135.00
505009P	PRETENSIONED PRESTRESSED CONCRETE BEAM, 63"	LF	\$185.00
505027P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BI-48), 48" X 27"	LF	\$215.00
505054P	PRESTRESSED CONCRETE SLAB BEAM, (TYPE SIV-48), 48" X 21"	LF	\$215.00
505030P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BII-48), 48" X 33"	LF	\$185.00
505033P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BIII-48), 48" X 39"	LF	\$220.00
505036P	PRESTRESSED CONCRETE BOX BEAM, (TYPE BIV-48), 48" X 42"	LF	\$230.00
505012P	PRETENSIONED PRESTRESSED CONCRETE BEAM, 72"	LF	\$200.00
502045M	CAST-IN-PLACE CONCRETE PILE, DRIVEN, 12" DIAMETER	LF	\$50.00

502090M	PRECAST CONCRETE PILE, DRIVEN, 12" X 12"	LF	\$90.00
502132M	PRESTRESSED CONCRETE PILE, DRIVEN, 12" X 12"	LF	\$50.00
502135M	PRESTRESSED CONCRETE PILE, DRIVEN, 14" X 14"	LF	\$50.00
502138M	PRESTRESSED CONCRETE PILE, DRIVEN, 16" X 16"	LF	\$50.00
502141M	PRESTRESSED CONCRETE PILE, DRIVEN, 18" X 18"	LF	\$50.00
502144M	PRESTRESSED CONCRETE PILE, DRIVEN, 20" X 20"	LF	\$75.00
502147M	PRESTRESSED CONCRETE PILE, DRIVEN, 22" X 22"	LF	\$75.00
502150M	PRESTRESSED CONCRETE PILE, DRIVEN, 24" X 24"	LF	\$75.00
502151M	PRESTRESSED CONCRETE PILE, DRIVEN, 30" X 30"	LF	\$75.00
502156M	PRESTRESSED CONCRETE PILE, DRIVEN, 54" DIAMETER	LF	\$200.00

SECTION 909 – DRAINAGE

909.02.02 HDPE Pipe

THE SUBPART HEADING IS CHANGED TO:

909.02.02 HDPE Pipe and Polypropylene (PP) Pipe

THIS SUBPART IS CHANGED TO:

Use corrugated HDPE drainage pipe that conforms to AASHTO M 294 and is Type S (smooth interior with annular corrugations) with gasketed silt-tight joints.

Use corrugated polypropylene (PP) drainage pipe that conforms to AASHTO M 330 and is Type S (smooth interior with annular corrugations) with gasketed silt-tight joints.

Use HDPE and polypropylene (PP) pipe from a manufacturer who is an AASHTO NTPEP (National Transportation Product Evaluation Program) certified manufacturer. For a list of NTPEP certified manufacturers, see the following webpage: <https://data.ntpep.org/>.

Submit a certification of compliance, as specified in 106.07, for HDPE and polypropylene (PP) pipe.

SECTION 910 – MASONRY UNITS

910.04 STONE CURB

THE FOLLOWING IS ADDED:

Granite blocks shall be a minimum of 10 inches to 12 inches in length, approximately 5 inches wide and 4 inches thick. All blocks less than 10 inches long will be rejected.

SECTION 911 – SIGNS, SIGN SUPPORTS, AND DELINEATORS

911.01.01 Materials

B. Retroreflective Sheeting.

TABLE 911.01.01-2 IS CHANGED TO:

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
WHITING-NEW EGYPT ROAD OVER RIDGE WAY
FEDERAL PROJECT NO. 0539301

Table 911.01.01-2 Allowable Sign Sheeting Types

Sign Type	Test Method	Type
Regulatory and Warning Signs	ASTM D 4956	Type III, Type VIII, Type IX or Type XI ¹
Guide Signs Mounted on Steel “U” or Square Tube Posts	ASTM D 4956	Type III, Type VIII, Type IX or Type XI
Guide Signs Mounted on Overhead Sign Structures, Breakaway Sign Supports, or Non-breakaway Sign Supports	ASTM D 4956	Type VIII, Type IX or Type XI ²
1. Ground-mounted signs with white background shall be ASTM Type IX.		
2. Do not use ASTM Type XI sheeting with any existing sign lighting improvement or signs that are lit.		

911.01.02 Fabrication**A. Sign Panels.**

THE SECOND PARAGRAPH IN PART A IS CHANGED TO:

Fabricate flat sheet signs from a single piece of sheet aluminum without joints, using the thicknesses specified in Table 911.01.02-1. Drill or punch 3/8 inch diameter holes in the sign blank for attachment to sign supports. Locate holes according to the 2004 Edition of Standard Highway Signs and Markings Book. If the panel is larger than 5 feet in any dimension, reinforce the panel with z-bars.

THE THIRD PARAGRAPH OF PART A IS CHANGED TO:

For multiple panel signs, use 1 foot wide extruded sections bolted together. Join sign panel sections together at the flanges with 3/8 inch bolts. Attach the sign panels to vertical supports, ensuring that the span between vertical supports is a maximum of 18 feet. Do not use extruded sign panels with steel “U” or square tube post sign supports. Use the same material and color for trim molding that is used for the sign face.

C. Legends and Borders.

THE FIRST PARAGRAPH IN PART C IS CHANGED TO:

The legend for each sign consists of letters, numerals, shields, and other symbols. Use Series E Modified 2000 lettering that conforms to the 2004 Edition of Standard Highway Signs and Markings Book. Ensure that the lettering is aligned, spaced, and sized according to 2004 Edition of Standard Highway Signs and Markings Book, its 2012 Supplement, and the working drawings. Apply the legend and borders using the following methods:

911.01.04 Acceptance Inspection

THE FIRST PARAGRAPH IS CHANGED TO:

Notify the RE at least 3 days before shipping to the Project so that arrangements for inspection can be made. The RE will reject signs not fabricated according to the 2004 Edition of Standard Highway Signs and Markings Book, its 2012 Supplement, and the Plans. The RE will ensure that finished signs are clear and legible without smudging, blisters, delamination, loose edges, or other blemishes. The RE will also ensure that the colors have a consistent chromaticity across all signs of the same color.

911.02 SIGN SUPPORTS**911.02.01 Steel “U” Post Sign Supports**

THE SUBPART IS RENAMED TO:

911.02.01 Steel “U” and Square Tube Post Sign Supports

THE FOLLOWING IS ADDED:

Use steel “U” post sign supports conforming to ASTM A 499, Grade 50 or 60, with the length of post and minimum pounds per foot as shown on the Plans. Provide 18-8 stainless steel 5/16 × 18 UNC hexagonal headed bolts and nuts conforming to ASTM A 320, Grade B8, Class 1, for securing the signs to the steel “U” post. Provide sign mounting bolts that are sized to extend beyond the end of each nut by no more than 3/4 inches when fully tightened.

Submit a certification of compliance, as specified in 106.07, for “U” posts.

Use square steel tube post sign supports conforming to ASTM A 1011, Grade 50, with the length of post and minimum pounds per foot as shown on the Plans. Provide 18-8 stainless steel 5/16 × 18 UNC hexagonal headed bolts and nuts conforming to ASTM A 320, Grade B8, Class 1, for securing the signs to the square steel tube post. Provide sign mounting bolts that are sized to extend beyond the end of each nut by no more than 3/4 inches when fully tightened.

Submit a certification of compliance, as specified in 106.07, for square steel tube posts.

SECTION 912 – PAINTS, COATINGS, TRAFFIC STRIPES, AND TRAFFIC MARKINGS

912.04.02 Removable Pavement Marking Tape

B. Removable Black Line Masking Tape.

THE THIRD PARAGRAPH IN PART B IS CHANGED TO:

Provide a certification of compliance, as specified in 106.07, for removable black masking tape.

SECTION 913 – GUIDE RAIL, FENCE, RAILING, AND BOX BEAM

913.01.01 Rail Element

THIS SUBPART IS CHANGED TO:

Rail element shall be steel conforming to AASHTO M 180, Class A, Type 1 in Table 2, except that galvanization shall be done after fabrication and after all shearing and punching. The weight of the zinc coating shall conform to Type 1 in Table 1.

913.04 BOX BEAM FOR CONSTRUCTION BARRIER CURB

THE FIRST PARAGRAPH IS CHANGED TO:

Ensure that the box beam is made of cold-formed welded and seamless structural tubing. Ensure that the box beam conforms to ASTM A 500, Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes, Grade C.

SECTION 914 – JOINT MATERIALS

914.03 POLYMERIZED JOINT ADHESIVE

THE FIRST PARAGRAPH IS CHANGED TO:

For longitudinal cold joints in HMA paving, around castings, and at concrete curb interfaces, use polymerized joint adhesive that is a hot-applied asphaltic joint adhesive listed on the QPL and conforms to the requirements in Table 914.03-1:

THE FOLLOWING SUBSECTION IS ADDED:

914.05 PREFORMED CLOSED CELL FOAM

Use a closed cell, foam material that is chemical-resistant, non-absorbent, and capable of maintaining a waterproof joint within the range of 50% compression and 25% tension, and conforming to the following:

Table 914.05-1 Requirements for Closed Cell Foam		
Property	Test Method	Requirements
Extrusion	ASTM D545 @ 50% Compression 3 Sides Restrained	< 1/4 in
Compression Deflection	ASTM D3575, Suffix D 50% Deflection @ 80°F	10 psi to 60 psi
Density	ASTM D3575, Suffix W, Method A	2 – 3 pcf
Water Absorption	ASTM D545	< 3%
Compression Set	ASTM D1056, 50% Deflection for 22 hrs. @ 70 ± 5°F	< 15% @ 168 hours

SECTION 917 – LANDSCAPING MATERIALS

917.03.01 Grass Seed Mixtures

THE FOLLOWING TABLE IS ADDED:

Table 917.03.01-8 Type Pinelands Grass Seed Mixtures.

COMMON NAME	BOTANICAL NAME	SEEDING RATE LBS. / ACRE
Switchgrass	Panicum Virgatum	15
Deertongue	Dichanthelium Clandestinum	10
Little Bluestem	Schizachyrium Scoparium	20
Sheep Fescue	Festuca Ovina	20
Partridge Pea	Chamaecrista Fasciculata	10

Recommended seeding periods are April 1st – May 31st and August 16th – October 15th.

Summer seeding shall be performed only if adequate irrigation is provided to ensure successful germination.

SECTION 919 – MISCELLANEOUS

919.05 GEOMEMBRANE LINER

TABLE 919.05-1 IS CHANGED TO:

CONSTRUCTION OF CR 539 OVERPASS (STR. NO. 1523-031),
WHITING-NEW EGYPT ROAD OVER RIDGE WAY
FEDERAL PROJECT NO. 0539301

Table 919.05-1 Requirements for HDPE Resin

Property	Test Method	Requirements
Specific Gravity (Resin & Carbon Black)	ASTM D 792	> 0.940
Melt Index	ASTM D 1238	< 0.4 g/10 min
Carbon Black Content	ASTM D 1603	2 – 3 %

DIVISION 1000 – EQUIPMENT

SECTION 1001 – TRAFFIC CONTROL EQUIPMENT

1001.01 FLASHING ARROW BOARD

SUBSECTION HEADING AND THIS SUBSECTION IS CHANGED TO:

1001.01 ARROW BOARD

Provide either Type A or Type C or both types of arrow boards. Ensure the arrow board elements conform to the MUTCD and the following requirements:

1. Non-reflective, black boards equipped with battery-operated amber lights.
2. A minimum peak luminous intensity of 8,800 candelas and equipped with photocells that will automatically reduce the luminous intensity to 1,500 candelas when the ambient light level drops to 5 foot-candles.
3. A light on the rear face of the board to indicate that the lights are operating.
4. Solid state controls with polarity and surge protection.
5. Panel operation controls mounted in a lockable enclosure.

Ensure the arrow boards are equipped with a diesel charged battery system. Do not use gasoline powered systems. With RE approval, the Contractor may use the arrow boards equipped with solar charged battery systems in non-moving operations. The Department may require a solar charged battery system in noise sensitive areas.

Securely mount arrow boards on a manufacturer-approved 2 wheeled towing trailer.

1001.03 TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHIONS

THIS SUBSECTION IS CHANGED TO:

Provide a truck affixed with a bed-mounted type C arrow board, as specified in 1001.01, and a rear mounted crash cushion. Ensure the weight of the truck with the type C arrow board and the rear mounted crash cushion is minimum total weight of 10 tons. The Contractor may use ballast to meet the weight requirement. When using ballast, ensure that it is securely fastened to the truck. Provide crash cushions that conforms to the following requirements:

1. Meets crash-worthiness requirements as specified in 159.03.02.
2. Designed to be attached to the rear of a truck.
3. Equipped with a 90 degree hydraulic tilt system to raise and lower the crash cushion. The tilt system shall have a locking mechanism to secure the crash cushion when in the raised position.
4. If equipped with energy absorbing modules, ensure that they are painted yellow.
5. Displays alternating 6 inch wide black and yellow bands, composed of Type III-retroreflective sheeting, as specified in ASTM D 4956, in an inverted “V” chevron pattern on the surface of the rear module that faces traffic. When in the raised position, ensure that the surface of the rear facing module also displays the chevron pattern.
6. Equipped with standard trailer lighting systems, including brake lights, taillights, and turn signals that are visible in the raised and lowered positions.

SECTION 1003 – HMA SITE EQUIPMENT

1003.01 MATERIALS TRANSFER VEHICLE (MTV)

THE FOLLOWING IS ADDED AFTER THE LAST PARAGRAPH:

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Ensure the MTVs Gross Weight and maximum speed limit do not exceed the load restrictions as shown in 105.09 Special Provisions.

SECTION 1008 – MISCELLANEOUS EQUIPMENT

THE FOLLOWING SUBSECTION IS ADDED:

1008.07 CONCRETE VERTICAL CURB SAW

Provide a power-driven vertical curb saw with horizontally-oriented blade capable of sawing to the required dimensions without causing uncontrolled cracking. Equip the vertical curb saw with water-cooled, circular, diamond-edge blades or abrasive wheels, and alignment guides. Ensure that the vertical curb saw is capable of immediately collecting the slurry produced from the operations. The Contractor may use a vertical curb saw that does not collect slurry if the RE approves an alternate slurry collection method.

When sawcutting grooves, use a multi-bladed saw with an adequate number of blades and alignment wheels.

Provide within the Project Limits spare saw blades and at least one standby saw that meets the above requirements.

SECTION 1009 – HMA PLANT EQUIPMENT

1009.01 HMA PLANT

A. Requirements for HMA Mixing Plants.

4. Equipment for Preparation of Asphalt Binder.

THE FOURTH PARAGRAPH IN PART 4 IS CHANGED TO:

Provide valves according to ASTM D 140, except ensure that a sampling valve is also located in the lowest third of each storage tank. If any additive is added at the HMA plant, provide a sampling valve according to AASHTO M 156, Section 4.3.4.

8. Safety.

THE THIRD PARAGRAPH IN PART 8 IS CHANGED TO:

When plant production occurs during night operations, provide permanently fixed lighting throughout the plant operations, plant laboratory, and truck scale areas to ensure a clear view of the operations. Also provide permanently mounted lighting at the sampling platforms to sufficiently illuminate the bed of the truck for inspection and sampling operations.

1009.03 ASPHALT-RUBBER BINDER BLENDING EQUIPMENT

THE FIFTH PARAGRAPH IS CHANGED TO:

Provide valves according to ASTM D 140, except ensure that a sampling valve is also located in the lowest third of each storage tank.

NJDOT TEST METHODS

NJDOT R-1 – DETERMINING RIDE QUALITY OF PAVEMENT SURFACES

B. Apparatus.

PART B IS CHANGED TO:

Use the following apparatus:

1. Class 1 IPS that meets the requirements of ASTM E 950, Sections 4.0, 5.0 and 6.0 of AASHTO M 328, and the following:
 - a. Valid certification.
 - b. Recertification after any major component repairs or replacements.
 - c. The data system provides the raw profile data in format readable in ProVal.
 - d. Current version of pavement profile analysis software installed on the IPS computer to compute the IRI.
2. Base plate and gauge blocks, of 1 inch and 2 inch thickness, provided by the manufacturer to verify daily vertical calibration.
3. Retro-reflective traffic marking tape or other approved mechanism to automatically trigger the start and stop of profile measurements.

C. Procedure.

PART C IS CHANGED TO:

Perform the following steps:

1. Turn on the inertial profiler and warm up all electronic equipment in accordance with the manufacturer recommendations before testing.
2. Perform Block and Bounce tests each day before collecting data. Record the results in the calibration log. Ensure tolerances are within the certified limits.
3. Ensure retro-reflective traffic marking tape or other approved mechanism is placed at the beginning and end of each direction of travel lane.
4. Enter project information in the test equipment system.
5. Make provisions to start and stop recording profile at the beginning and end of testing. If an automatic trigger mechanism is not installed, make provision to initiate start and end of data recording manually by pressing an appropriate key(s) on the computer.
6. Ensure that the required speed, as recommended by the manufacturer, is achieved and that the system is collecting profile data before recording profile.
7. For each test section, perform 3 test runs to collect data of both wheel paths of each lane in the longitudinal direction of travel. The wheel path is defined as being located approximately 3 feet on each side of the centerline of the lane and extending for the full length of the lane. Lanes are defined by striping.
8. Save data from each run separately before the next run or lane testing, clearly identifying each test run, lane identification, and run number.

FEDERAL AID PROJECT ATTACHMENT 1

DISADVANTAGED BUSINESS ENTERPRISE UTILIZATION

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FEDERAL AID PROJECT ATTACHMENT 2

SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES ON NJDOT FEDERAL AID PROJECTS

(23 CFR, PART 230, SUBPART A, APPENDIX A TO SUBPART A - SPECIAL PROVISIONS)

The Contractor is obligated to comply with the policies, procedures and guidelines relative to the implementation of an Equal Employment Opportunity Program on Federal and Federal Aid Highway construction contracts, except for those contracts awarded under 23 U.S.C. 117, and to the preparation and submission of reports pursuant thereto as per 23 CFR, Part 230, Subpart A, Appendix A to Subpart A - Special Provisions.

A. General

1. **Equal Employment Opportunity Requirements.** Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract, Provisions (Form FHWA-1273 or 1316, as appropriate) and these Special Provisions which are imposed pursuant to 23 USC 140, as established by Section 22 of the Federal Aid Highway Act of 1968. The requirements set forth in the Contract constitute the specific affirmative action requirements for project activities under this Contract and supplement the equal employment opportunity requirements set forth in the Required Contract Provisions.
2. The Contractor will work with the State agencies and the Federal Government in carrying out Equal Employment Opportunity obligations and in their review of activities under the contract.
3. The Contractor, and all subcontractors holding subcontracts, not including material suppliers, of \$10,000 or more, will comply with the following minimum specific requirement activities of Equal Employment Opportunity: (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway Program Manual, are applicable to material suppliers, as well as contractors and subcontractors.) The Contractor will include these requirements in every subcontract of \$10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

- B. Equal Employment Opportunity Policy.** The Contractor will accept as its operating policy the following statement which is designed to further the provisions of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

“It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training.”

- C. Equal Employment Opportunity Officer.** The Contractor will designate and make known to the Department contracting officers an Equal Employment Opportunity Officer (hereinafter referred to as the EEO Officer) who will have the responsibility for and must be capable of effectively administering and promoting an active EEO contractor program and who must be assigned adequate authority and responsibility to do so.

D. Dissemination of Policy

1. **Implementation.** All members of the Contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommended such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the Contractor's equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To ensure compliance with the above agreement, the following actions will be taken as a minimum:

- a. **Initial Project Site Meeting.** Conduct an initial project site meeting with key supervisory and office personnel before or at the start of work, and then not less than once every 6 months, at which time the Contractor's Equal Employment Opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
 - b. **EEO Obligations.** All new supervisory and office personnel will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the Contractor's equal employment opportunity obligations within 30 days following their reporting for duty with the Contractor.
 - c. All personnel engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official in the Contractor's procedures for locating and hiring minority and female employees.
2. Take the following actions to make the Contractor's equal employment opportunity policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc.:
 - a. Place notices and posters setting forth the Contractor's equal employment opportunity policy in areas readily accessible to employees, applicants for employment and potential employees.
 - b. Bring the Contractor's equal employment opportunity policy and the procedures to implement such policy to the attention of employees by means of meetings, employee handbooks, and/or other appropriate means.

E. Recruitment

1. When advertising for employees, include in all advertisements for employees the notation: "An Equal Opportunity Employer". Publish all such advertisements in newspapers or other publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.
2. Unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority and female applicants, including, but not limited to, State employment agencies, schools, colleges and minority-group organizations. To meet this requirement, the Contractor will, through their EEO Officer, identify sources of potential minority and female group employees, and establish procedures with such identified sources whereby minority and female group applicants may be referred to the Contractor for employment consideration.
3. In the event the Contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he/she is expected to observe the provisions of that agreement to the extent that the system permits the Contractor's compliance with the equal employment opportunity contract provisions. (The US Department of Labor has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the Contractor to do the same, such implementation violates Executive Order 11246, as amended).
4. Encourage present employees to refer minority and female applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures pertaining to the referral of applicants will be discussed with employees.

F. Personnel Actions.

Wages, working conditions and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

1. Conduct a project site inspection at the start of work, and periodically thereafter, to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
2. Periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
3. Periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

4. Promptly investigate all complaints of alleged discrimination made to the Contractor in connection with its obligations under this Contract, and will resolve or attempt to resolve such complaints, within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, corrective action shall include such other persons. Upon completion of each investigation, inform complainants of all their avenues of appeal.

G. Training and Promotion

1. Assist in locating, qualifying, and increasing the skills of minority and women who are applicants for employment or current employees.
2. Advise employees and applicants for employment of available training programs and entrance requirements for each.
3. Periodically review the training and promotion potential of minority and female employees and encourage eligible employees to apply for such training and promotion.

H. On-the-Job Training. The Contractor, as part of their equal employment opportunity affirmative action program, shall provide on-the-job training aimed at developing full journey people in the type of craft or job classification involved on the project.

1. Apprenticeship and Training Programs

The minimum length and type of training for each position will be established in the training program selected by the Contractor and approved by the Department and the Federal Highway Administration. The Department will approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average apprentice or trainee for journey person status in the craft concerned by the end of the training period.

Apprenticeship programs registered with the US Department of Labor, Bureau of Apprenticeship and Training, (BAT) or with a State apprenticeship agency recognized by USDOL BAT and training programs approved but not necessarily sponsored by the US Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided such programs are being administered in a manner consistent with the equal employment obligations of Federal-aid highway contracts. Approval or acceptance of a training program shall be obtained from the DCR/AA prior to commencing work in the classifications covered by the Contractor's training program. The Division will review guidelines developed by the Contractor for approval or disapproval in accordance with the Training Guideline Approval Process described in the "Revised Standard Training Guidelines". The Division will also review existing guidelines for revision based on the same process.

It is the intention of these provisions that training be provided in construction crafts rather than clerk-typist or secretarial-type positions. Training is permitted in lower level management positions (e.g., timekeepers), where the training is oriented toward project site applications. Training in semi-skilled laborer positions is permitted provided that significant and meaningful training is available on the project site and approved by DCR/AA. Some offsite, classroom training (e.g., safety, first aid instruction) may be permitted as long as such training is an integral part of an approved training program and does not comprise a significant part of the overall training.

2. Contractor Submission and Department Approval of the Initial Training Program

At or after the preconstruction conference, and prior to the start of Work, submit a Training Program to the RE for review and comments prior to DCR/AA review and approval. The Contractor's training program shall include:

- a. Number of trainees or apprentices to be trained in all selected Training Positions,
- b. Standard Program Hours for all positions,
- c. Estimate of the Minimum Available Hours actually feasible on the project toward completion of the Standard Program Hours per position,
- d. Training schedule of Estimated Start Dates for the apprentices or trainees, developed and coordinated with the project's work progress schedule,
- e. Training Guidelines for all positions, and
- f. Training that will be provided by the Contractor and provided by Subcontractors.

The number of apprentices and trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journey people in the various crafts within a reasonable area of recruitment. Submit timely, revised Training Programs, as required throughout the project to ensure that feasible and Maximum Available Training is provided. Maximum Available Training is defined as bringing each apprentice or trainee onto the project when work first becomes available in his/her craft and providing all available training until hours are no longer available.

3. Assignment of Training to Subcontractors

In the event that portions of the Contract work are subcontracted, determine how many, if any, of the apprentices or trainees are to be trained by subcontractors, provided, however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by these Training Special Provisions. Ensure that these Training Special Provisions are made applicable to such subcontracts.

4. Reimbursement of the Contractor for Providing Training

The Contractor will be credited for each apprentice or trainee employed on the construction site who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such apprentices or trainees as provided hereinafter. Payment will be made under the pay item Trainees at the bid price in the Proposal per person-hour of training given an employee on this contract in accordance with an approved training program. If approved, payment will be made for training persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other sources do not specifically prohibit the Contractor from receiving other reimbursement. Offsite, classroom training reimbursement may only be made to the Contractor when the company does one or more of the following and the apprentices or trainees are concurrently employed on a Federal-aid project: contributes to the cost of the training and/or provides instruction to apprentices or trainees or pays their wages during the offsite, classroom training (e.g., safety, first aid instruction) period.

Pay apprentices and trainees according to the project-specific New Jersey Department of Labor Prevailing Wage Rate Determination for the project. Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the Contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

I. Apprentice/Trainee Requirements of the Contract

The number of training positions will be 0, where feasible, consisting of at least 0 APPRENTICES and 0 TRAINEES. TRAINEE HOURS= 0.

Apprentices are defined as registered members of an approved apprenticeship program recognized by the United States Department of Labor (USDOL) Bureau of Apprenticeship and Training (BAT) or a New Jersey State apprenticeship agency recognized by USDOL BAT (e.g., New Jersey Department of Education). Graduates of the Pre-Apprenticeship Training Cooperative Program shall be classified as apprentices. Trainees are defined as skilled, semi-skilled or lower level management individuals receiving training per one of the approved NJDOT "Revised Standard Training Guidelines" (available from the DCR/AA).

Where feasible, assign at least 50% of the training positions to Skilled Crafts which include but are not limited to Carpenters, Dockbuilders, Electricians, Ironworkers and Operating Engineers.

1. Requirements for Recruitment, Selection and Approval of Apprentices and Trainees

Apprentices or trainees should be in their first year of apprenticeship or training. Interview and screen trainee candidates to determine if their actual work experience is equivalent to or exceeds that offered by the training program prior to submitting candidates on the Apprentice/Trainee Approval Memorandum (Form CR-1), via the RE, to the Division for review and approval or disapproval.

Training and upgrading of minorities (e.g., Blacks, Asians or Pacific Islanders, Native Americans or Alaskan Natives, Hispanics) and women toward journeyperson status is a primary objective of these Training Special Provisions. Accordingly, the Contractor shall make every effort to enroll minorities and women, by conducting systematic and direct recruitment through public and private sources likely to yield minority and female apprentices or trainees, to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as an apprentice or trainee in any position in which he or she has successfully completed a training course leading to journeyperson status or in which he or she has been employed as a journeyperson. The Contractor shall satisfy this requirement by including appropriate questions in the employment application or by other suitable means and by submitting an accurate and complete "Apprentice/Trainee Approval Memorandum" (Form CR-1) prior to the apprentice or trainee starting work on the project. Regardless of the methods used, the Contractor's records should document the findings in each case.

Skilled craft trainees may complete up to 3,000 total training hours on Department projects, with an extension of an additional 1,000 hours permitted on a case-by-case basis. Semi-skilled and lower-level management trainees attain journeyperson status upon completion of a training guideline and may complete up to three (3) different positions.

2. Documentation Required to be Signed by Apprentices or Trainees, and provided to the Department

Prior to the apprentice/trainee starting work on the project, submit an accurate, complete and signed Apprentice/Trainee Approval Memorandum for each apprentice/trainee to the RE for review, and final approval by DCR/AA. Once the notice that said apprentice/trainee has been approved to work on the Contract, said apprentice/trainee may start work on the Contract. No credit will be given for apprentices/trainees prior to said apprentice/trainee being approved by DCR/AA.

At the start of training, provide the RE and each apprentice or trainee with an applicable "Training Guideline" and, at the conclusion of training, an accurate and complete "Training Certificate for Reporting Hours to NJDOT" (Form CR-3), showing hours of training satisfactorily completed.

Maintain and submit an accurate and complete "NJDOT Contractor's 1409 Quarterly Training Report" (Form-CR-1409) to the RE within ten (10) days of the end of each training quarter (e.g., January 10, April 10, July 10, October 10); also provide a copy to each apprentice or trainee.

Maintain and submit accurate and complete "Biweekly Training Reports" (Form CR-2) to the RE, and each apprentice or trainee, as periodic reports documenting their performance under the Contract.

3. Determining Good Faith Compliance of Contract Apprentice/Trainee Program

Per the approved program or guideline, provide Maximum Available Training to apprentices and trainees by beginning their training as soon as feasible with the start of craft work utilizing the skill involved on the project construction site and by retaining them as long as training opportunities exist in their crafts or until their training program positions are completed.

Recall apprentices or trainees released due to reductions in force when the work scope permits and they are available to return. When they are unavailable to resume training on the project site, submit written proof of recall efforts and replacement candidates and/or positions in a timely manner. Do not terminate apprentices or trainees prior to completion of their training program positions without Department consultation and authorization. Apprentices or trainees are not required to be on board for the entire length of the Contract.

The Contractor shall have fulfilled the contractual responsibilities under these Training Special Provisions as specified in 23 CFR 230, Appendix B to Subpart A of Part 230 if the company has provided Acceptable Training to the number of apprentices or trainees specified in this contract and/or by providing the remaining hours required to complete training positions begun by apprentices or trainees on other projects. The number trained shall be determined on the basis of the total number enrolled on the Contract for a significant period.

Demonstrate all steps that have been taken in pursuance of enrolling minorities and women in the training program positions, prior to a determination as to whether the Contractor is in compliance with the Training Special Provisions of the Contract.

Submit to the RE written training program summaries at the 50% time and/or cost stage of the contract and also prior to project completion, describing all good faith efforts and particularly addressing Maximum Available Training for incomplete training positions, per the procedure found in the revised "Instructions for Implementing the Training Special Provisions".

4. Enforcement Measures and Contractor's Rating

Payment will not be made if either the failure to provide the required training or the failure to hire the apprentice or trainee as a journeyperson is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirements of the Contract.

Per established procedures and scheduled Contract Compliance Reviews, the Contractor's performance will be rated and reviewed periodically by the Department.

Failure of a Contractor to comply with the Training Special Provisions of the Contract, and as specified in 23 CFR Part 230, Appendix B to Subpart A of Part 230, may result in the actions as set forth as specified in Section 105.

J. Unions. If the Contractor relies in whole or in part upon unions as a source of employees, use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women within the unions, and to effect such union referrals to the construction project. Actions by the Contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

1. Use maximum effort to develop, in cooperation with the unions, joint training programs aimed at qualifying more minorities and women for union membership and increasing their skills in order for them to qualify for higher paying employment.
2. Use maximum effort to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.
3. Obtain information concerning the referral practices and policies of the labor unions except that to the extent such information is within the exclusive possession of the labor unions and such labor unions refuse to furnish this information to the Contractor, certify to the Department and set forth what efforts have been made to obtain this information.
4. In the event the unions are unable to provide the Contractor with a reasonable flow of minority and female referrals within the time limit set forth in the collective bargaining agreement, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability, making full efforts to obtain qualified and/or qualifiable minorities and women. (The US Department of Labor has held that it shall be no excuse that the union with which the Contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees). In the event the union referral practice prevents the Contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such Contractor shall immediately notify the Department.

K. Subcontracting

1. Use maximum effort to solicit bids from and to utilize minority subcontractors or subcontractors with meaningful minority and female representation among their employees. The Contractor may use lists of minority-owned construction firms as issued by the Department.
2. Ensure subcontractor compliance with the Contract Equal Employment Opportunity obligations.

L. Records and Reports

1. Maintain records necessary to determine compliance with the Contractor's equal employment opportunity requirements. Documents will include the following:
 - a. Number of minorities, non-minorities, and women employed in each work classification on the Contract.

- b. Progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to Contractors who rely in whole or in part on unions as a source of their work force).
 - c. Progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and
 - d. Progress and efforts being made in securing the services of minority and female subcontractors or subcontractors with meaningful minority and female representation among their employees.
- 2. All such documents must be retained for a period of 3 years following completion of the Contract work and shall be available at reasonable times and places for inspection by authorized representatives of the Department and the Federal funding agencies.

FEDERAL AID PROJECT ATTACHMENT 3

REQUIREMENTS FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY ON NJDOT FEDERAL AID PROJECTS

(MINORITY AND WOMEN WORK EMPLOYMENT GOAL OBLIGATIONS)

A. Employment Goals.

The goals for minority and female participation, in the covered area, expressed in percentage terms for the Contractor's aggregate work force in each trade, on all construction work are:

Minority And Women Employment Goal Obligations For Construction Contractors and Subcontractors on Federal Aid Projects		
County	Minority Participation Percent	Women Participation Percent
Atlantic	18.2	6.9
Bergen	22.6	6.9
Burlington	17.3	6.9
Camden	17.3	6.9
Cape May	14.5	6.9
Cumberland	16.0	6.9
Essex	17.3	6.9
Gloucester	17.3	6.9
Hudson	12.8	6.9
Hunterdon	17	6.9
Mercer	16.4	6.9
Middlesex	5.8	6.9
Monmouth	9.5	6.9
Morris	17.3	6.9
Ocean	17	6.9
Passaic	12.9	6.9
Salem	12.3	6.9
Somerset	17.3	6.9
Sussex	17	6.9
Union	17.3	6.9
Warren	1.6	6.9

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or Federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its Federally involved and non-Federally involved construction.

The Contractor's compliance with the Executive Order 11246 and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations

required by the specifications set forth in 41 CFR 60-4(3)a, and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade. Make a good faith effort to employ minorities and women evenly on each project. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for sole purpose of meeting the Contractor's goals is a violation of the Contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

If a project is located in more than one county, the minority work hour goal, only, will be determined by the county which serves as the primary source of hiring or, if workers are obtained almost equally from one or more counties, the single minority goal will be the average of the affected county goals.

B. Reporting Requirements.

1. Provide the Department with written notification in triplicate within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification will list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.
2. Directly provide the Department with employment workforce data of the number and work hours of minority and non-minority group members and women employed in each work classification for the Contract. The Contractor, subcontractors, professional service firms and others working on the project must submit this information via a web-based application through the New Jersey portal, Vendor Workforce Reporting Manager. Instructions on how to complete Form CC-257R are provided within the web application. Instructions for registering and receiving the authentication code to access the web based application can be found at the Contractor Manpower Project Reporting CC-257R website at: <http://www.state.nj.us/transportation/business/civilrights/pdf/cc257.pdf>.
 - a. On a monthly basis, submit Form CC-257R through the web based application within 10 days following the end of each reporting month.
 - b. In addition to the above, submit a hard copy of the electronic Form CC-257R to the RE within 10 days following the end of each reporting month
 - c. Submit a copy of the confirmation e-mail of the successful submission of Monthly Employment Utilization Report to the RE within 10 days following the end of each reporting month.
3. All employment data must be accurate and consistent with the certified payroll records. The Contractor is responsible for ensuring compliance with these reporting requirements. Failure of the Contractor, subcontractors, professional service firms and others working on the Contract, to report monthly employment data may result in payments being delayed or withheld as per 105.01, or impact the Contractor's prequalification rating with the Department.

FEDERAL AID PROJECT ATTACHMENT 4

FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONTRACT SPECIFICATIONS FOR NJDOT FEDERAL AID PROJECTS

(AS REQUIRED PER EXECUTIVE ORDER 11246 AS AMENDED BY EXECUTIVE ORDER 11375 AND IMPLEMENTING REGULATIONS AT 41 C.F.R. PART 60)

A. As used in these Specifications:

1. Covered area means the County or Counties in which the Project is located.
2. Director means Director, Office of Federal Contract Compliance Programs, United States Department of Labor or any person to whom the Director delegates authority.
3. Employer identification number means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, US Treasury Department Form 941.
4. Minority includes:
 - a. Black (a person having origins in any of the black African racial groups not of Hispanic origin);
 - b. Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race);
 - c. Asian and Pacific Islander (a person having originals in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - d. American Indian or Alaskan Native (a person having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participating or community identification).

B. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

C. Implement the specific affirmative action standards provided in paragraphs F1 through 16 of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction Contractors performing construction work in geographical areas where they do not have a Federal or Federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

D. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women excuses the Contractor's obligations under these Specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

E. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the US Department of Labor.

F. Take specific affirmative action to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. Document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

1. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. Where possible, assign

two or more women to each construction project. Specifically ensure that all foreman, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment with specific attention to minority or female individuals working at such sites or in such facilities.

2. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
3. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred back to the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
4. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
5. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the source compiled under F2 above.
6. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc. by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
7. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
8. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
9. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
10. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
11. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

12. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 13. Ensure that seniority practices, job classifications, work assignments and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 14. Ensure that all facilities and company activities are provided in a manner such that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, national origin cannot result. Do not require such segregated use by written or oral policies, nor tolerate such use by employee custom. Provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.
 15. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractor and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 16. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
- G. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (F1 through 16). The efforts of a Contractor association, joint contractor union, Contractor-Community, or other similar group of which the Contractor is a member and participant may be asserted as fulfilling any one or more of its obligations under F1 through 16 of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
- H. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women both minority and nonminority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
- I. Do not use the goals and timetables or affirmative action standards to discriminate against any person because of race, creed, color, national origin, age, ancestry, nationality, gender, disability, sex, affectional or sexual orientation, gender identity or expression, religion, and liability for military service.
- J. Do not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
- K. Carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspensions, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246 as amended.
- L. Implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph F of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

- M. Designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (such as mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
- N. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (such as those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).
- O. Failure of the Contractor or subcontractors to comply with the nondiscrimination provisions of the Contract may result in payment being delayed or withheld as specified in 105.01; default as specified in 108.14, liquidated damages as specified in 108.20, or termination of the Contract as specified in 108.15.02 pending corrective and appropriate measures taken by the Contractor to the satisfaction of the Department.

FEDERAL AID PROJECT ATTACHMENT 5

STATE OF NEW JERSEY MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE ON NJDOT FEDERAL AID PROJECTS

(N.J.S.A. 10:5-31 ET SEQ. (P.L.1975, C.127) N.J.A.C. 17:27-1.1 ET SEQ.)

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

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

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

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

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

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

- A. If the Contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the Contractor or subcontractor shall, within three business days of the contract award, seek assurances from the union that it will cooperate with the Contractor or sub-contractor 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 sub-contractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. If the Contractor's or subcontractor's prior experience

with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and women workers consistent with affording equal employment opportunities as specified in this chapter, the Contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under “B” below; and the Contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

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

7. To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Dept. of LWD, Construction EEO Monitoring Program and submitted promptly to the Dept. of LWD, Construction EEO Monitoring Program upon request.
- C. The Contractor or subcontractor agrees that nothing contained in "B" above shall preclude the Contractor or subcontractor from complying with the union hiring hall or apprentice-ship 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 Department and the Department of LWD, Construction EEO Monitoring Program an initial project workforce report (Form AA-201) electronically provided to the Department by the Department of LWD, Construction EEO Monitoring Program, through its web-site, for distribution to and completion by the Contractor, in accordance with N.J.A.C. 17:27-7. The Contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Dept. of LWD, Construction EEO Monitoring Program, and to the Department.

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

- D. The Contractor and its subcontractors shall furnish such reports or other documents to the Dept. of LWD, Construction EEO Monitoring Program as may be requested by the Dept. of LWD, Construction EEO Monitoring Program from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be re-requested by the Dept. of LWD, Construction EEO Monitoring Program for conducting a compliance investigation pursuant to N.J.A.C. 17:27-1.1 et seq.

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

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

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

1. The Contractor shall recruit prospective employees through the New Jersey Career Connections website, managed by the Department of Labor and Workforce Development, available online at:

Error!	Hyperlink	reference	not	valid.
	http://careerconnections.nj.gov/careerconnections/for_businesses.shtml			
2. The Contractor shall keep specific records of its efforts, including records of all individuals interviewed and hired, including the specific numbers of minorities and women;
3. The Contractor shall actively solicit and shall provide the NJDOT with proof of solicitations for employment, including but not limited to advertisements in general circulation media, professional service publications and electronic media; and

4. The Contractor shall provide evidence of efforts described at 2 above to the NJDOT no less frequently than once every 12 months.
5. The Contractor shall comply with the requirements set forth at N.J.A.C. 17:27-1.1 et seq.

FEDERAL AID PROJECT ATTACHMENT 6

INVESTIGATING, REPORTING AND RESOLVING EMPLOYMENT DISCRIMINATION AND SEXUAL HARASSMENT COMPLAINTS ON NJDOT FEDERAL AID PROJECTS

The Contractor and subcontractors agrees to the following requirements in order to implement fully the nondiscrimination provisions of the Contract.

The Contractor agrees that in instances when it receives from any person working on the project site a verbal or written complaint of employment discrimination, prohibited under N.J.S.A. 10:5-1 et seq., 10:2-1 et seq., 42 U.S.C. 2000(d) et seq., 42 U.S.C. 2000 (e) et seq. and Executive Order 11246, it shall take the following actions:

- A. Within one (1) working day commence an investigation of the complaint which shall include but not be limited to interviewing the complainant, the respondent, and all possible witnesses to the alleged act or acts of discrimination or sexual harassment.
- B. Prepare and keep for its use and file a detailed written investigative report which includes the following information:
 - 1. Investigatory activities and findings.
 - 2. Dates and parties involved and activities involved in resolving the complaint.
 - 3. Resolution and corrective action taken if discrimination or sexual harassment is found to have taken place.
 - 4. A signed copy of resolution of complaint by complainant and Contractor.

In addition to keeping in its files the above-noted detailed written investigative report, the Contractor shall keep for possible future review by the Department all other records, including but not limited to, interview memos and statements.

- C. Upon the request of the Department, provides to the Department within ten (10) calendar days a copy of its detailed written investigative report and all other records on the complaint investigation and resolution.
- D. Take appropriate disciplinary action against any Contractor employee, official or agent who has committed acts of discrimination or sexual harassment against any contractor employee or person working on the project. If the person committing the discrimination is a subcontractor employee, then the Contractor is required to attempt to effectuate corrective and/or disciplinary action by the subcontractor in order to establish compliance with the Contract.
- E. Take appropriate disciplinary action against any Contractor employee, official or agent who retaliates, coerces or intimidates any complaint and/or person who provides information or assistance to any investigation of complaints of discrimination or sexual harassment. If the person retaliating, coercing or intimidating a complainant or other person assisting an investigation is a subcontractor's employee, then the Contractor is required to attempt to effectuate corrective and/or disciplinary action by the subcontractor in order to establish compliance with the Contract.
- F. Ensure to the maximum extent possible that the privacy interests of all persons who give confidential information in aid of the Contractor's employment discrimination investigation are protected.

In conjunction with the above requirements, the Contractor shall develop and post a written sexual harassment policy for its work force.

Failure by the Contractor and subcontractors to comply with the above requirements may be cause for the Department to institute against the Contractor any and all enforcement proceedings and/or sanctions authorized by the Contract or by State and/or Federal law.

FEDERAL AID PROJECT ATTACHMENT 7

PAYROLL REQUIREMENTS FOR NJDOT FEDERAL AID PROJECTS

- A. Certified Payroll Reports.** Each Contractor and subcontractor shall furnish the RE with certified payroll reports for each week of contract work. Such reports shall be submitted within 7 days of the date of payment covered thereby and shall contain the following information:
1. Each employee's full name and an individually identifying number, (e.g. the last four digits of the employee's social security number) of each such employee.
 2. The ethnicity and gender of each employee.
 3. Each employee's correct classification (s) of work actually performed.
 4. Entries indicating each employee's basis hourly wage rate(s) and, where applicable, the overtime hourly wage rate(s). Any rates of contributions for fringe benefits paid to approved plans, funds or programs on behalf of the employee must be indicated. Any fringe benefits paid to the employee in cash must be indicated.
 5. Each employee's daily and weekly hours worked in each classification, including actual overtime hours worked (not adjusted).
 6. Each employee's gross wage.
 7. The itemized deductions made.
 8. The net wages paid.
- B. Statement of Wages.** Each Contractor or subcontractor shall furnish a statement each week to the RE with respect to the wages paid each of its employees engaged in contract work covered by the Copeland Act, as amended during the preceding weekly payroll period. The statement shall be executed by the Contractor or subcontractor or by an authorized officer or employee of the Contractor or subcontractors who supervises the payment of wages. Contractors and subcontractors must use the certification set forth on the Department's CR-347, or any form with identical wording. Each payroll submitted must be accompanied by a signed "Statement of Compliance".
- C. Maintaining Records.** Contractor and subcontractors shall maintain payroll records for a period of three (3) years after all work on the Contract is completed. Contractor and subcontractor shall maintain complete payroll records to include: name, social security numbers, last known address, telephone number and e-mail address for each employee. Government agencies are entitled to request or review all relevant payroll information, including social security numbers and addresses of employees. Contractors and subcontractors are required to provide such information upon request.
- D. Lack of Compliance.** Failure of the Contractor or subcontractor to comply with the payroll requirements may result in payment being delayed or withheld as specified in Section 105, default as specified in Section 108 or termination of the Contract as specified in Section 108.
- E. Diane B. Allen Equal Pay Act, N.J.S.A. 34:11-56.14b**

For Local Aid projects.

This requirement **DOES NOT** apply to employers who are contracting with local governments (for example: municipalities and counties).

FEDERAL AID PROJECT ATTACHMENT 8

FHWA-1273

REQUIRED CONTRACT PROVISIONS

FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants /

Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:

The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

(1) Withholding monthly progress payments;

(2) Assessing sanctions;

(3) Liquidated damages; and/or

(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendix A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA- 1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act ([29 CFR part 3](#))), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. Conformance. (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. Fringe benefits not expressed as an hourly rate.

Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. Unfunded plans. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. Interest. In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. Withholding requirements. The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. Priority to withheld funds. The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

3. Records and certified payrolls (29 CFR 5.5)

a. Basic record requirements (1) Length of record retention. All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) Information required. Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) Additional records relating to fringe benefits. Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) Additional records relating to apprenticeship. Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. Certified payroll requirements (1) Frequency and method of submission. The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) Information required. The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHDLegacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) Statement of Compliance. Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in [29 CFR part 3](#); and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) Use of Optional Form WH-347. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access (1) Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices (1) Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;

- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2

CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

- a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

- b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

- a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

- c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

- e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

- i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

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

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

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

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY
SYSTEM OR APPALACHIAN LOCAL ACCESS**

ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

FEDERAL AID ATTACHMENT 9

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FEDERAL AID ATTACHMENT 10

FEDERAL MANDATORY EQUAL OPPORTUNITY LANGUAGE ON FEDERAL AID PROJECTS

(AUTHORITY SUBJECT TO 41 CFR 60-1.4 IN COMPLIANCE WITH 2 CFR PART 200 AND 2 CFR PART 200 APPENDIX II)

All Contractors regardless of the value of the contract shall have this mandatory clause with their subcontractors:

The Contractor/Subcontractor hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:

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

- (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

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

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

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

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

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

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

FEDERAL AID ATTACHMENT 11

BYRD ANTI-LOBBYING CERTIFICATION

Pursuant to 31 USC 1352 and 49 CFR part 21, Contractor and all subcontractors are required to comply with this Attachment. Contractor and all subcontractors shall be responsible to fill out Disclosure of Lobbying Activities Standard Form – LLL (as contained in this Attachment) and report it to the NJDOT Contract Compliance Unit for appropriate disclosure to the Federal Government.

