

September 27, 2019

To: ALL CONSULTANTS
Subject: REQUEST FOR EXPRESSIONS OF INTEREST
Multi-Project Solicitation

ORDER FOR PROFESSIONAL SERVICES No. A3770
2020 – 2023 New Jersey Turnpike Authority Major Bridge Inspection Program
Major Bridge Group 1

And

ORDER FOR PROFESSIONAL SERVICES No. A3771
2020 – 2023 New Jersey Turnpike Authority Major Bridge Inspection Program
Major Bridge Group 2

The New Jersey Turnpike Authority (Authority) invites Expressions of Interest (EOIs) for two (2) Complex projects from engineering firms prequalified and eligible in the following Profile Code:

Profile Code	Description
D280C	Bridges – NBIS Program, Complex

Attached (see Section I) is a list of all consultants currently prequalified and eligible to submit an EOI for the above referenced assignment. *Joint Ventures (*Firms interested in submitting an EOI as a Joint Venture must be prequalified as a Joint Venture with the Authority) that meet all of the Profile Code requirements are also eligible to submit an EOI.

To qualify as a prequalified consultant, a firm **must** have on file with the Authority a current “Professional Service Prequalification Questionnaire” (PSPQ) package prior to submission of the EOI. A current PSPQ is one that has been on file with the Authority for no more than 24 months, or in certain cases for no more than 12 months. Only those firms who have been prequalified for the specified profile code(s) this project entails will be considered. Prequalification is not required for subconsultants. Prequalification is required however for Joint Ventures.

The Authority shall be seeking participation of Small Business Enterprises (SBE) as subconsultants. The project goal is 25% SBE participation to New Jersey Businesses (see Section VII of the Attachment to the Expression of Interest for the program provisions).

This multi-project solicitation is for professional services required to inspect and provide individual inspection reports for 10 major bridges on the New Jersey Turnpike and Garden State Parkway for OPS No. A3770, and for 8 major bridges on the New Jersey Turnpike and Garden State Parkway for OPS No. A3771. Each OPS has a 4-year term, from 2020 through 2023, which will cover 2 consecutive biennial inspection cycles for each major bridge.

It is the Authority's intent to engage the services of two firms through this multi-project solicitation for EOIs. Professional Services are required from two eligible firms, one for OPS No. A3770 and one for OPS No. A3771. The Consultant shall convey their understanding of both OPS', the Authority's needs, and they shall express their approach to both projects.

Project Description

New Jersey Turnpike Authority's Major Bridge Inspection Program involves biennial inspection of 7 major bridges on the New Jersey Turnpike and 11 major bridges on the Garden State Parkway. The current assignment, OPS No. A3575, has provided for biennial inspection of all 18 major bridges for a 4-year term, from 2016 through 2019. Starting with the next 4-year term, from 2020 through 2023, these 18 bridges have been divided into Major Bridge Groups 1 and 2. The 10 structures comprising Major Bridge Group 1 are largely located in the southern region of both roadways, and the 8 structures comprising Major Bridge Group 2 are located in the central/northern region of both roadways. This Request for Expressions of Interest (RFEOI) is for Major Bridge Groups 1 and 2.

A major bridge is typically defined as a long span mainline structure with complex structural framing and fracture critical members (FCMs), which spans over multilane expressway traffic and other features including waterways and railroads. Structural framing types include stringer-floorbeam-girder systems, trusses and prestressed concrete multi-girders. The biennial inspection of these complex crossings includes close-up hands-on coverage of pier tops and bearings, FCMs, fatigue-sensitive details and bridge mounted sign structures, together with underwater inspections which are typically performed on a 4-year cycle. The scope of work varies on an annual basis, depending upon the prescribed inspection cycle for each structure. The major bridge inspection assignment has a 4-year term, thereby covering 2 biennial inspection cycles for each major bridge.

These OPS' require the preparation of draft and final inspection reports, data collection and input by using Bentley's proprietary software for FHWA element level inspection, updating of FHWA Structure Inventory and Appraisal (SI&A) Forms, load rating updates and other related work defined in the Scope of Work. The inspection and report format will follow the standard requirements for the New Jersey Turnpike Authority Bridge Inspection Program and shall utilize proprietary software provided by Bentley Software "AssetWise Asset Reliability Inspections" (InspectTech) to develop the reports. See Sections XVIII and XIX for the list and description of major bridges in each Group.

Project background materials (including previous inspection reports) will be available for review electronically through the Authority's Secure File Sharing site. Access to the secure work space site will be provided to all prequalified and eligible Consultants via e-mail as part of the RFEOI notification process. If there are any questions or issues related to the Secure File Sharing site, please contact Jean H. Laird, P.E. via e-mail at laird@njta.com. The subject line should read OPS Nos. A3770 and A3771, Secure File Sharing Site Information."

Staff Qualifications

Key project personnel shall possess relevant training and experience demonstrating: (1) Successful completion of and effective scheduling for close-up, hands-on inspection and report submittals for major complex bridges with FCMs in accordance with National Bridge Inspection Standards (NBIS); (2) FHWA SI&A and Element Level Inspection data input and updating capabilities; (3) Proficiency in performing load ratings of complex bridge structures; and (4) Expertise in performing structural health monitoring (SHM) and non-destructive evaluation (NDE) of bridges. Project Managers, Team Leaders, Assistant Team Leaders, Divers, Load Rating Engineers,

Load Rating Reviewers, and Quality Control Engineers must meet the requirements outlined in the “Qualifications of Key Bridge Inspection Personnel” document on the Authority’s website at <http://www.njta.com/doing-business/njta-bridge-inspect-program> under the heading “Bridge Inspection Program” These factors will be critical elements in the selection process.

EOI Submission Requirements

To be considered for these services, qualified firms or prequalified Joint Ventures need to submit five (5) copies of their EOI, which must contain the following:

1. **Letter of Interest** not exceeding seven (7) single-sided, letter-sized pages with minimum 1-inch borders, minimum font (Arial) size of 10 pt., and 1.0 line spacing, stating the firm’s interest, ability and its commitment to complete the requested professional services listed in this solicitation and in their EOI. Indicate clearly in the first paragraph which OPS the firm prefers to be assigned, and submit only one EOI for both OPS’.

The Letter of Interest shall summarize the following information.

- a. **Experience of the Firm on Similar Projects**

Provide information on the firm and its subconsultants experience on similar projects.

The firm shall provide information on past projects which they have performed that demonstrate similar service of those required for this assignment. Each project listed shall include a brief description of the project scope actually performed by the firm and its relevance to the proposed assignment. It shall identify the firm’s office(s) the work was performed from, the date (time frame) the services were performed, magnitude and cost of the project, and contact/reference information for each project listed.

- b. **Experience of the Project Manager on Similar Projects**

The firm shall identify the Project Manager that will be assigned to the project and identify the individual’s education, credentials and work experience. The firm should discuss the proposed Project Manager’s experience and its application to the assignment. The firm shall review the criteria set forth by the Authority in the RFEOI in consideration of the person proposed for the assignment. If the firm is proposing an individual with credentials considerably different than those identified by the Authority, the firm must explain its rationale and identify/demonstrate the benefit the individual brings to the assignment.

The resume of the Project Manager proposed, included in the EOI, shall be clear, dated and detailed to the related assignment experience. References shall be furnished for each project listed (include date when work performed and relevance to subject assignment and at least one contact name and phone number for each project). Unless otherwise noted, the Project Manager shall be a licensed Professional Engineer.

- c. **Team Leaders’ and Key Personnel’s Qualifications and Relevant Experience**

The firm shall identify the Team Leaders and/or other key personnel that will be assigned to the project and their role and responsibilities specific to the assignment. Information concerning their education, credentials and work experience should be provided along with contact/reference information. The firm shall discuss the individuals proposed for the assignment and identify how their education, credentials and work experience are applicable to their role on the assignment.

The resumes of key personnel proposed, included in the EOI, shall be clear, dated and detailed to the related assignment experience. References shall be furnished for each project listed (include at least one contact name and phone number for each project).

d. Understanding of the Project and the Authority's Needs, and Reasonableness of Staffing Estimate

Provide an explanation of the firm's understanding of the project and Authority's needs required for the successful completion of the assignment. Provide a summary of the firm's and its staff's qualifications, and state how they relate to the firm's ability to provide the requested services. Through attached organizational chart and resumes identify the person(s), or subconsultant(s), responsible for each division of the assignment and their relevant experience.

Understanding of the Project

The firm shall provide information to demonstrate that they fully understand the overall objective of the project and why the Authority is undertaking the assignment. This may include discussions providing background information on the need for the project, its effect on the Authority's facilities, and impact on the overall transportation network. Firms should demonstrate specific first-hand knowledge of the location affected by the project and the long-term effects the project has on the Authority, its patrons, or other relevant issues.

Understanding of the Authority's Needs

The firm shall demonstrate that they fully understand the needs of the Authority as it relates to the specific scope of work identified in the RFEOI. The firm must confirm the deliverables and the schedule for design and construction associated with project specific deliverables. The firm should also discuss project management items, including deliverables such as submittal of wage rate approvals and invoicing.

Reasonableness of Staffing Estimate

The firm shall demonstrate through an attached estimate of work-hours the extent of work effort required to perform each primary task for the assignment as identified on the assignment staffing schedule issued with the RFEOI.

e. Approach to the Project

The firm shall identify the major tasks comprising the project and describe in detail how they will be accomplished. Provide an explanation of the process the firm will use to schedule, manage and perform the required tasks within the scope of services and identify the key milestones and projects critical path. The firm shall identify key issues and potential problems and discuss alternatives and options which would lead to resolution. The firm should discuss innovative concepts with cost benefits and/or accelerated project delivery, where applicable. The subconsultant roles, value to the team/project, and reporting relationship shall be clearly identified.

f. Commitment and Ability to Perform the Project and Outstanding Work with the Authority

The firm shall affirm their commitment and ability to complete the proposed work as well as any outstanding work the firm currently has with the Authority. The firm shall provide an explanation of the anticipated project schedule and demonstrate that the firm can commit the required staff resources and management to perform the assignment. A listing of the firm's facilities, including the address of the office where the project will be performed, and how they relate to the firm's ability to provide the requested services shall be provided.

Commitment and Ability to Perform the Project

The firm shall discuss their commitment and availability of required staff for the assignment as shown on the completed “Commitments of Proposed Project Staff” and “Certification of Staff Availability” forms.

Outstanding Work with the Authority

The firm shall discuss their outstanding work with the Authority as shown on the completed Disclosure Forms for the prime and all subconsultants. Information should be provided to demonstrate how this project may be impacted or affected by the existing work load of the consultant or its subconsultants. Outstanding Work shall be considered the sum of the Outstanding Work of the prime and subconsultants. No factors/weighting will be applied based on the percent of work assigned to the prime or subconsultants.

g. Commitment to Quality Management

An affirmation of the firm’s Commitment to Quality Management and Quality Assurance/Quality Control (QA/QC). The firm shall provide a written narrative that describes the firm’s quality assurance policy and how it intends to implement a quality assurance program specifically for this assignment. The firm shall identify credentialed QA/QC staff and the roles and working relationship with other staff members as part of the design process or construction phase.

h. Attainment of Small Business Enterprise (SBE) Participation Goals

The Authority has adopted a Small Business Enterprise Sub-Consultant’s Program (the SBE Program). Under the SBE Program, firms interested in submitting an EOI agree to make a good faith effort to award at least twenty-five (25) percent of the assignment to those businesses that meet the requirements and have been registered by the Division of Revenue & Enterprise Services/Department of the Treasury as a Small Business Enterprise.

Firms shall demonstrate how they will utilize SBE firms in order to achieve the 25% goal and add value to the project team.

2. An **Organization Chart** showing key project team members for all primary tasks, including subconsultants. Provide all team members’ names, titles and reporting relationships. Only one organizational chart is required if the same team members are proposed for both OPS’ and shall state so.
3. **Resumes for the Project Manager and each Key Project Team Member**, (a maximum total of 7) detailing relevant experience and professional/technical qualifications. Include resumes of proposed subconsultants. Each resume should be one page single-sided with dates provided for each project.
4. A completed **NJTA Bridge Inspection Qualification Summary Form** detailing certifications of proposed staff. Provide one complete form for each OPS. A copy of this form will be made available via the Authority’s Secure File Sharing Site.
5. A **Detailed Estimate of Work Hours** per task and by ASCE Grade/Classification, along with an estimate of total hours, to provide the work described herein. The Detailed Estimate of Work Hours for each OPS shall be presented on an annual basis over the 4-year term, from 2020 through 2023, and also include a separate summary which shows the grand total of proposed hours for the entire assignment. The complete Detailed Estimate of Work Hours shall therefore be a maximum of five (5) pages for each OPS, based on one (1) page per year for the 4-year term and one (1) page for the summary sheet.

6. A **Project Schedule** for this solicitation that addresses the various tasks defined by the scope of services for this assignment. The Project Schedule for each OPS shall be presented on an annual basis over the 4-year term, from 2020 through 2023. The Project Schedule shall therefore be a maximum of four (4) pages for each OPS, based on one (1) page per year for the 4-year term of this assignment.
7. A completed **Recent Authority Project Experience Form** identifying all Authority projects on which the consultant is currently working or have been completed (closed out) within the previous five (5) year period. A separate form shall be provided for the prime consultant and for each subconsultant.
8. A completed **Affidavit of Eligibility/Disclosure of Material Litigation** form for review by the Authority's legal counsel. Forms for each firm, each member of a joint venture and all sub-consultants shall be submitted. Firm shall certify that it is not suspended, disbarred or disqualified from bidding on any state or federal projects. Furthermore, no litigation shall be pending or brought against the firm that could materially affect its ability to perform the OPS described herein. Firm shall submit a description of all litigation pending, threatened or brought against it, including any litigation against its owners and/or principals; and shall also submit a description of any enforcement actions or penalties pending or assessed by any regulatory agency having jurisdiction over permit compliance, worker health and safety, or labor laws, as these issues relate to performance of the OPS described herein.
9. A completed **Disclosure Form – Outstanding Work with the Authority** stating all outstanding work with the Authority for both New Jersey Turnpike and Garden State Parkway projects. Forms for each firm, each member of a joint venture and all subconsultants shall be submitted. State "none" on the form if firm, joint venture or subconsultant has no outstanding work with the Authority. **It is specifically noted that the Authority's Disclosure Form shall be submitted with the EOI. Consultants may separate types of work by category (i.e. Design Services, Construction Services, Environmental Services, etc.) however, the "Total" amounts stated at the bottom of the page shall be the combined total amounts of all outstanding work with the Authority as identified on the form.**
10. A completed **Commitments of Proposed Project Staff Form** stating the percentage of time each member has available to commit to this assignment, including subconsultant staff.
11. A completed **Certification of Staff Availability Form** which shall certify that the staff proposed in the EOI shall be used in the performance of the project. When proposing the same staffing in multiple EOIs, disclose one of the following:
 - a. A statement that all projects utilizing same staff will be completed on time and how this will be done, or
 - b. A statement that the firm voluntarily withdraws one of the EOIs from further consideration if the Authority is giving serious consideration to more than one EOI, or
 - c. Alternate staff resumes to be used by the Authority in evaluating EOIs if the Authority is giving serious consideration to more than one EOI.
12. A completed **SBE Form – Proposed Schedule of Small Business Enterprise Participation** stating the firm's intention to use SBE Certified firms as subconsultants.
13. A completed **Disclosure of Investment Activities in Iran Form**.
14. A completed **Vendor Source Disclosure Form**.
15. A completed **Ownership Disclosure Form**, pursuant to N.J.S.A. 52:25-24.2.

EOIs that are incomplete may not be considered.

The required forms referenced in Items 7 through 15 above can be found on the Authority's website www.njta.com under *Doing Business, Supplemental Forms*.

Starting in 2018, firms performing underwater inspection services for the prime consultant shall be considered as subconsultants in the Authority's Bridge Inspection Program. As such, all subconsultant submission requirements shall apply to these services, and underwater inspection firms proposed as vendors will not be considered.

The NJTA has promulgated a Code of Ethical Standards pursuant to the laws of the State of New Jersey, a copy of which is available on the Authority's website <https://www.state.nj.us/ethics/docs/ethics/uniformcode.pdf>. By submitting an EOI, your firm will be subject to the intent and purpose of said Code and to the requirements of the State Ethics Commission.

EOIs are limited to a total of fourteen (14), single-sided, letter-sized pages, comprised of the following: **Letter of Interest**, not exceed seven (7) pages, and **Resumes**, a maximum of seven (7), each of which shall be one (1) page. Pages in excess of these requirements will not be considered. This information shall be presented in an organized fashion and shall be categorized in accordance with the preceding submission requirements. A foldout sheet (11 x 17) will be permitted only for the Project Schedule.

A brief transmittal letter along with the following forms and/or documents (listed below in the order in which they appear in this RFEOI), are **excluded** from the above referenced page count:

- Organization Chart
- Detailed Estimate of Work Hours
- NJTA Bridge Inspection Qualification Summary Form
- Project Schedule
- Recent Authority Project Experience Form
- Affidavit of Eligibility/Disclosure of Material Litigation
- Disclosure Form - Outstanding Work with the Authority
- Commitments of Proposed Project Staff Form
- Certification of Staff Availability Form
- SBE Form
- Disclosure of Investment Activities in Iran Form
- Vendor Source Disclosure Form
- Ownership Disclosure Form

The aforementioned fourteen (14) page limitation shall be increased to a maximum of nineteen (19) pages, if the Consultant must exercise Option 11c above. The additional five (5) single-sided letter-sized pages shall include information for alternate staffing as follows:

- 1) An alternate Organization Chart as permitted above showing key personnel names, position, title and reporting relationships (Note: Organization Chart is not included in the page count).
- 2) One (1) page, single-sided resume for up to five (5) alternate key project personnel stating relevant experience including dates of assignments and professional qualifications.

- 3) Allowance for one (1) page, if necessary, to explain the Consultant's modified approach to the project if it would be handled differently as a result of utilizing the alternate personnel.

The Consultant shall not include alternate staffing in their Expression of Interest unless they are required to do so in accordance with Option 11c. If included in the EOI, the proposed alternative staffing information shall be contained in a separate section of the EOI. It shall only be considered by the Authority in the scoring of the EOI if required.

Prime consultants who are undergoing active fee proposal negotiations or are recommended by the Authority to be awarded OPS No. P3731/P3732 or OPS No. T3726/T3727, are required to provide information indicating how their proposed staff will satisfactorily complete OPS No. P3731/P3732/T3726/T3727 and OPS No. A3770/A3771 concurrently. These firms shall furnish alternate staffing information by submitting up to five (5) additional single-sided letter-sized pages as described above.

Anything in excess of the page limitations for each of the EOI criteria above will not be read or considered. If the EOI submitted is not in accordance with the specific provisions defined above, it shall be considered incomplete and may be rejected.

