FY 2020 Gloucester County Local Concept Development Study

The Delaware Valley Regional Planning Commission (DVRPC) on behalf of Gloucester County, New Jersey is seeking consultant support for the preparation of a Local Concept Development (LCD) study being advanced through its Local Capital Project Delivery (LCPD) Program. This program is consistent with the Project Delivery Process (PDP) recently implemented by the New Jersey Department of Transportation (NJDOT). Through this Request for Proposals (RFP), DVRPC is seeking to engage one firm to provide professional consultant services to study the alternatives to address the condition of the existing structure at the Porchtown Road (County Route 613) Bridge over Still Run/at Iona Lake (Bridge 10-K-4) located in the Township of Franklin, Gloucester County.

DVRPC Timeline for RFP Process and Completion of Project:

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<th>Event</th>
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<tr>
<td>Posting of Request for Proposal:</td>
<td>December 13, 2019</td>
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<tr>
<td>Submission of Inquiries by Email:</td>
<td>January 3, 2019 at 3 PM EDT</td>
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<tr>
<td>Posting of Responses to Inquiries:</td>
<td>Rolling basis</td>
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<td>Technical Proposal Deadline:</td>
<td>January 17, 2019 at 10:00 AM EDT</td>
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<td>Administrative Proposal Deadline:</td>
<td>January 17, 2019 at 10:00 AM EDT</td>
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<td>Anticipated Award of Project:</td>
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The Delaware Valley Regional Planning Commission is the federally designated Metropolitan Planning Organization for a diverse nine-county region in two states: Bucks, Chester, Delaware, Montgomery, and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer in New Jersey. DVRPC’s vision for the Greater Philadelphia Region is a prosperous, innovative, equitable, resilient, and sustainable region that increases mobility choices by investing in a safe and modern transportation system; that protects and preserves our natural resources while creating healthy communities; and that fosters greater opportunities for all.

DVRPC’s mission is to achieve this vision by convening the widest array of partners to inform and facilitate data-driven decision-making. We are engaged across the region, and strive to be leaders and innovators, exploring new ideas and creating best practices.

DVRPC fully complies with Title VI of the Civil Rights Act of 1964 and related nondiscrimination statutes in all activities. For more information, visit [www.dvrpc.org/GetInvolved/TitleVI](http://www.dvrpc.org/GetInvolved/TitleVI).

DVRPC is funded through a variety of funding sources including federal grants from the U.S. Department of Transportation’s Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), the Pennsylvania and New Jersey departments of transportation, as well as by DVRPC’s state and local member governments.

DVRPC, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.
I. Project Background

Serving the Greater Philadelphia area since 1965, DVRPC works to foster regional collaboration in creating and maintaining a livable, sustainable, and economically competitive region covering our nine counties: Bucks, Chester, Delaware, Montgomery, and Philadelphia counties in Pennsylvania, and Burlington, Camden, Gloucester, and Mercer counties in New Jersey. These nine counties together comprise over 3,800 square miles with land use that varies from the dense urban core of Center City Philadelphia to the open rural areas of the New Jersey Pinelands. DVRPC staff works with municipal, city, county, and state representatives and many other partners to improve transportation, promote smart growth, protect the environment, and build the economy.

DVRPC is the federally designated Metropolitan Planning Organization (MPO) for the greater Philadelphia region. DVRPC sponsors and conducts studies, assists member planning agencies, and provides a forum for interagency cooperation and public input into funding decisions.

DVRPC assists its member counties and cities in carrying out specific transportation planning activities that help advance the goals, objectives, principles, policies, plans, and projects as set forth in Connections 2045 Plan for Greater Philadelphia (Plan). The Plan identifies principles that govern DVRPC’s approach to regional transportation planning, including giving the highest funding priority to maintaining and repairing existing infrastructure and system preservation.

As stated in the Plan, DVRPC long range goals are to:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
- Increase the safety of the transportation system for all motorized and nonmotorized users;
- Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and nonmotorized users;
- Increase accessibility and mobility of people and freight;
- Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns;
- Enhance the integration and connectivity of the system, across and between modes, for people and freight;
- Promote efficient system management and operation; and
- Emphasize the preservation of the existing system.

DVRPC’s LCPD Program strives to ensure that these goals are met starting with its LCD Phase, which identifies proposed projects for further development and implementation. The major objective of the LCD Phase is to identify and compare reasonable alternatives and strategies that address the requirements of the initial stages of the PDP. The LCD Phase will provide the information necessary to determine whether the project can successfully be advanced through the Local Preliminary Engineering (LPE), Final Design (FD), and Construction (CON) Phases. Moreover, the LCD Phase provides the framework for advancing the
project to the LPE Phase, the next phase of the PDP. For its New Jersey counties, DVRPC’s LPCD parallels that of the NJDOT, about which more information may be found at http://www.state.nj.us/transportation/capital/pd/phase.shtm.

As a part of its LCPD Program, DVRPC is seeking to study the alternatives to address the condition of the existing structure (Bridge 10-K-4) located in the Township of Franklin, Gloucester County.

The bridge is located on Porchtown Road, County Route 613 between Williamstown Road, County Route 612 and Taylor Road. The bridge spans over Still Run in which the upstream portion of the structure also has an attached spillway which forms Iona Lake. The reinforced concrete single span slab was built circa 1938 and is in need of replacement or repair. The bridge and roadway form the embankment of Iona Lake which is a public lake owned by the Township of Franklin. The upstream and downstream area along the roadway and bridge are also publically owned lands of the Township of Franklin. The Township of Franklin maintains access to the lake through a dock and boat launch to the east of the bridge near the Williamstown Road intersection. The lake has an auxiliary spillway to the west of the existing bridge that recently required emergency repairs. The lake has also overtopped during major flooding events and during Hurricane Irene scoured out the downstream embankment to the roadway edge. Emergency repairs were necessary during the storm in order to maintain the integrity of the roadway and to avoid a complete failure of the roadway embankment and loss of the lake. Given the history of the emergency repairs to the bridge, roadway and embankment, the County is seeking a design solution to address the safety at this location. A recent inspection also resulted in the need for priority 2 repairs for erosion and guiderail. The bridge has a low sufficiency rating of 68.6 and given the current poor condition may not be feasible to repair without a full replacement. The County is seeking to replace or repair the bridge and bring the dam into compliance in order to avoid future emergency repairs, maintain the integrity of the roadway and maintain a safe condition.

The study should include:

- An existing infrastructure safety report.
- An evaluation of the replacement of the current bridge.
- Consideration of the rehabilitation of the bridge.
- Consideration of all options to bridge the current dam, embankment and bridge structure into compliance with the current NJDEP dam safety standards.

DVRPC invites all firms pre-qualified by NJDOT with relevant experience in this area to submit a proposal for this project.
II. Scope of Work and Deliverables

The Consultant(s) shall be responsible for conducting an LCD study for the Porchtown Road (CR613) Bridge over Still Run at Iona Lake (Structure 10-K-4).

The Bridge Re-Evaluation Survey Report and the Project Location Map can be found in Appendices A and B. Both the introductory paragraph on page one and the Project Background of this document contain the general project scope.

The study shall be developed in coordination with DVRPC and the Project Sponsor (Gloucester County) and reviewed by NJDOT Bureau of Local Aid (NJDOT-LA), Bureau of Environmental Program Resources (NJDOT-BEPR) and NJDOT Structural & Railroad Engineering Services.

For the LCD Phase, DVRPC will be responsible for administering the consultant contracts for professional services. However, the consultant work for this study will be co-managed by both DVRPC and Gloucester County. Collectively, DVRPC, Gloucester County, and the Consultant will hereafter be referred to as the Project Team.

The LCD Phase shall involve developing a well-defined and justified Purpose and Need Statement focusing on the primary transportation needs to be addressed, which will support the advancement of the project to the LPE Phase or will lead to a no build alternative resulting in the termination of the project. The LCD study shall include community outreach; data collection; development of a reasonable number of prudent and feasible conceptual alternatives; development of a Purpose and Need Statement; selection of a Preliminary Preferred Alternative (PPA); determination of the National Environmental Policy Act (NEPA) classification; preparation of numerous reports including the Concept Development Report (CDR); and a Preliminary Engineering Scope Statement.

Primary tasks to be performed by the Consultant shall include, but are not limited to: data collection; purpose and need statement; development of alternatives; community outreach; selection of PPA; and NEPA classification. These alternatives and the PPA shall be analyzed at a “planning level effort.” Throughout this process, the project must comply with Federal Highway Administration (FHWA) and NJDOT requirements/regulations, including American Association of State Highway and Transportation Officials (AASHTO), Manual on Uniform Traffic Control Devices (MUTCD) standards and railroad engineering standards and guidelines.

Below is a list of the generic tasks for the project. An approximate percentage of the entire contract is indicated for each task. These tasks and percentages may be considered as a starting point for configuring tasks and corresponding resources, but respondents are encouraged to prepare proposals they consider to be the most appropriate to effectively and efficiently accomplish the stated goals of the project, produce quality deliverables, and to consult the NJDOT Concept Development Activity Descriptions.¹ Note that although these tasks are presented below in sequential order, the consultant might find it beneficial to

¹ See: http://www.state.nj.us/transportation/capital/pd/documents/CDPhaseActivityDescriptions.pdf
conduct work on different tasks in parallel, and may need to conduct work in a different order than presented below.

The consultant shall conduct all the following tasks outlined in the scope of work, unless otherwise specified. In submitting cost proposals, budgets should be detailed for each task.

Unless otherwise specified, five (5) color hard copies (double-sided as appropriate) shall be required for all final technical memoranda and reports produced for this project. All deliverables must be submitted first in draft form for review and then revised based on comments received from DVRPC and Gloucester County. Following revisions, final documents shall be submitted. Final documents, responding to comments shall be completed within two weeks of receiving comments.

All interim final project deliverables shall also be submitted in electronic format (on CDROM or DVDROM, or via e-mail or FTP, as specified by Gloucester County). Memoranda and reports shall be submitted to Gloucester County in both PDF format (to allow easy printing of additional copies) and editable format (i.e. Microsoft Word for text, Microsoft Excel for graphs and tables, or Microsoft PowerPoint for graphics, as applicable). The deliverables shall include the raw data files for the graphics and the Consultant shall provide clear indication of the location of data underlying any graphics so that DVRPC staff is able to reproduce or modify graphics as needed.

All final GIS data shall be projected horizontally in NAD83 New Jersey State Plane Feet and vertically in NADV 88 and submitted to DVRPC and Gloucester County. CADD drawings should be similarly projected and submitted in AutoCAD DWG format to the Project Sponsor. Traffic counts taken for the project should be submitted to DVRPC. All electronic data files produced must be documented consistently.

**Task 1: Project Management (15%)**

This task of the work shall include performing project management duties and responsibilities necessary to advance the project through the LCD phase, in accordance with the NJDOT’s Capital Project Delivery Guide for Concept Development. [Capital Project Delivery Guide](https://www.njdot.gov/cpdp) The LPDG (an interactive flowchart) is available on the NJDOT CD website. [LPDG Flowchart](https://www.njdot.gov/cpdp) Work efforts associated with this task shall include budgeting, scheduling, reporting, meetings, coordination, and reviews.

The Consultant shall establish an effective means of coordinating and reporting its activities with Gloucester County throughout the course of the project to ensure an expeditious exchange of information. A detailed project schedule shall be submitted at the kick-off meeting for review and approval, and reviewed regularly during the course of the study. The consultant’s project manager shall be responsible for the preparation of meeting agendas, including handouts and/or electronic slideshow presentations, if applicable, and minutes. Gloucester County and DVRPC shall be informed a minimum of one week prior to all meetings with outside agencies, state and local government officials, and/or groups so that personnel may attend, as desired.
Reporting and invoicing requirements shall be in accordance with the terms of DVRPC’s standard contract agreement. In general, the Consultant shall be responsible for preparing and submitting monthly progress reports and quarterly progress schedules to DVRPC indicating percent of work complete that corresponds to the reporting period of the monthly invoice. The progress reports shall include all active and completed tasks, and shall indicate the percent of work complete (total and by task); work and submittals completed in the last month and expected to be performed in the next billing period; meetings, actions/decisions required by DVRPC; and the status of the schedule and budget.

A. Project Controls

The Consultant shall be responsible for implementing and managing the following project controls:

- Preparation and filing of all project correspondences, memorandums, meeting minutes, transmittals, etc., in both hard and electronic media;
- Developing and maintaining a project schedule for the project duration which shall identify all project milestones; and
- Monthly invoicing/progress reports.

For the project schedule, task durations shall be shown in numbers of weeks. An updated project schedule shall be distributed to DVRPC and Project Sponsor on a quarterly basis. The Consultant shall identify and provide justification for deviations from the standing project schedule or budget.

