BEFORE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Rail Safety Division Application Type (check all that apply):
☐ E-Installation, removal or substitution of warning devices at a public crossing
☒ G-Construction, alteration, relocation, abolition or suspension of a public crossing
☐ P-Installation of traffic signals with preemption on the approach to a public crossing
☐ W-Installation of a fixed utility company's facilities at a public crossing (Pipe & Wire)
☐ X-Exemption from the Commission's railroad clearance requirement

Application Docket No.
To Be Assigned

For Applications E/G/P/W use caption 1, for X use caption 2 (delete unused caption):
In re: **(1)** Application for the reopening of the Randall Avenue Bridge over (crossing AAR # - AAR 530 983 U) AMTRAK-owned railroad tracks located in Bristol Township in Bucks County, PA.

To Pennsylvania Public Utility Commission:

1. The name, address, telephone number, and e-mail address of the applicant are:
Bristol Township, 2501 Bath Road, Bristol, PA 19007,(215)-785-0500, rmazur@bristoltownship.org

2. The name, address, telephone number, and e-mail address of the applicant's attorney are:
Flager & Associates, PC, 1210 Northbrook Drive, Suite 280, Feasterville-Trevose, PA 19053, (215)-953-5200,scott@flagerlaw.com

3. **The Applicant, Bristol Township, is also the municipality in where the crossing is located. The Randall Avenue Bridge crosses above five (5) active AMTRAK-owned railroad tracks and one (1) non-operational railroad track within Bristol Township. This bridge provides a vital link between Penn Avenue and North Radcliffe Street. Per a PUC Order on July 13, 2000 (attached as Exhibit A), maintenance obligations of the structure were assigned to Bristol Township and as a result, the Township is responsible for maintaining the bridge. Additionally, a provision included under Order #12 in Exhibit A specifies, "If the subject bridge is closed in the future by Commission order, a new proceeding shall be instituted for the purpose of assigning maintenance and cost responsibility for the closed bridge and for the removal and reconstruction of the bridge." The Township is requesting the Commission reevaluate maintenance responsibilities of the structure due to the bridge closure that occurred in early 2023.**

4. **Bristol Township requests approval to reopen the Randall Avenue Bridge (BMS# 09 7101 0090 6434 / BR Key 7587) now that the structure has been rehabilitated. Several repairs, retrofits, and improvements have been implemented addressing maintenance items identified in the 2022 National Bridge Inspection Standards (NBIS) inspection report and concerns of concrete falling onto the railroad tracks. The bridge repairs, retrofits, and improvements include but are not limited to installation of timber debris shielding (completed under a separate docket) over the active passenger rail tracks, concrete repairs wrapped in carbon fiber reinforced polymer at both abutments, new wings/wingwalls at each bridge corner, new girder bearings at each abutment, repaired concrete deck and sidewalks at each end of the bridge, replacement pedestrian railings and fences at each bridge corner, improved approach guide rail and curbing at each bridge corner and new, below grade, foundation drains installed behind each abutment. As-built plans are currently being prepared for these bridge repairs will be submitted to the PUC upon completion of the documents.**

5. **Per the PUC Order mentioned above, Bristol Township was assigned ownership and maintenance responsibilities of the Randall Avenue Bridge. The National Railroad Passenger Corporation (AMTRAK) is the owner of five (5) operational and one (1) (non-operational) rail lines that run beneath the Randall Avenue Bridge as part of the Northeast Corridor. Additional rail entities that are believed to operate on the tracks are SEPTA, Norfolk Southern, and Conrail. A Permit to Enter (PTE) has been obtained by the Township from AMTRAK for the attempts that have been made to inspect the structure. An additional PTE**

has been obtained by Bristol Township's contractor that has performed the Abutment repairs, CFRP wrapping, and bearing plate replacement work. The following individuals have been notified via Electronic Mail and/or First-Class Mail, explaining the reason for the Project and its intention to obtain Commission approval as well as revisit the ownership and maintenance responsibilities of the structure

Bristol Township	Randee Mazur
2501 Bath Road	Township Manager
Bristol, PA 19007	rmazur@bristoltownship.org
Flager C Associates, PC	Scott C. Holbert, Esquire
1210 Northbrook Drive, Suite 280	Township Solicitor
Feasterville-Trevose, PA 19053	scott@flagerlaw.com
Gilmore C Associates, Inc.	Kurt M. Schroeder, P.E.
12 Terry Drive, Suite 205	Township Engineer
Newtown, PA 18940	kschroeder@gilmore-assoc.com
Bucks County Planning Commission	Evan J. Stone
1260 Almshouse Road	Executive Director
Doylestown, PA 18901	estone@buckscounty.org
Amtrak Legal Department	Michael Kolonauski
Philadelphia Field Office	Senior Manager
30th Street Station, 2N-290	Michael.Kolonauski@amtrak.com
Philadelphia, PA 19104	
Pennsylvania Department of Transportation	Mary Ann Lang
7000 Geerdes Boulevard	District Utility Manager
King of Prussia, PA 19406	malang@pa.gov

Pennsylvania Department of Transportation

Commonwealth Keystone Building

400 North Street, 9th Floor

Harrisburg, PA 17120

Don Smith

Acting Chief Counsel

DOJSMITH@pa.gov

Pennsylvania Department of Transportation

(PennDOT)

Commonwealth Keystone Building

400 North Street, 9th Floor

Harrisburg, PA 17120

Karen Cummings

Assistant Counsel in Charge

kcummings@pa.gov

6. **The bridge was closed to pedestrian and vehicular traffic in early 2023. At the time of this application, barricades and construction fencing do not permit vehicles, pedestrians or other users to traverse the crossing. Prior to closure, the 2022 Interim Inspection of the Randall Avenue Bridge performed by McCormick Taylor (MT) in July and October of 2022 identifies an Average Daily Traffic value of 400 vehicles per day. The average daily pedestrian traffic and train movements are not identified in the 2022 Interim Inspection Report and are unknown by the Township. The MT 2022 Interim Inspection Report is attached as Exhibit C**

7. **The total preliminary cost estimated for the completed repairs are approximately $2,100,000.00. Sources of funding for the bridge repairs were furnished from Bristol Township as well as a 2021 Multimodal Transportation Fund grant from the Department of Community and Economic Development. Per the PUC Order mentioned above, generally Bristol Township was assigned bridge maintenance responsibilities of the superstructure, substructure, curbs and sidewalks including removal of snow, ice, debris and graffiti from the roadway and the Bridge; PennDOT was assigned all required inspection and reporting responsibilities for the Randall Avenue Bridge; AMTRAK was assigned maintenance responsibilities of all railroad facilities at the crossing, PECO was assigned maintenance responsibilities of its utility facilities at the crossing**

8. The application is necessary or proper for the following reason(s): **In order to reopen the bridge for public use.**

Wherefore, Bristol Township prays your Honorable Commission to approve the application:

Randee J. Mazur

(Signature of Applicant)

VERIFICATION

I, Randee Mazur**,** hereby state that the facts above set forth are true and correct (or are true and correct to the best of my knowledge, information and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

12/22/2025 Randee J. Mazur

Date (Signature)

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the participants, listed below, in accordance with the requirements of § 1.54 *(relating to service by participant)*.

Bristol Township
2501 Bath Road
Bristol, PA 19007

Randee Mazur
Township Manager
rmazur@bristoltownship.org

Flager & Associates, PC
1210 Northbrook Drive, Suite 280
Feasterville-Trevose, PA 19053

Scott C. Holbert, Esquire
Township Solicitor
scott@flagerlaw.com

Gilmore & Associates, Inc.
12 Terry Drive, Suite 205
Newtown, PA 18940

Kurt M. Schroeder, P.E.
Township Engineer
kschroeder@gilmore-assoc.com

Bucks County Planning Commission
1260 Almshouse Road
Doylestown, PA 18901

Evan J. Stone
Executive Director
estone@buckscounty.org

Amtrak Legal Department
Philadelphia Field Office
30th Street Station, 2N-290
Philadelphia, PA 19104

Michael Kolonauski
Senior Manager
Michael.Kolonauski@amtrak.com

Pennsylvania Department of Transportation
7000 Geerdes Boulevard
King of Prussia, PA 19406

Mary Ann Lang
District Utility Manager
malang@pa.gov

Pennsylvania Department of Transportation
Commonwealth Keystone Building
400 North Street, 9th Floor
Harrisburg, PA 17120

Don Smith
Acting Chief Counsel
DOJSMITH@pa.gov

Pennsylvania Department of Transportation
(PennDOT)
Commonwealth Keystone Building
400 North Street, 9th Floor
Harrisburg, PA 17120

Karen Cummings
Assistant Counsel in Charge
kcummings@pa.gov

Dated this December day of 22, 2025.

Randee J. Mazur
(Signature)

PENNSYLVANIA
PUBLIC UTILITY COMMISSION
Harrisburg, PA 17105-3265

Public Meeting held July 13, 2000

Commissioners Present:

John M. Quain, Chairman
Robert K. Bloom, Vice Chairman
Nora Mead Brownell
Aaron Wilson, Jr.
Terrance J. Fitzpatrick

Investigation Upon the Commission's Own Motion to determine the condition, disposition and responsibility for maintenance of the existing crossing structure carrying Randall Avenue above-the-grade of the tracks of National Railroad Passenger Corporation in Bristol Township, Bucks County (AAR 530 983 U)

I-00990082

OPINION AND ORDER

BY THE COMMISSION:

Before the Commission for consideration and disposition are the Exceptions filed by Pennsylvania Department of Transportation (PennDOT) and the Township of Bristol (Bristol Township) on April 11, 2000, to the Recommended Decision of Administrative Law Judge (ALJ) Charles E. Rainey, Jr., which was issued on March 22, 2000, in the above-captioned proceeding. Bristol Township filed Reply Exceptions on April 21, 2000.

History of Proceeding

By Order entered February 3, 1999, the Pennsylvania Public Utility Commission (Commission) instituted an investigation at this docket for the purpose of determining all matters relating to the condition and disposition of the rail-highway crossing structure carrying Randall Avenue over and above the grade of the tracks of National Railroad Passenger Corporation (Amtrak) in Bristol Township, Bucks County, as well as the assignment of responsibilities for future maintenance of the crossing structure.

By Hearing Notice dated March 8, 1999, a hearing was scheduled for April 14, 1999. On March 11, 1999, the ALJ issued a Prehearing Order directing the Parties to submit written direct testimony prior to the scheduled hearing.

Written direct testimony and related exhibits were prefiled by the following Parties: the Commission's Bureau of Transportation and Safety (BTS), PennDOT, National Railroad Passenger Corporation, Consolidated Rail Corporation (Conrail), County of Bucks (Bucks County), Southeastern Pennsylvania Transportation Authority (SEPTA), and Bristol Township.

The hearing was held as scheduled on April 14, 1999. The BTS, Bristol Township, SEPTA, Amtrak, Bucks County, Conrail, and PennDOT appeared. The pre-filed testimonies of those Parties were admitted into evidence at the hearing.

Subsequently, the ALJ received a letter dated June 1, 1999, from PECO Energy Company (PECO) which stated that, due to its recent personnel changes, there was a breakdown of communications which caused it to miss the hearing in this

proceeding. Accompanying the letter was the written direct testimony of Richard M. Cornforth on behalf of PECO. PECO, under cover letter dated July 2, 1999, submitted a late-filed exhibit marked as PECO Exhibit 1, which is an easement dated July 27, 1934, between the Philadelphia and Trenton Railroad Company and Philadelphia Electric Co.

A conference call was held on July 21, 1999, to address the concerns several Parties raised regarding PECO's testimony. Participating in the conference call were the BTS, Bristol Township, PECO, Amtrak, Conrail, Norfolk Southern Railway Company (Norfolk Southern), CSX Transportation, Inc. (CSX), PennDOT, Bucks County, and SEPTA. No Party objected to the admission into evidence of PECO Statement No. 1 (the written direct testimony of Richard M. Cornforth) and PECO Exhibit No. 1.

The Recommended Decision of ALJ Rainey was issued on March 22, 2000, wherein the ALJ recommended, *inter alia*, that Bristol Township maintain the substructure and superstructure of the bridge, including the structural integrity of the curbs and sidewalks of the bridge, as well as the wearing surface between the curbs of the bridge on Randall Avenue. In addition, the ALJ recommended that Bristol Township install structure mounted guiderails along both sides of the bridge within six (6) months. The ALJ also recommended that PennDOT inspect the Randall Avenue bridge at regular intervals not exceeding two (2) years in accordance with its current inspection criteria and report any significant changes in the condition of the structure to the Commission.

Exceptions and Reply Exceptions were filed as noted above. The record in this proceeding consists of a total of 184 pages.

Discussion

In his Recommended Decision, ALJ Rainey made thirty-seven (37) Findings of Fact (R.D., pp. 4-9) and drew seven (7) Conclusions of Law (R.D., pp. 24-26). We shall adopt and incorporate herein by reference the ALJ's Findings of Fact and Conclusions of Law to the extent that they are not expressly, or by necessary implication, overruled or modified by this Opinion and Order.

Initially, we are reminded that we are not required to consider expressly or at great length each and every contention raised by a party to our proceedings. *University of Pennsylvania v. Pennsylvania Public Utility Commission*, 86 Pa. 410, 485 A.2d 1217, 1222 (1984). Any Exception or argument which is not specifically addressed herein shall be deemed to have been duly considered and denied without further discussion.

Bristol Township filed one (1) Exception to the Recommended Decision. In its Exception, it objects to Ordering Paragraph No. 2, wherein the ALJ recommended as follows:

> 2. That Bristol Township, at its sole cost and expense, within 6 months of service of the Commission's final order in this proceeding, shall install structure mounted guiderails along both sides of the bridge.

(R.D., p. 26).

Bristol Township requests that the Ordering Paragraph be modified to read as follows:

2. That Bristol Township, at its sole cost and expense, within 6 months of service of the Commission's final order in this proceeding, shall install **concrete jersey barriers** along both sides of the bridge.

(Bristol Township Exc., p. 2). (Emphasis in original).

Bristol Township maintains that the recommendation in Ordering Paragraph No. 2 does not take into account testimony presented in this proceeding that a method other than "structure mounted guiderails" is available which will provide for the safety of the public without imposing an extreme financial hardship upon Bristol Township. (Bristol Township Exc., p. 2).

Bristol Township objects to the Ordering Paragraph because the cost of the "structure mounted guiderails" along both sides of the Randall Avenue Bridge will be approximately $30,000 to $35,000. The cost for the installation of concrete jersey barriers in the same locations will be approximately $1,200. Bristol Township submits that the purpose of the guiderails is for safety considerations and notes that BTS witness Hull testified that the applicable safety considerations would be addressed with the installation of concrete jersey barriers. (Bristol Township Exc., pp. 2-5).

As a result, Bristol Township requests that Ordering Paragraph No. 2 be modified to authorize the installation of "concrete jersey barriers" instead of the "structure mounted guiderails" due to the cost. (Bristol Township Exc., p. 5).

The factors to be considered are the relative safety benefits accruing to the public by the implementation of the four (4) recommendations made by Erdman Anthony Associates, Inc. (a consulting engineering firm), in the study of January 7, 1998, which

was undertaken on behalf of PennDOT. The firm recommended four (4) near-term improvements to the Randall Avenue bridge including the following: (1) replacement of load limit signs at both approaches and at the far advance of the bridge; (2) replacement of the lateral clearance markers at all corners of the bridge; (3) connection of standard approach guiderails at all corners of the bridge; and (4) installation of structure mounted guiderails along both sides of the bridge. (Township Ex. 1, p. 8).

After reviewing the record in this proceeding, we note that Bristol Township has completed three (3) of the four (4) recommendations. The remaining item is the installation of the "structure mounted guiderails." We have reviewed the record, including the arguments proffered concerning the utilization of the "concrete jersey barriers" instead of the "structure mounted guiderails," and conclude that the "concrete jersey barriers" are an acceptable alternative because safety will not be compromised and the related cost savings are substantial. Therefore, we shall grant the Exception of Bristol Township on this issue.

PennDOT excepts to Finding of Fact No. 14 and Ordering Paragraphs Nos. 5, 6, and 7. The Finding of Fact and Recommended Ordering Paragraphs are restated as follows:

> 14. Randall Avenue is the township road at the subject crossing. Randall Avenue is a two-lane street that runs Northeast and Southwest and is a major connecting point between U.S. 13 and Radcliffe Street, both of which are state highways. (Township St. No. 1 at 2).

(I.D., p. 5).

> 5. That the Pennsylvania Department of Transportation, at its sole cost and expense, shall furnish all material and perform all work required to inspect the subject

bridge at regular intervals not exceeding 2 years in accordance with its current inspection criteria; and as soon as practical after each inspection, report any significant changes in the condition of the structure to the Pennsylvania Public Utility Commission.

6. That the Pennsylvania Department of Transportation shall prepare a report regarding each inspection of the subject bridge which it performs, and file a copy of each inspection report with the Commission.

7. That the Pennsylvania Department of Transportation shall also serve copies of each inspection regarding the subject bridge on each party to this proceeding.

(I.D., pp. 26-27).

In its Exceptions, PennDOT objects to the ALJ's determination that Randall Avenue is a major connecting point between U.S. Route 13 and Radcliffe Street. PennDOT submits that, in this case, the record does not support Finding of Fact No. 14. PennDOT contends that the evidence of record referenced as support for this conclusion was the testimony presented by Bristol Township which never performed a traffic count on Randall Avenue. In addition, PennDOT maintains that no origin or destination studies were conducted to support the assertion that Randall Avenue is even a moderately used connecting point for the State highway system. PennDOT submits that, in fact, the Randall Avenue crossing, if part of the State highway system, would be a redundant crossing. (PennDOT Exc., p. 5).

PennDOT argues that Finding of Fact No. 14 should be rejected or modified to read:

14. Randall Avenue is the township road at the subject crossing. Randall Avenue is a two-lane street that runs

Northeast and Southwest and connects U.S. 13 and Radcliffe Street, both of which are state highways.

(PennDOT Exc. p. 4) (Emphasis added).

In consideration of the record before us, we find that there is no direct evidence of record to support the conclusion that the Randall Avenue crossing is "redundant to the State highway system." In part, the record evidence supports the fact that Green Lane, a State highway, is located within one (1) mile of the Randall Avenue crossing and that Green Lane acts as a connection between U.S. Route 13 and Radcliffe Street. In addition, the record supports the conclusion that the Randall Avenue bridge provides a direct link between two (2) State highways and, therefore, does provide a benefit to the State highway system. Therefore, we shall deny this Exception of PennDOT.

PennDOT also excepts to Ordering Paragraphs Nos. 5, 6, and 7, arguing that the Randall Avenue crossing provides no benefit to the State highway system, and therefore, no allocation against PennDOT is warranted in this case. PennDOT submits that it should not be responsible for conducting and bearing the cost of the bi-annual bridge inspection for the Randall Avenue crossing and requests that Ordering Paragraphs Nos. 5, 6, and 7 be stricken and that the responsibility for bridge inspection and associated costs be allocated to another party. (PennDOT Exc., pp. 5-6).