Expressions of Interest must be submitted no later than **12:00 PM on October 17, 2019**. Consultants will be fully responsible for the delivery of their EOIs. Reliance upon U.S. Mail or other carriers is at the Consultant's risk. Late EOIs will not be considered. EOIs hand delivered or delivered by an overnight delivery service shall be addressed to:

**New Jersey Turnpike Authority
1 Turnpike Plaza
Woodbridge, NJ 07095
Attn: Engineering Department, Structures Design
Jean H. Laird, P.E., Senior Project Engineer**

Expressions of Interest transmitted via U.S. Mail should be addressed to:

**New Jersey Turnpike Authority
PO Box 5042
Woodbridge, NJ 07095-5042
Attn: Engineering Department, Structures Design
Jean H. Laird, P.E., Senior Project Engineer**

Inquiries

Inquiries pertaining to this RFEOI are to be directed in writing to Jean H. Laird, P.E., Senior Project Engineer, Structures Design, New Jersey Turnpike Authority, PO Box 5042, Woodbridge, New Jersey 07095-5042. E-mail inquiries to laird@njta.com are acceptable. Inquiries by Fax are also acceptable. The Fax number is (732) 750-5393. **The deadline for inquiries is October 8, 2019.** The Authority will respond to all written inquiries received. Each inquiry will be stated and a written response provided. Responses will be posted on the Authority's Internet

website under *Doing Business, Current Solicitations* on or before **October 10, 2019**. Consultants will be responsible for submitting their EOIs in accordance with the RFEOI and any modifications, revisions and/or clarifications thereto as a result of the posted responses. Late inquiries may not be reviewed or considered.

Consultant Selection

Once the EOIs have been evaluated for completeness, the Authority will create a list of firms that shall receive the Request for Technical and Sealed Fee Proposals. ("RFP"). A Review Committee will evaluate the technical qualifications and experience of each firm and its project team, and will rank the firms. The evaluation and ranking of the EOIs will serve as a method by which to create a list of firms most highly qualified to perform the project, in accordance with N.J.A.C. 19:9-2.8(e), who will receive Requests for Technical and Sealed Fee Proposals. OPS Nos. A3770 and A3771 will be awarded to the top two (2) technically ranked firms, with assignment preference going to the highest technically ranked firm.

The EOIs will be evaluated and ranked on the basis of numerical scores resulting from pre-established weighted factors. For this project, the rating factors and their relative weights are:

RATING FACTORS	WEIGHT (%)	POINTS
Experience of the Firm on Similar Projects	15	45
Experience of the Project Manager on Similar Projects	10	30
Team Leaders' and Key Personnel's Qualifications and Relevant Experience	20	60
Understanding the Project and the Authority's Needs, and Reasonableness of Staffing Estimate	15	45
Approach to the Project	15	45
Commitment and Ability to Perform the Project and Outstanding Work with the Authority	10	30
Commitment to Quality Management	10	30
Attainment of SBE Participation Goals	5	15
	100%	300

Following the review of the submitted EOIs, the Authority will request Technical and Fee Proposals from at least three (3) firms it deems the most qualified. All respondents will be notified at each stage of the EOI and RFP process, regarding their status.

All submittals required pursuant to P.L. 2005, Chapters 51 and 271 Executive Order 117 (2008) will be requested only after the RFP stage of this procurement from the intended Awardee(s) only. This will include the combined CH. 51/Executive Order 117 Two-Year Certification and Disclosure of Political Contributions form (CH 51.1 R1/21/2009), the P.L. 2005 c. 271 Vendor Certification and Political Contribution Disclosure Form (Rev: 02/07/2006 DPP c271 C&D) completed by each business entity all of which will be transmitted to the intended Awardee(s) by the Authority via mail or fax and are to be returned to the Authority within five (5) business days.

Order for Professional Services

Final OPS Documents shall consist of the Authority's Order for Professional Services (which is available on the Authority's website http://www.njta.com/media/2928/ps_agreement_4_v5-17-2017.pdf), the RFEI, EOI and RFP, as well as the selected firm's submitted Technical Proposal and Final Negotiated Fee Proposal. These documents are listed in the order of priority in the event of a conflict.

Effective April 29, 2014 Consultants shall be required, at their own expense, to provide ALL insurance coverages as more fully set forth in the applicable OPS Agreement. (See OPS Agreement #4).

Business Registration
N.J.S.A. 52:32-44

The OPS will not be entered into by the Authority unless the firm first provides proof of valid business registration in compliance with N.J.S.A. 52:32-44. Pursuant to this law the firm is further notified that no subcontract shall be entered into by prime consultant unless the subconsultant first provides proof of valid business registration.

Attached please find additional information regarding EOI and project requirements.

Very truly yours,

ORIGINAL SIGNED BY

Robert J. Fischer, P.E.
Chief Engineer

RJF:JHL:ms

Attachments

c: J. L. Williams, P.E.
W. Wilson, P.E.
J. H. Laird, P.E.
Review Committee
File

Supplemental Information

Regarding EOI and Project Requirements

Dated September 27, 2019

for

Order for Professional Services No. A3770

2020 – 2023 New Jersey Turnpike Authority Major Bridge Inspection Program
Major Bridge Group 1

And

Order for Professional Services No. A3771

2020 – 2023 New Jersey Turnpike Authority Major Bridge Inspection Program
Major Bridge Group 2

This attachment is incorporated into and made a part of the RFEOI

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SECTION I
Prequalified and Eligible Consultants

AECOM Technical Services
Arora and Associates, P.C.
ATANE Engineers, Architects and Land Surveyors, P.C.
Boswell Engineering
Buchart-Horn, Inc.
CDM Smith Inc.
Gannett Fleming, Inc.
Greenman-Pedersen, Inc.
Hardesty & Hanover, LLC
IH Engineers, P.C.
Johnson, Mirmiran & Thompson, Inc.
KS Engineers, P.C.
Louis Berger U.S., Inc.
LS Engineering Associates Corporation
Michael Baker International, Inc.
Mott MacDonald LLC
MP Engineers, P.C.
Pennonni Associates, Inc.
Pickering, Corts & Summerson, Inc.
PKB Engineering Corporation
SJH Engineering, P.C.
Stantec Consulting Services, Inc.
STV Incorporated
TranSystems Corporation
Van Cleef Engineering Associates, LLC
WSP USA Inc.

SECTION II Administrative and Agreement Information

Professional Corporation

Incorporated firms that have not filed a copy of a Certificate of Authorization, as required by N.J.S.A. 45:8-56, with the Authority must include a copy of the Certificate with the EOI. Professional service corporations established pursuant to the "Professional Service Corporation Act," P.L. 1969, c. 232 (N.J.S.A. 14A:17-1 et seq.), are exempt from this requirement.

Signatures

Expressions of Interest, Technical Proposals and Fee Proposals must be signed by an officer of the firm authorized to make a binding commitment.

Incurring Costs

The Authority shall not be liable for any costs incurred by any consultant in the preparation of their EOI.

Addendum to EOI Solicitations

If, at any time prior to receiving EOIs, it becomes necessary to revise any part of this EOI solicitation, or if additional information is necessary to enable a firm to make an adequate interpretation of the provisions of this EOI solicitation, an addendum to the EOI solicitation will be made available on the Authority's website as described herein.

Acceptance and Rejection of EOIs and Proposals

The Authority may award an OPS for these services to a firm that the Authority determines best satisfies the needs of the Authority. The solicitation for an EOI or Technical Proposal does not, in any manner or form, commit the Authority to award any OPS. The contents of the EOIs may become a contractual obligation, if, in fact, the EOI or Technical Proposal is accepted and an OPS is entered into with the Authority. Failure of a firm to adhere to and/or honor any or all of the obligations of this EOI or Technical Proposal may result in cancellation of any OPS awarded by the Authority. The Authority shall not be obligated at any time to award an OPS to any consultant. The Authority reserves the right to reject any and all proposals or to negotiate with any proposer in accordance with applicable law.

Dissemination of Information

Information included in this document or in any way associated with this project is intended for use only by the firm and the Authority, and is to remain the property of the Authority. Under no circumstances shall any of said information be published, copied or used by the firm, except in replying to this EOI solicitation.

News Releases

No news releases pertaining to this RFEOI or the Project to which it relates shall be made without Authority approval and then only in coordination with the issuing office and the Authority's Media Relations Coordinator.

Public Records

Any EOI, Technical Proposal or Fee Proposal submitted by a firm constitutes a public document that will be made available to the public upon request pursuant to New Jersey's Open Public Records Act, N.J.S.A. 47:1A-1 et seq. The firms may request the Authority's General Counsel to deem certain sections of its EOI containing personal, financial or proprietary information non-disclosable, which determination shall be in accordance with such Act.

Section III
OPS Procurement and Project Schedule

OPS PROCUREMENT SCHEDULE

Posted	September 27, 2019
Deadline for Inquiries	October 8, 2019
Posted Responses to Inquiries	October 10, 2019
Submittal of Expressions of Interest	October 17, 2019
Request for Technical and Sealed Fee Proposals	November 6, 2019
Submittal of Technical and Sealed Fee Proposals	November 26, 2019
Notify Consultant of Need for Presentation (Approx.)	December 12, 2019
Presentation (If Requested)	December 17, 2019
Recommendation to Issue OPS	January 28, 2020

INSPECTION SCHEDULE – MAJOR BRIDGE GROUP 1

Notice to Proceed	February 25, 2020
Submittal of Work Plan	March 24, 2020
Estimated Start of Scheduled Bridge Inspections.....	See Scope of Work
Submission of Draft and Final Inspection Reports.....	See Scope of Work
Project Completion (Including Unanticipated Services).....	June 2024

INSPECTION SCHEDULE – MAJOR BRIDGE GROUP 2

Notice to Proceed	February 25, 2020
Submittal of Work Plan	March 24, 2020
Estimated Start of Scheduled Bridge Inspections.....	See Scope of Work
Submission of Draft and Final Inspection Reports.....	See Scope of Work
Project Completion (Including Unanticipated Services).....	June 2024

SECTION IV
Scope of Services

1. GENERAL

- A. The Consultant shall be responsible for the thorough understanding of the project requirements including the applicable codes and regulations governing the inspection. The Consultant shall become familiar with the New Jersey Turnpike Authority's (NJTA) procedures, presentation and coordinating requirements for the effective performance of the project.
- B. It will be the Consultant's responsibility to bring to the attention of the Authority, in the Request for Expression of Interest, or during preparation of the Expression of Interest, any errors, omissions or non-compliance discovered in this Scope of Services Section. By neglecting to do so, the Consultant will be responsible to make any resulting scope of services changes without additional compensation.

2. PROJECT COORDINATION

A. NJTA Coordination

1. The Consultant shall coordinate its activities with NJTA personnel throughout the course of this Order for Professional Services (OPS). Early on, the Consultant will establish a means of coordinating and reporting its activities with the designated project liaison to ensure an expeditious exchange of information. The NJTA shall be informed of all meetings with other agencies, government officials and/or groups so that NJTA personnel can attend if necessary.
2. All correspondence, invoices and transmittals for the project shall be referenced by the NJTA's Order for Professional Services Number.
3. Within two (2) weeks of Notice to Proceed, the Consultant shall submit a master inspection schedule for the entire 4-year term, from 2020 through 2023, for review and approval by the Authority. This master inspection schedule shall be updated on a monthly basis and include the inspection and report delivery milestones for all major bridges in Group 1 or 2 receiving biennial inspections that year.

The Group 1 and 2 assignments shall each commence in February 2020, immediately upon Notice to Proceed, and be completed by June 2024. With the exception of the first year, each annual assignment within the 4-year term shall commence in January of that year and be completed by June of the following year. Field inspections shall be scheduled and start in accordance with the NBIS anniversary date for each major bridge listed in Sections XVIII and XIX. The draft report for each major bridge shall be submitted within three (3) months of completion of the field work. The final report for each major bridge shall be submitted within one (1) month of receipt of the red-lined draft report from the Authority's Liaison Engineer.

4. The Consultant shall submit two (2) different schedules/reports on a monthly basis as follows.
 - Invoice Progress Report - The Consultant will be responsible to prepare and submit a separate monthly progress report and progress schedule indicating percent complete by task, corresponding to the invoices. Invoices shall be submitted and received by the Authority's Engineering Department within 15 calendar days of the end of each billing period. Standard reporting forms in MS Excel will be provided by the Authority at the project's kickoff meeting.

- Submission Schedule – The Consultant shall submit a bridge inspection submission schedule which includes but may not be limited to the following fields: Inspection Date, 2 Week Submission, 90 Day Submission of SIA and NBE data, Draft Report Submission, Final Report Submission, Load Rating Updates Required, and Comments. The Bridge Inspection Program Technical Manager will provide a template in Excel at the kickoff meeting. The initial schedule shall be submitted within 30 days of receipt of the template. Monthly updates are required to be submitted by the 7th of each month.
5. The Consultant shall notify the Authority's Liaison Engineer immediately, if and when the percent fee expended exceeds the project percent complete. The Consultant shall implement at once the necessary adjustments and/or make recommendations on how to alleviate this condition. Failure to do so will put the Consultant at risk of having to absorb any costs above and beyond the authorized fee.
 6. Invoices are required to be submitted on a monthly basis.
 7. The Consultant shall submit the names of the personnel in the inspection teams, along with their resumes and NHI training certificates, for approval by the Authority. The Consultant shall complete the QAF-3 forms, which will be furnished at the kickoff meeting. The Authority's Liaison Engineer shall have the right to approve the number, qualifications and performance of the Consultant's personnel and to have the Consultant remove any such personnel from the project who are not approved or licensed/certified as required, or who fail to perform satisfactorily. The Consultant shall not remove approved personnel assigned to the project without written approval from the Authority. Certificates shall be in PDF format with the following naming convention: "Firm Last First # year" ("ABC Smith Jane 130092 2012.pdf"). For acceptable Non-NHI courses such as the PennDOT thirteen (13) day bridge inspection course, use "Firm Last First #Equiv year" ("Bridge Associates Johnson Edward 130055Equiv 1999.pdf"). All files shall be submitted in one general folder or directory, not broken up into folders/subfolders. Certificates and completed QAF-3 forms shall be submitted within two (2) weeks following the kickoff meeting.

B. Quality Management and Coordination with Bridge Inspection Program Technical Manager Consultant

Immediately following Notice to Proceed, the Consultant shall submit a Project-Specific Quality Control/Quality Assurance (QA/QC) Plan for the Authority's approval which clearly explains how its firm-wide Quality Management Program translates into the quality process for this assignment. The QA/QC Plan shall identify credentialed QA/QC personnel and their roles, and explicitly outline measures to be followed throughout the duration of the assignment, including the management of subconsultants and their work. The submittal shall include the forms used by the Consultant to document the QA/QC process for review and approval by the Authority. If the forms are not found acceptable or the Consultant does not have available forms, then use of the Authority's QAF-5 form detailed in the current New Jersey Turnpike Authority Structure Inspection Quality Management Plan shall be used. The completed forms should be retained by the Consultant and available for review upon the Authority's request. The QAF-5 form will be furnished to the Consultant at the kickoff meeting.

The Consultant is entirely responsible for the quality of submittals in this inspection assignment, and will be monitored by the Authority on a continued basis for adherence to the approved QA/QC Plan. Should it be determined that incomplete or erroneous reports are being submitted, then the Consultant

will be required to convene a meeting with the Authority to review the deficiencies and propose an action plan to bring the reports to established standards.

Proposers are advised that general overview of the 2020 – 2023 NJTA Major Bridge Inspection Program for Major Bridge Groups 1 and 2 will be performed by the Authority's Bridge Inspection Program Technical Manager Consultant (Technical Manager) to ensure accuracy, consistency and completeness in inspection data collection and entry, SI&A and FHWA Element Level bridge inspection coding interpretation, inspection report format and content, and load ratings. The Technical Manager will be responsible for unscheduled field audits for compliance of inspection personnel and procedures, review of sample draft inspection reports and limited audits of Bentley (InspectTech) data entry, review of load rating updates, SI&A updates and FHWA Element Level bridge inspection coding. A kickoff meeting will be scheduled with the Consultant, the Authority's Liaison Engineer and the Technical Manager to discuss inspection procedures, personnel, report format, schedule and submittals.

The Authority's Liaison Engineer and the Technical Manager will arrange for coordination meetings each year with all engaged bridge inspection consultants, to establish consistent inspection procedures, coding guidelines, and report format. The Consultant shall include two (2) half-day coordination meetings each year at the Authority's Headquarters, in their estimate of work hours in the EOI and Fee Proposal.

C. Other Agency/Entity Coordination

The Consultant will be required to contact and/or meet with representatives of state and/or other agencies/entities (e.g., New Jersey Department of Transportation, Conrail, Norfolk Southern, CSX, NJ Transit, Amtrak, PATH, etc.), to review and determine all necessary project requirements and permits. It is noted that other agencies/entities may have security requirements such as obtaining of TWIC (Transportation Worker Identification Credentials) cards or supervision of inspection work by a security firm. The Consultant shall notify the Authority immediately if it is revealed during initial contact that the railroad ownership has changed. The Authority's Liaison Engineer will establish the correct channel of communication with the new railroad company for the Consultant in this case. Various regional agencies will be affected by this project and should be kept informed as to the status of this project. US Coast Guard shall be notified at least 30 days prior to the inspection of any bridge spanning a navigable waterway.

3. REGULATIONS AND GUIDELINES TO BE FOLLOWED, WHICH INCLUDE BUT ARE NOT LIMITED TO:

A. New Jersey Turnpike Authority (NJTA)

Standard Specifications 2016
Design Manual
Standard Drawings
Structural Repair Programs
Category A Repair Procedures
Authority Deficiency Category Definitions
Bridge Inspection Security Measures
InspectTech Connect Edition Online Help System
Manual for Traffic Control in Work Zones
LRFR Load Rating Manual

NJTA Structure Inspection Quality Management Plan (current version)

B. Structure Nomenclature/Inspection Methodology

Federal Highway Administration (FHWA)

Culvert Inspection Manual, 1986, FHWA-IP-86-2

Bridge Inspectors Reference Manual, December 2006

Guidelines for the Installation, Inspection, Maintenance and Repair of Structural Supports for Highway Signs, Luminaries and Traffic Signals, March 2005

Inspection of Fracture Critical Bridge Members, 1986, FHWA-IP-86-26

National Bridge Inspection Standards, 23 CFR Part 650, January 2005

American Association of State Highway and Transportation Officials (AASHTO)

Manual for Bridge Evaluation, 3rd Edition with 2019 Interims

Manual for Bridge Element Inspection

Roadside Design Guide, 1996

Occupational Safety and Health Administration (OSHA)

Commercial Diving Operations Standards, 29CFR Part 1910 Subpart T

New Jersey Department of Transportation (NJDOT)

Bridge Element Inspection Manual, Revision 1, February 2015.

Underwater Inspection and Evaluation of NJ Bridges Guidelines Manual, June 1994 Edition with August 2008 Revisions.

C. Concrete Deficiencies

American Concrete Institute (ACI)

Guide for Conducting a Visual Inspection of Concrete in Service, 2008, ACI 201.1R-08

D. Steelwork/Paint Deficiencies

Steel Structures Painting Council (SSPC)

E. Structure Inventory and Appraisal

Federal Highway Administration (FHWA)

Recording and Coding Guide for Structure Inventory and Appraisal of the Nation's Bridges, December 1995, FHWA-PD-96-001, and Errata Sheet, March 2004

New Jersey Department of Transportation (NJDOT)

Recording and Coding Guide for Structure Inventory and Appraisal of New Jersey Bridges, 2003 Edition with May 2008 Interim Revisions

4. GENERAL REQUIREMENTS AND CONDITIONS

- A. The Consultant shall defend, indemnify, and hold harmless the Authority, its Commissioners, Directors, officers, employees and agents from liability of any nature or kind arising out of any act or omission of the Consultant or any person, firm or corporation employed by the Consultant in connection with the work.