All Contracts and subcontracts over \$100,000 shall require the following mandatory language in every contract:

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

1. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, or any employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Disclosure of Lobbying Activities Standard Form – LLL (Federal Aid Attachment Form 11) in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

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

APPENDIX B TO PART 21—DISCLOSURE FORM TO REPORT LOBBYING DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB
0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action: ☐ a. contract ☐ b. grant ☐ c. cooperative agreement ☐ d. loan ☐ e. loan guarantee ☐ f. loan insurance		2. Status of Federal Action: ☐ a. bid/offer/application ☐ b. initial award ☐ c. post-award		3. Report Type: ☐ a. initial filing ☐ b. material change For Material Change Only: year _____ quarter _____ date of last report _____	
4. Name and Address of Reporting Entity: ☐ Prime ☐ Subawardee Tier _____, if known: Congressional District, if known: _____			5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime: Congressional District, if known: _____		
6. Federal Department/Agency:			7. Federal Program Name/Description: CFDA Number, if applicable: _____		
8. Federal Action Number, if known:			9. Award Amount, if known: \$ _____		
10. a. Name and Address of Lobbying Entity (if individual, last name, first name, MI): (attach Continuation Sheet(s) SF-LLL-A, if necessary)			b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI): (attach Continuation Sheet(s) SF-LLL-A, if necessary)		
11. Amount of Payment (check all that apply): \$ _____ ☐ actual ☐ planned			13. Type of Payment (check all that apply): ☐ a. retainer ☐ b. one-time fee ☐ c. commission ☐ d. contingent fee ☐ e. deferred ☐ f. other; specify: _____		
12. Form of Payment (check all that apply): ☐ a. cash ☐ b. in-kind; specify: nature _____ value _____					
14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment Indicated in Item 11: (attach Continuation Sheet(s) SF-LLL-A, if necessary)					
15. Continuation Sheet(s) SF-LLL-A attached: ☐ Yes ☐ No					
16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.			Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____		
Federal Use Only:			Authorized for Local Reproduction Standard Form - LLL		

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

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

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.
(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.
15. Check whether or not a SF-LLL-A Continuation Sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

**DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET**

Approved by OMB
0348-0046

Reporting Entity: _____ Page _____ of _____

APPENDIX A

EASEMENT DOCUMENTS

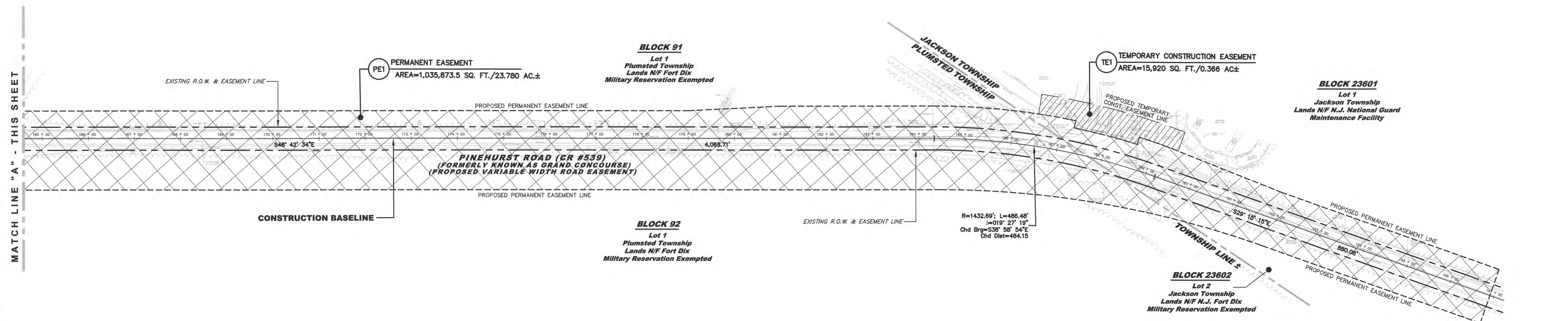
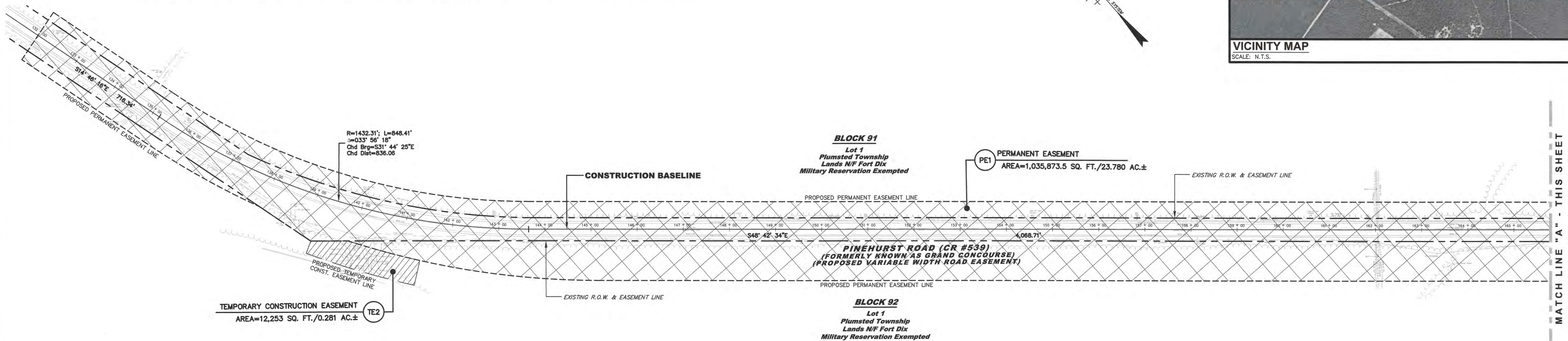
NOTES:

- COORDINATES SHOWN HEREON ARE NEW JERSEY STATE PLANE COORDINATE SYSTEM, NAD83 "LOCALIZED" GROUND COORDINATES, CENTERED ON A BASE POINT HAVING "GRID" AND "GROUND" COORDINATE VALUES OF NORTH 428928.745 AND EAST 511097.692. TO CONVERT FROM "LOCALIZED" GROUND COORDINATES TO NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD83 "GRID" COORDINATES, ADD A HORIZONTAL SHIFT DISTANCE OF 44.158 TO THE "LOCALIZED" NORTH COORDINATE VALUE, THEN MULTIPLY THAT SUM BY THE AVERAGE COMBINED SCALE FACTOR OF 0.999897061, AND ADD A HORIZONTAL SHIFT DISTANCE OF 52.6173 TO THE "LOCALIZED" EAST COORDINATE VALUE, THEN MULTIPLY THAT SUM BY THE AVERAGE COMBINED SCALE FACTOR OF 0.999897061.
- ELEVATIONS ARE BASED ON NAVD 1988 AND WERE ESTABLISHED BY ARH ASSOCIATES USING GPS AND A HIGH ORDER LEVEL OVER THE GPS POINTS.
- HORIZONTAL DATUM (NAD 1983) AND VERTICAL DATUM (NAVD 1988) WERE DERIVED FROM A VIRTUAL REFERENCE STATION (VRS) NETWORK (KEYNET GPS) SURVEY BY ARH ASSOCIATES USING TRIMBLE'S VRS NET APP SOFTWARE.
- TOPOGRAPHIC FEATURES SHOWN HEREON IS BASED ON TOPOGRAPHIC INFORMATION OBTAINED IN THE FIELD BY ARH ASSOCIATES IN APRIL 2024, AS SUPPLEMENTED BY ADDITIONAL TOPOGRAPHIC OBTAINED IN THE FIELD BY FRENCH & PARRELLO ASSOCIATES IN FEBRUARY, 2025
- ANY UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON ABOVE GROUND OBSERVATIONS, UTILITY MARKING FOUND IN THE FIELD AND/OR INFORMATION SUPPLIED BY THE UTILITY COMPANIES. SINCE NO PHYSICAL LOCATION OF THE UNDERGROUND FACILITIES HAVE BEEN MADE BY THE UNDERSIGNED, NO GUARANTEE IS BEING MADE FOR THEIR COMPLETENESS OR ACCURACY.
- THE UNDERSIGNED PROFESSIONAL IS NOT QUALIFIED TO MAKE ANY DETERMINATION AS TO THE EXISTENCE OR NON-EXISTENCE OF WETLANDS AND/OR HAZARDOUS MATERIALS. THEREFORE, NO STATEMENT IS BEING MADE OR IMPLIED HEREON, NOR SHOULD IT BE ASSUMED OR CONSTRUED THAT ANY STATEMENT IS BEING MADE BY THE FACT THAT NO EVIDENCE OF WETLANDS AND/OR HAZARDOUS MATERIALS IS PORTRAYED HEREON. THE CLIENT SHOULD PURSUE THESE MATTERS SEPARATE AND APART FROM THIS SURVEY.
- THIS PLAN WAS PREPARED IN UNITS OF US SURVEY FEET.
- IF THIS DOCUMENT DOES NOT CONTAIN THE RAISED SEAL OF THE UNDERSIGNED PROFESSIONAL, IT IS NOT A VALID COPY OF THE SURVEY AND NO LIABILITY IS ASSUMED FOR THE INFORMATION SHOWN HEREON.
- THIS SURVEY AND THE INFORMATION SHOWN HEREON IS PRIVILEGED AND HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF OCEAN COUNTY FOR EASEMENT ACQUISITION PURPOSES ONLY. THIS SURVEY AND THE INFORMATION CONTAINED HEREON CANNOT BE USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN PERMISSION OF THE UNDERSIGNED PROFESSIONAL.

REFERENCES:

- BASELINE, TOPOGRAPHIC, AND EXISTING BOUNDARY INFORMATION SHOWN HEREON IS BASED ON ELECTRONIC MICROSTATION DRAWING FILES PROVIDED BY MOTT MACDONALD IN AN EMAIL TO FRENCH & PARRELLO ASSOCIATES DATED JUNE 4, 2025.
- PLAN ENTITLED, "SURVEY PLANS FOR PINEHURST ROAD (COUNTY ROUTE 539), TOWNSHIPS OF PLUMSTED & JACKSON, OCEAN COUNTY, NEW JERSEY", 23 SHEETS PREPARED BY ARH ASSOCIATES, DATED JANUARY 27, 2025, REVISED FEBRUARY 10, 2025, FILE NO. 24-001-0414.

VICINITY MAP
SCALE: N.T.S.



PARCELS ACQUISITION SUMMARY TABLE			
PARCEL No.	EASEMENT TYPE	AREA (S.F)	AREA (Ac.)
PE1	PERMANENT EASEMENT	1,035,873.5 ±	23.780 ±
TE2	TEMPORARY EASEMENT	12,253 ±	0.281 ±
TE1	TEMPORARY EASEMENT	15,920 ±	0.366 ±

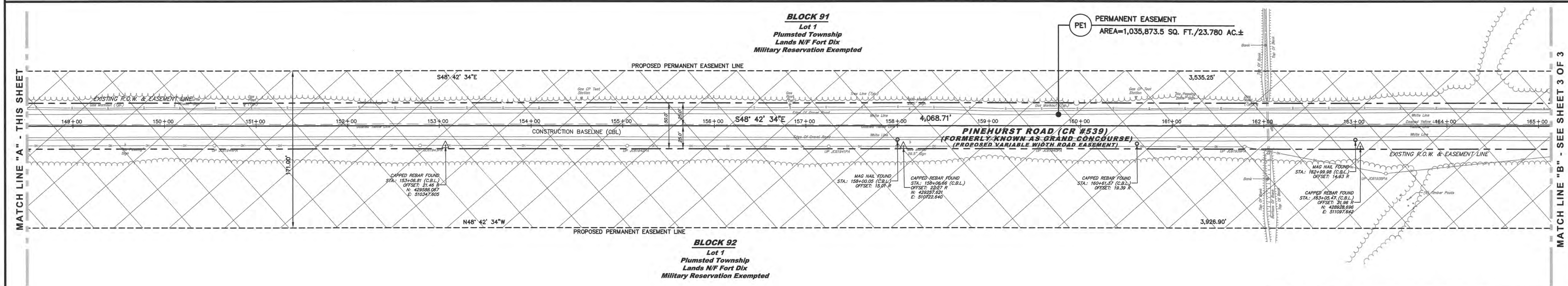
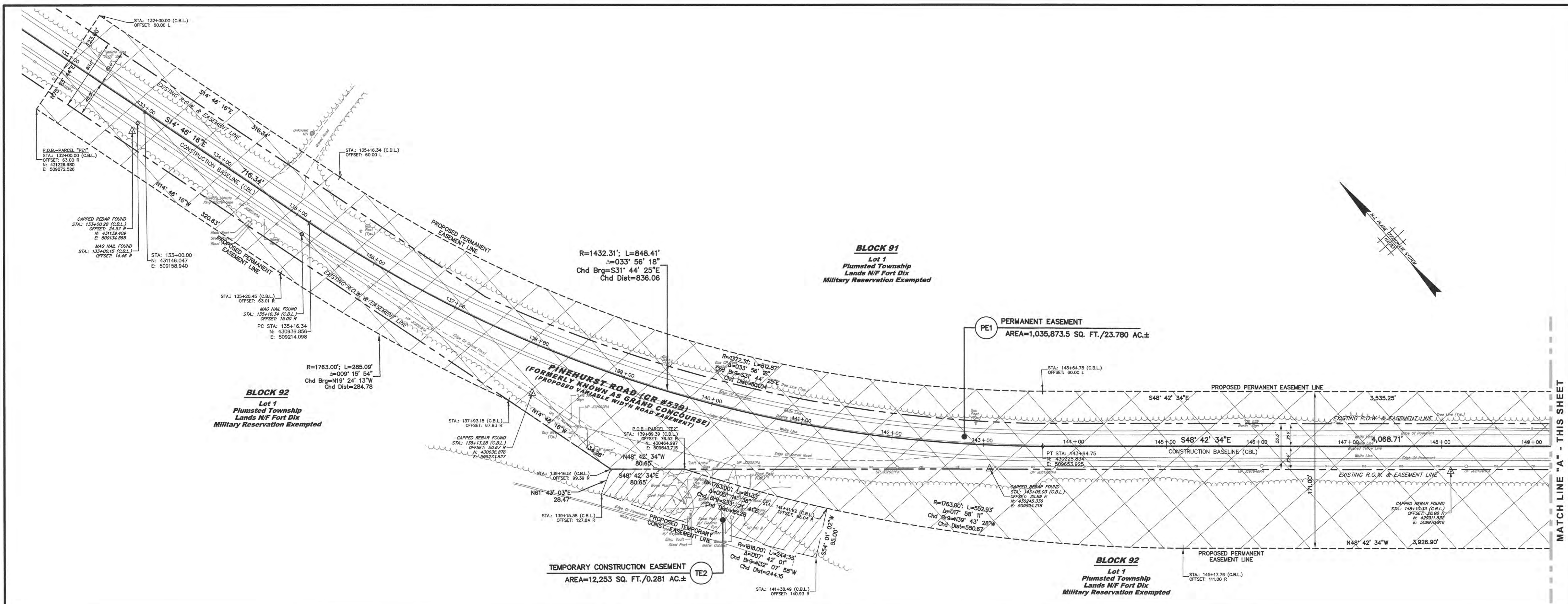
LEGEND:	
	PERMANENT EASEMENT
	TEMPORARY CONSTRUCTION EASEMENT

SCALE: 1" = 100'
SCALE IN FEET



02-02-2026 DATE		MODIFY PROPOSED PERMANENT EASEMENT LIMITS TO INCLUDE EXISTING C.R. 539 EASEMENT REVISIONS		BY	CHK		
EASEMENT ACQUISITION PLAN FOR COUNTY ROUTE NO. 539 (WHITING-NEW EGYPT ROAD OVER RIDGE WAY) SITUATED IN THE TOWNSHIP OF PLUMSTED & TOWNSHIP OF JACKSON OCEAN COUNTY, NEW JERSEY							
GENERAL PROPERTY PARCEL MAP							
FILE NO.:	DATE:	DESIGNED:	CHECKED:				
	03-10-2026		J.C.L.				
SCALE:	1" = 100'	DRAWN:	APPROVED:				
		D.S.B.	T.J.E.				
FILE NO.:	24 - 001 - 0415			SHEET 1 OF 3			

THE USE OF THIS SURVEY IN ITS PRESENT FORMAT IS SUBJECT TO THE STATE BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS ADMINISTRATIVE RULES AND REGULATIONS TITLE 13 CHAPTER 40 SUBCHAPTER 8 SECTION 13-40-8.2(a) "NO PERSON SHALL REMOVE A TITLE BLOCK FROM ANY MANUALLY DRAFTED OR DIGITAL DRAWING, OR FROM ANY PRINT OR REPRODUCTION FOR ANY REASON" AND SECTION 13-40-8.3(b) "THE TITLE BLOCK SHALL CONTAIN THE SIGNATURE OF THE PERSON(S) IN RESPONSIBLE CHARGE AND THE DATE WHEN SIGNED".



02-02-2026
DATE

MODIFY PROPOSED PERMANENT EASEMENT LIMITS TO INCLUDE EXISTING C.R. 539 EASEMENT
REVISIONS

BT

CJK

50' 0 50' 100'
SCALE: 1" = 50'
SCALE IN FEET

FPA
FRENCH & PARRELLO
ASSOCIATES
New Jersey • New York • Pennsylvania • Georgia

Corporate Office:
1800 RI 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com

THOMAS KERTLE, PLS
PROFESSIONAL LAND SURVEYOR, NJ LIC. No. 24G803583400

MARK F. JEHNKE
COUNTY ENGINEER
N.J. Professional Engineer
License No. 24GE04670300

EASEMENT ACQUISITION PLAN FOR
COUNTY ROUTE NO. 539
(WHITING-NEW EGYPT ROAD OVER RIDGE WAY)
SITUATED IN THE
TOWNSHIP OF PLUMSTED &
OCEAN COUNTY, NEW JERSEY

GENERAL PROPERTY PARCEL MAP

FILED BY:	DATE:	DESIGNED:	CHECKED:
	03-10-2026		J.C.L.
SCALE:	DRAWN:	APPROVED:	
1" = 50'	D.S.B.	T.J.E.	

FILE NO.: 24 - 001 - 0415

SHEET 2 OF 3

**DESCRIPTION OF A PERMANENT EASEMENT,
TO BE ACQUIRED BY THE COUNTY OF OCEAN,
LOCATED WITHIN THE TOWNSHIP OF PLUMSTED
& THE TOWNSHIP OF JACKSON,
OCEAN COUNTY, NEW JERSEY**

All that certain lot, tract or parcel of land and premises, situate, lying and being in the Township of Plumsted and the Township of Jackson, County of Ocean, State of New Jersey, and being more particularly described as follows:

PARCEL PE1

BEGINNING at a point located on the westerly side of Pinehurst Road, also known as County Route No. 539, said point having coordinates of North 431226.680 and East 509072.526, and said point also being located at a distance of 63.00 feet right as measured at right angles to the Pinehurst Road construction baseline Station 132+00.00, as shown on a plan entitled, "GENERAL PROPERTY PARCEL MAP, EASEMENT ACQUISITION PLAN FOR COUNTY ROUTE NO. 539 (WHITING-NEW EGYPT ROAD OVER RIDGE WAY) SITUATED IN THE TOWNSHIP OF PLUMSTED & TOWNSHIP OF JACKSON, OCEAN COUNTY, NEW JERSEY", which map was prepared by French & Parrello Associates, dated June 2025, revised February 2, 2026, and from said point of beginning running thence;

1. North 75° 13' 44" East, a distance of 123.00 feet running through Pinehurst Road to a point located on the easterly side of said road, said point being located at a distance of 60.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 132+00.00, thence;
2. South 14° 46' 16" East, a distance of 316.34 feet to a point of curvature, said point being located at a distance of 60.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 135+16.34, thence;
3. Along a curve bearing to the left, having a radius of 1372.31 feet, an arc length of 812.87 feet, a central angle 033° 56' 18", a chord bearing of South 31° 44' 25" East, and a chord distance of 801.04 feet to a point of tangent, said point being located at a distance of 60.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 143+64.75, thence;
4. South 48° 42' 34" East, a distance of 3,535.25 feet to a point, said point being located at a distance of 60.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 179+00.00, thence;
5. South 51° 34' 19" East, a distance of 200.25 feet to a point, said point being located at a distance of 70.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 181+00.00, thence;



6. South $48^{\circ} 42' 34''$ East, a distance of 333.46 feet to a point of curvature, said point being located at a distance of 70.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 184+33.46, thence;
7. Along a curve bearing to the right, having a radius of 1502.69 feet, an arc length of 308.70 feet, a central angle $011^{\circ} 46' 13''$, a chord bearing of South $42^{\circ} 49' 28''$ East, and a chord distance of 308.15 feet to a point of non-tangent, said point being located at a distance of 70.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 187+27.77, thence;
8. South $53^{\circ} 03' 39''$ West, a distance of 16.00 feet to a point on a curve concentric to the preceding curve, said point being located at a distance of 54.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 187+27.77, thence;
9. Along a curve bearing to the right, having a radius of 1486.69 feet, an arc length of 140.82 feet, a central angle $005^{\circ} 25' 38''$, a chord bearing of South $34^{\circ} 13' 32''$ East, and a chord distance of 140.77 feet to a point, said point being located at a distance of 54.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 188+63.48, thence;
10. North $58^{\circ} 29' 17''$ East, a distance of 16.00 feet to a point on a curve concentric to the preceding curve, said point being located at a distance of 70.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 188+63.48, thence;
11. Along a curve bearing to the right, having a radius of 1502.69 feet, an arc length of 59.22 feet, a central angle $002^{\circ} 15' 28''$, a chord bearing of South $30^{\circ} 22' 59''$ East, and a chord distance of 59.21 feet to a point of non-tangent, said point being located at a distance of 70.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 189+19.94, thence;
12. South $27^{\circ} 07' 25''$ East, a distance of 268.98 feet to a point, said point being located at a distance of 60.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 191+88.74, thence;
13. South $29^{\circ} 15' 15''$ East, a distance of 502.05 feet to a point, said point being located at a distance of 60.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 196+90.79, thence;
14. South $60^{\circ} 44' 45''$ West, a distance of 123.00 feet running through Pinehurst Road to a point located on the westerly side of said road, said point being located at a distance of 63.00 feet right as measured at right angles to Pinehurst Road construction baseline Station 196+90.79, thence;
15. North $29^{\circ} 15' 15''$ West, a distance of 502.05 feet to a point of curvature, said point being located at a distance of 63.00 feet right as measured at right angles to Pinehurst Road construction baseline Station 191+88.74, thence;

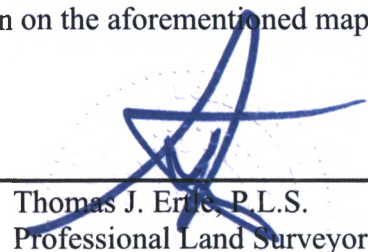


16. Along a curve bearing to the left, having a radius of 2097.00 feet, an arc length of 712.05 feet, a central angle $019^{\circ} 27' 19''$, a chord bearing of North $38^{\circ} 58' 54''$ West, and a chord distance of 708.64 feet to a point, said point being located at a distance of 110.95 feet right as measured at right angles to Pinehurst Road construction baseline Station 184+45.60, thence;
17. North $48^{\circ} 42' 34''$ West, a distance of 3,926.90 feet to a point of curvature, said point being located at a distance of 111.00 feet right as measured at right angles to Pinehurst Road construction baseline Station 145+17.76, thence;
18. Along a curve bearing to the right, said curve having a radius of 1763.00 feet, an arc length of 552.93 feet, a central angle $017^{\circ} 58' 11''$, a chord bearing of North $39^{\circ} 43' 28''$ West, and a chord distance of 550.67 feet to a point of non-tangent, said point being located at a distance of 76.52 feet right as measured at right angles to Pinehurst Road construction baseline Station 139+89.39, thence;
19. North $48^{\circ} 42' 34''$ West, a distance of 80.65 feet to a point, said point being located at a distance of 99.39 feet right as measured at right angles to Pinehurst Road construction baseline Station 139+16.51, thence;
20. North $14^{\circ} 46' 16''$ West, a distance of 134.26 feet to a point on curve, said point being located at a distance of 67.93 feet right as measured at right angles to Pinehurst Road construction baseline Station 137+93.15, thence;
21. Along a curve bearing to the right, having a radius of 1763.00 feet, an arc length of 285.09 feet, a central angle $009^{\circ} 15' 54''$, a chord bearing of North $19^{\circ} 24' 13''$ West, and a chord distance of 284.78 feet to a point of tangent, said point being located at a distance of 63.01 feet right as measured at right angles to Pinehurst Road construction baseline Station 135+20.45, thence;
22. North $14^{\circ} 46' 16''$ West, a distance of 320.63 feet to the point and place of **BEGINNING**.

Parcel PE1 containing 1,035,873.5 square feet or 23.780 acres, more or less.

Subject To any recorded or unrecorded easement, restrictions, and covenants.

Being intended to describe Permanent Easement PE1, as shown on the aforementioned map.



Thomas J. Erle, P.L.S.
Professional Land Surveyor
N.J. License No. 24GS03583400

**DESCRIPTION OF A TEMPORARY CONSTRUCTION EASEMENT
TO BE ACQUIRED BY THE COUNTY OF OCEAN
LOCATED IN THE TOWNSHIP OF JACKSON,
OCEAN COUNTY, NEW JERSEY**

All that certain lot, tract or parcel of land and premises, situate, lying and being in the Township of Jackson, County of Ocean, State of New Jersey, and being more particularly described as follows:

PARCEL TE1

BEGINNING at a point in a proposed permanent easement line for Pinehurst Road, also known as County Route No. 539, said point having coordinates of North 427431.406 and East 512915.932, said point also being located at a distance of 70.00 feet left as measured at right angles to the Pinehurst Road construction baseline Station 186+50.00, as shown on a plan entitled, "GENERAL PROPERTY PARCEL MAP, EASEMENT ACQUISITION PLAN FOR COUNTY ROUTE NO. 539 (WHITING-NEW EGYPT ROAD OVER RIDGE WAY) SITUATED IN THE TOWNSHIP OF PLUMSTED & TOWNSHIP OF JACKSON, OCEAN COUNTY, NEW JERSEY", prepared by French & Parrello Associates, dated June 2025, revised February 2, 2026, and from said point of beginning running thence;

1. North 49° 57' 02" East, a distance of 43.00 feet to a point of non-tangent curvature, said point being located at a distance of 113.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 186+50.00, thence;
2. Along a curve bearing to the right, having a radius of 1545.69 feet, an arc length of 321.29 feet, a central angle 011° 54' 35", a chord bearing of South 34° 05' 41" East, and a chord distance of 320.71 feet to a point, said point being located at a distance of 112.71 feet left as measured at right angles to Pinehurst Road construction baseline Station 189+50.00, thence;
3. South 60° 44' 45" West, a distance of 43.83 feet to a point in a proposed permanent easement line, said point being located at a distance of 68.88 feet left as measured at right angles to Pinehurst Road construction baseline Station 189+50.00, thence;

Running along said proposed permanent easement line the following six (6) courses:

4. North 27° 07' 25" West, a distance of 30.08 feet to a point of non-tangent curvature, said point being located at a distance of 70.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 189+19.94, thence;
5. Along a curve bearing to the left being parallel with the preceding second course, said curve having a radius of 1502.69 feet, an arc length of 59.22 feet, a central angle 002° 15' 28", a chord bearing of North 30° 22' 59" West, and a chord distance of 59.21 feet to a point, said point being located at a distance of 70.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 188+63.48, thence;

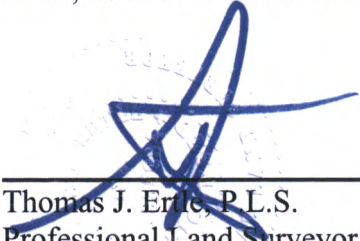


6. South $58^{\circ} 29' 17''$ West, a distance of 16.00 feet to a point on a curve, said point being located at a distance of 54.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 188+63.48, thence;
7. Along a curve bearing to the left being parallel with the preceding second course, said curve having a radius of 1486.69 feet, an arc length of 140.82 feet, a central angle $005^{\circ} 25' 38''$, a chord bearing of North $34^{\circ} 13' 32''$ West, and a chord distance of 140.77 feet to a point, said point being located at a distance of 54.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 187+27.77, thence;
8. North $53^{\circ} 03' 39''$ East, a distance of 16.00 feet to a point on a curve, said point being located at a distance of 70.00 feet left as measured at right angles to Pinehurst Road construction baseline Station 187+27.77, thence;
9. Along a curve bearing to the left being parallel with the preceding second course, said curve having a radius of 1502.69 feet, an arc length of 81.57 feet, a central angle $003^{\circ} 06' 37''$, a chord bearing of North $38^{\circ} 29' 40''$ West, and a chord distance of 81.56 feet to the point and place of **BEGINNING**.

Parcel TE1 containing 15,920 square feet or 0.365 acres, more or less.

Subject To any recorded or unrecorded easement, restrictions, and covenants.

Being intended to describe Temporary Construction Easement TE1, as shown on the aforementioned map.



Thomas J. Erie, P.L.S.
Professional Land Surveyor
N.J. License No. 24GS03583400

**DESCRIPTION OF A TEMPORARY CONSTRUCTION EASEMENT
TO BE ACQUIRED BY THE COUNTY OF OCEAN
LOCATED IN THE TOWNSHIP OF PLUMSTED,
OCEAN COUNTY, NEW JERSEY**

All the certain lot, tract or parcel of land and premises, situate, lying and being in the Township of Plumsted, County of Ocean, State of New Jersey, and being more particularly described as follows:

PARCEL TE2

BEGINNING at a point of intersection formed by the existing southwesterly right of way and easement line of Pinehurst Road, also known as County Route No. 539, and a proposed permanent easement line for Pinehurst Road, said point having coordinates of North 430464.997 and East 509343.715, said point also being located at a distance of 76.52 feet right as measured at right angles to the Pinehurst Road construction baseline Station 139+89.39, as shown on a plan entitled, "GENERAL PROPERTY PARCEL MAP, EASEMENT ACQUISITION PLAN FOR COUNTY ROUTE NO. 539 (WHITING-NEW EGYPT ROAD OVER RIDGE WAY) SITUATED IN THE TOWNSHIP OF PLUMSTED & TOWNSHIP OF JACKSON, OCEAN COUNTY, NEW JERSEY", prepared by French & Parrello Associates, dated June 2025, revised February 2, 2026, and from said point of beginning running thence;

1. Along a proposed permanent easement and a curve bearing to the left, said curve having a radius of 1763.00 feet, an arc length of 161.33 feet, a central angle 005° 14' 36", a chord bearing of South 33° 21' 41" East, and a chord distance of 161.28 feet to a point, said point being located at a distance of 86.04 feet right as measured at right angles to Pinehurst Road construction baseline Station 141+41.82, thence;
2. South 54° 01' 02" West, a distance of 55.00 feet to a point on a curve, said point being located at a distance of 140.93 feet right as measured at right angles to Pinehurst Road construction baseline Station 141+38.49, thence;
3. Along a curve bearing to the right being parallel with the preceding first course, said curve having a radius of 1818.00 feet, an arc length of 244.33 feet, a central angle 007° 42' 01", a chord bearing of North 32° 07' 58" West, and a chord distance of 244.15 feet to a point of non-tangent, said point being located at a distance of 127.84 feet right as measured at right angles to Pinehurst Road construction baseline Station 139+15.38, thence;
4. North 61° 43' 03" East, a distance of 28.47 feet to an angle point in the existing southwesterly right of way and easement line of Pinehurst Road, said point being located at a distance of 99.39 feet right as measured at right angles to Pinehurst Road construction baseline Station 139+16.51, thence;



5. South $48^{\circ} 42' 34''$ East, a distance of 80.65 feet along the existing southwesterly right of way and easement line of Pinehurst Road to the point and place of **BEGINNING**.

Parcel TE2 containing 12,253 square feet or 0.281 acres, more or less.

Subject To any recorded or unrecorded easement, restrictions, and covenants.

Being intended to describe Temporary Construction Easement TE2, as shown on the aforementioned map.

A handwritten signature in blue ink, appearing to read 'Thomas J. Ertle', is written over a horizontal line.

Thomas J. Ertle, P.L.S.
Professional Land Surveyor
N.J. License No. 24GS03583400

APPENDIX B
GEOTECHNICAL BORINGS AND
LABORATORY TESTING



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MCGUIRE-DIX-LAKEHURST (STRUCTURE #1523-031)
PLUMSTED TOWNSHIP, OCEAN COUNTY, NEW JERSEY
(FPA PROJECT NO. 1468.109)

BORING NO.: B-1
SHEET 1 OF 3

DATE STARTED: 3/26/2024
DATE FINISHED: 3/26/2024

DEPTH OF WATER: 55'±
LOCATION: See Plan

GROUND ELEVATION: 178.2 ±
GROUND WATER ELEV.: N/A
NORTHING: 428899.8
EASTING: 511129.1

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	STRATA	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	X - 21 - 12 - 12		S-1 TOP 4": Asphalt . BOT 20": Brown c ⁺ mf SAND , some ⁻ m ⁺ f Gravel, little ⁻ Silt.
	S-2 2-4'	10 - 8 - 9 - 10		S-2 Brown & Orange-Brown cmf SAND , little ⁺ mf ⁺ Gravel, little Silt.
	S-3 4-6'	24 - 12 - 15 - 16		S-3 Tan cmf SAND , little ⁺ f Gravel, little Silt.
	S-4 6-8'	30 - 37 - 50 - 45		S-4 Tan & Orange-Brown cmf SAND , some ⁺ mf ⁺ Gravel, little ⁺ Silt.
	S-5 8-10'	46 - 40 - 48 - 75		S-5 Same as S-4.
--- 10' ---	S-6 10-12'	20 - 24 - 23 - 25		S-6 Tan Brown cmf SAND , and mf ⁺ Gravel, little ⁻ Silt.
--- 15' ---	S-7 15-17'	12 - 17 - 17 - 19		S-7 Tan & Orange-Brown cm ⁺ f SAND , trace Silt.
	S-8 20-22'	15 - 14 - 17 - 12		S-8 Light Tan cmf SAND , little Clayey Silt.
--- 20' ---	S-9 25-27'	6 - 7 - 6 - 7		S-9 Light Grey CLAY , little ⁺ mf ⁺ Sand varved w/ many layers of f sand. (<i>moist</i>)
--- 25' ---	S-10 30-32'	10 - 12 - 14 - 18		S-10 Light Grey mf SAND , little Silt. (<i>dry</i>)
--- 30' ---	S-11 35-37'	12 - 15 - 17 - 17		S-11 Same as S-10. (<i>moist</i>)

SOILS ENGINEER: J. TIERNEY, PE

DRILLING INSPECTOR: M. MILGROM

CONTRACTOR: CRAIG TEST BORING

DRILLER: K. PARENT

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MCGUIRE-DIX-LAKEHURST (STRUCTURE #1523-031)
PLUMSTED TOWNSHIP, OCEAN COUNTY, NEW JERSEY
(FPA PROJECT NO. 1468.109)

BORING NO.: B-1
SHEET 2 OF 3

DATE STARTED: 3/26/2024

DEPTH OF WATER: 55'±

GROUND ELEVATION: 178.2 ±

DATE FINISHED: 3/26/2024

LOCATION: See Plan

GROUND WATER ELEV.: N/A

DRILLING TECHNIQUE: Mud Rotary

NORTHING: 428899.8

HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

EASTING: 511129.1

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	STRATA	DESCRIPTION OF SOIL
--- 40' ---	S-12 40-42'	15 – 20 – 20 – 22		S-12 Light Grey m+f SAND , little Silt.
---45'---	S-13 45-47'	34 – 31 – 26 – 38		S-13 Brown m+f SAND , little Silt. (<i>dry</i>)
---50'---	S-14 50-52'	30 – 31 – 39 – 36		S-14 Brown c+mf SAND , little Silt. (<i>moist</i>)
---55'---	S-15 55-57'	23 – 24 – 14 – 16		S-15 Brown m+f SAND , little Silt. (<i>wet</i>)
---60'---	S-16 60-62'	12 – 11 – 14 – 18		S-16 Tan mf SAND , little Silt.
---65'---	S-17 65-67'	15 – 15 – 18 – 18		S-17 Same as S-16 .
---70'---	S-18 70-72'	25 – 22 – 20 – 31		S-18 Light Brown & Light Red-Brown c+mf SAND , little Silt.
---75'---	S-19 75-77'	18 – 24 – 32 – 32		S-19 Light Tan mf+ SAND , little Silt.

SOILS ENGINEER: J. TIERNEY, PE

DRILLING INSPECTOR: M. MILGROM

CONTRACTOR: CRAIG TEST BORING

DRILLER: K. PARENT

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MCGUIRE-DIX-LAKEHURST (STRUCTURE #1523-031)
PLUMSTED TOWNSHIP, OCEAN COUNTY, NEW JERSEY
(FPA PROJECT NO. 1468.109)

BORING NO.: B-1
SHEET 3 OF 3

DATE STARTED: 3/26/2024
DATE FINISHED: 3/26/2024

DEPTH OF WATER: 55'±
LOCATION: See Plan

GROUND ELEVATION: 178.2 ±
GROUND WATER ELEV.: N/A
NORTHING: 428899.8
EASTING: 511129.1

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	STRATA	DESCRIPTION OF SOIL
--- 80' ---	S-20 80-82'	7 – 5 – 6 – 8		S-20 Grey & Brown mf+ SAND , some Silt. (micaceous)
--- 85' ---	S-21 85-87'	16 – 20 – 18 – 24		S-21 Tan cm+f SAND , little Silt.
--- 90' ---	S-22 90-92'	43 – 67 – 50/3" – X		S-22 Tan c+mf SAND , little Silt.
--- 95' ---	S-23 95-97'	18 – 24 – 19 – 18		S-23 Brown mf SAND , little+ Silt.
-- 100' --	S-24 100-102'	20 – 14 – 16 – 15		S-24 Tan c+mf SAND , little+ Clayey Silt.
-- 105' --				END OF BORING @ 102'
-- 110' --				
-- 115' --				

SOILS ENGINEER: J. TIERNEY, PE

DRILLING INSPECTOR: M. MILGROM

CONTRACTOR: CRAIG TEST BORING

DRILLER: K. PARENT

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MCGUIRE-DIX-LAKEHURST (STRUCTURE #1523-031)
PLUMSTED TOWNSHIP, OCEAN COUNTY, NEW JERSEY
(FPA PROJECT NO. 1468.109)

BORING NO.: B-2
SHEET 1 OF 3

DATE STARTED: 3/27/2024
DATE FINISHED: 3/27/2024

DEPTH OF WATER: 52'±
LOCATION: See Plan

GROUND ELEVATION: 178.7 ±
GROUND WATER ELEV.: N/A
NORTHING: 428830.9
EASTING: 511204.8

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	STRATA	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	X - 36 - 19 - 21		S-1 TOP 6": Asphalt MID 6": Dark-Grey cm ⁺ f SAND , little Silt, trace mf Gravel. BOT 12": Brown & Tan cmf SAND , and mf ⁺ Gravel, trace ⁺ Silt.
	S-2 2-4'	14 - 12 - 11 - 12		S-2 Orange-Brown cm ⁺ f SAND , trace ⁺ Silt, trace ⁻ f Gravel.
	S-3 4-6'	11 - 10 - 13 - 19		S-3 Orange-Brown cm ⁺ f SAND , some ⁻ mf ⁺ Gravel, trace Silt.
	S-4 6-8'	27 - 23 - 26 - 26		S-4 Yellow-Brown & Tan c ⁺ m SAND , and ⁻ mf ⁺ Gravel, trace Silt.
	S-5 8-10'	33 - 25 - 28 - 35		S-5 Same as S-4 .
	S-6 10-12'	36 - 32 - 33 - 40		S-6 Same as S-4 .
--- 15' ---	S-7 15-17'	17 - 20 - 25 - 29		S-7 Grey & Tan c ⁺ mf SAND , trace ⁺ Silt, trace ⁻ f Gravel.
--- 20' ---	S-8 20-22'	12 - 16 - 17 - 14		S-8 Tan & Light Grey c ⁺ mf SAND , little Silt, trace f Gravel.
--- 25' ---	S-9 25-27'	13 - 18 - 21 - 19		S-9 Tan & Light Grey cm ⁺ f SAND , little ⁻ Clayey Silt, trace f Gravel.
--- 30' ---	S-10 30-32'	8 - 11 - 14 - 15		S-10 Light Tan cm ⁺ f SAND , little Silt, trace f Gravel.
--- 35' ---	S-11 35-37'	6 - 6 - 8 - 11		S-11 Light Grey & Yellow-Brown mf ⁺ SAND , little Clayey Silt.

SOILS ENGINEER: J. TIERNEY, PE

DRILLING INSPECTOR: S. SAINTILMA

CONTRACTOR: CRAIG TEST BORING

DRILLER: M. GORSKI

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MCGUIRE-DIX-LAKEHURST (STRUCTURE #1523-031)
PLUMSTED TOWNSHIP, OCEAN COUNTY, NEW JERSEY
(FPA PROJECT NO. 1468.109)

BORING NO.: B-2
SHEET 2 OF 3

DATE STARTED: 3/27/2024
DATE FINISHED: 3/27/2024

DEPTH OF WATER: 52'±
LOCATION: See Plan

GROUND ELEVATION: 178.7 ±
GROUND WATER ELEV.: N/A
NORTHING: 428830.9
EASTING: 511204.8

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	STRATA	DESCRIPTION OF SOIL
--- 40' ---	S-12 40-42'	11 – 17 – 23 – 24		S-12 TOP 10": Light Grey SILT & CLAY , little mf Sand. BOT 14": Yellow-Brown m+f SAND , little Silt.
---45'---	S-13 45-47'	13 – 18 – 21 – 24		S-13 Red-Brown mf+ SAND , little Silt.
---50'---	S-14 50-52'	16 – 46 – 80 – 96		S-14 Dark Red-Brown mf+ SAND , little Silt.
---55'---	S-15 55-57'	10 – 23 – 32 – 33		S-15 Tan-Brown m+f SAND , little Silt.
---60'---	S-16 60-62'	3 – 9 – 10 – 12		S-16 Tan-Brown mf+ SAND , trace Clayey Silt.
---65'---	S-17 65-67'	15 – 20 – 20 – 20		S-17 Tan mf+ SAND , little Silt.
---70'---	S-18 70-72'	12 – 17 – 25 – 35		S-18 Yellow-Brown cm+f SAND , little Silt.
---75'---	S-19 75-77'	20 – 25 – 26 – 24		S-19 TOP 12": Same as S-18 . BOT 12": Light Tan cm+f SAND , little Silt.

SOILS ENGINEER: J. TIERNEY, PE

DRILLING INSPECTOR: S. SAINTILMA

CONTRACTOR: CRAIG TEST BORING

DRILLER: M. GORSKI

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MCGUIRE-DIX-LAKEHURST (STRUCTURE #1523-031)
PLUMSTED TOWNSHIP, OCEAN COUNTY, NEW JERSEY
(FPA PROJECT NO. 1468.109)

BORING NO.: B-2
SHEET 3 OF 3

DATE STARTED: 3/27/2024
DATE FINISHED: 3/27/2024

DEPTH OF WATER: 52'±
LOCATION: See Plan

GROUND ELEVATION: 178.7 ±
GROUND WATER ELEV.: N/A
NORTHING: 428830.9
EASTING: 511204.8

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	STRATA	DESCRIPTION OF SOIL
--- 80' ---	S-20 80-82'	3 - 3 - 4 - 5		S-20 Tan mf+ SAND , some Clayey Silt.
--- 85' ---	S-21 85-87'	9 - 14 - 16 - 19		S-21 Yellow-Brown c+mf SAND , little Silt, trace f Gravel.
--- 90' ---	S-22 90-92'	11 - 21 - 48 - 64		S-22 Tan cm+f SAND , little Silt, trace f Gravel.
--- 95' ---	S-23 95-97'	39 - 24 - 19 - 16		S-23 Tan cm+f SAND , little Silt.
-- 100' --	S-24 100-102'	8 - 10 - 11 - 13		S-24 Yellow-Brown cmf+ SAND , little Silt, trace f Gravel.
-- 105' --				END OF BORING @ 102'
-- 110' --				
-- 115' --				

SOILS ENGINEER: J. TIERNEY, PE

DRILLING INSPECTOR: S. SAINTILMA

CONTRACTOR: CRAIG TEST BORING

DRILLER: M. GORSKI

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-3
SHEET: 1 OF 1

DATE STARTED: 3/31/2025
DATE FINISHED: 3/31/2025

DEPTH OF WATER: Dry
LOCATION: Sta. 153+69.24, Offset 60.24'R

GROUND ELEVATION: +180'±
GROUND WATER ELEV.: N/A
NORTHING: 429517.727
EASTING: 510368.92

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	WOH - 1 - WOH - 1	10	S-1 Dark Tan mf SAND , little Silt.
	S-2 2-4'	1 - WOH - 1 - 1	14	S-2 Tan cmf SAND , some mf Gravel, little Clayey Silt.
	S-3 4-6'	3 - 5 - 7 - 6	19	S-3 Yellow-Brown & Tan c+mf SAND , little Silt.
	S-4 6-8'	18 - 20 - 18 - 13	24	S-4 Tan cmf SAND , little Silt.
--- 10' ---	S-5 8-10'	18 - 20 - 20 - 18	20	S-5 Tan cmf SAND , trace Silt.
	S-6 10-12'	19 - 20 - 20 - 25	21	S-6 Light Tan c+mf SAND , trace Silt, trace f Gravel.
--- 15' ---	S-7 15-17'	21 - 20 - 22 - 34	18	S-7 Light Grey & Tan cmf SAND , little Silt.
--- 20' ---				END OF BORING @ 17'
--- 25' ---				
--- 30' ---				
--- 35' ---				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-4
SHEET: 1 OF 1

DATE STARTED: 3/31/2025
DATE FINISHED: 3/31/2025

DEPTH OF WATER: Dry
LOCATION: Sta. 154+76.63, Offset 74.09'R

GROUND ELEVATION: +180'±
GROUND WATER ELEV.: N/A
NORTHING: 429436.46
EASTING: 510440.47

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL	
--- 5' ---	S-1 0-2'	1 – WOH – 1 – 1	15	S-1	Dark Tan f SAND , little Silt.
	S-2 2-4'	1 – 1 – 2 – 4	12	S-2	Orange-Brown cmf SAND , some mf Gravel, trace+ Silt.
	S-3 4-6'	6 – 11 – 16 – 15	21	S-3	Tan & Light Orange-Brown mf+ GRAVEL , and c+mf Sand, trace Silt.
	S-4 6-8'	22 – 23 – 24 – 24	18	S-4	Orange-Brown cmf SAND , little f Gravel, trace Silt.
	S-5 8-10'	20 – 33 – 30 – 23	24	S-5	Tan cmf SAND , little f Gravel, trace Silt.
---10'---	S-6 10-12'	14 – 18 – 23 – 24	20	S-6	Tan & Grey cmf SAND , trace Silt.
---15'---	S-7 15-17'	13 – 18 – 25 – 22	16	S-7	Light Grey & Tan cmf SAND , trace Silt.
---20'---	S-8 20-22'	13 – 18 – 22 – 21	18	S-8	Light Tan cm+f SAND , trace+ Silt.
---25'---	S-9 25-27'	12 – 17 – 17 – 19	23	S-9	Yellow-Brown & Tan c+mf SAND , little Silt.
---30'---				END OF BORING @ 27'	
---35'---					
SOILS ENGINEER: J. TIERNEY, PE DRILLING INSPECTOR: E. HARM				CONTRACTOR: CRAIG TEST BORING DRILLER: L. ELLIS	
The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.					



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-5
SHEET: 1 OF 1

DATE STARTED: 3/31/2025
DATE FINISHED: 3/31/2025

DEPTH OF WATER: Dry
LOCATION: Sta. 155+83.70, Offset 64.61'R

GROUND ELEVATION: +179'±
GROUND WATER ELEV.: N/A
NORTHING: 429372.921
EASTING: 510527.175

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	WOH - 1 - WOH - 1	11	S-1 Tan mf SAND , little Silt, trace f Gravel.
	S-2 2-4'	1 - 1 - 1 - 3	14	S-2 Tan c'mf SAND , little f Gravel, little Silt.
	S-3 4-6'	9 - 6 - 5 - 9	20	S-3 Orange-Brown & Tan c'mf SAND , little f Gravel, little Silt.
	S-4 6-8'	10 - 20 - 25 - 18	18	S-4 Tan cmf SAND , little f Gravel, little Silt.
	S-5 8-10'	25 - 23 - 25 - 24	24	S-5 Tan cmf SAND , trace Silt, trace f Gravel.
	S-6 10-12'	14 - 18 - 23 - 16	24	S-6 Light Tan cmf SAND , little Silt.
--- 15' ---	S-7 15-17'	12 - 15 - 21 - 19	20	S-7 Tan & Light Grey cmf SAND , little Silt.
--- 20' ---	S-8 20-22'	16 - 17 - 22 - 23	15	S-8 Light Grey cmf SAND , little Silt, w/ lenses of tan clayey silt.
--- 25' ---	S-9 25-27'	12 - 16 - 21 - 22	21	S-9 Light Grey & Tan c'mf SAND , little Silt.
--- 30' ---	S-10 30-32'	13 - 15 - 19 - 18	19	S-10 Light Grey & Orange-Brown cmf SAND , some Silt.
--- 35' ---	S-11 35-37'	9 - 8 - 19 - 24	18	S-11 Tan & Red-Brown cmf+ SAND , little Clayey Silt, little f Gravel.
END OF BORING @ 37'				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-6
SHEET: 1 OF 2

DATE STARTED: 3/28/2025
DATE FINISHED: 3/28/2025

DEPTH OF WATER: 45'±
LOCATION: Sta. 156+83.29, Offset 64.11'R

GROUND ELEVATION: +178'±
GROUND WATER ELEV.: +133'±
NORTHING: 429307.59
EASTING: 510602.331

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	1 – WOH – WOH – WOH	9	S-1 TOP 3": Dark Grey f SAND , little Silt, w/ roots & leaves.
	S-2 2-4'	2 – 2 – 3 – 7	21	BOT 6": Brown cmf SAND , trace f Gravel, trace Silt.
	S-3 4-6'	17 – 16 – 19 – 14	22	S-2 Orange-Brown cmf SAND , little f Gravel, trace Silt.
	S-4 6-8'	16 – 19 – 18 – 20	19	S-3 Same as S-2 .
	S-5 8-10'	19 – 16 – 17 – 22	23	S-4 Same as S-2 .
	S-6 10-12'	19 – 18 – 19 – 18	24	S-5 TOP 12": Same as S-2 . BOT 11": Brown mf SAND , trace Silt.
---15'---	S-7 15-17'	14 – 17 – 21 – 22	18	S-6 Light Tan c+mf SAND , trace Silt, trace f Gravel. S-7 Light Grey & Orange-Brown cmf SAND , trace Silt.
---20'---	S-8 20-22'	13 – 17 – 23 – 23	13	S-8 Same as S-7 .
---25'---	S-9 25-27'	9 – 14 – 20 – 27	17	S-9 Light Grey & Orange-Brown cmf SAND , trace Silt, w/ ½" thick lenses of silty clay.
---30'---	S-10 30-32'	12 – 22 – 31 – 32	15	S-10 Orange-Brown cm+ SAND , trace+ Clayey Silt.
---35'---	S-11 35-37'	13 – 13 – 25 – 33	14	S-11 TOP 9": Orange-Brown SILT , little+ f Sand. BOT 5": Light Red-Brown cmf SAND , little Silt. (moist)

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HAMILTON, PG

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-6
SHEET: 2 OF 2

DATE STARTED: 3/28/2025
DATE FINISHED: 3/28/2025

DEPTH OF WATER: 45'±
LOCATION: Sta. 156+83.29, Offset 64.11'R

GROUND ELEVATION: +178'±
GROUND WATER ELEV.: +133'±
NORTHING: 429307.59
EASTING: 510602.331

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-12 40-42'	17 – 19 – 16 – 24	17	S-12 TOP 14": Light Red-Brown cmf SAND , little Silt. BOT 3": Grey Clayey SILT , little f Sand.
---45'---	S-13 45-47'	12 – 12 – 12 – 14	14	S-13 Tan cmf+ SAND , and Silt & Clay. (wet)
---50'---				END OF BORING @ 47'
---55'---				
---60'---				
---65'---				
---70'---				
---75'---				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HAMILTON, PG

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-7
SHEET: 1 OF 2

DATE STARTED: 3/28/2025
DATE FINISHED: 3/28/2025

DEPTH OF WATER: 47'±
LOCATION: Sta. 157+75.04, Offset 59.93'R

GROUND ELEVATION: +177.5'±
GROUND WATER ELEV.: +130.5'±
NORTHING: 429250.182
EASTING: 510674.031

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	WOH – WOH – 1 – 1	13	S-1 TOP 6": Dark Grey f SAND , trace Silt, w/ roots & leaves.
	S-2 2-4'	1 – 3 – 4 – 6	16	BOT 7": Brown mf SAND , trace Silt, trace f Gravel.
	S-3 4-6'	13 – 11 – 21 – 27	18	S-2 Brown & Tan cmf SAND , some mf+ Gravel, little Clayey Silt.
	S-4 6-8'	17 – 13 – 20 – 26	20	S-3 Light Orange-Brown & Grey cmf SAND , some f Gravel, trace Silt.
	S-5 8-10'	21 – 23 – 27 – 41	24	S-4 Light Grey & Orange-Brown cmf SAND , and f Gravel, trace Silt.
	S-6 10-12'	30 – 21 – 25 – 23	17	S-5 Same as S-4 . S-6 Same as S-4 .
---15'---	S-7 15-17'	15 – 21 – 42 – 25	18	S-7 Light Grey cmf SAND , trace Silt.
---20'---	S-8 20-22'	8 – 18 – 20 – 28	18	S-8 TOP 3": Light Grey Silty CLAY , little f Sand. BOT 15": Light Grey mf SAND , trace Silt.
---25'---	S-9 25-27'	8 – 12 – 15 – 27	13	S-9 TOP 3": Same as S-8 BOT 21" . MID 4": Light Grey Silty CLAY , trace f Sand. BOT 6": Light Grey mf SAND , trace Silt.
---30'---	S-10 30-32'	12 – 15 – 23 – 26	18	S-10 Light Grey mf SAND , trace Silt, w/ ½"-1" thick lenses of silty clay.
---35'---	S-11 35-37'	15 – 23 – 27 – 35	16	S-11 Orange-Brown & Light Grey cmf SAND , trace Silt.