In considering PennDOT's Exceptions, we note that it is our statutory responsibility with regard to rail-highway crossing matters, to protect and promote the public safety. There is substantial credible evidence in the record which demonstrates that the instant crossing must be monitored, through inspections, in order to assure that there is no hazard to pedestrian and motor vehicle traffic. In addition, the PennDOT

witness testified that eighty percent (80%) of the costs incurred for bridge inspections performed by PennDOT is reimbursed with federal funds. If we were to assign the responsibility for bridge inspection to Bristol Township, it would not qualify for reimbursement with federal funds.

As noted above, we determined that the Randall Avenue bridge provides a direct link between two (2) State highways. With this consideration in mind, we will require PennDOT, at its sole cost and expense, to furnish all material and perform all work required to inspect the subject bridge at regular intervals not exceeding two (2) years in accordance with its current inspection criteria. In addition, and as soon as practicable after each inspection, PennDOT will be required to report any significant changes in the condition of the structure to the Pennsylvania Public Utility Commission. Therefore, we shall deny PennDOT's Exceptions consistent with our discussion.

Lastly, we will direct PennDOT to file a copy of each inspection report with the Commission and with each Party to this proceeding.

Conclusion

We have carefully reviewed the record as developed in this proceeding, including the ALJ's Recommended Decision and the Exceptions taken thereto. Premised upon our review, we conclude that: (1) PennDOT's Exceptions are not meritorious, and will be denied; (2) Bristol Township's Exceptions are meritorious and will be granted; and (3) the ALJ's Recommended Decision will be adopted, as modified, by this Opinion and Order; **THEREFORE,**

IT IS ORDERED:

1. That the Exceptions filed by the Township of Bristol on April 11, 2000, to the Recommended Decision of Administrative Law Judge Charles E. Rainey, Jr., are granted, consistent with this Opinion and Order.

2. That the Exceptions filed by Pennsylvania Department of Transportation on April 11, 2000, to the Recommended Decision of Administrative Law Judge Charles E. Rainey, Jr., are denied, consistent with this Opinion and Order.

3. That the Recommended Decision of Administrative Law Judge Charles E. Rainey, Jr., issued on January 26, 2000, is adopted, as modified, by this Opinion and Order.

4. That Township of Bristol, at its sole cost and expense, shall furnish all material and do all work necessary to maintain the substructure and superstructure of the bridge, including the structural integrity of the curbs and sidewalks of the bridge, as well as the wearing surface between the curbs of the bridge on Randall Avenue.

5. That Township of Bristol, at its sole cost and expense, within six (6) months of the date of entry of this Opinion and Order, shall install concrete jersey barriers along both sides of the bridge.

6. That Township of Bristol, at its sole cost and expense, shall remove snow, ice, debris and graffiti from the roadway surface on the bridge and from the highway approaches to the bridge.

7. That Township of Bristol, at its sole cost and expense, shall remove snow, ice, debris and graffiti from the sidewalks on the highway approaches to the bridge and from the sidewalks on the bridge.

8. That the Pennsylvania Department of Transportation, at its sole cost and expense, shall furnish all material and perform all work required to inspect the subject bridge at regular intervals not exceeding two (2) years in accordance with its current inspection criteria; and as soon as practical after each inspection, report any significant changes in the condition of the structure to the Pennsylvania Public Utility Commission.

9 That the Pennsylvania Department of Transportation shall prepare a report regarding each inspection of the subject bridge which it performs and file a copy of each inspection report with the Commission.

10. That the Pennsylvania Department of Transportation shall also serve copies of each inspection regarding the subject bridge on each Party to this proceeding.

11. That any Party to this proceeding may seek emergency relief from the Commission, pursuant to 52 Pa. Code §§3.1-3.12, to have the subject bridge closed if it finds that the bridge is a threat to public safety.

12. That, if the subject bridge is closed in the future by Commission order, a new proceeding shall be instituted for the purpose of assigning maintenance and cost responsibility for the closed bridge and for the removal and reconstruction of the bridge.

13. That the National Railroad Passenger Corporation, at its sole cost and expense, shall furnish all material and do all work necessary to maintain all railroad facilities at the subject crossing.

14. That PECO Energy Company, at its sole cost and expense, shall furnish all material and do all work necessary to maintain its utility facilities at the crossing.

15. That this Opinion and Order, insofar as it allocates costs and expenses to various Parties, is without prejudice to their rights to recover those costs and expenses from others pursuant to any applicable law or lawful agreement.

16. That this Opinion and Order, insofar as it assigns inspection and maintenance responsibilities to various Parties, is without prejudice to their rights to enforce inspection or maintenance by others pursuant to any applicable law or lawful agreement.

17. That, in all respects not inconsistent herewith, all previous orders of the Pennsylvania Public Utility Commission pertaining to the subject crossing shall remain in full force and effect.

18. That this Opinion and Order is binding upon the Parties hereto, their respective successors and assigns.

BY THE COMMISSION,

James J. McNulty

Secretary

(SEAL)

ORDER ADOPTED: July 13, 2000

ORDER ENTERED:

09 7101 0090 6434

(BRKEY 7587)

Randall Avenue
over
AMTRAK

Bristol Township,
Bucks County, Pennsylvania

POSTING: 3 ½ Tons

LOAD RATING REVIEW RECOMMENDED: No

INSPECTED: July 14, 2022 (Topside)
October 12 & 13, 2022 (Underside)

CATEGORY: B2p – Interim

PREPARED FOR:
Pennsylvania Dept. of Transportation
Engineering District 6-0

PREPARED BY:
McCormick Taylor, Inc.
600 Eagleview Blvd., 2nd Floor
Exton, PA 19341
610-640-3500

FRACTURE CRITICAL: Yes

HANDS-ON INSPECTION: Yes

MAP: 3263-G10, ADC Street Atlas

INSPECTED BY:
C.M. Nguyen, P.E., CBSI
M.A. Kraidman, E.I., CBSI

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
CHRISTOPHER M. NGUYEN
ENGINEER
PE081187

BMS # 09 7101 0090 6434
Randall Avenue over AMTRAK

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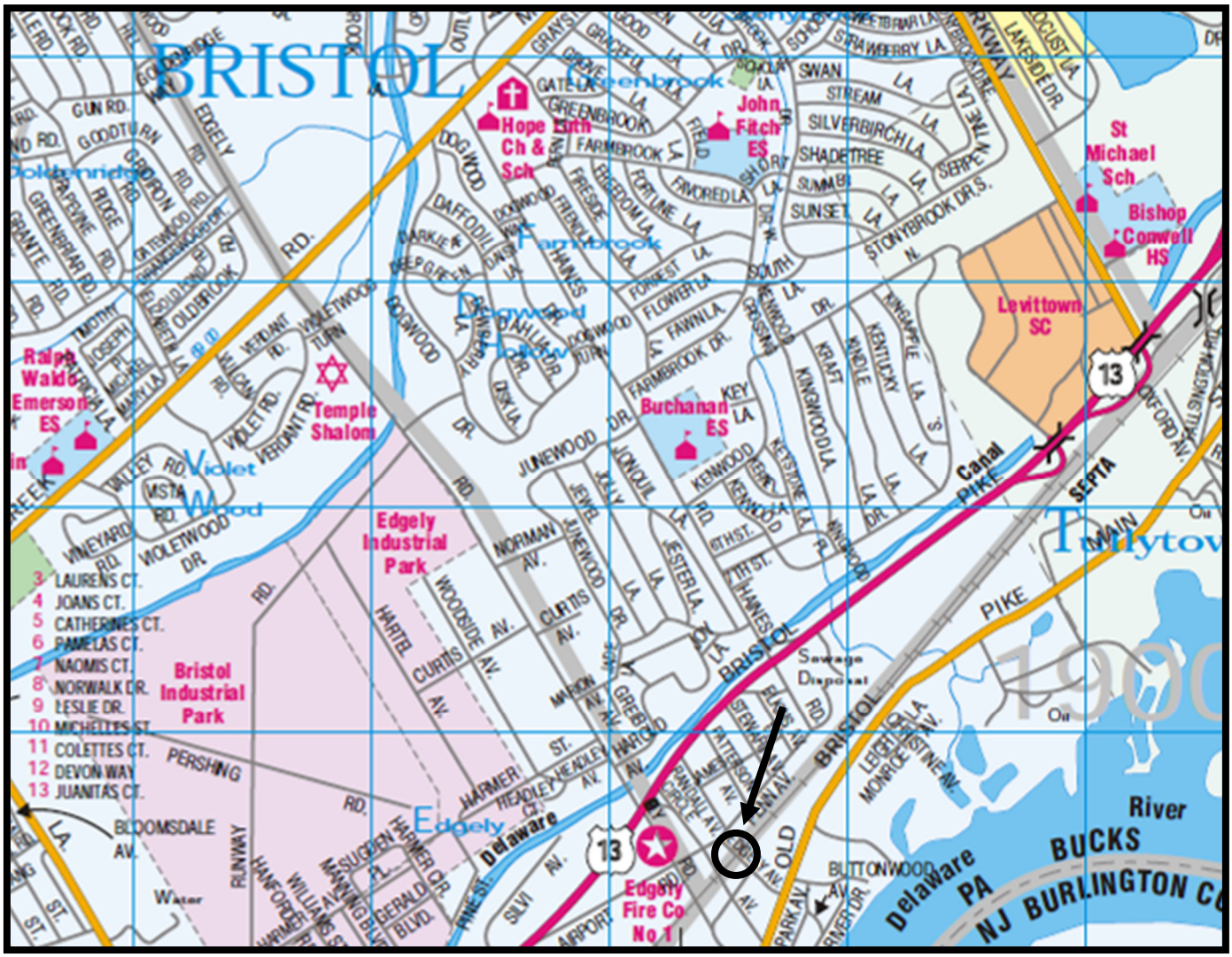
McCORMICK TAYLOR

BMS # 09 7101 0090 6434
Randall Avenue over AMTRAK

LOCATION MAP



N.T.S.

McCORMICK TAYLOR

BMS # 09 7101 0090 6434
Randall Avenue over AMTRAK

BRIDGE DESCRIPTION

Year Built:	1919
Structure Type:	Riveted Steel, Built-up Through Girder
Structure Length:	169’
Number of Spans:	3
Curb-Curb Width:	23’-4”
Approach Roadway Width:	24’-0”
Underclearance:	27’-10”
Skew Angle:	90º
Railroad Milepost:	Mg 64.34

INSPECTION SUMMARY

McCormick Taylor started an interim inspection of the Randall Avenue bridge over AMTRAK on July 14, 2022. The inspection was completed on October 12 & 13, 2022 with protection provided by AMTRAK.

Approach Slab

Prior Condition Rating N/A
Current Condition Rating N/A

There is no approach slab at this structure; therefore, the condition rating is not applicable.

Approach Roadway

Prior Condition Rating 5
Current Condition Rating N/A

The approach roadway was not fully evaluated during the current inspection. The near approach has a 16” long by 21” wide by 2” deep pothole exposing the joint steel right of centerline. The far approach has several 2’ deep potholes exposing the joint steel. There is a 2’ long area of broken bituminous at the end of the right girder which is undermined up to 5” laterally. The following description is taken from the 2021 routine inspection.

McCORMICK TAYLOR

The bituminous approach roadway is in fair condition. The pavement has moderate to heavy wear, minor settlement, and random cracking throughout. At the transition, there is full width open transverse cracking with 4' long bituminous patches. The patches have open transverse and diagonal cracking with areas of deterioration and potholes along the edges.

The near approach roadway has open longitudinal cracking along the centerline and along the left wheel path of the right travel lane. There is partial to full width hairline to slightly open transverse cracking throughout and an area of ¼" to $^{3}/_{8}$" wide map cracking with associated settlement and broken pavement along the left wheel path of the right travel lane within 12' of the transition. The previous areas of exposed steel plates have been patched since the last inspection.

The far approach roadway has open longitudinal cracking along the centerline and along the wheel paths of the right travel lane. There are areas of random map cracking with associated settlement along the edges of the bituminous patches and hairline to $^{1}/_{8}$" wide diagonal cracks in the right travel lane. The previous areas of exposed steel plate joint have been partially patched with bituminous since the last inspection. The patches are failed along the wheel paths adjacent to the centerline, exposing the steel plate joint.

There are bituminous approach sidewalks at the near left and far left with exposed steel plate joints (as constructed). The near left sidewalk has minor potholes and the settlement at the far left was previously repaired with a 2' wide bituminous patch and 40" high two rail timber pedestrian railing and retaining wall. The settled bituminous patch was repaired since the previous inspection.

Deck Wearing Surface

Prior Condition Rating 5
Current Condition Rating N/A

The deck wearing surface was not evaluated during the current inspection. The following description is taken from the 2021 routine inspection.

The bituminous deck wearing surface is in fair condition.

The pavement has moderate to heavy wear, failed and partially patched potholes, and minor wheel rutting throughout. There are partial length slightly open longitudinal cracks along the wheel paths and center of the travel lanes, full length open longitudinal cracking along the centerline of the roadway, and partial width slightly open transverse and diagonal cracking throughout. There is an area of heavy map cracking in the right lane adjacent to the centerline of the roadway full length of Span 2. The map cracking extends into the left travel lane along the far half of the span with associated minor settlement at the far end. The previous pothole at the far left corner was patched since the last inspection.

Deck

Prior Condition Rating 5
Current Condition Rating N/A

The deck was not evaluated during the current inspection. Only the sidewalks were evaluated. The reinforced concrete sidewalk cantilevers from the left girder. The top of the sidewalk has minor spalling at the construction joints and numerous partial to full width hairline to $^{1}/_{16}$" wide cracks throughout. There is a 10" wide by $^{3}/_{4}$" long by full depth hole and a 3" wide by $^{3}/_{4}$" long by full depth hole in the sidewalk above Pier 1. There is patching adjacent to the holes. There is a $^{3}/_{4}$" long by 7" wide by full depth hole with a failed patch over Pier 2. The underside of the sidewalk has numerous up to full width spalls with exposed reinforcement and numerous smaller spalls with exposed transverse reinforcement. The heaviest spalling is full width in Span 2 and over the piers. There is active leakage on the left end of Pier 1 from the full depth holes. The following description is taken from the 2021 routine inspection.

The reinforced concrete deck is in fair condition.

The top of the deck is not visible due to the bituminous wearing surface.

The underside of the deck has random short hairline cracking and leaching throughout, numerous shallow spalls with exposed reinforcement, and numerous surface spalls with surrounding delamination. Spans 2 and 3 have moderate efflorescence throughout. There is longitudinal cracking with leaching under the right curb. There is full width transverse cracking with efflorescence over Pier 2.

Superstructure

Prior Condition Rating 4
Current Condition Rating 4

The superstructure is in poor condition.

Through-Girders: Above the deck, the girders exhibit moderate to heavy paint chipping, heavy surface rust with minor pitting, and heavy delamination with section loss to the bottom of the web stiffeners at the top of the curbs where there is heavy debris, broken glass, and leaves accumulate. There is minor pack rust along the top flange coverplates. The top flange coverplates of the right girders at the ends of Spans 1 and 3 and the left girder at the far end of Span 2 are deformed from pack rust. Several rivet heads on the underside of the top flange of the right girder have minor section loss. There is moderate to heavy pack rust at the stiffeners with minor deformation at the corners. The girder bearing stiffeners at the near right are slightly bent due to impact damage. The angles connecting the Span 1 and 3 girders to the Span 2 girders are bent upward and there is moderate pack rust between the girder ends. The girder angles connecting Spans 1 to 2 and 2 to 3 have up to 9.5" wide sections of 100% section loss along both girders.

Below the deck, the left girder encasement is mostly intact with heavy scaling, delamination, and cracking. There is heavy cracking of the encasement with efflorescence within 5' of the near abutment. In Span 2, the bottom flange toe is exposed at Floorbeam 5 and in Bay 14 with minor section loss. Span 3 has several spalls with exposed rebar and rust staining throughout and there is an exposed stirrup in Bay 17.

The right girder below the deck has numerous areas of heavy cracking and delaminated concrete throughout. There is extensive spalling along the bottom flange of the girder with exposed coverplates, bottom flange, and rivet heads in all spans. No concrete was hanging from the girders but could be knocked off by hammer in small pieces with relative ease. The exposed coverplates and bottom flanges have minor to advanced section loss at the edges. In Span 2, Bay 5 there is a 5" long by 1" wide area of 100% section loss to the interior toe. The bottom flange is exposed 6' long at the far abutment with minor to $^{1}/_{8}$" section loss of the bottom flange cover plate and up to 95% section loss to the rivet heads across the bottom flange. The right edge of the bottom flange has a 7" long by $1^{1}/_{2}$" wide tear/bend in front of the far bearing.

Floorbeams: The concrete encased steel I-beams have typical scaling with areas of exposed aggregate. There is hairline to slightly open longitudinal cracking along the bottom flanges and hairline to slightly open horizontal cracking along the webs. Most cracks have efflorescence and stalactites. Numerous floorbeams exhibit spalling and open horizontal cracking along the bottom flange and web interface with exposed, delaminated, and corroded steel I-beam bottom flange with reduced flange thickness. The surrounding concrete at these locations is delaminated and separating from the bottom flanges. The concrete remained in place, even when being hit by a hammer, due to stirrup rebar holding the concrete in place.

Bearings: The sliding steel plate expansion bearings at the abutments are heavily corroded with moderate delamination, frozen, and inoperable. There is heavy bridge seat deterioration adjacent to the bearings at both abutments and a 22" long by up to $1^{1}/_{2}$" deep bearing loss along the right side at the far right bearing. The left fixed bearings at the piers have heavy delamination with minor section loss. The right fixed bearings have severe delamination, pitting, and moderate section loss.

Paint Condition

Prior Condition Rating 3/4
Current Condition Rating 3/4

The riveted through-girders above the deck have moderate to heavy paint flaking with heavy surface rust throughout, heavy delamination along the curbs, and areas of pack rust at the top flanges. The underside of the girders is concrete encased with large areas of spalling with exposed bottom flange steel. The exposed steel has heavy rust and pitting, and moderate to heavy delamination with section loss. The exposed portions of the floorbeams are delaminated and corroded with section loss to the bottom flanges.

Substructure

Prior Condition Rating 3
Current Condition Rating N/A

The substructure was not evaluated during the current inspection. Only the spalling at the bearings at the abutments was evaluated. The following description is taken from the 2021 routine inspection.

The substructure is in serious condition. The condition rating is controlled by deterioration of the concrete abutments and bridge seats adjacent to the bearings that encroaches below the bearings.