B. Meetings and Coordination

The Consultant shall be responsible for coordinating all project meetings, and prepare and distribute all meeting agendas, including handouts if applicable, and minutes. All design related and decision making actions shall be noted in the Design Communication Report (DCR), as further described below. The number of meetings will vary by project and shall be reflected in the Consultant’s technical proposal, for review and approval by the Project Team. These meetings may include the following:

- Local Officials Meetings;
- Status Meetings;
- Biweekly Conference Calls;
- In person meetings as needed (assume one every two months);
- Stakeholders Meetings with Regulatory Agencies, Interest Groups, etc. (anticipated 2 per study); and
- Public meetings with local town Councils and Commissions, if deemed necessary.

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C. Interagency Review Meetings

The Interagency Review Committee (IRC) is comprised of representatives from DVRPC, NJDOT Bureau of Local Aid (NJDOT-LA), NJDOT Bureau of Environmental Program Resources (NJDOT-BEPR), NJDOT-Railroad Engineering, FHWA, and subject matter experts (SMEs) to determine whether or not the project’s purpose and need has been fully justified and documented. An IRC meeting will be scheduled by NJDOT-LA at the conclusion of the study. The Consultant and Project Sponsor will be required to make a PowerPoint presentation with appropriate handouts before the IRC. The Consultant shall coordinate with the IRC regarding the meeting agenda topics and objectives. The Consultant should anticipate one IRC meeting per study.

D. Major Deliverables for Task 1:

The major deliverables for Task 1 is a detailed project schedule to be submitted at the kick-off meeting for DVRPC’s and the Project Sponsor’s review and approval. The project schedule shall contain:

- Interim project schedule updates provided on a quarterly basis;
- Bi-weekly conference calls with the project team;
- Monthly in person meetings with the project team;
- Anticipate three local officials meetings;
- One IRC meeting;
- Meeting agendas (including necessary handouts/presentations) and minutes, including written summaries of all project management meetings;
- Monthly progress reports, corresponding to the invoices;
- A final progress report and invoice with release clause, to be submitted within 30 days from the close of the project.

Task 2: Public Outreach (15%)

A. Public Action Plan

The Consultant shall develop a Public Action Plan (PAP) which will include strategies for communicating project information to stakeholders and soliciting project feedback. The PAP should be relevant to the project and developed in consultation with the Project Team and other appropriate parties. The purpose of the plan is to solicit public involvement, as early as possible, within the LCD phase and to continue throughout LPE, FD, and CON, although the selected consultant will only be responsible for implementing the PAP during the LCD phase of work.

The PAP shall include developing a contact database of known stakeholders, determining the number of anticipated meetings with local officials, citizens groups, external public and private agencies, and any others impacted by the proposed project. The PAP should outline in a
memorandum all anticipated outreach efforts from LCD through Construction.

It should be noted that the PAP is a “living” document that shall be amended in consultation with the Project Team as the project advances through LCD. The Consultant shall submit the PAP to the Project Team for their review, records, and distribution. The final deliverable including number of copies and media type shall be as directed by the Project Team. The PAP will identify the stakeholders and outline the number of public information sessions required.

B. Stakeholder Coordination

The Consultant shall coordinate with the various stakeholders to obtain input on the developed alternatives in an effort to obtain stakeholder / community support. The Consultant may serve as a liaison between the stakeholders and the Project Team. Stakeholders may include local officials, regulatory agencies (New Jersey Department of Environmental Protection [NJDEP], United States Army Corps of Engineers [USACE], U.S. Coast Guard, etc.), environmental and user groups, and other agencies (e.g., Township of Franklin). The Consultant should anticipate holding two stakeholder meetings.

C. Public Information Centers

The Consultant, in coordination with DVRPC and Project Sponsors, and in accordance with the PAP, shall arrange, prepare, attend, and document all Public Information Centers. Public Information Centers shall comply with Federal standards and guidelines. Work efforts may include preparing detailed mailing lists, meeting notifications and advertisements, handouts and presentation materials. The Consultant should anticipate two Public Information Centers.

D. Resolutions of Support

The Consultant shall aid the Sponsor in obtaining “resolutions of support” from the local municipalities impacted as a result of the proposed action. The Project Sponsor shall also provide a resolution of support for the PPA. Resolution of support is typically obtained at the conclusion of the Alternative Analysis phase when a PPA has been identified.

E. Public Outreach Summary

The Consultant shall document all outreach efforts including meeting minutes, presentation materials, comments resolutions, and correspondence. All outreach efforts shall be coordinated with the Project Team and shall be overseen by the Project Sponsor. Public meetings procedures, advertisements, and notices shall comply with federal standards. The Consultant shall summarize and record all public involvement efforts during LCD, which shall be included in the CDR.
F. Design Communication Report

The Consultant shall maintain a DCR throughout the LCD Phase consistent with NJDOT guidelines. The DCR shall provide a record of all relevant communication, decisions, agreements, and approvals that occur between the Consultant, IRC, and stakeholders. The Consultant shall clearly outline in their Proposal the methods and procedures for maintaining the DCR.

G. Major Deliverables for Task 2:
The major deliverables for Task 2 include the following:

- Public Action Plan;
- Resolution(s) of Support;
- Two stakeholders meetings;
- Two Public Information Centers;
- Public Outreach Summary; and
- Design Communications Report.

Task 3: Data Collection (20%)

This phase of the work includes: (1) obtaining and reviewing existing data for the project site from various project stakeholders and other sources; (2) performing environmental screenings in an effort to identify areas of sensitivities and constraints; (3) conducting conceptual engineering assessments and investigations to identify deficiencies and defects to the transportation infrastructure; and (4) formulating a purpose and need statement.

A. Collect & Review Existing Documentation

The Consultant shall obtain existing data, plans, and studies of the project area from the various project stakeholders. This information may include, but not be limited to, the following list of items:

- Tax and Right-of-Way Maps;
- Research and obtain Deeds;
- Zoning and Flood Maps;
- Jurisdictional Agreements and Maps;
- As-Built and Site Plans;
- State and Local Master Plans and Land Use Studies;
- Utility Maps;
- Traffic Reports and Pedestrian Studies;
- Structural Inspection Reports and Inventory & Appraisal Sheets;
- Straight Line Diagrams and Other Roadway Inventory Data;
- Drainage Maps, Soil Surveys, and Geodetic Surveys;
- Hydrological and Hydraulic Data and Reports;
- Environmental Landscape Data, reports and studies;
- Railroad ownership documents;
- Rail future use requirements including freight expansion and commuter use; and/or
- Demographic profiles.

Demographic profiles for the study corridor need to be developed and used in determining the presence or absence of communities covered by laws pertaining to Environmental Justice (EJ). If EJ communities are present, they need to be engaged as part of the public outreach to be conducted in Task 2.

B. Project Mapping and Survey

The Consultant shall prepare project base mapping in the form of geodetic aerial photos and topographical survey mapping for a project area determined in consultation with the Project Team. Ground control survey points shall be established and structural features and impediments located within ±1” in a horizontal projection of NAD83 NJ State Plane Feet and vertical datum of NAD88. The base mapping shall also include right of way and property lines within the project limits based on deed copies provided by the Project Sponsor. The Consultant shall submit the Project Mapping (in a map scale of 1”=30’) to the Project Team for their review and records. The final deliverable including level of mapping, number of copies, format, and media type shall be as directed by the Project Sponsor and DVRPC in coordination with NJDOT.

C. Identify Site Resources

Under the direction of NJDOT-BEPR, the Consultant shall identify existing environmental and cultural resources within the project limits based on available data, site visits, and consultation with stakeholders. It is the intent of this investigation to identify environmentally sensitive areas and State / Federally regulated areas. The culmination of this investigation is the preparation of an Environmental Screening Report.

D. Environmental Screening

The Consultant shall conduct a screening of the following environmental and cultural resource elements:

- Cultural Resources (Archeological and Historic Architecture);
- Section 4(f) Properties (Recreational and Historic);
- Air / Noise;
- Wetlands;
- Land Use;
• Floodplains / Sole Source Aquifers;
• Threatened & Endangered species;
• U.S. Fish & Wildlife;
• Stormwater regulations;
• Hazardous waste;
• Air & Noise;
• Socio-economic;
• Environmental Justice;
• Community Needs and Impacts;
• Regulated / Protected Areas;
• Coastal Zone Impacts (e.g. Waterfront Development, Coastal Area Facility Review Act [CAFRA], USACE, U.S. Coast Guard);
• Flood Hazard / Tidelands / Riparian Areas;
• NJDEP Green Acres Program (GAP);
• Registered Historic Sites and Districts;
• Highlands, Pinelands, Hackensack Meadowlands, Wild & Scenic Rivers;
• Soil Erosion and Sediment Control; and
• Dam Safety

In addition to identifying and documenting resource areas, the Consultant shall, in coordination with the NJDOT-BEPR, also list environmental constraints pertinent for the project planning and development, as well as to identify opportunities for mitigation, environmental stewardship, context sensitive solutions, sustainability of regulatory thresholds, and limitations including permit requirements. Fatal flaws relevant to impacts on environmental resources shall also be discussed.

E. Constraint Mapping

The Consultant shall delineate environmentally sensitive areas on the project base mapping. Areas of sensitivity may include wetlands, riparian buffers, hazardous waste sites, Green Acres encumbered properties, historic properties, high probability archeological sites, etc.

F. Environmental Screening Report

The Consultant shall prepare an Environmental Screening Report (ESR) in accordance with NJDOT-BEPR requirements. Prior to initiating the ESR, the Consultant shall obtain the latest ESR form / format from the Project Team for their use. The Consultant shall submit the final ESR to the Project Team for their review in advance of the IRC meeting. The final ESR shall be included as an Appendix in the CDR.
G. Architectural Survey / Eligibility Report

The consultant shall perform an intensive-level architectural survey in accordance with The Secretary of the Interior’s Standards for the Treatment of Historic Properties and obtain eligibility determinations from State Historic Preservation Office (SHPO), in coordination with NJDOT-BEPR. The Consultant shall also prepare an Eligibility Report in accordance with SHPO’s requirements. In order for this task to be deemed completed an eligibility determination from SHPO will be required. The final Eligibility Report shall be included as an Appendix in the CDR.

H. Evaluate Site Deficiencies

The Consultant shall collect existing data and assess the existing transportation system for substandard design elements, structural defects and traffic operational and capacity deficiencies, in accordance with current American Association of State Highway and Transportation Officials (AASHTO), Manual on Uniform Traffic Control Devices (MUTCD), and NJDOT design standards and guidelines. The Consultant may recommend the need for supplemental data collection, field testing, inspections and/or detailed analysis when existing data collected is insufficient or not available. Recommendations for additional data collection would be in an effort to make sound engineering determinations beyond what is apparent, or to resolve potential fatal flaw design issues that could pose constructability problems and cost implications.

In the event more detailed investigations are recommended, the Consultant shall clearly justify the need and goal for these additional services in their technical proposal for review and approval by the Project Team.

I. Identify Substandard Design Elements

The Consultant shall assess the project for substandard design conditions based on NJDOT’s list of Controlling Substandard Design Element (CSDE), in accordance with AASHTO, a Policy on Geometric Design of Highways and Streets (latest edition) and NJDOT Roadway Design Manual (latest edition) based on the roadway classification, design speed, and design loading for an HL-93/NJDOT permit vehicle as well as applicable railway engineering standards. The Consultant shall document each substandard condition and make a comparison with minimum design standards for each. This assessment will be utilized during alternatives development and for future applications of Design Exceptions.

J. Engineering Site Assessment and Investigations

Based on the problem statement and nature of the intended project, the Consultant shall perform a site visit and review all existing information made available during the proposal phase, and make a determination if additional engineering investigations, inspection, and testing are warranted. The Consultant shall clearly state the need and provide justification for performing detailed analysis during LCD in their technical proposal for consideration by the
Project Team.

This task will include an assessment of the existing transportation system and conditions at the site in an effort to identify defects and deficiencies. These defects and deficiencies will serve as the basis in establishing the project Purpose and Need. The needs, extent, and level of efforts for engineering investigations shall be considered on a project by project basis. Typical areas of investigation could include the following items:

Traffic & Collision Data

- Forecast travel projections
- Traffic counts (vehicles, buses, rail use, bicycles, & pedestrians)
- Crash analysis
- Traffic operations and Level of Service
- Locations & routes of local emergency or school services
- Potential traffic diversion routes

Structural

- Structural inventory & appraisal rating
- Load posting and rating
- Structural defects
- Structural service life and life cycle
- Structural integrity and serviceability
- Retaining wall defects

Roadway

- Geometrics
- Typical Sections
- Lane Tapers and Transitions
- Safety / Roadside Design Measures
- Sight Distance
- Access
- Right of Way
- Signing

Stormwater Management / Drainage

- Drainage System Defects
- Drainage Areas
- Flooding
1. NJDEP Best Management Practices
2. Stormwater Management (SWM) / Water Quality Regulatory Compliance
3. Dam Safety

Geotechnical / Pavement

- Subsurface Conditions
- Roadway and Embankment Stability
- Scour / Settlement
- Seismic Conditions
- Pavement and Deficiencies and Condition

Utilities

- Utility Contacts
- Utility Verification

ITS and Roadway Lighting

- Photo inventory of the site.