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HAMILTON, PG

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-7
SHEET: 2 OF 2

DATE STARTED: 3/28/2025
DATE FINISHED: 3/28/2025

DEPTH OF WATER: 47'±
LOCATION: Sta. 157+75.04, Offset 59.93'R

GROUND ELEVATION: +177.5'±
GROUND WATER ELEV.: +130.5'±
NORTHING: 429250.182
EASTING: 510674.031

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-12 40-42'	7 – 11 – 14 – 19	18	S-12 Yellow-Brown CLAY & SILT , trace mf Sand. (P.P.=4.5 tsf)
--- 45'---	S-13 45-47'	19 – 30 – 35 – 32	14	S-13 Light Grey f SAND , little Silt. (moist)
---50'---	S-14 50-52'	1 – WOH – 1 – 2	20	S-14 TOP 14": Brown cmf+ SAND , some Clayey Silt. (wet) BOT 6": Light Grey Silty CLAY , trace f Sand.
---55'---	S-15 55-57'	6 – 7 – 9 – 12	13	S-15 Light Brown & Tan mf SAND , little Clayey Silt, trace mf Gravel, w/ 2" thick lenses of clayey silt.
---60'---				END OF BORING @ 57'
---65'---				
---70'---				
---75'---				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HAMILTON, PG

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-8
SHEET: 1 OF 2

DATE STARTED: 3/27/2025
DATE FINISHED: 3/27/2025

DEPTH OF WATER: 45'±
LOCATION: Sta. 158+84.42, Offset 53.88'R

GROUND ELEVATION: +177.5'±
GROUND WATER ELEV.: +132.5'±
NORTHING: 429182.548
EASTING: 510760.205

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	1 - 1 - 1 - 1	12	S-1 TOP 4": Dark Grey mf SAND , trace Silt, w/ roots & leaves.
	S-2 2-4'	1 - 1 - 2 - 5	17	BOT 8": Light Brown cmf SAND , trace f Gravel, trace Silt.
	S-3 4-6'	9 - 12 - 14 - 12	19	S-2 Tan mf+ GRAVEL , and c+mf Sand, trace Silt. (damp)
	S-4 6-8'	10 - 5 - 12 - 16	18	S-3 Same as S-2 .
	S-5 8-10'	5 - 8 - 16 - 26	20	S-4 Brown cmf SAND , little Silt, trace f Gravel.
	S-6 10-12'	12 - 19 - 24 - 23	18	S-5 TOP 5": Same as S-4 . BOT 15": Light Brown f SAND , trace+ Silt.
---15'---	S-7 15-17'	13 - 23 - 24 - 22	13	S-6 Light Grey & Light Yellow-Brown mf SAND , trace Silt.
---20'---	S-8 20-22'	6 - 15 - 17 - 21	15	S-7 Light Brown cmf SAND , trace Silt.
---25'---	S-9 25-27'	12 - 18 - 20 - 24	18	S-8 TOP 3": Light Grey Silty CLAY , trace+ f Sand. BOT 12": Light Grey mf SAND , trace Silt.
---30'---	S-10 30-32'	20 - 17 - 21 - 22	9	S-9 Same as S-8 .
---35'---	S-11 35-37'	12 - 20 - 22 - 24	17	S-10 Light Grey f SAND , trace Silt. (moist)
				S-11 Light Red & Light Grey f SAND , trace Silt. (moist)

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HAMILTON, PG

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-8
SHEET: 2 OF 2

DATE STARTED: 3/27/2025
DATE FINISHED: 3/27/2025

DEPTH OF WATER: 45'±
LOCATION: Sta. 158+84.42, Offset 53.88'R

GROUND ELEVATION: +177.5'±
GROUND WATER ELEV.: +132.5'±
NORTHING: 429182.548
EASTING: 510760.205

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-12 40-42'	20 – 21 – 21 – 21	16	S-12 Light Orange-Brown & Light Red-Brown cmf SAND , trace Silt.
--- 45'---	S-13 45-47'	5 – 3 – 2 – 2	19	S-13 Brown mf SAND , and+ Silt & Clay. (<i>wet</i>)
---50'---	S-14 50-52'	36 – 48 – 41 – 38	10	S-14 Brown & Red-Brown m+f SAND , little Clayey Silt.
---55'---	S-15 55-57'	8 – 14 – 19 – 30	14	S-15 Brown f SAND , little Silt.
---60'---	S-16 60-62'	13 – 19 – 21 – 22	10	S-16 Same as S-15 .
---65'---				END OF BORING @ 62'
---70'---				
---75'---				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HAMILTON, PG

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-9
SHEET: 1 OF 2

DATE STARTED: 3/26/2025
DATE FINISHED: 3/26/2025

DEPTH OF WATER: 55'±
LOCATION: Sta. 160+20.56, Offset 71.17'R

GROUND ELEVATION: +177'±
GROUND WATER ELEV.: +122'±
NORTHING: 429079.725
EASTING: 510851.096

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	1 – 1 – WOH – WOH	12	S-1 TOP 6": Dark Grey f SAND , some Silt, w/ roots & leaves.
	S-2 2-4'	1 – 1 – 2 – 2	20	BOT 6": Brown mf SAND , trace Silt.
	S-3 4-6'	2 – 2 – 8 – 13	18	S-2 Brown cmf SAND , trace f Gravel, trace Silt.
	S-4 6-8'	10 – 51 – 37 – 30	20	S-3 Light Brown cmf SAND , little f Gravel, trace Silt.
	S-5 8-10'	12 – 25 – 25 – 26	17	S-4 Tan mf+ GRAVEL , and+ c+mf Sand, trace Silt.
---10' ---	S-6 10-12'	10 – 13 – 12 – 12	20	S-5 TOP 8": Same as S-4 . BOT 9" Light Grey cmf SAND , trace Silt.
				S-6 TOP 18": Same as S-5 BOT 6" . BOT 2": Brown mf SAND , trace Silt.
---15' ---	S-7 15-17'	9 – 12 – 16 – 17	16	S-7 TOP 2": Light Grey Silty CLAY , trace f Sand. BOT 14": Light Grey f SAND , trace Silt.
---20' ---	S-8 20-22'	7 – 13 – 15 – 16	14	S-8 TOP 4": Light Grey Silty CLAY , trace f Sand.
	S-9 22-24'	12 – 13 – 16 – 15	21	BOT 10": Light Grey f SAND , trace Silt.
---25' ---	S-10 25-27'	10 – 14 – 14 – 17	17	S-9 Light Grey cm+f SAND , trace+ Silt. (<i>moist</i>) S-10 Same as S-9
---30' ---	S-11 30-32'	8 – 12 – 14 – 15	20	S-11 Same as S-9
---35' ---	S-12 35-37'	16 – 26 – 30 – 36	15	S-12 Orange-Brown & Red-Brown cmf SAND , trace Silt.

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HAMILTON, PG

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-9
SHEET: 2 OF 2

DATE STARTED: 3/26/2025
DATE FINISHED: 3/26/2025

DEPTH OF WATER: 55'±
LOCATION: Sta. 160+20.56, Offset 71.17'R

GROUND ELEVATION: +177'±
GROUND WATER ELEV.: +122'±
NORTHING: 429079.725
EASTING: 510851.096

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-13 40-42'	15 – 23 – 29 – 28	20	S-13 Tan cmf SAND , trace Silt.
--- 45' ---	S-14 45-47'	13 – 21 – 24 – 23	22	S-14 Orange-Brown & Light Grey f SAND , trace Silt.
---50'---	S-15 50-52'	21 – 31 – 27 – 25	19	S-15 Light Brown, Grey & Orange-Brown mf SAND , little+ Silt.
---55'---	S-16 55-57'	9 – 11 – 20 – 27	17	S-16 Light Brown mf+ SAND , little- Silt. (wet)
---60'---	S-17 60-62'	19 – 19 – 21 – 22	18	S-17 Light Brown cm+f SAND , trace Silt.
---65'---	S-18 65-67'	17 – 21 – 23 – 21	13	S-18 Red-Brown & Orange-Brown f SAND , little Silt.
---70'---				END OF BORING @ 67'
---75'---				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HAMILTON, PG

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-10
SHEET: 1 OF 2

DATE STARTED: 3/25/2025
DATE FINISHED: 3/26/2025

DEPTH OF WATER: 52'±
LOCATION: Sta. 161+31.77, Offset 48.87'R

GROUND ELEVATION: +177'±
GROUND WATER ELEV.: +125'±
NORTHING: 429023.096
EASTING: 510949.363

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	WOH - 1 - WOH - 1	12	S-1 TOP 10": Dark Grey f SAND , little Silt, w/ organic matter.
	S-2 2-4'	1 - 1 - 2 - 3	16	BOT 2": Brown cmf+ SAND , little+ Silt, trace f Gravel.
	S-3 4-6'	3 - 2 - 1 - 2	11	S-2 Light Brown cmf SAND , trace+ Silt, trace f Gravel.
	S-4 6-8'	1 - 2 - 4 - 9	14	S-3 Tan cm+f SAND , little+ Clayey Silt, little- mf Gravel.
	S-5 8-10'	12 - 13 - 15 - 13	21	S-4 Light Yellow-Brown cmf SAND , little+ mf Gravel, trace Clayey Silt.
--- 10' ---	S-6 10-12'	12 - 7 - 7 - 8	17	S-5 Yellow-Brown c+mf SAND , some mf Gravel, trace Silt.
				S-6 Yellow-Brown & Light Grey cmf SAND , little f Gravel, w/ 2" clayey silt lenses.
	S-7 15-17'	9 - 14 - 17 - 20	24	S-7 Light Grey cmf SAND , trace f Gravel, trace Silt.
--- 20' ---	S-8 20-22'	10 - 12 - 14 - 18	15	S-8 Light Grey f SAND , trace Silt.
	S-9 22-24'	14 - 20 - 19 - 20	13	S-9 Light Grey mf+ SAND , trace Silt.
	S-10 25-27'	10 - 17 - 22 - 26	12	S-10 Light Grey & Yellow-Brown f SAND , trace+ Silt. (dry)
--- 30' ---	S-11 30-32'	12 - 13 - 19 - 25	15	S-11 Light Grey & Yellow-Brown cmf SAND , trace Silt. (dry)
--- 35' ---	S-12 35-37'	17 - 24 - 24 - 29	9	S-12 Orange-Brown & Light Grey cmf SAND , and f Gravel, trace Silt. (moist)

SOILS ENGINEER: J. TIERNEY, PE

DRILLING INSPECTOR: A. LaRUSSO/ E. HAMILTON

CONTRACTOR: CRAIG TEST BORING

DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-10
SHEET: 2 OF 2

DATE STARTED: 3/25/2025
DATE FINISHED: 3/26/2025

DEPTH OF WATER: 52'±
LOCATION: Sta. 161+31.77, Offset 48.87'R

GROUND ELEVATION: +177'±
GROUND WATER ELEV.: +125'±
NORTHING: 429023.096
EASTING: 510949.363

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-13 40-42'	34 – 45 – 33 – 25	14	S-13 Orange-Brown & Red-Brown cmf SAND , trace Silt. (moist)
--- 45' ---	S-14 45-47'	24 – 21 – 29 – 40	16	S-14 Orange-Brown & Red-Brown f SAND , trace* Silt. (moist)
---50'---	S-15 50-52'	15 – 21 – 21 – 16	12	S-15 TOP 6": Same as S-14 . BOT 6": Brown f SAND , trace Silt. (moist)
---55'---	S-16 55-57'	11 – 15 – 16 – 21	17	S-16 Brown f SAND , little Silt. (wet)
---60'---	S-17 60-62'	21 – 26 – 27 – 24	19	S-17 Same as S-16 .
---65'---	S-18 65-67'	10 – 23 – 31 – 41	18	S-18 TOP 12": Same as S-16 . BOT 6": Red-Brown & Orange-Brown f SAND , little Silt.
---70'---	S-19 70-72'	19 – 27 – 31 – 35	14	S-19 Light Brown f SAND , little Silt.
---75'---	S-20 75-77'	6 – 5 – 6 – 11	20	S-20 Tan cf* SAND , some Silt & Clay, trace* f Gravel.
				END OF BORING @ 77'

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: A. LaRUSSO/ E. HAMILTON

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-11
SHEET: 1 OF 2

DATE STARTED: 3/25/2025
DATE FINISHED: 3/25/2025

DEPTH OF WATER: 52'±
LOCATION: Sta. 162+46.80, Offset 56.15'R

GROUND ELEVATION: +177.5'±
GROUND WATER ELEV.: +125.5'±
NORTHING: 428941.718
EASTING: 511030.996

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	WOH – WOH – 1 – 1	12	S-1 TOP 8": Dark Grey mf SAND , trace ⁺ Silt, w/ organics.
	S-2 2-4'	1 – 1 – 1 – 1	9	BOT 4": Grey-Brown mf SAND , little Silt, trace f Gravel.
	S-3 4-6'	1 – 2 – 6 – 7	14	S-2 Yellow-Brown cmf SAND , little ⁺ Silt.
	S-4 6-8'	10 – 6 – 17 – 25	13	S-3 Yellow-Brown cmf SAND , little mf Gravel, little Silt.
	S-5 8-10'	41 – 36 – 41 – 43	15	S-4 Tan c ⁺ m SAND , and ⁻ mf ⁺ Gravel, trace Silt.
	S-6 10-12'	11 – 19 – 28 – 22	18	S-5 Same as S-4 .
--- 15' ---	S-7 15-17'	13 – 15 – 18 – 17	21	S-6 Yellow-Brown cmf SAND , some ⁺ mf Gravel, trace Silt.
	S-8 20-22'	4 – 10 – 11 – 13	19	S-7 Light Grey & Yellow-Brown cmf SAND , trace f Gravel, trace Silt.
--- 25' ---	S-9 22-24'	15 – 16 – 17 – 15	23	S-8 TOP 12": Light Grey CLAY & SILT , trace ⁺ f Sand. BOT 7": Light Grey mf ⁺ SAND , trace Silt.
	S-10 25-27'	12 – 13 – 15 – 12	24	S-9 Light Grey mf ⁺ SAND , trace Silt, w/ 2" thick lens of clay & silt.
--- 30' ---	S-11 30-32'	10 – 12 – 18 – 16	24	S-10 Light Grey f SAND , trace Silt.
	S-12 35-37'	13 – 25 – 29 – 30	20	S-11 Same as S-10 .
--- 35' ---				S-12 Light Grey & Yellow-Brown cmf SAND , trace Silt.

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: A. LaRUSSO

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-11
SHEET: 2 OF 2

DATE STARTED: 3/25/2025
DATE FINISHED: 3/25/2025

DEPTH OF WATER: 52'±
LOCATION: Sta. 162+46.80, Offset 56.15'R

GROUND ELEVATION: +177.5'±
GROUND WATER ELEV.: +125.5'±
NORTHING: 428941.748
EASTING: 511030.996

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-13 40-42'	8 – 11 – 19 – 22	13	S-13 TOP 8": Red-Brown c+mf SAND , some+ Clayey Silt. BOT 5": Orange-Brown mf SAND , little Silt.
--- 45'---	S-14 45-47'	32 – 40 – 50 – 60	22	S-14 Brown & Light Grey mf SAND , little Silt.
---50'---	S-15 50-52'	37 – 35 – 37 – 35	24	S-15 Brown mf SAND , little+ Silt.
---55'---	S-16 55-57'	20 – 18 – 13 – 22	20	S-16 TOP 16": Red-Brown cmf+ SAND , little+ Silt. BOT 4": Brown mf+ SAND , some+ Silt.
---60'---	S-17 60-62'	25 – 28 – 28 – 30	21	S-17 Tan-Brown mf SAND , trace+ Silt.
---65'---	S-18 65-67'	15 – 19 – 29 – 22	19	S-18 Orange-Brown mf SAND , little+ Silt.
---70'---	S-19 70-72'	24 – 31 – 36 – 32	15	S-19 Orange-Brown & Red-Brown cmf SAND , little+ Silt.
---75'---	S-20 75-77'	21 – 19 – 24 – 19	18	S-20 Light Grey & Yellow-Brown cmf SAND , little+ Silt.
---80'---	S-21 80-82'	6 – 8 – 11 – 12	23	S-21 Light Grey & Yellow-Brown cmf SAND , little Silt.
END OF BORING @ 82'				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: A. LaRUSSO

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-12
SHEET: 1 OF 2

DATE STARTED: 3/25/2025
DATE FINISHED: 3/25/2025

DEPTH OF WATER: 50'±
LOCATION: Sta. 162+94.95, Offset 64.95'R

GROUND ELEVATION: +177'±
GROUND WATER ELEV.: +127'±
NORTHING: 428903.331
EASTING: 511061.364

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---5'---	S-1 0-2'	WOH – WOH – 1 – 1	11	S-1 TOP 8": Dark Grey f SAND , little+ Silt, w/ many fibers & roots.
	S-2 2-4'	1 – 2 – 3 – 4	8	BOT 3": Yellow-Brown cm+f SAND , little f Gravel, little Silt.
	S-3 4-6'	4 – 5 – 8 – 7	17	S-2 Brown & Tan cm+f SAND , some mf+ Gravel, little Clayey Silt.
	S-4 6-8'	13 – 11 – 15 – 22	23	S-3 Same as S-2
	S-5 8-10'	20 – 16 – 16 – 26	18	S-4 Yellow-Brown c+mf SAND , little+ mf Gravel, little Silt.
---10'---	S-6 10-12'	16 – 18 – 20 – 22	24	S-5 Yellow-Brown cmf+ SAND , little f Gravel, trace Silt.
				S-6 Yellow-Brown cmf SAND , little+ mf Gravel, trace Silt.
---15'---	S-7 15-17'	14 – 18 – 22 – 22	22	S-7 Grey & Light Grey cm+f SAND , trace Silt.
---20'---	S-8 20-22'	10 – 10 – 10 – 14	18	S-8 Light Grey & Yellow-Brown cm+f SAND , trace Silt, varved w/ 2" thick light grey clay & silt layers.
	S-9 22-24'	15 – 15 – 12 – 14	20	S-9 Same as S-8
---25'---	S-10 25-27'	10 – 12 – 14 – 17	23	S-10 Light Grey mf+ SAND , trace Silt.
	S-11 27-29'	15 – 18 – 20 – 20	24	S-11 Same as S-10 .
---30'---	S-12 30-32'	10 – 13 – 15 – 14	19	S-12 Light Grey f SAND , trace Silt.
---35'---	S-13 35-37'	9 – 14 – 14 – 15	17	S-13 Light Tan mf+ SAND , little Clayey Silt.

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: A. LaRUSSO

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-12
SHEET: 2 OF 2

DATE STARTED: 3/25/2025
DATE FINISHED: 3/25/2025

DEPTH OF WATER: 50'±
LOCATION: Sta. 162+94.95, Offset 64.95'R

GROUND ELEVATION: +177'±
GROUND WATER ELEV.: +127'±
NORTHING: 428903.331
EASTING: 511061.364

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL	
---40'---	S-14 40-42'	15 – 19 – 19 – 23	18	S-14	Orange-Brown c+mf SAND , little+ Silt.
--- 45'---	S-15 45-47'	36 – 51 – 52 – 68	21	S-15	Brown f SAND , little+ Silt.
---50'---	S-16 50-52'	32 – 38 – 41 – 43	24	S-16	Light Brown-Brown mf+ SAND , little+ Silt.
---55'---	S-17 55-57'	15 – 23 – 15 – 15	22	S-17	Brown mf SAND , little Silt.
---60'---	S-18 60-62'	8 – 13 – 17 – 28	24	S-18	Brown-Grey m+f SAND , little+ Silt.
---65'---	S-19 65-67'	12 – 14 – 18 – 23	19	S-19	Red-Brown & Orange-Brown mf SAND , little+ Silt.
---70'---	S-20 70-72'	14 – 21 – 32 – 43	24	S-20	Red-Brown & Orange-Brown cm+f SAND , little+ Silt.
---75'---	S-21 75-77'	20 – 20 – 22 – 24	20	S-21	Light Grey & Light Brown mf SAND , little Silt.
---80'---	S-22 80-82'	7 – 6 – 8 – 10	18	S-22	Yellow-Brown & Grey cmf SAND , little Clayey Silt.
				END OF BORING @ 82'	
SOILS ENGINEER: J. TIERNEY, PE DRILLING INSPECTOR: A. LaRUSSO			CONTRACTOR: CRAIG TEST BORING DRILLER: L. ELLIS		
The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.					



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-13
SHEET: 1 OF 2

DATE STARTED: 4/2/2025
DATE FINISHED: 4/3/2025

DEPTH OF WATER: 55'±
LOCATION: Sta. 163+58.30, Offset 53.83'R

GROUND ELEVATION: +177.5'±
GROUND WATER ELEV.: +122.5'±
NORTHING: 428869.881
EASTING: 511116.303

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	1 - 3 - 4 - 4	9	S-1 Brown cmf SAND , some Silt, little f Gravel.
	S-2 2-4'	5 - 2 - 3 - 1	8	S-2 Orange-Brown cmf SAND , little Silt, trace ⁺ f Gravel.
	S-3 4-6'	2 - 1 - 2 - 2	14	S-3 Tan cmf SAND , little ⁺ Silt, trace ⁺ f Gravel.
	S-4 6-8'	7 - 5 - 19 - 15	19	S-4 Tan cmf SAND , little f Gravel, little Silt.
	S-5 8-10'	35 - 38 - 48 - 44	20	S-5 Tan cmf SAND , little ⁺ f Gravel, little Silt.
	S-6 10-12'	30 - 24 - 32 - 37	24	S-6 Tan cmf SAND , trace Silt.
--- 15' ---	S-7 15-17'	14 - 20 - 26 - 24	22	S-7 Grey & Tan cmf SAND , little ⁺ Silt.
--- 20' ---	S-8 20-22'	14 - 12 - 14 - 15	19	S-8 Light Tan cm ⁺ f SAND , little Silt, trace ⁻ f Gravel.
--- 25' ---	S-9 25-27'	7 - 8 - 7 - 10	17	S-9 Yellow-Brown CLAY & SILT , and mf Sand.
--- 30' ---	S-10 30-32'	11 - 12 - 17 - 18	24	S-10 Light Grey mf ⁺ SAND , little Silt & Clay.
--- 35' ---	S-11 35-37'	13 - 17 - 20 - 16	18	S-11 Light Grey f SAND , trace ⁺ Silt.

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-13
SHEET: 2 OF 2

DATE STARTED: 3/25/2025
DATE FINISHED: 3/25/2025

DEPTH OF WATER: 55'±
LOCATION: Sta. 163+58.30, Offset 53.83'R

GROUND ELEVATION: +177.5'±
GROUND WATER ELEV.: +122.5'±
NORTHING: 428869.881
EASTING: 511116.303

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-12 40-42'	25 – 25 – 23 – 22	19	S-12 Orange-Brown & Grey c+mf SAND , little Silt.
--- 45'---	S-13 45-47'	19 – 24 – 30 – 27	22	S-13 Orange-Brown & Red-Brown c+mf SAND , little Silt.
---50'---	S-14 50-52'	26 – 27 – 28 – 30	18	S-14 Brown mf SAND , little+ Silt.
---55'---	S-15 55-57'	26 – 22 – 17 – 14	20	S-15 Same as S-14 .
---60'---	S-16 60-62'	7 – 9 – 7 – 14	14	S-16 Orange-Brown mf SAND , little Silt.
---65'---	S-17 65-67'	19 – 19 – 22 – 21	24	S-17 Orange-Brown & Tan mf SAND , trace Silt.
---70'---	S-18 70-72'	30 – 48 – 44 – 45	23	S-18 Orange-Brown & Red-Brown cmf SAND , trace+ Silt.
---75'---	S-19 75-77'	21 – 23 – 27 – 28	24	S-19 Light Grey & Tan mf SAND , trace Silt.
---80'---	S-20 80-82'	6 – 7 – 9 – 9	17	S-20 Orange-Brown & Grey mf SAND , some Silt.
				END OF BORING @ 82' Well Installed to 15'

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-14
SHEET: 1 OF 2

DATE STARTED: 4/2/2025
DATE FINISHED: 4/2/2025

DEPTH OF WATER: 55'±
LOCATION: Sta. 163+83.02, Offset 36.04'R

GROUND ELEVATION: +178'±
GROUND WATER ELEV.: +123'±
NORTHING: 428866.941
EASTING: 511146.617

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	2 - 3 - 5 - 2	16	S-1 Orange-Brown c'mf SAND , some Silt, little f Gravel.
	S-2 2-4'	3 - 4 - 7 - 14	11	S-2 Tan cmf SAND , litte f Gravel, little Silt.
	S-3 4-6'	23 - 28 - 26 - 25	24	S-3 Tan cmf SAND , trace* Silt, trace f Gravel.
	S-4 6-8'	29 - 30 - 32 - 29	22	S-4 Tan cmf SAND , trace Silt.
	S-5 8-10'	25 - 29 - 30 - 38	19	S-5 Tan cm*f SAND , little+ mf* Gravel, trace Silt.
	S-6 10-12'	15 - 27 - 29 - 35	24	S-6 Same as S-5 .
---15'---	S-7 15-17'	11 - 15 - 20 - 17	20	S-7 Tan cmf SAND , trace Silt.
---20'---	S-8 20-22'	17 - 21 - 21 - 19	18	S-8 Light Grey cmf SAND , little Silt.
---25'---	S-9 25-27'	14 - 15 - 14 - 11	21	S-9 Tan cmf SAND , some Silt.
---30'---	S-10 30-32'	11 - 13 - 15 - 17	17	S-10 Light Grey mf* SAND , little Clayey Silt.
---35'---	S-11 35-37'	17 - 18 - 20 - 28	24	S-11 Light Grey f SAND , little Silt.

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-14
SHEET: 2 OF 2

DATE STARTED: 4/2/2025
DATE FINISHED: 4/2/2025

DEPTH OF WATER: 55'±
LOCATION: Sta. 163+83.02, Offset 36.04'R

GROUND ELEVATION: +178'±
GROUND WATER ELEV.: +123'±
NORTHING: 428866.941
EASTING: 511146.617

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-12 40-42'	32 – 44 – 36 – 43	22	S-12 Light Grey & Tan c*mf SAND , trace f Gravel, trace Silt.
--- 45'---	S-13 45-47'	18 – 28 – 49 – 46	19	S-13 Orange-Brown & Tan cmf SAND , little Silt.
---50'---	S-14 50-52'	12 – 32 – 39 – 43	18	S-14 Orange-Brown & Light Grey mf SAND , little+ Silt.
---55'---	S-15 55-57'	32 – 30 – 21 – 17	24	S-15 Brown cmf SAND , little Silt.
---60'---	S-16 60-62'	34 – 31 – 30 – 19	24	S-16 Same as S-15
---65'---	S-17 65-67'	16 – 19 – 21 – 21	20	S-17 Orange-Brown mf SAND , trace Silt.
---70'---	S-18 70-72'	21 – 32 – 43 – 47	17	S-18 Orange-Brown cmf SAND , little Silt.
---75'---	S-19 75-77'	32 – 32 – 32 – 29	24	S-19 Tan & Light Grey cmf SAND , trace f Gravel, trace Silt.
---80'---	S-20 80-82'	7 – 9 – 10 – 11	19	S-20 Tan & Grey m'f SAND , some Silt.
END OF BORING @ 82' Well Installed to 15'				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-15
SHEET: 1 OF 2

DATE STARTED: 4/1/2025
DATE FINISHED: 4/1/2025

DEPTH OF WATER: 55'±
LOCATION: Sta. 164+29.84, Offset 59.77'R

GROUND ELEVATION: +178.5'±
GROUND WATER ELEV.: +123.5'±
NORTHING: 428818.211
EASTING: 511166.134

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	WOH - 1 - 1 - 1	8	S-1 Brown mf SAND , little+ Silt.
	S-2 2-4'	3 - 3 - 4 - 4	12	S-2 Orange-Brown cm+f SAND , little- f Gravel, little- Silt.
	S-3 4-6'	7 - 8 - 12 - 14	19	S-3 Tan cmf SAND , trace f Gravel, trace Silt.
	S-4 6-8'	18 - 14 - 23 - 31	20	S-4 Tan cmf+ SAND , little Silt, trace+ f Gravel.
	S-5 8-10'	35 - 41 - 36 - 33	24	S-5 Tan cmf SAND , trace+ f Gravel, trace Silt.
	S-6 10-12'	15 - 23 - 38 - 32	24	S-6 Tan c+mf SAND , some- f Gravel, trace Silt.
--- 15' ---	S-7 15-17'	8 - 13 - 21 - 17	21	S-7 Light Grey & Tan c+mf SAND , little+ Silt.
--- 20' ---	S-8 20-22'	10 - 11 - 15 - 15	24	S-8 Same as S-7 .
--- 25' ---	S-9 25-27'	10 - 10 - 10 - 10	20	S-9 Light Grey & Tan c+mf SAND , little Silt.
--- 30' ---	S-10 30-32'	10 - 13 - 19 - 16	16	S-10 Light Grey & Orange-Brown mf SAND , little Clayey Silt.
--- 35' ---	S-11 35-37'	15 - 19 - 22 - 25	24	S-11 Light Grey mf SAND , trace+ Clayey Silt.

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-15
SHEET: 2 OF 2

DATE STARTED: 4/1/2025
DATE FINISHED: 4/1/2025

DEPTH OF WATER: 55'±
LOCATION: Sta. 164+29.84, Offset 59.77'R

GROUND ELEVATION: +178.5'±
GROUND WATER ELEV.: +123.5'±
NORTHING: 428818.211
EASTING: 511166.134

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-12 40-42'	19 – 25 – 32 – 37	24	S-12 Orange-Brown & Tan cmf SAND , little Silt.
--- 45'---	S-13 45-47'	21 – 33 – 36 – 36	20	S-13 Light Grey & Tan f SAND , trace* Silt.
---50'---	S-14 50-52'	37 – 39 – 49 – 54	18	S-14 Grey cmf SAND , trace Silt.
---55'---	S-15 55-57'	23 – 36 – 32 – 23	19	S-15 Tan cmf SAND , trace* Silt.
---60'---	S-16 60-62'	5 – 8 – 16 – 18	16	S-16 Yellow-Brown mf SAND , some Clayey Silt.
---65'---	S-17 65-67'	28 – 32 – 30 – 32	14	S-17 Tan cmf SAND , trace Silt.
---70'---	S-18 70-72'	26 – 33 – 40 – 42	24	S-18 Orange-Brown cmf SAND , little Silt.
---75'---	S-19 75-77'	29 – 41 – 48 – 32	24	S-19 Orange-Brown c*mf SAND , little Silt, trace* f Gravel.
---80'---	S-20 80-82'	8 – 10 – 13 – 11	19	S-20 Tan & Grey cmf SAND , some Silt.
END OF BORING @ 82'				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-16
SHEET: 1 OF 2

DATE STARTED: 4/3/2025
DATE FINISHED: 4/3/2025

DEPTH OF WATER: 50'±
LOCATION: Sta. 165+58.51, Offset 56.50'R

GROUND ELEVATION: +180'±
GROUND WATER ELEV.: +130'±
NORTHING: 428735.772
EASTING: 511264.972

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	1 – WOH – 1 – 1	11	S-1 Brown mf SAND , little Silt.
	S-2 2-4'	1 – 2 – 3 – 3	8	S-2 Orange-Brown c mf SAND , little f Gravel, little Silt.
	S-3 4-6'	5 – 6 – 7 – 11	14	S-3 Orange-Brown cmf SAND , trace f Gravel, trace Silt.
	S-4 6-8'	20 – 21 – 24 – 35	18	S-4 Orange-Brown & Tan cm+ SAND , some mf+ Gravel, trace Silt.
	S-5 8-10'	39 – 36 – 40 – 47	21	S-5 Tan c+mf SAND , little+ f Gravel, trace Silt.
	S-6 10-12'	14 – 28 – 30 – 38	24	S-6 Same as S-5 .
---15'---	S-7 15-17'	17 – 24 – 29 – 30	22	S-7 Same as S-5 .
---20'---	S-8 20-22'	9 – 12 – 20 – 22	20	S-8 Tan & Light Grey cmf SAND , trace+ Silt.
---25'---	S-9 25-27'	10 – 15 – 17 – 15	19	S-9 Light Grey & Tan cmf SAND , little Silt.
---30'---	S-10 30-32'	12 – 14 – 14 – 14	17	S-10 Same as S-9 .
---35'---	S-11 35-37'	10 – 7 – 13 – 10	24	S-11 Orange-Brown & Light Grey mf SAND , some Silt.

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-16
SHEET: 2 OF 2

DATE STARTED: 4/3/2025
DATE FINISHED: 4/3/2025

DEPTH OF WATER: 50'±
LOCATION: Sta. 165+58.51, Offset 56.50'R

GROUND ELEVATION: +180'±
GROUND WATER ELEV.: +130'±
NORTHING: 428735.772
EASTING: 511264.972

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-12 40-42'	20 – 26 – 30 – 24	22	S-12 Light Grey cmf SAND , little Silt.
---45'---	S-13 45-47'	20 – 55 – 40 – 44	19	S-13 Red-Brown cmf SAND , little Silt.
---50'---	S-14 50-52'	14 – 12 – 10 – 17	20	S-14 Orange-Brown m+f SAND , little Silt & Clay.
---55'---	S-15 55-57'	13 – 24 – 34 – 28	16	S-15 Brown mf SAND , little Silt.
---60'---	S-16 60-62'	13 – 10 – 11 – 14	21	S-16 Orange-Brown mf SAND , little Silt.
---65'---	S-17 65-67'	37 – 42 – 46 – 46	24	S-17 Brown c'mf SAND , trace Silt.
---70'---	S-18 70-72'	24 – 32 – 34 – 37	22	S-18 Light-Brown mf SAND , trace Silt.
---75'---	S-19 75-77'	24 – 34 – 37 – 37	24	S-19 Orange-Brown & Red-Brown cmf SAND , little Silt.
				END OF BORING @ 77'

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-17
SHEET: 1 OF 2

DATE STARTED: 4/4/2025
DATE FINISHED: 4/4/2025

DEPTH OF WATER: 55'±
LOCATION: Sta. 166+43.57, Offset 54.46'R

GROUND ELEVATION: +181'±
GROUND WATER ELEV.: +126'±
NORTHING: 428681.172
EASTING: 511330.234

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	1 - WOH - 1 - 1	9	S-1 Tan mf SAND , trace Silt.
	S-2 2-4'	2 - 1 - 1 - 3	10	S-2 Orange-Brown c mf SAND , little Silt.
	S-3 4-6'	6 - 5 - 6 - 11	12	S-3 Orange-Brown cm ⁺ f SAND , some mf ⁺ Gravel, trace Silt.
	S-4 6-8'	17 - 18 - 18 - 14	19	S-4 Tan cmf SAND , little f Gravel, trace Silt.
	S-5 8-10'	24 - 24 - 32 - 33	22	S-5 Same as S-4 .
---10'---	S-6 10-12'	11 - 21 - 24 - 28	23	S-6 Tan c ⁺ mf SAND , some f Gravel, trace Silt.
---15'---	S-7 15-17'	16 - 22 - 32 - 17	24	S-7 Tan cmf SAND , trace f Gravel, trace Silt.
---20'---	S-8 20-22'	13 - 21 - 26 - 23	20	S-8 Grey & Tan c mf SAND , trace ⁺ Silt.
---25'---	S-9 25-27'	16 - 21 - 20 - 17	14	S-9 Light Grey cm ⁺ f SAND , trace ⁺ Clayey Silt, trace f Gravel.
---30'---	S-10 30-32'	12 - 16 - 19 - 19	16	S-10 Light Grey cmf SAND , trace ⁺ Silt.
---35'---	S-11 35-37'	15 - 12 - 14 - 19	24	S-11 Same as S-10 .

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-17
SHEET: 2 OF 2

DATE STARTED: 4/4/2025
DATE FINISHED: 4/4/2025

DEPTH OF WATER: 55'±
LOCATION: Sta. 166+43.57, Offset 54.46'R

GROUND ELEVATION: +181'±
GROUND WATER ELEV.: +126'±
NORTHING: 428681.172
EASTING: 511330.234

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-12 40-42'	21 – 28 – 32 – 23	19	S-12 Tan & Orange-Brown cmf SAND , little Silt.
---45'---	S-13 45-47'	11 – 14 – 16 – 18	21	S-13 Light Grey & Orange-Brown f SAND , little Silt.
---50'---	S-14 50-52'	22 – 31 – 36 – 57	24	S-14 Red-Brown m f SAND , little+ Silt. (<i>dry</i>)
---55'---	S-15 55-57'	17 – 20 – 28 – 33	17	S-15 Brown mf SAND , little+ Silt. (<i>moist</i>)
---60'---	S-16 60-62'	17 – 24 – 31 – 31	24	S-16 Brown c mf SAND , little+ Silt. (<i>wet</i>)
---65'---	S-17 65-67'	40 – 50 – 50 – 58	24	S-17 Orange-Brown cmf SAND , trace+ Silt.
---70'---				END OF BORING @ 67'
---75'---				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-18
SHEET: 1 OF 2

DATE STARTED: 4/4/2025
DATE FINISHED: 4/4/2025

DEPTH OF WATER: 55'±
LOCATION: Sta. 167+64.74, Offset 70.25'R

GROUND ELEVATION: +181'±
GROUND WATER ELEV.: +126'±
NORTHING: 428589.351
EASTING: 511410.856

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---5'---	S-1 0-2'	WOH – WOH – 1 – 1	14	S-1 Dark Tan mf SAND , little Silt.
	S-2 2-4'	1 – 2 – 3 – 4	11	S-2 Orange-Brown cmf SAND , trace f Gravel, trace Silt.
	S-3 4-6'	5 – 7 – 13 – 18	17	S-3 Tan cmf SAND , some f Gravel, trace Silt.
	S-4 6-8'	15 – 16 – 18 – 14	16	S-4 Tan c'mf SAND , trace f Gravel, trace Silt.
	S-5 8-10'	24 – 23 – 21 – 38	23	S-5 Orange-Brown & Tan cm SAND , and mf Gravel, trace Silt.
---10'---	S-6 10-12'	10 – 19 – 24 – 23	22	S-6 Yellow-Tan cmf SAND , trace f Gravel, trace Silt.
---15'---	S-7 15-17'	20 – 20 – 23 – 23	20	S-7 Tan & Light Grey cmf SAND , trace f Gravel, trace Silt.
---20'---	S-8 20-22'	9 – 12 – 16 – 16	21	S-8 Light Grey & Tan cmf SAND , trace* Silt.
---25'---	S-9 25-27'	10 – 11 – 17 – 15	24	S-9 Same as S-8 .
---30'---	S-10 30-32'	11 – 11 – 14 – 13	19	S-10 Light Grey & Orange-Brown c'mf SAND , little* Silt.
---35'---	S-11 35-37'	12 – 14 – 16 – 14	18	S-11 Grey & Light Grey mf SAND , trace* Silt, trace f Gravel.

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-18
SHEET: 2 OF 2

DATE STARTED: 4/4/2025
DATE FINISHED: 4/4/2025

DEPTH OF WATER: 55'±
LOCATION: Sta. 167+64.74, Offset 70.25'R

GROUND ELEVATION: +181'±
GROUND WATER ELEV.: +126'±
NORTHING: 428589.351
EASTING: 511410.856

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-12 40-42'	6 – 9 – 19 – 23	13	S-12 Light Grey mf+ SAND , little Clayey Silt.
--- 45'---	S-13 45-47'	16 – 18 – 22 – 19	19	S-13 Orange-Brown & Red-Brown cmf SAND , little Silt.
---50'---	S-14 50-52'	19 – 21 – 29 – 21	21	S-14 Red-Brown & Yellow cmf SAND , little+ Silt, trace f Gravel.
---55'---	S-15 55-57'	11 – 12 – 19 – 25	24	S-15 Orange-Brown & Light Grey mf SAND , little+ Silt.
---60'---	S-16 60-62'	18 – 20 – 26 – 26	22	S-16 Brown mf SAND , little Silt.
---65'---				END OF BORING @ 62'
---70'---				
---75'---				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-19
SHEET: 1 OF 2

DATE STARTED: 4/8/2025
DATE FINISHED: 4/8/2025

DEPTH OF WATER: 60'±
LOCATION: Sta. 168+57.15, Offset 68.42'R

GROUND ELEVATION: +182.5'±
GROUND WATER ELEV.: +122.5'±
NORTHING: 428529.75
EASTING: 511481.496

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	1 - 1 - 1 - 1	17	S-1 Grey-Brown mf SAND , and Silt, w/ many root fibers.
	S-2 2-4'	1 - 2 - 4 - 4	16	S-2 Orange-Brown cmf SAND , trace f Gravel, trace Silt.
	S-3 4-6'	8 - 8 - 13 - 13	12	S-3 Orange-Brown cmf SAND , trace+ Silt.
	S-4 6-8'	20 - 17 - 19 - 19	13	S-4 Orange-Brown cmf SAND , trace f Gravel, trace Silt.
	S-5 8-10'	19 - 19 - 21 - 21	24	S-5 Same as S-4 .
	S-6 10-12'	9 - 18 - 26 - 25	16	S-6 Yellow-Tan cmf SAND , trace Silt.
--- 15' ---	S-7 15-17'	34 - 47 - 55 - 40	24	S-7 Tan c+mf SAND , and f Gravel, little Clayey Silt.
--- 20' ---	S-8 20-22'	17 - 18 - 20 - 28	21	S-8 Light Grey mf SAND , trace Silt.
--- 25' ---	S-9 25-27'	17 - 14 - 23 - 23	12	S-9 Light Grey & Tan cmf SAND , little mf Gravel, trace Silt.
--- 30' ---	S-10 30-32'	17 - 19 - 24 - 21	19	S-10 Tan & Light Grey c+mf SAND , trace Silt.
--- 35' ---	S-11 35-37'	18 - 15 - 22 - 19	18	S-11 Light Grey mf SAND , trace Silt.

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-19
SHEET: 2 OF 2

DATE STARTED: 4/8/2025
DATE FINISHED: 4/8/2025

DEPTH OF WATER: 60'±
LOCATION: Sta. 168+57.15, Offset 68.42'R

GROUND ELEVATION: +182.5'±
GROUND WATER ELEV.: +122.5'±
NORTHING: 428529.75
EASTING: 511481.496

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-12 40-42'	15 – 17 – 16 – 15	15	S-12 Light Grey & Tan mf SAND , some Silt.
--- 45'---	S-13 45-47'	27 – 40 – 43 – 33	22	S-13 Light Grey c'mf SAND , trace Silt.
---50'---	S-14 50-52'	24 – 27 – 34 – 33	24	S-14 Red-Brown & Orange-Brown mf SAND , little Silt.
---55'---	S-15 55-57'	28 – 34 – 34 – 32	20	S-15 Orange-Brown mf SAND , little Silt.
---60'---	S-16 60-62'	12 – 30 – 30 – 25	21	S-16 Brown & Tan cm ⁺ f SAND , trace ⁺ Silt. (wet)
---65'---				END OF BORING @ 62'
---70'---				
---75'---				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-20
SHEET: 1 OF 2

DATE STARTED: 4/8/2025
DATE FINISHED: 4/8/2025

DEPTH OF WATER: Dry
LOCATION: Sta. 169+53.88, Offset 51.84'R

GROUND ELEVATION: +182'±
GROUND WATER ELEV.: N/A
NORTHING: 428478.373
EASTING: 511565.121

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	WOH – WOH – WOH – WOH	6	S-1 Orange-Brown f SAND , trace Silt.
	S-2 2-4'	WOH – 1 – 1 – 1	8	S-2 Brown cm*f SAND , little Silt, trace* f Gravel.
	S-3 4-6'	7 – 6 – 8 – 9	15	S-3 Orange-Brown mf SAND , trace Silt.
	S-4 6-8'	14 – 12 – 7 – 6	12	S-4 Yellow-Tan c*mf SAND , trace mf Gravel, trace Silt.
	S-5 8-10'	7 – 8 – 11 – 9	19	S-5 Yellow-Tan cmf SAND , trace m Gravel, trace Silt.
	S-6 10-12'	6 – 14 – 20 – 20	20	S-6 Tan & Orange-Brown cmf SAND , trace Silt.
---15'---	S-7 15-17'	12 – 15 – 20 – 22	18	S-7 Tan cmf SAND , trace* Silt, trace f Gravel.
---20'---	S-8 20-22'	16 – 20 – 21 – 20	20	S-8 Tan & Orange-Brown cmf SAND , little Silt.
---25'---	S-9 25-27'	11 – 16 – 19 – 17	17	S-9 Light Grey & Orange-Brown cmf SAND , trace* Silt.
---30'---	S-10 30-32'	12 – 16 – 14 – 16	24	S-10 Light Grey & Orange-Brown f SAND , little Silt.
---35'---	S-11 35-37'	12 – 17 – 19 – 19	23	S-11 Light Grey & Tan cmf SAND , trace Silt.

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-20
SHEET: 2 OF 2

DATE STARTED: 4/8/2025
DATE FINISHED: 4/8/2025

DEPTH OF WATER: Dry
LOCATION: Sta. 169+53.88, Offset 51.84'R

GROUND ELEVATION: +182'±
GROUND WATER ELEV.: N/A
NORTHING: 428478.373
EASTING: 511565.121

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-12 40-42'	14 – 14 – 16 – 15	13	S-12 Brown & Tan cm ⁺ SAND , little ⁺ Clayey Silt.
--- 45' ---	S-13 45-47'	14 – 19 – 20 – 26	24	S-13 Light Grey & Tan cmf SAND , little Silt.
---50'---	S-14 50-52'	19 – 26 – 34 – 33	24	S-14 Light Grey mf SAND , trace ⁺ Silt.
---55'---				END OF BORING @ 52'
---60'---				
---65'---				
---70'---				
---75'---				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-21
SHEET: 1 OF 2

DATE STARTED: 4/9/2025
DATE FINISHED: 4/9/2025

DEPTH OF WATER: Dry
LOCATION: Sta. 170+51.14, Offset 64.42'R

GROUND ELEVATION: +182'±
GROUND WATER ELEV.: N/A
NORTHING: 428404.74
EASTING: 511629.891

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	1 – WOH – 1 – WOH	15	S-1 Orange-Brown f SAND , trace+ Silt.
	S-2 2-4'	1 – 1 – 1 – 1	9	S-2 Tan mf SAND , trace+ Silt.
	S-3 4-6'	1 – 1 – 2 – 2	12	S-3 Orange-Brown c mf SAND , trace f Gravel, trace Silt.
	S-4 6-8'	8 – 10 – 14 – 18	20	S-4 Brown & Orange-Brown cm+ SAND , trace f Gravel, trace Silt.
	S-5 8-10'	22 – 17 – 17 – 19	18	S-5 Yellow-Brown m f SAND , trace f Gravel, trace Silt.
	S-6 10-12'	9 – 22 – 35 – 32	24	S-6 Yellow-Brown & Tan c mf SAND , little f Gravel, trace Silt.
---15'---	S-7 15-17'	20 – 28 – 27 – 22	21	S-7 Tan cmf SAND , and mf+ Gravel, trace Silt.
---20'---	S-8 20-22'	12 – 15 – 18 – 17	22	S-8 Orange-Brown & Light Grey cmf SAND , some Silt.
---25'---	S-9 25-27'	14 – 18 – 20 – 18	14	S-9 Light Grey & Tan mf SAND , trace Silt.
---30'---	S-10 30-32'	12 – 16 – 21 – 36	24	S-10 Light Grey & Tan cmf SAND , trace Silt.
---35'---	S-11 35-37'	11 – 13 – 15 – 16	20	S-11 Light Grey & Orange-Brown c mf SAND , some Silt.

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-21
SHEET: 2 OF 2

DATE STARTED: 4/9/2025
DATE FINISHED: 4/9/2025

DEPTH OF WATER: Dry
LOCATION: Sta. 170+51.14, Offset 64.42'R

GROUND ELEVATION: +182'±
GROUND WATER ELEV.: N/A
NORTHING: 428404.74
EASTING: 511629.891

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-12 40-42'	15 – 19 – 23 – 22	22	S-12 Light Grey & Orange-Brown cmf SAND , little Silt.
--- 45' ---	S-13 45-47'	17 – 22 – 26 – 29	24	S-13 Light Grey & Orange-Brown cmf SAND , little Silt.
---50'---				END OF BORING @ 47'
---55'---				
---60'---				
---65'---				
---70'---				
---75'---				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-22
SHEET: 1 OF 2

DATE STARTED: 4/9/2025
DATE FINISHED: 4/10/2025

DEPTH OF WATER: Dry
LOCATION: Sta. 171+26.30, Offset 83.44'R

GROUND ELEVATION: +180'±
GROUND WATER ELEV.: N/A
NORTHING: 428340.851
EASTING: 511673.819

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	3 - 1 - WOH - WOH	6	S-1 Tan f SAND , trace* Silt, w/ some roots.
	S-2 2-4'	1 - 2 - 3 - 5	10	S-2 Brown mf SAND , little Silt.
	S-3 4-6'	5 - 4 - 6 - 8	15	S-3 Orange-Brown mf SAND , trace f Gravel, trace Silt.
	S-4 6-8'	10 - 8 - 10 - 13	18	S-4 Orange-Brown c*mf SAND , trace f Gravel, trace Silt.
	S-5 8-10'	19 - 21 - 25 - 20	21	S-5 Yellow-Brown & Orange-Brown cmf SAND , little Silt, trace* mf Gravel.
	S-6 10-12'	16 - 25 - 32 - 33	24	S-6 Tan & Orange-Brown cm*f SAND , some mf* Gravel, trace* Silt.
---15'---	S-7 15-17'	15 - 20 - 33 - 35	23	S-7 Yellow-Brown & Tan c*m SAND , little* f Gravel, trace Silt.
---20'---	S-8 20-22'	9 - 16 - 19 - 19	19	S-8 Tan & Light Grey cmf SAND , trace Silt.
---25'---	S-9 25-27'	15 - 18 - 19 - 17	18	S-9 Light Grey & Orange-Brown c*mf SAND , little* Silt.
---30'---	S-10 30-32'	15 - 21 - 22 - 21	24	S-10 Light Tan m*f SAND , little Silt, trace f Gravel.
---35'---	S-11 35-37'	20 - 21 - 24 - 23	16	S-11 Light Grey & Yellow-Brown f SAND , little Silt.

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-22
SHEET: 2 OF 2

DATE STARTED: 4/9/2025
DATE FINISHED: 4/10/2025

DEPTH OF WATER: Dry
LOCATION: Sta. 171+26.30, Offset 83.44'R

GROUND ELEVATION: +180'±
GROUND WATER ELEV.: N/A
NORTHING: 428340.851
EASTING: 511673.819

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
---40'---	S-12 40-42'	16 – 18 – 17 – 15	13	S-12 Light Grey & Orange-Brown cmf SAND , little Silt.
---45'---				END OF BORING @ 42'
---50'---				
---55'---				
---60'---				
---65'---				
---70'---				
---75'---				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-25
SHEET: 1 OF 1

DATE STARTED: 4/10/2025
DATE FINISHED: 4/10/2025

DEPTH OF WATER: Dry
LOCATION: Sta. 174+45.16, Offset 61.00'R

GROUND ELEVATION: +176.5'±
GROUND WATER ELEV.: N/A
NORTHING: 428147.298
EASTING: 511928.207

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	1 – WOH – 1 – WOH	11	S-1 Tan mf SAND , trace ⁺ Silt, trace f Gravel.
	S-2 2-4'	2 – 2 – 6 – 4	8	S-2 Orange-Brown cmf SAND , little f Gravel, trace ⁺ Silt.
	S-3 4-6'	7 – 4 – 5 – 8	20	S-3 Orange-Brown & Tan cm ⁺ SAND , little mf Gravel, little ⁻ Silt.
	S-4 6-8'	10 – 12 – 13 – 11	17	S-4 Tan c ⁺ mf SAND . Trace ⁺ f Gravel, trace Silt.
	S-5 8-10'	24 – 24 – 27 – 23	18	S-5 Tan & Grey cm ⁺ f SAND , little mf Gravel, little ⁻ Silt.
	S-6 10-12'	11 – 14 – 16 – 19	24	S-6 Tan c ⁺ mf SAND , little ⁺ f Gravel, trace Silt.
---15'---	S-7 15-17'	11 – 17 – 21 – 17	15	S-7 Light Grey & Tan cmf SAND , trace Silt.
---20'---	S-8 20-22'	7 – 11 – 11 – 8	16	S-8 Tan cmf SAND , trace ⁺ Silt.
---25'---	S-9 25-27'	13 – 17 – 19 – 19	24	S-9 Grey & Tan cmf SAND , trace f Gravel, trace Silt.
---30'---				END OF BORING @ 27'
---35'---				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-26
SHEET: 1 OF 1

DATE STARTED: 4/10/2025
DATE FINISHED: 4/10/2025

DEPTH OF WATER: Dry
LOCATION: Sta. 175+52.02, Offset 77.49'R

GROUND ELEVATION: +174.5'±
GROUND WATER ELEV.: N/A
NORTHING: 428064.4
EASTING: 511997.613

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	1 – WOH – WOH – 1	13	S-1 Brown mf SAND , little Silt, w/ some roots.
	S-2 2-4'	1 – 3 – 3 – 4	15	S-2 Orange-Brown cm+ SAND , little mf+ Gravel, trace Silt.
	S-3 4-6'	7 – 9 – 14 – 23	19	S-3 Orange-Brown cmf SAND , trace Silt.
	S-4 6-8'	16 – 12 – 24 – 24	18	S-4 Tan mf SAND , trace f Gravel, trace Silt.
	S-5 8-10'	29 – 30 – 34 – 22	20	S-5 Tan cmf SAND , little f Gravel, trace+ Silt.
	S-6 10-12'	23 – 30 – 24 – 27	24	S-6 Tan mf+ GRAVEL , and+ cmf Sand, trace+ Silt.
--- 15' ---	S-7 15-17'	16 – 17 – 16 – 24	24	S-7 Light Grey & Tan cmf SAND , trace f Gravel, trace Silt.
--- 20' ---				END OF BORING @ 17'
--- 25' ---				
--- 30' ---				
--- 35' ---				

SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.