The near abutment has heavy graffiti throughout. There is heavy to severe spalling/delamination with exposed aggregate at both ends and at the left third point. The stem wall is delaminated for over 50% of the front face and there is random hairline to open cracking throughout. There is a 5' high by 6' wide by 24" deep area of spalling/missing concrete at the right wingwall interface and a 4' long by up to 4' high by 6" deep spall at the left wingwall interface. The reinforced concrete backwall has random hairline to open cracking, efflorescence, minor edge spalling, and full height severe spalling and honeycombing at the right, outside of the girder. The bridge seats have severe spalling below the girders and cheekwalls. The top edge is spalled intermittently along the full length. Both bridge seats are spalled along the front of the bearings and the concrete around the bearings is delaminated. The spalling at the left is 10' long by 20" high (full height of the bridge seat) by 20" deep and the spalling adjacent to the right bearing is 8' long by 20" high by 24" deep. The reinforced concrete wingwalls have heavy spalling and delamination throughout. The left wingwall has cracking throughout with exposed aggregate, timber cribbing at the free end, heavy spalling under the cheekwall, and moderate cracking and delamination at the centerline. The right wingwall has heavy erosion behind the wingwall, filled with bituminous pavement. There is very heavy spalling up to full width of the cheekwall (outside of the sidewalk) and approximately 70% of the concrete under the cheekwall is spalled. The footing is not visible.

The riveted steel bents with filled concrete columns that make up the piers have pack rust at the plate connections on the columns in several areas. The Pier 1 crash wall has several spalls with exposed rebar, a few partial height vertical hairline cracks and partial width horizontal cracks on both faces, and a $^{3}/_{4}$" wide vertical crack with spalling up to 2" wide that extends full height through both faces of the wall at the centerline. The Pier 2 crash wall has several moderate to severe spalls; one with exposed reinforcement, a few $^{1}/_{4}$" wide vertical full height cracks with associated up to 2" wide spalling, and several full width up to $^{1}/_{4}$" longitudinal cracks on the top face with spalling up to 1.5" at the centerline. There is $^{1}/_{4}$" vertical displacement at the right third point in the top face. The steel bracing caps have minor to moderate delamination and moderate pitting. The Pier 2 cap has an area of 2" high by 1.5" wide area of 100% section loss at the top of the web adjacent to the connection plate. The bearings have heavy to severe delamination and pitting with minor to moderate section loss.

The far abutment has severe spalling, heaviest surrounding the bearings. At the left end, there is 18'-4" long by 20" high (full height) spalling. The spalling extends 15" deep to the front face of the bearing and 2' deep to the right side of the bearing. The right end of the stem has failed from the right edge of the bearing to the right end of the stem. A 4' long by 4' high by 3' high section of the stem/cheekwall/right wingwall has spalled off and is laying on the embankment. There is a full height by 11' wide by 5" deep spall at the right end adjacent to the bearing and a 6.5' high by 2' wide by 10" deep spall at the left end below the cheekwall. The bridge seats are severely spalled, heaviest below the girders. The concrete around the bearings is delaminated. The spalling at the left is 18'-4" long by 20" high by 15" deep to the front face of the bearing beginning from the left end of the stem wall. The spalling at the right measures 12' long by 20" high by 15" deep to the front face of the bearing and extends to 3'-6" deep adjacent to the bearing. The reinforced concrete backwall has random hairline to open cracking with efflorescence and spalling with exposed aggregate throughout. The left wingwall is not accessible due to a fence. There is a retaining wall that supports the left sidewalk. The right wingwall has severe scaling and spalling up to full height by full width. The footing is not visible.

Channel

Prior Condition Rating N/A
Current Condition Rating N/A

The bridge is over AMTRAK; therefore, the channel condition rating is not applicable.

Safety Features

Prior Condition Rating 3234
Current Condition Rating 3234

The bridge railing is 25" high structure mounted W-beam guide rail attached to the girder stiffener knee braces on top of 7" high concrete curbs. Boxing gloves are in place at the end of each girder with a portion of the girders remaining unprotected. The guide rail is not attached at the first post and several stiffeners are slightly bent. The guide rail has no offsets. There is collision damage to the near right boxing glove. The corrugated metal train shield has several tears, small holes, and heavy graffiti throughout. There is a 5' long newer section at the near end. The pipe railing has areas of 100% section loss throughout and a timber rail is strapped to the last post at the far left corner.

Transition guide rail is not provided. Approach guide rail is not provided at the far right corner due to a roadway restriction. There is 25' long Type 2-S W-beam approach guide rail with no offsets set behind 4" to 5" high curbs at the near left, near right, and far left corners. There are blunt ends at the bridge at the near corners. The guide rail is not attached to several posts at the near left corner and is only attached to the posts with one bolt at the W-beam splices. At the near right corner, the post closest to the bridge has an exposed caisson up to 14" high and there are several bent posts. There is impact damage at several locations. The Type 2-S W-beam guide rail with no offsets is continuous at both near corners and at the far left corner. There are boxing glove end treatments located in the clear

zone greater than 87.5’ from the bridge at the near corners and the far left corner. At the near right corner there is a missing W-beam panel beyond 87.5’ from the bridge and there are several bent posts and damaged rails. The far left corner has impact damage 75’ from the bridge and the boxing glove end treatment is damaged.

BMS # 09 7101 0090 6434
Randall Avenue over AMTRAK

LOAD RATING SUMMARY

The following is a summary of the current ratings for this structure. The ratings were updated in 2004 to include the wearing surface thickness and concrete curbs and are based on a load factor analysis performed using PennDOT's BAR7 program, version 7.11. In addition, a gross load rating was added to reflect the substructure deterioration.

LOAD RATING SUMMARY				
CONTROLLING MEMBER	VEHICLE	INVENTORY RATING (TONS)	OPERATING RATING (TONS)	SLC (TONS)
Floorbeam	H20	15	25	25
	HS20	27	46	36*
	ML80	21	35	28*
	TK527	26	44	35*
Substructure	GROSS LOAD	3	5	5

*SLC = f (OR) in accordance with SOL 495-13-08 Table 4.3.2-1: Safe Load Capacity reduction factors
f = 0.8 (substructure condition rating = 3 and ADTT < 500)

POSTING REVIEW

The bridge is currently posted for 3 $^1/_2$ Tons.

McCORMICK TAYLOR

BMS # 09 7101 0090 6434
Randall Avenue over AMTRAK

RECOMMENDATIONS

Maintenance

The following maintenance program is provided for the continued safe use of the bridge. The estimated costs listed below are based on PennDOT Bridge Management System unit costs. The actual costs will vary due to site-specific conditions.

Priority Code 0 – Critical Priority

None $0

Priority Code 1 – High Priority

Patch/repair the severely spalled concrete surrounding the bearing areas.[1]

12 CY	x	$1,200	$14,400

Repair the potholes exposing the joint steel at the near and far transitions. [1]

2 SY	x	$25	$50

Priority Code 2 – Priority

Connect the approach guide rail to the structure mounted guide rail and install standard approach guide rail at each corner. Install a standard end treatment at the far right corner. Repair the missing/damaged guide rail at the near right and far left corners.

4 EA	x	$1,000	$4,000

Repair/reseal the expansion joints at both transitions.

46 LF	x	$20	$920

Repair the deteriorated bottom flanges of the right girders in Spans 1-3 and the left girder in Span 2 and remove any loose concrete.

4 EA	x	$9,750	$39,000

Repair the deteriorated concrete encased steel floorbeams in Spans 1-3 and remove any loose concrete.

13 EA	x	$9,750	$126,750

Repair the loose steel plate expansion joint along the near transition.

3 LF	x	$55	$165

Repair the holes in the concrete sidewalk.

1 SY	x	$120	$120

Improve the off bridge drainage at the near right corner.

1 EA	x	$2,000	$2,000

Repair the damaged corrugated metal train shield at the far right corner.

1 LF	x	$63	$63

Priority Code 3 – Schedule

Replace the frozen/inoperable bearings.

8 EA	x	$1,000	$8,000

Repair the deteriorated cheekwalls at both abutments.

8 CY	x	$1,000	$8,000

Repair the spalled concrete at the near left wingwall, under the cheekwall, and far right wingwall.

5 CY	x	$1,200	$6,000

Patch/repair the spalled areas of the underside of the concrete deck and sidewalk and the hole above the left end of Pier 1.

14 SY	x	$200	$2,800

Move the near left, near right, and far right hazard clearance signs to their own posts and set to standard height (the minimum vertical clearance between the bottom of the hazard clearance sign and the top edge of pavement is 5').

4 EA	x	$200	$800

Priority Code 4 – Program

Spot paint the superstructure as needed throughout.

1 EB	x	$3,500	$3,500

Spot paint the steel bent pier columns and bracing as needed throughout.

1 EB	x	$750	$750

Reseal the approach roadway pavement. Repair the undermined bituminous at the end of the right girder.

20 SY	x	$40	$800

Replace the bent weight limit sign at the far advance posting.

1 EA	x	$200	$200

Repair the settlement at the far left sidewalk transition.

1 SY	x	$60	$60

Priority Code 5 – Routine

Clean and flush the bridge seats.

1 EB	x	$300	$300

Remove the debris from the girders along the curbs.			
1 EB	x	$400	$400
		Total Repair Costs	**$219,078**

[1] A priority notification letter was sent to Ms. Randee Elton, Bristol Township's Manager, on July 15, 2022.

Inspection Schedule

Per PennDOT Publication 238, Bridge Safety Inspection Manual, Chapter 2, Section 2.3.2.4, Table IP 2.3.2.4-1, Maximum Interval of Routine Inspection, interim inspections are required on a 12-month interval due to the posted weight restriction and fracture critical superstructure condition. Problem Area inspections may be conducted on a 6-month frequency until the Priority 1 Maintenance Items are completed.

Inspection Equipment

A Railroad Right-of-Entry permit, flaggers, and a ladder were required to access the underside of the bridge.

Waterway Information

Not applicable.

5A01	SR ID: 09710100906434	5A03	BR Key: 7587	7A01	Inspection Date: July 14, 2022

1A09	**Inspection Status:**	2 - Submitted
7A02	**Team Leader:**	C. Nguyen (3512)
7A03	**Inspection Type:**	I - Interim (special)
7A05	**Inspected By:**	8 - Consulting Firm

Structure Description

5A08	**FHWA Facility Carried:**	RANDALL AVENUE
5A07	**Features Intersected:**	AMTRAK
5A09	**Location:**	.2 Mi SE US-13 3263-G10
5C01	**Roadway Name:**	Randall Avenue
5A06	**City / Borough Name:**	09/101 - BRISTOL
6B48	**Combust. Mat. Under Bridge:**	12 - No Reportable Materials
	Combust. Mat. Under Bridge Note:	

Structure Type (Dept)

Main			Approach		
6A26	**Material Makeup:**	1 - Steel	6A26	**Material Makeup:**	
6A27	**Physical Makeup:**	9 - Other or none	6A27	**Physical Makeup:**	
6A28	**Span Interaction:**	1 - Simple, non-comp	6A28	**Span Interaction:**	
6A29	**Structural Config:**	14 - Girder riv/thru	6A29	**Structural Config:**	

5A01 **SR ID:** 09710100906434 5A03 **BR Key:** 7587 7A01 **Inspection Date:** July 14, 2022

Sign Information

ID01	ID02	ID03	ID04	ID06	ID07	ID05	ID08
Type of Sign	Sign Needed	Sign Message	Near Adv	Bridge Site Near	Bridge Site Far	Far Adv	Signing Notes
0 - Bridge	Yes	BRIDGE	G	G	G	G	NADV (at Penn Ave./Edgely Rd) "500 FT AHEAD" with auxiliary "Right Arrow" sign - all required signs are in place and in good condition with no problems noted.
1 - Bridge Weight Limit	Yes	3 1/2 TONS	G	G	G	G	NADV (at Penn Ave./Randall Ave.) "300 FT AHEAD" with auxiliary "Left Arrow" sign - all required signs in place and in good condition with no problems noted.
2 - Except Combinations	No						NAPP - all required signs are in place and in good condition with no problems noted. The load posting shares a post with the NR hazard clearance sign. Slight lean forward. Supplemental posting set at NL corner is scraped.
3 - One Truck at a Time	No						FAPP - all required signs are in place and in good condition with no problems noted. Supplemental posting shares a post with the hazard clearance sign at FR corner.
4 - Vertical Clearance On	No						FADV (at Radcliffe St.) "500 FT AHEAD" - all required signs are in place and in good condition. The bottom left corner of the 3 1/2 TONS sign is bent. Slight lean inward.
5 - Vertical Clearance Under	No						SUPP FADV (at Radcliffe St.) "500 FT AHEAD" - rotated for traffic traveling NB on Radcliffe Street of the weight restricted bridge. All signs are in place and in good condition. Slight lean inward. The "5" is peeling.
6 - One Lane Bridge	No						
7 - Narrow Bridge	No						
8 - Hazardous Clearance	Yes			D	D		NL - shares post with supp load posting, graffiti. Minor bend at top. NR - shares post with load posting, minor graffiti. FL - too low, minor graffiti. FR - too low, shares post with supp load posting and street sign, graffiti. Scraped.
9 - Other	No						No Trucks Sign - N ADV (at Penn Ave) - Left side of roadway, good condition. Turned toward traffic traveling southbound.

5A01 **SR ID:** 09710100906434 5A03 **BR Key:** 7587 7A01 **Inspection Date:** July 14, 2022

Features Intersected

6C02 SR ID SR	6C02 SR ID Seg	5C03 On/ Under	5B09 Skew Angle	5C06 Dir	5C29 NHS	4A20 Min Lat Cl Left	4A19 Min Lat Cl Right	6C18 Tot Hor Cl Left	6C19 Tot Hor Cl Right	6C20 Min Vrt Cl Rdwys Left	6C21 Min Vrt Cl Rdwys Right	6C22 Vrt Cl Over 10ft Left	6C23 Vrt Cl Over 10ft Right	6B17 ADT
_	_	1	90	0 -	0 - Not on NHS	0.0	99.9	0.0	24.0	99.9	99.9	99.9	99.9	400
_	_	2	90	N/A		0.0	99.9	-1.0	0.0	-1.0	27.8	-1.0	-1.0	0

Vertical Details

6C02 SR ID SR	6C02 SR ID Seg	5C03 On/ Under	6C35 Left Vertical Clearance Signing	6C37 Left Vertical Clear Posting	6C36 Right Vertical Clearance Signing	6C38 Right Vertical Clear Posting
_	_	1		0 ft 0 in		0 ft 0 in
_	_	2	0 - not req/not existing	0 ft 0 in		0 ft 0 in

6B15 **Design Exceptions:**

6A50 **Sup Latent Problem:**

6A51 **Sub Latent Problem:**

Deck Geometry

6B14 **Table Used for Appraisal:** 1 - 2A/2B

Controlling Values

5C10 **ADT:** 400

5C27 **Bridge Road Width:** 23.3

4A10 **Appraisal:** 4 - Tolerable

Notes: Use Table 2A.

4A11 **Underclr Appr:** 7 - Above Minimum

6B13 **Controlling Vertical:** 76.0 FT

Controlling Lateral:

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

Traffic Safety Features

Feature Type	IA01 Location	IA02 Adequacy Rating	IA03 Description	5C08 Posted Spd Lmt (mph)
1 - Railing		3 - inadeq for cond		25

Comment: Structure Mounted Guide rail - 25" high structure mounted guide rail in front of through girders with no offsets set behind 7" high curbs. Rails are attached to girder knee braces at stiffeners with bolted C-channels. Boxing glove at end of each girder; portion of girder end remains unprotected. Collision damage at near right boxing glove. Guide rail is not attached at the first post; several slightly bent girder bearing stiffeners.

Corrugated Metal Train Shield - there are numerous tears, small holes, and heavy graffiti throughout. 7" long x 4" high tear in the top in Span 2 in the left train shield. 1' long x 6" high tear in right shield at far end. Newer 5' long section at near end.

Pipe Railing - 44" high pipe railing attached to a chain link fence adjacent to the sidewalk in Span 1 and Span 3. There are areas of 100% section loss to the railings and posts throughout. A timber rail is strapped to the last post at the far left.

2 - Transition		2 - Req not provided		25

Comment: NL, NR, FL, FR - none provided, boxing glove end treatment at end of structure mounted guide rail.
NR - boxing glove damaged.

3 - Approach Guiderail		3 - inadeq for cond		25

Comment: NL - 25' long x 30" high Type 2-S W-beam guide rail with no offset brackets set behind 4" high curb. Rail begins approximately 15' from end of girder. Rail is unattached to several posts and only attached to posts with one bolt at each rail splice. There is a blunt end at the bridge.

NR - 25' long x 36" high Type 2-S W-beam guide rail with no offset brackets set behind 5" high curb. Rail begins approximately 6' from end of girder and exhibits impact damage at several locations. Post closest to bridge has exposed caissons; up to 14" high at the 1st post and up to 3" at several others. There is a blunt end at the bridge. There are several bent posts, one detached.

FL - 25' long x 35" high Type 2-S W-beam guide rail with no offset brackets set behind 5" high curb. Rail begins approximately 20' from end of girder and exhibits minor impact damage.

FR - none provided due to roadway restriction.

4 - Approach railend		4 - does not meet code 6		25

Comment: NL - continuous Type 2-S W-beam with no offset brackets; boxing glove located in the clear zone beyond 87.5' from bridge.

NR - continuous Type 2-S W-beam with no offset brackets; blunt end located in the clear zone beyond 87.5' from bridge. Missing panel > 87.5'. There are several bent posts (one detached) and damaged rails.

FL - continuous Type 2-S W-beam with no offset brackets; boxing glove located in the clear zone beyond 87.5' from bridge. Impact damage at 75'. Boxing glove damaged.

FR - none provided due to roadway restriction.

Approach Alignment

4A02 **Code:** 6 - Equal Min Criteria
Comment: Very minor speed reduction.

5A01 **SR ID:** 09710100906434 5A03 **BR Key:** 7587 7A01 **Inspection Date:** July 14, 2022

Approach Roadway

6B39 **Code:** 5 - Fair

Pavement: THE APPROACH ROADWAY WAS NOT FULLY EVALUATED DURING THE JULY 2022 INTERIM INSPECTION. ONLY THE APPROACH SIDEWALKS WERE EVALUATED. See below.

Bituminous with moderate to heavy wear, minor settlement, and random cracking. Full width open transverse cracking across the transitions with 4' long bituminous patches. The bituminous patches exhibit open transverse and diagonal cracking with typical areas of deterioration and potholes at the edges.

NEAR: Open longitudinal cracking along the centerline of the roadway and along the left wheel path of the right travel lane. Hairline to slightly open partial to full width transverse cracking throughout. An area of moderate 1/4" to 3/8" wide map cracking with associated settlement and broken pavement located along the left wheel path of the right lane within 12' of the transition.

FAR: Open longitudinal cracking along the centerline and along the wheel paths of the right travel lane. Areas of random map cracking with associated settlement at the edges surrounding the bituminous patches. HL to 1/8" wide diagonal cracks in the right travel lane. Previous areas of exposed steel plate joint have been partially patched with bituminous since the previous inspection.

JULY 2022 INTERIM:

Near - 16" long x 21" wide x 2" deep pothole exposing the joint steel right of centerline.

Far - 2" deep potholes exposing joint steel: 4" long x 16" wide left lane outer wheel path, 2" long x 4" wide left lane inner wheel path, 6" long x 18" wide right of centerline. 2' long area of broken bituminous at end of right girder; undermined up to 5" laterally.