K. Existing Conditions Documentation

At the conclusion of Data Collection, the Consultant shall summarize the findings of their investigation in a Project Fact Sheet. The existing conditions documentation shall be organized in a manner consistent with the Concept Development Report outline (see Task 5 below). The Project Fact Sheet shall include all supporting documentation obtained and or prepared during Data Collection. The Consultant shall submit the Project Fact Sheet to the Project Team for their review in advance of the IRC meeting. The final Project Fact Sheet shall be included as an Appendix in the CDR.

L. Purpose and Need Statement (P&N)

The project purpose is to define the transportation problem that needs to be solved. The project need provides data to support the purpose and justify the project. The Consultant shall provide a detailed and comprehensive statement of project need. It should include information on the adequacy of current facilities to accommodate present and proposed traffic, as well as other factors such as bridge condition, horizontal and vertical geometry, safety features, accident history, system linkage, social demands, economic development, and model interrelationships.
The P&N Statement should focus on the problems for which a proposed project is being considered (e.g. the purpose is to improve safety along a roadway segment with a high accident rate) and should not focus on the solution, or be too vague, as to constrain the range of alternatives (e.g. the purpose is to widen the highway). The purpose and need should establish goals & objectives and identify critical issues that need to be resolved. The Consultant shall submit the final P&N Statement to the Project Team for their review. The final project P&N Statement shall be included as an Appendix in the CDR.

M. Major Deliverables for Task 3:
The major deliverables for Task 3 are the following:

- Project Mapping;
- Project Fact Sheet with Photo Inventory of Site;
- Environmental Screening Report;
- Purpose and Need Statement;
- SHPO Eligibility Report; and
- GIS Data and Map Files.

Task 4: Alternatives Analysis (20%)

This phase of the work includes identifying feasible and prudent alternatives that will attempt to address the project's purpose and need. In addition to no-build alternative all feasible and prudent alternatives that avoid impacts to identified environmental resources (historic sites, parks, wetlands, threatened and endangered species, etc.) shall be considered and documented in accordance with State and/or Federal regulations. Projects that will result in impacts to Section 4(f) resources including parkland and historic sites / structures shall consider alternatives that comply with the requirements of a Section 4(f) evaluation (23 CFR 771.135(a)). These alternatives typically include avoidance or minimization / least harm solutions. Consideration for mitigation shall also be addressed in this evaluation.

At the onset of Alternative Analysis, the Consultant shall coordinate with the Project Team in identifying alternatives to be considered for analysis. Each alternative shall be developed conceptually and to a level of detail such that impacts to surrounding resources can be determined for comparison purposes. More detailed engineering development may be required in situations where impacts result in significant regulatory issues, cost prohibitive designs, adverse community impacts, etc. At a minimum three (3) build alternative and one no-build alternative shall be considered.

The Consultant shall clearly describe the alternatives for consideration in the Alternative Analysis Document. An impact assessment shall be made for each alternative in order to state the advantages and disadvantages of each. Where practical, impacts shall be approximately quantified (e.g. wetlands, right of way needs, costs etc.). The impact assessment shall be presented in an Impact Matrix with the list of alternatives on one axis and the critical issues / items represented on the other. An example of typical issues considered in the impact matrix may include meeting the purpose & need, safety, traffic operations, design features, structural integrity, cost, LOS, utilities, community needs, wetlands, Section 4f, ecology,
regulatory requirements etc.

The Consultant shall seek input from the various project stakeholders through Alternative Analysis in accordance with the PAP, with the intent of obtaining feedback on issues and concerns regarding each alternative.

The culmination of this phase of the work shall include a recommendation of a PPA for approval by NJDOT.

A. Develop Engineering Alternatives

The primary focus of the alternatives development is to meet the Purpose and Need while minimizing impacts to the surrounding environment and community. All environmental constraints are to be considered while developing the alternatives. Fatal Flaws are to be identified and considered. Alternative Analysis should clearly indicate why and how the project alternatives were developed, including what public and agency input was used. In addition, alternatives analysis should explain why alternatives were eliminated from consideration. It is to include the criteria used to eliminate alternatives, at what point in the process the alternatives were removed, and the measures for assessing the alternatives' effectiveness.

B. Alternative Impact Assessment

Once the alternatives have been defined and their respective footprints (impacts) established, the Consultant shall quantify (or qualitatively assess) impacts to surrounding resources. The consultant shall also identify how the alternatives compare in terms of constructability, cost, substandard elements, design exceptions, etc. A comparison matrix representing each alternative as well as critical elements shall be prepared, with the advantage and disadvantage of each represented. The comparison matrix will assist in the selection of a PPA.

C. Selection of Preliminary Preferred Alternative (PPA)

The Consultant shall weigh and / or rank impacts for each of the identified critical issues. The ranking and selection method shall be coordinated with the IRC, and clearly stated in the alternative analysis section of the CDR. Where feasible, quantitative impacts shall be presented and fatal flaws identified.

D. Alternative Analysis Documentation

At the conclusion of Alternative Analysis, the Consultant shall summarize the findings of their investigation including a detailed description and conceptual plan of each alternative, as well as an impact matrix, alternative analysis synopsis and recommendation of the PPA.
E. Major Deliverables for Task 4:

The major deliverables for Task 4 are the following:

- Alternative Analysis Matrix
- Description of the Alternatives

Task 5: Documentation (30%)

A. Concept Development Plans

The Consultant shall prepare concept plans of the PPA at a scale of 1”=30’ and contours generated at a 1-foot interval, and in a media form deemed appropriate by the Project Team. The plans shall be in accordance with latest editions of:

- NJDOT Roadway Design Manual;
- NJDOT Drainage Design Manual;
- NJDOT Standard Specifications for Roads and Bridge Construction;
- NJDOT Design Loading for HL-93/NJDOT Permit Vehicle;
- AASHTO Policy on the Geometric Design of Streets and Highways (Green Book);
- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities;
- AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities;
- AASHTO Highway Safety Manual;
- Institute of Transportation Engineers (ITE) Urban Street Geometric Design Handbook;
- ITE Manual on Uniform Traffic Control Devices (MUTCD); and

It is the intent of the concept plans to clearly present the nature and intent of the proposed work, as well as to provide enough detail to establish reasonable cost of the work. The concept plans will be presented as an Appendix in the CDR.

B. Prepare Cost Estimates

The Consultant shall prepare a preliminary construction cost estimate for the PPA. The cost estimate shall consider major construction activities including mobilization, paving, excavation, removal and demolition of existing structures, new structures, drainage and SWM facilities, lighting, landscaping, environmental mitigations and other major construction activities. Unit prices should consider recent bid pricing made available by the Project Sponsor or NJDOT sources. The Consultant shall also consider contingencies and escalation in the estimate.

In addition to construction cost, the Consultant shall estimate costs for Right of Way acquisitions, preliminary and final design, and other major expenditures. Cost developed for this task will be utilized for future funding needs.
C. NEPA Classification and Documentation

The Consultant, in coordination with the Project Team, shall determine the level of NEPA documentation i.e., Categorical Exclusion(s), Environmental Assessment with FONSI, or Environmental Impact Statement for the next phase of work. In addition to the environmental document, a determination shall be made regarding the need for Section 106, Section 4(f), Section 6(f), etc., investigations, evaluation(s), and reporting. This information shall be presented in the CDR. The actual NEPA document will be prepared in a separate consultant effort, in the PE Phase.

D. Develop Preliminary Engineering Next Steps/Tasks

The LPE next steps/tasks shall be prepared by the Consultant, in coordination with the Project Team. It shall include all the tasks needed to conduct LPE and FD, suitable for inclusion in an RFP for consultant services in those phases. This information shall be presented in the CDR.

E. Concept Development Report

The Consultant shall prepare and submit a CDR to the IRC for their review and approval. The report will incorporate all documentation prepared under the LCD phase and be organized in the following manner:

- Introduction;
- Purpose and Need;
- Existing Conditions / Fact Sheet;
- Traffic and Crash Summary;
- Social, Economic and Environmental Considerations;
- Evaluations of Alternatives;
- Selection of the Preliminary Preferred Alternative;
- Description of Preliminary Preferred Alternative;
- NEPA Classification;
- Preliminary Engineering Next Steps/Tasks;
- Appendices.

The CDR appendices shall include, but not limited to, the following documentation:

- Purpose and Need Statement;
- List of Existing Documentation collected under LCD;
- Inspection Reports Crash Data and Collision Diagrams;
- Traffic Counts;
- Congestion Management Process (if required);
- Aerial Photography;
- Straight Line Diagram;
- Environmental Screening Report Eligibility Report (if required);
- SHPO Eligibility Determination;
- Public Outreach Plan & Public Outreach Summary;
- Resolutions of Support;
- Sketches of Alternatives;
- Alternative Analysis;
- Impact Matrix;
- Cost Estimates;
- Conceptual Plans for PPA;
- Constructability Reports;
- Project Correspondence.

F. **PowerPoint Presentation**

The consultant shall produce and deliver to Gloucester County a PowerPoint presentation with accompanying narrative that effectively presents the compete elements of the study with project findings.

G. **Major Deliverable for Task 5:**

The major deliverables for Task 5 are the following:
- Concept development plans;
- Cost estimate;
- Concept Development Report;
- PowerPoint presentation.

**III. Submission Information:**

Technical and Administrative Proposals are to be submitted separately. Technical Proposals should be submitted via email to procurement@dvrpc.org. Administrative Proposals should be sent via email separately to slee@dvrpc.org.

Both the Technical and Administrative Proposal submissions are due no later than **10:00 AM EDT** on **Friday, January 17, 2019**. Please note that file sizes must be under 25 MB. Acceptable file types are .pdf, .doc, and .docx.

Proposals submitted after the submission deadline, that do not strictly adhere to the submission instructions, or that are non-responsive to any of the requirements of this RFP may be deemed disqualified and may be ineligible for award.

**DVRPC** assumes no responsibility for delays causing the any Proposals to be received after the above-referenced due dates and times.
Respondent bears all costs related to the preparation and submittal of its Proposals. DVRPC reserves the right to award all or only part of the solicitation to one or more Respondents, and the right to cancel the solicitation and make no award.

IV. Technical Proposal Requirements

The proposal, transmitted as a .pdf, .doc, and/or .docx file should contain the firm name and be titled “Technical Proposal.” Please submit your Technical Proposals via email to procurement@dvrpc.org. The firm who submits the proposal, Respondent, must include the following elements in order:

A. **Cover letter** from a principal of the Respondent, providing summary of proposed solution of the project, along with primary contact information (phone number and email address). (1 page maximum)

B. **Project Team Description** including qualifications, relevant experience, and contact information for each team member. Please identify the project manager, key personnel, and any sub-consultants, and include an organizational chart of the project team, if available. If team of consultants, explain how team may have previously worked together. (5 page maximum)

C. **Detailed Summary of Experience** related to the type of Local Concept Development Project for improvement to the existing structure at the Porchtown Road (County Route 613) Bridge over Still Run/at Iona Lake (Bridge 10-K-4) located in the Township of Franklin, Gloucester County described in this RFP. Possible elements can include methods, approximate geographic size, project’s beginning and end dates, explanations of significant delays, and lessons learned. (3 page maximum)

D. **Proposal Narrative** providing sufficiently detailed information of project methods and discussion of their approach so that the Respondent’s competence and ability to provide the required deliverables of task and products is clearly demonstrated. The narrative should specify which tasks will be done by the lead consultant and which tasks will be done by sub-consultants, if applicable. Respondents are invited to present alternative methods that would enhance the deliverables or shorten the time required to complete the deliverables. (5 page maximum)

E. **Detailed Project Schedule** outlining the Respondent’s proposed sequence of activities. The County would like to see an expedited but realistic schedule. (1 page maximum)

Please Note: All Technical Proposals are to be sent via e-mail separate from the Administrative Proposal to procurement@dvrpc.org.
V. Administrative Proposal Requirements

The proposal, transmitted as a .pdf, .doc, and/or .docx file should contain the firm name and be titled “Administrative Proposal.” Please submit your Administrative Proposals via email to slee@dvrpc.org. The Administrative Proposal should contain elements A through C:

A. Certification of Eligibility – A certificate is to be included in the proposal for each firm stating that: "The firm is not ineligible to receive award of a contract due to the firm's inclusion on any Federal, Pennsylvania, or New Jersey state lists of debarred contractors, or otherwise ineligible to be awarded a contract using Federal or state funds." This statement should be written on your firm’s letterhead and should be signed by an officer of the firm.