TEST BORING LOG

ROUTE 539 OVERPASS AT JOINT BASE MDL
TOWNSHIP OF PLUMSTED, OCEAN COUNTY, NEW JERSEY
FPA NO. 1468M.109

BORING NO.: FPA-27
SHEET: 1 OF 1

DATE STARTED: 4/10/2025
DATE FINISHED: 4/10/2025

DEPTH OF WATER: Dry
LOCATION: Sta. 176+59.26, Offset 76.75'R

GROUND ELEVATION: +173'±
GROUND WATER ELEV.: N/A
NORTHING: 427994.193
EASTING: 512078.687

DRILLING TECHNIQUE: Mud Rotary
HAMMER TYPE: 140 lb. Automatic Trip Hammer, 30 Inch Drop

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	RECOVERY (INCHES)	DESCRIPTION OF SOIL
--- 5' ---	S-1 0-2'	1 – WOH – 1 – WOH	10	S-1 Light Brown mf SAND , little Silt.
	S-2 2-4'	WOH – 1 – 2 – 3	12	S-2 Orange-Brown c+mf SAND , little Silt.
	S-3 4-6'	7 – 9 – 11 – 13	10	S-3 Orange-Brown cmf SAND , trace+ Gravel, trace Silt.
	S-4 6-8'	22 – 21 – 29 – 26	20	S-4 Orange-Brown c+mf SAND , little+ f Gravel, trace Silt.
	S-5 8-10'	31 – 29 – 29 – 19	13	S-5 Tan & Orange-Brown mf+ GRAVEL , and+ c+mf Sand, trace Silt.
	S-6 10-12'	22 – 23 – 20 – 17	18	S-6 Tan & Brown c+m SAND , and+ mf+ Gravel, trace Silt.
---15'---	S-7 15-17'	13 – 12 – 14 – 14	24	S-7 Same as S-6 .
---20'---				END OF BORING @ 17'
---25'---				
---30'---				
---35'---				

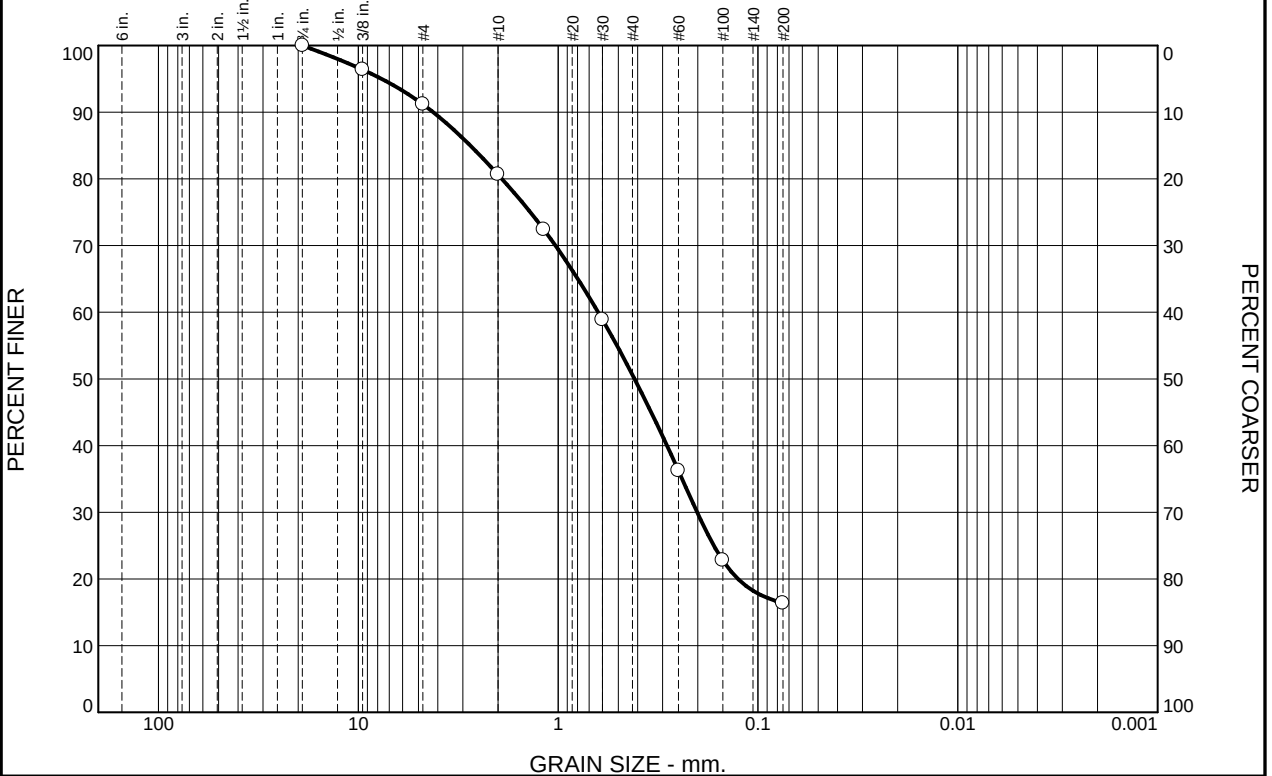
SOILS ENGINEER: J. TIERNEY, PE
DRILLING INSPECTOR: E. HARM

CONTRACTOR: CRAIG TEST BORING
DRILLER: L. ELLIS

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	3.6	15.7	21.8	22.7	19.8	16.4

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	96.4		
#4	91.2		
#10	80.7		
#16	72.4		
#30	58.9		
#60	36.2		
#100	22.8		
#200	16.4		

* (no specification provided)

Material Description

Brown & Orange Brown cmf SAND, little+ mf+ Gravel, little Silt

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 4.2182 D₈₅= 2.7514 D₆₀= 0.6307
D₅₀= 0.4146 D₃₀= 0.2015 D₁₅=
D₁₀= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Source of Sample: B-1 Depth: 2' - 4'
Sample Number: S-2

Date: 4/11/24

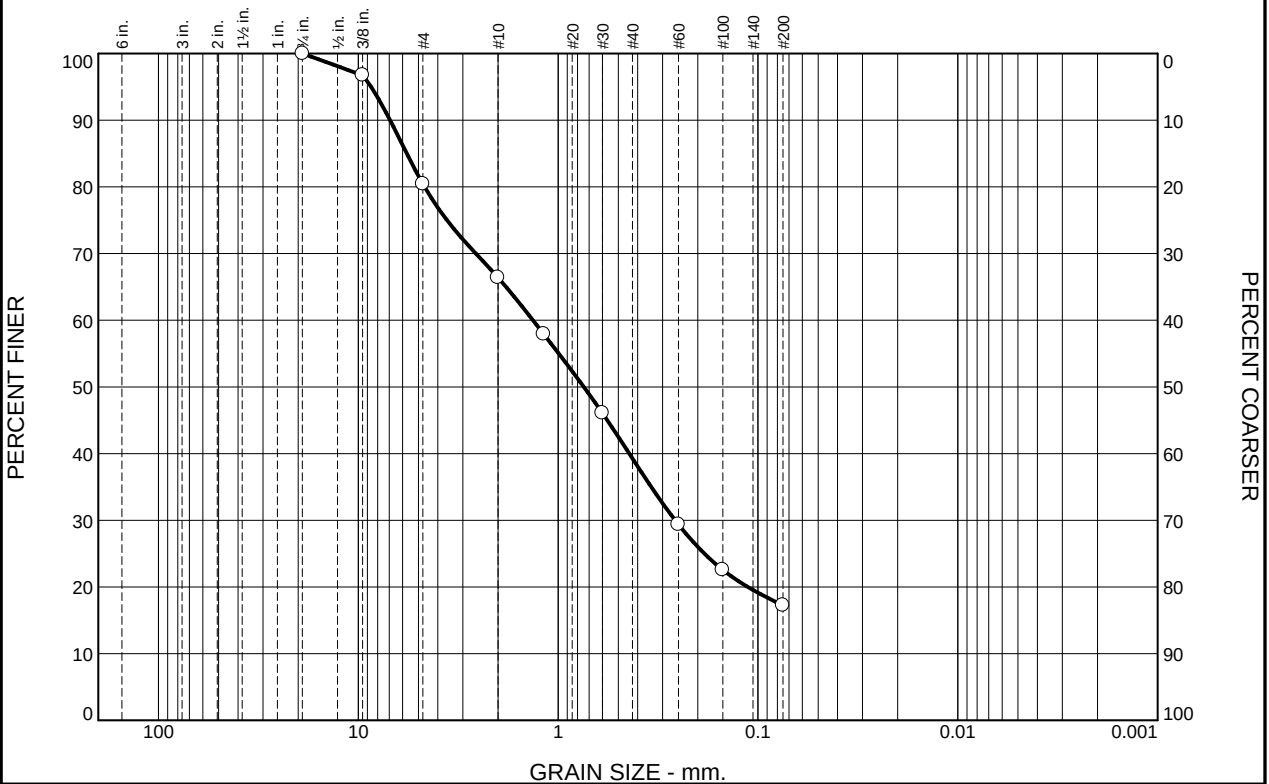
FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Ocean County Engineering
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468.109
Figure

Tested By: JR Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	3.3	30.3	20.3	16.7	12.2	17.2

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	96.7		
#4	80.4		
#10	66.4		
#16	57.9		
#30	46.1		
#60	29.4		
#100	22.6		
#200	17.2		

* (no specification provided)

Material Description

Tan & Orange Brown cmf Sand, some+ mf+ Gravel, little+ Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 6.9334

D₈₅= 5.7178

D₆₀= 1.3372

D₅₀= 0.7437

D₃₀= 0.2597

D₁₅=

D₁₀=

C_u=

C_c=

Classification

USCS=

AASHTO=

Remarks

Source of Sample: B-1 Depth: 6' - 8'
Sample Number: S-4

Date: 4/11/24

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Wall, NJ

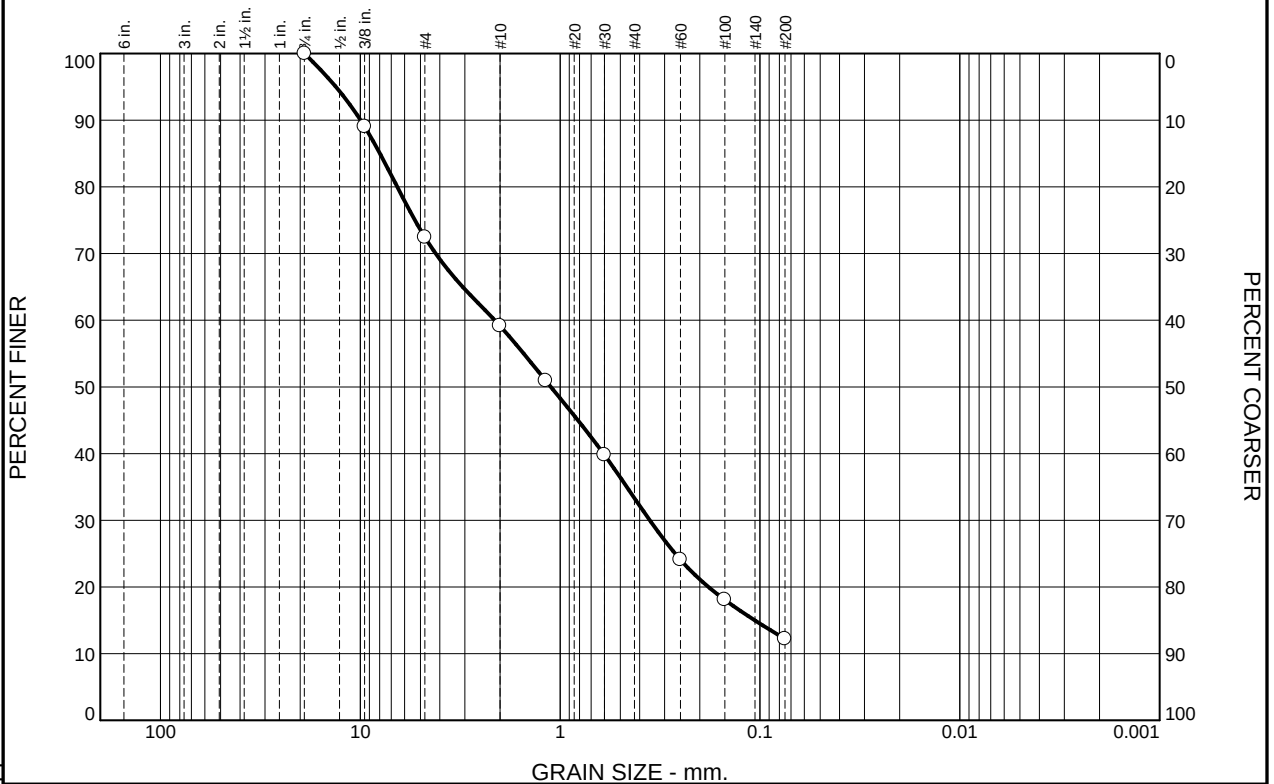
Client: Ocean County Engineering
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468.109
Figure

Tested By: JR

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	10.9	29.9	19.4	15.7	11.9	12.2

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	89.0		
#4	72.4		
#10	59.2		
#16	50.9		
#30	39.8		
#60	24.1		
#100	18.1		
#200	12.2		

* (no specification provided)

Material Description

Tan Brown cmf Sand, and mf+ Gravel, little- Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 9.9583

D₈₅= 7.9750

D₆₀= 2.1247

D₅₀= 1.1137

D₃₀= 0.3558

D₁₅= 0.1061

D₁₀=

C_u=

C_c=

Classification

USCS=

AASHTO=

Remarks

Source of Sample: B-1 Depth: 10' - 12'
Sample Number: S-6

Date: 4/11/24

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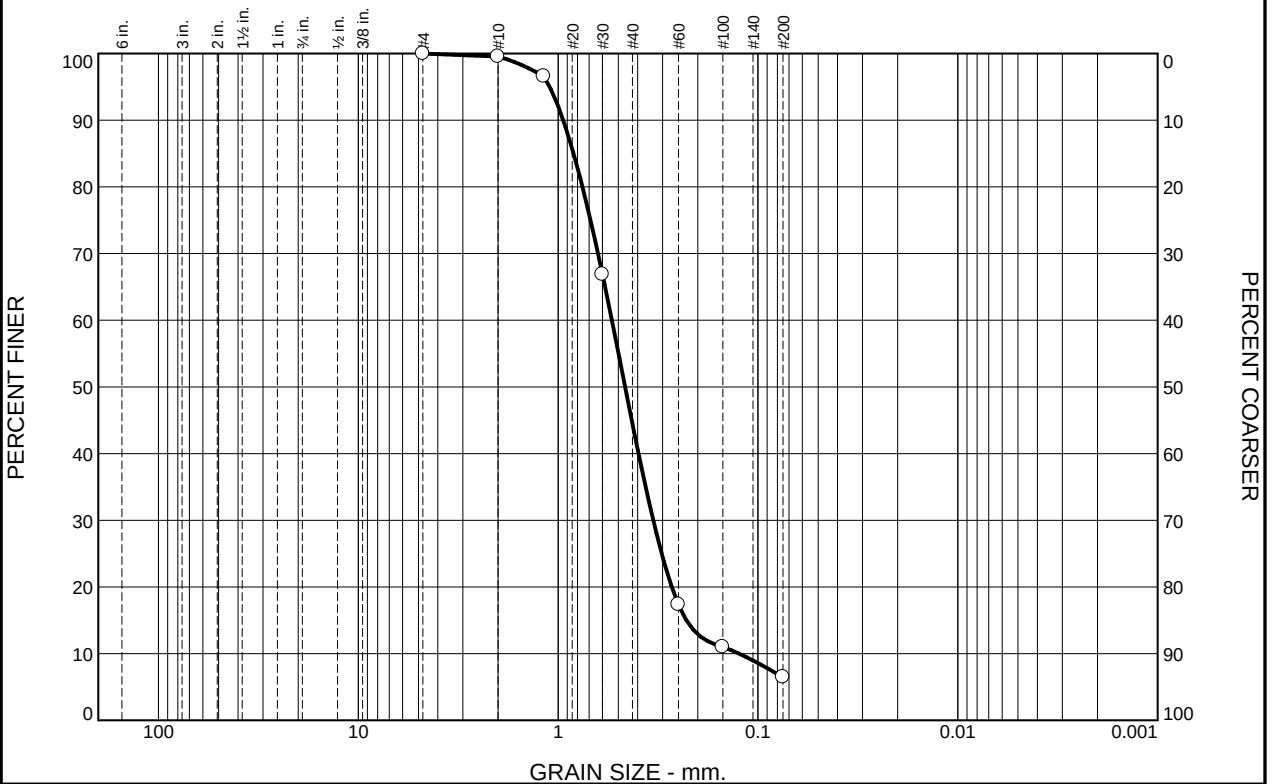
Client: Ocean County Engineering
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468.109
Figure

Tested By: JR

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.4	32.7	49.6	10.8	6.5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.6		
#16	96.6		
#30	66.9		
#60	17.3		
#100	11.0		
#200	6.5		

* (no specification provided)

Material Description

Tan & Orange Brown cm+f SAND, trace Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 0.9431

D₅₀= 0.4623

D₁₀= 0.1243

D₈₅= 0.8370

D₃₀= 0.3342

C_u= 4.33

D₆₀= 0.5385

D₁₅= 0.2281

C_c= 1.67

Classification

USCS=

AASHTO=

Remarks

Source of Sample: B-1 Depth: 15' - 17'
Sample Number: S-7

Date: 4/11/24

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Wall, NJ

Client: Ocean County Engineering
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468.109

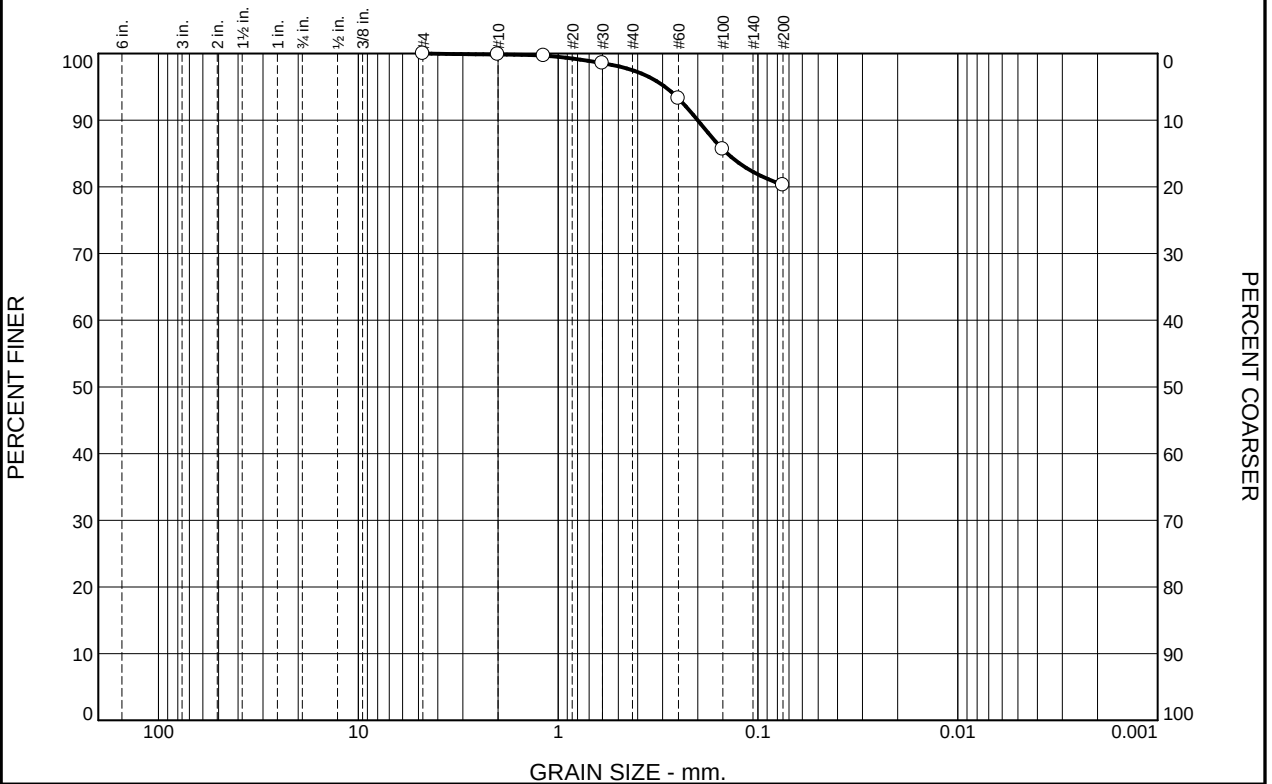
Figure

Tested By: JR

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.1	1.3	5.3	13.0	80.3

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.9		
#16	99.7		
#30	98.6		
#60	93.3		
#100	85.6		
#200	80.3		

* (no specification provided)

Material Description

Light Grey Varved CLAY, little+ mf+ Sand

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 0.2003

D₈₅= 0.1424

D₆₀=

D₅₀=

D₃₀=

D₁₅=

D₁₀=

C_u=

C_c=

Classification

USCS=

AASHTO=

Remarks

Source of Sample: B-1 Depth: 25' - 27'
Sample Number: S-9

Date: 4/11/24

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Wall, NJ

Client: Ocean County Engineering
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468.109

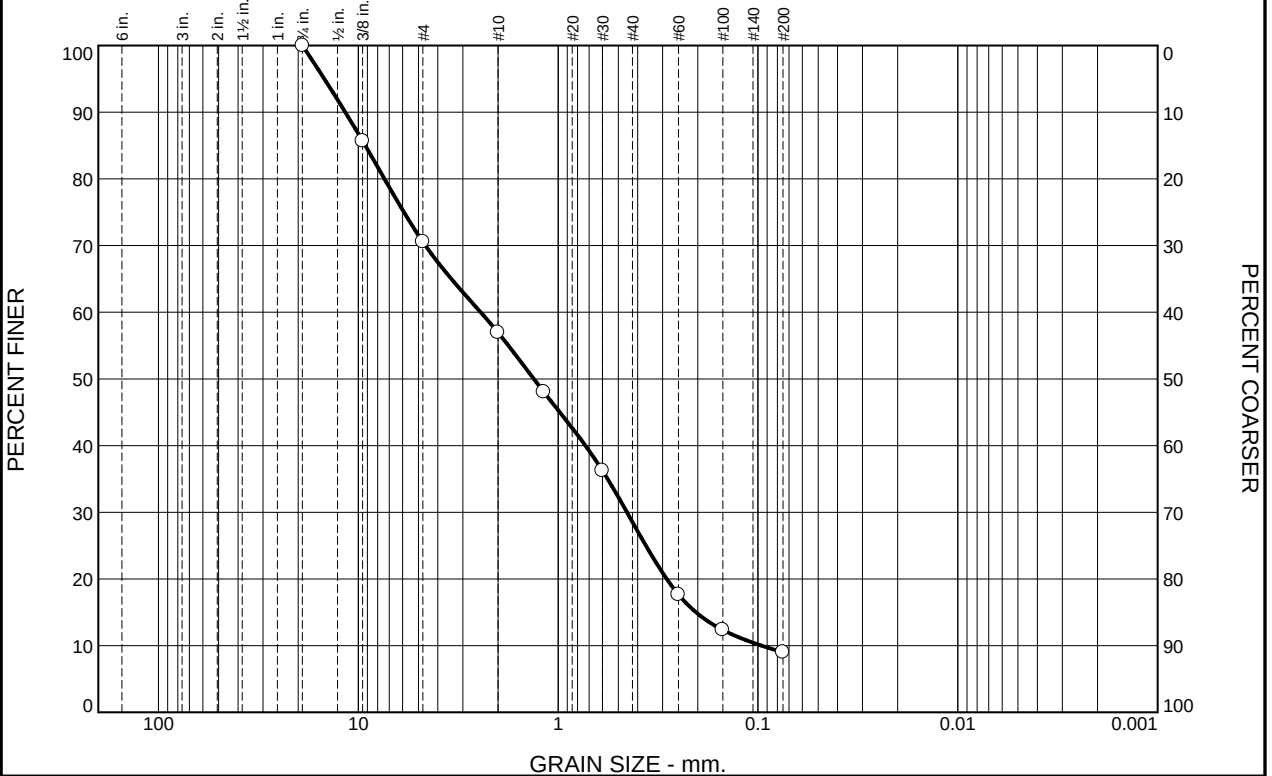
Figure

Tested By: JR

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	14.3	28.7	20.8	18.6	8.6	9.0

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	85.7		
#4	70.5		
#10	57.0		
#16	48.0		
#30	36.2		
#60	17.6		
#100	12.4		
#200	9.0		

* (no specification provided)

Material Description

Brown & Tan cmf- SAND, and mf+ Gravel, trace+ Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 11.6139

D₈₅= 9.2202

D₆₀= 2.4422

D₅₀= 1.3242

D₃₀= 0.4525

D₁₅= 0.2045

D₁₀= 0.0961

C_u= 25.40

C_c= 0.87

Classification

USCS=

AASHTO=

Remarks

Source of Sample: B-2
Sample Number: S-1

Depth: 0' - 2'

Date: 4/11/24

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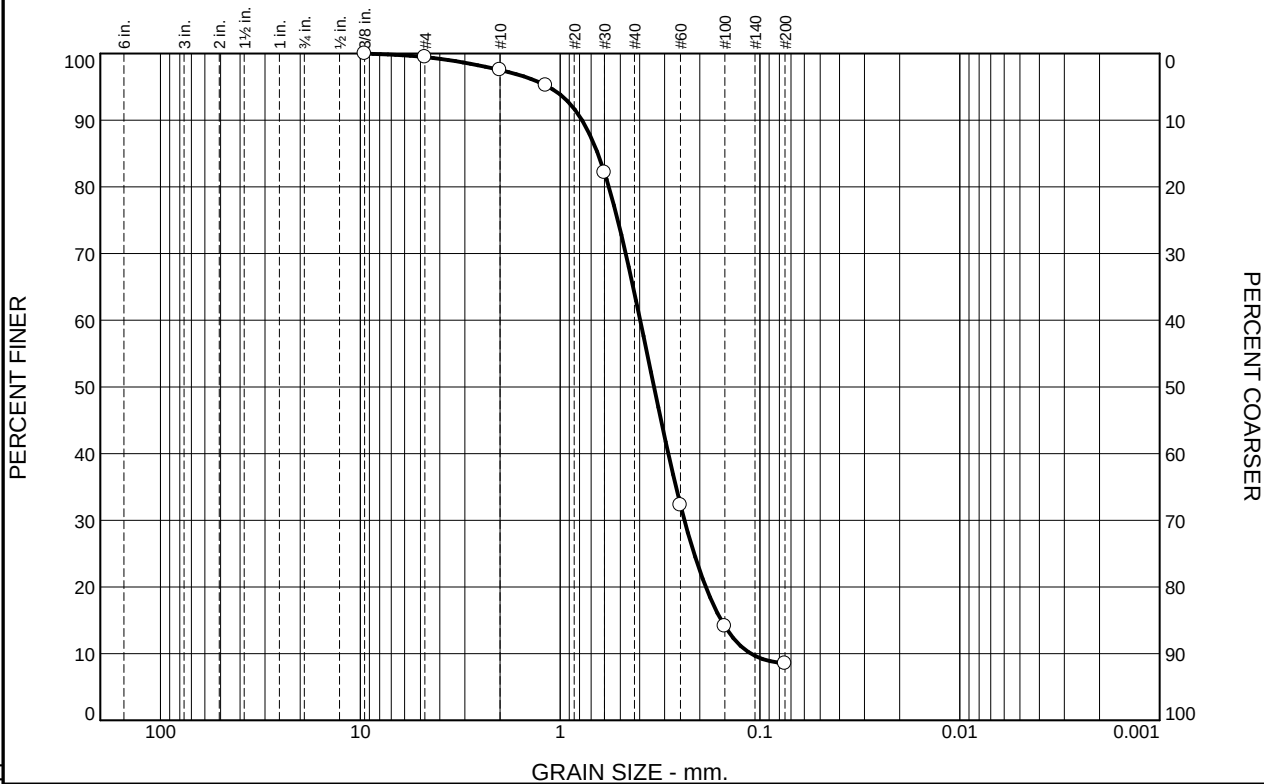
Client: Ocean County Engineering
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468.109
Figure

Tested By: JR

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	2.5	15.4	49.8	23.8	8.5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375	100.0		
#4	99.5		
#10	97.5		
#16	95.2		
#30	82.1		
#60	32.3		
#100	14.1		
#200	8.5		

* (no specification provided)

Material Description

Orange Brown cm+f SAND, trace+ Silt, trace- f Gravel

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 0.7766

D₅₀= 0.3389

D₁₀= 0.1112

D₈₅= 0.6477

D₃₀= 0.2388

C_u= 3.58

D₆₀= 0.3975

D₁₅= 0.1562

C_c= 1.29

Classification

USCS=

AASHTO=

Remarks

Source of Sample: B-2
Sample Number: S-2

Depth: 2' - 4'

Date: 4/11/24

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Wall, NJ

Client: Ocean County Engineering
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468.109

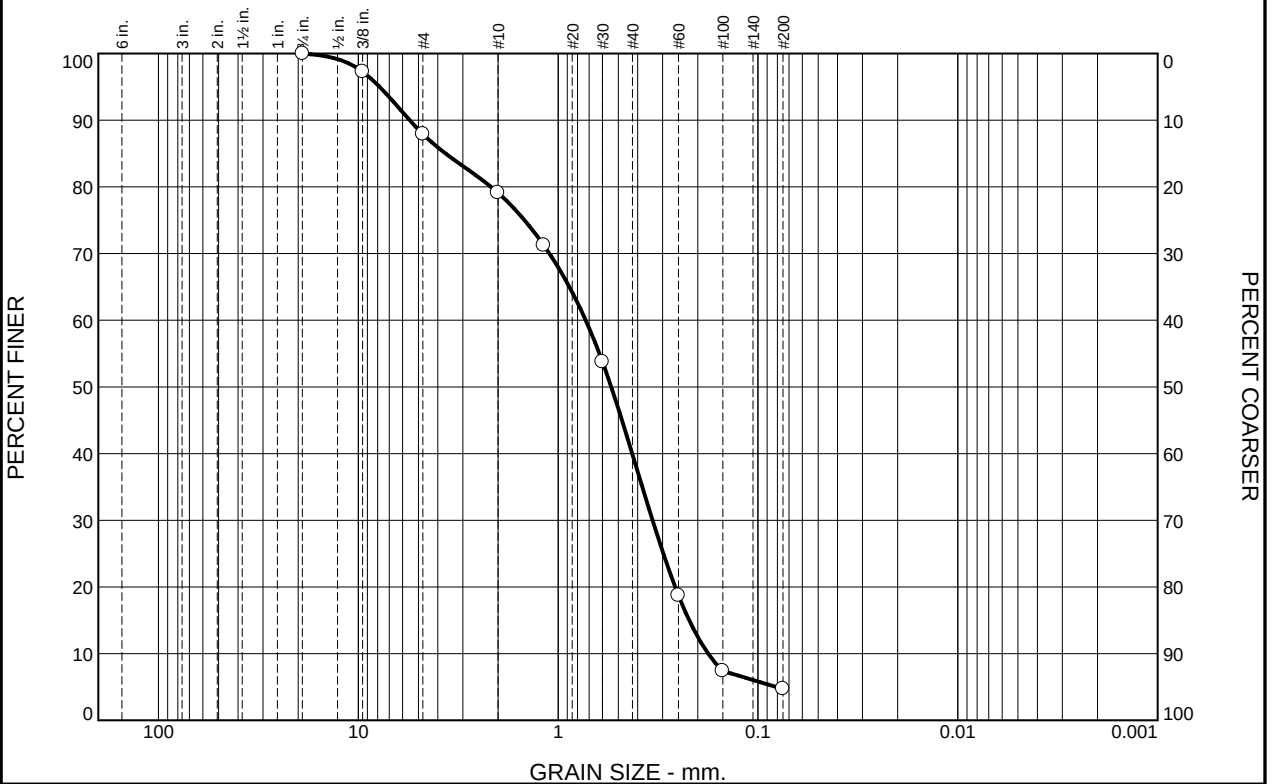
Figure

Tested By: JR

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	2.7	18.2	25.3	35.1	14.0	4.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	97.3		
#4	87.9		
#10	79.1		
#16	71.2		
#30	53.8		
#60	18.7		
#100	7.4		
#200	4.7		

* (no specification provided)

Material Description

Orange Brown cm+f SAND, some- mf+ Gravel, trace Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 5.5285

D₈₅= 3.6579

D₆₀= 0.7275

D₅₀= 0.5425

D₃₀= 0.3369

D₁₅= 0.2208

D₁₀= 0.1776

C_u= 4.10

C_c= 0.88

Classification

USCS= SP

AASHTO=

Remarks

Source of Sample: B-2
Sample Number: S-3

Depth: 4' - 6'

Date: 4/11/24

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Wall, NJ

Client: Ocean County Engineering
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468.109

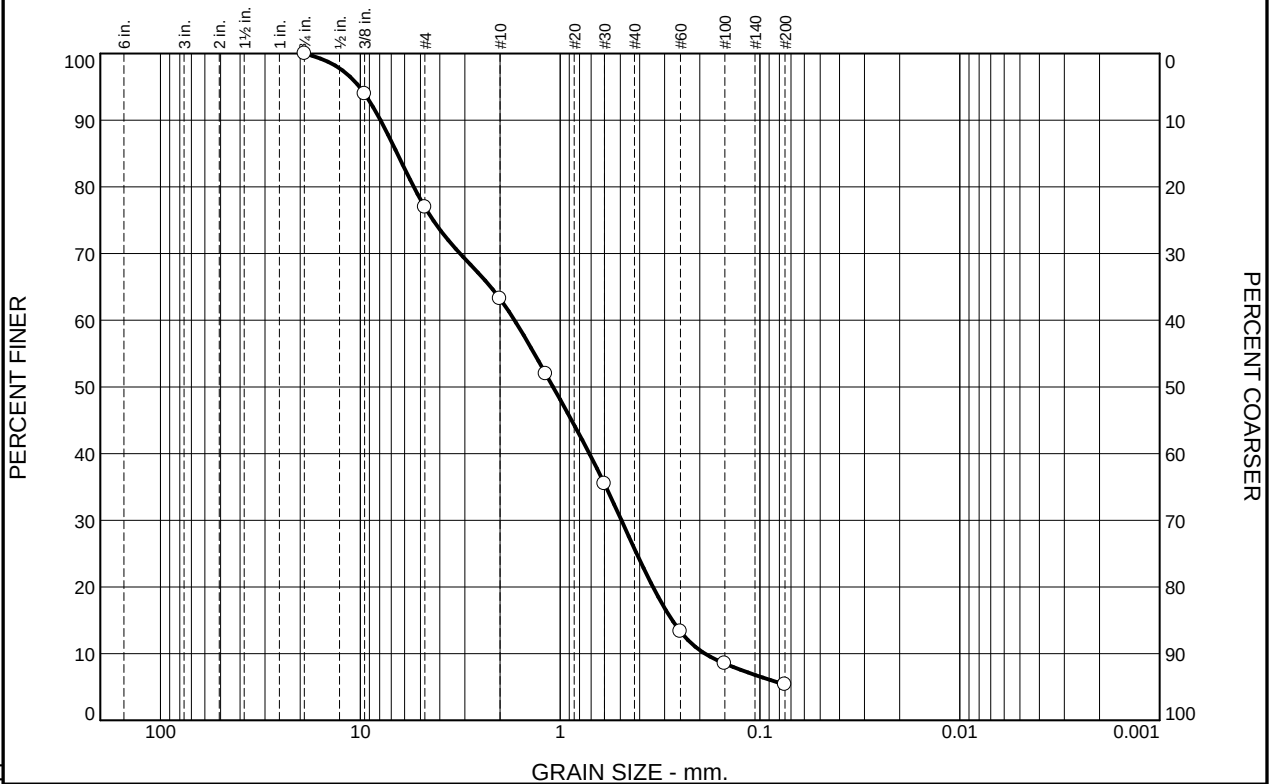
Figure

Tested By: JR

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	6.0	30.8	27.7	22.2	7.9	5.4

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	94.0		
#4	76.9		
#10	63.2		
#16	51.9		
#30	35.5		
#60	13.3		
#100	8.5		
#200	5.4		

* (no specification provided)

Material Description

Yellow Tan Brown c+m SAND, and- mf+ Gravel, trace Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 7.9212

D₈₅= 6.5318

D₆₀= 1.6914

D₅₀= 1.0852

D₃₀= 0.4936

D₁₅= 0.2749

D₁₀= 0.1886

C_u= 8.97

C_c= 0.76

Classification

USCS=

AASHTO=

Remarks

Source of Sample: B-2
Sample Number: S-5

Depth: 8' - 10'

Date: 4/11/24

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CONSULTING ENGINEERS
Wall, NJ

Client: Ocean County Engineering
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468.109

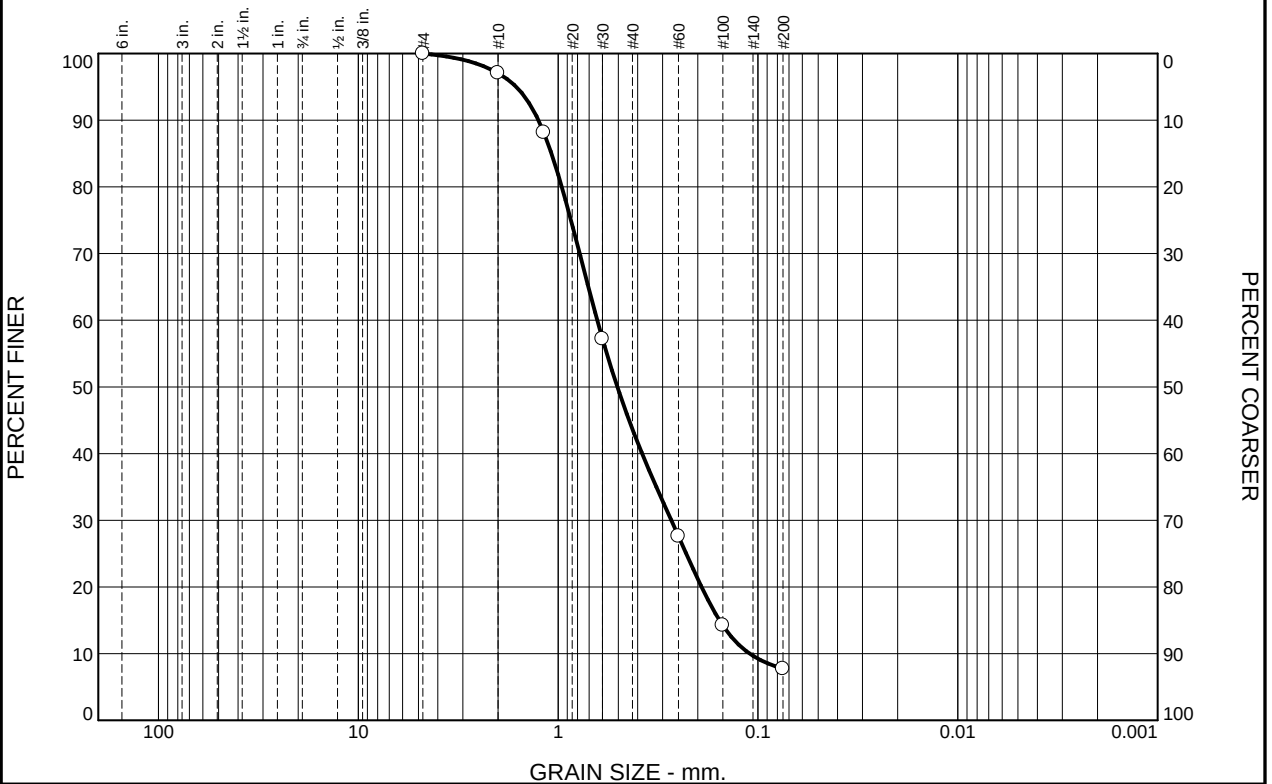
Figure

Tested By: JR

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	2.9	39.9	29.6	19.9	7.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	97.1		
#16	88.2		
#30	57.2		
#60	27.6		
#100	14.2		
#200	7.7		

* (no specification provided)

Material Description

Grey & Tan c+ mf SAND, trace+ Silt, trace- f Gravel

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 1.2549

D₈₅= 1.0798

D₆₀= 0.6372

D₅₀= 0.5056

D₃₀= 0.2716

D₁₅= 0.1559

D₁₀= 0.1101

C_u= 5.79

C_c= 1.05

Classification

USCS=

AASHTO=

Remarks

Source of Sample: B-2
Sample Number: S-7

Depth: 15' - 17'

Date: 4/11/24

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CONSULTING ENGINEERS
Wall, NJ

Client: Ocean County Engineering
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468.109

Figure

Tested By: JR

Checked By: RT



SUMMARY OF LABORATORY TESTING



PROJECT: Ocean County - Route 539 Overpass @ Joint Base MDL

PROJECT #: 1468M.109

DATE: 5/25

Boring & Sample Number	Depth (ft)	Classification	Natural Water Content %	Atterberg Limits				Unit Dry Weight PCF	Specific Gravity	Permeability inches / hour @ 20 deg C	Compaction	Grain Size	Corrosivity	Triaxial	% Passing #200	pH	Organic Content %
				Liquid Limit	Plastic Limit	Plasticity Index											
FPA-3 S-2	2 - 4	Tan cmf SAND, some- mf Gravel, little Clayey Silt	7									*					
FPA-3 S-6	10 - 12	Light Tan c+mf SAND, trace Silt, trace- f Gravel	2									*					
FPA-4 S-2	2 - 4	Orange Brown cmf SAND, some mf Gravel, trace+ Silt	5	Non-Plastic											9.5		
FPA-4 S-3	4 - 6	Tan & Light Orange Brown mf+ GRAVEL, and c+mf Sand, trace Silt	3									*					
FPA-4 S-8	20 - 22	Light Tan cm+f SAND, trace+ Silt	4									*					
FPA-5 S-5	8 - 10	Tan cmf- SAND, trace Silt, trace- f Gravel	4									*					
FPA-5 S-11	35 - 37	Tan & Red Brown cmf+ SAND, little- Clayey Silt, little- f Gravel	11									*					
FPA-6 S-2 & S-3	2 - 6	Orange-Brown cmf SAND, little f Gravel, trace Silt	8										*				
FPA-6 S-6	10 - 12	Light Tan c+mf SAND, trace Silt, trace f Gravel	1									*					
FPA-6 S-10	30 - 32	Orange Brown cm+ SAND, trace+ Clayey Silt	16									*					
FPA-6 S-13	45 - 47	Tan cmf+ SAND, and- Silt & Clay	14	21	13	8									38.5		
FPA-7 S-2	2 - 4	Brown & Tan cmf SAND, some mf+ Gravel, little Clayey Silt	5									*					
FPA-7 S-12	40 - 42	Yellow Brown CLAY & SILT, trace mf Sand	16	32	16	16									94.1		
FPA-7 S-14	50 - 52	Brown cmf+ SAND, some Clayey Silt	21	17	14	3									26.8		
FPA-7 S-15	55 - 57	Light Brown & Tan mf SAND, little- Clayey Silt, trace mf Gravel	21									*					
FPA-8 S-3	4 - 6	Tan mf+ GRAVEL, and c+mf Sand, trace Silt	3									*					
FPA-8 S-13	45 - 47	Brown mf SAND, and+ Silt & Clay	21	23	14	9									46.3		
FPA-8 S-14	50 - 52	Brown & Red Brown m+f SAND, little- Clayey Silt	8									*					
FPA-9 S-4	6 - 8	Tan mf+ Gravel, and+ c+mf Sand, trace Silt	2									*					
FPA-9 S-9	22 - 24	Light Grey cm+f SAND, trace+ Silt	6									*					

* SEE TEST CURVES

Supervising Professional Engineer: Michael W. Schappert, PE



SUMMARY OF LABORATORY TESTING



PROJECT: Ocean County - Route 539 Overpass @ Joint Base MDL

PROJECT #: 1468M.109

DATE: 5/25

Boring & Sample Number	Depth (ft)	Classification	Natural Water Content %	Atterberg Limits				Unit Dry Weight PCF	Specific Gravity	Permeability inches / hour @ 20 deg C	Compaction	Grain Size	Corrosivity	Triaxial	% Passing #200	pH	Organic Content %
				Liquid Limit	Plastic Limit	Plasticity Index											
FPA-10 S-3	4 - 6	Tan cm+f SAND, little+ Clayey Silt, little- mf Gravel	7									*					
FPA-10 S-20	75 - 77	Tan cf+ SAND, some- Silt & Clay, trace+ f Gravel	18									*					
FPA-11 S-4	6 - 8	Tan c+m SAND, and- mf+ Gravel, trace Silt	2									*					
FPA-11 S-17	60 - 62	Tan Brown mf SAND, trace+ Silt	21									*					
FPA-12 S-2	2 - 4	Brown & Tan cm+f SAND, some- mf+ Gravel, little Clayey Silt	6									*					
FPA-12 S-13	35 - 37	Light Tan mf+ SAND, little Clayey Silt	10									*					
FPA-13 S-8	20 - 22	Light Tan cm+f SAND, little- Clayey Silt, trace- f Gravel	11									*					
FPA-13 S-9	25 - 27	Yellow Brown CLAY & SILT, and mf Sand	24	38	19	19									58.8		
FPA-13 S10	30 - 32	Light Grey mf+ SAND, little Silt & Clay	14									*					
FPA-14 S-3 & S-4	4 - 8	Tan cmf SAND, trace+ Silt, trace f Gravel	2										*				
FPA-14 S-5	8 - 10	Tan cm+f SAND, little+ mf+ Gravel, trace Silt	3									*					
FPA-14 S-10	30 - 32	Light Grey mf+ SAND, little Clayey Silt	14									*					
FPA-15 S-2	2 - 4	Orange Brown cm+f SAND, little- f Gravel, little- Silt	6									*					
FPA-15 S-11	35 - 37	Light Grey mf SAND, trace+ Clayey Silt	5									*					
FPA-16 S-4	6 - 8	Orange Brown & Tan cm+ SAND, some mf+ Gravel, trace Silt	5									*					
FPA-16 S-14	50 - 52	Orange Brown m+f SAND, little Silt & Clay	11									*					
FPA-17 S-3	4 - 6	Orange Brown cm+f SAND, some- mf+ Gravel, trace Silt	4									*					
FPA-17 S-9	25 - 27	Light Grey cm+f SAND, trace+ Clayey Silt, trace- f Gravel	9									*					
FPA-18 S-5	8 - 10	Orange Brown & Tan cm SAND, and- mf+ Gravel, trace Silt	3									*					
FPA-18 S-12	40 - 42	Light Grey mf+ SAND, little Clayey Silt	13									*					

* SEE TEST CURVES

Supervising Professional Engineer: Michael W. Schappert, PE



SUMMARY OF LABORATORY TESTING



PROJECT: Ocean County - Route 539 Overpass @ Joint Base MDL

PROJECT #: 1468M.109

DATE: 5/25

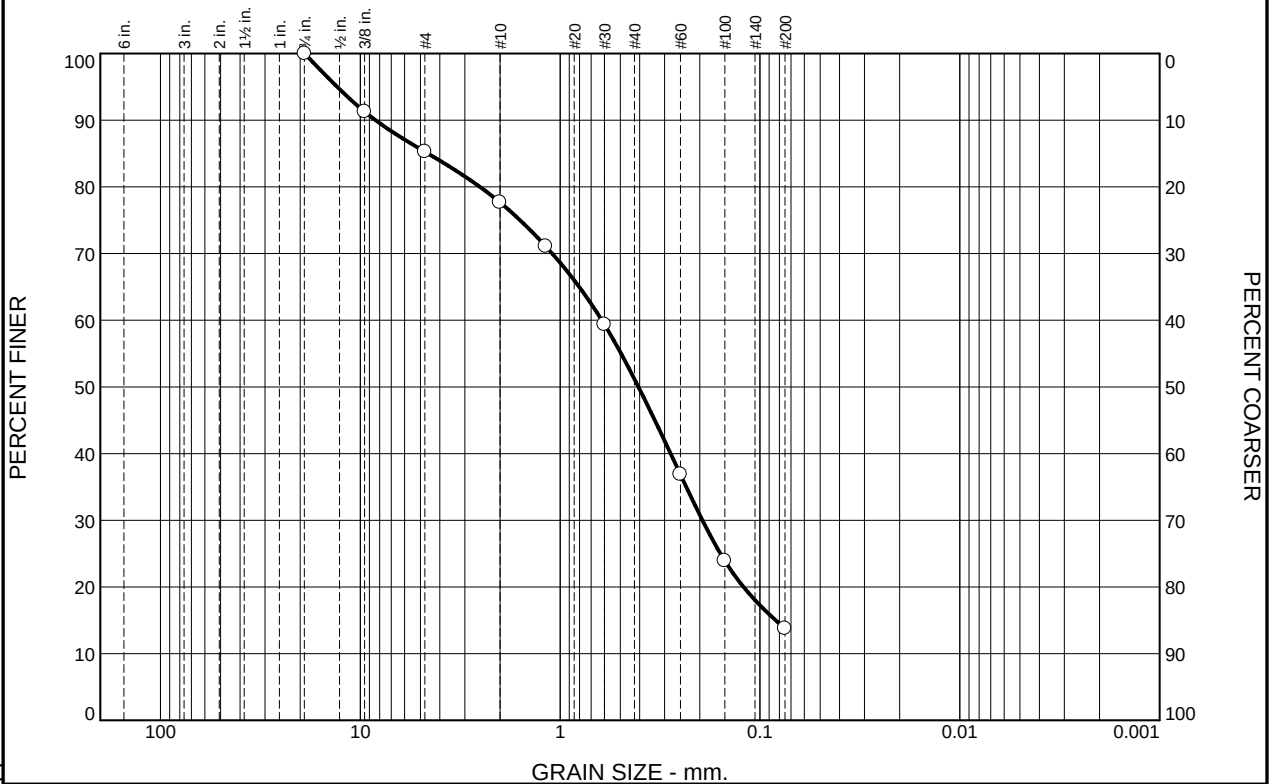
Boring & Sample Number	Depth (ft)	Classification	Natural Water Content %	Atterberg Limits				Unit Dry Weight PCF	Specific Gravity	Permeability inches / hour @ 20 deg C	Compaction	Grain Size	Corrosivity	Triaxial	% Passing #200	pH	Organic Content %
				Liquid Limit	Plastic Limit	Plasticity Index											
FPA-19 S-7	15 - 17	Tan c+mf SAND, and- f Gravel, little- Clayey Silt	3									*					
FPA-19 S-16	60 - 62	Brown & Tan cm+f SAND, trace+ Silt	17									*					
FPA-20 S-2	2 - 4	Brown cm+f SAND, little- Silt, trace+ f Gravel	8									*					
FPA-20 S-12	40 - 42	Brown & Tan cm+ SAND, little+ Clayey Silt	10									*					
FPA-21 S-4	6 - 8	Brown & Orange Brown cm+ SAND, trace f Gravel, trace Silt	4									*					
FPA-21 S-7	15 - 17	Tan cmf- SAND, and mf+ Gravel, trace Silt	4									*					
FPA-22 S-3 & S-4	4 - 8	Orange-Brown mf SAND, trace f Gravel, trace Silt	5										*				
FPA-22 S-6	10 - 12	Tan & Orange Brown cm+f SAND, some- mf+ Gravel, trace+ Silt	5									*					
FPA-22 S-10	30 - 32	Light Tan m+f SAND, little- Silt, trace- f Gravel	6									*					
FPA-25 S-3	4 - 6	Orange Brown & Tan cm+ SAND, little mf Gravel, little- Silt	6									*					
FPA-25 S-5	8 - 10	Tan & Grey cm+f SAND, little mf Gravel, little- Silt	6									*					
FPA-26 S-2	2 - 4	Orange Brown cm+ SAND, little mf+ Gravel, trace- Silt	4									*					
FPA-26 S-6	10 - 12	Tan mf+ Gravel, and+ cmf Sand, trace+ Silt	2									*					
FPA-27 S-5	8 - 10	Tan & Orange Brown mf+ Gravel, and+ c+mf Sand, trace Silt	2									*					
FPA-27 S-7	15 - 17	Tan & Brown c+m SAND, and- mf+ Gravel, trace Silt	9									*					