- B. The Consultant shall not assign this OPS, sublet, or transfer any part of the work or obligations hereunder, without the prior written approval of the Authority.
- C. The Consultant shall comply with all Federal and State laws applicable for the work to be performed under this OPS.
- D. The Consultant shall obtain a traffic permit prior to performing any work on the Authority's Right of Way.
- E. The Consultant shall provide traffic control in accordance with the current edition of the New Jersey Turnpike Authority Manual for Traffic Control in Work Zones, for bridge inspection work along the New Jersey Turnpike and Garden State Parkway. The Consultant shall also provide traffic control on local and state roads in accordance with the governing agency's requirements. **The Consultant shall not rely exclusively on State Police-assisted slowdowns, and instead shall assume that availability for slowdowns will be limited. Under the Approach to the Project Section of the Expression of Interest, the Consultant shall include an estimate for the duration and quantity of shoulder and lane closings for this OPS.** No shoulder or lane closings on the New Jersey Turnpike will be approved until the Consultant, its subconsultants, and its subcontractors view the Authority's Traffic Safety Training video on lane closing procedures. Reimbursement for furnishing traffic control devices and shoulder/lane closings will be made as a direct expense.

A Traffic Control Coordinator (TCC) shall be required where lane and half ramp closings are to be installed by the consultant or vendor as part of bridge inspection projects. A TCC will not be required for shoulder closings installed by the consultant or vendor. Refer to Standard Specifications 801.03(A)(6) for TCC requirements and certification which shall apply to design and bridge inspection assignments involving lane and half ramp closings.

- F. For bridge inspection work over active railroad lines (NJ Transit, PATH, Amtrak, Conrail, CSX, Norfolk Southern, Shared Assets, etc.) the Consultant shall have their Team Leaders and Inspectors complete safety training as required by the respective outside agency. The Consultant shall obtain railroad permits, and flagging services necessary to access and perform inspections. For purposes of estimating the costs for permits, flagging, and inspection services, the Consultant shall assume a value of \$20,000 for each year, unless upon review of all requirements it is expected to exceed these values. The estimated expense shall be listed separately in the Fee Proposal.
- G. Lane closings and daily shoulder closings necessary for the inspection work shall be provided and maintained by the Consultant, and shall conform to applicable Standard Drawings. Lane and shoulder closings may not be possible at all times due to conflicts with ongoing higher priority construction or maintenance work in certain areas. The Consultant shall utilize all available Maintenance and Contractor installed closings, where possible. This will require close coordination and contact with the Authority's Operations Department. Lane and shoulder closing requests, as well as slowdown requests, shall be submitted via the web-based application to the Authority (instructions will be provided to the consultants at the kickoff meeting) one week in advance of the desired closings (by Monday, 12:00 PM), and shall conform to the Authority's Lane and Shoulder Closure Tables in the Manual for Traffic Control in Work Zones.
- H. Short duration shoulder closings necessary for the inspection work shall be provided and maintained by the Consultant. **Short duration shoulder closings shall be installed for a maximum duration of 60 minutes within a two-hour window, and are restricted to cursory top of deck surveys and underdeck and pier top inspections requiring a truck mounted attenuator (TMA).** Short duration shoulder closings shall conform to Standard Drawing No. TP-7.

- I. All inspection work shall be performed behind guide rail or other existing roadside barriers, where feasible. **Where work must be conducted in a closed lane or shoulder, a truck mounted attenuator (TMA) shall be provided and placed preceding the work area in accordance with the current AASHTO Roadside Design Guide. For moving inspection operations which do not require the setup of equipment (ladders, snoopers, etc.), TMAs will also be required.** The truck shall be in excellent operating condition and have a minimum gross weight of 10 tons. The truck mounted attenuator shall be the Alpha100K as manufactured by Energy Absorption System, Inc., and distributed by Transpo Industries, Inc., or an approved NCHRP 350, Test Level 3 compliant equal. The truck shall also be equipped with two large conspicuous overhead flashing lights. If supplied with an arrow board, only the "CAUTION" bar shall be illuminated. The top of the arrow board must be 13 feet 6 inches from the ground for either standalone arrow boards or TMA attached arrow boards. TMAs shall be provided by the Consultant. A separate line item shall be provided in the Fee Proposal for the cost associated with furnishing the TMAs for the project and for fueling of the TMAs. For moving inspection operations, the TMA must be fitted with a "Shoulder Closed" sign that will not be obstructed or obstruct any oscillating lights or the arrow board panel. The Consultant will be required to provide a letter from the proposed rental company, which states that the TMAs supplied meet or exceed NCHRP 350, Test Level 3 compliance. In addition, the Consultant will be required to take photos of the TMA, specifically for review of the placement of the TMA mounted "Shoulder Closed" sign.
- J. The Consultant shall furnish specialized equipment as needed to perform bridge inspections.
- K. Reimbursement for any additional cost incurred by the Consultant due to circumstances beyond the control of the Consultant, such as down time for bad weather, shall be approved by the Authority's Liaison Engineer. The Authority's Liaison Engineer will have sole discretion in determining if such circumstances are beyond the control of the Consultant, which would therefore warrant compensation for additional labor and expenses
- L. The Consultant shall retain legal responsibility for all inspection work, which shall in general follow the latest standards including all the applicable codes and regulations governing the inspection and practices of the Authority.
- M. Unanticipated Services

The Authority's Liaison Engineer may require additional information with regard to a reported deficiency by the Consultant, the Authority's Maintenance Department and/or other entities. The required information may consist of a survey or sketch with photographs and recommendations for corrective action. Depending on the deficiency, the Consultant may be required to provide design services. The design services may consist of preparing calculations, providing details and specifications, and developing cost estimates.

As such, Proposers shall provide in their EOIs an additional **500 hours per year per Group** for the 4-year term of this assignment, to allow for unforeseen emergency inspection, repair design services and/or extra work as directed by the Authority (Unanticipated Services). Explicit written authorization must be received from the Authority's Liaison Engineer in order to charge time to this task, prior to commencement of the work. The Consultant will be requested to provide an estimate of hours and cost, in writing, related to each special assignment under consideration for prior approval.

N. Load Rating Updates

As the biennial inspections are completed, the Consultant shall compare as-inspected conditions to the information in the load rating reports for each bridge, and submit a list of bridges and their load ratings recommended for updating for Authority review and approval. While recommendations for updates will be primarily based upon measured section losses and current bridge condition, the Consultant shall reference Appendix A3 of the Authority's Load Rating Manual for detailed guidance regarding identification of bridges warranting load rating updates. The updates shall be made using existing load rating files, by key personnel meeting the requirements of the Authority's Load Rating Manual. Under the 2016 – 2019 NJTA Major Bridge Inspection Program, tables were created for select major bridges which listed candidate locations of section loss meeting the Authority's developing guidelines for section loss documentation and repair recommendations. It is anticipated that these section loss tables will be further developed and utilized under the 2020 – 2023 NJTA Major Bridge Inspection Program, in order to facilitate and document the review process for candidate locations warranting structural analyses or load rating updates. For the purpose of estimating a level of effort, Proposers shall make an allowance of **500 hours per year per Group** for all LRFR load rating updates required over the 4-year term of this assignment.

Following Notice to Proceed, a meeting will be held to discuss the Authority's guidelines for section loss documentation and repair recommendations, and to provide guidance for this load rating task. All available electronic load rating files will be made available to the Consultant for updating.

LRFR load rating updates shall utilize the most current version of AASHTOWare's Bridge Rating (BrR) software which has been approved for use in Appendix A1 of the Authority's Load Rating Manual. For complex bridges that cannot be modeled in BrR, LRFR load ratings shall utilize other appropriate software specified in the Load Rating Manual. The load ratings shall also include Emergency Vehicles EV2 and EV3, as needed and in accordance with the Load Rating Manual.

Proposers are advised that since 2015, the costs associated with obtaining BrR and any other LRFR load rating software licenses are no longer reimbursed by the Authority as a direct expense. The Authority licenses the BrR Unlimited Option as a Member Agency, which allows consultants to obtain single copies of BrR at the current special license fee of \$5,000 per workstation for use in performing load ratings of the Authority's bridges.

- O. All team leaders shall notify the Authority and Technical Manager of their location via email on a daily basis. An email template will be provided to each consultant and subconsultant at the kickoff meeting.

5. SPECIFIC PROJECT SERVICES

A. Introduction

New Jersey Turnpike Authority's Major Bridge Inspection Program involves biennial inspection of 7 major bridges on the New Jersey Turnpike and 11 major bridges on the Garden State Parkway. The current assignment, OPS No. A3575, has provided for biennial inspection of all 18 major bridges for a 4-year term, from 2016 through 2019. Starting with the next 4-year term, from 2020 through 2023, these 18 bridges have been divided into Major Bridge Groups 1 and 2. The 10 structures comprising Major Bridge Group 1 are largely located in the southern region of both roadways, and the 8 structures comprising Major Bridge Group 2 are located in the central/northern region of both roadways.

A major bridge is typically defined as a long span mainline structure with complex structural framing and fracture critical members (FCMs), which spans over multilane expressway traffic and other features including waterways and railroads. Structural framing types include stringer-floorbeam-girder systems, trusses and prestressed concrete multi-girders. The biennial inspection of these complex crossings includes close-up hands-on coverage of pier tops and bearings, FCMs, fatigue-sensitive details and bridge mounted sign structures, together with underwater inspections which are typically performed on a 4-year cycle. The scope of work varies on an annual basis, depending upon the prescribed inspection cycle for each structure. The major bridge inspection assignment has a 4-year term, thereby covering 2 consecutive biennial inspection cycles for each major bridge.

The Consultant for each Major Bridge Group shall provide a complete list of proposed Team Leaders for both biennial inspection cycles, and indicate the individual bridge assignments for each Team Leader over the entire 4-year term. In order to promote having different sets of eyes looking at the same bridges over two consecutive cycles, the Consultant shall ensure that Team Leaders who are assigned to individual bridges in the first biennial cycle are then reassigned to different bridges in the subsequent biennial cycle.

For each major bridge listed in Sections XVIII and XIX, the Consultant shall commence its biennial inspection on or prior to the previous inspection (anniversary) date. Although NBIS allows for biennial inspections to commence up to two months prior to the anniversary date, NJTA approval is required for inspections starting more than 7 days prior to the anniversary date.

B. Scope of Services for the 2020 – 2023 NJTA Major Bridge Inspection Program

The following summarizes the list of bridges in each Major Bridge Group, together with their scheduled biennial and underwater inspection cycles under this assignment.

Major Bridge Group 1

<u>Structure Number</u>	<u>Structure Name (Abbreviated)</u>	<u>Last NBIS Inspection Date</u>	<u>Next Biennial Inspection Cycles</u>	<u>Next Underwater Inspection Date</u>
P0.00	Turnpike PEW/PWE over Delaware River	7/22/18	2020, 2022	7/27/2020
28.0SR	Parkway S over Great Egg Harbor	10/4/18	2020, 2022	9/22/2020
28.5SR	Parkway S over Drag Channel	10/4/18	2020, 2022	9/21/2020
28.0N	Parkway N over Great Egg Harbor	11/12/18	2020, 2022	12/14/2022
28.5N	Parkway N over Drag Channel	11/12/18	2020, 2022	12/14/2022
N2.01	Turnpike HEW/HWE over Newark Bay	6/19/19	2021, 2023	9/18/2021
49.0N	Parkway N over Mullica River	6/24/19	2021, 2023	9/17/2021
49.0S	Parkway S over Mullica River	6/28/19	2021, 2023	9/17/2021
51.9N	Parkway N over Bass River	6/26/19	2021, 2023	9/27/2021
51.9S	Parkway S over Bass River	7/1/19	2021, 2023	9/27/2021

Major Bridge Group 2

<u>Structure Number</u>	<u>Structure Name (Abbreviated)</u>	<u>Last NBIS Inspection Date</u>	<u>Next Biennial Inspection Cycles</u>	<u>Next Underwater Inspection Date</u>
W115.36	Turnpike NSW/SNW over Hackensack River	3/11/18	2020, 2022	5/24/2022
84.24N&S	Turnpike NSO/NSI/SNO/SNI over Raritan River	4/9/18	2020, 2022	6/10/2020
E109.83	Turnpike NSE/SNE over Hackensack River	5/18/18	2020, 2022	6/26/2022
E107.88	Turnpike NSE/SNE over Passaic River	6/29/18	2020, 2022	6/26/2022
W107.87	Turnpike NSW/SNW over Passaic River	4/11/19	2021, 2023	6/26/2023
127.2N	Parkway NBI/NBO over Raritan River	7/16/19	2021, 2023	7/31/2021
127.2S	Parkway S over Raritan River	7/16/19	2021, 2023	7/31/2021
158.2	Parkway N/S over Passaic River	8/25/19	2021, 2023	8/28/2021

C. Bridge Inspection Scope

1. General

The scope of biennial inspection shall cover all structural elements on a two-year (biennial) cycle in accordance with NBIS, including pier tops and bearings, fracture critical members (FCMs) and bridge-mounted sign structures. Inspection findings shall be reported via the Authority's InspectTech software including FHWA Structure Inventory & Appraisal (SI&A) and Bridge Element Level Inspection data collection and updates.

The major bridge biennial inspection requires full observation all parts of each structure with hands-on capability. All vantage points shall be utilized to access the structure, including ground level, boat access, pier top level and roadway level, with full utilization of available catwalks and safety cables, over-the-side inspection vehicles, ground-up inspection vehicles, superstructure rigging, large ladders, and tethered climbing on overhead truss members.

The hands-on visual superstructure inspection shall cover all truss and girder elements and their connections, floorbeam and stringer elements and their connections, bearings (including cantilevered piggyback arrangements), diaphragms, bracing and secondary members, catwalk assemblies, and expansion joints. Special attention shall be paid to fracture critical members (FCMs), fatigue-sensitive details, normally inaccessible connections and member areas, and members with known or potential cracks. The biennial inspection shall also include a visual detailed inspection of the top of deck, underdeck and underdeck joint assemblies, substructure units including bearing seat areas, fenders, parapet median joints, drainage system, electrical facilities, navigation and aviation warning light assemblies and appurtenances.

The biennial inspection shall also cover bridge appurtenances including but not limited to: bridge and fascia mounted sign structures and noise barriers, right-of-way and security fencing, substructure protection, guide rail and barriers, utilities and supports attached to the structure, approaches, and approach protection features within 50 feet of the bridge abutments.

Bearings are observed at documented air and steel temperatures for position and function. Individual bearing measurements are not taken as part of this inspection; rather only if deemed necessary for bearings which are observed to be abnormal or deficient.

With the exception of inspections following major reconstruction, the Consultant shall use the Authority's latest bearing matrix coded with defects (uploaded to 2018 reports as "File" file type) during the current inspection. This file will be used to collect current defects and then uploaded as a working file for use in future inspections.

2. Underwater Inspections

In general, an underwater inspection shall be performed every four years (48 months) for each major bridge. The only exception to this is for Structure No. W107.87 which had its last underwater inspection performed in 2018, and will have its next underwater inspection performed on a 60-month cycle to align with the NBIS inspection in 2023. A complete underwater inspection is required for all substructure units and fender elements that are below mean low water. The underwater inspection shall include probing and checking for potential scour along the face of each abutment and pier; taking soundings at ten (10) foot intervals along both fascias and the longitudinal centerline of the bridge, and around pier perimeters; and providing a streambed cross section showing the streambed below both fascias and the longitudinal centerline of the bridge. Water level, at the time of inspection, shall be shown on the cross section relative to a reusable known reference elevation. Baseline streambed profiles shall be shown on the drawings to assess long term movement. If tidal flow is present, both mean high and low water levels shall be recorded on the streambed cross section. **Starting in 2019, the Consultant shall provide sounding sketches using the template provided by NJTA; the sounding sketches are to be an update of the soundings from the last underwater inspection report. For bridges that require underwater inspections, a diver may be used to perform the off-cycle soundings/fathometric surveys.**

The underwater inspection shall be a hands-on inspection performed by a qualified dive team. A Professional Engineer, licensed in the State of New Jersey, shall be present when the underwater inspection is performed. A diving report containing observations of noted conditions shall be submitted. The inspection shall be a Type 2 classification in accordance with NJDOT's Underwater Inspection Evaluation of New Jersey Bridges Guideline Manual, June 1994, and all associated revisions. The underwater inspections are in addition to the requirements of the routine biennial inspections (not in place of) and shall be performed at the time of the initial routine bridge inspection.

The minimum size of a dive team shall be three (3) as follows:

Commercial Scuba Air Diving:

- a. Designate Person-in-Charge (DPIC)
- b. Standby Diver
- c. Diver (line tended)

Commercial Surface – Supplied Air Diving:

- a. DPIC
- b. Diver
- c. Tender

The requirements for diver and dive team training are as follows:

The diver shall have successfully completed NHI Course No. FHWA-NHI-130091 – Underwater Bridge Inspection, within the last 5 years. The diver shall be commercially trained at an Association of Commercial Diving Educators (ACDE) accredited school complying with the requirements of ANSI/ACDE-01-1993, “Commercial Diver Training – Minimum Standard”. A military diving school meeting the same standards is also acceptable training.

In lieu of meeting the above requirements, a diver may be trained through either field experience or a combination of formal diving training and field experience. The OSHA diving standard (29-CFR 1910.410) specifies that all dive team members (i.e., divers and support employees involved in diving operations including the DPIC) must have experience or training in the use of tools, equipment, systems, techniques, diving operations and emergency procedures which pertain to their assigned tasks and diving modes (i.e., scuba diving on air, surface supplied diving on air or mixed gas diving). Additionally, dive team members who are exposed to hyperbaric conditions (e.g., diver) or control the exposure of others to hyperbaric conditions (e.g., DPIC or decompression chamber operator) must be trained in diving related physics or physiology. The level of training required by the standard depends upon the particular experience or function an employee fulfills on a dive team, the specific underwater operational tasks being performed and the diving mode to which the employee is assigned.

Records of all diver or dive team training shall be maintained by the diving company and shall be available for inspection.

All dive team members shall be trained in cardiopulmonary resuscitation and standard first aid (American Red Cross Standard).

3. Fracture Critical Member (FCM) Inspections

Special attention shall be paid to FCMs, normally inaccessible connections and member areas, fatigue-sensitive details and members with known potential crack locations, for visual crack detection or crack growth. Proposers are advised that the majority of NJTA's major bridges have major FCM elements. These include but are not limited to the following: Extensive use of non-redundant girder systems; box girders and pin and hanger assemblies on Structure Nos. E107.88 and W107.87; a complex three-span continuous, cantilever through truss/tied arch unit with suspenders on Structure No. N2.01; and a continuous through truss arch unit with suspenders comprising the main span over the navigation channel on Structure No. P0.00, with continuous deck truss units on the New Jersey and Pennsylvania approaches. Special attention shall also be paid to all welding and fatigue sensitive details, both in terms of stress category and known damage, on all major structures.

FCM inspections shall comply with the requirements of FHWA-IP-86-26, Inspection of Fracture Critical Members, and they shall be performed concurrently with the biennial inspections. The FCM inspections are supplementary to, rather than in place of, the biennial inspections.