B. DBE/SBE Letters – If applicable, the Respondent and/or any sub-consultants must submit letters demonstrating that they are certified as a DBE/SBE firm by the Commonwealth of Pennsylvania and/or New Jersey.

C. Project Cost Budget – Respondent will be asked to provide a detailed project cost budget estimate utilizing the schedule attached to this RFP. Please see Attachment A: Contract Pricing Proposal. A separate detailed budget is to be prepared by the Respondent and each subconsultant. During negotiations, the Respondent or DVRPC may suggest that deliverables or tasks be modified or deleted. Please note that Title 41 Code of Federal Regulations limits the amount of profit or fee to 10 percent of the direct labor and indirect costs.

Please Note: All Administrative Proposals are to be sent via e-mail separate from the Technical Proposal to the attention of Sonia Lee, at slee@dvrpc.org.

VI. Evaluation Criteria

An evaluation committee consisting of representatives from DVRPC and our planning partners will evaluate each proposal properly submitted and, at its discretion, recommend an awardee or awardees to the DVRPC Board.

Criteria have been established to guide the evaluation of each Respondent’s proposal. After the close of the advertisement period, all submitted proposals are evaluated and ranked according to the weighted evaluation criteria and scoring basis outlined in the RFP.

Technical approach and product understanding (weight 40%): Respondents should clearly detail their methods and approach to the project. Respondents are encouraged to offer suggestions for enhancing specific tasks or the overall work and/or propose innovative techniques to improve the results of this analysis.

Professional qualifications and experience in similar work (weight 30%): Respondents should demonstrate their qualifications and experience as it relates to carrying out the project.
Ability to perform within schedule (weight 30%): Respondents should demonstrate an ability to perform the tasks proposed within the allotted time.

Negotiations for award of the contract will be to the Respondent(s) that best meet the evaluation criteria. DVRPC reserves the right to award in part or as a whole. DVRPC may reject all proposals. DVRPC further reserves the right to negotiate cost and scope elements with the leading Respondent(s).

VII. Contract

The contract will be between DVRPC and the selected Respondent(s) who will be technically and administratively responsible to DVRPC. DVRPC will authorize all payments to the selected firm(s). The contract will be cost reimbursable with a fixed fee, not to exceed type.

Length of contract and availability of funds will be provided in the contract details. Should additional funding become available for related work DVRPC may negotiate with the selected Respondent(s) to perform the work for up to three additional years.

VIII. Inquiries Regarding this Solicitation

All inquiries related to this RFP should be directed to procurement@dvrpc.org and submitted no later than Friday, January 3, 2019 at 3 PM EDT. Inquiries may not be considered if not received by then. DVRPC will respond to questions it considers appropriate to the RFP and of interest to all Respondents, but reserves the right, in its discretion, to amend or to not respond to any question.

All inquiries and responses will be posted on a rolling basis on the DVRPC website at the location of the posting of the original RFP at www.dvrpc.org/Consultant.

Responses posted on DVRPC’s website become part of the RFP upon posting. DVRPC reserves the right, in its discretion, to revise questions and responses to questions after posting, by posting the modified response. No oral response to any Respondent question by any DVRPC employee or agent shall be binding on DVRPC or in any way considered to be a commitment by DVRPC.

DVRPC considers any information submitted directly to the Commission through a notice of opportunity announcement to be confidential and proprietary. While DVRPC does not make such information public, unsuccessful respondents may request a debrief meeting to discuss their submission and subsequent evaluation. DVRPC’s Access to Records Policy may be viewed at www.dvrpc.org/Policies.

IX. Reservation of Rights & Response Usage

Negotiations for award of the contract will be to the Respondent(s) that best meet the evaluation criteria. DVRPC may reject all proposals. DVRPC further reserves the right to negotiate cost and scope elements with the leading Respondent(s). DVRPC reserves and may, in its sole discretion, exercise any or more of the following rights and options with respect to this RFP if DVRPC determines that doing so is in the best interest of DVRPC:
A. Decline to consider any response to this RFP; cancel the RFP at any time; elect to proceed or not to proceed with discussions or presentations regarding its subject matter with any Respondent and with firms that do not respond to the RFP;

B. Extend the Submission Date/Time and/or to supplement, amend, substitute or otherwise modify the RFP at any time prior to the Submission Date/Time, by posting notice thereof on DVRPC’s web page(s) where the RFP is posted;

C. No contractual obligation on behalf of DVRPC whatsoever shall arise from the RFP process;

D. This RFP does not commit DVRPC to pay any cost incurred in the preparation or submission of any response to the RFP;

E. DVRPC considers any information submitted directly to the Commission through a notice of opportunity announcement to be confidential and proprietary. While DVRPC does not make such information public, unsuccessful Respondents may request a debrief meeting to discuss their submission and subsequent evaluation.

F. DVRPC’s Access to Records Policy may be viewed at https://www.dvrpc.org/policies/.

X. Disadvantaged Business Enterprises

The Delaware Valley Regional Planning Commission is committed to providing opportunities for Disadvantaged Business Enterprises (DBE) to compete for work. DBEs are certified by the Pennsylvania Unified Certification Program (PAUCP) and the New Jersey Unified Certification Program (NJUCP) in accordance with 49 CFR Part 26. Any party that enters into an agreement with DVRPC is encouraged to involve DBEs in the required work and to submit documentation of any such involvement in the proposal narrative and budget.

For this project, the DBE/SBE goal shall be a minimum 12.49%.

Any party that enters into an agreement with DVRPC shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any agreement or in the administration of its DBE program or the requirements of 49 CFR part 26. All parties to DVRPC agreements shall take all necessary and reasonable steps under 49 CFR part 26 to ensure nondiscrimination in the award and administration of any subagreements and in addition each prime contractor or subrecipient must include the following assurance in any subcontracts entered into:

“The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of this agreement.”

DVRPC encourages all prospective Respondents to use the following links to the PA and NJ Unified Certification Program to locate DBE firms to utilize as sub-consultants.

PA - Unified Certification Program: [www.dotsbe.pa.gov/PAUCPWeb/paucp/viewHome.do](http://www.dotsbe.pa.gov/PAUCPWeb/paucp/viewHome.do)

NJ - Unified Certification Program: [www.njucp.dbesystem.com](http://www.njucp.dbesystem.com)

**Submission Requirements**
The Respondent, using the attached DBE Participation Schedule (Attachment B), is required to furnish the following documentation as part of its technical proposal:

- The names and addresses of DBE firms that will participate in the Contract;
- A description of the work that each DBE will perform; and
- The percentage of participation of each DBE firm participating.

**XI. Small Business Enterprise & Emerging Small Business Enterprise Programs**

In addition to DBEs, DVRPC encourages the use of small businesses under the following programs: Small Business Enterprise (SBE) in Pennsylvania, and Emerging Small Business Enterprise (ESBE) in New Jersey.

Small business concerns are those entities seeking to participate in contracts that meet the definition of a small business concern set forth in Section 3 of the Small Business Act and Small Business Administration regulations as per 13 CFR Part 121.

These programs are designed to facilitate greater participation of small businesses in transportation related procurements. Any party that enters into an agreement with DVRPC is encouraged to involve SBE/ESBEs in the required work and to submit documentation of any such involvement in the proposal narrative and budget.

Contractors looking for certified SBEs can search these online databases:


Contractors must maintain records to ensure compliance with 49 C.F.R Part 26 obligations by indicating the number of DBE, SBE/ESBE, and non-DBE/SBE/ESBE subcontractors, the type of work performed on the project, documentation of efforts to secure DBE/SBE/ESBE firms for available subcontracting opportunities and the means of communication used to obtain the services of DBE/SBE/ESBEs, and dollar amounts paid to DBE/SBE/ESBEs.
ATTACHMENT A
Contract Pricing Proposal Sample

www.dvrpc.org/consultant/files/price_proposal.xls
www.dvrpc.org/consultant/files/price_proposal-non-profit.xls
ATTACHMENT B
Disadvantaged Business Enterprise (DBE) Participation Schedule

As specified in the DBE Participation Section included in the Request for Proposal Documents, the Proposer shall furnish to DVRPC’s satisfaction the details of disadvantaged business enterprise participation.

Table I: All Work to be Performed by DBEs

<table>
<thead>
<tr>
<th>Name of DBE Firm</th>
<th>Contact Person (Business Address &amp; Telephone Number)</th>
<th>Description of Work to be Performed</th>
<th>Total DBE Agreed Percentage to be Credited to DBE Goal</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

Project Name: __________________________________________________________

Name: ________________________________________________________________

Title: _______________________________________________________________

Firm or Corporation: __________________________________________________

Email: ______________________________________________________________

Telephone Number: __________________________________________________

Proposers are hereby notified that the information contained herein will be verified with the designated DBE firm. Additionally, if and when the award of a contract is made, all DBE firms listed herein will be simultaneously notified of the award. DVRPC reserves the right to waive informalities herein in its sole reasonable discretion. All percentages must be expressed as a percentage of the Proposer’s total maximum price to DVRPC.

Signature: ________________________________ Date: ____________________
COUNTY OF GLOUCESTER
1200 N. DELSEA DRIVE
CLAYTON
NEW JERSEY 08312

BRIDGE RE-EVALUATION SURVEY REPORT

STRUCTURE NO. 0810-K04
WILLOW GROVE ROAD (CR 613) OVER STILL RUN AT IONA LAKE
FRANKLIN TOWNSHIP
GLOUCESTER COUNTY

17TH CYCLE
NOVEMBER 18, 2014

NOTE: This Bridge Re-Evaluation Survey Report shall be filed immediately after the 16TH Cycle Inspection Report.

Prepared By

IH ENGINEERS, P.C.
103 College Road East, 1st Floor
Princeton, NJ 08540
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STRUCTURAL DATA:
Bridge No.: 0810-K04
Route No.: 9008
Mile Point: 0.700
Name: Willow Grove Road (CR 613) over Still Run at Iona Lake
Year Built: 1938
Length: 29.0’
Date of this Evaluation: 11/18/2014
Width: 38.5’
By: IH Engineers, P.C. (Nishit Patel)
Date of Previous Evaluation: 11/28/2012
By: Advantage Engineering Associates, P.C
Special Equipment Used: Small Boat (Photo no. 17-17)
Date of Underwater Inspection: Not Required
Scour Critical: No

WORK DONE: None

OVERALL PHYSICAL CONDITION: Fair due to the condition of the superstructure and substructure (Items 59 and 60 = 5)

OVERALL CONDITION (ITEM 67): Fair due to the low inventory ratings (Item 67 = 5)

Inspection Team Leader: Nishit Patel
Certifying Engineer: Sid W. Sidhom, P.E.
N.J. P.E. Number: GE 04070000

I certify that this report is an accurate description of the subject structure, to the extent determinable by visual inspection and testing performed.

Signature: ________________________________
Date: 8-10-15

Initials: N P
CONCLUSIONS AND RECOMMENDATIONS:

The overall condition of the structure is fair due to the condition of the superstructure, substructure and the low inventory ratings.

The deck and superstructure are in fair condition due to the areas of map cracking with efflorescence and moderate honeycombing throughout the underside of the concrete slab (Photos 17-07 and 17-10). There are large areas of spalling for the full length x 2” deep with delaminated concrete, exposed moderately corroded rebar and longitudinal cracking with efflorescence at the underside of the slab at the fasciae (Photos 17-09 and 17-11).

The substructure is in fair condition due to the spall in the west abutment breastwall interface with the southwest wingwall (Photo 17-11). Both abutment breastwalls at the north end exhibit moderate efflorescence with wide map cracking. There are wide vertical and horizontal cracks at the south end of the east abutment breastwall (Photo 17-12) and several vertical cracks at are located at isolated locations within the abutment breastwalls. The southeast integral wingwall exhibits severe spalling at the base of the wall and one full height vertical crack up to ¼” wide at the interface between the abutment breastwall and the wingwall (Photo 17-13).

Since the previous inspection, the condition rating of the approach roadway is being downgraded from very good to good condition due to the minor impact damage in the northwest guide rail end terminal (Photo 17-08). There has been no change in the condition of the remaining structural components.

The bridge has been screened by Gloucester County and was determined not to be scour critical, therefore the in-depth Bridge Scour Evaluation is not required at this time. There is a concrete invert slab between both abutments. This inspection revealed no observed scour, exposed footing or undermining. Therefore, the appraisal of Item 113 remains unchanged (Item 113 = 8).