* SEE TEST CURVES

Supervising Professional Engineer: Michael W. Schappert, PE

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	8.7	13.6	18.3	22.5	23.1	13.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	91.3		
#4	85.3		
#10	77.7		
#16	71.1		
#30	59.4		
#60	36.9		
#100	23.9		
#200	13.8		

* (no specification provided)

Material Description

Tan cmf SAND, some- mf Gravel, little Clayey Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 8.3872

D₈₅= 4.5833

D₆₀= 0.6185

D₅₀= 0.4056

D₃₀= 0.1940

D₁₅= 0.0834

D₁₀=

C_u=

C_c=

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-3
Sample Number: S-2

Depth: 2' - 4'

Date: 5/6/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

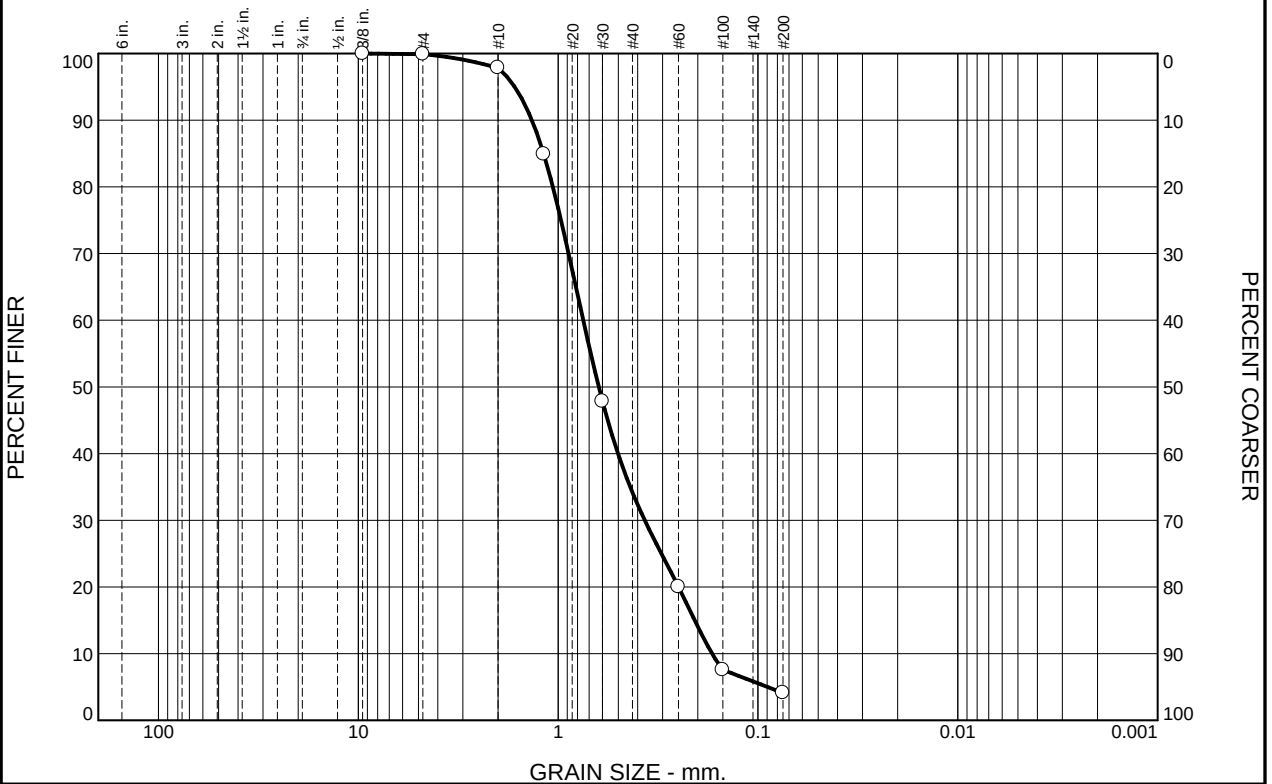
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	2.1	50.1	27.8	15.9	4.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375	100.0		
#4	99.9		
#10	97.9		
#16	84.9		
#30	47.8		
#60	20.0		
#100	7.6		
#200	4.1		

* (no specification provided)

Material Description
Light Tan c+mf SAND, trace Silt, trace- f Gravel

Atterberg Limits
PL= LL= PI=
Coefficients
D₉₀= 1.3534 D₈₅= 1.1824 D₆₀= 0.7485
D₅₀= 0.6262 D₃₀= 0.3687 D₁₅= 0.2074
D₁₀= 0.1697 C_u= 4.41 C_c= 1.07

Classification
USCS= SP AASHTO=

Remarks

Source of Sample: FPA-3 Depth: 10' - 12'
Sample Number: S-6

Date: 5/6/25

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CONSULTING ENGINEERS
Wall, NJ

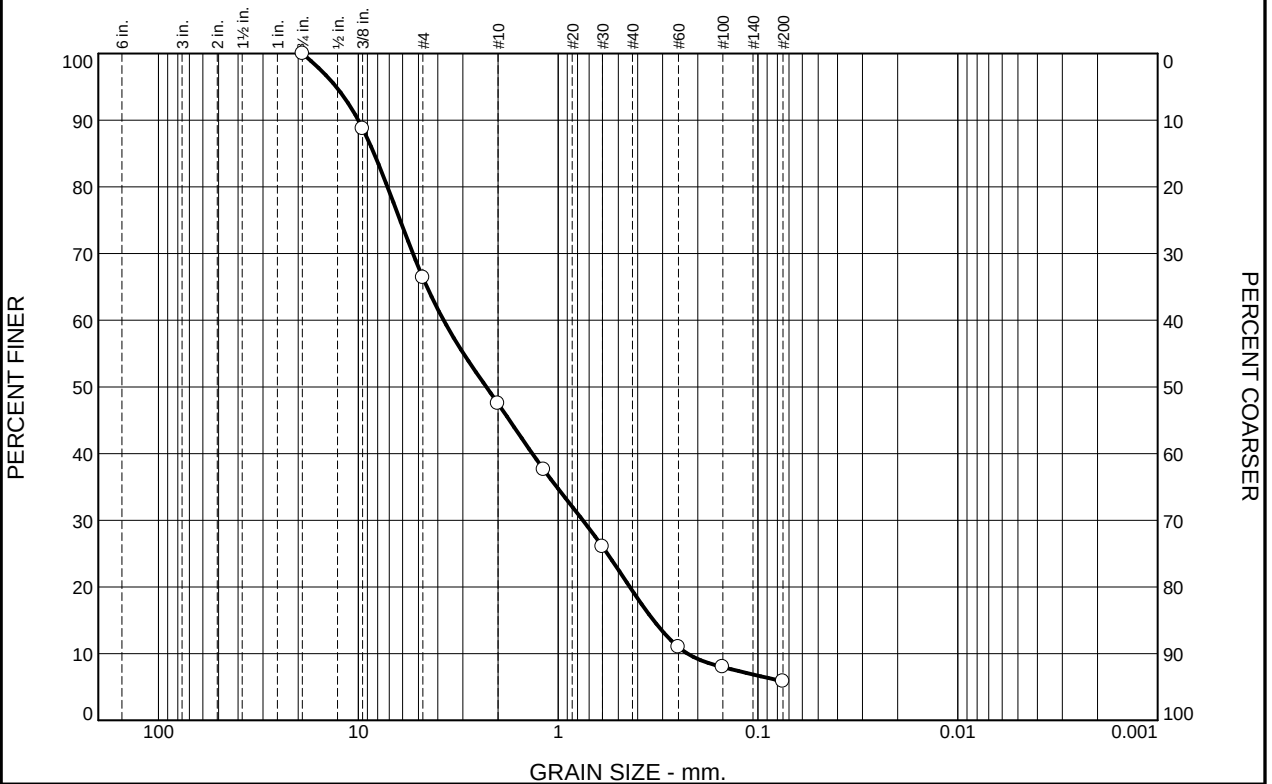
Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	11.2	41.3	21.5	15.0	5.2	5.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	88.7		
#4	66.4		
#10	47.5		
#16	37.6		
#30	26.0		
#60	11.0		
#100	8.0		
#200	5.8		

* (no specification provided)

Material Description

Tan & Light Orange Brown mf+ GRAVEL, and c+mf Sand, trace Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 9.9967

D₈₅= 8.3355

D₆₀= 3.7423

D₅₀= 2.2876

D₃₀= 0.7523

D₁₅= 0.3333

D₁₀= 0.2251

C_u= 16.63

C_c= 0.67

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-4
Sample Number: S-3

Depth: 4' - 6'

Date: 5/6/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

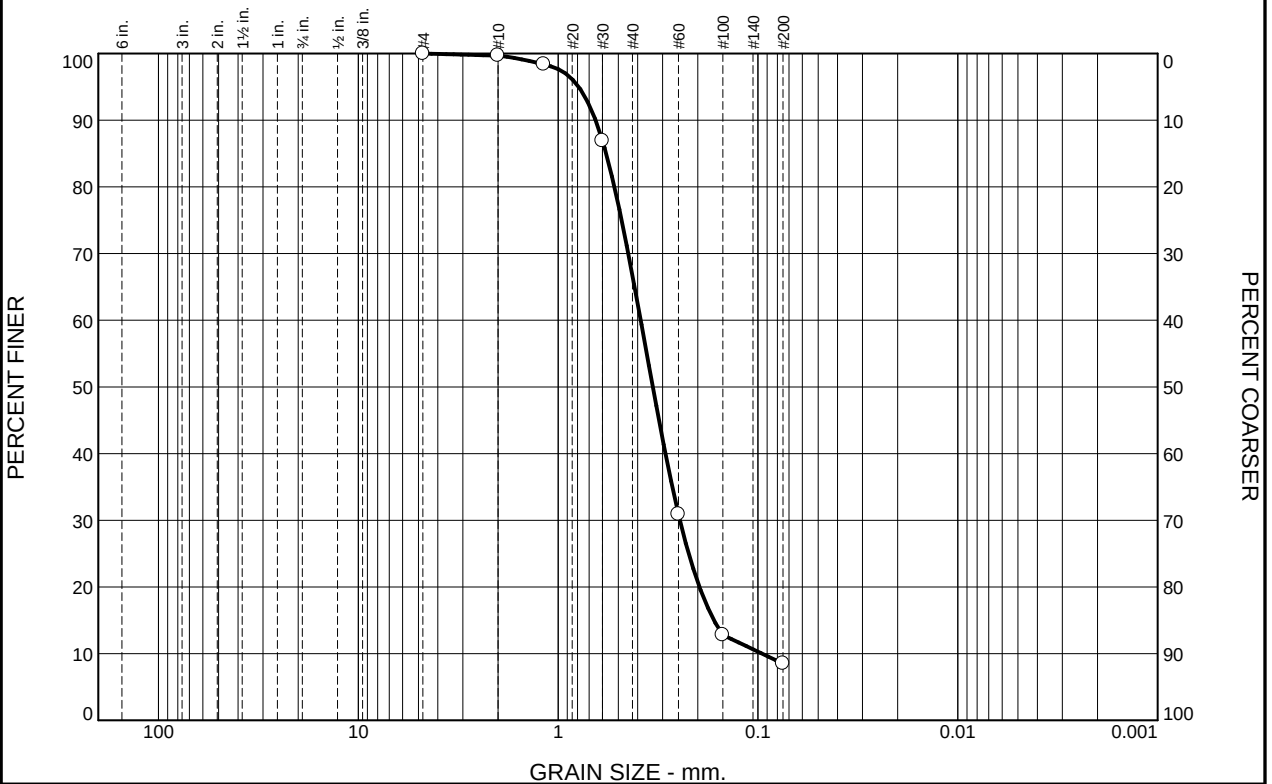
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.3	12.8	56.0	22.4	8.5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.7		
#16	98.4		
#30	86.9		
#60	30.9		
#100	12.8		
#200	8.5		

* (no specification provided)

Material Description		
Light Tan cm+f SAND, trace+ Silt		
Atterberg Limits		
PL=	LL=	PI=
Coefficients		
D ₉₀ = 0.6496	D ₈₅ = 0.5753	D ₆₀ = 0.3862
D ₅₀ = 0.3359	D ₃₀ = 0.2459	D ₁₅ = 0.1661
D ₁₀ = 0.0954	C _u = 4.05	C _c = 1.64
Classification		
USCS=	AASHTO=	
Remarks		

Source of Sample: FPA-4
Sample Number: S-8

Depth: 20' - 22'

Date: 5/6/25

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Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

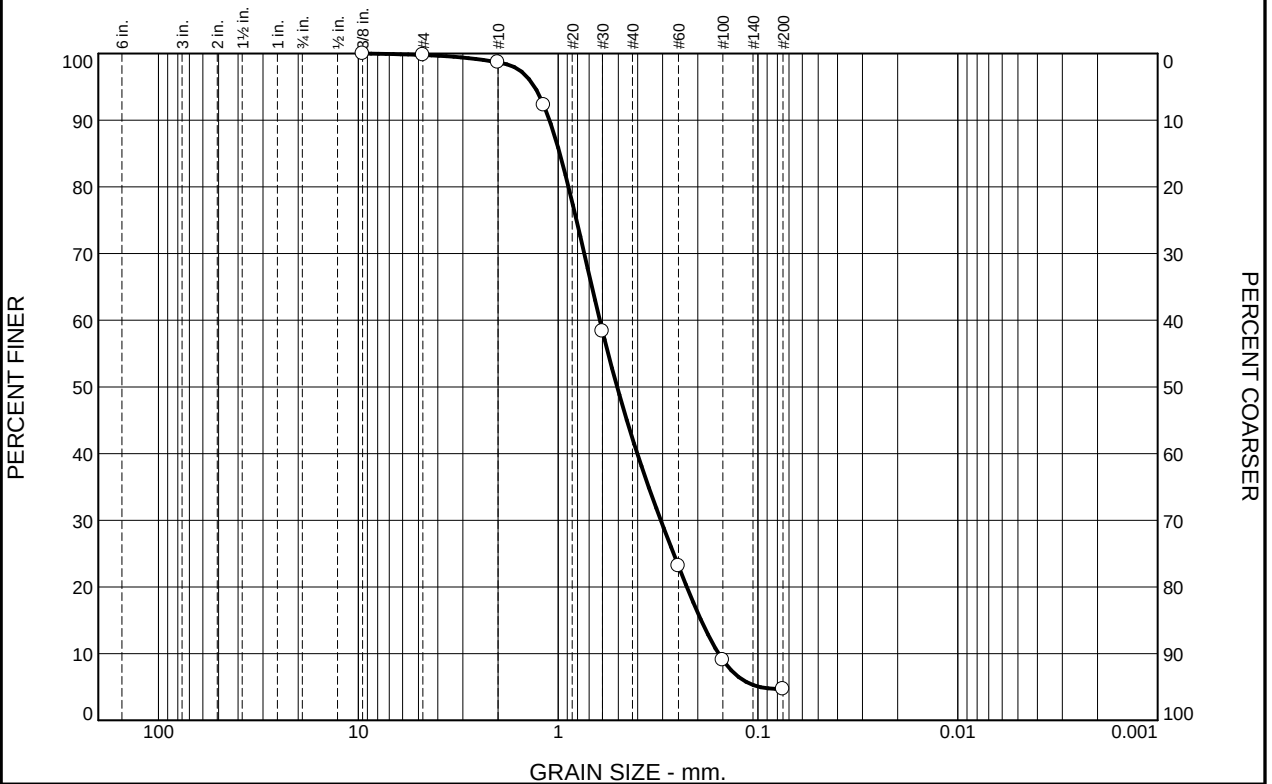
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	1.3	40.3	35.2	18.5	4.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375	100.0		
#4	99.8		
#10	98.7		
#16	92.3		
#30	58.4		
#60	23.2		
#100	9.1		
#200	4.7		

* (no specification provided)

Material Description

Tan cmf- SAND, trace Silt, trace- f Gravel

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 1.1047

D₈₅= 0.9816

D₆₀= 0.6186

D₅₀= 0.5068

D₃₀= 0.3064

D₁₅= 0.1925

D₁₀= 0.1575

C_u= 3.93

C_c= 0.96

Classification

USCS= SP

AASHTO=

Remarks

Source of Sample: FPA-5
Sample Number: S-5

Depth: 8' - 10'

Date: 5/6/25

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CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

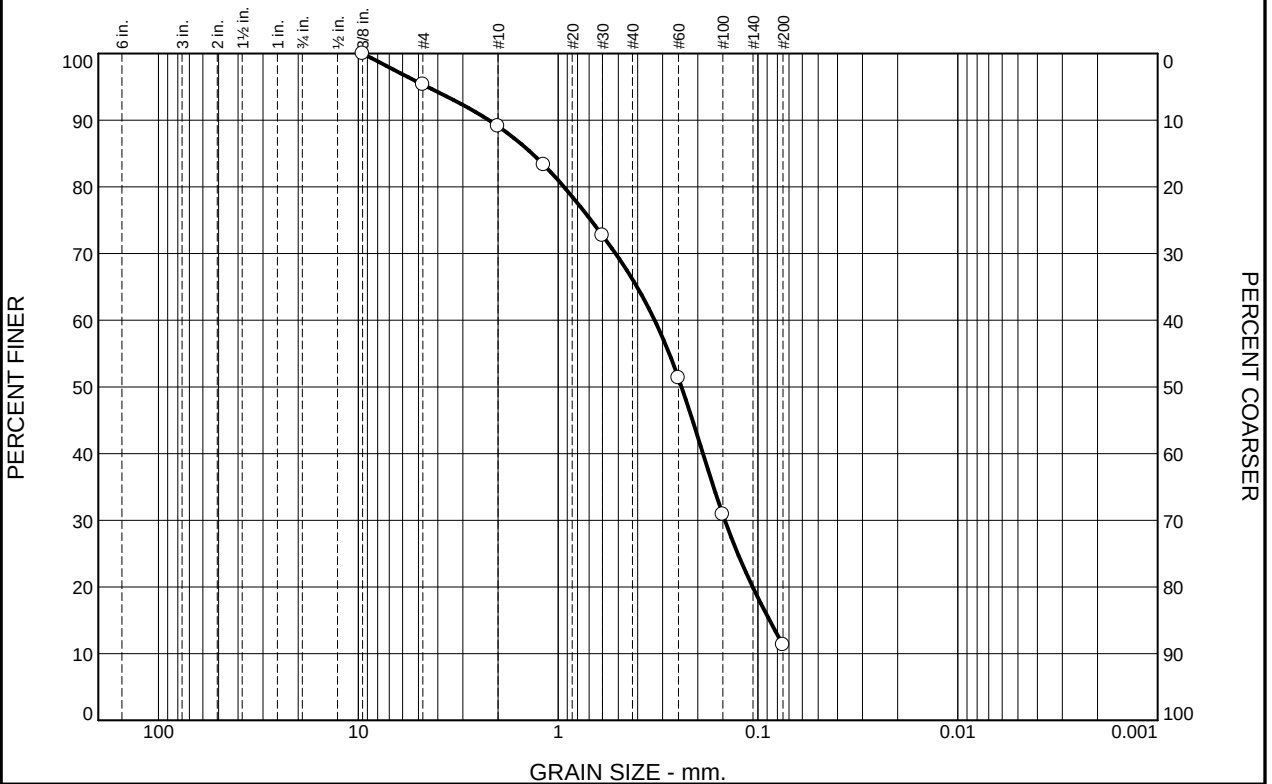
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	10.9	16.4	21.4	40.0	11.3

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375	100.0		
#4	95.3		
#10	89.1		
#16	83.3		
#30	72.7		
#60	51.3		
#100	30.9		
#200	11.3		

* (no specification provided)

Material Description

Tan & Red Brown cmf+ SAND, little- Clayey Silt, little- f Gravel

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 2.2189

D₈₅= 1.3506

D₆₀= 0.3288

D₅₀= 0.2412

D₃₀= 0.1465

D₁₅= 0.0875

D₁₀=

C_u=

C_c=

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-5
Sample Number: S-11

Depth: 35' - 37'

Date: 5/6/25

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CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

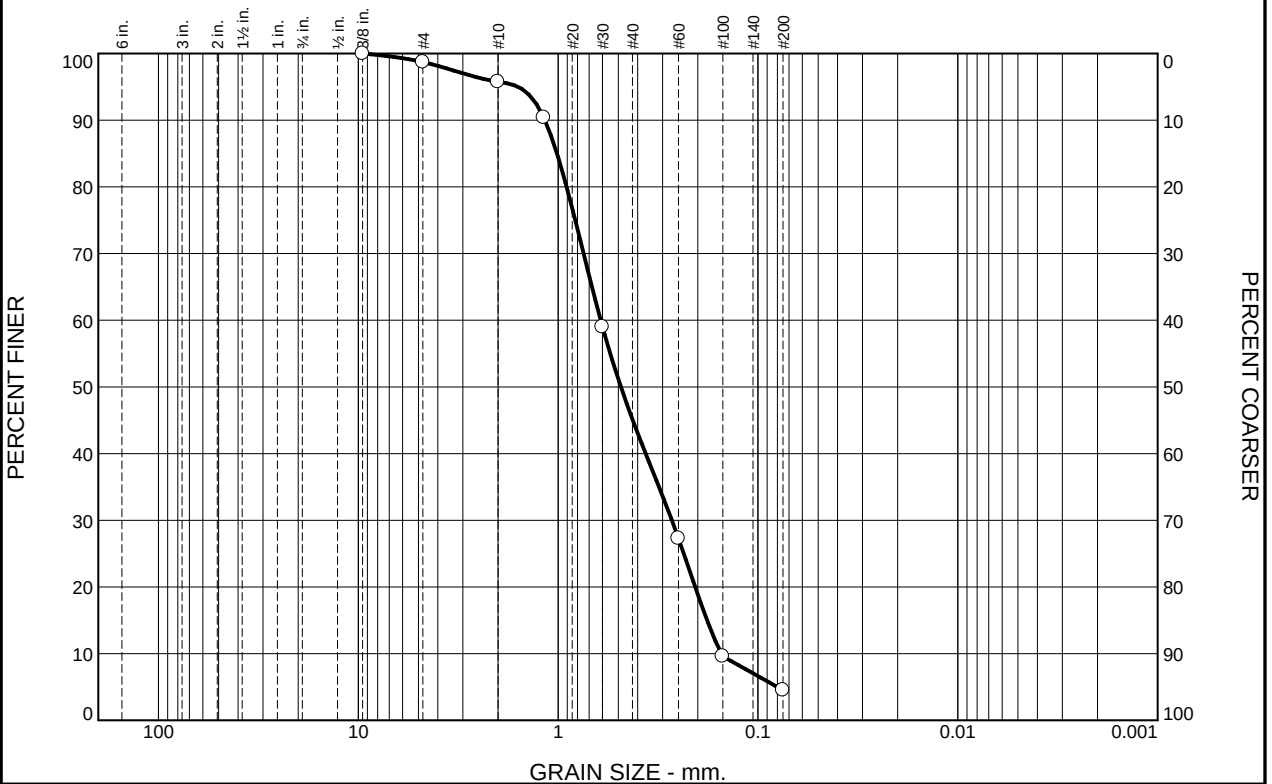
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	4.2	36.8	31.7	22.8	4.5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375	100.0		
#4	98.7		
#10	95.8		
#16	90.4		
#30	59.0		
#60	27.3		
#100	9.6		
#200	4.5		

* (no specification provided)

Material Description
Light Tan c+mf SAND, trace Silt, trace f Gravel

PL= **Atterberg Limits** LL= PI=

Coefficients

D₉₀= 1.1647 D₈₅= 1.0134 D₆₀= 0.6127
D₅₀= 0.4851 D₃₀= 0.2698 D₁₅= 0.1798
D₁₀= 0.1525 C_u= 4.02 C_c= 0.78

USCS= SP **Classification** AASHTO=

Remarks

Source of Sample: FPA-6 Depth: 10' - 12'
Sample Number: S-6

Date: 5/6/25

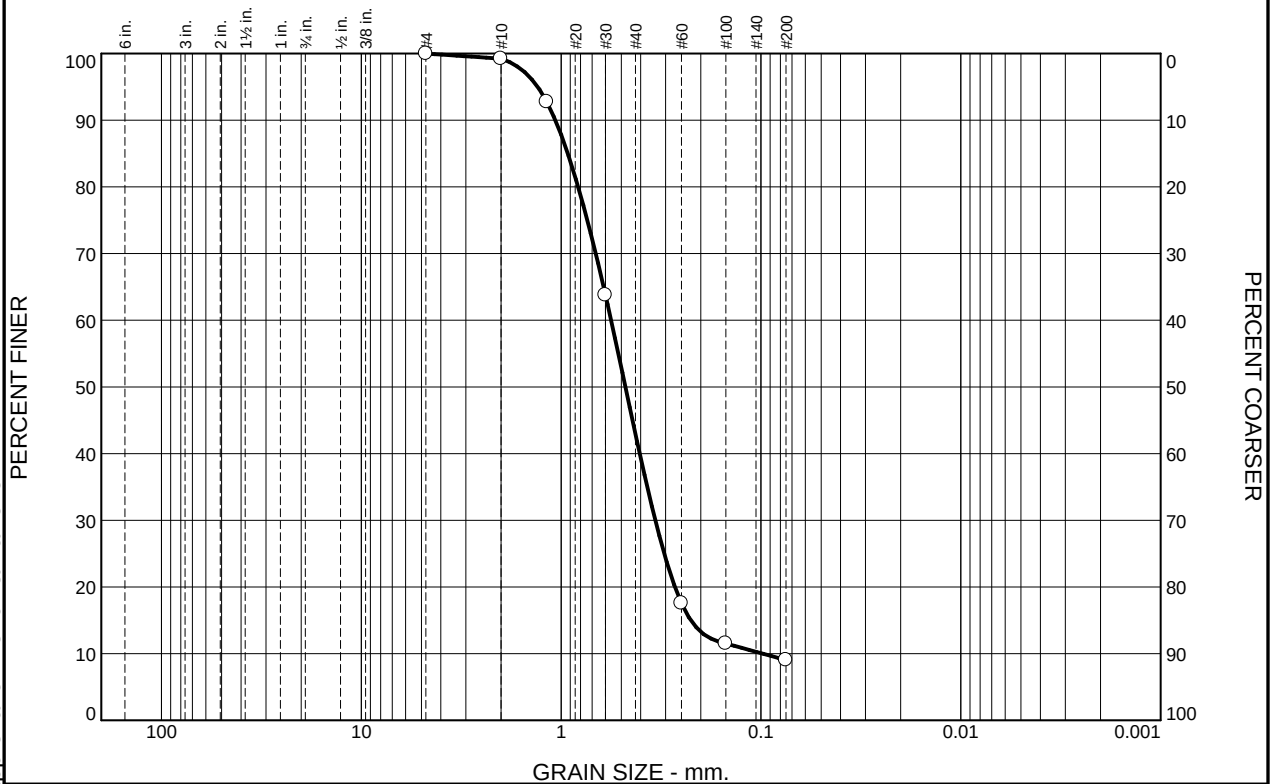
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Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109 Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.8	35.4	46.2	8.6	9.0

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.2		
#16	92.7		
#30	63.8		
#60	17.6		
#100	11.5		
#200	9.0		

* (no specification provided)

Material Description

Orange Brown cm+ SAND, trace+ Clayey Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 1.0692

D₈₅= 0.9263

D₆₀= 0.5626

D₅₀= 0.4770

D₃₀= 0.3378

D₁₅= 0.2245

D₁₀= 0.0981

C_u= 5.74

C_c= 2.07

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-6
Sample Number: S-10

Depth: 30' - 32'

Date: 5/6/25

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Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

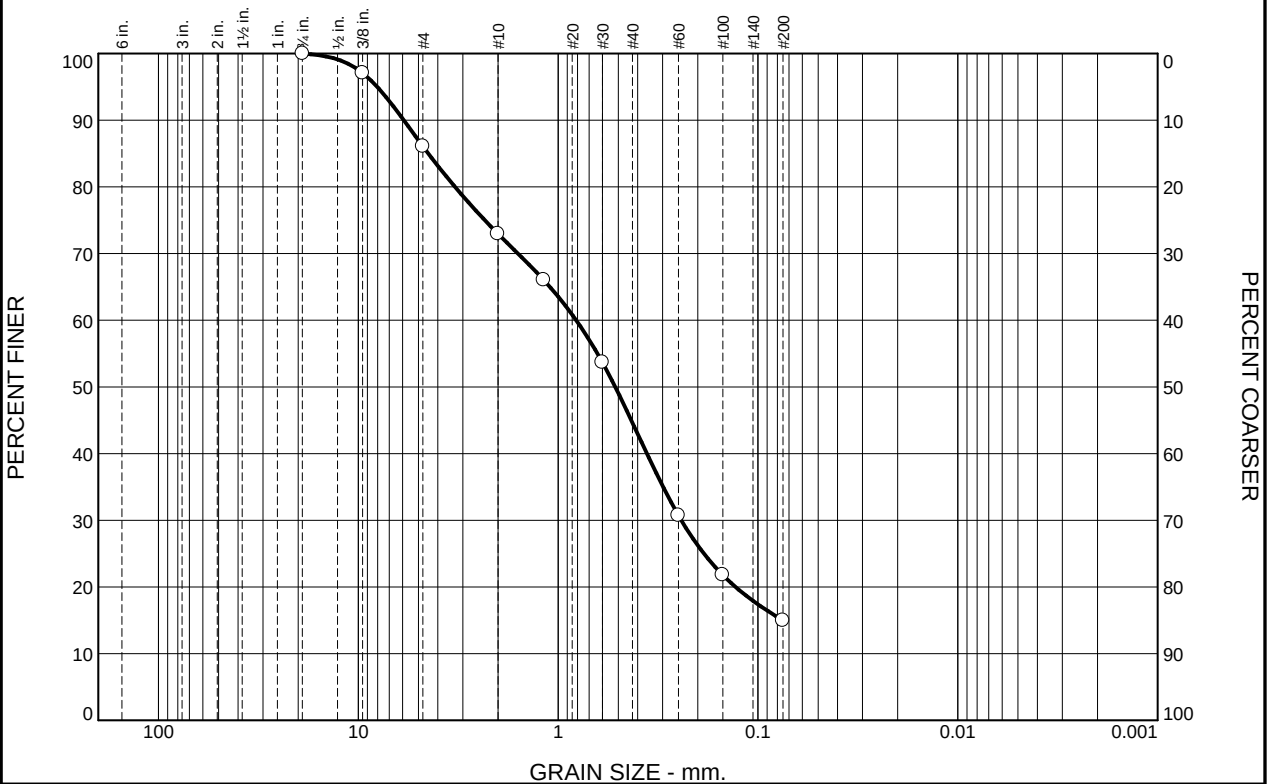
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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	2.9	24.1	19.3	23.0	15.7	15.0

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	97.1		
#4	86.1		
#10	73.0		
#16	66.0		
#30	53.7		
#60	30.7		
#100	21.8		
#200	15.0		

* (no specification provided)

Material Description

Brown & Tan cmf SAND, some mf+ Gravel, little Clayey Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 5.9214

D₈₅= 4.4649

D₆₀= 0.8123

D₅₀= 0.5181

D₃₀= 0.2421

D₁₅= 0.0754

D₁₀=

C_u=

C_c=

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-7
Sample Number: S-2

Depth: 2' - 4'

Date: 5/6/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

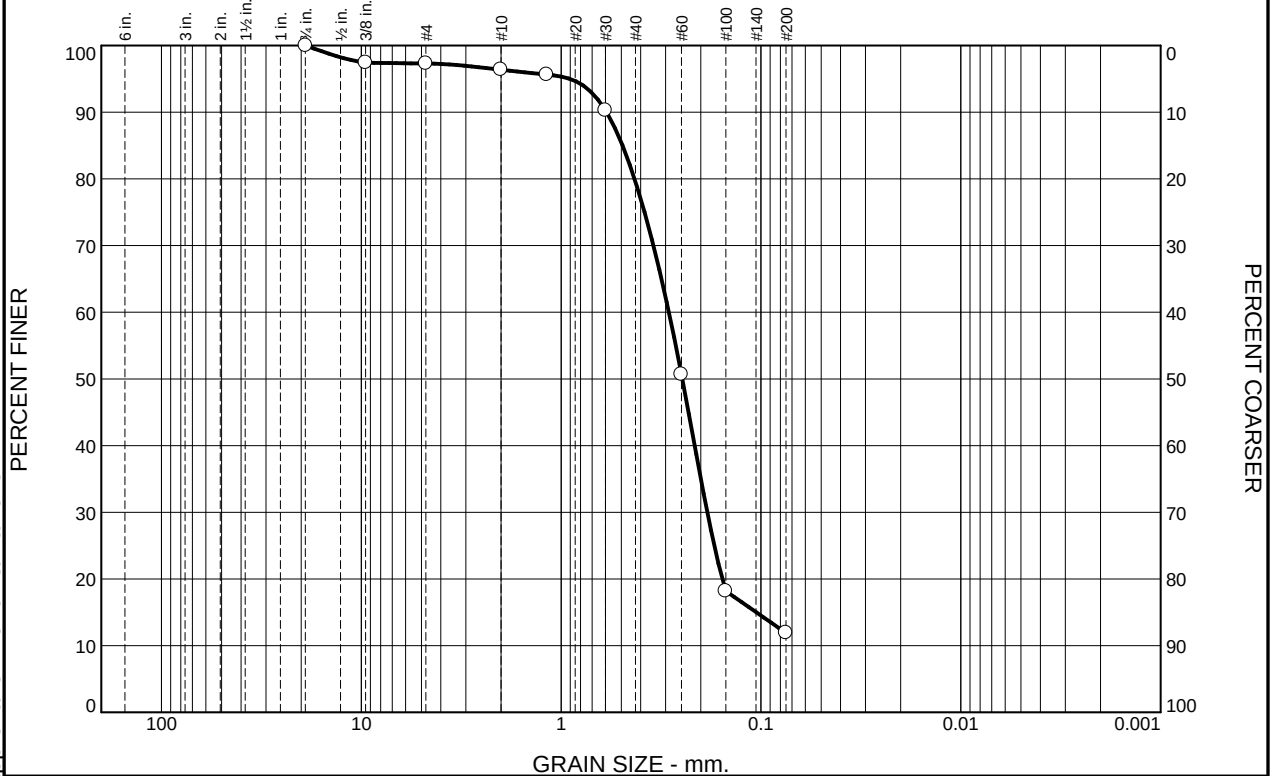
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	2.6	1.0	6.1	39.6	38.8	11.9

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	97.4		
#4	97.3		
#10	96.4		
#16	95.6		
#30	90.3		
#60	50.7		
#100	18.2		
#200	11.9		

* (no specification provided)

Material Description

Light Brown & Tan mf SAND, little- Clayey Silt, trace mf Gravel

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 0.5926

D₅₀= 0.2475

D₁₀=

D₈₅= 0.4929

D₃₀= 0.1856

C_u=

D₆₀= 0.2890

D₁₅= 0.1056

C_c=

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-7
Sample Number: S-15

Depth: 55' - 57'

Date: 5/7/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

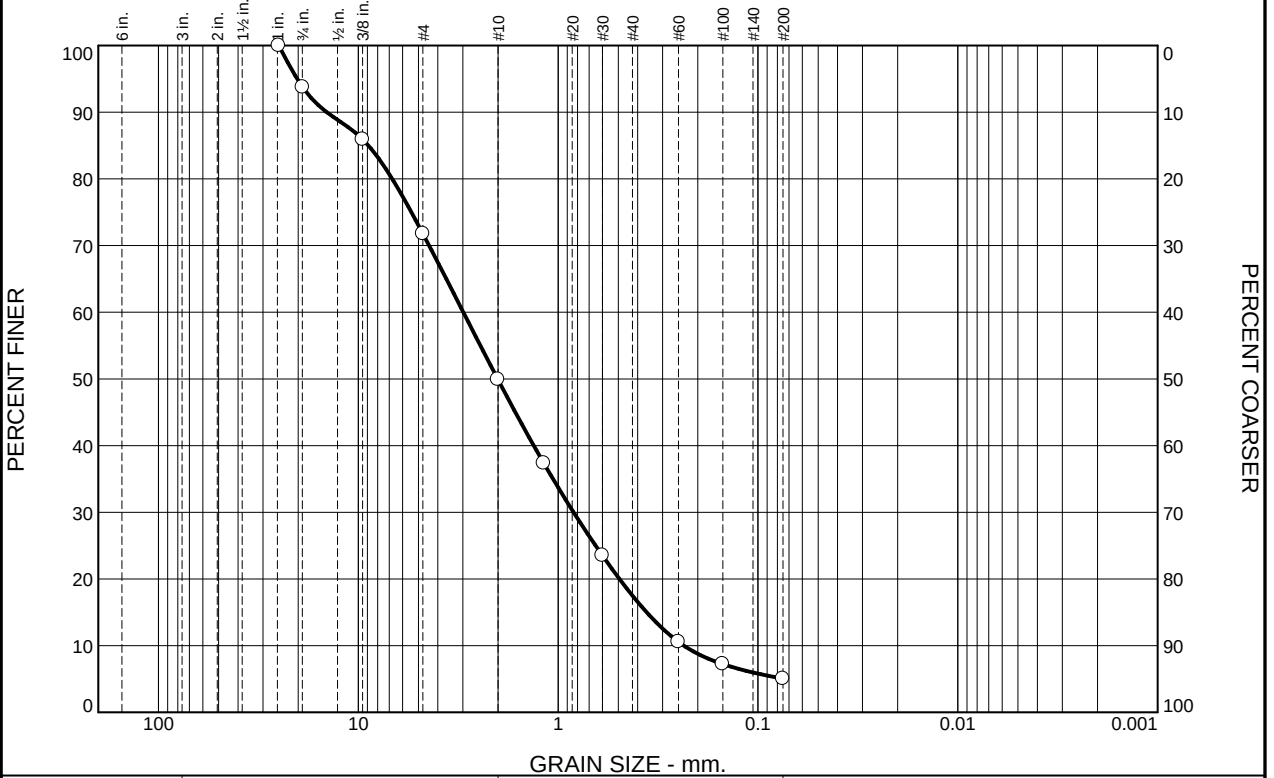
Figure

Tested By: CS

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	14.0	36.1	26.4	12.9	5.6	5.0

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1	100.0		
.75	93.8		
.375	85.9		
#4	71.8		
#10	49.9		
#16	37.4		
#30	23.5		
#60	10.6		
#100	7.2		
#200	5.0		

* (no specification provided)

Material Description
Tan mf+ GRAVEL, and c+mf Sand, trace Silt

PL=

Atterberg Limits
LL=

PI=

D₉₀= 14.3829
D₅₀= 2.0077
D₁₀= 0.2351

Coefficients
D₈₅= 8.8942
D₃₀= 0.8370
C_u= 12.68

D₆₀= 2.9812
D₁₅= 0.3607
C_c= 1.00

USCS=

Classification
AASHTO=

Remarks

Source of Sample: FPA-8 Depth: 4' - 6'
Sample Number: S-3

Date: 5/7/25

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CONSULTING ENGINEERS
Wall, NJ

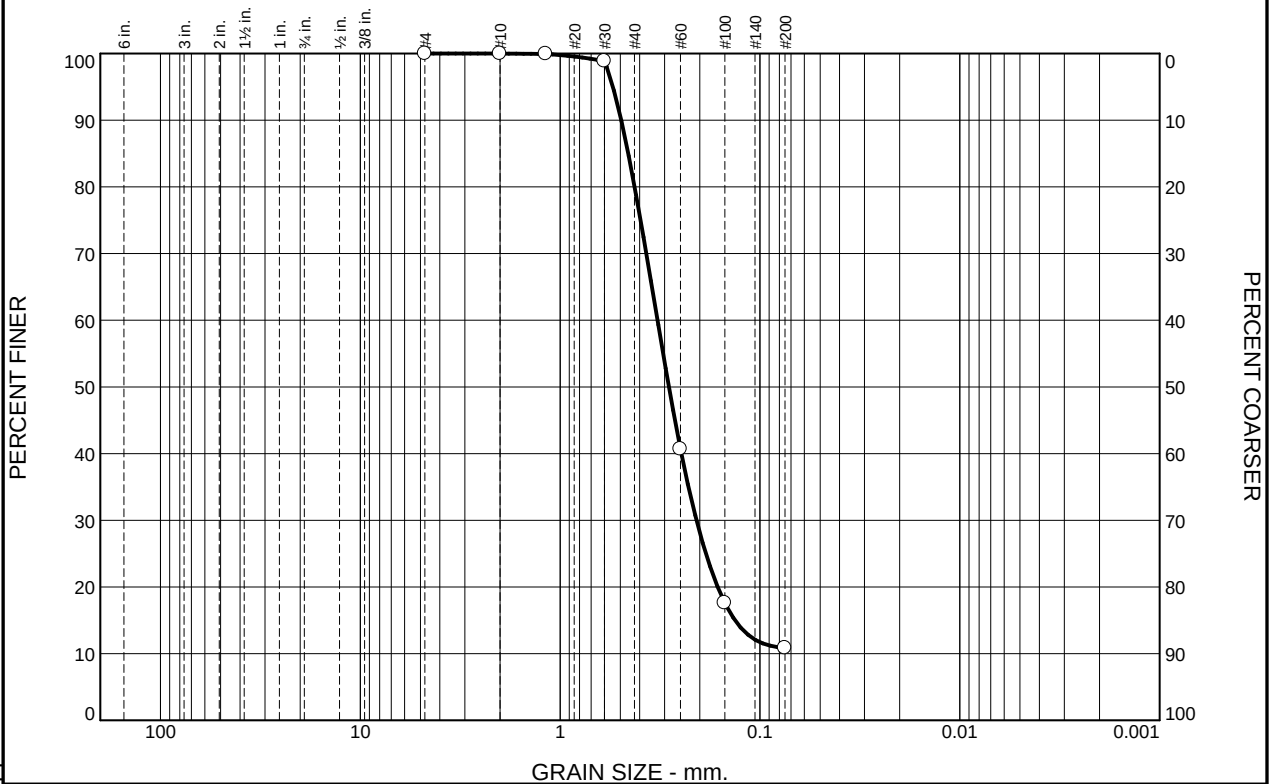
Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.0	1.1	58.2	29.9	10.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	100.0		
#16	99.9		
#30	98.9		
#60	40.7		
#100	17.6		
#200	10.8		

* (no specification provided)

Material Description

Brown & Red Brown m+f SAND, little- Clayey Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 0.4947

D₅₀= 0.2856

D₁₀=

D₈₅= 0.4562

D₃₀= 0.2078

C_u=

D₆₀= 0.3256

D₁₅= 0.1334

C_c=

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-8
Sample Number: S-14

Depth: 50' - 52'

Date: 5/7/25

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Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

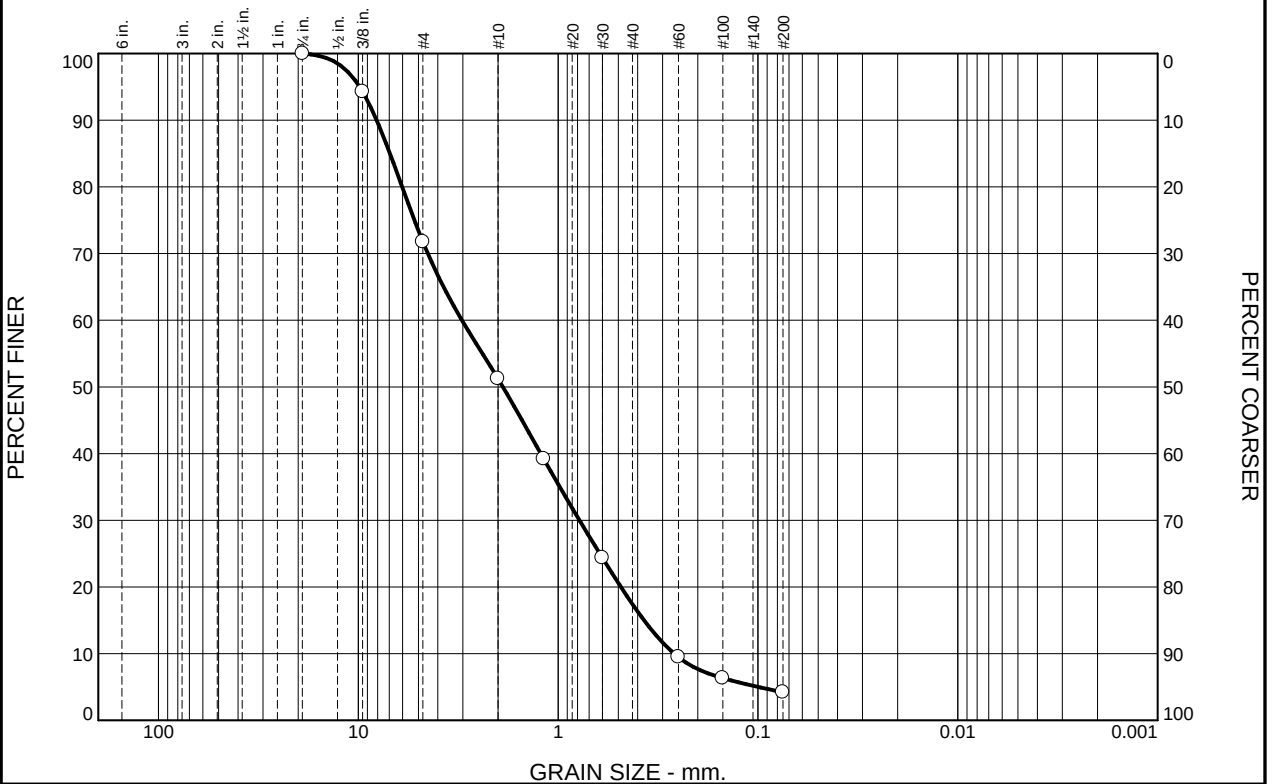
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	5.7	43.1	26.8	14.9	5.3	4.2

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	94.3		
#4	71.8		
#10	51.2		
#16	39.2		
#30	24.4		
#60	9.5		
#100	6.3		
#200	4.2		

* (no specification provided)

Material Description

Tan mf+ Gravel, and+ c+mf Sand, trace Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 8.0940

D₈₅= 6.9458

D₆₀= 3.0297

D₅₀= 1.8902

D₃₀= 0.7820

D₁₅= 0.3715

D₁₀= 0.2629

C_u= 11.53

C_c= 0.77

Classification

USCS= SP

AASHTO=

Remarks

Source of Sample: FPA-9
Sample Number: S-4

Depth: 6' - 8'

Date: 5/7/25

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CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

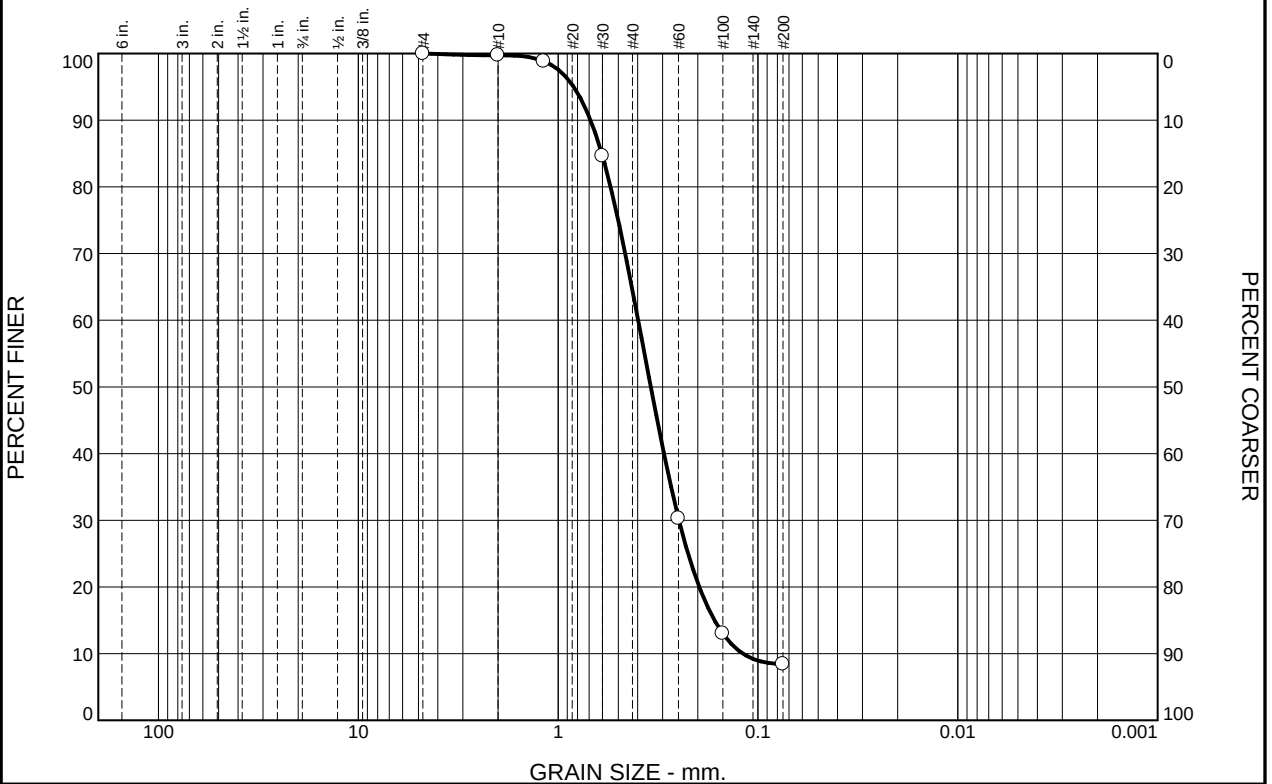
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.3	15.1	54.3	21.9	8.4

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.7		
#16	98.8		
#30	84.6		
#60	30.3		
#100	13.0		
#200	8.4		

* (no specification provided)

Material Description
Light Grey cm+f SAND, trace+ Silt

PL= **Atterberg Limits** LL= PI=

Coefficients

D₉₀= 0.6882 D₈₅= 0.6048 D₆₀= 0.3976
D₅₀= 0.3437 D₃₀= 0.2486 D₁₅= 0.1651
D₁₀= 0.1191 C_u= 3.34 C_c= 1.31

USCS= **Classification** AASHTO=

Remarks

Source of Sample: FPA-9
Sample Number: S-9

Depth: 22' - 24'

Date: 5/7/25

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Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