Drainage: Curbed; minor erosion at far right corner.

Shoulders: No shoulders.

SIDEWALKS:

Bituminous - exposed steel plate (as constructed) with a bituminous ramp at the near left sidewalk transition. Near left sidewalk has minor potholes. Exposed steel plate (as constructed) at the far left sidewalk transition has 1" long x 5" wide area of 100% section loss; areas of plate are pitted/delaminated. The settlement at the far left was previously repaired with a 2' wide bituminous patch along the outside edge and a 40" high two rail timber pedestrian railing and retaining wall. Up to 1/2" settlement along the transition.

Approach Slab

6B38 **Code:** N - N/A

Pavement:

6B04 **Bump at Bridge:** No Bump

6A39 **Relief Joints:** 0 - Joints not present 6A41 **Number of Joints:** 2

Comment:

6B02 **New Wearing Surface Under Bridge:** No

5A01 **SR ID:** 09710100906434 5A03 **BR Key:** 7587 7A01 **Inspection Date:** July 14, 2022

Deck Wearing Surface

Main

5B02 **Type of Wearing Surface:** 6 - Bituminous
5B03 **Type of Memb. Water-Proof:** 0 - None
5B04 **Deck Corrosion Protection:** 0 - None
6A33 **Thickness:** 0.2
6A34 **Date Recorded:** 01/01/1901

Approach

6A30 **Type of Wearing Surface:**
6A31 **Type of Memb. Water-Proof:**
6A32 **Deck Corrosion Protection:**
6A33 **Thickness:** 0.0
6A34 **Date Recorded:** 01/01/1901

6B40 **Condition Rating:** 5 - Fair-all primary structural elements are sound but may have minor section loss, cracking spalling.

IC02 **Dk WS Notes:** THE WEARING SURFACE WAS NOT EVALUATED DURING THE JULY 2022 INTERIM INSPECTION. Potholes expose areas of joint steel; see Form A for locations.

Bituminous with moderate to heavy wear, failed/partially repaired potholes, and minor wheel rutting throughout. There are partial length slightly open longitudinal cracks along the wheel paths and along the center of the lanes and full length open longitudinal cracks along the centerline of the roadway. There is partial width slightly open transverse and diagonal cracking throughout. Heavy map cracking in the right travel lane adjacent to the centerline of the roadway full length of Span 2 extends into the left travel lane along the far half of the span with associated minor settlement at the far end of Span 2. Potholes at the far left corner was patched since the previous inspection.

Expansion Joints:

6A41 **Number of Expansion Joints:** 2

Joint Number	VD25 Joint Type	VD26 Movement Class	VD27 Manufacture Code
0			

Bridge Cleaning

VD31 **Bridge Seat Cleaning:** 0
VD32 **Bridge Seat Cleaning Note:**
VD33 **Scuppers w/ Downspouts:** 0
VD34 **Scuppers w/o Downspouts:** 0

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

Joint Inventory and Inspection Information

IJ01 Overall Joint Condition Rating: 4 - Poor

IJ02 / IJ03 Joint / Record Key	IJ04 Joint Type	IJ05 Joint Location	IJ06 Joint Movement	IJ07 Joint Manufacturer	IJ08 Joint Length (ft)	IJ09 Debris Impact?	IJ10 Leaking?	IJ13 Condition Rating
						N	N	

IJ02 / IJ03 Joint / Record Key	IJ11 Damaged?	IJ12 Covered?	IJ14 Extrusion Install Year	IJ15 Seal Install Year	IJ16 ECMS NO	IJ17 Replacement Reason	IJ18 Replacement Comments	IJ19 Condition Summary
	N	N						

Bearing Inventory and Inspection Information

IB01 Overall Bearing Condition Rating: 5 - Fair

IB02/IB03 Bearing / Record Key	IB04 Bearing Type	IB05 Bearing Location	IB06 Bearing Count	IB07 Bearing Movement	IB08 Corrosion?	IB09 Alignment Issues?	IB10 Anchor Bolt Issues?	IB11 Loss of Bearing Area?	IB12 Condition Rating
1 - 1	03 - Steel Plates	Abutment - NAB - Single	2	E - Expansion	2 - Yes, Mult	0 - No	0 - No	1 - Yes, One	5 - Fair
2 - 1	03 - Steel Plates	Abutment - FAB - Single	2	E - Expansion	2 - Yes, Mult	0 - No	0 - No	1 - Yes, One	5 - Fair
3 - 1	05 - Rockers	Pier - P01 - Single	2	F - Fixed	2 - Yes, Mult	0 - No	0 - No	0 - No	5 - Fair
4 - 1	05 - Rockers	Pier - P02 - Single	2	F - Fixed	2 - Yes, Mult	0 - No	0 - No	0 - No	5 - Fair

IB02/IB03 Bearing / Record Key	IB13 Install Year	IB14 ECMS NO	IB15 Replacement Reason	IB16 Replacement Comment	IB17 Condition Summary
1 - 1					
2 - 1					
3 - 1					
4 - 1					

5A01 **SR ID:** 09710100906434 5A03 **BR Key:** 7587 7A01 **Inspection Date:** July 14, 2022

Deck

1A01	**Condition**	5 - Fair-all primary structural elements are sound but may have minor section loss, cracking spalling.		
6B07	**Est. Spall Delamination:**	0.00%	6B08 **Date:**	01/01/1901
6B10	**Est. Chloride Content:**	25.00%	6B11 **Date:**	07/30/2009
1A07	**Unrepaired Spalls:**	1042.75 SF	6B47 **Deck Cracking Metric:**	0.00 YD/SY

Deck Top: THE DECK WAS NOT EVALUATED DURING THE JULY 2022 INTERIM INSPECTION. ONLY THE SIDEWALKS WERE EVALUATED.

Reinforced Concrete. Not visible due to the bituminous wearing surface.

Reinforced Concrete Sidewalk: Minor spalling at the construction joints. Numerous partial to full width hairline to 1/16" wide cracks throughout. 10" wide x 3/4" long x full depth hole and 3" wide x 3/4" long x full depth hole in sidewalk above Pier 1. Patching adjacent to holes. 3/4" long x 7" wide x full depth hole in failed patch over Pier 2.

Deck Underside: Reinforced concrete with random short hairline cracks and leaching throughout. Longitudinal crack along the centerline with leaching. Numerous sections of 18" long, shallow spalls with exposed reinforcement. Spans 2 and 3 have moderate efflorescence throughout. Longitudinal cracking with leaching under the right curb.

SPAN 1, BAY 1 - 3 short exposed longitudinal bars. 2 diagonal HL cracks with moderate efflo and moisture staining adjacent to right girder. Few additional surface spalls with surrounding delamination.

SPAN 1, BAY 2 - 4 short shallow spalls with exposed longitudinal bars. Few additional surface spalls with surrounding delamination.

SPAN 1, BAY 3 - 5 short shallow spalls with exposed longitudinal bars. Few additional surface spalls with surrounding delamination.

SPAN 2, BAY 1 - Numerous exposed longitudinal bars.

SPAN 2, BAY 2 - 7 exposed longitudinal bars.

SPAN 2, BAY 3 - 6 exposed longitudinal bars.

SPAN 2, BAY 4 - 2 exposed longitudinal bars.

SPAN 2, BAY 5 - Numerous exposed longitudinal bars.

SPAN 2, BAY 6 - 4 exposed longitudinal bars.

SPAN 2, BAY 7 - 3 exposed longitudinal bars.

SPAN 2, BAY 8 - 2' long x 1' wide spall with exposed and corroded reinforcement (3 longitudinal bars) located at center of span.

SPANS 2 & 3, BAY 16 - transverse cracking with leaching over Pier 2.

SPAN 3, BAY 18 - 7 exposed longitudinal bars on near face of the the far floorbeam.

SPAN 3, BAY 19 - there is a 3' long x 8" wide shallow spall with exposed longitudinal bar located adjacent to G1 between Floorbeams 18 and 19. 2 exposed longitudinal bars on near end 3' from G2.

Deck Drainage: Natural.

Expansion Joints: Steel sliding plate expansion joint is visible at both transitions due to deteriorated bituminous. See Form A for locations.

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

Deck Notes: SIDEWALK UNDERSIDE: Numerous up to full width spalls with exposed longitudinal and transverse reinforcement and numerous smaller spalls with exposed transverse reinforcement. Heaviest spalling is full width in Span 2, over the piers, and at FAB. Active leakage on left end of Pier 1 from sidewalk hole.

Debris along the girders throughout. 4" diameter cast iron utility line with 6.5" O.D. sleeve is attached to stiffeners along the exterior face of the left girder.

Superstructure

1A04 **Condition Rating:** 4 - Poor-adv. section loss, deterioration, spalling or scour.

Narrative: Two riveted steel through girders with spalling concrete encasement below the deck. The bottom flange of the built-up coverplates are concrete encased. The webs are not encased above the deck and along the exterior of the right girder. Moisture from the non-sidewalk side (southern face) runs down the web and onto the bottom flange encasement. The right girder has exposed bottom flange nearly full length with section loss.

Above the Deck -
Moderate to heavy paint chipping and heavy surface rust with minor pitting throughout. Heavy delamination with section loss to bottom of the webs and stiffeners at the top of the curbs where heavy debris, broken glass, and leaves accumulate. Minor pack rust along the top flange coverplates. Top flange coverplates at the ends of the Span 1 and 3 girders and at the far end of the Span 2 left girder are deformed from pack rust. Minor section loss to several rivet heads on the underside of the top flange throughout the right girder. Moderate to heavy pack rust at the stiffeners with minor deformation at the corners. Slightly bent girder bearing stiffeners at the near right due to impact damage. The angles connecting Span 1 and 3 girders to Span 2 girders are bent upward up to 1-3/8"H. There is 100% section loss up to 9.5"W at the vertical leg and horizontal leg interface of the angles connecting Spans 1 and 2 and Spans 2 and 3 along both girders. There is moderate pack rust between the girder ends. Heavy graffiti throughout.

Girders/Beams: Girders Below the Deck (SPAN 1) -

SPAN 1 LEFT GIRDER - the left bottom flange concrete encasement is mostly intact with heavy scaling and cracking. There is heavy cracking with efflorescence within 5' of the near abutment.

Bay 2 - Areas of rust staining.

Pier 1 - Bottom flange encasement spalled left side of bearing.

SPAN 1 RIGHT GIRDER - the right girder encasement exhibits heavy scaling of interior web. The bottom flange encasement has areas of extensive spalling.

Bay 1 - BF coverplate is exposed 7.5'L (FL Bay 1) x full width beginning at the near abutment. The exposed steel exhibits very heavy delamination and section loss to rivet heads with up to 100% within 6.5' of the near abutment. There is 0.21" remaining bottom coverplate thickness to the exterior toe offset 1' from the front face of the NR bearing for 6" length; 0.11" (knife edging) to interior toe offset 3' from bearing for 6" length. Active seepage along bottom flange.

AT FB2 - 4' long x full width spall exposing the bottom flange.

Pier 1 - Bottom flange encasement spalled right side of bearing.

Floorbeams: Girders Below the Deck (SPAN 2) -

SPAN 2 LEFT - FB5 - Ext. toe exposed 20"L with minor delam.

Bay 8 - left BF encasement is spalled in with no exposed steel.

Bay 14 - BF interior toe exposed 2'L at FB 14 w/ 1.25" remaining thickness.

SPAN 2 RIGHT - the right girder BF is heavily spalled with exposed coverplate intermittently full length. No concrete was hanging from the girders but could be knocked off by hammer in small pieces with relative ease.

Bay 4 - Exposed coverplate from bearing to FB4 with 3/16" SL.

Bay 5 - interior toe between FBs 4 and 5 has knife edging and a 5"L x 1"W area of 100% SL at end of coverplates. Edge of section loss has knife edging; 0.60" thick 1" in from knife edging. Encasement above the exposed BF is spalled with exp aggregate. BF exposed nearly full length.

Bay 6 - interior toe mid-way between FB's 5 and 6 has 1.40" remaining thickness and 1 1/8" located 1' from FB5.

Bays 7 and 8 - FL x FW spall with section loss to the exposed BF coverplates. Inside edge min 1.626" BF thickness between Beams 6 through 8. Section loss is for 8" towards the center, then full thickness at the outside edge, which measures 2 7/8" remaining of total flange thickness at FB07.

Bay 7 - 1 3/4" minimum thickness remaining.

Bay 8 - 2' dia x 1"D spall with exposed long reinf along the interior web.

Bays 11-14 - Bottom flange encasement mostly spalled; remaining concrete is delaminated/loose.

Bay 11 - Exposed BF coverplate with 1/8" section loss. Exposed full length with fresh concrete chunks on ground.

Bays 12 and 13 - FL spall with mod SL and delam to the exposed BF coverplates. Severe SL to rivet heads. Inside edge measures 2 1/4" w/in 12" of the near face of FB 12 and 2 1/8" midway between FBs 11 and 12. The encasement is cracked adjacent to the spall from FB11-FB13.

Bay 14 - mod delam to exposed BF at FB13. BF exposed full width for 3/4 of bay.

Stringers: Girder Below the Deck (SPAN 2 continued) -

Bay 15 - BF encasement is spalled FL. Right edge of BF is exposed 18"L x 4"W with heavy delamination and 5"L at 1/4 pt. 0.82" remaining toe thickness at midspan. Left edge exposed 18" long at mid.

Bay 16 - 4'L x FW spall (near of bearing) with section loss to exposed BF coverplate. 0.20" remaining cover plate thickness of interior toe. 0.57" remaining thickness of the exterior toe. BF exposed for 3".

Girders Below the Deck (SPAN 3) -

SPAN 3 LEFT GIRDER - the bottom flange encasement is spalled with rust staining but no visible steel at the far abutment. 1 exposed stirrup in Bay 17. Several small spalls with rebar ends/rust staining present.

SPAN 3 RIGHT GIRDER - heavy spalling of bottom flange along full length with bottom flange coverplate exposed/corroded intermittent full length. The bottom flange is exposed at the far abutment for 6' length with 1/8" section loss of bottom flange coverplate and up to 95% section loss of rivet heads across bottom flange. 7"L x 1.5"W tear/bend to the right edge of the bottom flange in front of the bearing. There is 3/16" remaining coverplate thickness at the far abutment (knife edging at tear).

Diaphragms: Floorbeams - 20 concrete encased steel floorbeams numbered FB00 to FB19; FB00 and FB19 are the end floorbeams.

General Description - the concrete encasement exhibits typical scaling with areas of exposed aggregate. There is hairline to slightly open longitudinal cracking along the bottom flanges as well as hairline to slightly open horizontal cracks along the webs. Most cracks have efflorescence and stalactites. Numerous floorbeams exhibit open horizontal cracking along the bottom flange and web interface with exposed, delaminated and corroded steel I-beam bottom flange. The surrounding concrete at these locations is delaminated and separating from the bottom flanges. The concrete remained in place, even when being hit by a hammer, due to stirrup rebar holding the concrete in place.

SPAN 1 -
FB00 - refer to general description.

FB01 - refer to general description.

FB02 - refer to general description.

FB03 - 3' long x 3" high x 2"deep exposed bottom flange with 7/8" remaining thickness (1/8" section loss) at the far face adjacent to the left girder connection.

Truss Members: Floorbeams (SPAN 2) -

FB04 - exposed BF with 3/4" remaining thickness, along the near and far faces, beginning at the G2 connection and continuing for 4' length. There is horizontal open cracking at the web and bottom flange interfaces with numerous exposed stirrups.

FB05 - exposed BF with 3/4" remaining thickness, beginning at the G2 connection and continuing for 5' length along both faces; encasement separating up to 3/4". There is a diagonal crack of the encasement on the far side from the right girder BF to the deck interface at centerline with heavy delam and moisture at centerline.

FB06 - BF with 0.71" remaining thickness, along the near and far faces, beginning at the G2 connection and continuing for a 3' length. Exposed 8'L with 0.71" on the near face at G1.

FB07 - exposed BF with 11/16" remaining thickness at right girder connection measuring 2'L at the near face and 5' at the far face. There are two add'l spalls at the far face along the left half of the bottom flange and web interface.

FB08 - exposed BF with 0.625" remaining thickness at the near right for 4' length.

FB09 - exposed BF with 11/16" remaining thickness at right for 6' length.

FB10-FB12 - refer to general description. Delamination of BF encasement is typical throughout.

FB10 - four exposed stirrups.

FB12 - BF far face exposed 2'L just right of centerline.

FB13 - exposed BF with 0.71" remaining thickness, along the near and far faces, beginning at the G2 connection and continuing for a length of 3'. The BF encasement is delaminated throughout.

FB14 - exposed BF with 0.59" remaining thickness, along the near face, beginning at the G2 connection and continuing for 4' length. Near face BF exposed 6'L at centerline with 0.766" rem. thickness. BF exposed 36"L with 0.74" remaining thickness at G1 on near face. The remaining encasement is cracked and delaminated full length with isolated spalls and exposed stirrups.

Portals/Bracings: Floorbeams (SPAN 2, continued) -

FB15 - the BF toe is exposed with 0.79" remaining thickness, along the near face, beginning at the G2 connection and continuing for a 8.5' length. The remaining encasement is cracked full length and separating from bottom flange. Far face encasement is cracked at right end up 1/4 point up to 1" wide with two exposed bars.

Floorbeams (SPAN 3) -

FB16 - heavy large open cracking and spalling full length of the bottom flange encasement with 7/8" remaining thickness to exposed edge of the bottom flange along the full length of the near face (min 5/8" right end). 6' wide area of full bottom flange exposure right end with heavy delam and 0.66" remaining thickness far face, 2' wide left end far face.

FB17 - 1" wide full length open longitudinal cracking of bottom flange encasement; remaining encasement is delaminated. Bottom flange visible through crack. Bottom flange exposed for 4' width along far face 2' from G2.

FB18 - 1" wide full length open longitudinal cracking of bottom flange encasement; remaining encasement is delaminated. Horizontal cracking along bottom flanges. Few exposed stirrups. Bottom flange visible in crack at left end of near face.

FB19 - bottom flange is exposed full length with 1/16" to 1/8" section loss to the bottom flange (non-measureable remaining thickness due to concrete encasement). Heavy delam adjacent to FR bearing. Bottom flange exposed/delaminated for 5' at G1 connection.

Sidewalk Overhang Brackets -

Left side only attached to left through girder.

Concrete encased with hairline cracking and some efflorescence, and spalling.

Bracket at FB19 concrete encasement failed and exposes steel has up to 1/8" (0.125") section loss to the bottom back to back angle's horizontal legs.

Bearings: Near Abutment - expansion; steel sliding plates. Very minor bearing loss at near right bearing.

Pier 1 - fixed; steel, pinned.

Pier 2 - fixed; steel, pinned

Far Abutment - expansion; steel sliding plates.

The expansion bearings at the abutments are heavily corroded with moderate delamination, frozen, and inoperable. The fixed bearings have heavy delamination at the left with minor section loss and severe delamination and pitting at the right with moderate section loss. There is heavy bridge seat deterioration adjacent to the bearings. 22" long (full length of plate) x up to 1 1/2" bearing loss along right side of far right bearing.