FCM inspections include bridges with box girders, plate girders, two or three-girder systems, transverse pier girders, pin and hanger assemblies, suspenders and sockets, select truss members and other non-redundant structural members. The FCM inspection requires full hands-on inspection of all surfaces and weldments of box girders (interior and exterior) and plate girders in the tension zone, including their major bearings and critical uplift anchor bolt assemblies. Also included are bearing, joint, and structural steel conditions for span ends supported by box girders or framed integral therewith. For welded construction, tension and stress reversal zones shall be examined for the presence of tack welds; welded erection aids; groove weld backup bars; plug welded holes; and other weld details. Special attention shall be paid to any AASHTO Fatigue Category D, E, or E' weld details. Paint shall be removed from areas if applicable of suspected cracks to perform non-destructive testing if deemed necessary. The areas where paint has been removed and cleaned shall be spray coated by the inspector with a rust inhibitor. Non-destructive testing, liquid penetrant (PT), or as recommended, shall be performed on a sampling basis for FCMs with Category D, E, or E' details. The locations and number of such details shall be identified, delineated and documented by the Consultant. Prior to any non-destructive testing, a recommended list of locations shall be submitted to the Authority's Liaison Engineer for approval. The estimated direct expense for non-destructive testing shall be listed separately in the Fee Proposal.

FCM inspections shall cover the detailed inspection of pin and hanger assemblies and include the following information: Sketch elevations of each face of each hanger assembly plotting clearances and conditions of individual components, relative suspended girder positions, rotation monitoring, and any redundant support and disc bearing conditions. Drainage and catwalk conditions relative to pin and hanger assemblies shall also be included.

Confined Space Entry Requirements

- a. The Team Leader shall attend a training course for confined space inspections and submit evidence of training certification to the Authority. Firms such as Leading Edge Safety and Health, LLC, (732) 223-7800, offer a training course on safety of confined space entry.
- b. During the FCM inspection of box girder interiors, interior air shall be monitored from the outside by a person certified for first aid from a firm certified for the interior air monitoring.
- c. A second inspector shall be positioned at the entry opening with a two-way radio to stay in contact with the entrants inside the confined space.

The Team Leader for FCM inspections shall have successfully completed the NHI FCM Inspection Course (FHWA-NHI-130078, Fracture Critical Inspection Techniques for Steel Bridges) within the past 5 years.

4. Inspection of Bridge Security Features

This assignment includes ongoing condition inspection of bridge security features which were recently installed at the Turnpike and Parkway major bridges. These features include ground and structure mounted security fencing, catwalk gates, secured manholes and hatches, secured box girders, and other items specific to each bridge. The Consultant shall record the inspection findings for each bridge in an input form via InspectTech. The Authority has a formal procedure for performing work within secured areas, and will provide details to the Consultant at the kickoff meeting.

The Consultant shall coordinate with the designated New Jersey Turnpike Authority Key Custodian or Security Liaison to obtain security keys necessary to open the locks at locations where security fence is present. A representative of the Consultant who will require access at the bridge(s) shall obtain the security key in person at the Authority's headquarters.

5. Vertical Underclearance Measurements

For inspections following major reconstruction, the Consultant shall provide vertical underclearance measurements and photos for any spans over active roadways. Photos should be framed by both substructure units. Photos shall be annotated using photo software or MS Word to include roadway names, structure milepost and name, date photo taken, and minimum vertical clearances at each shoulder and lane line citing near fascia (NF) or far fascia (FF). **Starting in 2019, the Consultant shall provide clearance sketches using the template provided by NJTA and clearly denote SI&A Items DJ, 10, 53, 54B, 55B and 56, as well as any vertical underclearance postings present.**

For second cycle inspections and later, elevation photos are already available through InspectTech. The Consultant shall update the vertical clearances as follows.

- a. Structures over Turnpike/Parkway Mainline and Ramps – Underclearance measurements obtained by Lidar will be provided by the Technical Manager if available. The Consultant shall update the clearance photos and the SI&A data as necessary. The Consultant shall notify the Technical Manager if Lidar data is missing.
- b. Turnpike/Parkway Mainline over Roads, Railroads, Etc. – The Consultant shall field verify the elevations, and update the clearance photographs and SI&A data as necessary. **Starting in 2019, the Consultant shall provide clearance sketches using the template provided by NJTA and clearly denote SI&A Items DJ, 10, 53, 54B, 55B and 56, as well as any vertical underclearance postings present.**

6. Inspection of Navigation Lighting Systems

Starting in 2019, the Consultant shall conduct nocturnal inspections of their assigned bridges spanning navigable waterways with span or fender mounted navigation lighting. This will be required on an annual basis for each assigned bridge, both as part of the biennial inspection and as part of the off-cycle inspection. When part of the NBIS biennial inspection, a sketch (plan) of the location of the lighting and its condition (functional/non-functional) shall be

included in the report. For off-cycle (non-NBIS) inspections, the sketch shall be uploaded to InspectTech. Category A2 reports shall be created/updated as necessary for both current cycle and off-cycle inspections.

7. Stenciling of Bridge Barrier Parapets

The Authority is undertaking a stenciling program for those major bridges and viaducts with significant total length and number of spans, to clearly identify the pier numbers at the roadway level. As such, the Consultant will be required to stencil the barrier parapets on each major bridge where none currently exist, or re-stencil the barrier parapets where the existing markings are faded or unintelligible, as approved by the Authority. A stenciling procedure is being developed by the Authority and will be shared with the Consultant at the kickoff meeting. The procedure is summarized for Proposers as follows.

Stenciling along the barrier parapet shall be located over all piers, at locations with deck joints or where no deck joints are present (in continuous spans), and it shall label the appropriate pier number at each location. The stencil shall be typically positioned in the upper left-handed corner on the interior face of the barrier parapet, to the right of the deck joint or open parapet joint. If this area is spalled or damaged, the pier number shall be stenciled to the left of the joint, or in a location closest to the damaged area on either side of the deck or open joint. Additionally, a joint plate, lighting standard mount or cabinet may be present at this location, which will require the stenciling to be performed on the opposite side of the joint. The top of the pier number shall be positioned 3 to 4 inches down from the top of the barrier parapet and the left edge of the pier number shall be positioned 4 inches to the right of the associated deck joint or open joint in the barrier above the intermediate piers in continuous spans where no deck joint is present; this stenciling position shall be followed throughout the structure for consistency. Stenciling shall also conform to previous formats to the greatest extent practicable. The following equipment will be required for bridge stenciling.

- Yellow Lumber Marking Crayon (Keel)
- Tape Measure
- Stiff Wire Brush
- Soft Fiber (Polymer) Brush
- Pavement Stencil Set, A thru Z, 0 thru 9, Punctuation, 8", Polyethylene (RAE Mfr. Model No. STL-116-8088, Grainger Item No. 18E712, or Equivalent)
- Enamel-Based Flat Black Spray Paint (Krono® Pro Professional All Surface Enamel, or Equivalent)
- Disposable Gloves
- Dust Mask
- Safety Glasses
- Personal Protective Equipment (PPE), as per NJTA Requirements

8. Category A Deficiencies

The Consultant shall notify the Authority's Liaison Engineer and Technical Manager whenever a new Category A deficiency is detected, via an email with photos. Following the Authority's concurrence of the new Category A deficiency, the Consultant shall create and submit the Category A notification through InspectTech. **For previously reported Category A deficiencies to be monitored under this assignment, if the condition has worsened or if new defects of similar type have been found, the Consultant shall create a new Category A Report. However, if the condition has not worsened and no additional defects of that type have been found, the Consultant shall update the existing report description with the date of their inspection, firm name, and a note stating, "the condition remains unchanged."** The Consultant shall attach supporting photos/sketches to the report. The procedure to issue or update Category A reports is available on the Authority's website at <https://www.njta.com/inspecttech/bridge-inspection-program-notifications> under No. 2019-2.0 Category A Procedure Changes.

D. Bridge Inspection Reports

1. Development of Individual Inspection Report using Bentley Software "AssetWise Asset Reliability Inspections" (InspectTech)

The Consultant shall provide a list of users that will require access to Bentley (InspectTech) software to the Authority at the kickoff meeting. This includes all users that require email notifications regarding procedures and clarifications. All users are required to submit all questions and issues related to InspectTech via email to NJTABridgesHelp@njta.com. All latest directives and clarifications are available via <https://www.njta.com/inspecttech/bridge-inspection-program-notifications>.

The Consultant will be responsible for achieving proficiency with InspectTech, and maintaining that proficiency throughout the duration of the assignment while accommodating ongoing revisions to report forms and software updates. The Authority will provide training and assistance to all bridge inspection consultants. The Consultant shall include the costs associated with a full day training session for key staff (assume one training session per year) together with any other effort associated with using InspectTech in their Fee Proposal.

2. Report Format

The Consultant shall submit a draft inspection report for each major bridge to the Technical Manager. Starting in 2017, the Authority began using a new bridge inspection report format, which has been subsequently updated each year. A sample report has been posted to the Authority's Secure File sharing site along with other project reference and materials. The majority of the document pages shall be generated in InspectTech (IT) through the standard forms and report sections. Other pages (Section Loss Documentation, Clearance, FCM Location Plan, Underwater Inspection Report/Soundings) shall be generated outside the program or pulled from previous cycles and inserted as additional sections. Category A reports for Type A1, A2, A3, Inadequate Clearance and Guide Rail shall also be included in the report.

a. Report Sections

The report shall have the following sections; all are generated in IT unless otherwise noted *.

- Cover
- Table of Contents
- **Bridge Description**
- **Contract History**
- **Load Rating Summary Sheets***
- General Information/Inspection Information
- Conclusions
- Recommendations
- Photographs
- Repairable Deficiencies
- Approach/Roadway (Sheets 1 through 4)
- Deck 1 (General 1)
- Deck 1 (General 2)
- Deck 2 (Joints)
- Deck 3 (Top of Deck)
- Deck 4 (Underdeck)
- Superstructure 1 (General 1)
- Superstructure 1 (General 2)
- **FCM Member Summary***
- Superstructure 2 (Superstructure)
- Section Loss Sheet*
- Bearing Matrix (Inventory Information Only)
- Superstructure 3 (Bearings)
- Substructure 1 (General)
- Substructure 2 (Abutment and Piers)
- Underwater Inspection Report/Soundings
- Waterway/Channel
- Fender/Navigation Lighting
- **Navigation Lighting Status Sketch***
- Bridge Security Features
- Underclearance Sketches*
- Bridge Element Inspection Forms
- Structure Inventory and Appraisal Forms
- Category A Reports

Field notes are organized into checkbox groupings taken from the former bullet forms. For each grouping, there are up to six different defects. Each defect is classifiable as N/A, Category A, or B/C (Contract). Fields include notes, contract repair quantities and photo references for recommended repairs. Repeatable information such as spans and joints are collected in repeater groups which are limited to 200 rows.

b. Report Section Descriptions

A description of the information per report section is listed below.

Bridge Description – includes a description of the structural elements including deck, superstructure, and substructure. Includes original construction and changes due to widening / major rehabilitation. This field form is read only and does not require update unless work has been performed to change the structure type.

Contract History –Contract type, Contract Number, Description of Work, Year. The Consultants will need to review card files, and existing available contract information to collect data for all contract work competed from construction to the most recent repair contract. This information will be entered into the Inventory Information form in InspectTech. Information shall be obtained by the Consultant through review of the contract information included in the prior individual reports and review of as-built plans. Hours shall be included in the fee proposal for this task.

Load Rating Summary Sheets – For any new structures or structures requiring load rating updates based on Appendix A3 of the Authority’s Load Rating Manual, the InspectTech form shall be used to generate this report section and shall include Emergency Vehicle (EV) Ratings. There is also an InspectTech form available for LFR ratings, should ratings using that methodology be required. For all other structures the existing/current PDF shall be included. Refer to the Authority’s Load Rating Manual for all requirements.

General Information/Inspection Information – Bridge Date (NBI and other fields), Superstructure, Substructure and Inspection Information including Team Leader, Assistant Team Leader, Inspector(s), equipment, MPT, temperature.

Conclusions - Overall Condition, Upgrade/Downgrade, Load Rating, Scheduled/Ongoing/Completed Work, FCM (type and condition), Type 2 Underwater Inspection Statements. Description of Deck, Approaches, Superstructure, Substructure, Waterway, Safety Features, Other and Category E to supplement NBI ratings.

Recommendations – RFG form including a description of recommended repairs, with quantity and photo references.

Repairable Deficiencies – Summary of defects included in the field notes warranting repair by future contract. This summary is used to total the quantity of defects included in the recommendations section.

Approach/Roadway 1 - Roadway, Guide Rail, Embankment.

Approach/Roadway 2 - Sidewalk/Safetywalk/Curb, Barrier, Other, Noise Barriers.

Approach/Roadway 3 - Median, Parapet Protective Fencing, Drainage Inlets, Lighting Standards and Junction Boxes.

Approach/Roadway 4 - Safety Features.

Deck 1 (General 1) – Median, Sidewalk/Safetywalk/Curb, Bridge Rail, Parapet Protective Fencing, Drainage Inlets.

Deck 1 (General 2) - Noise Barriers, Lighting Standards and Junction boxes.

Deck 2 (Joints) - Repeater Group for Deck Joints per substructure unit.

Deck 3 (Top of Deck) - Rideability, Overlay Type, Overlay Appraisal, Repeater Group for Top of Deck Defects per Span.

Deck 4 (Underdeck) - Deck Type, Percent SIP, Repeater Group for Underdeck/Fascia Defects per Span.

Superstructure 1 (General 1) - Coating Condition, Drainage, Utility Lines/Support, Catwalks/Ladders/Hatches, Structural Connections (Read Only).

Superstructure 1 (General 2) - Underbridge Lighting, Bridge Mounted Sign Structures.

FCM Member Summary - Includes an FCM In-Depth Inspection Plan, Location Plan, Box Girder Inventory Forms, and Detail Plates. The Inspection Plan includes a description of the bridge and fracture critical members (FCMs), inspection methods, and special inspection needs. The Location Plan is a framing plan highlighting the FCM members. The Location Plan shall clearly identify all FCMs on each individual bridge. The Box Girder Inventory Forms are repeater field groups for each box girder and include data related to the box girder type, size, anchor bolts, bearings, connections, stiffeners and weldments. All notes regarding inspection findings shall be included on the Superstructure 2 (Superstructure) Form. Detail Plates include diagrams depicting the plan, elevation and cross section views of the FCMs.

Superstructure 2 (Superstructure) - Repeater Group for Span to include all notes for FCM member inspection when considered superstructure element.

Bearing Matrix (Inventory Information Only) - The bearing deficiency matrix is included for inventory information only.

Superstructure 3 (Bearing) – Repeater Group for Bearing Lines.

Substructure 1 (General) – Abutment Slope, Substructure Protection Features, Right of Way Security, Drainage (Read Only).

Substructure 2 (Abutments and Piers) – Repeater group for Abutment/Wingwalls and Piers. **To include all notes for FCM member inspection when considered substructure element.**

Underwater Inspection Report / Soundings Survey – For Structures crossing waterways where a Type 2 Underwater Inspection is performed during the NBIS inspection a PDF of the report in its entirety will be uploaded and added as a report section. For all other cases Soundings Surveys will be provided as described above.

Waterway/Channel – Countermeasures and Waterway/Channel.

Fender/Navigation Lighting – Fender System, Navigation Lighting: Span Mounted, Navigation Lighting: Fender Mounted.

Navigation Lighting Status Sketch – Plan view of the fender and span lighting documenting the findings from the nocturnal navigation lighting survey.

Bridge Security Features – Security Fencing, Box Girder Access, Major Bridge Security Features.

c. Photographs

GENERAL: Elevation (2), Approach (2), Top of Deck, Superstructure (Each Type), Waterway (2), FCMs.

CATEGORY A: Defect Photos associated with Category A Reports (A1, A2, A3, Guide Rail, Inadequate Clearance).

DEFECT: Approach, Deck, Superstructure, Bearings, Substructure, Misc. (Utilities) in order of the field notes. **Starting in 2019 Category D repairs will no longer be recommended in the reports, however, the corresponding defect photos shall be included in the Photographs Section of the reports, and uploaded to the Pics/Files page as described below.**

WORK DONE: Work done photos shall be included within the defect photos.

EQUIPMENT AND MPT: Special equipment or MPT in use during the inspection.

Photographs are required to be referenced in the field notes for all defects with Category A, or B/C repairs recommended; typical/worst photos shall be included in the report with reference to other similar locations in the description.

Deficiency quantities (e.g. 20 SF of concrete is hollow sounding) and location shall be included in the caption. The photo date shall be recorded upon upload and reflect the actual date the photograph was taken.

Although not all photos will be included in the Report, the Consultant shall take photos of every repairable (A, B/C or D) defect and upload into InspectTech. Photos not included in the Inspection Report will also be useful for scoping of bridge repair contracts and the description shall contain the element and defect shown at a minimum.

Utility Photos are required for all utilities on a bridge. Photographs shall be clear enough to identify utility lines, casing, and supports, and be at a distance that shows the relative location of the utilities on the structure. Captions shall include direction and orientation of the photo stating location and type of lines. Separate photos are not necessary if the above criteria are met in an existing photo. If a utility is not captured within existing general, work done or defect photos, it shall be included in a separate photograph at the end.

Note that photo references are not linkable to fields. Photo number references should therefore be manually entered after the photographs are numbered.

Recommendations noted in reports shall be cross referenced to photos taken which depict that deficiency.

When improvements are underway at a structure, the Consultant shall provide photos of the areas under construction. This will require early familiarization with the Authority's planned bridge repair contracts for 2020 and future years.

The digital camera to be used shall have a minimum resolution of four (4) mega pixels.

d. SI&A

FHWA Structure Inventory & Appraisal (SI&A) forms shall be updated during the biennial inspection of each major bridge. All SI&A data required by the Authority as described below will be submitted to NJDOT. InspectTech is currently populated with SI&A data from the latest biennial inspection cycle. The Consultant shall update the SI&A data and run the error check and Sufficiency Rating calculation utilizing InspectTech. **Consultants should pay particular attention to fields highlighted RED which indicate that the input does not follow the defined format, causing the data transfer to fail for that asset. The Authority will transmit SI&A data directly to NJDOT's CombIS system from InspectTech.**

The tasks involved in updating the forms include:

Addressing Federal Coding Items 1 to 116 (inclusive); note the following.

- Code Item 100 (STRAHNET Route) in accordance with FHWA memo dated February 9, 2001. Item 6B shall no longer be coded as per FHWA errata sheet.
- Code Items 11, 12 and 13 using NJDOT Straight Line Diagrams and Appraisal of New Jersey Bridges.
- Code Items 10, 47 and 54 for all sheets (Sheet 2 or A through Z).
- Code Item 21 as State Toll Agency (31).
- The Authority will update all state and federal load rating fields. The Consultant shall verify that the ratings on the Load Rating Summary sheet match the SIA data and will notify the Authority if they do not match.

Completion of State Coding Items as follows.