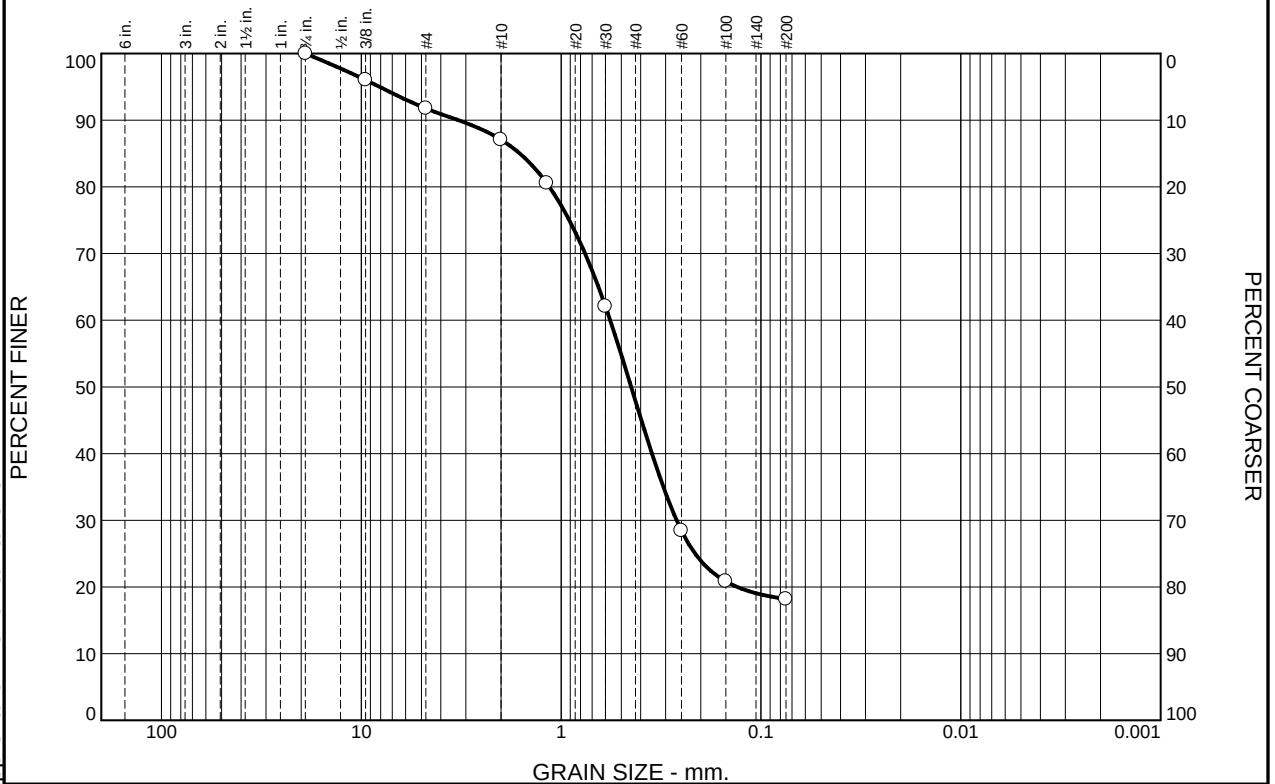
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	4.0	8.9	25.0	33.7	10.2	18.2

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	96.0		
#4	91.8		
#10	87.1		
#16	80.6		
#30	62.1		
#60	28.4		
#100	20.8		
#200	18.2		

* (no specification provided)

Material Description
Tan cm+f SAND, little+ Clayey Silt, little- mf Gravel

PL= **Atterberg Limits** LL= PI=

Coefficients

D₉₀= 3.2632 D₈₅= 1.6083 D₆₀= 0.5685
D₅₀= 0.4462 D₃₀= 0.2645 D₁₅=
D₁₀= C_u= C_c=

USCS= **Classification** AASHTO=

Remarks

Source of Sample: FPA-10 Depth: 4' - 6'
Sample Number: S-3

Date: 5/7/25

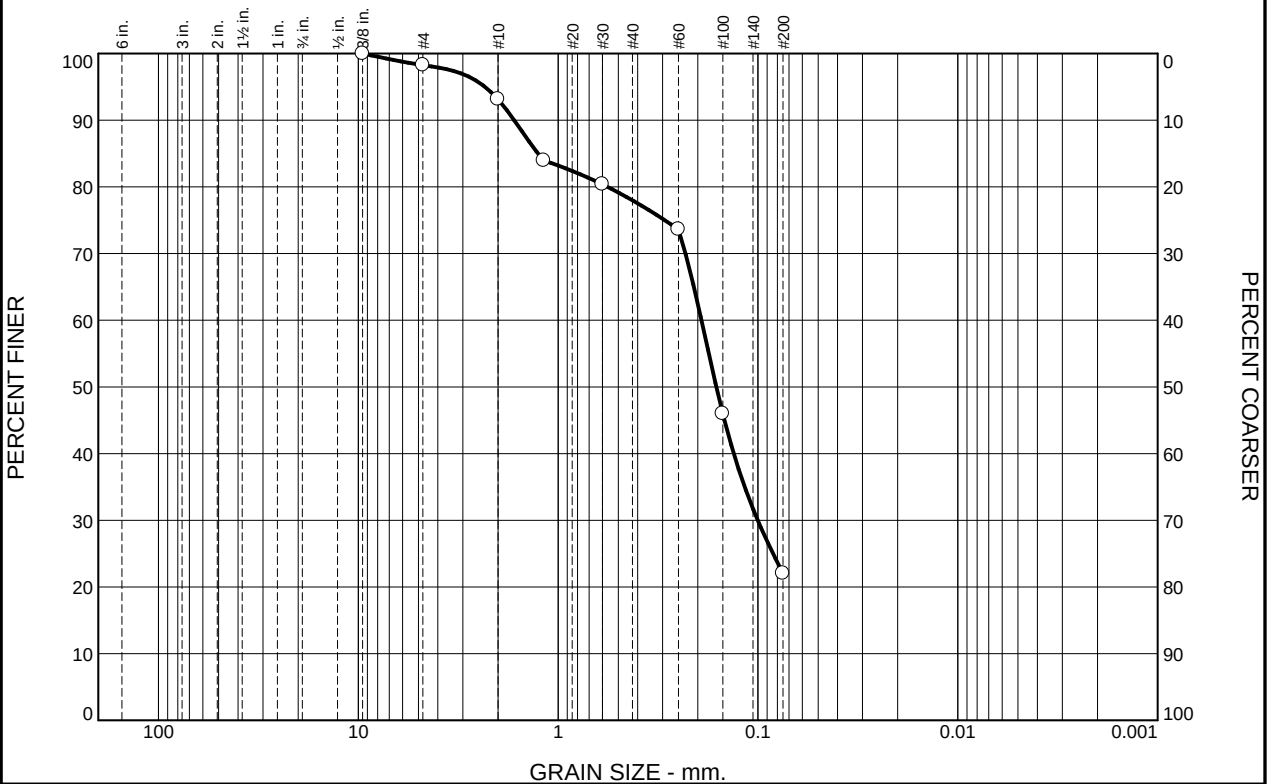
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Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109 Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	6.9	12.7	6.8	51.6	22.0

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375	100.0		
#4	98.3		
#10	93.1		
#16	84.0		
#30	80.4		
#60	73.6		
#100	46.0		
#200	22.0		

* (no specification provided)

Material Description

Tan cf+ SAND, some- Silt & Clay, trace+ f Gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 1.6599 D₈₅= 1.2614 D₆₀= 0.1918
D₅₀= 0.1616 D₃₀= 0.1003 D₁₅=
D₁₀= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Source of Sample: FPA-10
Sample Number: S-20

Depth: 75' - 77'

Date: 5/7/25

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Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

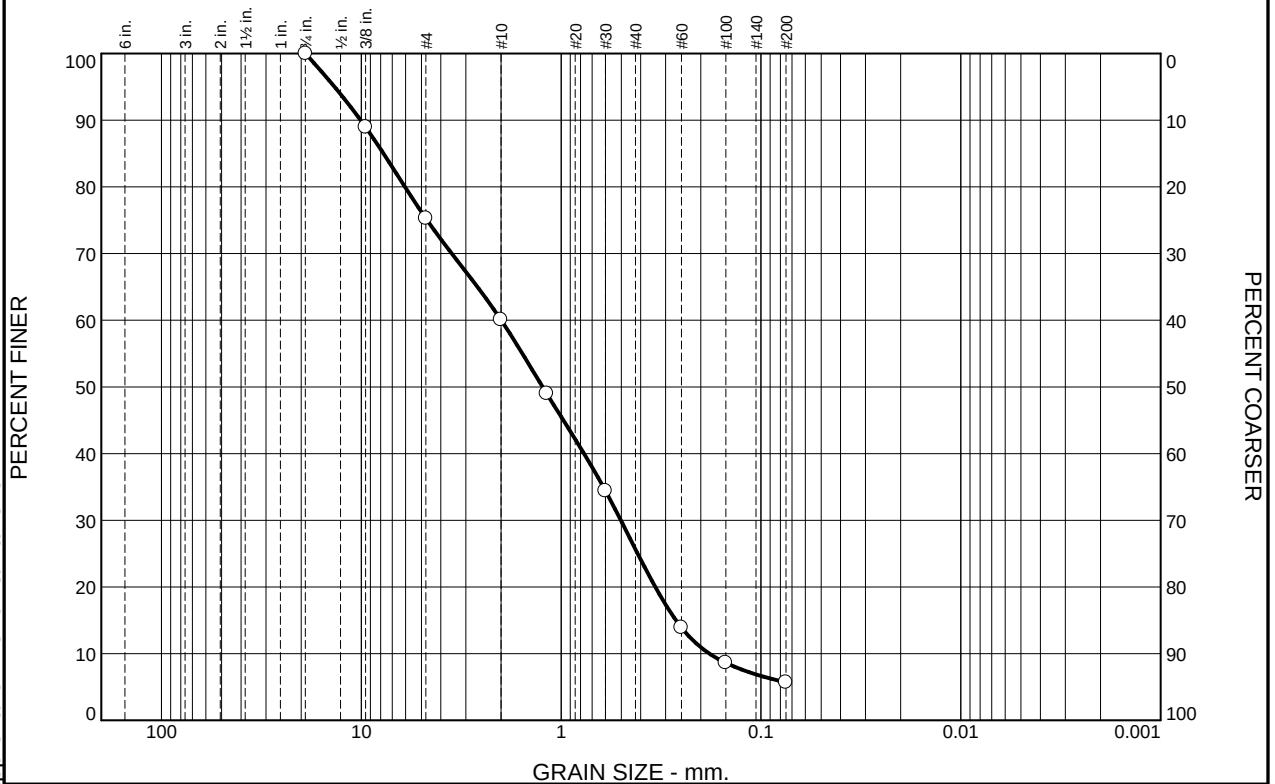
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	11.0	28.9	25.7	20.5	8.2	5.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	88.9		
#4	75.3		
#10	60.1		
#16	49.0		
#30	34.4		
#60	13.9		
#100	8.6		
#200	5.7		

* (no specification provided)

Material Description

Tan c+m SAND, and- mf+ Gravel, trace Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 10.0704

D₈₅= 7.7431

D₆₀= 1.9945

D₅₀= 1.2384

D₃₀= 0.5029

D₁₅= 0.2665

D₁₀= 0.1812

C_u= 11.01

C_c= 0.70

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-11
Sample Number: S-4

Depth: 6' - 8'

Date: 5/7/25

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Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

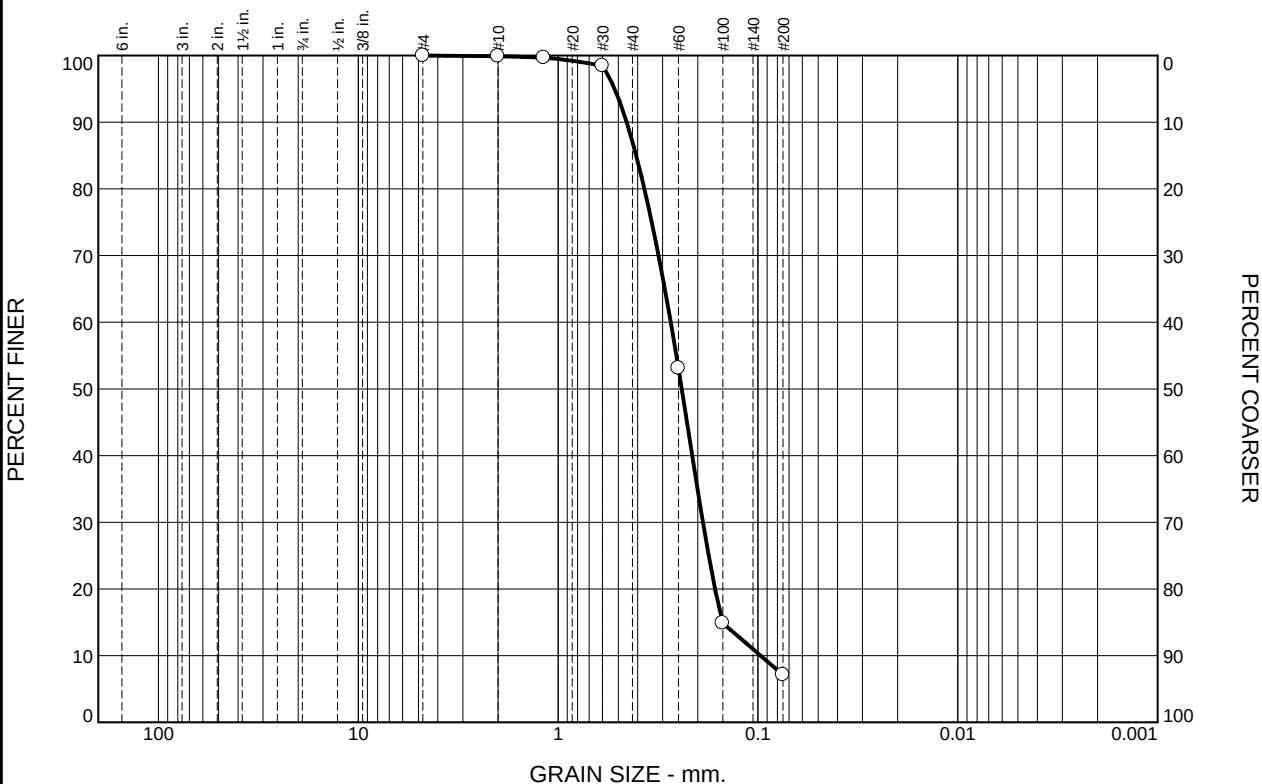
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.1	1.4	45.4	46.0	7.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.9		
#16	99.7		
#30	98.5		
#60	53.1		
#100	14.9		
#200	7.1		

* (no specification provided)

Material Description
Tan Brown mf SAND, trace+ Silt

Atterberg Limits
PL= LL= PI=

Coefficients
D₉₀= 0.4540 D₈₅= 0.4067 D₆₀= 0.2732
D₅₀= 0.2406 D₃₀= 0.1886 D₁₅= 0.1504
D₁₀= 0.0970 C_u= 2.82 C_c= 1.34

Classification
USCS= AASHTO=

Remarks

Source of Sample: FPA-11
Sample Number: S-17

Depth: 60' - 62'

Date: 5/7/25

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Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

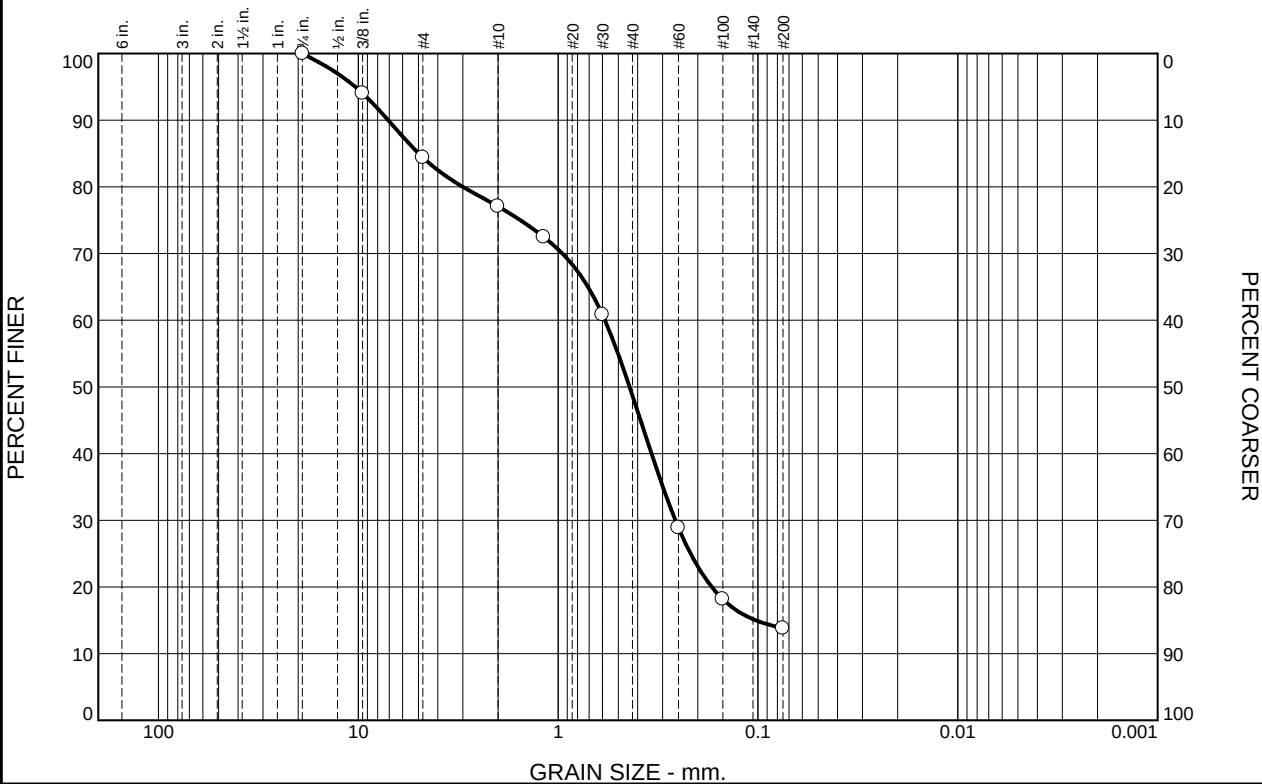
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	5.9	17.0	16.3	31.9	15.1	13.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	94.0		
#4	84.4		
#10	77.1		
#16	72.5		
#30	60.8		
#60	28.9		
#100	18.2		
#200	13.8		

* (no specification provided)

Material Description

Brown & Tan cm+f SAND, some- mf+ Gravel, little Clayey Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 7.0813

D₈₅= 4.9825

D₆₀= 0.5835

D₅₀= 0.4390

D₃₀= 0.2591

D₁₅= 0.1028

D₁₀=

C_u=

C_c=

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-12
Sample Number: S-2

Depth: 2' - 4'

Date: 5/7/25

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Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

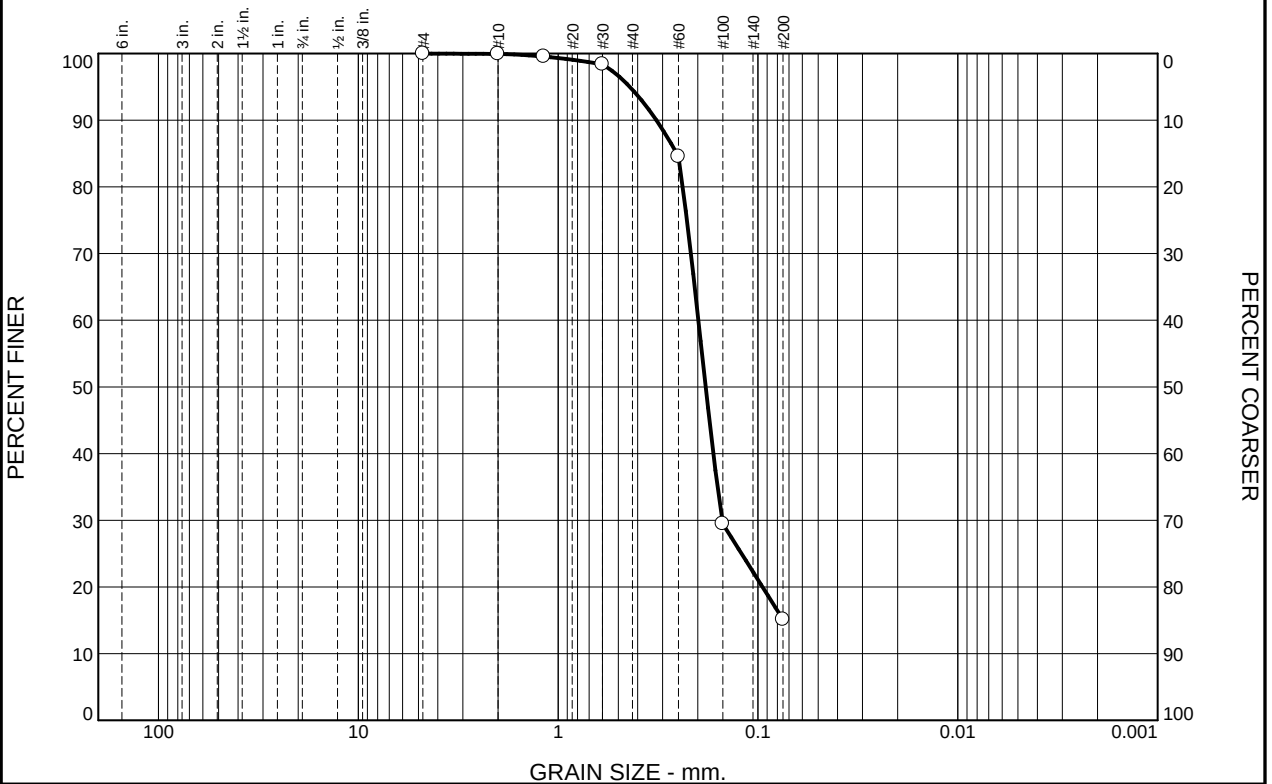
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.1	1.5	13.9	69.4	15.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.9		
#16	99.5		
#30	98.4		
#60	84.5		
#100	29.5		
#200	15.1		

* (no specification provided)

Material Description
Light Tan mf+ SAND, little Clayey Silt

Atterberg Limits
PL= LL= PI=
Coefficients
D₉₀= 0.3224 D₈₅= 0.2549 D₆₀= 0.1988
D₅₀= 0.1827 D₃₀= 0.1509 D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= AASHTO=

Remarks

Source of Sample: FPA-12 Depth: 35' - 37'
Sample Number: S-13

Date: 5/7/25

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Wall, NJ

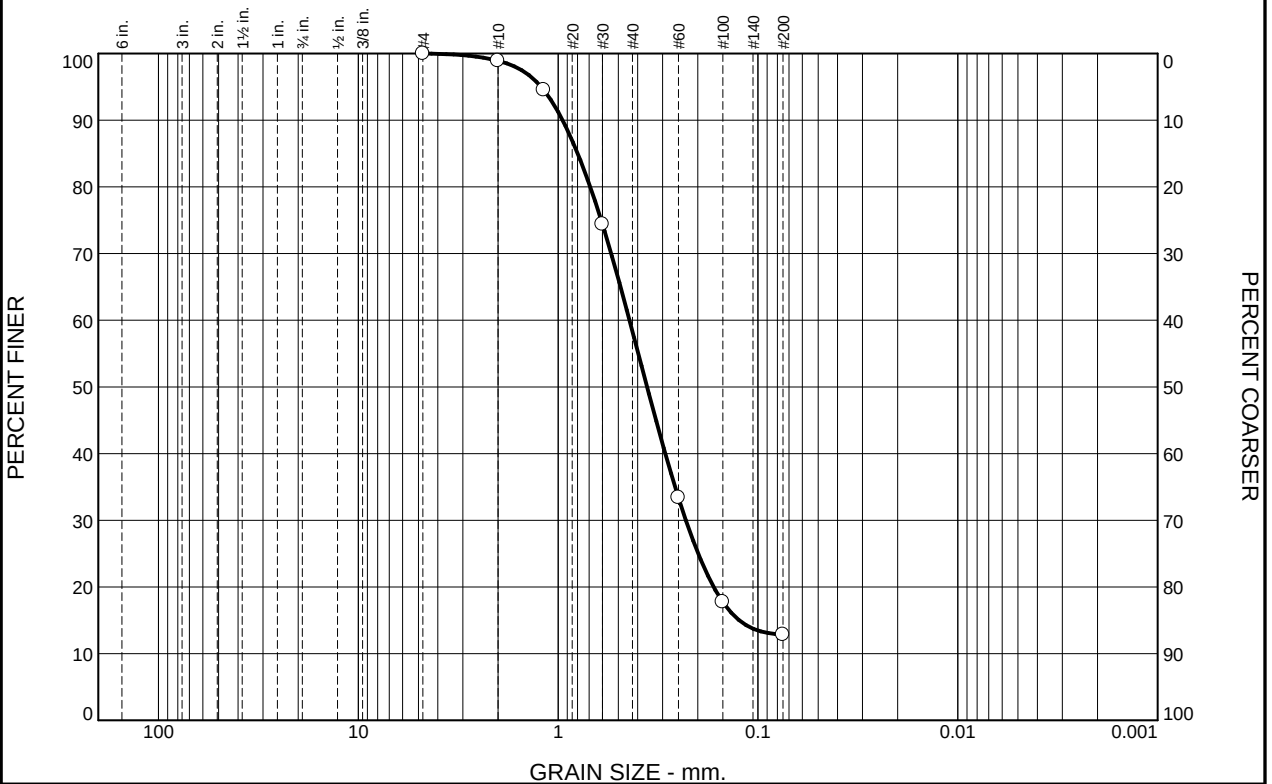
Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	1.1	24.5	41.0	20.6	12.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	98.9		
#16	94.5		
#30	74.4		
#60	33.4		
#100	17.7		
#200	12.8		

* (no specification provided)

Material Description
Light Tan cm+f SAND, little- Clayey Silt, trace- f Gravel

PL= **Atterberg Limits** LL= PI=

D₉₀= 0.9501 **Coefficients** D₈₅= 0.7981 D₆₀= 0.4395
D₅₀= 0.3588 D₃₀= 0.2295 D₁₅= 0.1242
D₁₀= C_u= C_c=

USCS= **Classification** AASHTO=

Remarks

Source of Sample: FPA-13
Sample Number: S-8

Depth: 20' - 22'

Date: 5/7/25

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Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

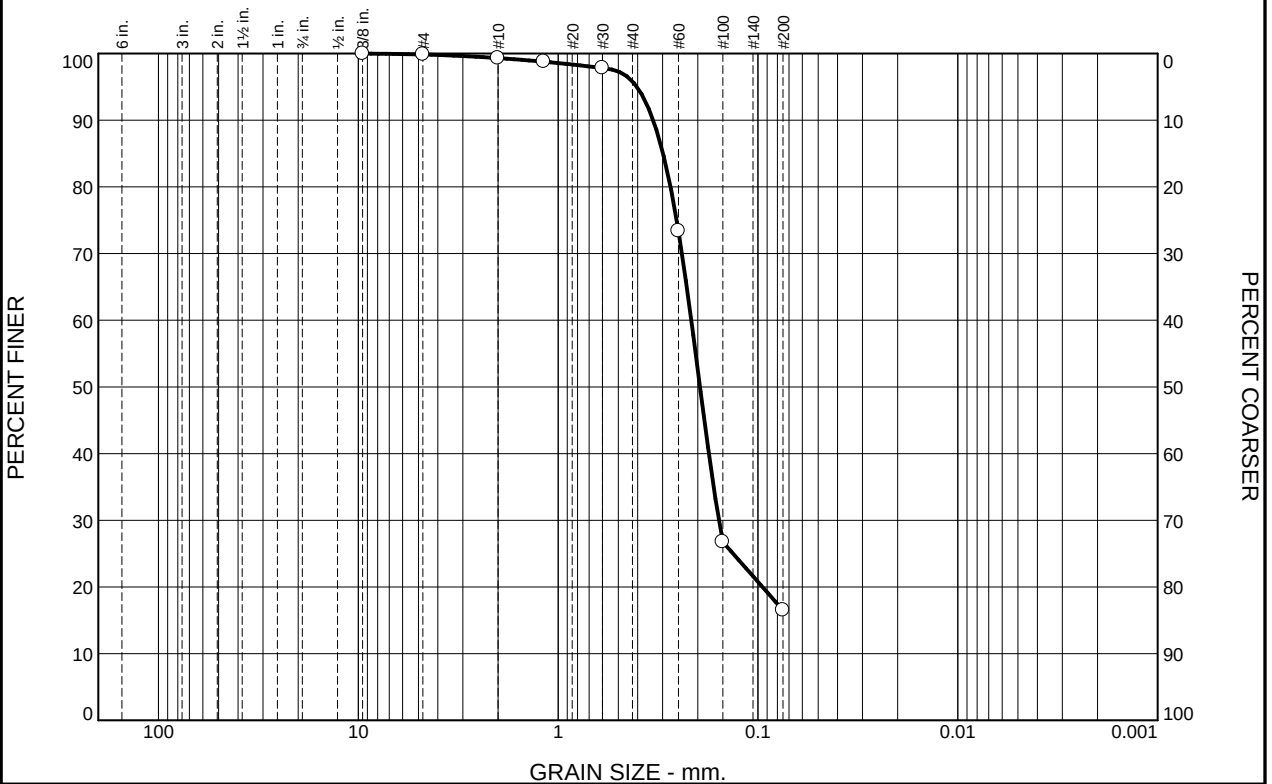
Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.7	1.5	24.4	56.9	16.5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375	100.0		
#4	99.9		
#10	99.3		
#16	98.8		
#30	97.8		
#60	73.4		
#100	26.8		
#200	16.5		

* (no specification provided)

Material Description
Light Grey mf+ SAND, little Silt & Clay

PL= **Atterberg Limits** LL= PI=

Coefficients

D₉₀= 0.3345 D₈₅= 0.2985 D₆₀= 0.2157
D₅₀= 0.1951 D₃₀= 0.1569 D₁₅=
D₁₀= C_u= C_c=

USCS= **Classification** AASHTO=

Remarks

Source of Sample: FPA-13 Depth: 30' - 32'
Sample Number: S-10

Date: 5/7/25

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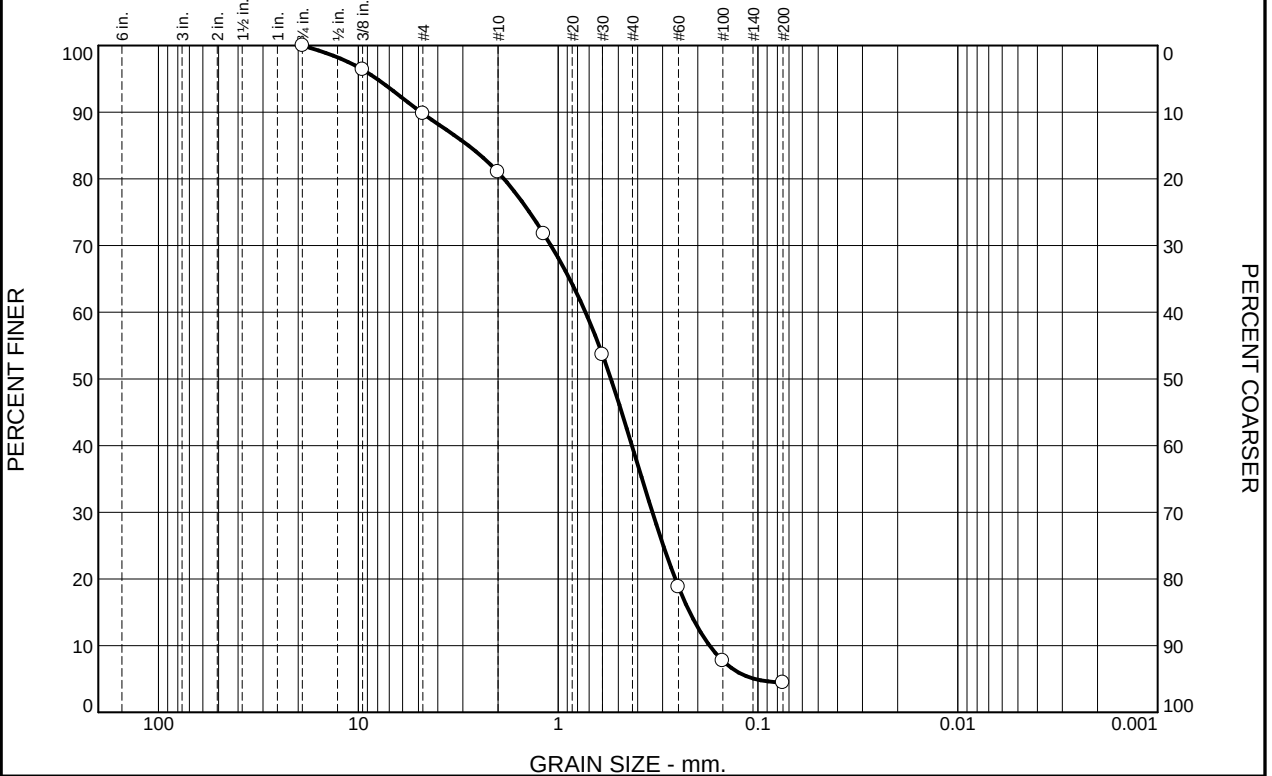
Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	3.6	15.4	27.4	34.8	14.4	4.4

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	96.4		
#4	89.8		
#10	81.0		
#16	71.7		
#30	53.6		
#60	18.8		
#100	7.7		
#200	4.4		

* (no specification provided)

Source of Sample: FPA-14
Sample Number: S-5

Depth: 8' - 10'

Date: 5/7/25

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Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

Figure

Tested By: CS

Checked By: RT

Material Description

Tan cm+f SAND, little+ mf+ Gravel, trace Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 4.8505

D₈₅= 2.8109

D₆₀= 0.7293

D₅₀= 0.5445

D₃₀= 0.3374

D₁₅= 0.2194

D₁₀= 0.1747

C_u= 4.17

C_c= 0.89

Classification

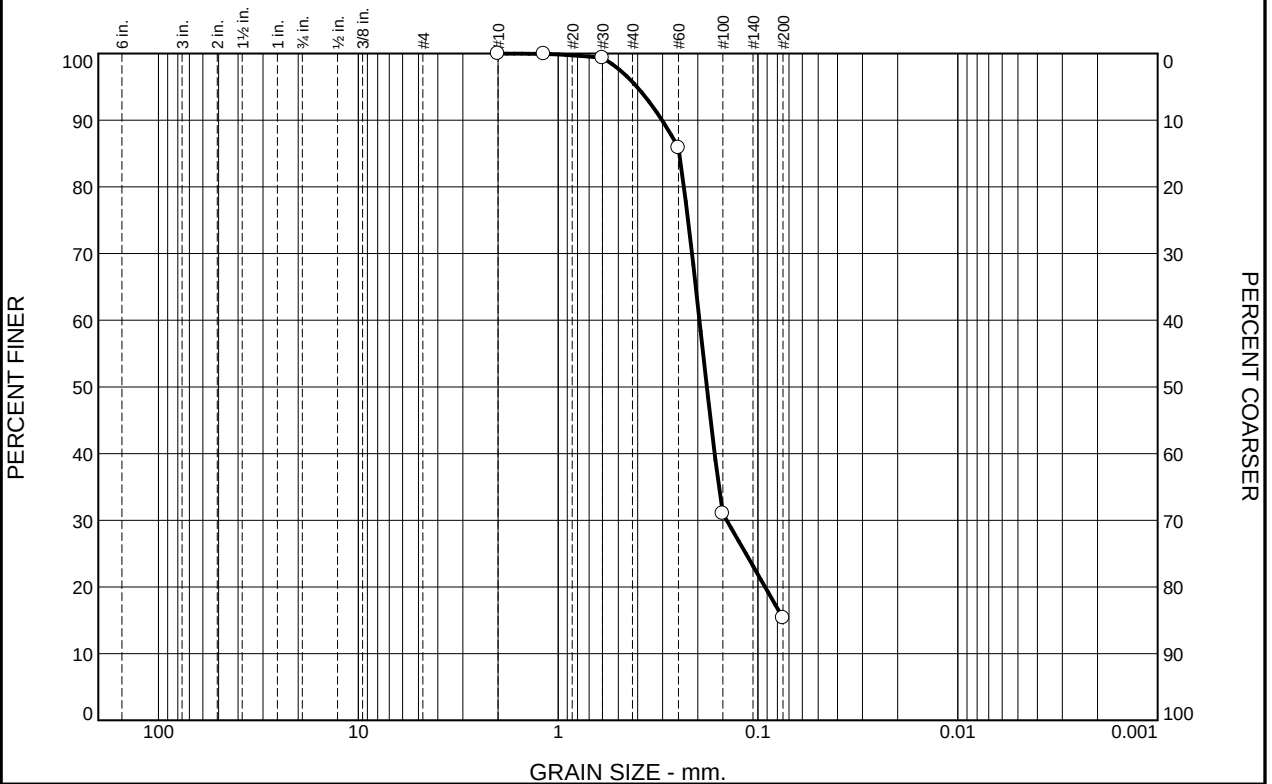
USCS= SP

AASHTO=

Remarks

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.0	0.7	13.4	70.5	15.4

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#16	99.9		
#30	99.3		
#60	85.9		
#100	31.0		
#200	15.4		

* (no specification provided)

Material Description
Light Grey mf+ SAND, little Clayey Silt

Atterberg Limits
PL= LL= PI=
Coefficients
D₉₀= 0.3021 D₈₅= 0.2475 D₆₀= 0.1963
D₅₀= 0.1803 D₃₀= 0.1434 D₁₅=
D₁₀= C_u= C_c=

Classification
USCS= AASHTO=

Remarks

Source of Sample: FPA-14 Depth: 30' - 32'
Sample Number: S-10

Date: 5/7/25

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Wall, NJ

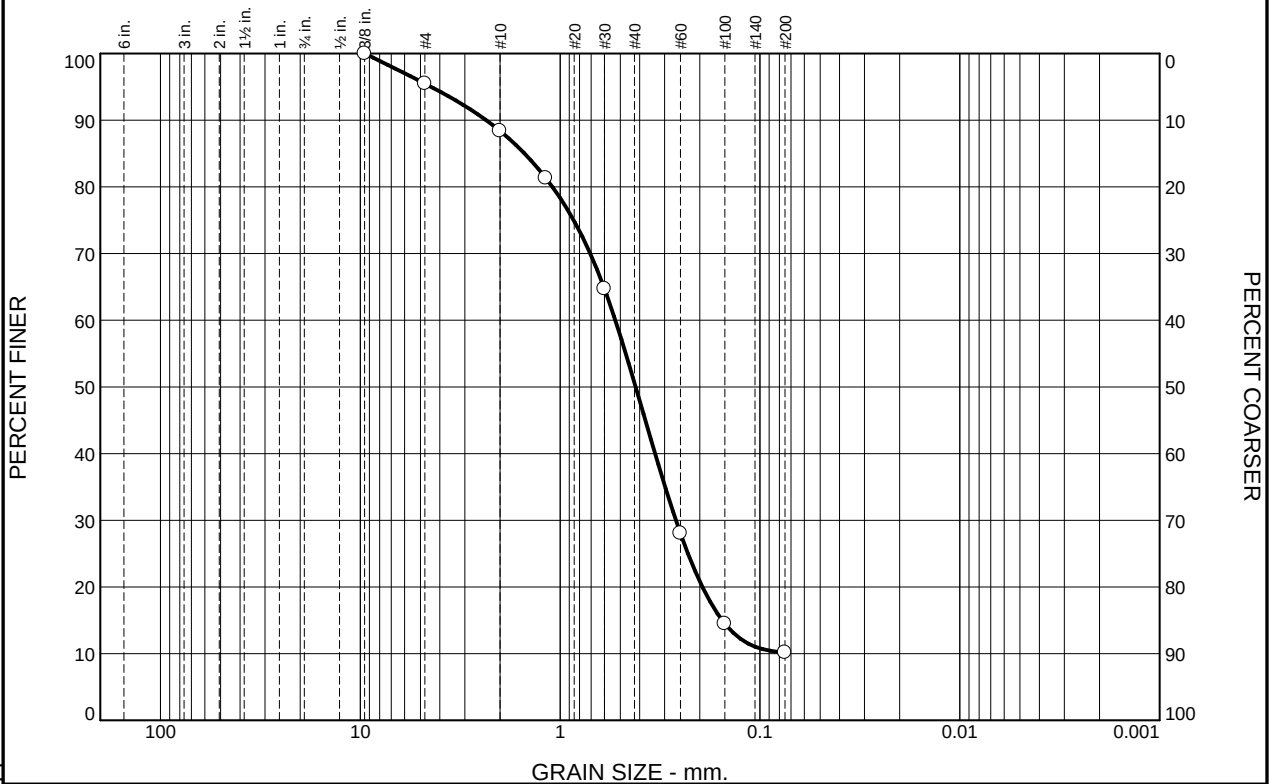
Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	11.6	23.7	36.7	17.9	10.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375	100.0		
#4	95.5		
#10	88.4		
#16	81.3		
#30	64.7		
#60	28.0		
#100	14.5		
#200	10.1		

* (no specification provided)

Material Description

Orange Brown cm+f SAND, little- f Gravel, little- Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 2.3450

D₅₀= 0.4189

D₁₀=

D₈₅= 1.5076

D₃₀= 0.2635

C_u=

D₆₀= 0.5298

D₁₅= 0.1546

C_c=

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-15
Sample Number: S-2

Depth: 2' - 4'

Date: 5/7/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

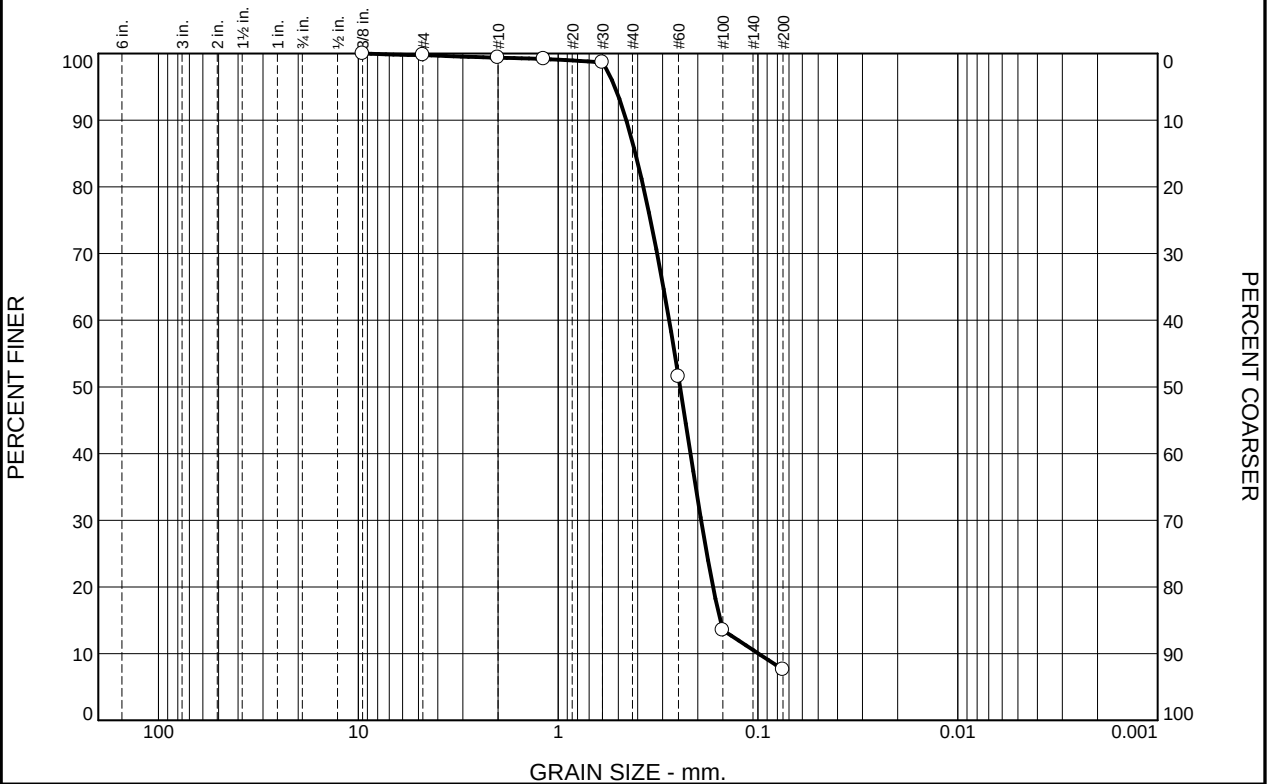
Figure

Tested By: CS

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.6	0.7	47.2	43.9	7.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375	100.0		
#4	99.8		
#10	99.4		
#16	99.2		
#30	98.7		
#60	51.5		
#100	13.5		
#200	7.6		

* (no specification provided)

Material Description
Light Grey mf SAND, trace+ Clayey Silt

PL= **Atterberg Limits** PI=
LL=

Coefficients
D₉₀= 0.4560 D₈₅= 0.4104 D₆₀= 0.2784
D₅₀= 0.2453 D₃₀= 0.1925 D₁₅= 0.1544
D₁₀= 0.0993 C_u= 2.80 C_c= 1.34

USCS= **Classification** AASHTO=

Remarks

Source of Sample: FPA-15
Sample Number: S-11

Depth: 35' - 37'

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

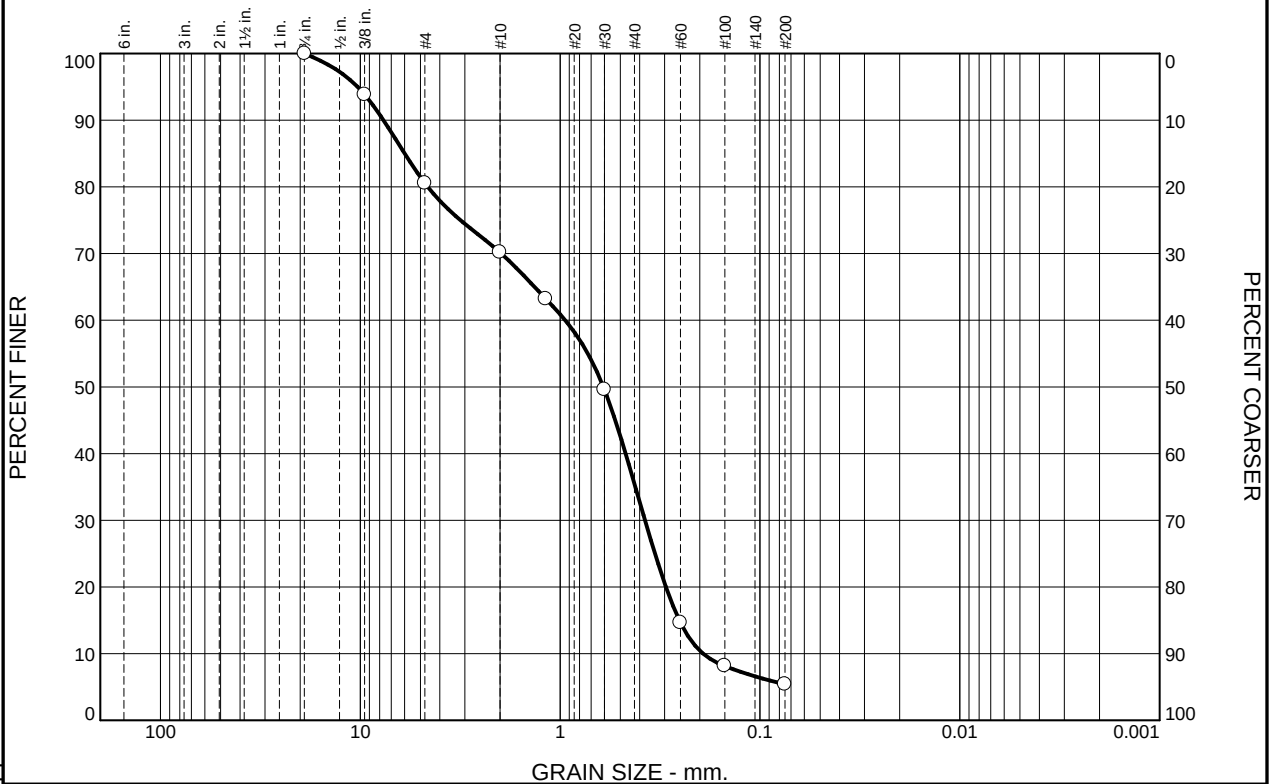
Figure

Tested By: CS

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	6.1	23.7	20.6	35.0	9.2	5.4

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	93.8		
#4	80.5		
#10	70.2		
#16	63.2		
#30	49.6		
#60	14.6		
#100	8.1		
#200	5.4		

* (no specification provided)

Material Description

Orange Brown & Tan cm+ SAND, some mf+ Gravel, trace Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 7.6608

D₈₅= 5.9969

D₆₀= 0.9434

D₅₀= 0.6077

D₃₀= 0.3761

D₁₅= 0.2534

D₁₀= 0.1928

C_u= 4.89

C_c= 0.78

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-16
Sample Number: S-4

Depth: 6' - 8'

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

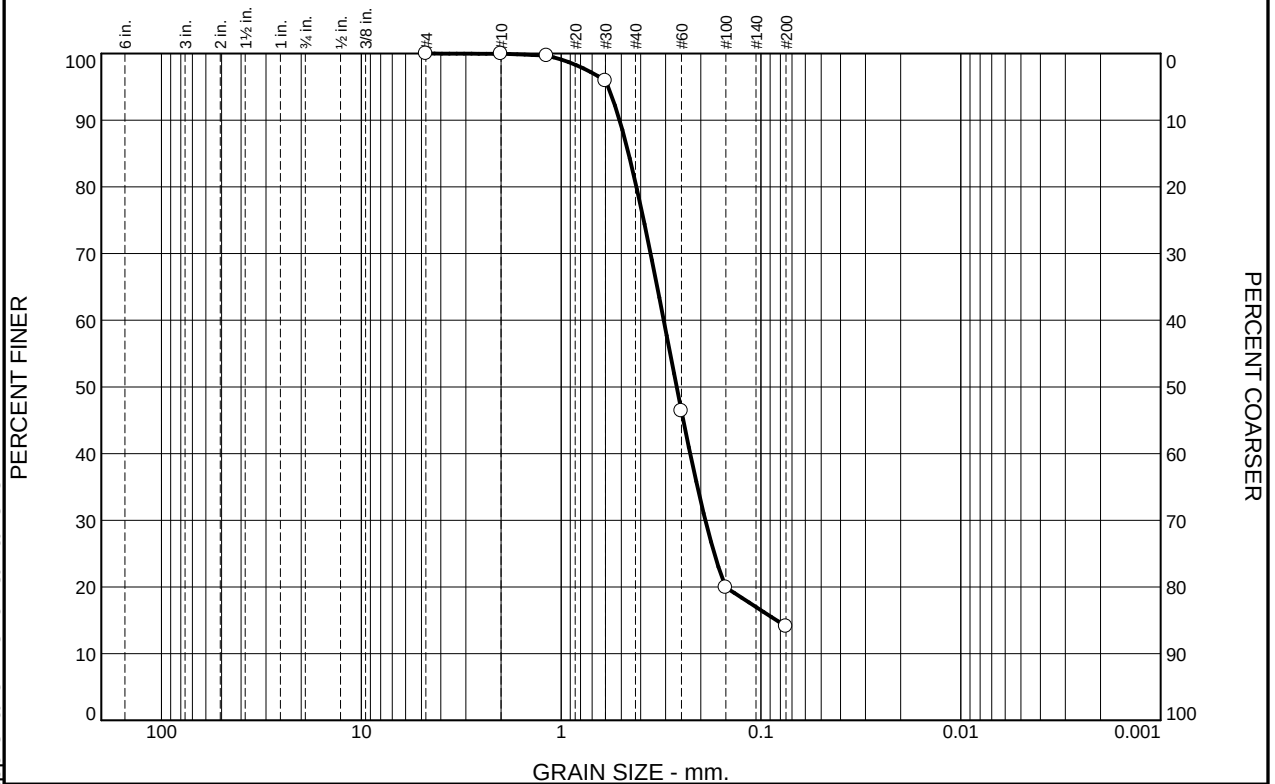
Figure

Tested By: CS

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.0	4.1	49.5	32.3	14.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	100.0		
#16	99.7		
#30	95.9		
#60	46.4		
#100	19.9		
#200	14.1		

* (no specification provided)