Drainage System: None

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

Substructure

1A02 **Substructure Condition Rating:** 3 - Serious-loss of section, deterioration, spalling or scour have seriously affected primary structure

Notes: THE SUBSTRUCTURE WAS NOT FULLY EVALUATED DURING THE JULY 2022 INTERIM INSPECTION. ONLY THE SPALLING AT THE BEARINGS AT THE ABUTMENTS WAS EVALUATED.

The reinforced concrete substructure is in overall serious condition. The substructure condition rating is controlled by concrete deterioration of the abutments and bridge seats adjacent to the bearings that encroaches below the bearings.

Near Abutment

Backwall: Reinforced Concrete - random hairline and open cracking, efflorescence, and minor edge spalling. Full height severe spalling and honeycombing at near right outside of the girder.

Bridge Seats: Reinforced Concrete - severe spalling (heaviest under the girders and full length below the cheekwalls). The top edge is spalled intermittently full length. The left and right are spalled to the front of the bearings and the concrete around the bearings is delaminated. The spalling at the left is 10' long x 20" high (full height) x 20" deep (back to bearing) and the spalling at the right is 8' long (from corner) x 20" high (full height) x 16" deep (back to bearing); 24" deep at edge/corner. Very minor (~1/2" at corner) bearing loss.

Cheekwalls: Reinforced Concrete - heavy to severe spalling delamination and exposed aggregate under both cheekwalls.

Stem: Reinforced Concrete - heavy to severe spalling/delamination and exposed aggregate at both ends and the left 1/3 point. Delamination of over 50% of face of stem. Random hairline to open cracking throughout. 5' high x 6' wide x 24" deep area of spalling/missing concrete at the WNR interface below cheekwall. 4' long x up to 4' high x 6" deep spall at WNL. Heavy graffitti.

Wings: Reinforced Concrete - heavy spalling/delamination.

WNL - cracking throughout with exposed aggregate and timber cribbing at the end (stable). Heavy spalling under the cheekwall (outside of the sidewalk), moderate cracking/delamination at centerline of wing.

WNR - heavy erosion behind wing filled with bituminous pavement. Very heavy spalling up to full width of the cheekwall. Approximately 70% of the concrete under the cheekwall is spalled.

Footing: Not visible.

Piles: None visible.

IN20 **Scour Undermine:** 0 - No

Settlement: None evident.

Embank Slope-wall: Soil; minor erosion.

Wall Drainage: None

Far Abutment

Backwall: Reinforced Concrete - random hairline and open cracking, efflorescence, and spalling with exposed aggregate throughout.

Bridge Seats: Reinforced Concrete - severe spalling (heaviest under the girders). Concrete surrounding bearings is delaminated. The left and right are spalled to the front of the bearings and the concrete around the bearings is delaminated. The spalling at the left is 18'-4" long x 20" high (full height) x 15" deep to the front face of the bearing (2' deep to right, interior, of bearing) and begins at the left end of the stem wall. The spalling at the right is 12' long x 20" high (full height) x 15" deep to the front face of the bearing and extends to 3'-6" deep adjacent to the bearing. 22" long (full length of plate) x up to 1 1/2" bearing loss along right side of right bearing.

Cheekwalls: Reinforced Concrete - severe spalling and scaling at the left up to full width x full height at near end. The right cheekwall has collapsed.

Stem: Reinforced Concrete - heavy spalling. 6.5' wide x 7 1/2' high (FH) x 11" deep spall just right of the far left bearing. The spall beneath the left bearing exhibits few areas with protruding steel wire strands. The right end of the stem has failed from the right edge of the bearing to the right end of the stem. 4' long x 4' high x 3' high section of the stem/cheekwall/right wing has spalled off of the abutment and is laying on the embankment. Full height x 11' wide x 5" deep spalling at the right end right of the bearing. 6.5' high x 2' wide x 10" deep spall left end below cheekwall.

Wings: WFL (Not accessible) - The retaining wall supports the far left sidewalk. Blocked by timber sidewalk extension.

WFR - reinforced concrete with severe scaling and spalling up to full height by full width.

Footing: Not visible.

Piles: None visible.

IN20 **Scour Undermine:** 0 - No

Settlement: None evident.

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

Embank Slope-wall: Soil; moderate erosion.

Wall Drainage: None

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

Navigational Control

4A21 **Controls Exist:** Unknown
4A22 **Vert Clearance:** 0.00
4A24 **LIft Vertical:** 0.00
4A23 **Horz Clearance:** 0.00
4A07 **Pier Protection:** N - Not Applicable

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

Pier Details

5D02 **Pier/Bent Number:** **P01** **IN20** **Scour Undermine:** No

Condition Summary: PIER 1 WAS NOT EVALUATED DURING THE JULY 2022 INTERIM INSPECTION.

Concrete filled riveted steel column bents with upper lateral steel bracing and reinforced concrete crash wall at base.

Bridge Seats: Pinned steel bearings; heavy to severe delamination and pitting with minor to moderate section loss.

Cheekwalls: N/A

Columns/Stems: Concrete filled riveted steel bents: Left column has moderate pack rust at the near face, right side of column and minor pack rust at far left and far right. Right column moderate pack rust at the near face, both sides and far left up to 1/2" thick.

Reinforced concrete crash wall: Heavy scaling throughout. 3/4" wide full height crack at the centerline with spalling measuring up to 2" wide through near and far faces. There is an 18" wide x 5" high x 5" deep spall 5' right of the crack on the near face. In addition, there is a 30" wide x 8" high x 2.5" deep spall with exposed horizontal reinforcement located beneath the right column on the near face. Few partial height vertical hairline cracks and partial width hairline horizontal cracks throughout near and far faces. There is a 22" wide x 6" high x 1.5" deep spall 2' left of right column on near face with surrounding delamination.

Cap: Steel bracing with light to moderate delamination and pitting.

Settlement: None evident.

5D02 **Pier/Bent Number:** **P02** **IN20** **Scour Undermine:** No

Condition Summary: PIER 2 WAS NOT EVALUATED DURING THE JULY 2022 INTERIM INSPECTION.

Concrete filled riveted steel column bents with upper lateral steel bracing and reinforced concrete crash wall at base.

Bridge Seats: Pinned steel bearings; heavy to severe delamination and pitting with minor to moderate section loss.

Cheekwalls: N/A

Columns/Stems: Concrete filled riveted steel bents: Left column has moderate pack rust at the near face, left side of column. Right column has severe pack rust to 1/2" along the near face, both sides of column.

Reinforced concrete crash wall: Several moderate to severe spalls, a 65" wide x 9" high x 2" deep spall has exposed rebar at near left. A few up to 1/4" wide vertical full height cracks with spalling up to 2" wide and a horizontal hairline cracks throughout. 3/4" wide full height crack at the centerline. Several full width longitudinal cracks on top face up to 1/4" wide with spalling up to 1.5" wide at centerline. There is 1/4" vertical displacement at right 1/3 point on top face.

Cap: Steel bracing with minor delamination and moderate pitting. There is 2" high x 1.5" wide area of 100% section loss at top of web adjacent to right connection plate.

Settlement: None evident.

5D02 **Pier/Bent Number:** **P03** **IN20** **Scour Undermine:** No

Condition Summary:

Bridge Seats:

Cheekwalls:

Columns/Stems:

Settlement:

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5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

Main

6A44 **Group:** 2 - Group 2

6A45 - 6A48 **Critical Ranking Factor:** 4383

6A49 **Total Critical Ranking Factor:** 18

Structure Type (Dept)

6A26 **Material Makeup:** 1 - Steel

6A27 **Physical Makeup:** 9 - Other or none

6A28 **Span Interaction:** 1 - Simple, non-comp

6A29 **Structural Config:** 14 - Girder riv/thru

Approach

6A44 **Group:**

6A45 - 6A48 **Critical Ranking Factor:** 000

6A49 **Total Critical Ranking Factor:** 0

Structure Type (Dept)

6A26 **Material Makeup:**

6A27 **Physical Makeup:**

6A28 **Span Interaction:**

6A29 **Structural Config:**

Fracture Critical Details

IF01 **Location:** M - 1 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** D

IF03 **Member:** G1 & G2 Riveted Through Girder

IF04 **Member Detail:** Net tension zone

IF06 **Notes:** Bottom flange and inside web encased. Exposed bottom flange coverplate with up to 100% section loss to rivet heads within 7' of NAB.

IF01 **Location:** M - 1 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** D

IF03 **Member:** G1 & G2, Riveted Through Girder to Stiffener Conn

IF04 **Member Detail:** WEB/STIFFENER CONN

IF06 **Notes:** Riveted connection is concrete encased below deck. No cracks visible.

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

IF01 **Location:** M - 1 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** D

IF03 **Member:** G1 & G2, Riveted Floorbeam Connection to Girders

IF04 **Member Detail:** WEB/FLOORBEAM CONN

IF06 **Notes:** Concrete encased, not visible.

IF01 **Location:** M - 1 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** D

IF03 **Member:** G1 & G2, Riveted Sidewalk Bracket Conn

IF04 **Member Detail:** WEB/SIDEWALK CONN

IF06 **Notes:** The sidewalk bracket connection to the through girder webs is concrete encased and not visible.

IF01 **Location:** M - 1 **IF02** **Type:** 11 - Floorbeam **IF05** **FC Stress Category:** A

IF03 **Member:** FB00 TO FB03, Rolled Floorbeams

IF04 **Member Detail:** Net tension zone

IF06 **Notes:** The floorbeams are full encased except where concrete delamination has exposed bottom flange.

FB03 edge of bottom flange exposed at left end with 3/4" remaining along far face.

IF01 **Location:** M - 2 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** D

IF03 **Member:** G1 & G2, Riveted Through Girder

IF04 **Member Detail:** Net tension zone

IF06 **Notes:** Bottom flange and inside web encased. G2, Bay 7 has up to 1.25" section loss (original 2 7/8") to inside bottom flange coverplates. Exposed bottom flange coverplates at Bays 11, 12 & 13 with minimum 2.25" remaining thickness.

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

IF01 **Location:** M - 2 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** D

IF03 **Member:** G2 & G2, Riveted Through Girder Stiffener Conn

IF04 **Member Detail:** WEB/STIFFENER CONN

IF06 **Notes:** Riveted connection is concrete encased below deck. No cracks visible.

IF01 **Location:** M - 2 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** D

IF03 **Member:** G1 & G2, Girder Web Splice Connection Plates

IF04 **Member Detail:** WEB/SPLICE PLATE CONN

IF06 **Notes:** Concrete encased on the inside under concrete deck and sidewalk. No cracks visible.

IF01 **Location:** M - 2 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** D

IF03 **Member:** G1 & G2, Riveted Floorbeam Connection to Girders

IF04 **Member Detail:** WEB/FLOORBEAM CONN

IF06 **Notes:** Concrete encased, not visible.

IF01 **Location:** M - 2 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** D

IF03 **Member:** G1 & G2, Riveted Sidewalk Bracket Conn

IF04 **Member Detail:** WEB/SIDEWALK CONN

IF06 **Notes:** The sidewalk bracket connection to the through girder webs is concrete encased and not visible.

IF01 **Location:** M - 2 **IF02** **Type:** 11 - Floorbeam **IF05** **FC Stress Category:** D

IF03 **Member:** FB04 TO FB15, Rolled Floorbeams

IF04 **Member Detail:** Net Tension Zone

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

IF06 **Notes:** The floorbeams are full encased except where concrete delamination has exposed bottom flange.

FB05: 0.75" remaining bottom flange thickness.
FB06: 0.71".
FB07: 0.65".
FB08: 0.625".
FB09: 11/16".
FB13: 0.71".
FB14: 0.68"
FB15: 0.76".
FB16: 7/8".

IF01 **Location:** M - 3 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** D

IF03 **Member:** G1 & G2 Riveted Through Girder

IF04 **Member Detail:** Net tension Zone
IF06 **Notes:** Bottom flange and inside web encased. 6' length of exposed bottom flange coverplate with 1/4" remaining coverplate thickness. 7"L x 1.5"W tear at FR brg. Up to 95% section loss to rivet heads within at FAB.

IF01 **Location:** M - 3 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** D

IF03 **Member:** G1 & G2, Riveted Through Girder to Stiffener Conn

IF04 **Member Detail:** WEB/STIFFENER CONN
IF06 **Notes:** Riveted connection is concrete encased below deck. No cracks visible.

IF01 **Location:** M - 3 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** D

IF03 **Member:** G1 & G2, Riveted Floorbeam Connection to Girders

IF04 **Member Detail:** WEB/FLOORBEAM CONN
IF06 **Notes:** Concrete encased, not visible.

IF01 **Location:** M - 3 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** D

IF03 **Member:** G1 & G2, Riveted Sidewalk Bracket Conn

IF04 **Member Detail:** WEB/SIDEWALK CONN
IF06 **Notes:** The sidewalk bracket connection to the through girder webs is concrete encased and not visible.

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

IF01 **Location:** M - 3 **IF02** **Type:** 01 - Girder **IF05** **FC Stress Category:** A

IF03 **Member:** FB16 TO FB19, Rolled Floorbeams

IF04 **Member Detail:** Net tension zone

IF06 **Notes:** The floorbeams are full encased except where concrete delamination has exposed bottom flange.

FB16: 1/16" section loss along near face.

FB19: 1/8" section loss along near face.

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Form K

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

Paint Condition

6B36 **Protective Coating:** 3 - Critical to Poor **6B37** **Protective Coating (Extent):** 4 - Blast + 20-40%

6B35 **New Protective Coating Since Last Insp:** 0 - No New Coating

Int Beam / Gird: Floorbeams: Exposed steel (encasement spalls) delaminated and corroded with section loss to the bottom flanges.

Fascias: Girders above deck: Moderate to heavy paint flaking with heavy surface rust throughout, heavy delamination along the curbs, and areas of pack rust at the top flanges.

Girders below deck: Exposed steel due to concrete encasement spalling with heavy rust and pitting, moderate/heavy delamination with section loss.

Splsh Zone Truss Gird: N/A

Truss: N/A

Bearings: N/A

Other: N/A

pennsylvania DEPARTMENT OF TRANSPORTATION

Form K

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

Load Ratings

IR01a **Load Rating Review Recommended:** Recalc not required
Due To:

IR03 **Calculation Date:** February 08, 2006

IR02 **Rating Approval Date:** February 08, 2006

Load Rating Details

	IR10	IR11	IR11a	IR21	IR20	IR05	IR06	IR07	IR16	IR14	IR15	IR13	IR12
LOAD TYPE	IR LOAD	OR LOAD	SLC RATING	IR Rating Factor	OR Rating Factor	NBI IND	RTNG ANAL METH	CONT MEM TYPE	ANALYSIS ENGINEER	AASHTO MANUAL YEAR	AASHTO SPEC YEAR	OPR GOV CRIT	INV GOV CRIT
1	15	25	25	-1.00	-1.00	0	2	2	Erdman Anthony	1994	1996	M	M
IR19	Notes Description:												
8	21	35	28	-1.00	-1.00	0	2	2	Erdman Anthony	1994	1996	M	M
IR19	Notes Description:												
2	27	46	36	-1.00	-1.00	1	2	2	Erdman Anthony	1994	1996	M	M
IR19	Notes Description:												
0	26	44	35	-1.00	-1.00	0	2	2	Erdman Anthony	1994	1996	M	M
IR19	Notes Description:												
9	3	5	5	-1.00	-1.00	0	7	2	Erdman Anthony	1994	1996	S	S
IR19	Notes Description: Gross Load Rating represents the seriously deteriorated abutments.												

Posting

VP01 **Status Date:** 07/02/1987
VP02 **Posting Status:** P - Posted for load
VP03 **Special Restrictive Posting:** 2 - One Truck w/ limit
VP04 **Posted Weight Limit:** 3 ton
VP05 **Posted Limit Combination:** -1 ton
VP06 **Posting Reason:** F - Sub/Deficient abut

5A01 **SR ID:** 09710100906434 5A03 **BR Key:** 7587 7A01 **Inspection Date:** July 14, 2022

Proposed Maintenance Items :-

IM01 Type of Work	IM03 Action	IM04 Est Qty	UOM	IM05 Priority	IM06 Init Recm'd Date	IM08 Target Year	IM11 Work Assign
Flexible	28 - B744802-REPAIR ABUTMENT	12	CY	1	1/13/1992	0	

IM07 **Status:** 0 - Work not planned IM15 **Notes:** Patch/repair the severely spalled concrete surrounding the bearing areas.

#1 N/A

#2 A priority notification letter was sent to Mr. William McCauley, Bristol Township's Manager, on 3/7/17, 10/23/17, and 1/19/18. A Plan of Action from Bristol Township was received on 2/21/18 and has been uploaded to BMS2.

#3 This maintenance recommendation, with recent notification letter dated 8/14/18, was discussed during the critical deficiency meeting on 8/15/18. Bristol Township is working with their engineer, Gilmore Associates, to pursue funding to repair/rehab the bridge.

#4 A priority notification letter was sent to Mr. William McCauley, Bristol Township's Manager, on 7/25/19, 1/15/2020, and 7/28/20.

#5 A priority notification letter was sent to Ms. Randee Elton, Bristol Township's Manager, on 1/14/21, 7/19/21, 1/20/22, and 7/15/22.

IM09 **Location:**

Flexible	10 - BITWRGS-RPR/RPL.BIT.W.S.	2	SY	1	7/14/2022	0	

IM07 **Status:** 0 - Work not planned IM15 **Notes:** Repair the bituminous potholes exposing the joint steel at the near and far transitions.

#1 N/A
#2 A priority notification letter was sent to Ms. Randee Elton, Bristol Township Manager, on 7/15/22.

IM09 **Location:**

Flexible	27 - RDGDERL-CONNECT GDERAIL TO BR	4	EA	2	11/30/1993	0	

IM07 **Status:** 0 - Work not planned IM15 **Notes:** Connect the approach guide rail to the structure mounted guide rail and install standard approach guide rail at each corner. Install a standard end treatment at the far right corner. Repair the missing/damaged guide rail at the near right and far left.

IM09 **Location:**

Flexible	4 - A744101-REPAIR DK.JOINT	46	LF	2	7/26/2011	0	

IM07 **Status:** 0 - Work not planned IM15 **Notes:** Repair/Reseal the expansion joints at the near and far transitions.

IM09 **Location:**

Flexible	49 - C744602-RPR.STEELGIRDER	4	EA	2	7/31/2012	2013	1 - Contractor

IM07 **Status:** 0 - Work not planned IM15 **Notes:** Repair the deteriorated bottom flanges of the right girder in Spans 1, 2, and 3 and the left girder in Span 2 and remove any loose concrete.