Requirements for Sheet 1

<u>Item No.</u>	<u>Name</u>
(M84)	Degree latitude
(M85)	Degree longitude
(A)	Town
(AA)	Route
(AB)	Structure Name
(AE)	Owner
(AE)	Owner 2
(AF)	Alt. Structure #
(AG)	Rail Type
(AK)	Abutment
(AL)	Pier
(AM)	Depth of Fill
(AV)	Widened Struct. - 1st Widened Design
(AV)	Widened Struct. - 1st Widened Mat.
(AV)	Widened Struct. - 2nd Widened Design
(AV)	Widened Struct. - 2nd Widened Mat.
(BA)	Approach Roadway Condition
(BC)	USRA Code
(BE)	Rail Milepost
<i>(BR)</i>	<i>Load Ratings: HS Tons</i>
<i>(BV)</i>	<i>Load Ratings: Military: RF</i>
<i>(CB)</i>	<i>Load Ratings: HS Tons</i>
<i>(CF)</i>	<i>Load Ratings: Military: RF</i>
<i>(CG)</i>	<i>Load Type- Load/Tons</i>
(CI)	Cycle Number
(CJ)	Inspection Type
(CM)	Consultant
(CP)	Federal Report
(FV)	Route Milepost
<i>(BQ)</i>	<i>Load Ratings – H</i>
<i>(BS)</i>	<i>Load Ratings - 3</i>
<i>(BT)</i>	<i>Load Ratings - 3S2</i>
<i>(BU)</i>	<i>Load Ratings - 3-3</i>
<i>(CA)</i>	<i>Load Ratings - H</i>
<i>(CC)</i>	<i>Load Ratings - 3</i>
<i>(CD)</i>	<i>Load Ratings - 3S2</i>
<i>(CE)</i>	<i>Load Ratings - 3-3</i>

All the State load rating fields indicated in italic above will be coded by NJTA. The Consultant shall verify the data.

Requirements for Sheet 2 or A through Z

<u>Item No.</u>	<u>Name</u>
DJ	Minimum Vertical Underclearance Including Shoulders
SRI	State Route Identification including Ramp Identifiers

The Consultant shall notify the Authority of coding downgrades from above a Four (4) or for upgrades from less than or equal to a Four (4) for Federal Codes 58, 59 and 60.

e. Bridge Element Level Inspection

In accordance with 23 CFR 650 Subpart C, the Authority has been collecting element level data for all of its NBIS bridges since the 2015 Bridge Inspection Program. Bentley developed the Element Level Inspection Data Input module within InspectTech for the Authority. **Similar to SI&A data, the Authority will transmit Bridge Element Level inspection data directly to NJDOT's CombIS system from InspectTech.**

The Consultant shall perform the element level inspection concurrently with the routine NBIS inspection for each bridge within the scope of this assignment. The Consultant shall refer to the AASHTO Manual for Bridge Element Inspection and NJDOT Bridge Element Inspection Manual for element descriptions, quantity calculations, and condition state definitions. The Consultant shall cross check inputs for condition states and quantities for a particular element with its corresponding input in the bridge inspection forms and SI&A item condition ratings to ensure consistent inputs.

3. Fracture Critical Member (FCM) Inspection Report

Beginning in 2019, the Consultant shall no longer prepare a separate FCM inspection report for each bridge designated for an FCM inspection. The photos and inspection findings are now included in the standard report sections.

4. Draft Report Submission

The Consultant shall submit a draft report for each major bridge in electronic format (PDF) which includes updated field forms, FHWA Element Level bridge inspection coding forms and SI&A sheets. The Technical Manager will establish FTP sites to upload the reports. Prior to their submission, draft reports shall receive an independent review by the Consultant's structural staff not directly involved in the bridge inspection assignment, for technical concurrence of repair recommendations and prioritization. Each major bridge inspection report shall be submitted first in draft form to the Technical Manager for review and conformance with established Authority standards. The Authority's Liaison Engineer will then review the red-lined draft reports before returning to the Consultant for comment resolution and report finalization. Any red-lined comments shall be addressed and incorporated in the final report, or responded to accordingly in the draft reports which will serve as

the record for comment resolution. The final report shall then be submitted to the Authority's Liaison Engineer and Technical Manager.

5. Deliverables for Final Reports

Electronic bridge inspection report files shall be provided as PDF files on CDs, DVD, flash drive or other acceptable media. Each of the reports shall be named (GSP or TPK)_BridgeInspectionReport_Structure Number. File extension. Examples include "GSP_BridgeInspectionReport _28.0S.pdf", and "TPK_BridgeInspectionReport _W106.26AR.pdf". All reports shall be placed together in one folder or subfolder set up specifically for bridge inspection reports only. Working files for Underwater Inspection Reports, Section Loss Documentation, , etc. shall also be included under a separate folder titled "Working Files".

The Consultant shall also submit one (1) hard copy of each final major bridge inspection report. All final reports shall be bound in 3-ring binders with a spine thickness of no more than 3 inches. Reports shall be broken into two or more volumes, as needed, in order to remain within the thickness limit. Tabs and/or heavy card stock sheets shall be used to delineate between sections and appendices of the report. .

6. Authority Deficiency Category Definitions

To identify the severity of the deficiencies and prioritize the necessary repairs to help in planning for future Maintenance Force and Contract improvements, the deficiencies and conditions noted in the bridge and ancillary structure inspection reports shall be identified within one of the following Authority stipulated repair categories:

CATEGORY A

Deficiencies that require prioritized attention with prompt notification given to the Authority. For such findings, a Category A report is prepared and issued with one of the below subcategories based on urgency and criticality.

A1 (Emergency)

Critical findings in the bridge deck, superstructure or substructure which, if not repaired immediately, may require closing the bridge, or a portion thereof, and could lead to a total collapse of the structure; or, a defect found at any ancillary structural asset determined as an immediate safety hazard to the traveling public.

A2 (Priority)

Major defects noted which are recommended for necessary repair in the near future as they pose a potential safety concern to the travelling public, or could lead to significant load restriction or partial collapse of the structure.

A3 (Non-Structural)

Issues noted which are recommended for repair before or within the next regularly scheduled contract as they pose a potential safety concern to the travelling public.

Guide Rail

Damage or significant corrosion noted to guide rail elements including attachments to bridges, rail and posts at approach roadway or substructure protection runs, and end terminals at Turnpike and Parkway structures, which require repair in the near future; these deficiencies are reported by the issuance of a Guide Rail Type Category A Report.

Inadequate Clearance

Vertical bridge underclearances which are incorrectly posted, or measured to be less than the following minimum thresholds established for New Jersey Turnpike and Garden State Parkway crossings, are reported by the issuance of an Inadequate Clearance Type Category A Report.

Bridges over State Roads	14' - 9" minimum
Bridges over Non-State (County and Local) Roads	14' - 6" minimum
Bridges over New Jersey Turnpike and Garden State Parkway Roads	14' - 0" minimum

Through InspectTech, a Category A Report is issued for each item and distributed to Engineering and Maintenance as required. Further information can be found in the Category A Repair Procedures.

For loose concrete found over traffic, the Consultant shall remove loose material if fractured areas are reachable and removable by hand tools. The Consultant shall mark the fractured area with spray paint and take two photos of the area, one close-up, and one backed up to indicate the location of fracture relative to span framing.

CATEGORY B / C "Contract / Deck Work"

Deficiencies noted that are recommended for repair by an annual Bridge Repair Contract or Specialized Repair Contract as part of the Authority's Capital Budget Program.

CATEGORY D "Maintenance"

Deficiencies noted which can be repaired most expeditiously by the Authority's Maintenance Department.

CATEGORY E "Monitor"

Noted deficiencies or conditions that are considered actively developing and may be recommended for contract work, but require monitoring until the condition has been remedied. This monitoring would involve an increased inspection frequency and/or level of detail through routine or interim inspections.

Further information can be found in the Authority Deficiency Category Definitions on the Authority's website at https://www.njta.com/media/4595/njta_deficiency_category_definitions_v61219.pdf.

SECTION V
Staffing Schedule
 2020 – 2023 New Jersey Turnpike Authority Major Bridge Inspection Program
 OPS No. A3770 - Major Bridge Group 1

Classification (ASCE-Grade)	Task 1 Mobilization	Task 2 Bridge Inspection	Task 3 Inspection Reports	Task 4 SI&A/Element Level Inspection	Task 5 Load Rating Updates	Task 6 Unanticipated Services	Total Hours
Project Manager ()						20	
Project Engineer ()						40	
Team Leader ()						160	
Inspector/ Engineer ()						160	
Junior Engineer ()						80	
CADD Technician ()						40	
Other-Specify ()							
Total Hours					500 ³	500 ²	

Notes:

- (1) The above chart is intended to act as a guide. The Consultant shall modify and expand Classifications and Tasks as required to meet project needs.
- (2) Unanticipated Services in the amount of 500 hours is an annual total and shall be multiplied over the 4-year term of this assignment.
- (3) Load Rating Updates in the amount of 500 hours is an annual total and shall be multiplied over the 4-year term of this assignment.

SECTION V
Staffing Schedule
 2020 – 2023 New Jersey Turnpike Authority Major Bridge Inspection Program
 OPS No. A3771 - Major Bridge Group 2

Classification (ASCE-Grade)	Task 1 Mobilization	Task 2 Bridge Inspection	Task 3 Inspection Reports	Task 4 SI&A/Element Level Inspection	Task 5 Load Rating Updates	Task 6 Unanticipated Services	Total Hours
Project Manager ()						20	
Project Engineer ()						40	
Team Leader ()						160	
Inspector/ Engineer ()						160	
Junior Engineer ()						80	
CADD Technician ()						40	
Other-Specify ()							
Total Hours					500 ³	500 ²	

- Notes:
- (1) The above chart is intended to act as a guide. The Consultant shall modify and expand Classifications and tasks as required to meet project needs.
 - (2) Unanticipated Services in the amount of 500 hours is an annual total and shall be multiplied over the 4-year term of this assignment.
 - (3) Load Rating Updates in the amount of 500 hours is an annual total and shall be multiplied over the 4-year term of this assignment.

SECTION VI Compensation Basis

Effective February 28, 2011 the New Jersey Turnpike Authority will no longer issue Non-Revenue Toll Passes to consultants working on Authority projects. Also, effective this date, the consultant will be responsible for paying all tolls.

Following a review of submitted Expressions of Interest, the Authority will request Technical and Fee Proposal(s) from the firm(s) it deems most qualified.

The Sealed Fee Proposal shall be submitted as a cost-plus fee, based on reimbursement of direct professional and technical salaries, except Corporate Officers, Partners, Owners and routine secretarial and clerical services, times a multiplier, not to exceed 2.8, based on a 10% allowance for profit and an overhead rate of 154.5%, the individual Firm's overhead rate as determined by Federal Audit Regulation (FAR) procedures, whichever is less plus direct expenses and subconsultant services, at cost. The multiplier shall not be applied to the premium portion of overtime. When Corporate Officers, Partners, Owners and/or Principals are required to provide services in a technical capacity, the salaries for such services shall be reimbursable for direct salaries times a multiplier not to exceed 2.8. The multiplier covers all overhead and profit. No expenses or costs shall be billed unless specifically included in this EOI Solicitation or Final Negotiated Fee Proposal. For general services provided by Corporate Officers, Partners, Owners and/or Principals working in a non-technical capacity, no compensation will be provided.

Average rate per classification/grade will not be permitted to determine total labor costs. The Consultant shall list each individual proposed for the project and include the hours and hourly pay rate.

Effective August 1, 2015, salary rate increases will be permitted in accordance with the following parameters:

- Salary increases will not be permitted for the first 24 months of any OPS Agreement from the date of execution;
- Starting at month 25, all staff, regardless of pay grade / title, will be allowed up to a maximum annual increase of 2%;
- The proposal salary rate increase schedule will apply to the prime consultant as well as all sub-consultants;
- Supplements to OPS Agreements executed prior to August 1, 2015 will not be permitted salary increases.

The Fee Proposal when requested, shall detail time (hours) and direct salary data for classifications conforming to ASCE Professional and Technical Grades, as shown on the staffing schedule and as modified by the Consultant to account for all required services. The ceiling amount shall be estimated to the nearest \$5,000.

Salaries shall be charged at the Consultant's hourly rates. The Consultant is responsible for managing the assignment, adhering to the number of hours, salary rates and personnel, as presented in the Expression of Interest and Fee Proposals. Individual standard and overtime rates must be approved by the Authority's Chief Engineer or the Chief Engineer's designated representative prior to commencement of work or whenever the Consultant proposes that an individual's rate be changed during the term of this OPS, provided such change is reflected in the Consultant's Fee Proposal. Except for overtime worked on construction supervision during

permissible contract working hours, approval of overtime must be issued by the Authority. The Fee Proposal shall follow and reflect the staffing schedule as shown in Section V.

Direct expenses shall include approved subconsultant services; mileage; material sampling and destructive testing; non-destructive testing (NDT); air monitoring; printing of inspection reports (including the costs of regular paper, colored paper, dividers, covers, photo pages, bindings, labels, and plastic covers); railroad insurance, permits, safety training, flagging and inspection services; rental costs for bridge inspection access equipment and truck-mounted attenuators (TMAs); fuel, tire and repair costs for rented bridge inspection access equipment and TMAs; materials for bridge parapet stenciling; Authority-approved safety vests; tolls charged by other agencies as required to access Authority bridges or to attend project meetings; and expenses associated with the unanticipated assignment task, with prior written approval by the Authority. The Consultant shall provide the estimated direct costs for these items in the Fee Proposal. Mileage will be paid at the prevailing rate. Mileage will be reimbursed for travel between the field office and the job site and return. Any change to this rate is subject to the approval of the New Jersey Turnpike Authority.

Expenses for lodging and meals will be paid in accordance with the Federal per diem rates which can be found at www.gsa.gov/perdiem. Compensation for lodging and meals must be approved in advance by the Authority, otherwise the Consultant will not be reimbursed for meals and lodging. This shall also apply to the Consultants subconsultants.

Subconsultant services are those required services performed by other firms at the Consultant's direction. These services in excess of \$5,000 must be approved in advance by the Authority.

Overnight delivery charges will be paid by the Authority if said delivery is specifically requested by the Authority and agreed to in advance. Otherwise, the Consultant will not be reimbursed for overnight delivery charges if the Consultant elects to use such services for his convenience. This shall also apply to the consultant's subconsultants.

SECTION VII
NEW JERSEY TURNPIKE AUTHORITY
SMALL BUSINESS ENTERPRISE SUBCONSULTING PROGRAM

It is the policy of the New Jersey Turnpike Authority (the "Authority") that Small Business Enterprises ("SBE") as determined and defined by the Division of Minority and Women Business Development ("Commerce Commission") and the Department of the Treasury ("Treasury") in N.J.A.C. 17:13-1.1, have the opportunity to compete for and participate in the performance of consultant services. The Authority is seeking participation of these SBEs for the issuance of certain Orders for Professional Services (OPS). Your Expression of Interest (EOI) must include a goal of awarding at least twenty-five (25%) percent of the total value of the OPS to subconsultants who are registered with the Division as a SBE. The Consultant must submit proof of its subconsultant's SBE registration. In the event that the Consultant cannot comply with the goal set forth above, prior to the time of the award, the Consultant must demonstrate to the Authority's satisfaction that a good faith effort was made to accomplish the above stated goal.

In order for the Authority to monitor and report SBE participation during the course of the OPS pursuant to N.J.A.C. 17:13-5.2, the consultant shall submit evidence of SBE participation in a form acceptable to the Authority, with each invoice for payment. Invoices for Payment submitted without the completed SBE Form will not be processed.

If the Consultant, for any reason, at any time during the course of the OPS, intends to make any additions, deletions or substitutions to the list of firms on the SBE form submitted to the Authority, the Consultant shall submit such proposed changes for approval. Any such proposed changes must comply with the requirements and procedures set forth herein.

Evidence of a “good faith effort” includes, but is not limited to:

1. Consultant shall request a listing of small businesses from the Division and the Authority and attempt to contact same;
2. Consultant shall keep specific records of its efforts, including the names of businesses contacted and the means and results of such contacts, receipts from certified mail and telephone records;
3. Consultant shall provide proof of solicitations of SBEs for their services, including advertisements in general circulation media, professional service publications and minority and women focus media;
4. Consultant shall provide evidence of efforts made to identify work categories capable of being performed by SBEs;
5. Consultant shall provide all potential subconsultants with detailed information regarding the project description;
6. Consultant shall attempt, wherever possible, to negotiate lower prices with potential SBE subconsultants which submitted higher than acceptable fee estimates; and
7. Efforts made to use the services of available community organizations, consultant groups, and local, state and federal agencies that provide assistance in the recruitment and placement of SBEs.

Consultant shall maintain adequate records to document their efforts and will provide same to the Authority upon request.

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

GOODS, PROFESSIONAL SERVICE AND GENERAL SERVICE CONTRACTS

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

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

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

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union of the contractor's commitments under this chapter 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.

The contractor or subcontractor agrees to make good faith efforts to meet targeted county employment goals established in accordance with N.J.A.C.17:27-5.2.

The contractor or subcontractor agrees to inform in writing its appropriate recruitment agencies including, but not limited to, employment agencies, placement bureaus, colleges, universities, and labor unions, that it does not discriminate on the basis of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal law and applicable Federal court decisions.

In conforming with the targeted employment goals, the contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions.

The contractor shall submit to the public agency, after notification of award but prior to execution of a goods and services contract, one of the following three documents:

Letter of Federal Affirmative Action Plan Approval

Certificate of Employee Information Report

Employee Information Report Form AA302 (electronically provided by the Division and distributed to the public agency through the Division's website at www.state.nj.us/treasury/contract_compliance).

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

SECTION IX
State Contractor Political Contributions Compliance
Public Law 2005, Chapter 51, Executive Order 134 and Executive Order 117

In order to safeguard the integrity of State government procurement by imposing restrictions to insulate the award of State contracts from political contributions that pose the risk of improper influence, purchase of access, or the appearance thereof, Executive Order 134 was signed on September 22, 2004 ("Executive Order 134"). The Order is applicable to all State agencies, the principal departments of the executive branch, any division, board, bureau, office, commission within or created by a principal executive branch department, and any independent State authority, board, commission, instrumentality or agency. Executive Order 134 was superseded by Public Law 2005, c.51, signed into law on March 22, 2005. In September 2008, Executive Order 117 was signed and became effective November 15, 2008. It applies to the same government contracting entities subject to Executive Order 134, but extends the political contribution restrictions by expanding the definition of "business entity" to include, for example, more corporate shareholders and sole proprietors. Executive Orders 134 and 117, and Public Law 2005, c.51 contain restrictions and reporting requirements that will necessitate a thorough review of the provisions. Pursuant to the requirements of PL 2005, c.51, the terms and conditions set forth in this section are material terms of any OPS resulting from this RFEOI or RFP:

DEFINITIONS

For the purpose of this section, the following shall be defined as follows:

- a) Contribution – means a contribution reportable as a recipient under "The New Jersey Campaign Contributions and Expenditures Reporting Act." P.L. 1973, c. 83 (C.19:44A-1 et seq.), and implementing regulations set forth at N.J.A.C. 19:25-7 and N.J.A.C. 19:25-10.1 et seq. Through December 31, 2004, contributions in excess of \$400 during a reporting period were deemed "reportable" under these laws. As of January 1, 2005, that threshold was reduced to contributions in excess of \$300.
- b) Business Entity – means any natural or legal person; business corporation (and any officer, person, or business entity that owns or controls 10% or more of the corporation's stock); professional services corporation (and any of its officers or shareholders); limited liability company (and its members); general partnership (and its partners); limited partnership (and its partners); in the case of a sole proprietorship: the proprietor; a business trust, association or any other legal commercial entity organized under the laws of New Jersey or any other state or foreign jurisdiction, including its principals, officers, or partners. The definition of a business entity also includes (i) all principals who own or control more than 10 percent of the profits or assets of a business entity ; (ii) any subsidiaries directly or indirectly controlled by the business entity; (iii) any political organization organized under section 527 of the Internal Revenue Code that is directly or indirectly controlled by the business entity, other than a candidate committee, election fund, or political party committee; and (iv) if a business entity is a natural person, that person's spouse or child, residing in the same household.