We recommend that the following Emergency/Priority repairs be made to prevent further deterioration, preserve the structural integrity of the bridge, improve safety and extend its useful life:

None
1 - STRUCTURAL DATA

IDENTIFICATION
8 Structure No.: 0810K04
MS2 County Bridge No.: M82 Municipal Bridge No.: 
(AB) Name: WILLOW GROVE RD (CR613) OVER STILL RUN @ IONA LAKE
1 State Code: 
(1A) State Code 34 - New Jersey
(1B) Region Code 2 - Region 2 - New York/New Jersey
3 County Code: 015 - GLOUCESTER COUNTY
5 Inventory Route (On/Under): 1: Route carried "on" the structure
5B Inventory Route Signing Prefix: 4 - COUNTY HIGHWAY
5C Level of Service: 1 - MAINLINE
5D Inventory Route Number: 613
5E Directional Suffix: 0 - NOT APPLICABLE
6 Features: STILL RUN AT IONA LAKE
7 Facility WILLOW GROVE ROAD
Carried by Structure: 
16 Latitude: 393542.00
17 Longitude: -750454.05
M84 Latitude (Degrees): 39.5950
M85 Longitude (Degrees): -75.08168
M142 GPS Location: Southwest Corner

CLASSIFICATION
21 Maintenance Responsibility: 02 - County Highway Agency
M94 Maint. Resp.: 
22 Owner: 02 - County Highway Agency
M93 Owner: 
M95 Ownership Resolved: 
101 Parallel Structure Designation: N - No parallel structure
103 Temporary Struct. Designation: _
104 Highway System of Inv. Route: 0 - Structure/Route is NOT on NHS
112 NBIS Bridge Length: Yes
Agency Admin. Area: 
26 Func. Class. of Inv. Route: 17 - Urban - Collector
37 Historical Significance: 5 - Not eligible
M91 On/Off System: 1: On-System Structure
M96 Comments Ownership:

(MM) Orphan Bridge: N
(BP) Bridge Demolition: N
(CP) Federal Report: _ - Highway carrying NBIS bridges included in reports to FHWA
(CR) Off-Route Bridge: N
(FX) Federal Error Cannot be Corrected: N

2 Highway Agency District: DISTRICT 03 (SOUTH)
4 Place Code: 24840 - Franklin (Township of)
(A) Town: 0805 - Franklin Township
9 Location: 0.65 Mi. N of Rte 40
11 Mile Point: 0.700
(AA) Inventory Route: 9008 - Gloucester County
(FV) Inventory Route Milepoint: 
(AC) Non-inventory Feature: WW: Roadway and/or railroad over waterway
(AD) Adm. Juris. Non-Inv Feature: 4: Other existing (which includes county and local jurisdiction)
(AE) Alternate Agency: 9200 - Private
(AF) Alternate Structure Number: 
98 Border Bridge Code: 
(98AA) State Code: 34 - New Jersey
(98AB) Region Code: 2 - Region 2 - New York/New Jersey
(98B) % Resp.: 
99 Border Bridge Structure Number: 

118
**STRUCTURE TYPE AND MATERIAL**

- **43A Main Span Material:** 1 - Concrete
- **43B Main Span Design:** 01 - Slab
- **44A Approach Span Material:**
- **44B Approach Span Design:**
- **45 Number of Main Spans:** 1
- **46 Number of Approach Spans:** 0
- **(AJ) Type of Slope Protection:**
- **(AK) Type of Abutment:** 29: (B) Gravity on Timber Piles
- **(AL) Type of Pier:**
- **(AT) Special Material 1:**
- **(AT) Special Material 2:**
- **(AU) Additional Structure Type 1:**
- **(AU) Additional Structure Type 2:**
- **Fracture Critical Details:**

**M143 Structure Type Primary:** 01 - Slab

**M144 Structure Type Secondary:**

**M97 Struc. Mat. Type Desc:**

- **107 Deck Structure Type:** 1 - Concrete Cast-in-Place
- **108A Wearing Surface:** 6 - Bituminous
- **108B Membrane:** 0 - None
- **108C Deck Protection:** 0 - None

**AV) Widened Structure Type:**

- **1st Widened Material:**
- **1st Widened Design:**
- **2nd Widened Material:**
- **2nd Widened Design:**

- **106 Year Reconstructed:** 00
- **42A Type of Service On:** 5 - Highway-pedestrian
- **42B Type of Service Under:** 5 - Waterway

**GEOMETRIC DATA**

- **32 Approach Roadway Width (w/ shoulders):** 30,000 ft
- **33 Bridge Median:** 0 - No median
- **34 Skew:** 0 deg
- **35 Structure Flared:** 0 - No flare
- **M98 Str. is Standalone or Connected:**

**M99 Length of Portion Included:** ft

**M101 Total Structure Opening:** ft²

**M143 Design Vertical Inside Opening:** ft

**M146 Available Vertical Inside - South or West End:** ft

**M147 Available Vertical Inside - North or East End:** ft

**NAVIGATION DATA**

- **38 Navigation Control:** 0 - No navigation control on waterway (bridge permit not required)
- **39 Navigation Vertical Clearance:** 0 ft
- **40 Navigation Horizontal Clearance:** 0 ft

- **111 Pier/Abutment Protection:** 1 - Navigation protection not required

- **116 Min. Nav. Vertical Clearance under Lift Bridge:** 0.0 ft

**(AP) Fender System:** _
UTILITIES AND APPURtenances

(HA) Bridge Noise Barrier:
   Type of Material 1: 
   Type of Material 2: 
   Barrier Height 1: 0.00 ft 
   Barrier Height 2: 0.00 ft

(AO) Utilities:
   Utilities 1: 
   Utilities 2: 
   Utilities 3: 
   Utilities 4:

Sign Structures:
   (GS) Overhead Sign Structure: 
   (GT) Cantilever Sign Structure:

(GU) Faseia Mounted Sign Structure:

RAILROAD

(BC) USRA Code: 
(BE) Rail Milepost: 0.000

(BD1) Rail On: 
(BD2) Rail Under:

TEMPORARY STRUCTURES

(GV) Bridge: N 
(GW) Shoring: N 
(GZ) Cond. Desc.: 

(GY) Measures: N 
(GX) Repairs: N
**LOAD RATING AND POSTING**

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<th>Alternate Load Ratings:</th>
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<td>31 Design Load:</td>
<td>Alt. Design Load:</td>
</tr>
<tr>
<td>65 Inventory Rating Method:</td>
<td>-1 - Load Factor (LF)</td>
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<tr>
<td>66 Inventory Rating: 22.0 tons</td>
<td>Alt. Inventory Rating Method: -1</td>
</tr>
<tr>
<td>63 Operating Rating Method: 1 - Load Factor (LF)</td>
<td>Alt. Inventory Rating: tons</td>
</tr>
<tr>
<td>64 Operating Rating: 36.0 tons</td>
<td>Alt. Operating Rating Method: -1</td>
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<tr>
<td>Rating Date 01/01/1995</td>
<td>Alt. Operating Rating: tons</td>
</tr>
<tr>
<td>Type</td>
<td>Inventory</td>
</tr>
<tr>
<td>H15:</td>
<td>(BQ) 12</td>
</tr>
<tr>
<td>HS20:</td>
<td>(BR) 22</td>
</tr>
<tr>
<td>3:</td>
<td>(BS) 17</td>
</tr>
<tr>
<td>NJ3S2:</td>
<td>(BT) 27</td>
</tr>
<tr>
<td>3-3:</td>
<td>(BU) 34</td>
</tr>
<tr>
<td>Military:</td>
<td>(BV)</td>
</tr>
<tr>
<td>HL93:</td>
<td>( )</td>
</tr>
</tbody>
</table>

| Type | Inventory | Operating |
| H15: | ( ) | ( ) |
| HS20: | ( ) | ( ) |
| 3: | ( ) | ( ) |
| NJ3S2: | ( ) | ( ) |
| 3-3: | ( ) | ( ) |
| Military: | ( ) | ( ) |
| HL93: | ( ) | ( ) |

41 Posting Status: A - Open

70 Posting: 5 - Equal to or above legal loads

(CG1) Posted Load Type: 

(CG2) Posted Load Limit: tons

(AI) Speed Limit Posting: mph

Load Rating Review Recommended: ☐

**(BK) Overstress %:**

**(CH1) Load Rating/Posting Combo:** L: Load Factor Rating

**(CH2) Load Rating/Posting Combo:** tons

**(AN) Plans Available:** No, plans are not available.

Load Rating Engineer: Unknown

**Posting**

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Operating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck 1:</td>
<td></td>
</tr>
<tr>
<td>Truck 2:</td>
<td></td>
</tr>
<tr>
<td>Truck 3:</td>
<td></td>
</tr>
</tbody>
</table>
A - INSPECTION INFORMATION

APPRaisal ITEMS

Structurally Deficient/Functionally Obsolete: ND

67 Structural Evaluation: 5 - Somewhat better than minimum
68 Deck Geometry: 4 - Meets minimum tolerable limits
69 Underclearances, Vertical & Horizontal: N - Not applicable

Sufficiency Rating: 68.6

70 Bridge Posting: 5 - Equal to or above legal loads
71 Waterway Adequacy: 8 - Bridge Above Approaches
72 Approach Roadway Alignment: 8 - Equal to present desirable criteria

EXISTING BRIDGE CONDITION

58 Deck: 5 - Fair Condition (minor section loss)

59 Superstructure: 5 - Fair Condition (minor section loss)
60 Substructure: 5 - Fair Condition (minor section loss)
62 Culvert: N - Not Applicable
63 Operating Rating Method: 1 - Load Factor (LF)
65 Inventory Rating Method: 1 - Load Factor (LF)

(BA) Approach Roadway Condition: 7: Good Condition - minor defects such as cracking of approach roadway, small spalls in approach roadway, minor settlements (less than 1") or minor collision damage to guide rails.

61 Channel/Channel Protection: 7 - Bank protection needs minor repairs
113 Scour Critical Bridge: 8 - Stable for scour conditions
64 Operating Rating: 36.0 tons
66 Inventory Rating: 22.0 tons

CONDITION REMARKS

Deck Distress/Unrepaired Spalls: -1 ft

(BF) Deck:
1. R: Spalled under deck
2. S: Exposed rebars
3. U: Med/Wide cracks under deck
4. W: Det. parapet/balustrade
5.

(BG) Superstructure:
1. B: Spalled underdeck
2. Z: Other
3.
4.
5.

(BH) Substructure:
1. A: Severe spalling
2. C: Medium/wide cracks
3. Z: Other
4.
5.

(BJ) Culvert:
1.
2.

HIGHWAY SAFETY/FENCING

36A Bridge Rail: 0 - Does not meet acceptable standards/safety
36B Transition: 0 - Does not meet acceptable standards/safety
36C Approach Rail: 0 - Does not meet acceptable standards/safety
36D Fnd Treatments: 1 - Meets acceptable standards

(AG) Type of Bridge Rail: 16: More than one type of Railing
(AH) Height of Bridge Rail: 2.25 ft
(AQ) Chain Link Fence Height: 0.00 ft
(FN) Fencing Required: NO - Conditions DO NOT warrant chain link
(FO) Pedestrian Traffic Fencing Status: N: Not applicable or fencing is not
(FP) Fencing Improvement Cost: $ 0

SCOUR EVALUATION

*113 Scour Critical Bridge: 8 - Stable for scour conditions

(FB) Date of Stage 1 Scour Eval.: 

(FC) Stage 1 Scour Eval. Consultant: 

(FD) Stage 1 Scour Eval. Prioritization Category: 
 - Not Applicable

(FE) Stage 1 Scour Eval. Sufficiency Rating: 

(FA) FHWA Scour Category: 01: Assessed (Old bridge)

(FF) Date of Stage 2 Scour Eval.: 

(FG) Stage 2 Scour Eval. Consultant: _ - Not Applicable

(FH) Scour Critical Elements: 

17-5
SCOUR COUNTERMEASURES

(FJ) Scour Countermeasures Cost: $  

(FL) Scour Monitoring Required/Type:  

(FK) Scour Countermeasures Installed/Type:  
1.  
2.  
3.  