Material Description
Orange Brown m+f SAND, little Silt & Clay

PL= **Atterberg Limits** LL= PI=

Coefficients

D₉₀= 0.5102 D₈₅= 0.4599 D₆₀= 0.3067
D₅₀= 0.2642 D₃₀= 0.1898 D₁₅= 0.0836
D₁₀= C_u= C_c=

USCS= **Classification** AASHTO=

Remarks

Source of Sample: FPA-16 Depth: 50' - 52'
Sample Number: S-14

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

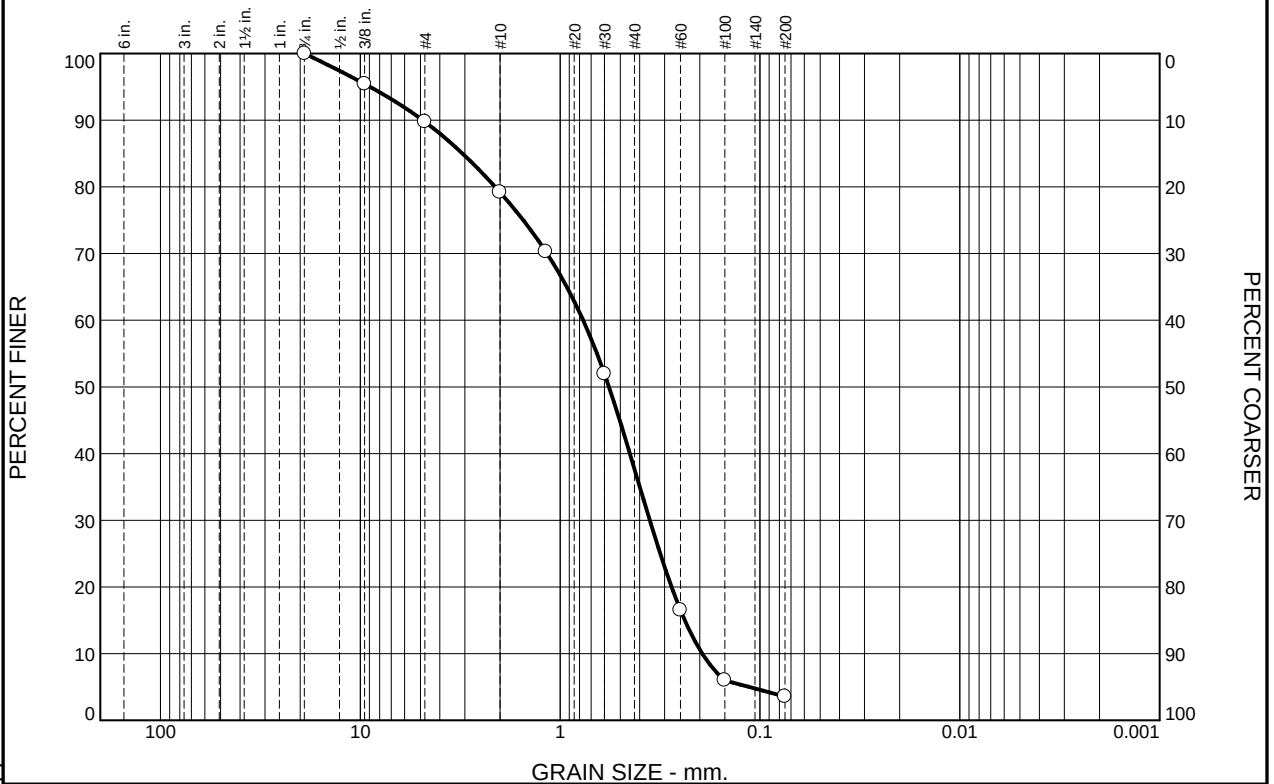
Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

Figure

Tested By: CS Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	4.5	16.3	27.2	35.5	12.9	3.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	95.4		
#4	89.8		
#10	79.2		
#16	70.3		
#30	52.0		
#60	16.5		
#100	6.0		
#200	3.6		

* (no specification provided)

Material Description

Orange Brown cm+f SAND, some- mf+ Gravel, trace Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 4.8672

D₈₅= 3.0791

D₆₀= 0.7671

D₅₀= 0.5698

D₃₀= 0.3559

D₁₅= 0.2379

D₁₀= 0.1944

C_u= 3.95

C_c= 0.85

Classification

USCS= SP

AASHTO=

Remarks

Source of Sample: FPA-17
Sample Number: S-3

Depth: 4' - 6'

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

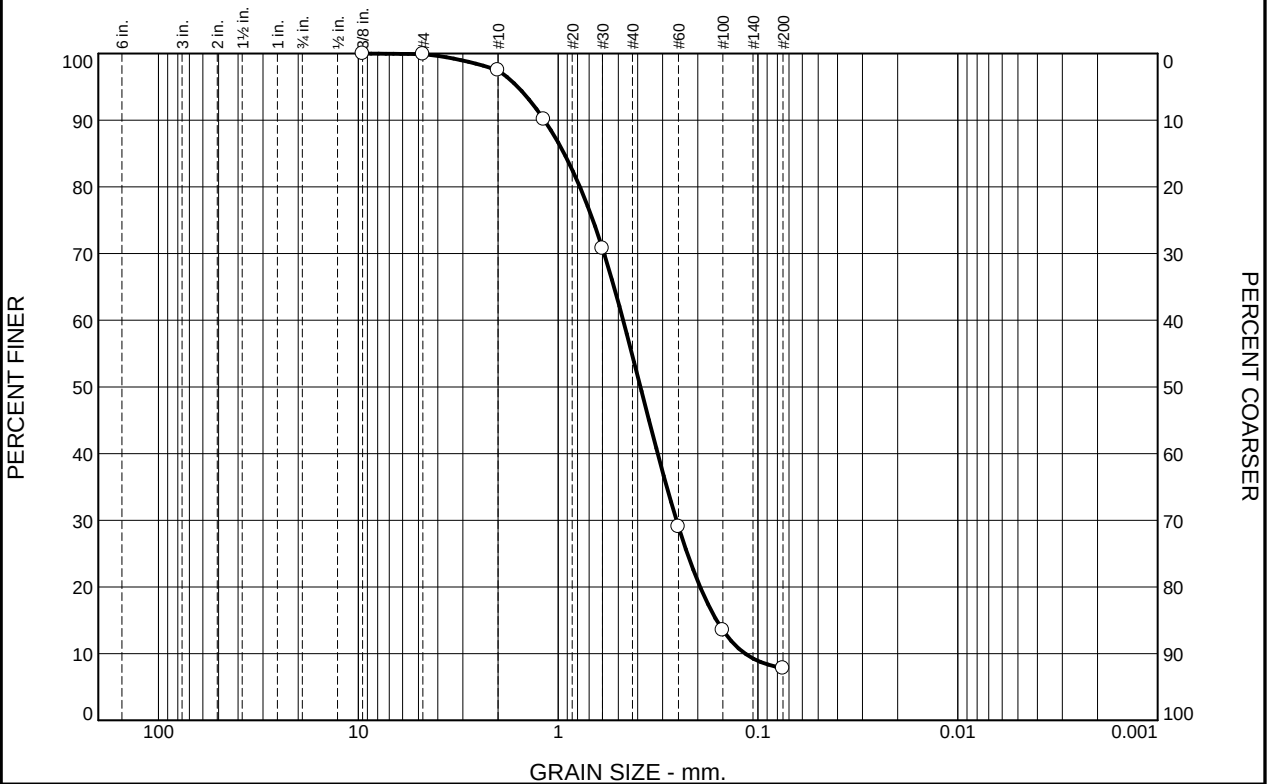
Figure

Tested By: CS

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	2.5	26.7	41.7	21.3	7.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375	100.0		
#4	99.9		
#10	97.5		
#16	90.1		
#30	70.8		
#60	29.1		
#100	13.5		
#200	7.8		

* (no specification provided)

Material Description

Light Grey cm+f SAND, trace+ Clayey Silt, trace- f Gravel

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 1.1722

D₈₅= 0.9330

D₆₀= 0.4730

D₅₀= 0.3874

D₃₀= 0.2557

D₁₅= 0.1611

D₁₀= 0.1159

C_u= 4.08

C_c= 1.19

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-17
Sample Number: S-9

Depth: 25' - 27'

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

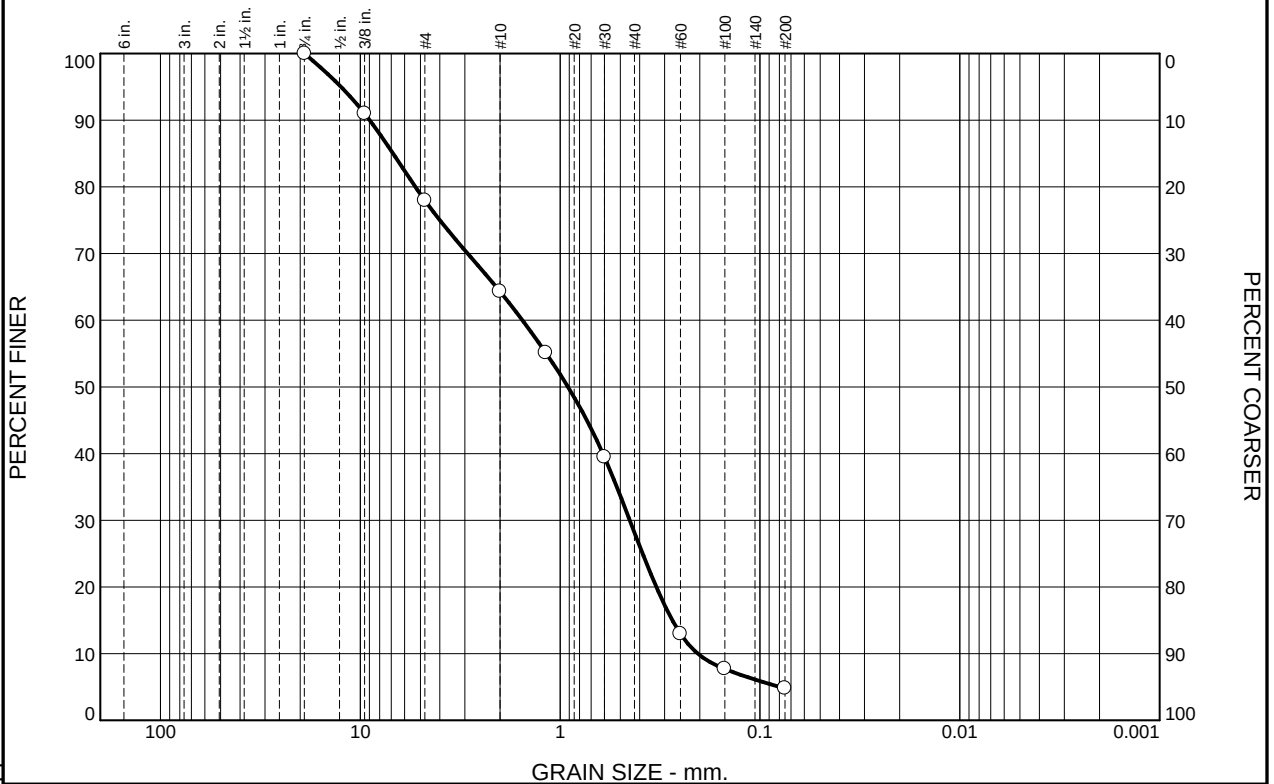
Figure

Tested By: CS

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	9.0	26.7	24.8	26.5	8.2	4.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	91.0		
#4	78.0		
#10	64.3		
#16	55.1		
#30	39.5		
#60	13.0		
#100	7.7		
#200	4.8		

* (no specification provided)

Source of Sample: FPA-18
Sample Number: S-5

Depth: 8' - 10'

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

Material Description

Orange Brown & Tan cm SAND, and- mf+ Gravel, trace Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 8.9685

D₈₅= 6.8564

D₆₀= 1.5449

D₅₀= 0.9134

D₃₀= 0.4484

D₁₅= 0.2746

D₁₀= 0.2046

C_u= 7.55

C_c= 0.64

Classification

USCS= SP

AASHTO=

Remarks

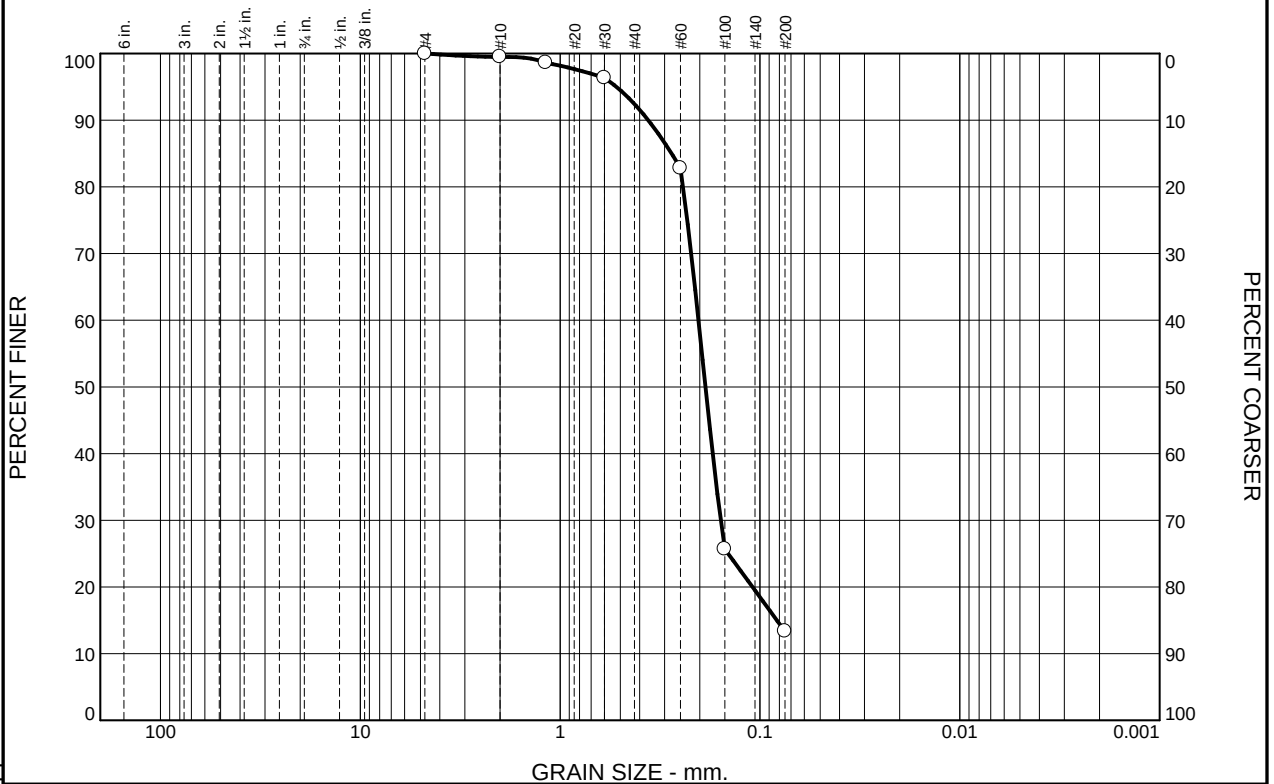
Tested By: CS

Checked By: RT

Figure

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.5	3.2	13.5	69.4	13.4

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.5		
#16	98.6		
#30	96.3		
#60	82.8		
#100	25.7		
#200	13.4		

* (no specification provided)

Material Description
Light Grey mf+ SAND, little Clayey Silt

Atterberg Limits
PL= LL= PI=

Coefficients
D₉₀= 0.3623 D₈₅= 0.2769 D₆₀= 0.2032
D₅₀= 0.1874 D₃₀= 0.1572 D₁₅= 0.0823
D₁₀= C_u= C_c=

Classification
USCS= AASHTO=

Remarks

Source of Sample: FPA-18 Depth: 40' - 42'
Sample Number: S-12

Date: 5/8/25

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CONSULTING ENGINEERS
Wall, NJ

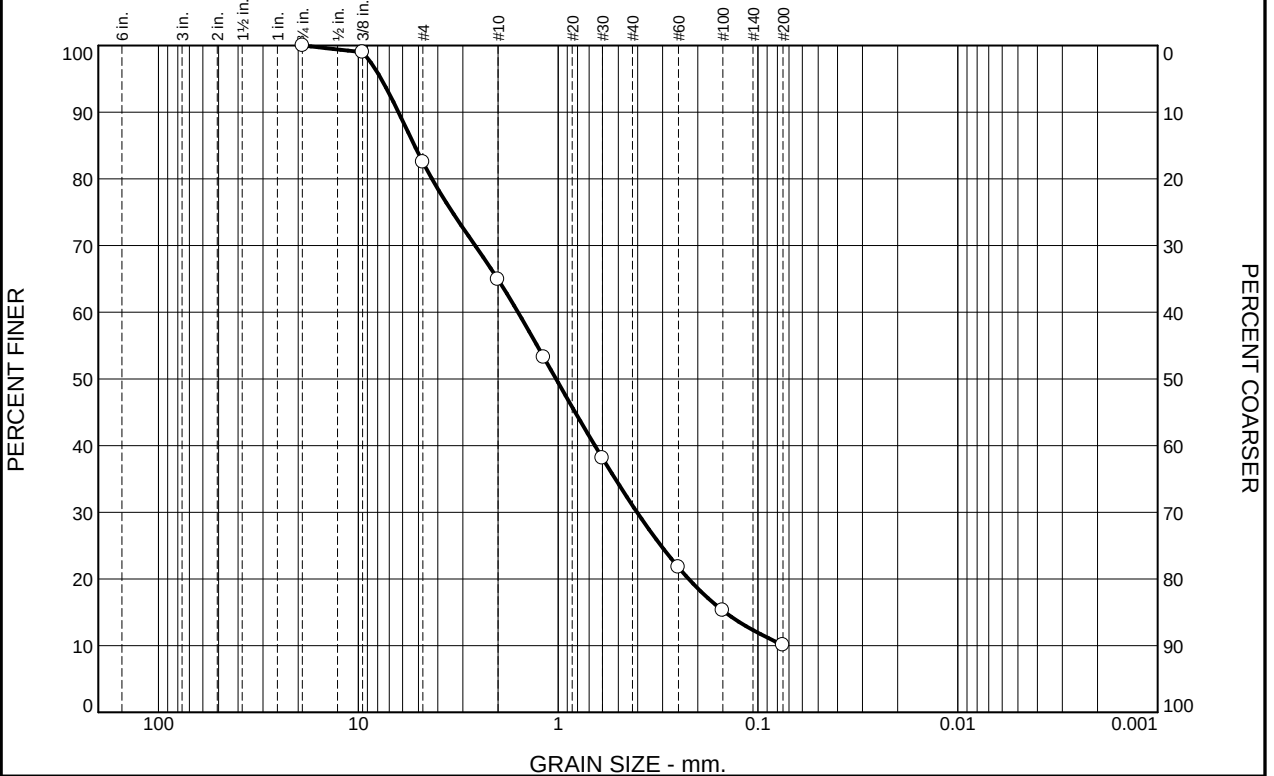
Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

Figure

Tested By: CS Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	1.0	34.1	26.8	16.4	11.6	10.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	99.0		
#4	82.5		
#10	64.9		
#16	53.2		
#30	38.1		
#60	21.7		
#100	15.3		
#200	10.1		

* (no specification provided)

Material Description
Tan c+mf SAND, and- f Gravel, little- Clayey Silt

Atterberg Limits
PL= LL= PI=
Coefficients
D₉₀= 6.2959 D₈₅= 5.2318 D₆₀= 1.5882
D₅₀= 1.0245 D₃₀= 0.4027 D₁₅= 0.1461
D₁₀= C_u= C_c=

Classification
USCS= AASHTO=

Remarks

Source of Sample: FPA-19
Sample Number: S-7

Depth: 15' - 17'

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL

Project No: 1468M.109

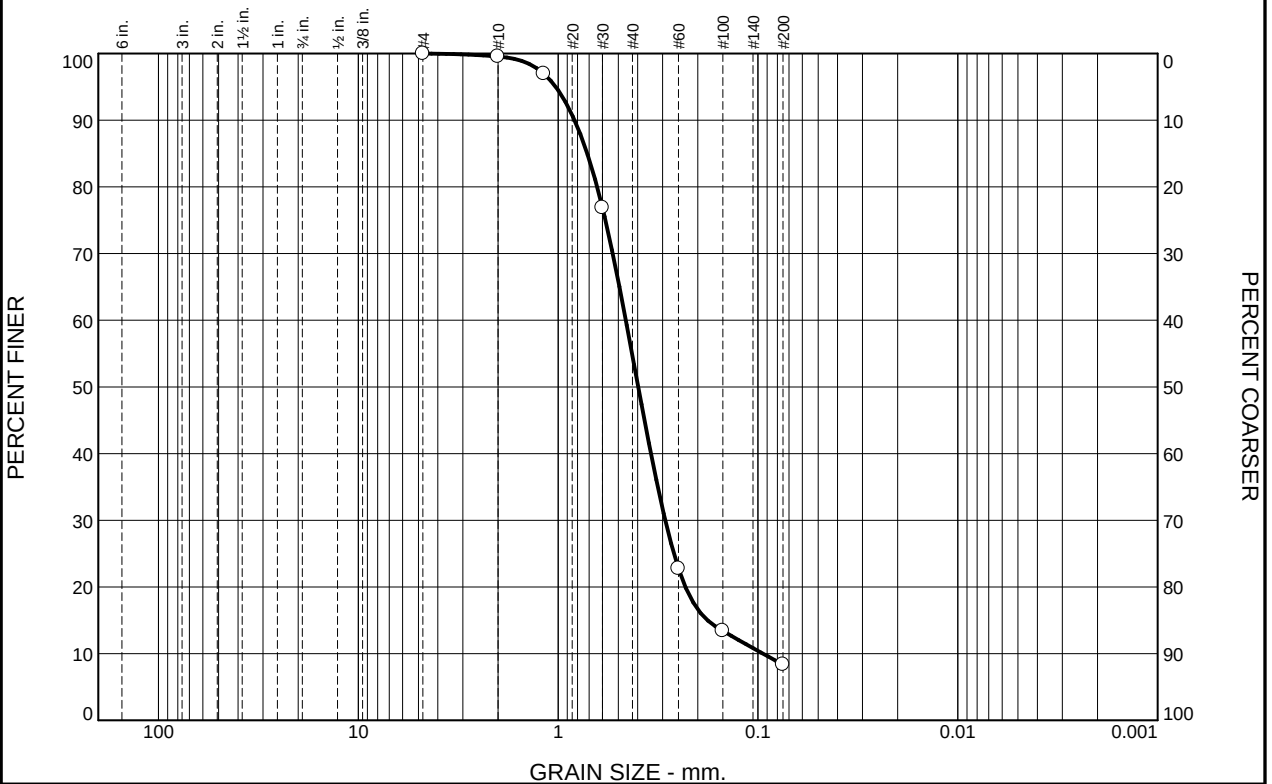
Figure

Tested By: CS

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.5	22.6	54.1	14.4	8.4

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.5		
#16	97.0		
#30	76.9		
#60	22.8		
#100	13.4		
#200	8.4		

* (no specification provided)

Material Description

Brown & Tan cm+f SAND, trace+ Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 0.8274

D₈₅= 0.7151

D₆₀= 0.4586

D₅₀= 0.3973

D₃₀= 0.2911

D₁₅= 0.1787

D₁₀= 0.0944

C_u= 4.86

C_c= 1.96

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-19
Sample Number: S-16

Depth: 60' - 62'

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

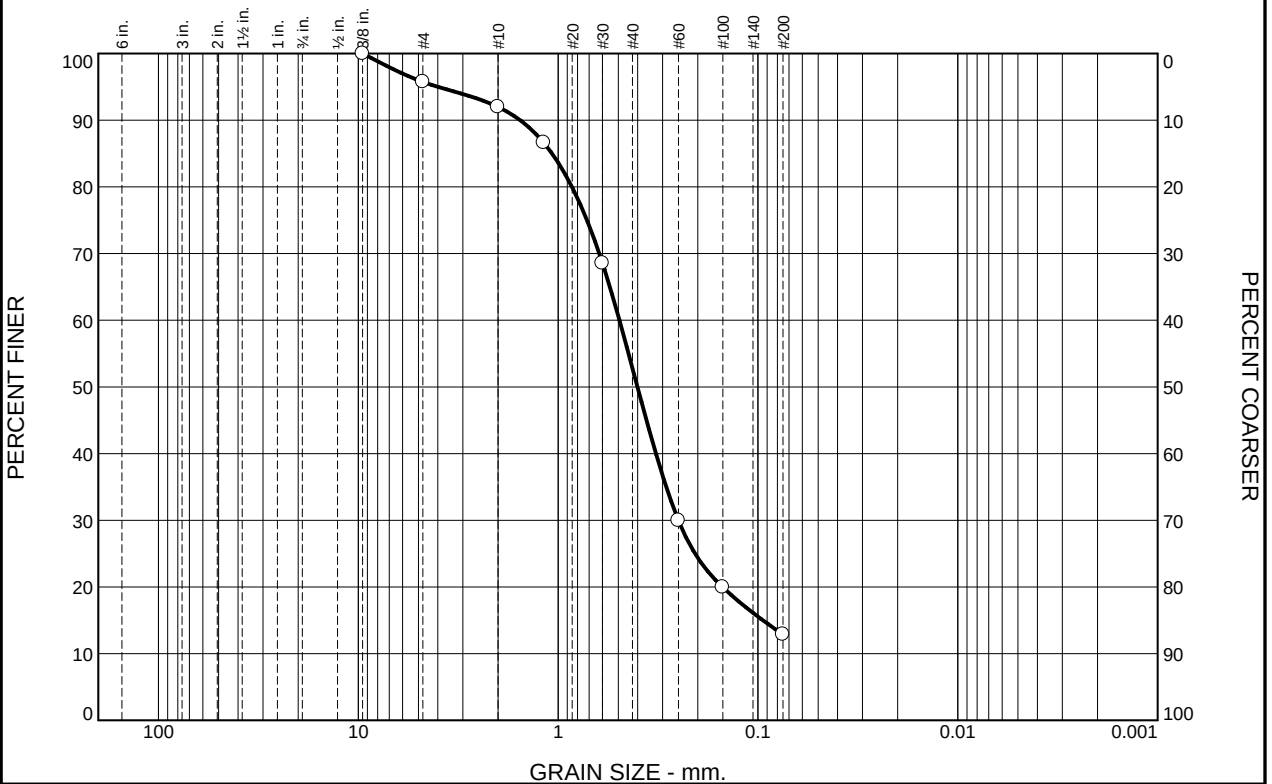
Figure

Tested By: CS

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	8.0	23.4	38.6	17.1	12.9

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375	100.0		
#4	95.7		
#10	92.0		
#16	86.6		
#30	68.6		
#60	30.0		
#100	20.0		
#200	12.9		

* (no specification provided)

Material Description
Brown cm+f SAND, little- Silt, trace+ f Gravel

PL= **Atterberg Limits** LL= PI=

D₉₀= 1.5491 **Coefficients** D₈₅= 1.0725 D₆₀= 0.4936
D₅₀= 0.4009 D₃₀= 0.2503 D₁₅= 0.0944
D₁₀= C_u= C_c=

USCS= **Classification** AASHTO=

Remarks

Source of Sample: FPA-20
Sample Number: S-2

Depth: 2' - 4'

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

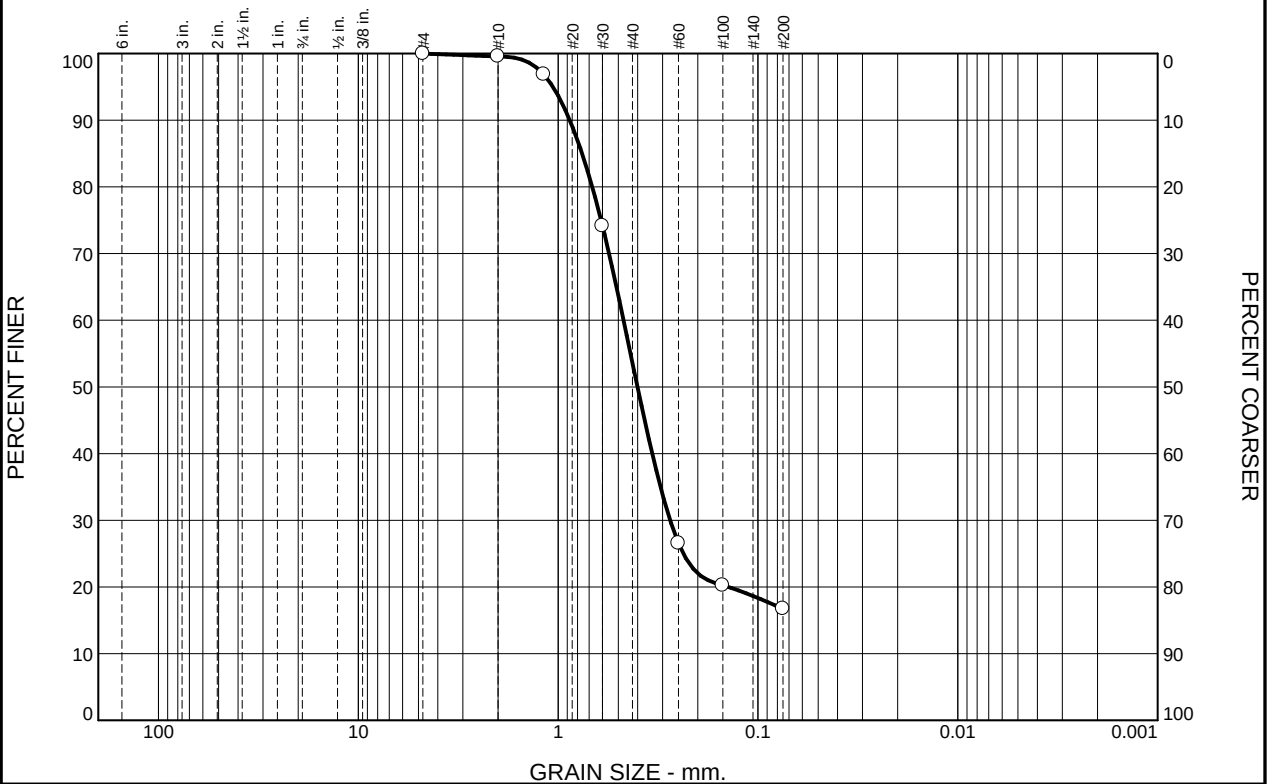
Figure

Tested By: CS

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	0.4	25.4	47.6	9.9	16.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.6		
#16	96.8		
#30	74.2		
#60	26.6		
#100	20.2		
#200	16.7		

* (no specification provided)

Material Description		
Brown & Tan cm+ SAND, little+ Clayey Silt		
Atterberg Limits		
PL=	LL=	PI=
Coefficients		
D ₉₀ = 0.8744	D ₈₅ = 0.7587	D ₆₀ = 0.4709
D ₅₀ = 0.4008	D ₃₀ = 0.2753	D ₁₅ =
D ₁₀ =	C _u =	C _c =
Classification		
USCS=	AASHTO=	
Remarks		

Source of Sample: FPA-20
Sample Number: S-12

Depth: 40' - 42'

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

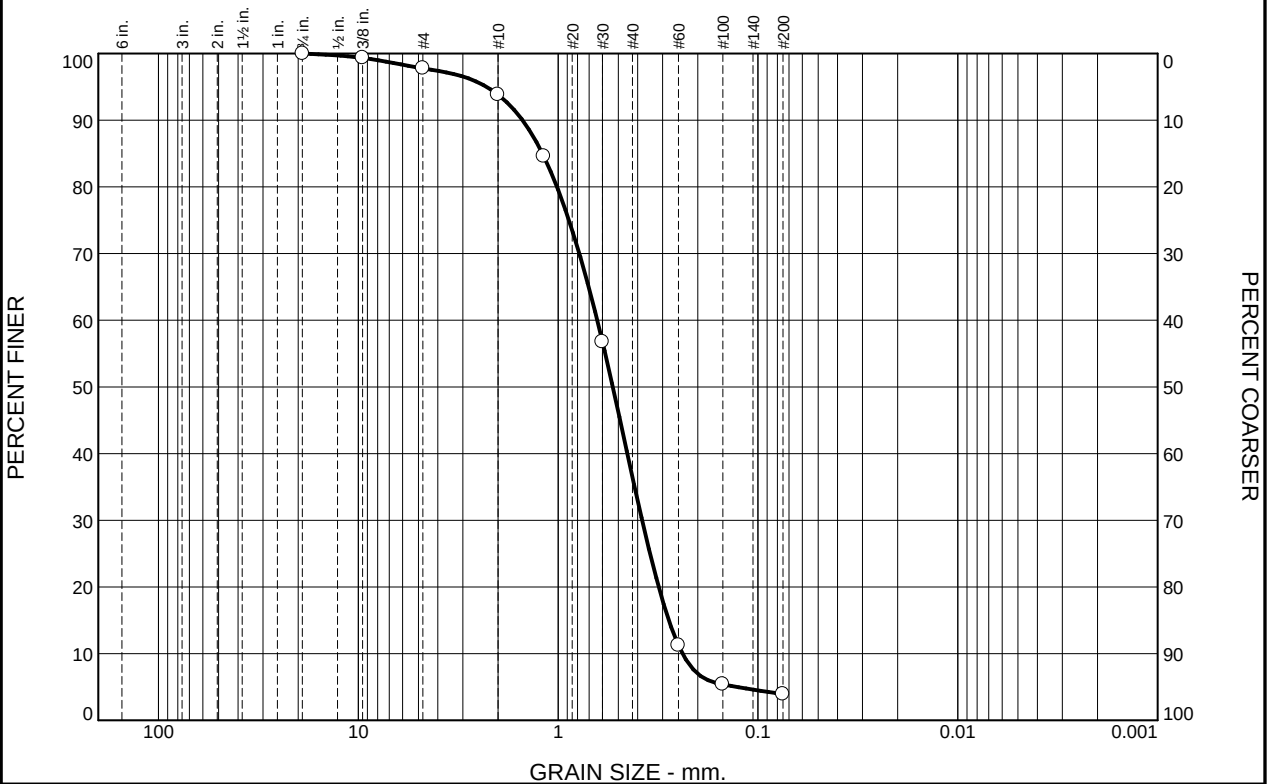
Figure

Tested By: CS

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.7	5.5	37.0	45.6	7.3	3.9

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	99.3		
#4	97.8		
#10	93.8		
#16	84.6		
#30	56.8		
#60	11.2		
#100	5.4		
#200	3.9		

* (no specification provided)

Source of Sample: FPA-21
Sample Number: S-4

Depth: 6' - 8'

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

Figure

Tested By: CS

Checked By: RT

Material Description

Brown & Orange Brown cm+ SAND, trace f Gravel, trace Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 1.5081

D₈₅= 1.1982

D₆₀= 0.6372

D₅₀= 0.5329

D₃₀= 0.3799

D₁₅= 0.2795

D₁₀= 0.2387

C_u= 2.67

C_c= 0.95

Classification

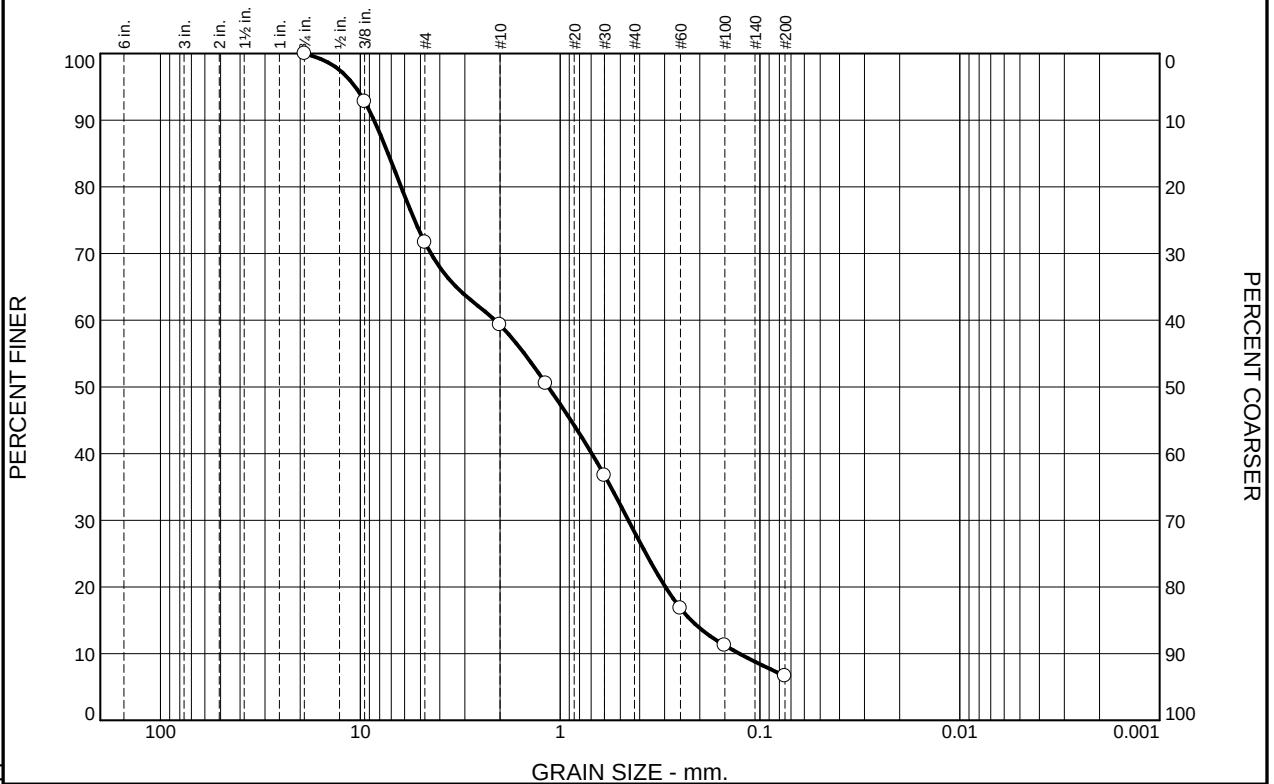
USCS= SP

AASHTO=

Remarks

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	7.1	33.6	22.6	19.9	10.2	6.6

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	92.8		
#4	71.7		
#10	59.3		
#16	50.5		
#30	36.7		
#60	16.8		
#100	11.2		
#200	6.6		

* (no specification provided)

Material Description

Tan cmf- SAND, and mf+ Gravel, trace Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 8.5330

D₈₅= 7.2593

D₆₀= 2.1165

D₅₀= 1.1473

D₃₀= 0.4558

D₁₅= 0.2209

D₁₀= 0.1267

C_u= 16.70

C_c= 0.77

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-21
Sample Number: S-7

Depth: 15' - 17'

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

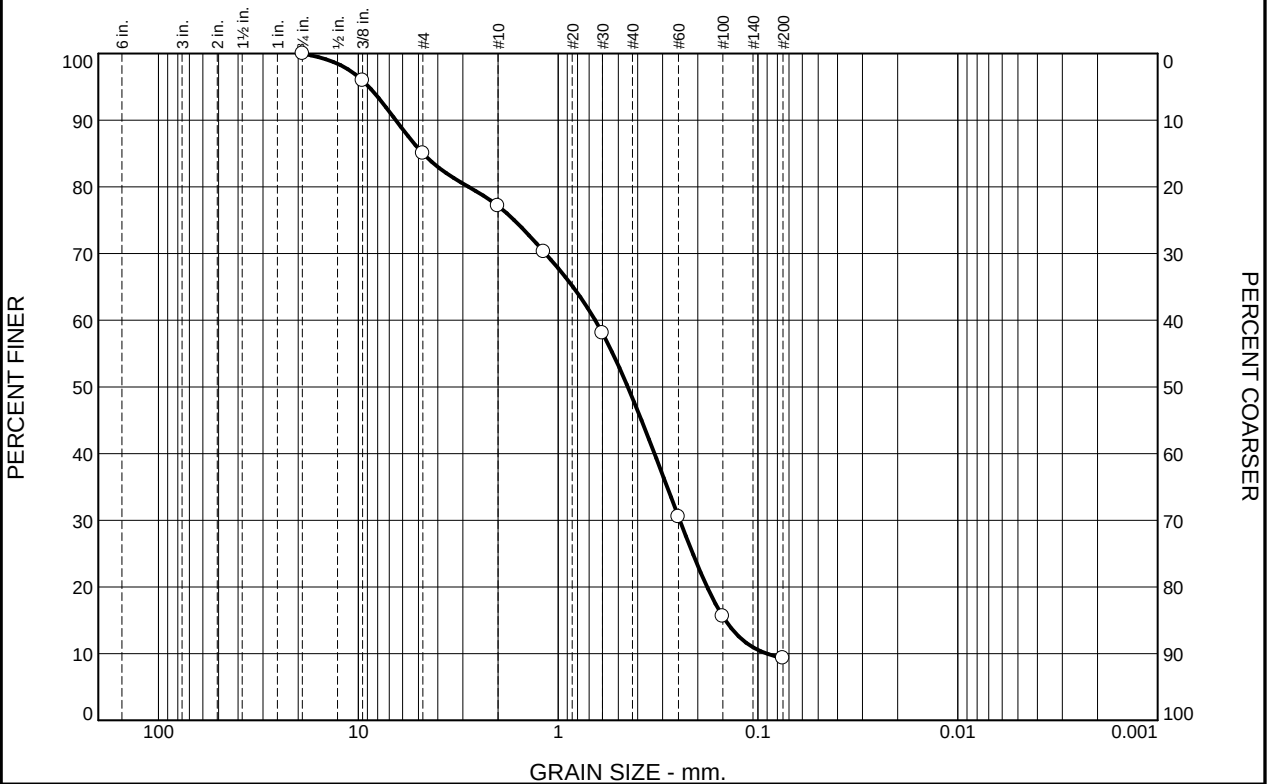
Figure

Tested By: CS

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	4.0	18.9	19.0	27.6	21.2	9.3

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	95.9		
#4	85.0		
#10	77.1		
#16	70.3		
#30	58.1		
#60	30.5		
#100	15.6		
#200	9.3		

* (no specification provided)

Material Description

Tan & Orange Brown cm+f SAND, some- mf+ Gravel, trace+ Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 6.4882

D₈₅= 4.7427

D₆₀= 0.6525

D₅₀= 0.4483

D₃₀= 0.2462

D₁₅= 0.1457

D₁₀= 0.0903

C_u= 7.23

C_c= 1.03

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-22
Sample Number: S-6

Depth: 10' - 12'

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

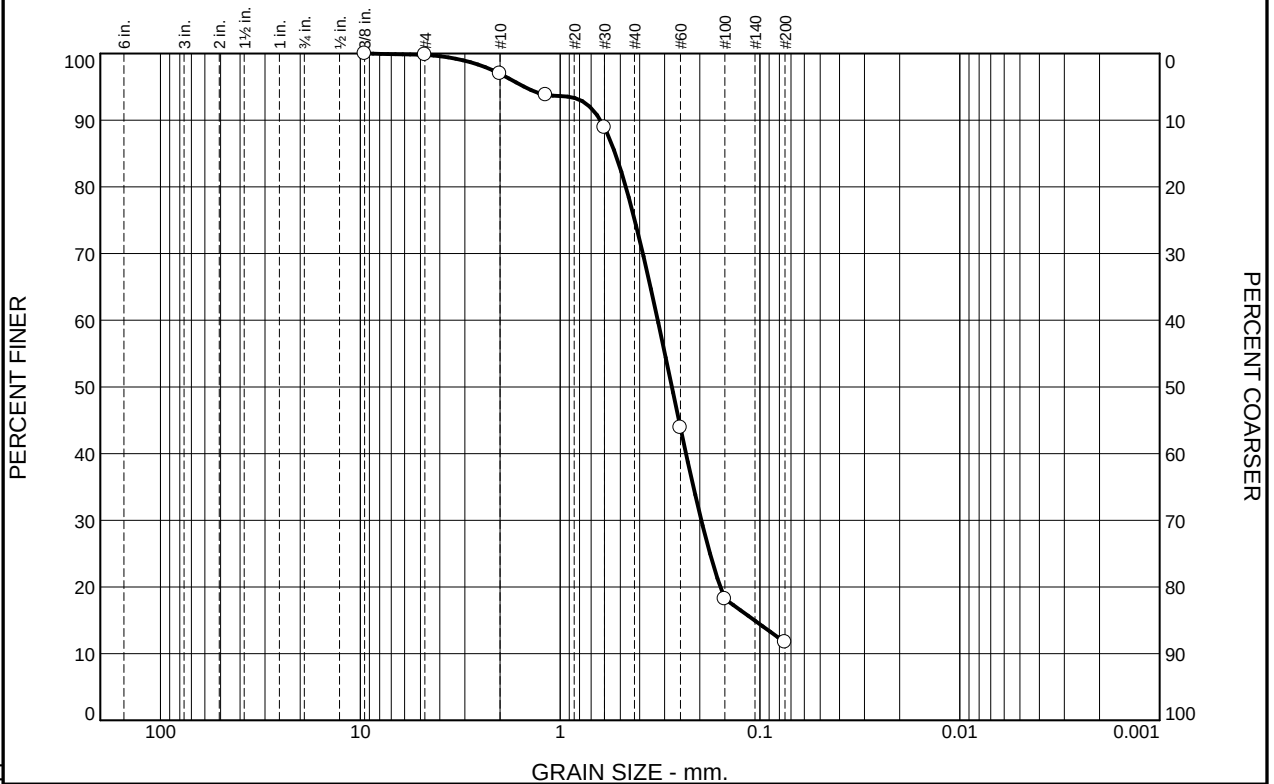
Figure

Tested By: CS

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	0.0	3.0	8.1	45.0	32.2	11.7

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375	100.0		
#4	99.8		
#10	97.0		
#16	93.8		
#30	88.9		
#60	43.9		
#100	18.2		
#200	11.7		

* (no specification provided)

Material Description
Light Tan m+f SAND, little- Silt, trace- f Gravel

Atterberg Limits
PL= LL= PI=

Coefficients
D₉₀= 0.6289 D₈₅= 0.5299 D₆₀= 0.3248
D₅₀= 0.2761 D₃₀= 0.1966 D₁₅= 0.1066
D₁₀= C_u= C_c=

Classification
USCS= AASHTO=

Remarks

Source of Sample: FPA-22
Sample Number: S-10

Depth: 30' - 32'

Date: 5/8/25

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Wall, NJ

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Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

Figure

Tested By: CS

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	6.6	7.8	28.2	38.2	8.1	11.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1	100.0		
.75	94.0		
.375	93.4		
#4	90.5		
#10	85.6		
#16	78.0		
#30	57.4		
#60	19.2		
#100	12.4		
#200	11.1		

* (no specification provided)

Material Description
Orange Brown & Tan cm+ SAND, little mf Gravel, little- Silt

PL= **Atterberg Limits** LL= PI=

D₉₀= 4.3192 **Coefficients** D₈₅= 1.8811 D₆₀= 0.6392
D₅₀= 0.5101 D₃₀= 0.3356 D₁₅= 0.2032
D₁₀= C_u= C_c=

USCS= **Classification** AASHTO=

Remarks

Source of Sample: FPA-25 Depth: 4' - 6'
Sample Number: S-3

Date: 5/8/25

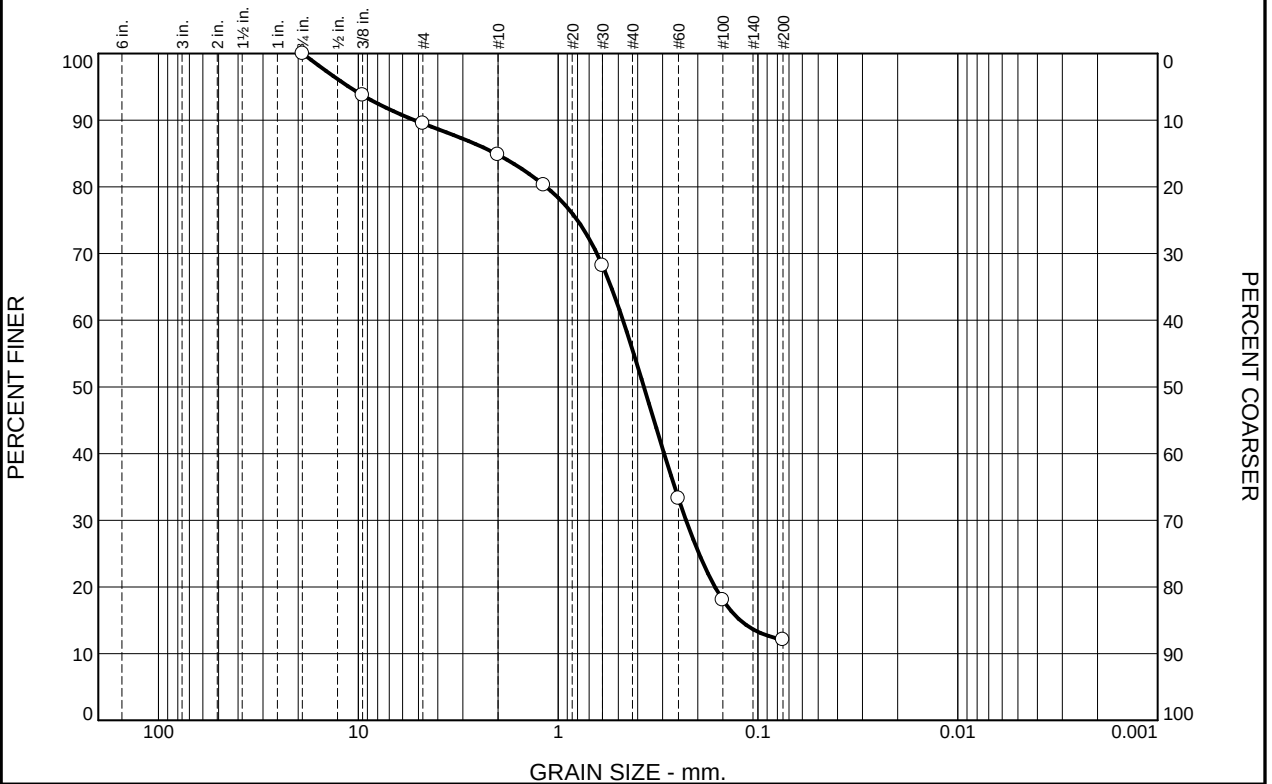
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Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109 Figure

Tested By: CS Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	6.2	9.0	16.6	34.9	21.2	12.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	93.7		
#4	89.5		
#10	84.8		
#16	80.3		
#30	68.2		
#60	33.3		
#100	18.0		
#200	12.1		

* (no specification provided)

Material Description

Tan & Grey cm+f SAND, little mf Gravel, little- Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 5.2292

D₈₅= 2.0521

D₆₀= 0.4739

D₅₀= 0.3722

D₃₀= 0.2290

D₁₅= 0.1227

D₁₀=

C_u=

C_c=

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-25
Sample Number: S-5

Depth: 10' - 12'

Date: 5/8/25

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Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