BREACH OF TERMS OF THE LEGISLATION

It shall be a breach of the terms of the contract for the Business Entity to (i) make or solicit a contribution in violation of the Legislation, (ii) knowingly conceal or misrepresent a contribution given or received; (iii) make or solicit contributions through intermediaries for the purpose of concealing or misrepresenting the source of the contribution; (iv) make or solicit any contribution on the condition or with the agreement that it will be contributed to a campaign committee or any candidate or holder of the public office of Governor, or to any State or county party committee; (v) engage or employ a lobbyist or consultant with the intent or understanding that such lobbyist or consultant would make or solicit any contribution, which if made or solicited by the business entity itself, would subject that entity to the restrictions of the Legislation; (vi) fund contributions made by third parties, including consultants, attorneys, family members, and employees; (vii) engage in any exchange of contributions to circumvent the intent of the Legislation; or (viii) directly or indirectly through or by any other person or means, do any act which would subject that entity to the restrictions of the Legislation.

CERTIFICATION AND DISCLOSURE REQUIREMENTS

- a) The Authority shall not enter into a contract to procure from any Business Entity services or any material, supplies or equipment, or to acquire, sell or lease any land or building, where the value of the transaction exceeds \$17,500, if that Business Entity has solicited or made any contribution of money, or pledge of contribution, including in-kind contributions to a candidate committee and/or election fund of any candidate for or holder of the public office of Governor, or to any State, county or municipal political party committee, or legislative leadership committee during specified time periods.
- b) Prior to the award of any contract or agreement, the intended Awardee shall submit the Certification and Disclosure form, certifying that no contributions prohibited by the Legislation have been made by the Business Entity and reporting all contributions the Business Entity made during the preceding four years to any political organization organized under 26 U.S.C.527 of the Internal Revenue Code that also meets the definition of a “continuing political committee” within the means of N.J.S.A. 19:44A-3(n) and N.J.A.C. 19:25-1.7. Failure to submit the required forms will preclude award of a contract under this RFP, as well as future contract opportunities.
- c) Further, the Contractor is required, on a continuing basis, to report any contributions it makes during the term of the contract, and any extension(s) thereof, at the time any such contribution is made.

STATE TREASURER REVIEW

The State Treasurer or his designee shall review the Disclosures submitted pursuant to this section, as well as any other pertinent information concerning the contributions or reports thereof by the intended awardee, prior to award, or during the term of the contract, by the contractor. If the State Treasurer determines that any contribution or action by the contractor constitutes a breach of contract that poses a conflict of interest in the awarding of the contract under this solicitation, the State Treasurer shall disqualify the Business Entity from award of such contract.

ADDITIONAL DISCLOSURE REQUIREMENT OF P.L. 2005, C. 271

Contractor is advised of its responsibility to file an annual disclosure statement on political contributions with the New Jersey Election Law Enforcement Commission (ELEC), pursuant to P.L. 2005, c. 271, section 3 if the contractor receives contracts in excess of \$50,000 from a public entity in a calendar year. It is the contractor's responsibility to determine if filing is necessary. Failure to so file can result in the imposition of financial penalties by ELEC. Additional information about this requirement is available from ELEC at 888-313-3532 or at www.elec.state.nj.us.

ADDITIONAL DISCLOSURE REQUIREMENT OF P.L. 2005, C. 51 (EXECUTIVE ORDER NO. 117)

Executive Order No. 117 (Corzine 2008) is designed to enhance New Jersey's efforts to protect the integrity of government contractual decisions and increase the public's confidence in government. The Executive Order builds on the provisions of P.L. 2005, c. 51 ("Chapter 51"), which limits contributions to certain political candidates and committees by for-profit business entities that are, or seek to become, State government vendors.

Executive Order No. 117 extends the provisions of Chapter 51 in two ways:

1. The definition of "business entity" is revised and expanded so that contributions by the following individuals also are considered contributions attributable to the business entity:
 - Officers of a corporation, any person or business entity who owns or controls 10% or more of the corporation's stock, and professional services corporations, including any officer or shareholder, with the term "officer" being defined in the same manner as in the regulations of the Election Law Enforcement Commission regarding vendor disclosure requirements (N.J.A.C. 19:25-26.1), with the exception of officers of non-profit entities;
 - Partners of general partnerships, limited partnerships, and limited liability partnerships and members of limited liability companies (LLCs), with the term "partner" being defined in the same manner as in the regulations of the Election Law Enforcement Commission regarding vendor disclosure requirements (N.J.A.C. 19:25-26.1);
 - In the case of a sole proprietorship: the proprietor; and
 - In the case of any other form or entity organized under the laws of this State or any other state or foreign jurisdiction: the entity and any principal, officer, and partner thereof;
 - Spouses, civil union partners, and resident children of officers, partners, LLC members, persons owning or controlling 10% or more of a corporation's stock, all shareholders of a professional services corporation, and sole proprietors are included within the new definition, except for contributions by spouses, civil union partners, or resident children to a candidate for whom the contributor is eligible to vote or to a political party committee within whose jurisdiction the contributor resides.
2. Reportable contributions (those over \$300.00 in the aggregate) to legislative leadership committees, municipal political party committees, and candidate committees or election funds for Lieutenant Governor are disqualifying contributions in the same manner as reportable contributions to State and county

political party committees and candidate committees or election funds for Governor have been disqualifying contributions under Chapter 51.

Executive Order No. 117 applies only to contributions made on or after November 15, 2008, and to contracts executed on or after November 15, 2008.

Only the intended Awardee will be required to submit the required P.L. 2005 c. 51/Executive Order 117 and P.L., 2005, c. 271 forms. The **combined** Chapter 51/Executive Order 117 form and the Chapter 271 form are available on the Department of Treasury Division of Purchase and Property's website at: <http://www.state.nj.us/treasury/purchase/forms.htm>.

SECTION X
Set-Off for State Tax
(N.J.S.A. 54:49-19)

Please be advised that pursuant to P.L. 1995. C. 159, effective January 1, 1996 and notwithstanding any provision of the law to the contrary, whenever any taxpayer, partnership, or S corporation under contract to provide goods or services or construction projects to the State of New Jersey or its agencies or instrumentalities, including the legislative and judicial branches of State government, is entitled to payment for those goods or services or construction projects and at the same time the taxpayer, or the partner or shareholder of that entity, is indebted for any State tax, the Director of the Division of Taxation shall seek to set-off that taxpayer's, partner's or shareholder's share of the payment due to the taxpayer, partnership, or S corporation. The amount of set-off shall not allow for the deduction of any expenses or other deductions which might be attributable to a partner or shareholder subject to set-off under this act. No payment shall be made to the taxpayer, the provider of goods or services or the contractor or subcontractor of construction projects pending resolution of the indebtedness.

The Director of Division of Taxation shall give notice to the set-off to the taxpayer, the provider of goods or services, or the contractor or subcontractor of construction projects and provide an opportunity for a hearing with thirty (30) days such notice under the procedures for protests established under R.S. 54:49-18. No requests for conference, protest or subsequent appeal to the Tax Court from any protest under this section shall stay the collection of the indebtedness. Interest that may be payable by the State pursuant to P.L. 1987, c. 184 (c.582:32-32et seq.) to the taxpayer, the provider of goods or services, or the contractor or subcontractor of construction projects shall be stayed.

SECTION XI
Right to Audit

Pursuant to N.J.A.C. 17:44-2.2, authority to audit or review contract records:

- (a) Relevant records of private vendors or other persons entering into contracts with covered entities are subject to review by the Office of the State Comptroller (OSC) pursuant to N.J.S.A. 52:15C-14(d).
- (b) As of November 15, 2010, the Consultant (contract partner) shall maintain all documentation related to products, transactions or services under this contract for a period of five years

from the date of final payment. Such records shall be made available to the New Jersey Office of the State Comptroller upon request.

SECTION XII **Source Disclosure Certification**

Pursuant to N.J.S.A. 52:34-13.2 (Executive Order 129 (2004)), the Authority must consider the requirements of New Jersey's contracting laws, the best interests of the State of New Jersey and its citizens, as well as applicable federal and international requirements.

The Authority shall insure that all Firms seeking to enter into any contract in which services are procured on its behalf must disclose:

- a. The location by country where the services under contract will be performed;
- b. Any subcontracting of services under the contract and the location by country where the subcontracted services will be performed.

This information must be disclosed on the Vendor Source Disclosure Form – N.J.S.A. 52:34-13.2 (Executive Order 129 (2004)), which is available on the Authority's website and returned with your Firm's Expression of Interest (EOI).

SECTION XIII **Disclosure of Investment Activities in Iran**

Pursuant to N.J.S.A. 52:32-57(a), the bidder must certify that neither the Proposer, nor one of its parents, subsidiaries, and/or affiliates (as defined in N.J.S.A. 52:32-56(e)(3)), is listed on the Department of 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 Proposer is unable to so certify, the Proposer shall provide a detailed and precise description of such activities to the Authority. Each Proposer (and all Subconsultants) shall certify under penalty of perjury, date and return to the Authority the completed form entitled "Disclosure of Investment Activities in Iran" which is available on the Authority's website with your Firm's Expression of Interest (EOI). Failure to include the completed form, certified and dated, shall be grounds for rejection of Proposer's Expression of Interest (EOI).

Pursuant to N.J.S.A. 52:32-57(a), any person or entity that is on the list of entities that are doing business with Iran is ineligible to and shall not bid on or submit a proposal for a contract with the Authority.

SECTION XIV **Antidiscrimination Provisions**

In accordance with N.J.S.A. 10:2-1 every contract for or on behalf of the State or any county or municipality or other political subdivision of the State, or any agency of or authority created by any of the foregoing, for the construction, alteration or repair of any public building or public work or for the acquisition of materials, equipment, supplies or services shall contain provisions by which the contractor agrees that:

- a. 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 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;
- a. 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;
- b. 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 calendar day during which such person is discriminated against or intimidated in violation of the provisions of the contract; and
- c. This contract may be canceled or terminated by the contracting public agency, 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 contracting public agency of any prior violation of this section of the contract.

SECTION XV
Standards Prohibiting Conflicts of Interest
Executive Order 189 (1988 - Kean)

Pursuant to N.J.S.A.52:34-19 and Executive Order 134 (1976 - Byrne), Executive Order 189 (1988 - Kean) includes the following prohibitions on any vendor which provides or offers or proposes to provide goods or services to or perform any contract for the State of new Jersey or any State agency.

- (a) No vendor shall pay, offer to pay, or agree to pay, either directly or indirectly, any fee, commission, compensation, gift, gratuity, or other thing of value of any kind to any State officer or employee or special State officer or employee, as defined by N.J.S.A. 52:13D-13b. and e., in the Department of the Treasury or any other agency with which such vendor transacts or offers or proposes to transact business, or to any member of the immediate family, as defined by N.J.S.A. 52:13D-13i., of any such officer or employee, or any partnership, firm, or corporation with which they are employed or associated, or in which such officer or employee has an interest within the meaning of N.J.S.A. 52:13D-13g.
- (b) The solicitation of any fee, commission, compensation, gift, gratuity or other thing of value by any State officer or employee or special State officer or employee from any State vendor shall be reported in writing forthwith by the vendor to the Attorney General and the Executive Commission on Ethical Standards.
- (c) No vendor may, directly or indirectly, undertake any private business, commercial or entrepreneurial relationship with, whether or not pursuant to employment, contract or other agreement, express or implied, or sell any interest in such vendor to, any State officer or employee or special State officer or employee having any duties or responsibilities in connection with the purchase, acquisition or sale of any property or services by or to any State agency or any instrumentality thereof, or with any person, firm or entity with which he is employed or associated or in which he has an interest within the meaning of

N.J.S.A. 52:13D-13g. Any relationships subject to this provision shall be reported in writing forthwith to the Executive Commission on Ethical Standards, which may grant a waiver of this restriction upon application of the State officer or employee or special State officer or employee upon a finding that the present or proposed relationship does not present the potential, actuality or appearance of a conflict of interest.

- (d) No vendor shall influence, or attempt to influence or cause to be influenced, any State officer or employee or special State officer or employee in his official capacity in any manner which might tend to impair the objectivity or independence of judgment of said officer or employee.
- (e) No vendor shall cause or influence, or attempt to cause or influence, any State officer or employee or special State officer or employee to use, or attempt to use, his official position to secure unwarranted privileges or advantages for the vendor or any other person.
- (f) The provisions cited above in paragraph 3a. through 3e. shall not be construed to prohibit a State officer or employee or special State officer or employee from receiving gifts from or contracting with vendors under the same terms and conditions as are offered or made available to members of the general public subject to any guidelines the Executive Commission on Ethical Standards may promulgate under paragraph 3c.

Section XVI **ADA Indemnification**

The Consultant and the Authority do hereby further agree that the provisions of Title II of the Americans With Disabilities Act of 1990 (the "Act") (42 U.S.C. §12101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereto, are made a part of this OPS. In providing any aid, benefit, or service on behalf of the Authority pursuant to this OPS, the Consultant agrees that the performance shall be in strict compliance with the Act. In the event that the Consultant, its agents, servants, employees, or subconsultants violate or are alleged to have violated the Act during the performance of this OPS, the Consultant shall defend the Authority in any action or administrative proceeding commenced pursuant to this Act. The Consultant shall indemnify, protect, and save harmless the Authority, its agents, servants, and employees from and against any and all suits, claims, losses demands, or damages, or whatever kind or nature arising out of or claimed to arise out of the alleged violation. The Consultant shall at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the Authority grievance procedure, the Consultant agrees to abide by any decision of the Authority which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the Authority or if the Authority incurs any expense to cure a violation of the Act which has been brought pursuant to its grievance procedure, the Consultant shall satisfy and discharge the same at its own expense.

The Authority shall, as soon as practicable after a claim has been made against it, give written notice thereof to the Consultant along with full and complete particulars of the claim. If any action or administrative proceedings is brought against the Authority or any of its agents, servants, and employees, the Authority shall expeditiously forward or have forwarded to the Consultant every demand, complaint, notice, summons, pleading, or other process received by the Authority or its representatives. It is expressly agreed and understood that any approval by the Authority of the services provided by the Consultant pursuant to this contact will not relieve the Consultant of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the Authority

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

Section XVII
Diane B. Allen Equal Pay Act

Please be advised that in accordance with P.L. 2018, c. 9, also known as the Diane B. Allen Equal Pay Act, which was signed in to law by Governor Phil Murphy on April 24, 2018, a contractor performing “qualifying services” or “public work” to the State or any agency or instrumentality of the State shall provide the Commissioner of Labor and Workforce Development a report regarding the compensation and hours worked by employees categorized by gender, race, ethnicity, and job category. For more information and report templates see <https://nj.gov/labor/equalpay/equalpay.html>

SECTION XVIII
Bridges List and Descriptions
Major Bridge Group 1

1. Structure No. P0.00 – Turnpike PEW/PWE over Delaware River

Traditional Name	Delaware River Turnpike Bridge
SI&A Number	P000000
Next NBIS Inspection Date	7/22/20
Next Underwater Inspection Date	7/27/20
Total Number of Spans	31

The Delaware River Turnpike Bridge was built in 1956, and it is jointly owned and maintained by the New Jersey Turnpike Authority and Pennsylvania Turnpike Commission (PTC). The structure is a combination of two-girder and floorbeam simple spans, continuous deck truss units and a continuous through truss tied arch unit, with an overall length of 6,571'-0" and width of 80'-0". Ten (10) two-girder and floorbeam simple spans, and one (1) three-span and one (1) four-span continuous deck truss units make up the Pennsylvania (west) approach. Similarly, four (4) two-girder and floorbeam simple spans, and one (1) three-span and one (1) four-span continuous deck truss units make up the New Jersey (east) approach. The continuous through truss arch unit is comprised of a main span and twin anchor spans with an overall length of 1,364'-0", with the roadway suspended via fifteen (15) sets of suspender ropes. New quadruple strand suspenders support the main span roadway between floorbeams and main truss panel points.

Punched riveted plate box member construction was used for the continuous through truss arch unit and heavy rolled "H" column sections were used for the continuous deck truss units. Riveted fabrication of painted carbon and silicon steel and rocker bearings are used throughout the structure.

Independent two column style reinforced concrete piers support the two-girder and floorbeam simple spans and the main span of the continuous through truss arch unit. Two-column with cap/strut style piers support the continuous deck truss units and the twin anchor spans of the continuous through truss arch unit. All piers are supported on piles.

A single catwalk runs the full length of the structure, together with a top of main truss walkway and access ladders to the main unit and deck truss bearings. Vertical underclearances vary from 30'-0" at the abutments to 135'-0" above mean high water in the main channel of the Delaware River. Fender systems are present at Piers 17 and 18. In addition to spanning the Delaware River, the structure crosses US Highway 13, AMTRAK's Northeast Corridor Line, 3 local streets in Pennsylvania, and River Road in New Jersey.

The Delaware River Turnpike Bridge has undergone extensive repairs since its original construction and widening, including modification and repairs to the deck and wearing surface, structural steel, drainage system, substructure, paint system, roadway lighting, navigation lighting, and fender system. The Authority completed deck reconstruction and miscellaneous structural, roadway and lighting improvements on the New Jersey side of the bridge under Contract No. R-1433, and PTC completed similar work under three previous contracts on the Pennsylvania side of the bridge. Contract No. T100.216 recently completed structural repairs, climbing aids, and repainting of the entire bridge.

On January 20, 2017, a complete fracture was discovered in the North Truss Top Chord Member U21-U22 of Span 16 on the Pennsylvania side of the bridge, when Contract No. T100.216 was underway. The bridge was immediately closed to traffic while emergency repairs began by constructing temporary supports along the length of the affected truss unit and temporarily splicing the fractured member. Once the bridge was stabilized, post-tensioning was utilized to bring the damaged truss back into alignment and to reintroduce loads into the fractured truss member. Then, a permanent splice was built to rejoin and repair the fractured truss member. The structure was reopened to traffic in early March 2017.

The Delaware River Turnpike Bridge has bridge security features which were recently installed under Contract Nos. A100.183 and A100.196. The following is a list of secured areas which will require special access.

- Catwalk Gates - At 6 locations along the center catwalk.
- Girder and Floorbeam Guard Gates (6 total) - At 4 locations along 2 floorbeams and 2 locations along 2 girders. (East Abutment, Main Unit).
- Ground Mounted Security Fence with Security Locks (7 fenced in areas) - Piers 2 to 7, Piers 11 to 14, Pier 15, Pier 16, Pier 17, Piers 20 to 21, and Piers 22 to the East Abutment.
- Over the Side Security Gates – 4 locations along the north parapet - Pier 10, Pier 17, Pier 20, and Pier 27.

2. Structure No. 28.OSR – Parkway S over Great Egg Harbor and Harbor Road

Traditional Name	Great Egg Harbor Bridge Southbound
SI&A Number	370280S
Next NBIS Inspection Date	10/04/20
Next Underwater Inspection Date	9/22/20
Total Number of Spans	21

The Great Egg Harbor Bridge Southbound, carrying the Parkway S Roadway over Great Egg Harbor and Harbor Road, was constructed under Contract No. P100.251. It was opened to traffic in its final traffic configuration in Spring 2019, replacing original Structure No. 28.OS which has been demolished. The structure is on the coastal evacuation route for Cape May County and currently carries US Route 9 also.