(FI) Recommended Scour Countermeasures:  

PROPOSED IMPROVEMENTS

75A Type of Work:  

75B Work To Be Done By:  

76 Length of Structure Improvement: ft  

(BO) Owner's Maintenance Cost: $  

94 Bridge Improvement Cost: $  

95 Roadway Improvement Cost: $  

96 Total Project Cost: $  

97 Year of Improvement Cost Estimate:
B - INSPECTION INFORMATION

INSPECTION DATES

Inspection Report Author: Patel, Nishith
Primary Type of Inspection: Regular Inspection
Previous Cycle Inspection Date: 11/28/2012
90 Inspection Date: 11/18/2014
91 Inspection Frequency (in months): 24
Next Inspection Date: 11/18/2016
Pontis Element Inspection Date: 11/18/2014
Pontis Element Frequency (in months): 24
Next Pontis Element Inspection Due: 11/18/2016

(AW) Date of Mechanical/Electrical inspection: 1/1/1901
  (AW1) Mechanical Inspect Type: 
  (AW2) Electrical Inspect Type: 
  (AW3) Traffic Safety Inspect Type: 
  (AW4) Mechanical Inspect Date: 
  (AW5) Electrical Inspect Date: 
  (AW6) Traffic Safety Inspect Date: 
  (AW7) Movable Bridge Type: 

(AX) Date of Deck Condition Survey: 
  M132 Confined Space Entry: No
  M105 Description of Inspection Type: 

PAINT CONDITIONS AND DATE

(GD) Fascia Beam: 
(GE) Fascia Bottom Flange: 
(GF) Interior Beam: 
(GH) Interior Bottom Flange: 
(GI) Beam Ends: 
(GJ) Connections: 
(GK) Bracings: 
(GL) Bearings: 
(GM) Substructure: 
(GN) Above Deck Superstructure: 
(GO) Railings/Fence: 

(AZ) FATIGUE DETAIL

Location 1: 

Location 2: 

Location 3: 

93A FC Inspection Date: 
92A FC Inspection Frequency (in months): 
Next FC Inspection Date: 
93B UW Inspection Date: 
92B UW Inspection Frequency (in months): 
Next UW Inspection Date: 
UW Inspected By: 
93C SI Date: 
92C SI Frequency (in months): 
Next SI Date: 
(AR) Special Equipment: 
(AR) Special Equipment: 
Special Inspection By: 
(AS) Special Testing Type: 

(AS) Special Testing Type: 

(AY) Date of Special Testing: 

(GA) Is Painting Required? No: No parts of the structure require painting 
(GB) Environment: 
(GC) Date of Current Paint Inspection: 
(GR) Date of Last Painting: 
(GP) Remarks 1: Concrete Slab Superstructure 

(GQ) Remarks 2: N 

17-7
IN-DEPTH FRACTURE CRITICAL/PIN-HANGER

(FY) Special FCM Insp. Required: □
(FZ) Special P/H Insp. Required: □
(FQ) Latest In-Depth FC/ Pin-Hanger Inspection Date: 1/1/1901
(FQ1) Special FCM Insp. Date:
(FQ2) Special P/H Insp. Date:

(FR) Consultant: _
(FR1) Special FCM Insp. Consultant:
(FR2) Special P/H Insp. Consultant:

CYCLE DATA

(P1) Group Number: 081K4
(P2) Work Spec Number:
(CI) Cycle Number: 17
(CJ) Inspection Type: R: Regular Inspection
(CM) Current Consultant: H2 - IH Engineers, P.C.
(CO) Previous Consultant: A10 - Advantage Engg.
M87 Contract State Agreement No.: 2014H1976A
Agreement Modification Number:
Contract ID: 1550803
Contract Date:

(BM) Federal Job Number:
(BN) State Job Number:
(P3) NTP Date: Funding Category: Federal - STP OnSystem
(P4) State Project Manager: Ayodele Oshilaja
(P5) State Assistant PM:
County Project Manager:
M130 Project Name:

STRUCTURE STATUS
Bridge Status:
Bridge Lifecycle Phase:
Data Last Updated:
1A - ROADWAY DATA

ROADWAY IDENTIFICATION

Roadway Name: Willow Grove Rd. (CR 613)
Bridge ID/Structure Number: 0810K04
Roadway SRI: 08000613
NBI Roadway?: Yes

5A Position of Route (On/Under): 1: Route carried "on" the structure
5B Route Signing Prefix: 4 - COUNTY HIGHWAY
5C Level of Service: 1 - MAINLINE
5D Route Number: 613
5E Directional Suffix: 0 - NOT APPLICABLE

HIGHWAY NETWORKS AND SERVICE CLASSIFICATION

11 Milepoint: 0.700
12 Base Highway Network: Inventory Route is not on the Base Network
13A LRS inventory Route:
13B Subroute Number: N
19 Toll Facility: 3 - On free road. The structure is toll-free and carries a toll-free highway.
26 Functional Classification: 17 - Urban - Collector

100 STRAHNET Highway Designation: 0 - Not a STRAHNET route
102 Traffic Direction: 2 - 2-way traffic
104 NHS System: 0 - Structure/Route is NOT on NHS
105 Federal Lands Highways: 0 - Not Applicable
110 Designated Truck Highway Network: Inventory route not on network

School Bus: ☐ Transit Route: ☐ Emergency Route: ☐

TRAFFIC DATA

28 Number of Lanes: ON 2 UNDER 0
Number of Medians: 0
Roadway Speed Limit: 40 mph
19 Bypass/Detour Length: 4 miles
Detour Speed: 25 mph
(FM) Incidents Reported: 
Accident Count: Rate:
ADT Class: ADT Class 3
29 ADT Total: 2831
30 Year of ADT: 2014
114 Future ADT: 3454
115 Year of Future ADT: 2034
109 Truck ADT (%): 3
(FW) Estimated ADT: Yes

VERTICAL AND HORIZONTAL CLEARANCES

10 Vertical Clearance: 99.99 ft
53 Minimum Vertical Clearance over Bridge: 99.99 ft
54A Minimum Vertical Underclearance Ref: N - Feature not a highway or railroad
54B Minimum Vertical Underclearance: 0.00 ft
(DJ) Minimum Vertical Underclearance (including shoulders): 0.00 ft
32 Approach Roadway Width: 30.000 ft
47 Inventory Route, Total Horizontal Clearance: 33.7 ft
51 Bridge Roadway Width, Curb-to-Curb: 33.7 ft
55A Minimum Lateral Underclearance Ref: N - Feature not a highway or railroad
55B Minimum Lateral Underclearance on Right: 0.0 ft
56 Minimum Lateral Underclearance on Left: 0.0 ft
Element Inspection

<table>
<thead>
<tr>
<th>Environment</th>
<th>Total Quantity</th>
<th>Units</th>
<th>Condition State 1</th>
<th>Condition State 2</th>
<th>Condition State 3</th>
<th>Condition State 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>38 - Reinforced Concrete Slab</td>
<td>1117</td>
<td>sq. ft</td>
<td>0</td>
<td>1057</td>
<td>60</td>
<td>0</td>
</tr>
<tr>
<td>1080 - Delamination/Spall/Patched Area</td>
<td>60</td>
<td></td>
<td></td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1090 - Exposed Rebar</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>1120 - Efflorescence/Rust Staining</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>1130 - Cracking (RC and Other)</td>
<td>941</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>941</td>
</tr>
<tr>
<td>1190 - Abrasion/Wear (PSC/RC)</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>510 - Wearing Surfaces</td>
<td>1117</td>
<td>sq. ft</td>
<td></td>
<td></td>
<td>1117</td>
<td></td>
</tr>
<tr>
<td>215 - Reinforced Concrete Abutment</td>
<td>77</td>
<td>ft.</td>
<td>13</td>
<td>32</td>
<td>32</td>
<td>0</td>
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<tr>
<td>1080 - Delamination/Spall/Patched Area</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1120 - Efflorescence/Rust Staining</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>1130 - Cracking (RC and Other)</td>
<td>37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>330 - Metal Bridge Railing</td>
<td>29</td>
<td>ft.</td>
<td>29</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>515 - Steel Protective Coating</td>
<td>104</td>
<td>sq. ft</td>
<td>104</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>331 - Reinforced Concrete Bridge Railing</td>
<td>29</td>
<td>ft.</td>
<td>29</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1120 - Efflorescence/Rust Staining</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>1130 - Cracking (RC and Other)</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>845 - Other Wingwall</td>
<td>52</td>
<td>ft.</td>
<td>36</td>
<td>16</td>
<td>0</td>
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</tr>
<tr>
<td>1080 - Delamination/Spall/Patched Area</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
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<td>15</td>
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<tr>
<td>1130 - Cracking (RC and Other)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
Structure No.: 0810-K04          Route: 9008          Cycle No.: 11/18/2014
Name: Willow Grove Road (CR 613) over Still Run at Iona Lake          Insp. Date: 17

LOAD RATING SUMMARY SHEET (LRSS)
(Form NJ-BI-101 Created 1/25/2011)

Project Information:
Group: 08D4          Agreement No.: 2014BI976A          Contract ID: 15-50803          Agree/Mod No.: 0

Rating Information:
Method: LRFR: No          LFR: Yes          ASR: Yes          Other (Specify): N/A
Rating Date: 01/1995          Computer Software Used: PennDOT BAR 7          Version: Unknown
Load Testing: No          Cycle when Rating Performed: 7          Design Load: Unknown

Structure Information:
Plans Available? No          Contract Designation: Unknown
Overlay? Yes          Considered in Rating? Yes          Type/Thickness: Unknown
Section Losses? No          Considered in Rating? No          Item 59 Cond.: 5

For LRFR Use Only:
Dynamic Load Allowance:          Condition Factor:          System Factor: 
ADTT (one direction):          Resistance Factor:          FCM: No

Load Rating Engineer (LRE):
Name: Unknown          Firm: Unknown          Initial: 

Load Rating Reviewer (LRR) certification as per the NBIS Title 23 CFR Section 650.309(c):
Name: Unknown          N.J. P.E. No.: 
Firm: Unknown

I certify that this rating is an accurate representation of the subject structure, considering all deterioration and/or changes to loading conditions, to the extent determinable by research and visual inspection and testing performed. I am charged with the overall responsibility for bridge capacity evaluation for the above mentioned structure.

Sign          Date

17-13
LOAD RATING SUMMARY SHEET (LRSS) (cont.)

Rating Comments:
The inventory ratings for all truck types are lower than the legal loads. However the operating ratings are higher than the legal loads therefore, load posting is not required at this time.
Plans are not available in the County records therefore LARS load ratings will not be computed.

The Load Factor and Working Stress ratings, computed in the 7th cycle report in accordance with the FHWA directive dated November 1993, AASHTO Manual for Condition Evaluation of Bridge and Structures, are as follows:

<table>
<thead>
<tr>
<th>Material</th>
<th>Compressive Strength f'c</th>
<th>Tensile Strength</th>
<th>Yield</th>
<th>Inventory</th>
<th>Operating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>2,400</td>
<td>---</td>
<td>---</td>
<td>960</td>
<td>1,320</td>
</tr>
<tr>
<td>Reinforcing Steel</td>
<td>---</td>
<td>---</td>
<td>33,000</td>
<td>18,000</td>
<td>25,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Member</th>
<th>Concrete Slab Cond. Rating = 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck Type (Tons)</td>
<td>As-Built</td>
</tr>
<tr>
<td>H15 (15T)</td>
<td>9 21</td>
</tr>
<tr>
<td>HL-93 (NL)</td>
<td>---</td>
</tr>
<tr>
<td>HS-20 (36T)</td>
<td>16 38</td>
</tr>
<tr>
<td>3 (25T)</td>
<td>13 30</td>
</tr>
<tr>
<td>3S2 (40T)</td>
<td>20 48</td>
</tr>
<tr>
<td>3-3 (40T)</td>
<td>25 59</td>
</tr>
<tr>
<td>SU4 (27T)</td>
<td>---</td>
</tr>
<tr>
<td>SU5 (31T)</td>
<td>---</td>
</tr>
<tr>
<td>SU6 (35T)</td>
<td>---</td>
</tr>
<tr>
<td>SU7 (39T)</td>
<td>---</td>
</tr>
</tbody>
</table>

1 Operating level rating of design load or legal load rating
2 Controlling Member
(NL) = Notional Load
SOUNDED DATA

<table>
<thead>
<tr>
<th>POINT</th>
<th>LOCATION</th>
<th>CYCLE 9 CLEAR DIMENSION</th>
<th>CYCLE 16 CLEAR DIMENSION</th>
<th>NOVEMBER 2014 (CYCLE 17) CLEAR DIMENSION</th>
<th>WATER DEPTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>WEST ABUTMENT</td>
<td>6.00'</td>
<td>7.00'</td>
<td>7.00'</td>
<td>2.00'</td>
</tr>
<tr>
<td>B</td>
<td>SPAN</td>
<td>6.00'</td>
<td>6.00'</td>
<td>7.00'</td>
<td>2.00'</td>
</tr>
<tr>
<td>C</td>
<td>EAST ABUTMENT</td>
<td>6.00'</td>
<td>6.83'</td>
<td>7.00'</td>
<td>2.00'</td>
</tr>
</tbody>
</table>