IM09 **Location:**

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

IM01 Type of Work	IM03 Action	IM04 Est Qty	IM05 UOM	IM06 Priority	IM08 Init Recm'd Date	IM11 Target Year	Work Assign
Flexible	50 - B744602-RPR/RPL.STL.FLBM	13	EA	2	7/31/2012	2013	1 - Contractor
IM07	**Status:** 0 - Work not planned	**IM15**	**Notes:** Repair the deteriorated bottom flanges of the concrete encased steel I-beams in Spans 1, 2, and 3 and remove any loose concrete.				
IM09	**Location:**						
Flexible	20 - D744102-RPR.STL.EXP.DAM	3	LF	2	7/10/2013	0	
IM07	**Status:** 0 - Work not planned	**IM15**	**Notes:** Repair the loose steel plate expansion joint along the near transition.				
IM09	**Location:**						
Flexible	18 - RLGPEDN-RPR/RPL.PED.RLG	1	LF	2	7/18/2017	0	
IM07	**Status:** 0 - Work not planned	**IM15**	**Notes:** Repair the damaged corrugated metal train shield at the far right corner.				
IM09	**Location:** F RT						
Flexible	47 - RDDRAIN-IMPR.OFF BR.DRAINAGE	1	EA	2	7/19/2017	0	
IM07	**Status:** 0 - Work not planned	**IM15**	**Notes:** Improve off bridge drainage at the near right corner.				
IM09	**Location:** NR						
Flexible	39 - E744303-RPRCONCSIDEWALK	1	SY	2	7/14/2022	0	
IM07	**Status:** 0 - Work not planned	**IM15**	**Notes:** Repair the holes in the concrete sidewalk.				
IM09	**Location:**						
Flexible	44 - A744501-REHAB.STEEL BRG	8	EA	3	1/13/1992	0	
IM07	**Status:** 0 - Work not planned	**IM15**	**Notes:** Replace the frozen/inoperable bearings.				
IM09	**Location:**						
Flexible	38 - A744801-RPR/RPL.BACKWALL	8	CY	3	1/13/1992	0	
IM07	**Status:** 0 - Work not planned	**IM15**	**Notes:** Repair the deteriorated cheekwalls at the near and far abutments.				
IM09	**Location:**						
Flexible	6 - D744303-RPR.CONC.DECK	14	SY	3	1/13/1992	0	
IM07	**Status:** 0 - Work not planned	**IM15**	**Notes:** Patch/repair spalling on the underside of the deck and sidewalk and hole above left end of Pier 1.				
IM09	**Location:**						
Flexible	15 - C744802-RPR/RPL WINGWALL	5	CY	3	2/11/2004	0	
IM07	**Status:** 0 - Work not planned	**IM15**	**Notes:** Repair the spalled concrete on the near left wingwall, under the cheekwall, and far right wingwall.				
IM09	**Location:**						
Flexible	51 - RDCLSGN-RPL.CLEARANCE SIGN	4	EA	3	8/5/2010	0	
IM07	**Status:** 0 - Work not planned	**IM15**	**Notes:** Move the near left, near right, and far right hazard clearance signs to their own post and set each corner to standard height (the minimum vertical clearance between the bottom of the hazard clearance sign and the top edge of pavement is 5').				
IM09	**Location:**						
Flexible	57 - A743201-SPOT PAINT SUPERSTR	1	EB	4	2/15/2000	0	
IM07	**Status:** 0 - Work not planned	**IM15**	**Notes:** Spot paint the superstructure as needed throughout.				
IM09	**Location:**						

5A01 **SR ID:** 09710100906434 5A03 **BR Key:** 7587 7A01 **Inspection Date:** July 14, 2022

IM01 Type of Work	IM03 Action	IM04 Est Qty	UOM	IM05 Priority	IM06 Init Recm'd Date	IM08 Target Year	IM11 Work Assign
Flexible	16 - B743201-SPOT PAINT SUBSTR	1	EB	4	2/15/2000	0	

IM07 **Status:** 0 - Work not planned IM15 **Notes:** Spot paint the pier columns and bracing as needed throughout.
IM09 **Location:**

Flexible	40 - RDPAVMT-PATCH/RAISE PAVEMENT	20	SY	4	7/10/2013	0	

IM07 **Status:** 0 - Work not planned IM15 **Notes:** Reseal the near and far approach roadway pavements. Repair the undermined bituminous at the end of the right girder.
IM09 **Location:**

Flexible	70 - RDLDSGN-RPL.LOAD LIMIT SIGN	1	EA	4	1/13/2021	0	

IM07 **Status:** 0 - Work not planned IM15 **Notes:** Replace the bent weight limit sign at the far advance posting.
IM09 **Location:**

Flexible	46 - RDSHLDR-RPR/RECONST SHOULDER	1	SY	4	7/14/2022	0	

IM07 **Status:** 0 - Work not planned IM15 **Notes:** Repair the settlement at the far left sidewalk transition.
IM09 **Location:**

Flexible	8 - C743102-CLEAN BRG/SEAT	1	EB	5	2/15/2000	0	

IM07 **Status:** 0 - Work not planned IM15 **Notes:** Clean and flush the bridge seats.
IM09 **Location:**

Flexible	23 - A743101-CLEAN/FLUSH DK	1	EB	5	7/30/2009	0	

IM07 **Status:** 0 - Work not planned IM15 **Notes:** Remove the debris from the left and right girders along the curb.
IM09 **Location:**

Completed Maintenance Items :-

IM01 Type of Work	IM03 Action	IM04 Est Qty	UOM	IM05 Priority	IM14a Completed Date	IM08 Target Year	IM11 Work Assign
Flexible	18 - RLGPEDN-RPR/RPL.PED.RLG	5	LF	0	1/1/1901	0	

IM07 **Status:** 6 - Completed/Contr IM15 **Notes** Repair the damaged corrugated metal train shield which is detached from the post and rails at the near left corner. The deficiency presents a potential hazard to pedestrians.

#1 The maintenance status was changed from '0 - Work not planned' to '6 - Completed by Contractor' during the 2015 routine inspection.

#2 A priority notification letter was sent to Mr. William McCauley, Bristol Township's Manager, on January 14, 2015.

#3 MT followed up with a phone call to Bristol Township on January 23, 2015. There was no confirmation whether or not the maintenance was completed. Waiting to hear back with confirmation or POA and schedule.

IM09 **Location:**

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

IM01	IM03	IM04		IM05	IM14a	IM08	IM11
Type of Work	**Action**	**Est Qty**	**UOM**	**Priority**	**Completed Date**	**Target Year**	**Work Assign**
Flexible	24 - RDBRUSH-CUT BRUSH CLEAR SIGN	1	EA	0	1/1/1901	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** NADV - cut the overhanging vegetation obstructing the load posting warning traffic traveling southbound on Penn Avenue located at the Penn Avenue and Randall Avenue intersection.

#1 The maintenance status was changed from '0 - Work not planned' to '6 - Completed by contractor' by MT after the January 28, 2016 problem area inspection.

#2 a priority notification letter was sent to Mr. William McCauley, Bristol Township's Manager, on July 28, 2015.

IM09 **Location:** NADV

Flexible	51 - RDCLSGN-RPL.CLEARANCE SIGN	4	EA	1	1/1/1901	0	No

IM07 **Status:** 5 - Completed/Dept **IM15** **Notes** H03 LOCATION: LNRLFR Converted from BMS - H01 code: RDCLSGN

IM09 **Location:** LNRLFR

Flexible	10 - BITWRGS-RPR/RPL.BIT.W.S.	77	SY	1	1/1/1901	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** Repair the missing bituminous pavement along the transitions exposing the steel expansion joints. (2 SY, Priority 1)

Repair the map cracking along the centerline of the bridge. (75 SY, Priority 4)

#1 The maintenance item was tagged as "6 - Completed/Contractor" by MT during the January 30, 2014 problem area inspection.

IM09 **Location:**

Flexible	40 - RDPAVMT-PATCH/RAISE PAVEMENT	4	SY	2	1/1/1901	0	

IM07 **Status:** 5 - Completed/Dept **IM15** **Notes** Patch and seal the potholes at the near and far transitions.

IM09 **Location:**

Flexible	18 - RLGPEDN-RPR/RPL.PED.RLG	1	LF	2	1/1/1901	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** Repair the damaged corrugated metal train shield which is bent at the far right corner.

IM09 **Location:** FR

Flexible	40 - RDPAVMT-PATCH/RAISE PAVEMENT	10	SY	3	1/1/1901	0	

IM07 **Status:** 5 - Completed/Dept **IM15** **Notes** patch the deteriorated far approach

IM09 **Location:**

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

IM01	IM03	IM04		IM05	IM14a	IM08	IM11
Type of Work	**Action**	**Est Qty**	**UOM**	**Priority**	**Completed Date**	**Target Year**	**Work Assign**
Flexible	70 - RDLDSGN-RPL.LOAD LIMIT SIGN	4	EA	0	4/26/2013	0	No

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** Install the "BRIDGE" placard and a Right Arrow at the Penn Ave/Edgely Rd intersection (Near Adv) Install the "BRIDGE" placard and Left Arrow at the Penn Ave/Randall Ave intersection (als Near Adv). Install the "BRIDGE" placard at the near approach and new "WEIGHT LIMIT 2 1/2 TONS" POSTING. Install the "BRIDGE:" placard at the far approach and replace the "WEIGHT LIMIT 3 1/2 TONS" Posting Sign. Install the "BRIDGE" placard on each of the two Far Adv at the Radcliffe St intersection.

#1 NA

#2 A notification letter was sent to Bristol Township on July 27, 2011. and to the Twp Manager, William McCauley on July 31, 2012.
#3 Posting recommendations completed per e-mail from Doug Waite 4/26/2013

IM09 **Location:**

Flexible	39 - E744303-RPRCONCSIDEWALK	1	SY	1	4/26/2013	0	No

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** Patch the spalled concrete sidewalk beyond the pedestrian rail at the far left corner and over the Pier 1 joint.

#1 NA

#2 A notification letter was sent to Bristol Township on July 27, 2011. A notification letter sent to Township Manager, Willam McCauley, July 31, 2012.
#3 Sidewalk repairs completed per e-mail from Doug Waite 4/26/2013

IM09 **Location:**

Flexible	70 - RDLDSGN-RPL.LOAD LIMIT SIGN	2	EA	0	8/7/2014	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** NADV - raise the load posting located at the Penn Avenue and Edgely Road intersection to standard height (the minimum vertical clearance between the bottom of the auxiliary "500 Ft Ahead" distance plaque and the top edge of pavement is 4').

NADV - raise the load posting located at the Penn Avenue and Randall Road intersection to standard height (the minimum vertical clearance between the bottom of the auxiliary "300 Ft Ahead" distance plaque and the top edge of pavement is 4').

FAPP - raise the load posting located at the far left corner of the bridge to standard height (the minimum vertical clearance between the bottom of the auxiliary "Weight Limit 3-1/2 Tons Weight Limit" sign and the top edge of pavement is 7').

#1 The recommended maintenance was completed on August 7, 2014 as per email sent from Mr. Kurt Schroder of Gilmore & Associates recieved by MT on 8/7/2014.

#2 A priority notification letter was sent to Mr. William McCauley, Bristol Township's Manager, on July 31, 2014.

IM09 **Location:**

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

IM01	IM03	IM04		IM05	IM14a	IM08	IM11
Type of Work	**Action**	**Est Qty**	**UOM**	**Priority**	**Completed Date**	**Target Year**	**Work Assign**
Flexible	24 - RDBRUSH-CUT BRUSH CLEAR SIGN	0	EA	0	8/7/2014	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** Cut the overhanging vegetation obstructing the near advance load posting located at the Penn Avenue and Randall Road intersection.

#1 The recommended maintenance was completed on August 7, 2014 as per email sent from Mr. Kurt Schroder of Gilmore & Associates recieved by MT on 8/7/2014.

#2 A priority notification letter was sent to Mr. William McCauley, Bristol Township's Manager, on July 31, 2014.

IM09 **Location:**

Flexible	18 - RLGPEDN-RPR/RPL.PED.RLG	5	LF	0	2/12/2016	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** Repair the damaged corrugated train shield at the near left (northwest) corner.

#1 N/A

#2 The damaged train shield was reviously repaired with wire tie. Currently a section of the train shield is failed and the deficiency presents a potential hazard to pedestrians. A priority notification letter was sent to Mr. William McCauley, Bristol Township's Manager, on January 29, 2015.

#3. As per a Gilmore and Assoc. letter dated March 12, 2016, this item has been repaired by Bristol Township.

IM09 **Location:**

Flexible	70 - RDLDSGN-RPL.LOAD LIMIT SIGN	1	EA	0	6/28/2016	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** Repair the far approach load posting located at the far left (northeast) corner of the bridge to standard height (the minimum vertical clearance between the bottom of the auxiliary "Weight Limit 3-1/2 Tons Weight Limit" sign and the top edge of sidewalk is 7').

#1 The maintenance status was changed from '0 - Work not planned' to '6 - Completed by contractor' by MT after the January 28, 2016 problem area inspection.

#2 a priority notification letter was sent to Mr. William McCauley, Bristol Township's Manager, on July 28, 2015.

IM09 **Location:** FAPP

Flexible	24 - RDBRUSH-CUT BRUSH CLEAR SIGN	1	EA	0	1/18/2018	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** FADV - clear vegetation blocking the far advance load posting warning traffic traveling southbound on Radcliffe St.

#1 Observed completed during the January 19, 2018 interim inspection.

#2 A priority notification letter was sent to Mr. William McCauley, Bristol Township Manager, on 7/21/17.

IM09 **Location:** FADV

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

IM01 Type of Work	IM03 Action	IM04 Est Qty	UOM	IM05 Priority	IM14a Completed Date	IM08 Target Year	IM11 Work Assign
Flexible	39 - E744303-RPRCONCSIDEWALK	1	SY	0	1/18/2018	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** Repair the settlement resulting in a tripping hazard at the near left sidewalk transition.

#1 Observed completed during the January 19, 2018 interim inspection.

#2 A priority notification letter was sent to Mr. William McCauley, Bristol Township Manager, on 7/21/17.

IM09 **Location:** NAPP

IM01 Type of Work	IM03 Action	IM04 Est Qty	UOM	IM05 Priority	IM14a Completed Date	IM08 Target Year	IM11 Work Assign
Flexible	46 - RDSHLDR-RPR/RECONST	7	SY	1	1/18/2018	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** Repair the settling bituminous sidewalk at the far left corner.

#1 Observed completed during the January 19, 2018 interim inspection.

#2 Priority code was a 2 and was changed to a 1 due to continued deterioration resulting in a hazard for pedestrians.

#3 A priority notification letter was sent to Mr. William McCauley, Bristol Township Manager, on 7/21/17.

IM09 **Location:**

IM01 Type of Work	IM03 Action	IM04 Est Qty	UOM	IM05 Priority	IM14a Completed Date	IM08 Target Year	IM11 Work Assign
Flexible	24 - RDBRUSH-CUT BRUSH CLEAR SIGN	2	EA	0	7/30/2018	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** Clear the vegetation blocking the weight limit posting signs at the near advance (Penn Ave) and far advance (Radcliffe St).

#1 N/A

#2 A priority notification letter was sent to Mr. William McCauley, Bristol Township Manager, on 7/27/18.

IM09 **Location:** NADV, FADV

IM01 Type of Work	IM03 Action	IM04 Est Qty	UOM	IM05 Priority	IM14a Completed Date	IM08 Target Year	IM11 Work Assign
Flexible	46 - RDSHLDR-RPR/RECONST	7	SY	1	1/29/2019	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** Repair the settlement of the bituminous sidewalk at the far left corner.

#1 Observed complete during the January 29, 2019 problem area inspection.

#2 A priority notification letter was sent to Mr. William McCauley, Bristol Township Manager, on 7/27/18. A deficiency meeting was held at the bridge on 8/15/18.

IM09 **Location:** FL

IM01 Type of Work	IM03 Action	IM04 Est Qty	UOM	IM05 Priority	IM14a Completed Date	IM08 Target Year	IM11 Work Assign
Flexible	77 - RTWALLR-RETAINING WALL	10	LF	2	1/29/2019	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** Repair/replace the rotated far left retaining wall.

IM09 **Location:**

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

IM01	IM03	IM04		IM05	IM14a	IM08	IM11
Type of Work	**Action**	**Est Qty**	**UOM**	**Priority**	**Completed Date**	**Target Year**	**Work Assign**
Flexible	46 - RDSHLDR-RPR/RECONST	1	SY	1	7/14/2021	0	

IM07 **Status:** 6 - Completed/Contr **IM15** **Notes** Repair the bituminous sidewalk settlement at the far left corner.

#1 Observed completed during the 2021 Routine Inspection.
#2 A priority notification letter was sent to Mr. William McCauley, Bristol Township's Manager on 1/15/2020 and 7/28/20.
#3 A priority notification letter was sent to Ms. Randee Elton, Bristol Township's Manager, on 1/14/21.

IM09 **Location:**

Flexible	10 - BITWRGS-RPR/RPL.BIT.W.S.	1	SY	1	1/19/2022	0	

IM07 **Status:** 7 - Superseded **IM15** **Notes** Repair the potholes in the bituminous exposing the joint steel at the far transition.

#1 Superceded during January 2022 inspection.
#2 A priority notification letter was sent to Mr. William McCauley, Bristol Township's Manager on 7/28/20.
#3 A priority notification letter was sent to Ms. Randee Elton, Bristol Township's Manager, on 1/14/21 and 7/14/21.

IM09 **Location:**

pennsylvania
DEPARTMENT OF TRANSPORTATION

INSPECTION ADMINISTRATION

Form P

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

Current Inspection

7A03 **Primary Type:** I - Interim (special)

7A06 **Types of Inspections Performed:**

NBI	Underwater	Element	Fracture Critical	Other Special
No	No	No	Yes	Yes

Actual Inspection Workforce Hours

6B26 **NBI Crew:** 0.00

6B28 **Fracture Critical:** 0.00

6B27 **Crane:** 0.00

6B30 **Underwater:** 0.00

6B29 **Other 1:** 40.00

6B31 **Other 2:** 0.00

Inspection Costs (Entered to nearest dollar)

6B32 **Engineering:** 5567

6B33 **Rigging:** 0

6B34 **Office:** 0

Special Equip Used:

6B12 **Temperature:** 78.0

6B09 **Weather:** 1 - Clear

6B03 **Inventory Review Recommended:** No

Change Notes:

Inspection Team

7A05 **Inspected By:** 8 - Consulting Firm

7A05a **Insp. Org. Name:** McCormick Taylor, Inc.

7A02 **Team Leader:** C. Nguyen (3512)

6B23 **Team Member:** M.A. Kraidman, EI, CBSI

6B24 **Hired By:** 1

6B25 **Insp Contract Num:** E04825

2A02 **Inspection Notes:** RR Milepost 64.34.

July 2022 Interim Inspection:
-Topside inspection performed on 7/14/22.
-Underside inspection performed on 10/12/22 and 10/13/22 with flagging provided by AMTRAK. Amtrak did not provide access to the center portion of Span 2. As such, we were not able to get hands-on access from the catenary along Track 1 to the catenary along Track 4.