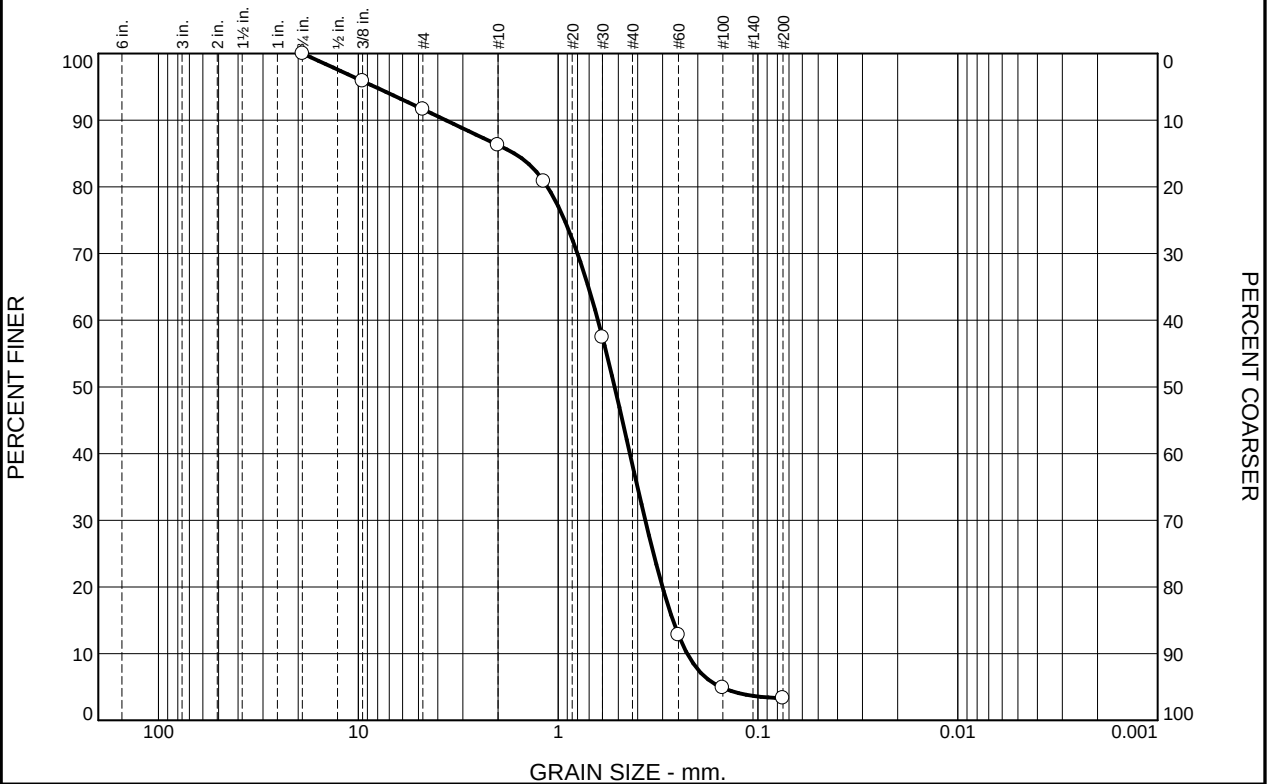
Figure

Tested By: CS

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	4.1	9.6	28.9	44.6	9.5	3.3

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	95.9		
#4	91.6		
#10	86.3		
#16	80.8		
#30	57.4		
#60	12.8		
#100	4.9		
#200	3.3		

* (no specification provided)

Material Description		
Orange Brown cm+ SAND, little mf+ Gravel, trace- Silt		
Atterberg Limits		
PL=	LL=	PI=
Coefficients		
D ₉₀ = 3.6453	D ₈₅ = 1.6527	D ₆₀ = 0.6322
D ₅₀ = 0.5217	D ₃₀ = 0.3663	D ₁₅ = 0.2665
D ₁₀ = 0.2260	C _u = 2.80	C _c = 0.94
Classification		
USCS= SP	AASHTO=	
Remarks		

Source of Sample: FPA-26
Sample Number: S-2

Depth: 2' - 4'

Date: 5/8/25

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Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

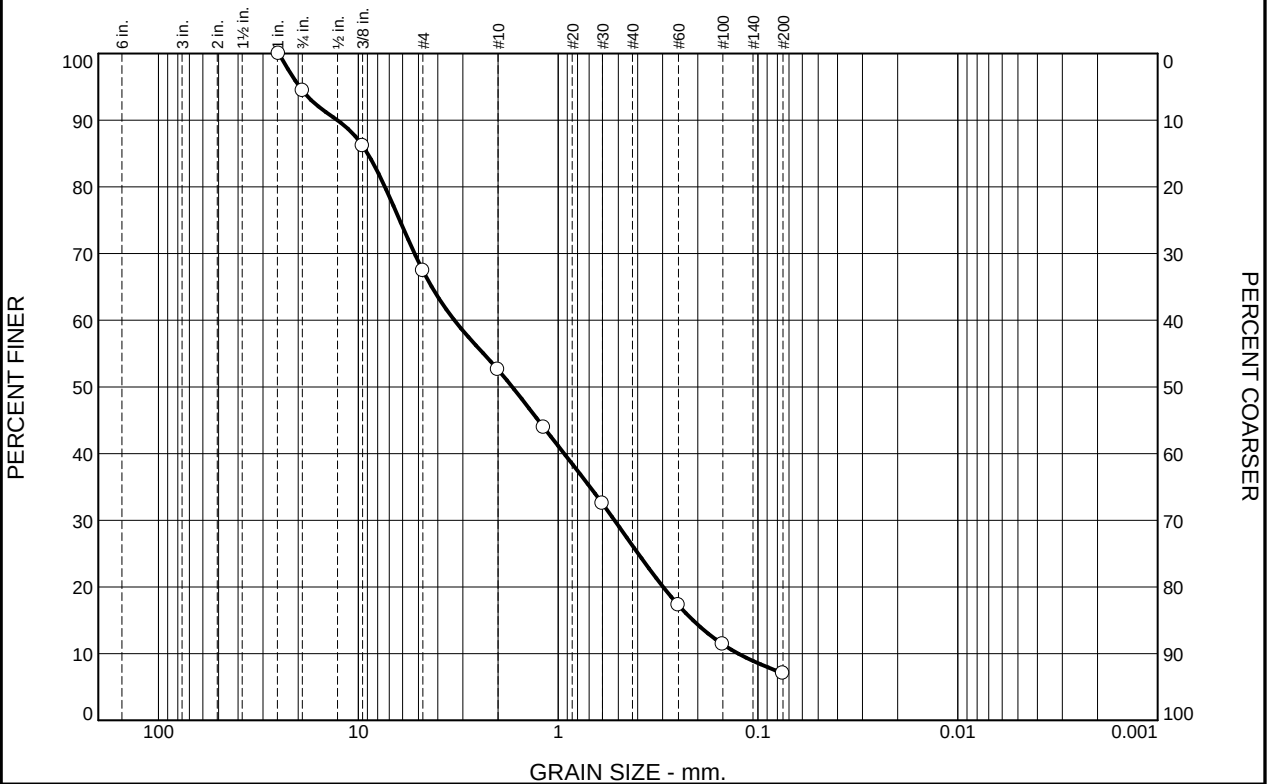
Figure

Tested By: CS

Checked By: RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	13.8	33.6	20.1	15.2	10.2	7.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1	100.0		
.75	94.4		
.375	86.2		
#4	67.4		
#10	52.6		
#16	43.9		
#30	32.5		
#60	17.3		
#100	11.4		
#200	7.1		

* (no specification provided)

Material Description
Tan mf+ Gravel, and+ cmf Sand, trace+ Silt

Atterberg Limits
PL= LL= PI=

Coefficients
D₉₀= 12.7200 D₈₅= 8.9708 D₆₀= 3.3035
D₅₀= 1.6965 D₃₀= 0.5223 D₁₅= 0.2114
D₁₀= 0.1254 C_u= 26.34 C_c= 0.66

Classification
USCS= AASHTO=

Remarks

Source of Sample: FPA-26
Sample Number: S-6

Depth: 10' - 12'

Date: 5/8/25

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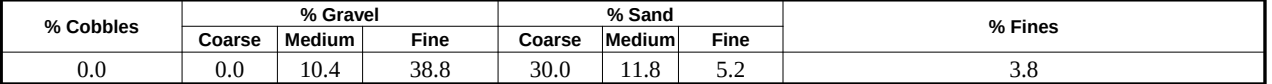
Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

Figure

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Material Description

Tan & Orange Brown mf+ Gravel, and+ c+mf Sand, trace Silt

<u>Atterberg Limits</u>	
PL=	LL= PI=
<u>Coefficients</u>	
D ₉₀ = 9.7333	D ₈₅ = 7.5147 D ₆₀ = 2.7301
D ₅₀ = 1.9474	D ₃₀ = 0.9694 D ₁₅ = 0.4149
D ₁₀ = 0.2771	C _u = 9.85 C _c = 1.24

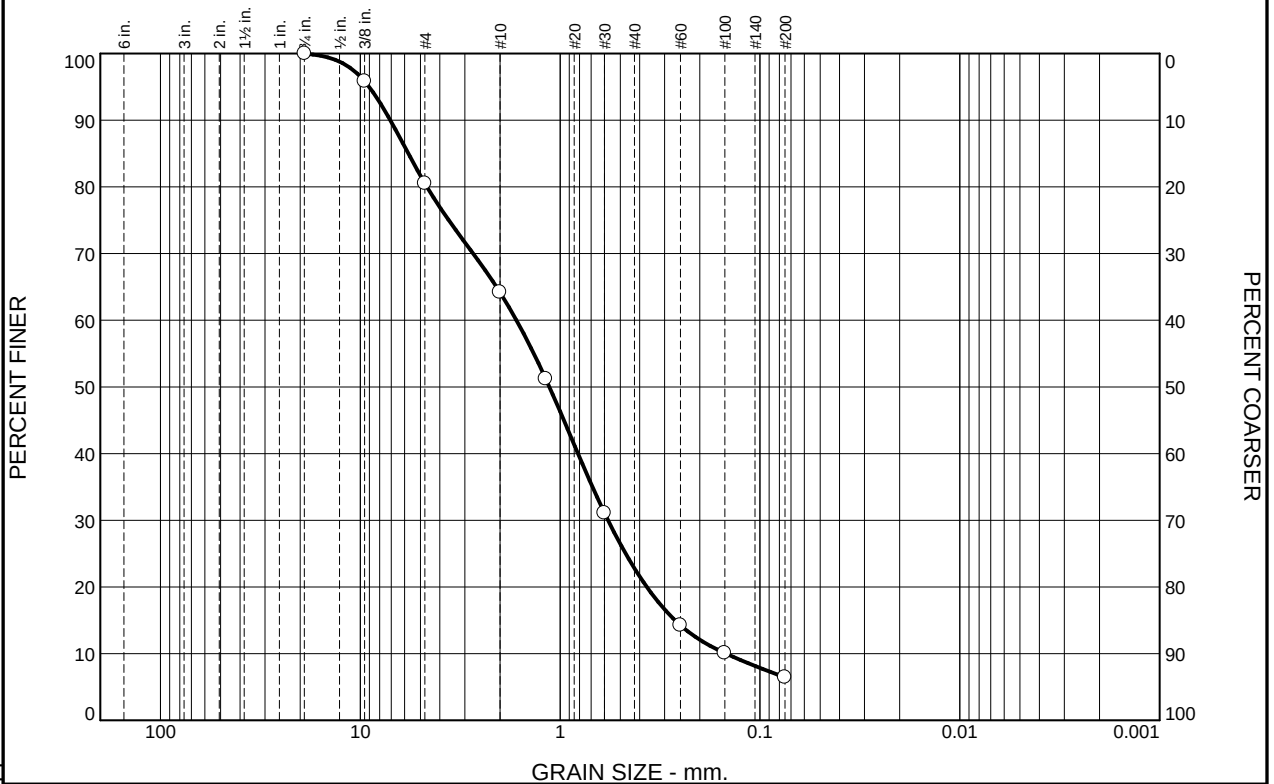
<u>Classification</u>	
USCS= SW	AASHTO=

Remarks

Tested By: CS **Checked By:** RT

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Particle Size Distribution Report



% Cobbles	% Gravel			% Sand			% Fines
	Coarse	Medium	Fine	Coarse	Medium	Fine	
0.0	0.0	4.1	31.7	33.1	16.9	7.7	6.5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	95.8		
#4	80.5		
#10	64.2		
#16	51.2		
#30	31.1		
#60	14.2		
#100	10.1		
#200	6.5		

* (no specification provided)

Material Description

Tan & Brown c+m SAND, and- mf+ Gravel, trace Silt

Atterberg Limits

PL=

LL=

PI=

Coefficients

D₉₀= 7.0766

D₈₅= 5.7484

D₆₀= 1.6550

D₅₀= 1.1324

D₃₀= 0.5761

D₁₅= 0.2662

D₁₀= 0.1480

C_u= 11.18

C_c= 1.35

Classification

USCS=

AASHTO=

Remarks

Source of Sample: FPA-27
Sample Number: S-7

Depth: 15' - 17'

Date: 5/8/25

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
Wall, NJ

Client: Mott MacDonald, LLC
Project: Route 539 Overpass @ Joint Base MDL
Project No: 1468M.109

Figure

Tested By: CS

Checked By: RT



Results Only Soil Testing for Ocean County - Route 539 Overpass at Joint Base MDL

May 12, 2025

Prepared for:

**Ryan Tumpey
French & Parrello
1800 Route 34, Ste 101
Wall, NJ 07719
ryan.tumpey@fpaengineers.com**

**Project X Job#: S250509H
Client Job or PO#: 1468M.109**

Prepared by:
M. Williams

Respectfully Submitted,

Eduardo Hernandez, M.Sc., P.E.
Sr. Corrosion Consultant
NACE Corrosion Technologist #16592
Professional Engineer
California No. M37102
ehernandez@projectxcorrosion.com





Soil Analysis Lab Results

Client: French & Parrello

Job Name: Ocean County - Route 539 Overpass at Joint Base MDL

Client Job Number: 1468M.109

Project X Job Number: S250509H

May 12, 2025

	Method	ASTM D4327		ASTM D4327		ASTM G187		ASTM G51	ASTM G200	SM 4500-D	ASTM D4327		ASTM D6919	ASTM D6919	ASTM D6919		ASTM D6919	ASTM D6919	ASTM D4327	ASTM D4327
Bore # / Description	Depth	Sulfates SO ₄ ²⁻		Chlorides Cl ⁻		Resistivity As Rec'd / Minimum		pH	Redox	Sulfide S ²⁻	Nitrate NO ₃ ⁻		Ammonium NH ₄ ⁺	Lithium Li ⁺	Sodium Na ⁺	Potassium K ⁺	Magnesium Mg ²⁺	Calcium Ca ²⁺	Fluoride F ₂ ⁻	Phosphate PO ₄ ³⁻
	(ft)	(mg/kg)	(wt%)	(mg/kg)	(wt%)	(Ω-cm)	(Ω-cm)		(mV)	(mg/kg)	(mg/kg)		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
FPA-6, S-2 & S-3	2-6	15.2	0.0015	19.6	0.0020	93,800	22,780	7.1	187	0.06	0.8		3.8	ND	23.8	5.0	14.9	160.8	3.9	4.2
FPA-14, S-3 & S-4	4-8	9.5	0.0009	16.4	0.0016	294,800	37,520	6.9	190	0.54	1.3		1.7	ND	17.9	3.7	12.1	138.1	6.4	4.4
FPA-22, S-3 & S-4	4-8	44.8	0.0045	30.8	0.0031	127,300	24,790	6.2	162	ND	2.3		19.6	ND	36.3	6.9	11.7	138.5	3.7	8.7

Cations and Anions, except Sulfide and Bicarbonate, tested with Ion Chromatography

mg/kg = milligrams per kilogram (parts per million) of dry soil weight

ND = 0 = Not Detected | NT = Not Tested | Unk = Unknown

Chemical Analysis performed on 1:3 Soil-To-Water extract

PPM = mg/kg (soil) = mg/L (Liquid)

For AWWA 105C: 0-3mg/kg sulfide = Negative; 3-6mg/kg = trace; >6mg/kg = Positive

Note: Sometimes a bad sulfate hit is a contaminated spot. Typical fertilizers are Potassium chloride, ammonium sulfate or ammonium sulfate nitrate (ASN). So this is another reason why testing full corrosion series is good because we then have the data to see if those other ingredients are present meaning the soil sample is just fertilizer-contaminated soil. This can happen often when the soil samples collected are simply surface scoops. This is why it's best to dig in a foot, throw away the top and test the deeper stuff. Dairy farms are also notorious for these items.

If one sample pops up much more corrosive than all others, we would recommend collecting more samples surrounding the problem sample location to determine if the peak is isolated to it. This allows us to conclude it was a contaminated sample and able to declare it an outlier.

Try out our new online forms: [SOIL CORROSIVITY & THERMAL RESISTIVITY LAB REQUEST FORM](#) & [IN-SITU WENNER 4 PIN QUOTE REQUEST FORM](#)

APPENDIX C

SOIL SAMPLING TEST RESULTS

Table 1A
 Petroleum Hydrocarbons and General Chemistry
 Soil Analytical Results

Ocean County - LPE-FD CR539 at JBMDL 2024 Small Bridge Design
 Ocean County, New Jersey

Sample ID:	NJDEP	NJDEP	NJDEP	NJDEP	NJDEP	FPA-5			FPA-11			FPA-18			FPA-25		
Sample Matrix:	Residential	Residential	Non-Residential	Non-Residential	Migration to	Soil			Soil			Soil			Soil		
Lab ID:	Ingestion-Dermal	Inhalation	Ingestion-Dermal	Inhalation	Ground Water	AD50643-001			AD50482-001			AD50779-001			AD50925-001		
Sample Date	SRS	SRS	SRS	SRS	SRS	3/31/2025			3/25/2025			4/4/2025			4/10/2025		
Sample Depth (feet bgs):	May 2021	May 2021	May 2021	May 2021	May 2021												
Petroleum Hydrocarbons (mg/kg)						Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL
Total EPH	NS	NS	NS	NS	NS	ND		61	ND		65	ND		63	ND		64
General Chemistry (mg/kg)						Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL
Percent Solids	NS	NS	NS	NS	NS	99			93			95			94		
Ignitability (POS/NEG)	NS	NS	NS	NS	NS	NEG			NEG			NEG			NEG		
Temp, °C	NS	NS	NS	NS	NS	22.7			22.4			21.8			23.5		
Cyanide	47	NS	780	NS	20	ND	0.24		ND	0.24		ND	0.25		ND	0.26	
Reactive Cyanide	47	NS	780	NS	20	ND	0.50		ND	0.50		ND	0.50		ND	0.50	
Reactive Sulfur	NS	NS	NS	NS	NS	ND	100		ND	100		ND	100		ND	100	
pH	NS	NS	NS	NS	NS	5			4.3			4.6			4.9		
Burning Rate (mm/sec)	NS	NS	NS	NS	NS	NA			NA			NA			NA		
Flame Propagation (POS/NEG)	NS	NS	NS	NS	NS	NEG			NEG			NEG			NEG		

Notes and Abbreviations
 Feet bgs - feet below ground surface
 mg/kg - milligram per kilogram
 Q - qualifier
 ND - not detected
 NA - not analyzed
 NS - no standard
 J - estimated concentration
 RL - reporting limit
 D - diluted
 U - Not detected

Table 1B
Metals
Soil Analytical Results

Ocean County - LPE-FD CR539 at JBMDL 2024 Small Bridge Design
Ocean County, New Jersey

Sample ID:	NJDEP Residential Ingestion-Dermal SRS May 2021	NJDEP Residential Inhalation SRS May 2021	NJDEP Non-Residential Ingestion-Dermal SRS May 2021	NJDEP Non-Residential Inhalation SRS May 2021	NJDEP Migration to Ground Water SRS May 2021	FPA-5			FPA-11			FPA-18			FPA-25		
Sample Matrix:						Soil			Soil			Soil			Soil		
Lab ID:						AD50643-001			AD50482-001			AD50779-001			AD50925-001		
Sample Date						3/31/2025			3/25/2025			4/4/2025			4/10/2025		
Sample Depth (feet bgs):																	
Metals (mg/kg)						Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL
Aluminum	78000	NS	NS	NS	NS	2,600		20	4,800		22	3,200		21	1,900		21
Antimony	31	NS	520	NS	5.4	ND		0.30	ND		0.32	ND		0.32	ND		0.32
Arsenic	19	1100	19	5200	19	0.56		0.20	0.74		0.22	1.1		0.21	0.66		0.21
Barium	16000	870000	260000	NS	2100	4.0		0.51	5.5		0.54	4.6		0.53	2.9		0.53
Beryllium	160	2000	2600	9300	0.7	ND		0.10	ND		0.11	ND		0.11	ND		0.11
Cadmium	71	2600	1100	12000	1.9	ND		0.081	ND		0.086	ND		0.084	ND		0.085
Calcium	NS	NS	NS	NS	NS	ND		100	ND		110	ND		110	ND		110
Chromium	NS	NS	NS	NS	NS	3.9		1.0	5.7		1.1	6.1		1.1	4.1		1.1
Cobalt	23	520	390	2500	90	0.79		0.20	ND		0.22	0.29		0.21	0.25		0.21
Copper	3100	NS	52000	NS	910	2.6		2.0	2.6		2.2	2.6		2.1	ND		2.1
Iron	NS	NS	NS	NS	NS	2,500		30	3,200		32	4,100		32	2,600		32
Lead	200	NS	800	NS	90	2.5		0.30	3.1		0.32	2.4		0.32	3.0		0.32
Magnesium	NS	NS	NS	NS	NS	ND		100	ND		110	130		110	ND		110
Manganese	1900	87000	31000	400000	NS	21		2.0	3.8		2.2	8.0		2.1	6.1		2.1
Mercury	23	520000	390	NS	0.1	ND		0.084	ND		0.090	ND		0.088	ND		0.089
Nickel	1600	20000	26000	93000	48	1.1		1.0	1.3		1.1	1.1		1.1	ND		1.1
Potassium	NS	NS	NS	NS	NS	ND		100	ND		110	ND		110	ND		110
Selenium	390	NS	6500	NS	11	ND		1.0	ND		1.1	ND		1.1	ND		1.1
Silver	390	NS	6500	NS	0.5	ND		0.20	ND		0.22	ND		0.21	ND		0.21
Sodium	NS	NS	NS	NS	NS	ND		100	ND		110	ND		110	ND		110
Thallium	NS	NS	NS	NS	NS	ND		0.051	ND		0.054	ND		0.053	ND		0.053
Vanadium	390	170000	6500	800000	NS	4.6		0.20	6.9		0.22	7.2		0.21	4.8		0.21
Zinc	23000	NS	390000	NS	930	ND		4.0	ND		4.3	4.9		4.2	ND		4.3

Notes and Abbreviations

Feet bgs - feet below ground surface

mg/kg - milligram per kilogram

Q - qualifier

U - not detected

ND - not detected

NS - no standard

J - estimated concentration

RL - reporting limit

MDL- method detection limit

D - Indicates result is based on a dilution

NA- not analyzed

Bolded and shaded analytical results exceed the corresponding cleanup criteria

Table 1C
Semivolatile Organic Compounds
Soil Analytical Results

Ocean County - LPE-FD CR539 at JBMDL 2024 Small Bridge Design
Ocean County, New Jersey

Sample ID:	NJDEP Residential Ingestion-Dermal SRS May 2021	NJDEP Residential Inhalation SRS May 2021	NJDEP Non-Residential Ingestion-Dermal SRS May 2021	NJDEP Non-Residential Inhalation SRS May 2021	NJDEP Migration to Ground Water SRS May 2021	FPA-5 Soil AD50643-001 3/31/2025			FPA-11 Soil AD50482-001 3/25/2025			FPA-18 Soil AD50779-001 4/4/2025			FPA-25 Soil AD50925-001 4/10/2025		
Sample Depth (feet bgs):						Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL
Semi-Volatile Organic Compounds (mg/kg)																	
1,1'-Biphenyl	87	NS	450	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
1,2,4,5-Tetrachlorobenzene	23	NS	390	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
1,4-Dioxane	7	45	36	210	0.067	ND		0.034	ND		0.036	ND		0.035	ND		0.035
2,3,4,6-Tetrachlorophenol	1900	NS	27000	NS	26	ND		0.034	ND		0.036	ND		0.035	ND		0.035
2,4,5-Trichlorophenol	6300	NS	91000	NS	68	ND		0.034	ND		0.036	ND		0.035	ND		0.035
2,4,6-Trichlorophenol	49	NS	230	NS	0.86	ND		0.034	ND		0.036	ND		0.035	ND		0.035
2,4-Dichlorophenol	190	NS	2700	NS	0.19	ND		0.034	ND		0.036	ND		0.035	ND		0.035
2,4-Dimethylphenol	1300	NS	18000	NS	2.3	ND		0.034	ND		0.036	ND		0.035	ND		0.035
2,4-Dinitrophenol	130	NS	1800	NS	0.33	ND		0.17	ND		0.18	ND		0.18	ND		0.18
2,4-Dinitrotoluene	0.8	NS	3.8	NS	0.27	ND		0.034	ND		0.036	ND		0.035	ND		0.035
2,6-Dinitrotoluene	0.8	NS	3.8	NS	0.27	ND		0.034	ND		0.036	ND		0.035	ND		0.035
2-Chloronaphthalene	4800	NS	67000	NS	NA	ND		0.034	ND		0.036	ND		0.035	ND		0.035
2-Chlorophenol	390	NS	6500	NS	0.76	ND		0.034	ND		0.036	ND		0.035	ND		0.035
2-Methylnaphthalene	240	NS	3300	NS	3.1	ND		0.034	ND		0.036	ND		0.035	ND		0.035
2-Methylphenol	320	NS	4600	NS	0.77	ND		0.034	ND		0.036	ND		0.035	ND		0.035
2-Nitroaniline	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
2-Nitrophenol	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
3+4-Methylphenol	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
3,3'-Dichlorobenzidine	1.2	NS	5.7	NS	3.9	ND		0.034	ND		0.036	ND		0.035	ND		0.035
3-Nitroaniline	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
4,6-Dinitro-2-methylphenol	NS	NS	NS	NS	NS	ND		0.17	ND		0.18	ND		0.18	ND		0.18
4-Bromophenyl-phenyl ether	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
4-Chloro-3-methylphenol	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
4-Chloroaniline	2.7	NS	13	NS	0.23	ND		0.034	ND		0.036	ND		0.035	ND		0.035
4-Chlorophenyl phenyl ether	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
4-Nitroaniline	27	NS	130	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
4-Nitrophenol	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Acenaphthene	3600	NS	50000	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Acenaphthylene	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Acetophenone	7800	NS	130000	NS	3.6	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Anthracene	18000	NS	250000	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Atrazine	220	NS	3200	NS	0.33	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Benzaldehyde	170	NS	910	NS	NS	ND		0.034	ND		0.036	ND		0.035	0.11		0.035
Benzo(a)anthracene	5.1	78000	23	370000	0.71	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Benzo(a)pyrene	0.51	3500	2.3	16000	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Benzo(b)fluoranthene	5.1	78000	23	370000	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Benzo(g,h,i)perylene	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Benzo(k)fluoranthene	51	780000	230	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
bis(2-chloroethoxy)methane	190	NS	2700	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
bis(2-chloroethyl)ether	0.63	NS	3.3	NS	0.33	ND		0.013	ND		0.014	ND		0.013	ND		0.014
bis(2-chloroisopropyl)ether	3100	NS	52000	NS	1.9	ND		0.034	ND		0.036	ND		0.035	ND		0.035
bis(2-ethylhexyl)phthalate	39	NS	180	NS	14	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Butylbenzylphthalate	290	NS	1300	NS	29	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Caprolactam	32000	290	460000	1300	16	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Carbazole	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Chrysene	510	NS	2300	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Dibenzo(a,h)anthracene	0.51	7800	2.3	37000	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Dibenzofuran	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Diethylphthalate	51000	NS	730000	NS	44	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Dimethylphthalate	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Di-n-butylphthalate	6300	NS	91000	NS	NS	ND		0.17	ND		0.18	ND		0.18	ND		0.18
Di-n-octylphthalate	630	NS	9100	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Fluoranthene	2400	NS	33000	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Fluorene	2400	NS	33000	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Hexachlorobenzene	0.43	NS	2.3	NS	0.17	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Hexachlorobutadiene	8.9	NS	47	NS	0.17	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Hexachlorocyclopentadiene	470	2.7	7800	NS	2.5	ND		0.17	ND		0.18	ND		0.18	ND		0.18
Hexachloroethane	17	NS	91	NS	0.17	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Indeno(1,2,3-cd)pyrene	5.1	78000	23	370000	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Isophorone	570	NS	2700	NS	0.23	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Naphthalene	2500	5.7	34000	27	19	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Nitrobenzene	160	7.5	2600	36	0.17	ND		0.034	ND		0.036	ND		0.035	ND		0.035
n-Nitroso-di-n-propylamine	0.17	NS	0.36	NS	0.17	ND		0.034	ND		0.036	ND		0.035	ND		0.035
n-Nitrosodiphenylamine	110	NS	520	NS	1.1	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Pentachlorophenol	1	NS	4.4	NS	0.33	ND		0.17	ND		0.18	ND		0.18	ND		0.18
Phenanthrene	NS	NS	NS	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Phenol	19000	39000	270000	NS	21	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Pyrene	1800	NS	25000	NS	NS	ND		0.034	ND		0.036	ND		0.035	ND		0.035
Tentatively Identified Compounds	NS	NS	NS	NS	NS	7.3	J		9.7	J		6.3	J		9.0	J	

Notes and Abbreviations

Feet bgs - feet below ground surface

mg/kg - milligram per kilogram

Q - qualifier

U - not detected

ND - not detected

NS - no standard

J - estimated concentration

RL - reporting limit

MDL - method detection limit

D - Indicates result is based on a dilution

NA- not analyzed

Bolded and shaded analytical results exceed the corresponding cleanup criteria

Table 1D
Volatile Organic Compounds
Soil Analytical Results

Ocean County - LPE-FD CR539 at JBMDL 2024 Small Bridge Design
Ocean County, New Jersey

Sample ID:	NJDEP Residential Ingestion-Dermal SRS May 2021	NJDEP Residential Inhalation SRS May 2021	NJDEP Non-Residential Ingestion-Dermal SRS May 2021	NJDEP Non-Residential Inhalation SRS May 2021	NJDEP Migration to Ground Water SRS May 2021	FPA-5 Soil AD50643-001 3/31/2025			FPA-11 Soil AD50482-001 3/25/2025			FPA-18 Soil AD50779-001 4/4/2025			FPA-25 Soil AD50925-001 4/10/2025		
Sample Matrix:																	
Lab ID:																	
Sample Depth (feet bgs):																	
Sample Date:																	
Volatile Organic Compounds (mg/kg)						Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL
1,1,1-Trichloroethane	160000	NS	NS	NS	0.20	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,1,2,2-Tetrachloroethane	3.5	NS	18	NS	0.0069	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	NS	NS	NS	NS	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,1,2-Trichloroethane	12	NS	64	NS	0.017	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,1-Dichloroethane	120	NS	640	NS	0.24	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,1-Dichloroethene	11	52	180	240	0.0069	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,2,3-Trichlorobenzene	NS	NS	NS	NS	NS	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,2,4-Trichlorobenzene	780	94	13000	NS	0.52	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,2-Dibromo-3-chloropropane	0.87	0.026	4.5	0.12	0.0050	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,2-Dibromoethane	0.35	0.085	1.8	0.41	0.005	ND		0.0010	ND		0.0011	ND		0.0010	ND		0.0010
1,2-Dichlorobenzene	6700	NS	110000	NS	11	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,2-Dichloroethane	5.8	71	30	320	0.0095	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,2-Dichloropropane	19	5.7	98	27	0.0058	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,3-Dichlorobenzene	6700	NS	110000	NS	11	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,3-Dichloropropene (Total)	7	4.8	36	23	0.0063	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,4-Dichlorobenzene	780	NS	13000	NS	1.4	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
1,4-Dioxane	7	45	36	210	0.067	ND		0.10	ND		ND	0.10		ND	0.10		0.10
2-Butanone	47000	NS	780000	NS	0.98	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
2-Hexanone	390	1000	6500	NS	0.15	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
4-Methyl-2-pentanone	NS	NS	NS	NS	NS	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Acetone	70000	NS	NS	NS	19	ND		0.010	ND		0.011	ND		0.010	ND		0.010
Benzene	3.0	2.2	16	11	0.0094	ND		0.0010	ND		0.0011	ND		0.0010	ND		0.0010
Bromochloromethane	NS	NS	NS	NS	NS	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Bromodichloromethane	11	NS	59	NS	0.0050	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Bromoform	88	NS	460	NS	0.018	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Bromomethane	110	18	1800	82	0.043	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Carbon disulfide	NS	NS	NS	NS	3.7	ND		0.0052	ND		0.0057	ND		0.0050	ND		0.0050
Carbon tetrachloride	7.6	1.4	40	6.9	0.0075	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Chlorobenzene	510	NS	8400	NS	0.64	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Chloroethane	NS	NS	NS	NS	NS	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Chloroform	780	590	13000	NS	0.33	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Chloromethane	NS	270	NS	1200	NS	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
cis-1,2-Dichloroethene	780	NS	13000	NS	0.35	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
cis-1,3-Dichloropropene	7.0	4.8	36	23	0.0063	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Cyclohexane	NS	NS	NS	NS	NS	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Dibromochloromethane	8.3	NS	43	NS	0.005	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Dichlorodifluoromethane	16000	NS	260000	NS	38	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Ethylbenzene	7800	10	130000	48	15	ND		0.0010	ND		0.0011	ND		0.0010	ND		0.0010
Isopropylbenzene	7800	NS	130000	NS	22	ND		0.0010	ND		0.0011	ND		0.0010	ND		0.0010
m&p-Xylenes	12000	NS	190000	NS	19	ND		0.0015	ND		0.0016	ND		0.0014	ND		0.0014
Methyl Acetate	78000	NS	NS	NS	22	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Methylcyclohexane	NS	NS	NS	NS	NS	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Methylene chloride	50	1400	260	NS	0.013	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Methyl-t-butyl ether	780	140	13000	650	0.25	ND		0.0010	ND		0.0011	ND		0.0010	ND		0.0010
o-Xylene	12000	NS	190000	NS	19	ND		0.0010	ND		0.0011	ND		0.0010	ND		0.0010
Styrene	16000	NS	260000	NS	2.1	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Tetrachloroethene	330	47	1700	NS	0.0086	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Toluene	6300	NS	100000	NS	7.8	ND		0.0010	ND		0.0011	ND		0.0010	ND		0.0010
trans-1,2-Dichloroethene	1300	NS	22000	NS	0.56	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
trans-1,3-Dichloropropene	7.0	4.8	36	23	0.0063	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Trichloroethene	15	3.0	79	14	0.0065	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Trichlorofluoromethane	23000	NS	390000	NS	29	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Vinyl chloride	0.97	1.4	5.0	6.4	0.0067	ND		0.0021	ND		0.0023	ND		0.0020	ND		0.0020
Xylenes (Total)	12000	NS	190000	NS	19	ND		0.0010	ND		0.0011	ND		0.0010	ND		0.0010
Tentatively Identified Compounds	NS	NS	NS	NS	NS	ND			ND			0.049	J		0.0071	J	

Notes and Abbreviations

Feet bgs - feet below ground surface

mg/kg - milligram per kilogram

Q - qualifier

U- not detected

ND - not detected

NS - no standard

J - estimated concentration

RL - reporting limit

MDL- method detection limit

D - Indicates result is based on a dilution

NA- not analyzed

Bolded and shaded analytical results exceed the corresponding cleanup criteria

Double Underline - RL exceeds SRS

Table 1E
PCBs
Soil Analytical Results

Ocean County - LPE-FD CR539 at JBMDL 2024 Small Bridge Design
Ocean County, New Jersey

Sample ID:	NJDEP Residential Ingestion-Dermal SRS May 2021	NJDEP Residential Inhalation SRS May 2021	NJDEP Non-Residential Ingestion-Dermal SRS May 2021	NJDEP Non-Residential Inhalation SRS May 2021	NJDEP Migration to Ground Water SRS May 2021	FPA-5 Soil AD50643-001 3/31/2025			FPA-11 Soil AD50482-001 3/25/2025			FPA-18 Soil AD50779-001 4/4/2025			FPA-25 Soil AD50925-001 4/10/2025		
Sample Matrix:																	
Lab ID:																	
Sample Depth (feet bgs):																	
Sample Date:																	
PCBs (mg/kg)						Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL
Aroclor (Total)	0.25	NS	1.1	NS	1.6	ND		0.025	ND		0.027	ND		0.026	ND		0.027
Aroclor-1016	0.25	NS	1.1	NS	1.6	ND		0.025	ND		0.027	ND		0.026	ND		0.027
Aroclor-1221	0.25	NS	1.1	NS	1.6	ND		0.025	ND		0.027	ND		0.026	ND		0.027
Aroclor-1232	0.25	NS	1.1	NS	1.6	ND		0.025	ND		0.027	ND		0.026	ND		0.027
Aroclor-1242	0.25	NS	1.1	NS	1.6	ND		0.025	ND		0.027	ND		0.026	ND		0.027
Aroclor-1248	0.25	NS	1.1	NS	1.6	ND		0.025	ND		0.027	ND		0.026	ND		0.027
Aroclor-1254	0.25	NS	1.1	NS	1.6	ND		0.025	ND		0.027	ND		0.026	ND		0.027
Aroclor-1260	0.25	NS	1.1	NS	1.6	ND		0.025	ND		0.027	ND		0.026	ND		0.027
Aroclor-1262	0.25	NS	1.1	NS	1.6	ND		0.025	ND		0.027	ND		0.026	ND		0.027
Aroclor-1268	0.25	NS	1.1	NS	1.6	ND		0.025	ND		0.027	ND		0.026	ND		0.027

Notes and Abbreviations

Feet bgs - feet below ground surface

mg/kg - milligram per kilogram

Q - qualifier

U - not detected

ND - not detected

NS - no standard

J - estimated concentration

RL - reporting limit

MDL- method detection limit

D - Indicates result is based on a dilution

NA- not analyzed

Bolded and shaded analytical results exceed the corresponding cleanup criteria

Table 1F
Pesticides
Soil Analytical Results

Ocean County - LPE-FD CR539 at JBMDL 2024 Small Bridge Design
Ocean County, New Jersey

Sample ID:	NJDEP Residential Ingestion-Dermal SRS May 2021	NJDEP Residential Inhalation SRS May 2021	NJDEP Non-Residential Ingestion-Dermal SRS May 2021	NJDEP Non-Residential Inhalation SRS May 2021	NJDEP Migration to Ground Water SRS May 2021	FPA-5 Soil AD50643-001 3/31/2025	FPA-11 Soil AD50482-001 3/25/2025	FPA-18 Soil AD50779-001 4/4/2025	FPA-25 Soil AD50925-001 4/10/2025
Sample Matrix:									
Lab ID:									
Sample Depth (feet bgs):									
Sample Date:									
Volatile Organic Compounds (mg/kg)	Result	Q	RL	Result	Q	RL	Result	Q	RL
4,4'-DDD	2.3	NS	11	NS	0.47	ND	0.0025	ND	0.0027
4,4'-DDE	2	NS	11	NS	0.47	ND	0.0025	ND	0.0027
4,4'-DDT	1.9	NS	9.5	NS	0.67	ND	0.0025	ND	0.0027
α-Chlordane	0.27	NS	1.4	NS	1.4	ND	0.0051	ND	0.0054
Aldrin	0.041	NS	0.21	NS	0.13	ND	0.0051	ND	0.0054
α-BHC	0.086	NS	0.41	NS	0.0023	ND	0.0010	ND	0.0011
β-BHC	0.3	NS	1.4	NS	0.0046	ND	0.0010	ND	0.0011
Chlordane	0.27	NS	1.4	NS	1.4	ND	0.0051	ND	0.0054
δ-BHC	NS	NS	NS	NS	NS	ND	0.0051	ND	0.0054
Dieldrin	0.034	NS	0.16	NS	0.024	ND	0.0010	ND	0.0011
Endosulfan I	470	NS	7800	NS	NS	ND	0.0051	ND	0.0054
Endosulfan II	470	NS	7800	NS	NS	ND	0.0051	ND	0.0054
Endosulfan sulfate	NS	NS	NS	NS	NS	ND	0.0051	ND	0.0054
Endrin	19	NS	270	NS	1.6	ND	0.0051	ND	0.0054
Endrin aldehyde	NS	NS	NS	NS	NS	ND	0.0051	ND	0.0054
Endrin ketone	NS	NS	NS	NS	NS	ND	0.0051	ND	0.0054
γ-BHC (Lindane)	0.57	NS	2.8	NS	0.0035	ND	0.0010	ND	0.0011
Heptachlor	0.15	NS	0.81	NS	0.083	ND	0.0051	ND	0.0054
Heptachlor Epoxide	0.076	NS	0.4	NS	0.081	ND	0.0051	ND	0.0054
Methoxychlor	320	NS	4600	NS	NS	ND	0.0051	ND	0.0054
Toxaphene	0.49	NS	2.3	NS	6.2	ND	0.025	ND	0.027
γ-Chlordane	0.27	NS	1.4	NS	1.4	ND	0.0051	ND	0.0054

Notes and Abbreviations

Feet bgs - feet below ground surface

mg/kg - milligram per kilogram

Q - qualifier

U- not detected

ND - not detected

NS - no standard

J - estimated concentration

RL - reporting limit

MDL- method detection limit

D - Indicates result is based on a dilution

NA- not analyzed

Bolded and shaded analytical results exceed the corresponding cleanup criteria

Table 1G
TCLP
Soil Analytical Results

Ocean County - LPE-FD CR539 at JBMDL 2024 Small Bridge Design
Ocean County, New Jersey

Sample ID:		FPA-5			FPA-11			FPA-18			FPA-25		
Sample Matrix:		Soil			Soil			Soil			Soil		
Lab ID:		AD50643-001			AD50482-001			AD50779-001			AD50925-001		
Sample Depth (feet bgs):		3/31/2025			3/25/2025			4/4/2025			4/10/2025		
Sample Date:													
TCLP Metals		Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL
Mercury	0.2	ND		0.00050	ND		0.00050	ND		0.00050	ND		0.00050
Arsenic	5	ND		0.10	ND		0.10	ND		0.10	ND		0.10
Barium	100	ND		0.25	ND		0.25	ND		0.25	ND		0.25
Cadmium	1	ND		0.050	ND		0.050	ND		0.050	ND		0.050
Chromium	5	ND		0.10	ND		0.10	ND		0.10	ND		0.10
Lead	5	ND		0.050	ND		0.050	ND		0.050	ND		0.050
Selenium	1	ND		0.10	ND		0.10	ND		0.10	ND		0.10
Silver	5	ND		0.050	ND		0.050	ND		0.050	ND		0.050
TCLP SVOCs		Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL
2,4,5-Trichlorophenol	400	ND		0.0080	ND		0.0080	ND		0.0080	ND		0.0080
2,4,6-Trichlorophenol	2	ND		0.0080	ND		0.0080	ND		0.0080	ND		0.0080
2,4-Dinitrotoluene	0.13	ND		0.0080	ND		0.0080	ND		0.0080	ND		0.0080
2-Methylphenol	200	ND		0.0020	ND		0.0020	ND		0.0020	ND		0.0020
3+4-Methylphenol	200	ND		0.0020	ND		0.0020	ND		0.0020	ND		0.0020
Hexachlorobenzene	0.13	ND		0.0080	ND		0.0080	ND		0.0080	ND		0.0080
Hexachlorobutadiene	0.5	ND		0.0080	ND		0.0080	ND		0.0080	ND		0.0080
Hexachloroethane	3	ND		0.0080	ND		0.0080	ND		0.0080	ND		0.0080
Nitrobenzene	2	ND		0.0020	ND		0.0020	ND		0.0020	ND		0.0020
Pentachlorophenol	100	ND		0.040	ND		0.040	ND		0.040	ND		0.040
Pyridine	5	ND		0.0080	ND		0.0080	ND		0.0080	ND		0.0080
TCLP VOCs		Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL
1,1-Dichloroethene	0.7	ND		0.050	ND		0.050	ND		0.050	ND		0.050
1,2-Dichloroethane	0.5	ND		0.050	ND		0.050	ND		0.050	ND		0.050
1,4-Dichlorobenzene	7.5	ND		0.050	ND		0.050	ND		0.050	ND		0.050
2-Butanone	200	ND		0.050	ND		0.050	ND		0.050	ND		0.050
Benzene	0.5	ND		0.025	ND		0.025	ND		0.025	ND		0.025
Carbon Tetrachloride	0.5	ND		0.050	ND		0.050	ND		0.050	ND		0.050
Chlorobenzene	100	ND		0.050	ND		0.050	ND		0.050	ND		0.050
Chloroform	6	ND		0.25	ND		0.25	ND		0.25	ND		0.25
Tetrachloroethene	0.7	ND		0.050	ND		0.050	ND		0.050	ND		0.050
Trichloroethene	0.5	ND		0.050	ND		0.050	ND		0.050	ND		0.050
Vinyl chloride	0.2	ND		0.050	ND		0.050	ND		0.050	ND		0.050
TCLP Pesticides		Result	Q	RL	Result	Q	RL	Result	Q	RL	Result	Q	RL
Chlordane	0.03	ND		0.00050	ND		0.00050	ND		0.00050	ND		0.00050
Endrin	0.02	ND		0.000050	ND		0.000050	ND		0.000050	ND		0.000050
gamma-BHC (Lindane)	0.4	ND		0.000050	ND		0.000050	ND		0.000050	ND		0.000050
Heptachlor	0.008	ND		0.000050	ND		0.000050	ND		0.000050	ND		0.000050
Heptachlor Epoxide	0.008	ND		0.000050	ND		0.000050	ND		0.000050	ND		0.000050
Methoxychlor	10	ND		0.000050	ND		0.000050	ND		0.000050	ND		0.000050
Toxaphene	0.5	ND		0.0013	ND		0.0013	ND		0.0013	ND		0.0013

Notes and Abbreviations

Feet bgs - feet below ground surface

mg/kg - milligram per kilogram

Q - qualifier

U - not detected

ND - not detected

NS - no standard

J - estimated concentration

RL - reporting limit

MDL - method detection limit

D - Indicates result is based on a dilution

NA - not analyzed

Bolded and shaded analytical results exceed the corresponding cleanup criteria

APPENDIX D
SESC CERTIFICATION AND 5G3
AUTHORIZATION



714 Lacey Road, Forked River, NJ 08731 Tel (609) 971-7002 Fax (609) 971-3391
www.SoilDistrict.org

SOIL EROSION AND SEDIMENT CONTROL CERTIFICATION
N.J.S.A. 4:24-39, ET. SEQ., CHAPTER 251, P.L.1975

CERTIFICATION DATE: August 12, 2026

Ocean County Engineering Dept
129 Hooper Avenue
Toms River, NJ 08754

Re: SCD#26670; CR539 Ridge Way Overpass Project - Site Plan; Block N/A, Lot N/A; Plumsted Township

Pursuant to Chapter 251, Soil Erosion and Sediment Control Act, P.L. 1975, the Ocean County Soil Conservation District, hereby, grants certification of the soil erosion and sediment control plan for the above-referenced project, subject to the following:

1. The applicant is required to schedule a pre-construction meeting with the District prior to the start of soil disturbance activities. The applicant must also notify the District, by mail or fax, at least 48 hours prior to initial land disturbance.
2. Any changes to the certified Soil Erosion and Sediment Control Plan will require the submission of a revised Soil Erosion and Sediment Control Plan to the District for review and approval.
3. The applicant must notify the District when the project is completed.
NOTE: No certificate of occupancy can be granted by a municipality until a report of compliance is issued by the District.
4. The applicant must carry out all land disturbance activities in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey, promulgated by the State Soil Conservation Committee. A copy of the certified plan and a copy of these provisions must be kept on the job site at all times.
5. Any conveyance of the project (or portion thereof) will transfer full responsibility for compliance to subsequent owner(s). The District must be notified in writing of any change of ownership.
6. This certification is limited to the controls specified in this plan. It is not authorization to engage in the proposed land use unless such use has been previously approved by the municipality or other controlling agency. **THIS CERTIFICATION SHALL EXPIRE IN 3-1/2 YEARS.**

Failure to comply with any of the conditions listed may result in the issuance of a Stop Construction Order.

NOTE: (1) All sediment spilled, dropped, washed or tracked onto roadways (public or private), or other impervious surfaces must be removed immediately.

NOTE: (2) Additional Measures will be required if erosion problems develops.

NOTE: (3) At the time of the final inspection, you are required to submit a Soil Compaction Mitigation Verification Form. You must also provide confirmation that the proper type and amount of seed, lime and fertilizer have been used for permanent stabilization work.

NOTE: (4) The revised Standards for Soil Erosion and Sediment Control in NJ require applicants to perform a soil test to determine the lime application rate prior to permanent stabilization.

William J. Pollock

SUPERVISOR

Copy to: Applicant, Municipality Construction Official, Planning Board, Applicant's Engineer, District

Healthy Soil is at the Root of Everything!



State of New Jersey

PHILIP D. MURPHY
Governor

DEPARTMENT OF AGRICULTURE
PO Box 330
TRENTON NJ 08625-0330

EDWARD D. WENGRYN
Secretary

TAHESHA L. WAY
Lieutenant Governor

August 12, 2025

Ocean County Engineering Dept
129 Hooper Avenue
Toms River, NJ 08754

Re: CR539 Ridge Way Overpass Project - Site Plan

SCD Certification Code (for RFA/NJDEP Stormwater Permit): L8MM8H0R68

Chapter 251 Identification Number (SCD# as per District): 26670

Acres: 21

Block N/A

Lot N/A

Dear Applicant:

Your proposed project requires a Stormwater Construction General Permit (5G3) pursuant to N.J.A.C. 7:14 A.

As the applicant, you are required to submit applications and payment electronically utilizing the NJDEP Stormwater Construction Activity E-Permitting System.

You must file for this permit prior to starting ANY soil disturbing activities.

In order to access the E-permitting system you must first become a registered user of NJDEP Online at <http://www.nj.gov/dep/online>. Once registered, the following information is required to complete the E-Permit, Stormwater Construction General Permit Request for Authorization (RFA).

1. The Application/ Project name.
2. The location of the site – Physical Address, NJ State Plane Coordinates, Block(s) and Lot(s).
3. Highlands Area Approval/ Exemption (*if site is located within the Highlands*)
4. Contact information (*address, email, and phone*) for – Fees/ Billing contact, Owner, and Permittee.
5. SCD Certification Code (for RFA /NJDEP Stormwater Permit) - 10 digits includes both capital letters and numbers and Chapter 251 Identification Number (SCD# as per District) (***provided above****)

*These codes are unique to your stormwater RFA and Chapter 251 approval. Enter these codes in the E-permitting system, on the screen titled "SCD Certified Plan". The codes are **case sensitive** and each code may only be used once.

6. Area of land disturbance (***provided above***)
7. The date activity will commence.
8. Identification number of all existing NJPDES permits for the facility.
9. A project description and description of current land use.
10. Certification PIN (*this PIN is generated and emailed to you when registering a NJDEP online account*).
11. A method of payment – checking/ savings account, voucher payment, credit card

If you have any questions regarding this information or any other aspect of the E-Permitting system please contact Daniel Kuti, NJDEP Bureau of Nonpoint Pollution Control at (609) 633-7021 or at PortalComments@dep.state.nj.us

New Jersey Department of Environmental Protection



Division of Watershed Protection and Restoration
Bureau of NJPDES Stormwater Permitting
P.O. Box 420 – 501 E. State St., 1st Flr
Trenton, NJ 08625-0420
Tel: (609) 633-7021 / Fax: (609) 777-0432
Mail Code - 501-02A

PI ID #: 1151438_
Portal ID#: 2114047
NJPDES #: NJG0386154
Payment Arrangement: Credit Card
Paid Online: Yes
Paid On: 08/13/2026
Paid Amt: \$650.00

This Authorization form is requested to be located at the regulated construction site at all times and be available for inspection by any authorized representative of the New Jersey Department of Environmental Protection. If you have designated an agent, it is your responsibility to notify your agent about this General Permit and its requirements.

AUTHORIZATION TO DISCHARGE

5G3 -Construction Activity Stormwater (GP)

To ensure compliance during the construction activity please print out the Stormwater Construction Permit terms and conditions located at
<http://www.nj.gov/dep/dwq/5g3.htm>

Facility Name and Address:

CR 539 OVERPASS OVER RIDGE WAY
 County Route 539
 Plumsted Twp, NJ 08533

Type of Activity: Stormwater Discharge General Permit Authorization New

Owner:

Ocean County
 129 Hooper Avenue
 Toms River, NJ 08754

Operating Entity:

OCEAN COUNTY
 129 Hooper Avenue
 Toms River, NJ 08754

Electronically certified online by the responsible party Kevin Nollstadt On 08/12/2026.

Issuance Date	Effective Date of Authorization
08/13/2026	08/13/2026

Your Request for Authorization under NJPDES General Permit No. NJG0386154 has been approved by the New Jersey Department of Environmental Protection.

Date: 08/13/2026

Soil Conservation District – OCEAN

714 Lacey Road
 Forked River, NJ 08731
 (609) 971-7002

Gabriel Mahon, Chief
 Bureau of NJPDES Stormwater Permitting
 Division of Watershed Protection and Restoration
 New Jersey Department of Environmental Protection