NOTES:
1. THE CLEAR DIMENSIONS GIVEN ABOVE ARE REFERENCED FROM THE BOTTOM OF SLAB AT THE FASCIA TO THE STREAMBED.
2. THE WATER DEPTH DIMENSIONS ARE MEASURED FROM THE WATER SURFACE (AT THE TIME OF INSPECTION) TO THE STREAMBED.
3. ELEVATION DATA TAKEN FROM CYCLE 14 REPORT.
SOUNDING DATA

<table>
<thead>
<tr>
<th>POINT</th>
<th>LOCATION</th>
<th>CYCLE 9 CLEAR DIMENSION</th>
<th>CYCLE 16 CLEAR DIMENSION</th>
<th>NOVEMBER 2014 (CYCLE 17) CLEAR DIMENSION</th>
<th>WATER DEPTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>WEST ABUTMENT</td>
<td>6.00'</td>
<td>5.92'</td>
<td>6.00'</td>
<td>1.00'</td>
</tr>
<tr>
<td>E</td>
<td>ISLAND</td>
<td>6.00'</td>
<td>6.92'</td>
<td>7.00'</td>
<td>2.00'</td>
</tr>
<tr>
<td>F</td>
<td>EAST ABUTMENT</td>
<td>6.00'</td>
<td>6.00'</td>
<td>6.00'</td>
<td>1.00'</td>
</tr>
</tbody>
</table>

NOTES:
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2. THE WATERDEPTH DIMENSIONS ARE MEASURED FROM THE WATER SURFACE (AT THE TIME OF INSPECTION) TO THE STREAMBED.
3. ELEVATION DATA TAKEN FROM CYCLE 14 REPORT.
<table>
<thead>
<tr>
<th>Location:</th>
<th>South elevation, looking north.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>General view.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location:</th>
<th>North elevation, looking south.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>General view.</td>
</tr>
<tr>
<td>Structure No.:</td>
<td>0810-K04</td>
</tr>
<tr>
<td>---------------</td>
<td>----------</td>
</tr>
<tr>
<td>Name:</td>
<td>Willow Grove Road (CR 613) over Still Run at Iona Lake</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Photo No:</th>
<th>17-03</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Location:</th>
<th>East approach roadway, looking west.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>General view.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Photo No:</th>
<th>17-04</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Location:</th>
<th>West approach roadway, looking east.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>General view.</td>
</tr>
<tr>
<td>Location:</td>
<td>Description:</td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td>Upstream channel, looking north.</td>
<td>General view.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location:</th>
<th>Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downstream channel, looking south.</td>
<td>General view.</td>
</tr>
<tr>
<td>Location:</td>
<td>Underside of reinforced concrete slab, looking north.</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Description:</td>
<td>General view. Note the areas of map cracking throughout the underside of concrete slab.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location:</th>
<th>West approach roadway, north end terminal system, looking northeast.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Note the minor impact damage to the end terminal system at the trailing end.</td>
</tr>
<tr>
<td>Location:</td>
<td>Underside of reinforced concrete slab, below the north fascia, looking northeast.</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Description:</td>
<td>Large spall with exposed rebar, longitudinal and map cracking with efflorescence and stalactites on the underside of concrete slab. Note the areas of moderate efflorescence with map cracking at the north end of the east abutment breastwall. Also note the moderate scaling on the upstream channel spillway.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location:</th>
<th>Underside of the reinforced concrete slab, looking south.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Areas of moderate honeycombing at isolated locations.</td>
</tr>
<tr>
<td>Location:</td>
<td>West abutment breastwall at the south end, interface between the wingwall and breastwall, looking west.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Description:</td>
<td>Spall in the west abutment breastwall at the interface with the southwest wingwall. Note the large spall with exposed moderately corroded rebar on the underside of the slab at the south fascia.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location:</th>
<th>East abutment breastwall, looking northeast.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Wide vertical and horizontal cracks at the south end of the east abutment breastwall.</td>
</tr>
<tr>
<td>Location:</td>
<td>Southeast wingwall, looking southeast.</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Description:</td>
<td>Areas of severe spalling at the base of the wall and a ¼&quot; wide full height vertical crack at the breastwall and wingwall interface.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location:</th>
<th>South parapet, looking southeast.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Note the areas of spalling with exposed rebar and map cracking with efflorescence throughout.</td>
</tr>
<tr>
<td>Location:</td>
<td>West approach roadway, north bituminous concrete curb, looking west.</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td>Description:</td>
<td>Areas of longitudinal and transverse cracks on the curb. Also note the minor erosion for 6' long x 6&quot; high in the embankment behind the curb.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location:</th>
<th>East approach roadway, looking north.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Severe scaling and spalling in the concrete base below the steel hand rail post.</td>
</tr>
<tr>
<td>Structure No.:</td>
<td>Route:</td>
</tr>
<tr>
<td>---------------</td>
<td>--------</td>
</tr>
<tr>
<td>0810-K04</td>
<td>9008</td>
</tr>
<tr>
<td>Name:</td>
<td></td>
</tr>
<tr>
<td>Willow Grove Road (CR 613) over Still Run at Iona Lake</td>
<td>Insp. Date:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location:</th>
<th>Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast embankment, looking west.</td>
<td>Small boat utilized during the inspection.</td>
</tr>
</tbody>
</table>
Structure No.: 0810-K04  
Route: 9008  
Cycle No.: 11/18/2014  
Name: Willow Grove Road (CR 613) over Still Run at Iona Lake  
Insp. Date: 17

GLOUCESTER COUNTY  
STRUCTURAL EVALUATION AND BRIDGE MANAGEMENT  
FIELD NOTES

Inspectors: Navid Rahman  
Jinesh Shah  
Crew Chief: Nishit Patel  
Weather: Sunny  
Special Equipment Used: Small Boat (Photo 17-17)

RATINGS:

N  Not applicable.  
9  Excellent Condition.  
8  Very Good Condition – no problems noted.  
7  Good Condition – some minor problems.  
6  Satisfactory Condition – some minor deterioration of structural elements.  
5  Fair Condition – minor section loss to primary structural elements.  
4  Poor Condition – advanced section loss to primary structural elements.  
3  Serious Condition – seriously deteriorated primary structural elements.  
2  Critical Condition – facility should be closed until repairs are made.  
1  Imminent Failure Condition – facility closed. Study of repairs is feasible.  
0  Failed Condition – facility is closed and beyond repair.

<table>
<thead>
<tr>
<th>GPS COORDINATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ Southwest corner</td>
</tr>
<tr>
<td>N 39° 35' 42.00''</td>
</tr>
<tr>
<td>W 75° 04' 54.05''</td>
</tr>
</tbody>
</table>

GENERAL

Type of Bridge: Single Span, Simply Supported, Reinforced Concrete Slab  
Year Built: 1938  
Year of Widening / Major Repairs: N/A  
No. of Lanes: On 2  
Under N/A (Waterway)  
Vertical Clearances: Over Deck: Unlimited  
Minimum Under (Item 54): N/A (Waterway)  
Maximum Under (Item 10): N/A (Waterway)  
Horizontal Underclearance: Total Horizontal Clearance: N/A (Waterway)  
Right: N/A (Waterway)  
Left: N/A (Waterway)

Overall Physical Condition of Structure: Fair due to the condition of the superstructure and substructure.
<table>
<thead>
<tr>
<th>RATING</th>
<th>COMPONENT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Wearing Surface / Top of Deck (Bituminous Concrete)</td>
<td>No defects noted</td>
</tr>
<tr>
<td>5</td>
<td>Underside of Deck</td>
<td>See superstructure notes</td>
</tr>
<tr>
<td>N</td>
<td>Median</td>
<td>None</td>
</tr>
<tr>
<td>N</td>
<td>Curbs High</td>
<td>None</td>
</tr>
<tr>
<td>N</td>
<td>Sidewalks / Safetywalks</td>
<td>None</td>
</tr>
<tr>
<td>6</td>
<td>Parapets/ Balustrades (Concrete)</td>
<td>North parapet exhibits areas of map cracking up to 0.012” wide spaced at 5” apart some with efflorescence (60 SF) and both ends exhibit surface spalling (1 SF) each. South parapet exhibits areas of map cracking varying from 0.012” to 0.020” wide spaced at 5” apart with efflorescence throughout for 80 SF. There is a spall with exposed rebar at the west end (1 SF), one spall along the base at west end (2 SF) and one spall at the top coping near the west end (2 SF) (Photo 17-14). There is a large spall on the south face of south parapet (10’ long x 1’ high x 1” deep) near the west end.</td>
</tr>
<tr>
<td>7</td>
<td>Railings / Fencing (W-beam)</td>
<td>No significant defects</td>
</tr>
<tr>
<td>N</td>
<td>Deck Joints / Filler Material</td>
<td>None</td>
</tr>
<tr>
<td>N</td>
<td>Drains and Scuppers</td>
<td>None</td>
</tr>
<tr>
<td>N</td>
<td>Light Stands</td>
<td>None</td>
</tr>
<tr>
<td>N</td>
<td>Utilities</td>
<td>None</td>
</tr>
<tr>
<td>N</td>
<td>Others</td>
<td>None</td>
</tr>
</tbody>
</table>

Additional Remarks: Overhead wires along the south side.
**APPROACHES**

- **SI&A Item BA Rating:** 7
- **SI&A Item 72 Rating:** 8

### APPROACH - West

<table>
<thead>
<tr>
<th>RATING</th>
<th>COMPONENT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Approach Slab / Pavement (Bituminous Concrete)</td>
<td>No defects noted</td>
</tr>
<tr>
<td>8</td>
<td>Approach Shoulder (Bituminous Concrete)</td>
<td>No defects noted</td>
</tr>
<tr>
<td></td>
<td>Approach Roadway Vertical and Horizontal Alignment</td>
<td>Vertical: Level Horizontal: Straight and tangent</td>
</tr>
<tr>
<td>6*</td>
<td>Guide Rail Condition (W-Beam)</td>
<td>No significant defects. There is minor impact damage to the northwest end terminal system (6 LF) at the trailing end <em>(Photo 17-08).</em></td>
</tr>
<tr>
<td>N</td>
<td>Sidewalks</td>
<td>None</td>
</tr>
<tr>
<td>6</td>
<td>Curbs (Bituminous Concrete, at north only)</td>
<td>There are 1/8&quot; wide transverse and longitudinal cracks for full length (100 LF) and back face is exposed up to 6&quot; high due to the minor erosion on the embankment for 6' long <em>(Photo 17-15).</em></td>
</tr>
<tr>
<td>N</td>
<td>Utilities</td>
<td>None</td>
</tr>
<tr>
<td>7</td>
<td>Approach Roadway Embankment</td>
<td>No significant defects</td>
</tr>
<tr>
<td>6</td>
<td>Others Fire Hydrant Concrete base of Steel railing at north side only</td>
<td>No significant defects The concrete base of the steel hand rail exhibits severe scaling and spalling throughout behind the w-beam guide rail system (10’ long x 1’ wide x 3’ deep) <em>(similar to Photo 17-16).</em></td>
</tr>
</tbody>
</table>

**Additional Remarks:** Overhead wires along the south side. *The defect is not significant enough to downgrade the entire element.*
## APPROACHES

**Approach**  East

### RATING  COMPONENT  REMARKS

<table>
<thead>
<tr>
<th>8</th>
<th>Approach Slab / Pavement (Bituminous Concrete)</th>
<th>No defects noted</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Approach Shoulder (Bituminous Concrete)</td>
<td>No defects noted</td>
</tr>
<tr>
<td>8</td>
<td>Approach Roadway Vertical and Horizontal Alignment</td>
<td>Vertical: Level Horizontal: Straight for 400' then slight curve to north</td>
</tr>
<tr>
<td>7</td>
<td>Guide Rail Condition (W-Beam)</td>
<td>No significant defects</td>
</tr>
<tr>
<td>N</td>
<td>Sidewalks</td>
<td>None</td>
</tr>
<tr>
<td>6</td>
<td>Curbs (Bituminous Concrete, at north only)</td>
<td>The back face of the curb is exposed up to 5&quot; high due to the minor erosion on the embankment for 4' long approximately 25' from the bridge (similar to Photo 17-15).</td>
</tr>
<tr>
<td>N</td>
<td>Utilities</td>
<td>None</td>
</tr>
<tr>
<td>7</td>
<td>Approach Roadway Embankment</td>
<td>No significant defects</td>
</tr>
<tr>
<td>6</td>
<td>Others Concrete base of Steel railing at north side only</td>
<td>The concrete base of the steel hand rail exhibits severe scaling and spalling throughout behind the w-beam guide rail system (10&quot; long x 1&quot; wide x 3&quot; deep) (Photo 17-16).</td>
</tr>
</tbody>
</table>