The superstructure consists of 21 spans of precast prestressed concrete bulb tee girders. The structure has 17 simple spans comprised of 9 concrete girders, with a span length varying from 147'-6" to 178'-8" in Spans 1 through 7 and Spans 12 through 21; and 4 continuous spans comprised of 7 concrete girders spliced and post tensioned with a span length varying from 210'-0" to 250'-0" in Spans 8 through 11 (main channel unit). The substructure is comprised of multi-column, 30" square precast concrete column pile bents.

The structure is 3,831'-0" in total length and carries two lanes of southbound traffic with a left shoulder, a right shoulder and a multi-use path outside along the right shoulder. The structure has a deck width of 70'-0".

Vertical underclearances vary from 12'-11" at Pier 1 to 55'-0" above mean high water in the main channel of Great Egg Harbor. The river flow is centered between Piers 1 through 20. The main channel fender

system at Piers 8 and 9 is contiguous with Structure No. 28.0N. In addition to spanning Great Egg Harbor, the structure crosses Harbor Road in Span 1.

3. Structure No. 28.5SR – Parkway S over Drag Channel

Traditional Name	Drag Channel Bridge Southbound
SI&A Number	370285S
Next NBIS Inspection Date	10/04/20
Next Underwater Inspection Date	9/21/20
Total Number of Spans	10

The Drag Channel Bridge Southbound, carrying the Parkway S Roadway over Drag Channel, was constructed under Contract No. P100.251. It was opened to traffic in its final traffic configuration in Spring 2019, replacing original Structure No. 28.5S which has been demolished. The structure is on the coastal evacuation route for Cape May County and currently carries US Route 9 also.

The superstructure consists of 10 spans of precast prestressed concrete I-girders. The structure has 9 simple spans comprised of 8 girders, with a span length of 77'-0" in Spans 1 through 6 and Spans 8 through 10; and 1 simple span comprised of 9 girders with a span length of 77'-0" in Span 7 with the 9th girder added to accommodate the observation deck / fishing bump-out at the west fascia. The substructure is comprised of multi-column, 30" square precast concrete column pile bents.

The structure is 777'-4" in total length and carries two lanes of southbound traffic with a left shoulder, a right shoulder, and a multi-use path outside along the right shoulder (with an observation deck / fishing bump-out in Span 7). The structure has a typical deck width of 70'-0".

The as-built navigational vertical clearance is approximately 15'-0" at mean high water in Spans 2 through 9, and there is no designated navigable channel. As such, there are no navigation lights and no fender system at this waterway crossing. The channel flow is centered between Piers 1 and 9.

4. Structure No. 28.0N – Parkway N over Great Egg Harbor and Harbor Road

Traditional Name	Great Egg Harbor Bridge Northbound
SI&A Number	360280N
Next NBIS Inspection Date	11/12/20
Next Underwater Inspection Date	12/14/22
Total Number of Spans	47

The Great Egg Harbor Bridge Northbound carries the Parkway N Roadway over Great Egg Harbor and Harbor Road. It was constructed in 1973 and has recently undergone superstructure and deck replacement under Contract No. P100.300.

The original 1973 structure consisted of prestressed concrete box beam spans and structural steel spans. Under Contract No. P100.300, the superstructure was replaced with a steel multi-girder system with the single reinforced concrete slab span remaining at the southern approach (Span 1). The 11 main spans (Spans 13 through 23) are comprised of 4 girders with span lengths up to 180'-0" feet in length; and the

approach spans (Spans 2 through 13 and Spans 24 through 47) are comprised of 7 girders with span lengths of 40'-0" and 75'-0" respectively.

The bridge carries two lanes of northbound traffic, and has 47 spans with a total length of 3,669'-0" and a total width of 33'-0".

The substructure units consist of reinforced concrete abutments supported on steel piles, prestressed concrete pile bent piers with reinforced concrete pier caps and tall reinforced concrete hammerhead piers supported on steel piles.

Vertical underclearances vary from about 10'-0" at Pier E19 to about 49'-0" above mean high water in the main channel of Great Egg Harbor. The main channel fender system at Piers 17 and 18 is contiguous with Structure No. 28.0S. In addition to spanning Great Egg Harbor, the structure crossed Harbor Road in Span 1.

5. Structure No. 28.5N – Parkway N over Drag Channel

Traditional Name	Drag Channel Bridge Northbound
SI&A Number	360285N
Next NBIS Inspection Date	11/12/20
Next Underwater Inspection Date	12/14/22
Total Number of Spans	19

The Drag Channel Bridge Northbound carries the Parkway N Roadway over Drag Channel. It was constructed in 1973 and has recently undergone superstructure and deck replacement under Contract No. P100.300.

The original 1973 structure consisted of prestressed concrete box beam spans. Under Contract No. P100.300, the superstructure was replaced with a steel multi-girder system. The bridge carries two lanes of northbound traffic and has 19 spans, with a total length of 768'-0" and a total width of 33'-0". The spans are comprised of 7 girders with span lengths of approximately 40'-0".

The substructure units consist of reinforced concrete abutments supported on steel piles and prestressed concrete pile bent piers with reinforced concrete pier caps.

The as-built navigational vertical clearance is approximately 11'-0" at mean high water in Spans 4 through 16 and there is no designated navigable channel. As such, there are no navigation lights and no fender system at this waterway crossing.

6. Structure No. N2.01 – Turnpike HEW/HWE over Newark Bay and NJ Route 440

Traditional Name	Casciano Memorial Newark Bay Bridge
SI&A Number	N002010
Next NBIS Inspection Date	6/19/21
Next Underwater Inspection Date	9/18/21
Total Number of Spans	33

The Casciano Memorial Newark Bay Bridge is a combination of two-girder and floorbeam simple spans and a continuous cantilevered through truss tied arch unit, with an overall length of 6,170'-0" and width of approximately 80'-0". Built in 1956, this structure traditionally extends from Pier W15 to Pier E19. Thirteen two-girder and floorbeam simple spans form the west approach, and seventeen two-girder and floorbeam simple spans form the east approach. The continuous cantilevered through truss tied arch unit is comprised of a main span and twin side spans with lengths of 675'-0" and 298'-0", respectively. The continuous cantilevered through truss tied arch unit has two tie chords at the roadway floorbeam level connecting the main span between Panel Points L9W and L9E, for a length of 596'-0". Each tie chord maintains a tension load in excess of 3.5 million pounds under dead load. Additionally, the tied arch unit floor system is suspended by fifteen sets of four suspender strands along each truss, for a total of thirty strand sets.

The original 1956 configuration consisted of punched plate box member construction for the K-truss main span and side spans of the continuous cantilevered through truss tied arch unit, as well as for its tie chords. Riveted fabrication of painted carbon and silicon steel is used throughout the superstructure, which is supported by two-column concrete pier bents founded on bedrock. Rocker bearings are used throughout the bridge.

A single catwalk runs the full length of structure, along with a top of truss walkway. Safety handrail cables and truss climbing aids (bypass shelves at gusset plates) were added through the main unit by Contract No. T100.034. Currently only one catwalk access point is provided via over-the-side ladder (with security fence) at Pier W1 eastbound. Vertical underclearances vary from 26'-9" at Pier E19, to 135'-0" above mean high water in the main channel of Newark Bay, with fender systems along Piers 1E and 1W. In addition to spanning Newark Bay, the structure crosses New Jersey Route 440.

The approach spans to the west of Pier W15 are considered to be part of the West Approach to Newark Bay Bridge, Structure No. N2.01W, while the approach spans to the east of Pier E19 are considered to be part of the East Approach to Newark Bay Bridge, Structure No. N2.01E. These approach spans, Structure Nos. N2.01W and N2.01E, are not included in this assignment as they are not within the limits of the Casciano Memorial Newark Bay Bridge.

The Casciano Memorial Newark Bay Bridge has undergone extensive repairs since its original construction, including modification and repairs to the deck and wearing surface, structural steel, drainage system, substructure, paint system, roadway lighting, navigation lighting, and fender system. Contract No. T100.034 was recently completed for full bridge deck reconstruction and miscellaneous structural, roadway and lighting improvements.

During 2012, Contract No. A100.196 made emergency strengthening repairs to eastbound gusset tie plates at 60 locations and repaired web buckling of Stringer 2 (EB) and Stringer 11 (WB) at 6 locations. Additional strengthening is underway by Contract No. T100.381 which includes Stringers 2 and 11 (former curb line, now fascia), all floorbeams, all girders, and remaining westbound gusset tie plates. In addition, Contract No. T100.184 which is currently underway includes the following work.

- Seismic retrofit of bearings
- Pier / span seismic connections
- Tie chord redundancy measures

- Total coating removal / repainting of the structure
- Additional climbing aids, over-the-side access ladders deemed necessary
- Substructure / fender repairs
- Suspender rope replacement

The Casciano Memorial Newark Bay Bridge has bridge security features which were recently installed under Contract Nos. A100.183, A100.226 and T100.034. The following is a list of secured areas which will require special access.

- Parapet mounted high security fence running the full length of the main unit at Piers W2 to E2 along both roadways. Proposers are advised that access beyond this fence will require the use of an Aspen Aerials Model over-the-side inspection truck.
- Ground Mounted Security Fence with Security Locks (3 fenced in areas) – At Piers W29 to W11, and at Piers E18 and E19.

7. Structure No. 49.0N – Parkway N over Mullica River

Traditional Name	Northbound Mullica River Bridge
SI&A Number	360490N
Next NBIS Inspection Date	6/24/21
Next Underwater Inspection Date	9/17/21
Total Number of Spans	6

As part of the Parkway Interchange 30-80 Widening Program, Contract No. P100.024 was awarded in December 2008 for construction of a new parallel bridge carrying the northbound Parkway Mainline over the Mullica River to the east of the existing bridge which carried both directions. Contract No. P100.024 also involved construction of new approach roadways and a contiguous fender system to protect the new and existing bridge piers.

The Northbound Mullica River Bridge was constructed under Contract No. P100.024, and it consists of 6 spans of prestressed post-tensioned concrete spliced girders for a total continuous unit length of 1230'-0". Drilled shaft foundations support 3 column bents.

The structure carries three northbound lanes and a full right shoulder over the Mullica River with a width of 56'-0". The span over the 80'-0" wide Mullica River channel has a vertical underclearance of 33'-0". Fenders are present along Piers 2 and 3.

The Northbound Mullica River Bridge has bridge security features which were recently installed under Contract No. P100.025. The following is a list of secured areas which will require special access.

- Ground Mounted Security Fence and Gate – At southeast retaining wall access road.

8. Structure No. 49.0S – Parkway S over Mullica River

Traditional Name	Southbound Mullica River Bridge
SI&A Number	360490S

Next NBIS Inspection Date	6/28/21
Next Underwater Inspection Date	9/17/21
Total Number of Spans	12

The Southbound Mullica River Bridge consists of 8 spans with dual superstructures of simply supported built-up riveted steel plate girder and floorbeam-stringer spans (FCM), which in turn are supported by a common substructure unit. There are also 4 concrete T-beam approach spans within the abutments. The typical substructure unit is a three-column concrete pier on a pile supported foundation. Built in 1954, this structure has a total length of 884'-0" and width of 67'-0".

The structure's fender system at Piers 3 and 4, contiguous with Structure No. 49.0N, protects the main channel and is accessible from the roadway via access ladders located along the fascia. The span over the Mullica River channel has a vertical underclearance of 33'-0".

Following completion of Contract No. P100.025 in 2013, the original Structure No. 49.0T was renamed Structure No. 49.0S. Contract No. P100.025 included complete bridge deck reconstruction, repainting, and miscellaneous structural, roadway and lighting improvements.

The Southbound Mullica River Bridge has bridge security features which were recently installed under Contract No. P100.025. The following is a list of secured areas which will require special access.

- Ground Mounted Security Fence and Gate – At southeast retaining wall of adjacent structure 49.0N along the access road.

9. Structure No. 51.9N – Parkway N over Bass River, US Route 9 and West Greenbush Road

Traditional Name	Northbound Bass River Bridge
SI&A Number	360519N
Next NBIS Inspection Date	6/26/21
Next Underwater Inspection Date	9/27/21
Total Number of Spans	6

As part of the Parkway Interchange 30-80 Widening Program, Contract No. P100.130 was awarded in January 2011 for construction of a new parallel bridge carrying the Parkway Northbound over Bass River, to the east of the existing bridge which carried both directions. Contract No. P100.130 also involved construction of new approach roadways and a contiguous fender system to protect the new and existing bridge piers.

The Northbound Bass River Bridge was constructed under Contract No. P100.130, and it consists of 6 spans of prestressed post-tensioned concrete spliced girders for a total continuous unit length of 984'-0".

Three column bents on pile foundations support the structure, which carries three northbound lanes and a full right shoulder. The vertical underclearances vary from 16'-0" in Span 6 over West Greenbush Road to 29'-0" in Span 4 over Bass River. The structure also has a skewed crossing in Span 2 over US Route 9. The structure's fender system at Piers 3 and 4 is contiguous with Structure 51.9S.

The Northbound Bass River Bridge has bridge security features which were recently installed under Contract No. P100.130. The following is a list of secured areas which will require special access:

- Ground Mounted Security Fence and Gate – At North Abutment along West Greenbush Road, and adjacent to South MSE Retaining Walls.

10. Structure No. 51.9S – Parkway S over Bass River, US Route 9 and West Greenbush Road

Traditional Name	Southbound Bass River Bridge
SI&A Number	360519S
Next NBIS Inspection Date	7/01/21
Next Underwater Inspection Date	9/27/21
Total Number of Spans	7

The Southbound Bass River Bridge consists of dual superstructures of simply supported built-up riveted steel plate girder and floorbeam-stringer spans (FCM), which in turn are supported by a common substructure unit. There is also a reinforced concrete T-beam span within the North Abutment. The typical substructure unit is a three-column concrete pier on a pile supported foundation, except for the span over US Route 9 which is a built-up steel pier cap (FCM) on two columns. Built in 1954, this structure has 7 spans, with a total length of 851'-0" and width of 62'-0".

The structure's fender system protects the main channel in Span 4, and it is accessible from the roadway via access ladders located along the fascia. Vertical underclearances vary from 12'-8" at West Greenbush Road, to 15'-2" at US Route 9, to 29'-0" above mean high water over the 105-foot-wide main channel of Bass River.

Following completion of Contract No. P100.131 in 2013, the original Structure No. 51.9T was renamed Structure No. 51.9S. Contract No. P100.131 included complete bridge deck reconstruction, repainting, and miscellaneous structural, roadway and lighting improvements.

SECTION XIX
Bridges List and Descriptions
Major Bridge Group 2

1. Structure No. W115.36 – Turnpike NSW/SNW over Hackensack River

Traditional Name	Western Hackensack River Bridge
SI&A Number	W115360
Next NBIS Inspection Date	3/11/20
Next Underwater Inspection Date	5/24/22
Total Number of Spans	30

The Western Hackensack River Bridge is an all weathering steel structure built in 1970, consisting of multiple welded girder spans with a three-span span continuous main river unit. The structure is 3,600'-0" long and 84'-0" wide with a vertical underclearance of 50'-0" in the main channel of the Hackensack River. The three-span continuous main river unit has an overall length of 555'-0".

There are no catwalks on the structure. In addition to spanning the Hackensack River, with fender systems present at Piers 16 and 17, the structure crosses Sports Complex Ramp SWC, two Turnpike Maintenance U-Turn Ramps, Service Area 13 Ramps NESA and CARSA/TRKSA, and the Vince Lombardi Service Area truck parking lot.

The substructure of the Western Hackensack River Bridge typically consists of two-column reinforced concrete piers with pile-supported footings carrying large cantilevered pier caps, which in turn support independent superstructures for the northbound and southbound roadways of the Western Alignment. Following the discovery of large map cracks in the exposed surfaces of the footings in the early 1980s, spall and crack repairs of the most deteriorated footings were performed under several miscellaneous structural repair contracts. Subsequent investigations indicated that the cracking was the result of Alkali-Silica Reactivity (ASR) in the concrete.

Following further testing in 1996, the Authority proceeded with a multi-phase ASR remediation of the footings which included crack sealing, lithium treatment, and the construction of supplemental overfootings at select locations to restore the original footing capacity. The supplemental overfootings were constructed under Contract No. R-1360 in 2001, and Contract No. R-1442 in 2004. The bridge piers have also undergone crack and spall repairs and substructure waterproofing treatments under various miscellaneous structural repair contracts, most recently Contract No. R-1500 in 2007. Additional investigations have characterized the reported cracking in the piers as cyclic freeze-thaw cracking due to poor air entrainment of the concrete, rather than ASR distress. Contract No. T100.482 is underway to reconstruct and repair columns and caps of select piers.

In April 2018, indication of relative movement at a wide crack in the pedestal base between the pier columns was first observed at Pier 18. Since July 2019, monitoring of Pier 18 and companion Pier 15 has been underway with the use of crack gauges, surveying, and inclinometers (to measure rotational monitoring). The subject pier monitoring is anticipated to be followed by an investigation into the cause of the relative movement, together with recommendations for retrofit or replacement.

The Western Hackensack River Bridge has bridge security features which were recently installed under Contract Nos. A100.183 and A100.226. The following is a list of secured areas which will require special access.

- Ground Mounted Security Fence with Security Locks (4 fenced in areas) - South Abutment to Pier 5, Pier 7 to 13, Pier 21 to 22, and Pier 28 to the North Abutment.
- Concrete Barrier No Parking Area Perimeters (2 sections) – Pier 23 and Piers 24 to 26 (with gate openings).

2. Structure No. 84.24 – Turnpike NSO/NSI/SNO/SNI over Raritan River

Traditional Name	Basilone Memorial Raritan River Bridge
SI&A Numbers	M08424N & M08424S
Next NBIS Inspection Date	4/9/20
Next Underwater Inspection Date	6/10/20
Total Number of Spans	5

The Basilone Memorial Raritan River Bridge is a combination of the original 1951 construction and subsequent 1971 widening construction, with an overall length of 805'-0" and width of 265'-0". Although it is inspected and maintained as a single asset in the Authority's inventory, it is actually made up of two separate structures, namely the original Structure No. 84.24S and the newer companion Structure No. 84.24N. Structure No. 84.24S originally consisted of 2 two-girder and floorbeam simple spans flanking a three-span continuous two-girder and floorbeam river unit 535'-0" in length. The original bridge was widened in 1971 by adding a new girder and extending the original cantilevered floorbeam brackets and installing an additional girder on each fascia.

When the New Jersey Turnpike was widened in 1971, companion Structure No. 84.24N was constructed to the east of the original bridge to carry the new northbound (SNO and SNI) roadways. Independent contiguous superstructures were built to support both new northbound roadways, each consisting of 2 two-girder and floorbeam simple spans flanking a three-span continuous two-girder and floorbeam river unit 535'-0" in length.

The original 1951 bridge was constructed using riveted fabrication of painted carbon and silicon steel, while the widened portion of the original 1951 bridge and the 1971 companion bridge were constructed using welded and bolted fabrication of weathering steel. Rocker bearings are used throughout the bridges.

Two-column with cap/strut style reinforced concrete piers support the original 1951 bridge, and independent single column piers support the widened portion and the 1971 companion bridge. All piers are supported on bedrock.

Five catwalks run nearly the full length of structure with crossovers provided. The vertical underclearance in the main channel of the Raritan River is 46'-0" above mean high water. Fender systems are present at Piers 2 and 3. In addition to spanning the Raritan River, the structure crosses the New Jersey Turnpike U-Turn at Milepost 84.