6B49 **Inaccessible Portion of Structure:**

IC01 **Inaccessible Inspection Location:**

Damage Inspection Comment:

5A01 **SR ID:** 09710100906434 **5A03** **BR Key:** 7587 **7A01** **Inspection Date:** July 14, 2022

Next Inspection

7A14 **Next Inspection By:** 8 - Consulting Firm

6B20 **Next Insp Type:** R - Regular (routine)

Schedule

Insp Types	7A07 Required	7A09 Frequency	7A10 Next Date
NBI:	**----**	24	July 14, 2023
Fracture Critical:	Yes	12	July 14, 2023
Underwater:	No	-1	January 01, 1901
Other Special:	Yes	12	July 14, 2023
Element:	No	-1	January 01, 1901
Crane:	**----**	**6B21**	January 01, 1901

7A19 **Ext Insp Interval Eligiblity** No **7A20** **Ext Insp Interval Concurrence** No

6B01 **Special InspType:** 4 - Problem areas only

Estimated Inspection Workforce Hours

7A12 **NBI Crew:** 48.00 **7A17** **Underwater:** 0.00

7A15 **Fracture Critical:** 0.00 **7A16** **Other 1:** 0.00

7A13 **Crane:** 0.00 **7A18** **Other 2:** 0.00

pennsylvania
DEPARTMENT OF TRANSPORTATION

Fatigue and Fracture (F&F) Plan

Structure ID (5A01):	09 7101 0090 6434	**BRKEY (5A03):**	7587
Structure Name:	Randall Avenue over AMTRAK	**Original F&F Plan Date:**	12/1/11
District:	6-0	**Reviewed/Updated:**	7/14/22

Note: This F&F plan is in accordance with PennDOT Pub 238 IP 2.4.5.1. This plan shall be reviewed during each FC inspection and updated during each Routine Inspection. A copy of the latest version of the F&F Plan shall be uploaded to BMS2.

1. Bridge Condition:

Deck (1A01) = 5 Sub (1A02) = 3

Super (1A04) = 4 Posting = 3 1/2 Tons

Notes:

2. FC Inspection Scope and Interval:

Note: Indicate the portions of the superstructure that require a hands-on FC Inspection and the interval required for the inspection.

Routine Inspection:

- Perform a hands-on FC inspection of each FCM with each Routine (Routine Interval = 24 months)

Interim Inspection:

- Perform a hands-on FC inspection of each FCM due to the load posting (Interim Interval = 12 months)

3. Access Equipment and Special Testing Needs:

Note: List any access equipment necessary to complete the FC inspection. Also, list any special testing equipment required in addition to the standard magnifying glass, dye penetrant, and lighting for a FC inspection (i.e. ultrasonic testing equipment for testing of pins).

Routine Inspection:

A fiberglass extension ladder or hi-rail bucket truck is required to complete the hands-on FC inspection.

Interim Inspection:

A fiberglass extension ladder or hi-rail bucket truck is required to complete the hands-on FC inspection.

4. Approval for Limited Scope Inspection (If Required, check the approved item)

Note: Approval is required only for the following cases: Interim inspection is a limited inspection (Does not include all FCM), a less than full hands on Routine inspection of the FCMs is proposed for concrete encased FCMs, or FCMs don't control the superstructure rating and an interval longer than required by Pub 238 Table IP 2.3.2.4-1 is scheduled. For locally owned bridges, Limited scope must be approved by a Professional engineer working for the owner or their consultant.

X The proposed Limited scope Interim F&F plan is satisfactory to meet FC inspection requirements.

_____ The proposed less than full hands-on FC Routine inspection of the concrete encased FCMs is satisfactory to meet FC inspection requirements.

_____ The proposed inspection interval, which is longer than required by Pub 238 Table 2.3.2.4-1, is satisfactory to meet FC inspection requirements due to FCM not controlling the Superstructure Rating.

District Bridge Engineer or Local Owner Engineer _____ Signature _____ Date

Bucks County
Randall Avenue over AMTRAK
BMS ID 09-7101-0090-6434 BR KEY 7587

December 2011
CMN/MAK - No Changes - 7-14-22

FRACTURE CRITICAL INSPECTION PLAN

1. **References** - This FC Inspection Plan was initially developed from bridge inspection file documents. The original bridge plans do not exist.

2. **Conditions at time of initial FC Inspection Plan development**
   - **Last Inspection** 7/24/2015 (Routine)
   - **Conditions-** Deck = 5, Super = 4 (since 2009), Sub = 3
     - FC girders are in poor condition
     - FC floorbeams fair condition
   - **Current Load Rating -** June 2004 (Rating summary is part of the inspection report in EDMS. Analysis files were included.)
     - Current load posting: 3-1/2 Tons
       - Based on the inventory rating of Gross Load Rating
       - Operating rating factor is < 1.0
     - Interim inspection frequency of 12 months is required due to substructure and load posting.

3. **FC Inspection scope and frequency**
   - **Routine Inspection** – perform FC inspection with each Routine
     - Hands-on inspection of every FC member
     - Maximum Routine Inspection Interval
       – 24 months Routine with 12 months Interim for substructure
     - Record FCM inspection findings on BMS2 Screen IF through iForms.
   - **Reduced Inspection Interval of FCMs**
     - Hands-on inspection of FCMs
       - See Inventory Table for FCMs
     - Frequency of FCM interim inspection - 12 months
       - FCMs are in poor-fair condition as per 7/24/2015 (Routine) inspection. 12 months inspection is required due to load posting. Load posting is controlled by FCMs. (Pub 238 Table 2.3.2.4-1).
     - Interim inspection of FCMs as described herein can be used in lieu of 24 month Routine frequency.
     - Determine scope and frequency of subsequent interims following each inspection. Identify interval to next inspection in the Recommendations.
   - **FC data in BMS -** The FC data in BMS needs to be modified as per the FCM inventory Table in this plan.

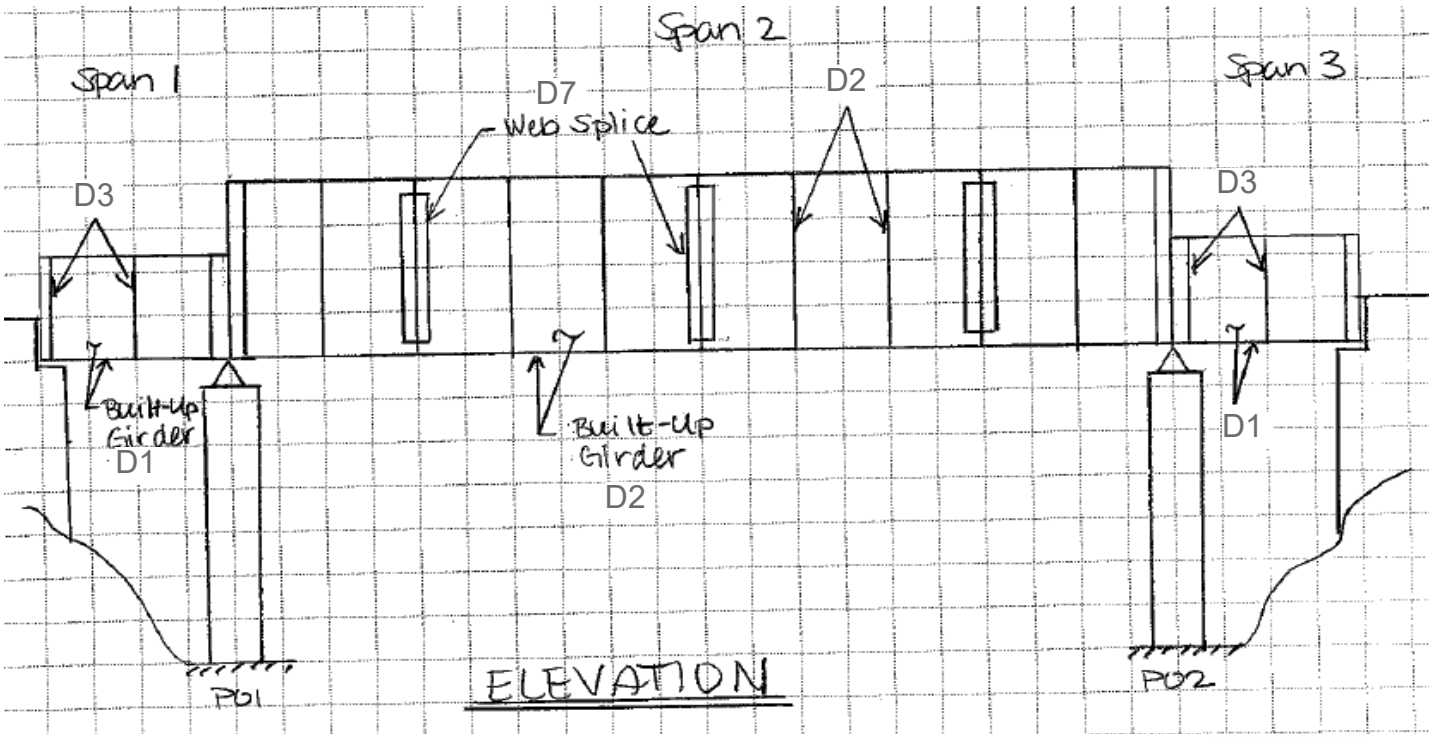
4. **Photos**
   - Initial baseline FCM photos – A complete record set of baseline photos in the FC Inspection Plan ensures the ability to measure the long term progress of deterioration and defects.
     - **Req'd Follow-up**: Add Baseline photos to FCI Plan during 2012 inspection.
   - Baseline photo are to include:
     - General elevation of bridge (both sides)
     - Photos of as many FCM details as is practical.
       - At a minimum, each type of FC detail or member should be represented.
       - Ensure there are general views of details, as well as, close-ups
       - Photograph FC details or members already exhibiting deterioration and/or changed condition.
   - Photos during Routine or Interim Inspections
     - Take photos of advancing problems and/or more critical details.
     - Unchanged conditions need to be photographed at least every 6 years.
   - **All photos are to have captions and dates** to indicate location, photo orientation, and extent of problems.

5. **Revisions to this FC Inspection Plan**
   - Modify FC Inspection Plan as needed for changing conditions and/or inspection methodologies.
   - Save revised FC Inspection Plan to EDMS/BMS

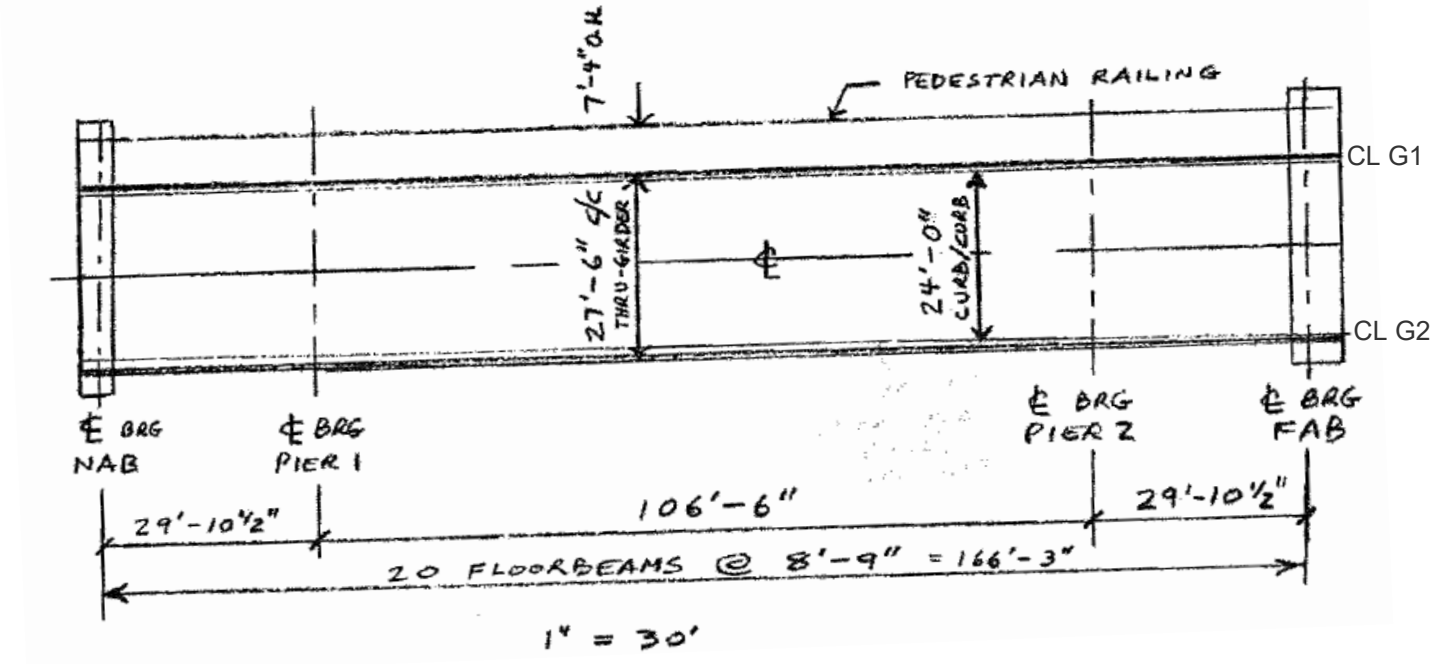
DAWOOD

PROJECT	BMS# 09-7101-0090-6434		
	Randall Avenue over AMTRAK		
DESIGNED BY:	ATH	DATE:	12-01-2011
CHECKED BY:		DATE:	
SHEET	1	OF	2

FC PLANS



ELEVATION

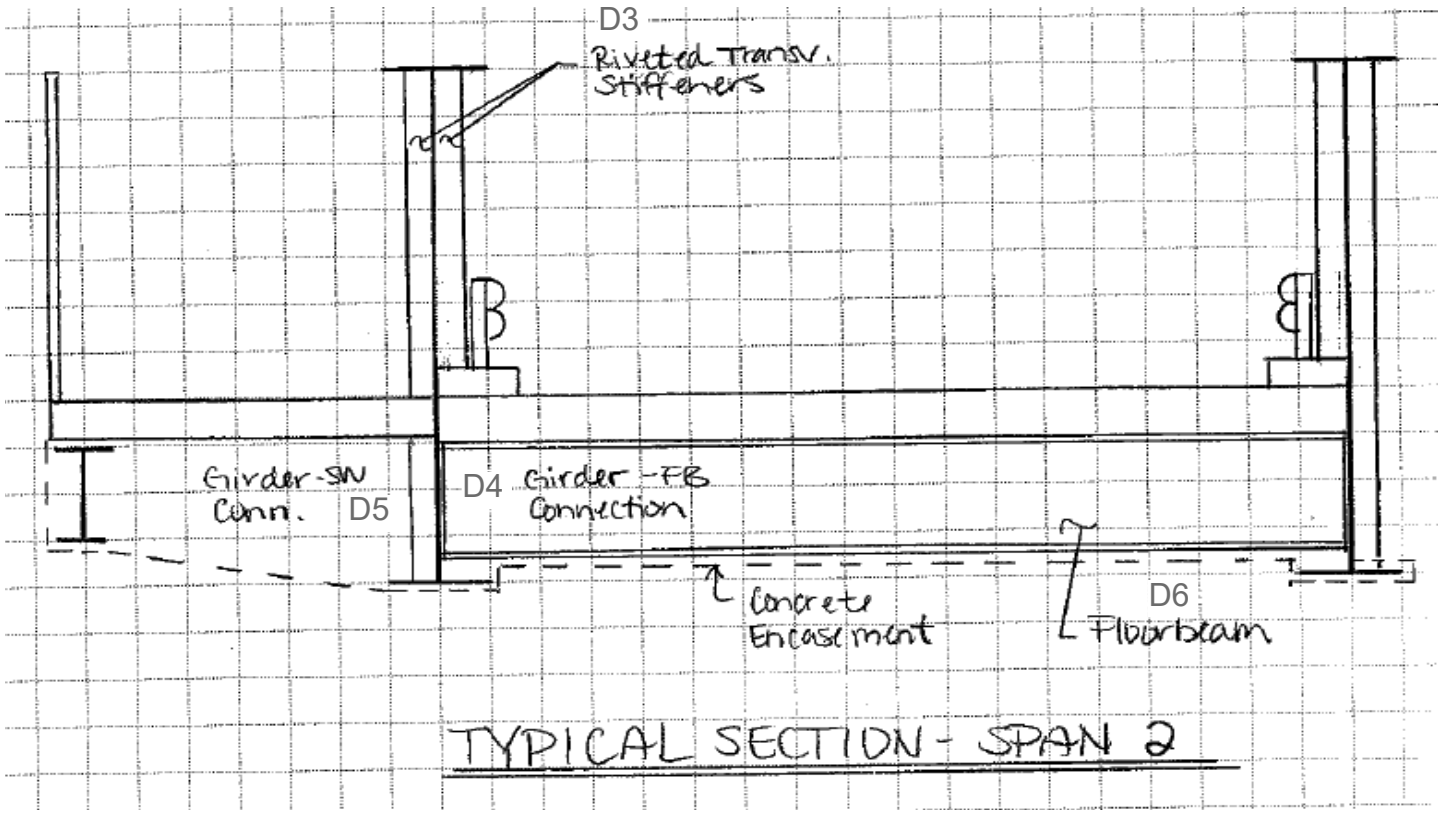


FRAMING PLAN

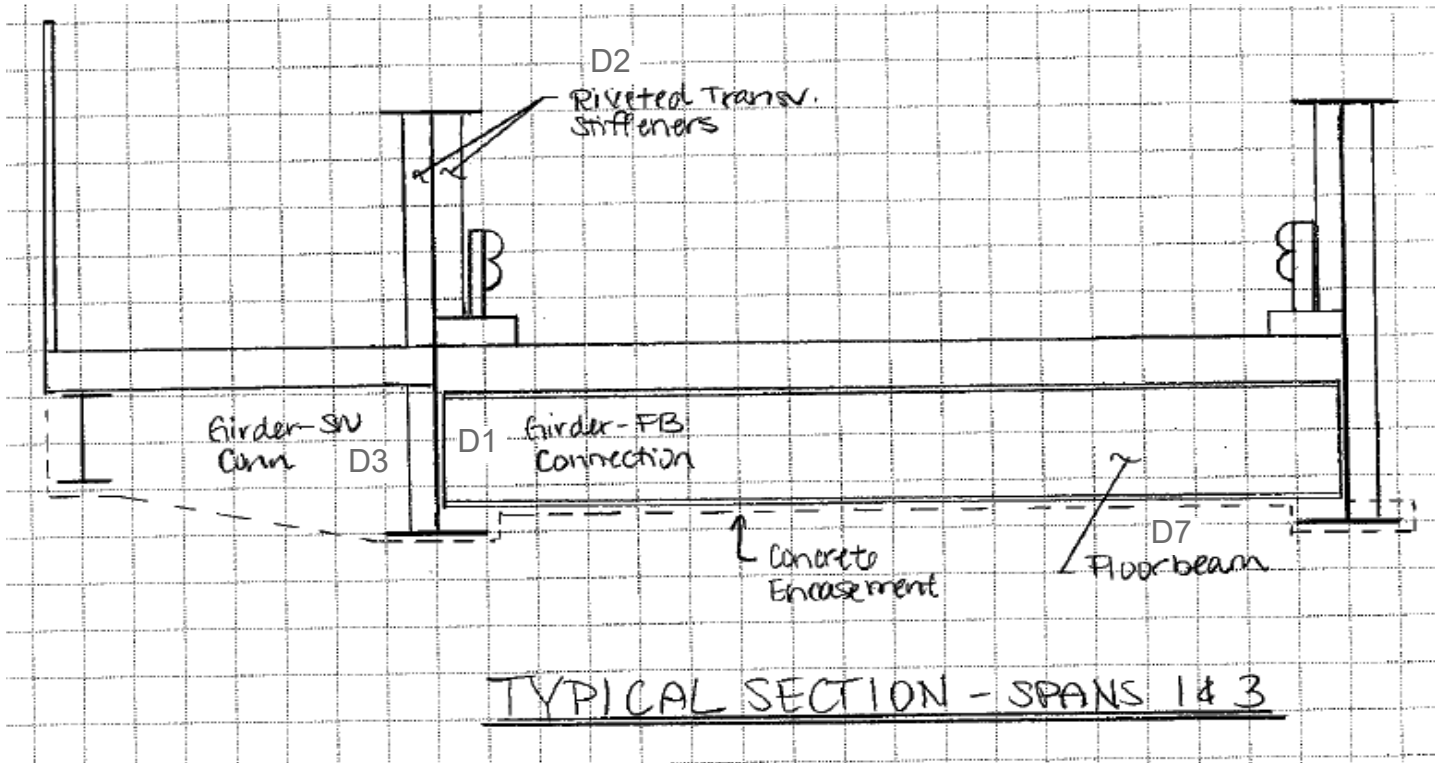
DAWOOD

PROJECT	BMS# 09-7101-0090-6434		
	Randall Avenue over AMTRAK		
DESIGNED BY:	ATH	DATE:	12-01-2011
CHECKED BY:		DATE:	
SHEET	2	OF	2