**Additional Remarks:** Overhead wires along the south side.
## SUPERSTRUCTURE

**SPAN #** Single  

**SI&A Item 59 Condition Rating:** 5

<table>
<thead>
<tr>
<th>RATING</th>
<th>COMPONENT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Reinforced Concrete Slab</td>
<td>There are areas of map cracking with efflorescence less than 0.012&quot; wide throughout the underside of the concrete slab (941 SF) (Photo 17-07) and areas of moderate honeycombing at isolated locations at the underside of the concrete slab for 6 SF (Photo 17-10). There are large areas of spall and delaminated concrete with exposed moderately corroded rebar, longitudinal crack with efflorescence and stalactites below both fascia for full length x 2&quot; deep x 18&quot; wide each on the underside of concrete slab (Photos 17-09 and 17-11). The concrete haunches at both sides exhibit vertical cracks up to 0.009&quot; wide spaced at 1’ apart some with efflorescence.</td>
</tr>
<tr>
<td>N</td>
<td>Diaphragms / Cross Frames</td>
<td>None</td>
</tr>
<tr>
<td>N</td>
<td>Bearings</td>
<td>None</td>
</tr>
<tr>
<td>N</td>
<td>Deflection and Vibration</td>
<td>None noticed at time of inspection.</td>
</tr>
<tr>
<td>N</td>
<td>Others Hunches</td>
<td>None</td>
</tr>
</tbody>
</table>

**Additional Remarks:**

## FATIGUE DETAILS

**Estimated percentage of large trucks in ADT:** 3%

<table>
<thead>
<tr>
<th>Category</th>
<th>Detail Description and Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>None</td>
</tr>
</tbody>
</table>

17-30
## SUBSTRUCTURE

### ABUTMENT West

<table>
<thead>
<tr>
<th>RATING</th>
<th>COMPONENT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Breastwall (Concrete)</td>
<td>There is a spall at the west abutment and the southwest wingwall interface for 8&quot; wide x 5' high x 1&quot; deep with moderate efflorescence (Photo 17-11). One 0.012&quot; wide vertical crack for full height approximately 10' from the south end and two 0.012&quot; wide vertical cracks for full height approximately 10' from the north end at 2' apart with moderate efflorescence. Also north end exhibits moderate efflorescence with 0.012&quot; wide map cracking for 10 SF (similar to Photo 17-09)</td>
</tr>
<tr>
<td>N</td>
<td>Backwall</td>
<td>Not visible</td>
</tr>
<tr>
<td>N</td>
<td>Bridge Seat</td>
<td>Not visible</td>
</tr>
<tr>
<td>7</td>
<td>Wingwalls / Retaining Walls (Concrete)</td>
<td>No significant defects: Stone gabion/rip-rap placed at southwest approach embankment and along southwest wingwall</td>
</tr>
<tr>
<td>N</td>
<td>Embankment / Slope Protection</td>
<td>None</td>
</tr>
<tr>
<td>7</td>
<td>Others / Footings</td>
<td>3 Weep holes on the breastwall: No significant defects</td>
</tr>
</tbody>
</table>

### ABUTMENT East

<table>
<thead>
<tr>
<th>RATING</th>
<th>COMPONENT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Breastwall (Concrete)</td>
<td>Two 0.012&quot; wide vertical cracks for full height approximately 10’ from the north end at 3’ apart with moderate efflorescence. Also north end exhibits moderate efflorescence with 0.012” wide map cracking for 10 SF (Photo 17-09). There a vertical and horizontal cracks up to 0.040” wide at the south end for 25 LF on the east abutment breastwall (Photo 17-12). There is 3 SF of moderate efflorescence at south end (Photo 17-13).</td>
</tr>
<tr>
<td>N</td>
<td>Backwall</td>
<td>Not visible</td>
</tr>
<tr>
<td>N</td>
<td>Bridge Seat</td>
<td>Not visible</td>
</tr>
<tr>
<td>5</td>
<td>Wingwalls / Retaining Walls (Concrete)</td>
<td>The southeast integral wingwall exhibits one full height vertical crack up to ¼&quot; wide at the interface with the abutment breastwall (Photo 17-13). The southeast integral wingwall exhibits severe spalling at the base for 15’ long x 2.5’ high (Photo 17-13) mostly covered with stone riprap.</td>
</tr>
<tr>
<td>N</td>
<td>Embankment / Slope Protection</td>
<td>None</td>
</tr>
<tr>
<td>N</td>
<td>Others / Footings</td>
<td></td>
</tr>
</tbody>
</table>

Additional Remarks:
**Structure No.:** 0810-K04  
**Route:** 9008  
**Cycle No.:** 11/18/2014  
**Name:** Willcow Grove Road (CR 613) over Still Run at Iona Lake  
**Insp. Date:** 17

**Remarks:**

**SUBSTRUCTURE/SCOUR**

SI&A Item 60 Condition Rating: 5

**ABUTMENT West**

<table>
<thead>
<tr>
<th>RATING</th>
<th>COMPONENT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Description</td>
<td>Stabilized stone and gravel bed noted on downstream bed and concrete</td>
</tr>
<tr>
<td></td>
<td></td>
<td>invert slab below structure.</td>
</tr>
<tr>
<td></td>
<td>Condition</td>
<td>No significant defect</td>
</tr>
</tbody>
</table>

**PROBING/SCOUR**

| 8      | Findings                       | No evidence of scour or exposed footing noted.                        |
|        | Changes Since Prior Inspection | None                                                                   |
|        | Debris                         | None                                                                   |

**Repair Quantities:** None

**ABUTMENT East**

<table>
<thead>
<tr>
<th>RATING</th>
<th>COMPONENT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Description</td>
<td>Stabilized stone and gravel bed noted on downstream bed and concrete</td>
</tr>
<tr>
<td></td>
<td></td>
<td>invert slab below structure.</td>
</tr>
<tr>
<td></td>
<td>Condition</td>
<td>No significant defect</td>
</tr>
</tbody>
</table>

**PROBING/SCOUR**

| 8      | Findings                       | No evidence of scour or exposed footing noted.                        |
|        | Changes Since Prior Inspection | None                                                                   |
|        | Debris                         | None                                                                   |

**Repair Quantities:** None
**WATERWAY/CHANNEL**

**WATERWAY** Still Run at Iona Lake

**SPAN(S)** Single

**SI&A Item No. 61:** 7 (Field)

**SI&A Item No. 71:** 8 (Field)

**Prioritization Category:** N/A

**Scour Sufficiency Rating:** N/A

<table>
<thead>
<tr>
<th>RATING</th>
<th>COMPONENT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>FLOW CONDITIONS</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Direction</td>
<td>North to South</td>
</tr>
<tr>
<td></td>
<td>Magnitude</td>
<td>Upstream check dam in front of the Structure.</td>
</tr>
<tr>
<td></td>
<td>Velocity</td>
<td>3 FT/Sec</td>
</tr>
<tr>
<td></td>
<td><strong>EMBANKMENTS</strong></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Upstream</td>
<td>Stable with concrete wall.</td>
</tr>
<tr>
<td>7</td>
<td>Downstream</td>
<td>Stable with stone riprap.</td>
</tr>
<tr>
<td>6</td>
<td>Channel Countermeasures</td>
<td>Reinforced concrete invert slab between breastwalls. Reinforced concrete spillway dam at the upstream opening exhibits moderate scaling throughout (Photo 17-09).</td>
</tr>
<tr>
<td></td>
<td><strong>CHANNEL MOVEMENT AND CHANGES</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Horizontal Location</td>
<td>Downstream: Straight 50' then turns to west. Upstream: Lake with check dam controlling flow approximately 20' from the bridge.</td>
</tr>
<tr>
<td></td>
<td>Cross Section</td>
<td>See sounding sketches.</td>
</tr>
<tr>
<td></td>
<td>Alignment</td>
<td>In line with structure. Beneath structure 100% streambed is occupied with water.</td>
</tr>
<tr>
<td></td>
<td>Changes Since Previous Inspection</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Navigation Clearances</td>
<td>Not a navigable waterway.</td>
</tr>
<tr>
<td></td>
<td>Waterway Opening</td>
<td>Adequate for present flow at the time of inspection.</td>
</tr>
<tr>
<td>7</td>
<td>Other/Debris in Channel</td>
<td>None</td>
</tr>
</tbody>
</table>

**Repair Quantities:** None
**HIGHWAY SAFETY**

<table>
<thead>
<tr>
<th>RATING</th>
<th>COMPONENT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Bridge Railing</td>
<td>42&quot; high concrete parapet (Typical). South: Concrete parapet supplemented in front with deck mounted W-steel beam guide rail with steel post and steel spacer at 6’ spacing. Steel beam is single rail thickness. North: Steel connector plate runs 1/3rd of parapet at East and West.</td>
</tr>
<tr>
<td>0</td>
<td>Transition to Bridge Railing</td>
<td>Southwest and Southeast: Post spacing is 3' with steel spacers. Northwest and Northeast: Post spacing is 3' with steel spacers.</td>
</tr>
<tr>
<td>0</td>
<td>Curb / Sidewalk Terminations</td>
<td>Only at north side of both approaches.</td>
</tr>
<tr>
<td>0</td>
<td>Approach Guide Rails</td>
<td>W-beam guide rail with substandard steel spacer blocks with 6'-3&quot; post spacing at all corners and adequate length.</td>
</tr>
<tr>
<td>1</td>
<td>Approach Guide Rail End Terminals</td>
<td>The approach guide rail end terminals (BCT’s) appear to be meeting current acceptable standards.</td>
</tr>
</tbody>
</table>

**DECK GEOMETRY**

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge Cross Section</td>
<td>Approach roadway width is narrower than the bridge roadway width (<a href="#">see sketch on next page</a>).</td>
</tr>
</tbody>
</table>
| Adequacy of Lane / Shoulder Widths | Two (2) lanes, two way traffic (Table 2A)  
SI&A Item 51 (Curb to curb) = 33.7'  
ADT = 2,831 (Year 2014)  
SI&A Item 68 = 4 (Meets minimum tolerable limits) |
| Vertical Clearance over Deck | Unlimited                                                              |

*Posting for Load / Speed / Clearance Restrictions | None
DECK CROSS SECTION

SI&A ITEM 52 = 38.5' (OUT TO OUT)

DISTANCE BETWEEN THE GUIDE RAIL POST AND BRIDGE RAILING VARIES,
(12' AT EAST END,
21' AT WEST END)

SI&A ITEM 51 = 33.7' (GUIDE RAIL TO GUIDE RAIL)

W-BEAM GUIDE RAIL
ATTACHED TO PARAPET

REINFORCED CONCRETE SLAB

ABUTMENT
FLOW

FOOTING

DECK CROSS SECTION (Looking East)

SCALE: N.T.S.
<table>
<thead>
<tr>
<th>Structure No.: 0810-K04</th>
<th>Route: 9008</th>
<th>Cycle No.: 11/18/2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: Willcw Grove Road (CR 613) over Still Run at Iona Lake</td>
<td></td>
<td>Inspect. Date: 17</td>
</tr>
</tbody>
</table>

**FENCING**

<table>
<thead>
<tr>
<th>Coding of SI&amp;A Item FN:</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coding of SI&amp;A Item FO:</td>
<td>N</td>
</tr>
<tr>
<td>Coding of SI&amp;A Item FP (in thousands):</td>
<td>0</td>
</tr>
</tbody>
</table>

Warranted (Per Design Manual Section 23): No

If Yes: (#) Description:

<table>
<thead>
<tr>
<th>Current Status of Fence &amp; Sidewalk:</th>
<th>Left Side</th>
<th>Right Side</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Fence:</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>b. Sidewalk Width:</td>
<td>0.0 FT</td>
<td>0.0 FT</td>
</tr>
<tr>
<td>c. Total Height of fence above curb/sidewalk:</td>
<td>0.0 FT</td>
<td>0.0 FT</td>
</tr>
<tr>
<td>d. Type of Fence (per Design Manual Section 23):</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Action Recommended: None

Estimated Cost: $0.00
<table>
<thead>
<tr>
<th>CYCLE NO.</th>
<th>YEAR</th>
<th>WORK DONE SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>2014</td>
<td>None</td>
</tr>
</tbody>
</table>
| 16        | 2012 | 1. Recently resurfaced roadway over the Bridge and on both approaches.  
           |      | 2. Stone gabion/rip-rap placed at Southeast and Southwest approach embankments and along wingwalls.  
           |      | 3. Fire hydrant installed at Northwest approach corner. |
| 15        | 2010 | None              |