The Basilone Memorial Raritan River Bridge has undergone extensive repairs since the original construction and widening, including modification and repairs to the deck and wearing surface, structural steel, drainage system, substructure, paint system, roadway lighting, navigation lighting, and fender system. In 2004 Contract No. R-1442 erected bridge inspection safety cables between Girders G4 and G5 and between Girders G6 and G7 for the entire bridge length, to improve inspection access in these areas. Contract No. T100.523 is scheduled to repair fatigue damage and corrosion, and to strengthen low rating superstructure steel members beginning in May 2021 with construction completion in May 2023.

The Basilone Memorial Raritan River Bridge has bridge security features which were recently installed under Contract Nos. A100.183 and A100.226. The following is a list of secured areas which will require special access.

- Catwalk Gates - At 10 locations on 5 catwalks (North and South Abutments).
- End Bay Catwalk Removals – At North and South Abutments.
- Ground Mounted Security Fence with Security Locks (2 fenced in areas) - At the South and North Abutments.

3. Structure No. E109.83 - Turnpike NSE/SNE over Hackensack River and Abandoned Railroad

Traditional Name	Lewandowski Memorial Hackensack River Bridge
SI&A Number	E109830
Next NBIS Inspection Date	5/18/20
Next Underwater Inspection Date	6/26/22
Total Number of Spans	38

The Lewandowski Memorial Hackensack River Bridge is a combination of original 1951 construction and subsequent 1973 widening construction, with an overall length of 5,620'-0" and width of 108'-0". The superstructure is made up of 38 spans, with 21 simple spans on the south approach, and 14 simple spans on the north approach. The main river unit is three-span continuous unit with an overall length of 930'-0".

The original 1951 configuration consisted of a riveted two-girder and floorbeam, painted steel superstructure supported by two-column reinforced concrete pier bents. The bridge was subsequently widened to provide for full shoulders in each direction as part of the 1971 Widening Program. Additional fascia girders with extended floorbeam cantilevers, all of weathering steel and supported by individual pier columns, created a structure with many unique connections.

The river piers of this structure are founded on steel bearing piles. The north approach to the structure, the North Abutment and Piers N7 to N15, are all supported directly on the excavated cuts and plateaus of Laurel (Snake) Hill. The south approach to the structure is located entirely in the New Jersey Meadowlands.

Three catwalks run nearly the full length of structure with crossovers provided at four piers. Catwalks have been PEOSHA upgraded, and climbing aids, safety handrail cables installed in joint areas / across pier tops, and access shelves with cables at FCM areas with difficult access. The vertical underclearance in the main channel of the Hackensack River is 110'-0" above mean high water. Fender systems are present at Piers 1S and 1N. In addition to spanning the Hackensack River, the structure crosses the former NJ Transit Boonton Line, now Norfolk Southern Storage Tracks, at Span 6N.

The Lewandowski Memorial Hackensack River Bridge has undergone extensive repairs since its original construction and widening, including modification and repairs to the deck and wearing surface, structural steel, drainage system, substructure, paint system, roadway lighting, navigation lighting, and fender system. Contract No. T100.137 was completed in 2015 and included complete bridge deck reconstruction and miscellaneous structural, roadway and lighting improvements, and complete repainting of the original and widening joint zones. Contract No. A100.459 is scheduled to repair the fender and navigation lighting fixtures.

Cracks in the floorbeam webs beneath Stringers S2 and S3 and between Stringers S14 and S15 at all 7 intermediate deck joints in the Main River Unit are currently being analyzed by Rutgers Center for Advanced Infrastructure and Transportation (CAIT). An analysis and 6-month monitoring are being performed to determine their implication and develop repair recommendations and details. Cracks in the floorbeam upper flanges that are newly developed or developing beneath Stringers S4 and S13 at the intermediate deck joints in the Main River Unit are also being monitored on a 6-month basis

The Lewandowski Memorial Hackensack River Bridge has bridge security features which were recently installed under Contract No. T100.137. The following is a list of secured areas which will require special access.

- Catwalk Gates - At 12 locations on 3 catwalks (abutments / main span limits).
- Over-the-Side Access Ladders at Piers 2N (SB) and 2S (NB) with security fence and locks.
- Ground Mounted Security Fence with Security Locks (3 fenced in areas) – At the South Abutment, Pier 2N to 6N, and Pier 8N to North Abutment

4. Structure No. E107.88 - Turnpike NSE/SNE over Passaic River, Railroads and Roadways

Traditional Name	Chaplain Washington Memorial Passaic River Bridge
SI&A Number	E107880
Next NBIS Inspection Date	6/29/20
Next Underwater Inspection Date	6/26/22
Total Number of Spans	48

The Chaplain Washington Memorial Passaic River Bridge is a combination of original 1951 construction and subsequent 1973 widening construction, with 48 spans and an overall length of 6,941'-0" and width of 104'-0".

The original 1951 configuration consisted of a riveted two-girder and floorbeam, painted steel superstructure. The original superstructure was made up of 19 two-girder and floorbeam simple spans on the south approach, 24 two-girder and floorbeam simple spans on the north approach, and a three-span continuous two-girder and floorbeam main river unit that cantilevers past its terminal piers to suspend two additional approach spans.

The original 1951 piers are twin independent reinforced concrete columns on separate footings at Piers 9S, 11S, 15S to 21S, 24N, 25N and 26N, which are strut connected below grade and pile supported. With the exception of River Piers 1S and 1N, the remaining 1951 piers are reinforced concrete frame piers with a cap strut and separate footings connected by a strut below grade. River Piers 1S and 1N have massive combined pedestal footings carried down to bedrock at an elevation of – 50'.

The bridge was subsequently widened to its current width of 104'-0", to provide for full shoulders in each direction as part of the 1971 Widening Program. Additional fascia girders with extended floorbeam cantilevers, all of weathering steel, on separate substructure units created a structure with many unique connections. Further complicating the structure are 4 box girders and multiple pin and hanger assemblies at the original suspended spans framing the main river unit, and at offset widening column locations. Widening columns are independent single columns at each fascia with separate pile supported footings. Redundant supports to pin and hanger assemblies were added under Contract Nos. R-1121 and R-1292.

Three catwalks run nearly the full length of structure with crossovers provided, along with eight deck hatches. Full access catwalks / ladders exist at pin and hanger assemblies for structure hinges near Piers 2S and 2N, and interior access catwalks / ladders exist for the 13 auxiliary pin and hanger assemblies at offset widening pier column locations. The vertical underclearance in the main channel of the Passaic

River is 110'-0" above mean high water. Fender systems contiguous with Structure No. W107.87 are present at Piers 1S and 1N.

In addition to spanning the Passaic River, the structure crosses Raymond Boulevard/Truck Route 1 & 9, Turnpike Interchange 15E Ramps, Public Service Yard and Roads, Essex County Resource Recovery Facility Roads, Conrail's Freight Mainline, PATH, NJ Transit's Morris and Essex Line, AMTRAK's Northeast Corridor Line, Newark-Jersey City Turnpike, Interchange I5W Ramp TNE, multiple utilities and other ground interferences.

The Chaplain Washington Memorial Passaic River Bridge has undergone extensive repairs since its original construction and widening, including modification and repairs to the deck and wearing surface, structural steel, drainage system, substructure, paint system, roadway lighting, navigation lighting, and fender system. In 2008 the Authority completed the lowering and widening, seismic retrofit and deck reconstruction of the Washington Memorial Passaic River Bridge. The project was separated into two consecutive construction contracts, namely, Contract Nos. R-1393A and R-1393B. Contract No. R-1393A, completed in late 2004, performed main girder bearing replacements and seismic retrofit, and eliminated existing shoulder width restrictions by lowering and widening the bridge under full traffic where it crosses under the Pulaski Skyway. Contract No. R-1393B, completed in late 2008, involved full bridge deck reconstruction and miscellaneous structural, roadway and lighting improvements. In 2010 the entire structure was repainted (original zone and widening joint zones) by Contract No. T100.116. In 2018 Contract No. A100.196 Work Order S2 performed urgent repairs of cracked stringers at approximately 80 locations.

The major pin and hanger assemblies have seized and are no longer functioning as originally designed, and the auxiliary pin and hanger assemblies have similar detailing and are also prone to seizing. These and other issues are being addressed by Contract No. T100.436 which is performing conventional steel repairs, strengthening of low rating structural members, removal and replacement of major pin and hanger assemblies at Piers 2S and 2N, and other miscellaneous work on this bridge. Construction of Contract No. T100.436 commenced in April 2019 and is scheduled to be completed in March 2021.

The Chaplain Washington Memorial Passaic River Bridge has bridge security features which were recently installed under Contract Nos. A100.183, A100.196 and A100.226. The following is a list of secured areas which will require special access.

- Catwalk Gates: At 12 locations on three catwalks (abutments / main unit limits).
- Box Girder Locks: At Piers 8S, 9S, and 10S.
- End Bay Catwalk Removals: At North and South Abutments.
- Ground Mounted Security Fence with Security Locks (9 fenced in areas) – at the South Abutment, Piers 19S to 16S, Piers 15S to 13S, Piers 8S to 2S, Pier 6N to 7N, Piers 14N to 18N, Piers 19N to 20N, Pier 23N to 25N, and Pier 26N to the North Abutment.

5. Structure No. W107.87 - Turnpike NSW/SNW over Passaic River, Raymond Boulevard, Harrison Avenue, Ramps and Railroads

Traditional Name	Laderman Memorial Passaic River Bridge
SI&A Number	W107870
Next NBIS Inspection Date	4/11/21
Next Underwater Inspection Date	6/26/23
Total Number of Spans	51

The Laderman Memorial Passaic River Bridge is a combination of multiple girder simple spans, independent side by side two-girder and floorbeam simple spans, and independent side by side continuous two-girder and floorbeam river units, with a total of 51 spans, and an overall length of 7,294'-0" and width of 108'-0". The multiple girder simple spans are either supported on individual bearings, simple span transverse pier cap girders, or continuous transverse pier cap girders. In total, there are 5 different superstructure types used throughout the bridge, all fabricated from welded and bolted weathering steel.

The south approach consists of 11 multiple girder simple spans with transverse FCM pier cap girders and seven independent side by side FCM two-girder and floorbeam simple spans. The north approach consists of 5 multiple girder simple spans with individual bearings, 11 multiple girder simple spans with FCM transverse pier cap girders, and 12 independent side by side FCM two-girder and floorbeam simple spans.

The river units consist of independent side by side three span continuous FCM two-girder and floorbeam units that cantilever past their terminal piers to suspend two additional approach spans. The original pin and hanger assemblies at the two hinge locations have since been replaced and been made redundant with the installation of disc bearings on auxiliary support beams.

Independent column style piers support the multiple girder simple spans with transverse pier cap girders, and three-column with cap/strut style piers support the multiple girder simple spans, independent side by side two-girder and floorbeam simple spans (except Pier 4N), and river units. Pier 4N is an independent column style pier made up of 4 columns, with a transverse pier cap box girder. All piers are founded on piles, except for the river piers which are supported on bedrock.

Two catwalks run the length of girder and floorbeam units from Pier 10S to Pier 15N, with crossovers provided, along with eight deck hatches. The vertical underclearance in the main channel of the Passaic River is 110'-0" above mean high water. Fender systems contiguous with Structure No. E107.88 are present at Piers 1S and 1N.

In addition to spanning the Passaic River, the structure crosses Raymond Boulevard / Truck Route 1 & 9, Turnpike Interchange 15E Ramps, Public Service Yard and Roads, Essex County Resource Recovery Facility Roads, Conrail's (NS/CSX) Freight Mainline, PATH, NJ Transit's Morris and Essex Line, AMTRAK's Northeast Corridor Line, Newark-Jersey City Turnpike, Interchange I5W Ramp TNE, multiple utilities and other ground interferences.

The Laderman Memorial Passaic River Bridge has undergone extensive repairs since its original construction, including modification and repairs to the deck and wearing surface, structural steel, drainage system, substructure, paint system, roadway lighting and navigation lighting, fender system and catwalk system. Most

recently, in 2018 Contract No. A100.196 Work Order S2 performed emergency repairs of Girder G4 in Span 3S, following the discovery of extensive deterioration and cracking under the 2017 biennial inspection.

The superstructure has exhibited ongoing steel fatigue cracking since the bridge was opened to traffic, despite the Authority's ongoing efforts to repair its fatigue-prone details under various contracts. These and other issues are being addressed by Contract No. T100.436 which is performing fatigue and conventional steel repairs, temporary removal of major pin and hanger assemblies to facilitate condition inspection, limited zone painting, removal of ancillary structural supports, and other miscellaneous work on this bridge. Construction of Contract No. T100.436 commenced in April 2019 and is scheduled to be completed in March 2021. These issues will continue to be monitored on a 6, 12, or 24-month interim basis as warranted.

The Laderman Memorial Passaic River Bridge has bridge security features which were recently installed under Contract Nos. A100.183, A100.196 and A100.226. The following is a list of secured areas which will require special access.

- Catwalk Gates - At 4 locations on 2 catwalks (Piers 3N and 3S).
- Box Girder Lock - At Pier N4.
- Locked Deck Manholes (8 locations) – 4 manhole covers are currently welded closed, pending repairs.
- Ground Mounted Security Fence with Security Locks (8 fenced in areas) At South Abutment, Piers S17 to S16, Piers S15 to S13, Piers S10 to S2, Pier N5 to N18, Piers N19 to N23, Piers N24 to N28, and North Abutment.

6. Structure No. 127.2N - Parkway NBI/NBO over Raritan River and Smith Street

Traditional Name	Alfred E. Driscoll Bridge (Northbound Driscoll Bridge)
SI&A Number	361272N
Next NBIS Inspection Date	7/16/21
Next Underwater Inspection Date	7/31/21
Total Number of Spans	29

The Northbound Driscoll Bridge, Structure No. 127.2N, was built in 1954. Its original configuration consisted of continuous spans over the river and simply supported spans on land, with painted built-up riveted steel 2-girder/floorbeam/stringer spans. It was later widened in 1969 with weathering steel welded plate 2-girder/floorbeam/stringer superstructure. The dual structures share a common foundation, which was built in the original contract and later widened with a cantilever to support the expanded superstructure. Substructure units include major concrete two column piers with a strut and third column widening with a cap and cantilever, all pile supported. This structure has 29 spans, with a total length of 4,392'-0" and width of 129'-0".

The structure's fender system at Piers 15 and 16 protects the main channel of the structure. Three catwalks run the nearly full length of the structure with crossovers provided. An additional FCM access catwalk was added from Pier 7 to Pier 17 (over water spans) for access to Girder 1 (west side). Vertical underclearances vary from 28'-2" at Smith Street Westbound to 135'-0" above mean high water in the main channel of the Raritan River.

Structure No. 127.2N originally carried both northbound and southbound Parkway Mainline Roadways. In 2006 Contract No. 104-1211 completed the construction of a new parallel bridge, Structure No. 127.2S, to the west of the original bridge. Structure No. 127.2S carries the southbound Parkway Mainline Roadway and the original bridge, Structure No. 127.2N, has been converted to carry the northbound Parkway Mainline Roadway, separated as four through lanes and a narrow right shoulder (inner), median, and one through lane, three ramp lanes and a right shoulder (outer).

Contract No. 104-1213 was awarded in November 2006 for rehabilitation of Structure No. 127.2N. The rehabilitation work included total bridge deck reconstruction, bearing replacements, and miscellaneous structural, roadway, lighting improvements, and climbing aids and was completed in 2009. The entire original structure portion, including widening joint zones, was repainted in 2014 under Contract No. P100.185-1.

The Northbound Driscoll Bridge has bridge security features which were installed under Contract Nos. A100.183, A100.196 and P100.185. The following is a list of secured areas which will require special access:

- Ground Mounted Security Fence with Security Locks (5 locations) - From the South Abutment to Pier 7, Pier 18 to Pier 19, Pier 20 to 24, Pier 25 to 28, and at the North Abutment area.
- Catwalk Gates – Installed on all 3 catwalks at the South Abutment, and at Pier 7, Pier 19 and Pier 28.
- Girder Guard Fences – Installed on Girders G1 - G4, and Cross Floorbeams in Span 1.
- Locked Manholes – Manholes were locked in the northbound inner roadway right shoulder at Piers 1, 9, 12, 17, and 28.

7. Structure No. 127.2S - Parkway S over Raritan River and Smith Street

Traditional Name	Southbound Driscoll Bridge
SI&A Number	361272S
Next NBIS Inspection Date	7/16/21
Next Underwater Inspection Date	7/31/21
Total Number of Spans	27

The Southbound Driscoll Bridge, Structure No. 127.2S, was built in 2006 by Contract No. 104-1211. It carries 7 lanes and a right shoulder in one wide roadway. Its configuration consists of 4 continuous painted welded steel plate girder (multi-girder) units as follows: 1 seven-span continuous unit, 2 six-span continuous units, and 1 eight-span span continuous unit. This structure has 27 spans, with a total length of 4,376'-0" and width of 96'-0".

Vertical underclearances vary from 31'-0" at Smith Street Westbound to 133'-0" above mean high water in the main channel of the Raritan River (Pier 16-17). Fender systems contiguous with Structure No. 127.2N and the NJDOT Route 9 Bridge to the east are present at Piers 15 and 16.

The Southbound Driscoll Bridge has bridge security features which were recently installed under Contract Nos. A100.183, A100.196 and P100.185. The following is a list of secured areas which will require special access.

- Ground Mounted Security Fence with Security Locks (5 locations) - From the South Abutment to Pier 7, Pier 19, Pier 20 to 25, Pier 26 to 27 and the North Abutment area.
- Catwalk Gates – Installed on the centerline longitudinal catwalk in Span 1, Span 7, Span 19, and Span 28.

8. Structure No. 158.2 - Parkway N/S over Passaic River, US Route 46 and River Drive

Traditional Name	Parkway Passaic River Bridge
SI&A Number	361582T
Next NBIS Inspection Date	8/25/21
Next Underwater Inspection Date	8/28/21
Total Number of Spans	8

The Parkway Passaic River Bridge is a combination of original 1955 construction and subsequent 1963 widening construction, with 8 spans and an overall length of 969'-0" and width of 99'-0".

The dual superstructures carry independent roadways and are supported by a common substructure. The original configuration consisted of continuous riveted plate FCM girders supporting floorbeams and stringers, which was widened by extending the original cantilevered floorbeam brackets and installing new welded plate fascia girders. The substructure units are massive reinforced concrete cantilever "T" piers with architectural cap extensions on individual columns. Piers 1 through 5 are pile-supported, and Piers 6 and 7 have spread footings.

Vertical underclearances vary from 14'-4" at US Route 46 and River Road, to 25'-10" above mean high water in the main channel of the Passaic River.

Structural repairs were completed in 2015 under Contract No. P100.233, which addressed heavily deteriorated floorbeams and sway frames under leaking intermediate joints.

The Authority has determined the superstructure will be replaced under Contract No. P100.476 with a new widened superstructure, in order to accommodate three 12'-0" lanes of traffic with a 12'-0" right shoulder and a 5'-0" left shoulder in each direction. Contract No. P100.476 will also include modifying/rehabilitating the existing abutments, wingwalls and piers in order to accommodate the proposed new widened superstructure. Construction of Contract P100.476 is scheduled to commence in August 2020 and completed by Spring 2024.

The Parkway Passaic River Bridge has bridge security features which were recently installed under Contract No. A100.183. The following is a list of secured areas which will require special access:

- Ground Mounted Security Fence with Security Locks (2 locations) – At North and South abutments.