FC PLANS



TYPICAL SECTION - SPAN 2



TYPICAL SECTION - SPANS 1 & 3

Bucks County
Randall Aveue over AMTAK
BMS ID 09-7101-0090-6434 BR KEY 7587

FRACTURE CRITICAL INSPECTION PLAN

September 2012

FCM Inventory [1]						
FC Span	**FCM Member Type**	**FCM Number**	**FCM Description**	**Member Detail**	**AASHTO Fatigue Category**	**Inspection Procedure for FCMs [2] (Note if Interim Inspection is required)**
IF01	**IF02**	**[3]**	**IF03**	**IF04**	**IF05**	
1-1	01 Girder	D1	G1 & G2 Girder	Girder Tension Zone	D	Inspect bottom flange angles and cover plates where visible. **Interim inspection: Required**
1-1	01 Girder	D3	G1 & G2 Girder Stiffener Conn	WEB/STIFFENER CONN	D	Inspect stiffener angle connection to girder web plate where visible. **Interim inspection: Required**
1-1	01 Girder	D4	G1 & G2 Girder Floorbeam Conn	WEB/FLOORBEAM CONN	D	Inspect floorbeam angle connection to girder web plate where visible. **Interim inspection: Required**
1-1	01 Girder	D5	G1 & G2 Girder Sidewalk Bracket Conn	WEB/SIDEWALK CONN	D	Inspect Sidewalk Bracket connection to girder web plate where visible. **Interim inspection: Required**
1-1	11 Floorbeam	D6	FB00 to FB03 Floorbeam	Net tension zone	A	Inspect bottom flange where visible. **Interim inspection: Required**
2-2	01 Girder	D2	G1 & G2 Girder	Girder Tension Zone	D	Inspect bottom flange angles and cover plates where visible. **Interim inspection: Required**
2-2	01 Girder	D3	G1 & G2 Girder Stiffener Conn	WEB/STIFFENER CONN	D	Inspect stiffener angle connection to girder web plate where visible. **Interim inspection: Required**
2-2	01 Girder	D7	G1 & G2 Girder Web Splice Conn	WEB/SPLICE CONN	D	Inspect girder web splice plate connection in tension zone where visible. **Interim inspection: Required**
2-2	01 Girder	D4	G1 & G2 Girder Floorbeam Conn	WEB/FLOORBEAM CONN	D	Inspect floorbeam angle connection to girder web plate where visible. **Interim inspection: Required**

Bucks County
Randall Aveue over AMTAK
BMS ID 09-7101-0090-6434 BR KEY 7587

FRACTURE CRITICAL INSPECTION PLAN

September 2012

2-2	01 Girder	D5	G1 & G2 Girder Sidewalk Bracket Conn	WEB/SIDEWALK CONN	D	Inspect Sidewalk Bracket connection to girder web plate where visible. **Interim inspection: Required**
2-2	11 Floorbeam	D6	FB04 to FB15 Floorbeam	Net tension zone	A	Inspect bottom flange where visible. **Interim inspection: Required**
3-3	01 Girder	D1	G1 & G2 Girder	Girder Tension Zone	D	Inspect bottom flange angles and cover plates where visible. **Interim inspection: Required**
3-3	01 Girder	D3	G1 & G2 Girder Stiffener Conn	WEB/STIFFENER CONN	D	Inspect stiffener angle connection to girder web plate where visible. **Interim inspection: Required**
3-3	01 Girder	D4	G1 & G2 Girder Floorbeam Conn	WEB/FLOORBEAM CONN	D	Inspect floorbeam angle connection to girder web plate where visible. **Interim inspection: Required**
3-3	01 Girder	D5	G1 & G2 Girder Sidewalk Bracket Conn	WEB/SIDEWALK CONN	D	Inspect Sidewalk Bracket connection to girder web plate where visible. **Interim inspection: Required**
3-3	11 Floorbeam	D6	FB16 to FB19 Floorbeam	Net tension zone	A	Inspect bottom flange where visible. **Interim inspection: Required**

Notes:
[1] This inventory organized to meet IF screen data already in BMS
[2] When describing member condition, note left girder, right girder or both
[3] FCM number included for information only, not required for BMS

Revised by: JMF, Date 09/07/2012

McCormick Taylor
Engineers & Planners Since 1946

PROJECT DIST 6 NBIS JOB NO. 5150-02 SHEET NO. 1 OF 1

LOCATION RANDALL AVE OVER AMTRAK

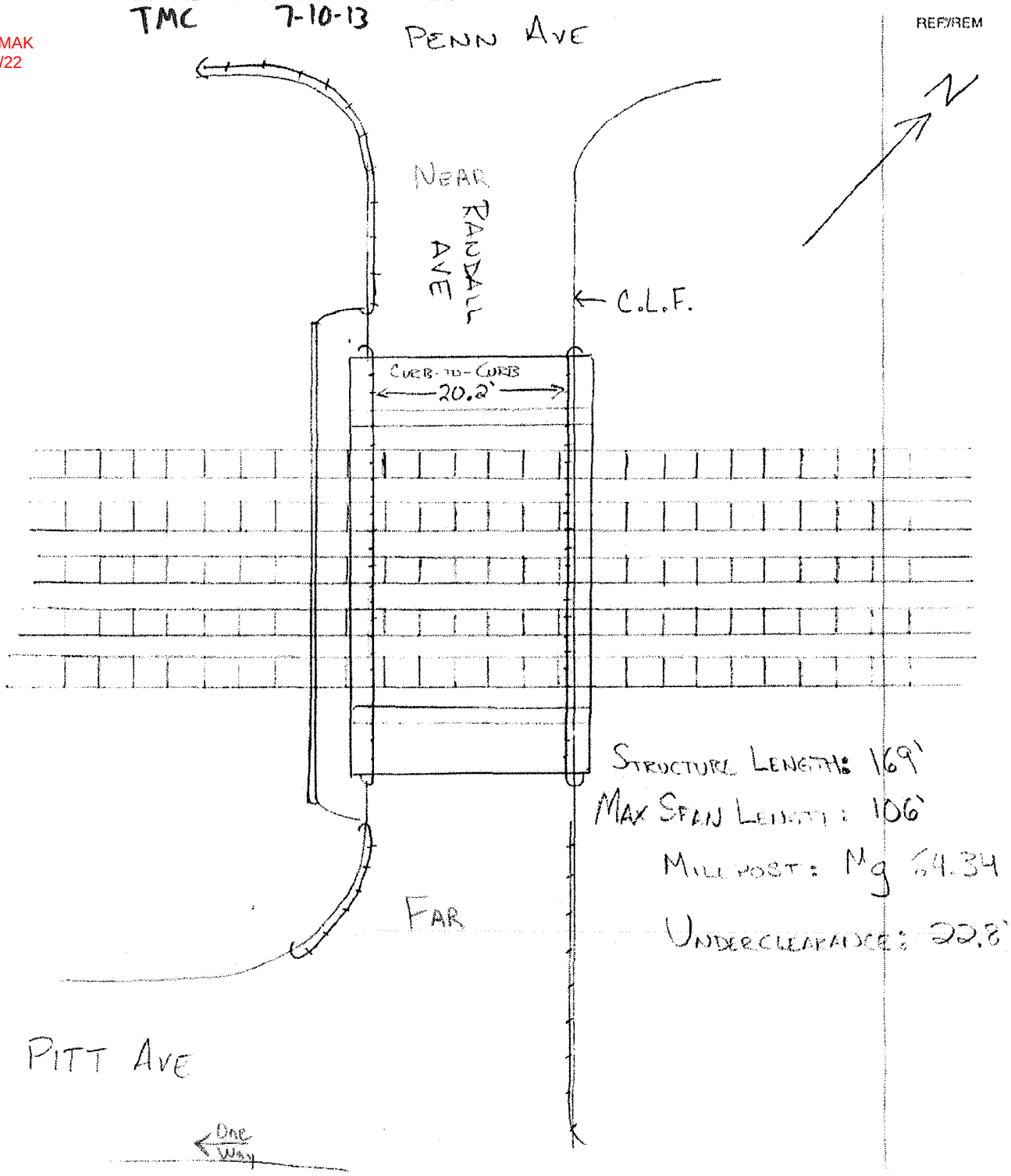
SUBJECT *09 7101 0090 6434 - PLAN VIEW

DESIGNED BY MSM DATE 7/30/09 CHECKED BY _____ DATE _____

REVISED BY TMC DATE 7-26-11 BACK CHECKED BY SMF DATE 7-26-11

TMC 7-10-13

CMN/MAK
7/14/22



McCormick Taylor
Engineers & Planners Since 1946

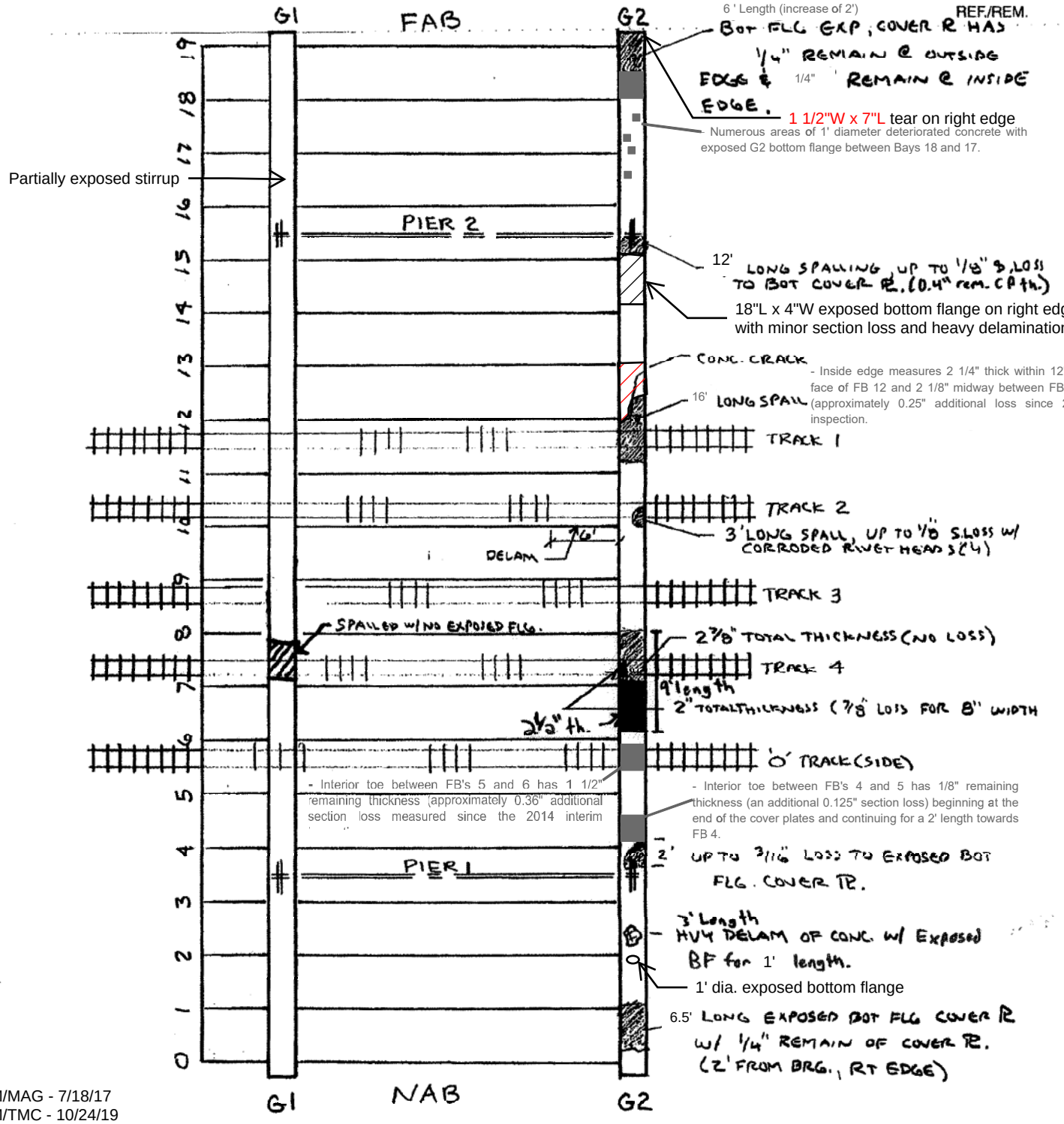
PROJECT 09 7101 0090 6434 JOB NO. _____ SHEET NO. 1 OF 2

LOCATION RANDALL AVE OVER AMTRAK

SUBJECT FRAMING PLAN

DESIGNED BY JMF DATE 9-7-12 CHECKED BY _____ DATE _____

REVISED BY TMC DATE 7-25-13 BACK CHECKED BY _____ DATE _____



SBM/MAG - 7/18/17
SBM/TMC - 10/24/19

McCormick Taylor
Engineers & Planners Since 1946

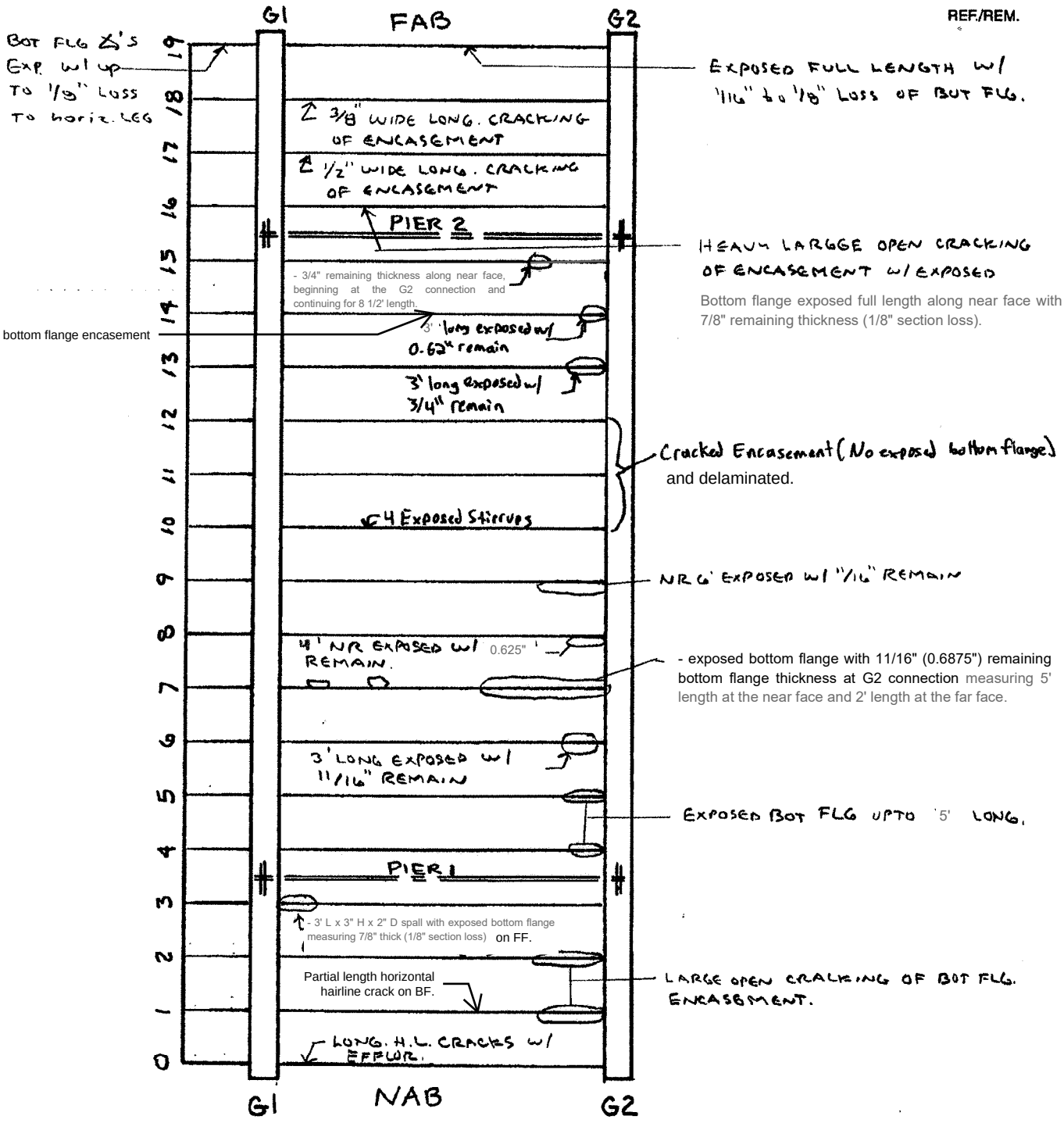
PROJECT 09 7101 0090 6434 JOB NO. _____ SHEET NO. 2 OF 2

LOCATION RANDALL AVE OVER AMTRAK

SUBJECT FRAMING PLAN

DESIGNED BY JMF DATE 9-7-12 CHECKED BY _____ DATE _____

REVISED BY TMC DATE 7-25-13 BACK CHECKED BY _____ DATE _____



SBM/MAG - 7/18/17
SBM/TMC - 10/24/19

CMN/MAK
7/14/22

BRIDGE POSTING SHEET

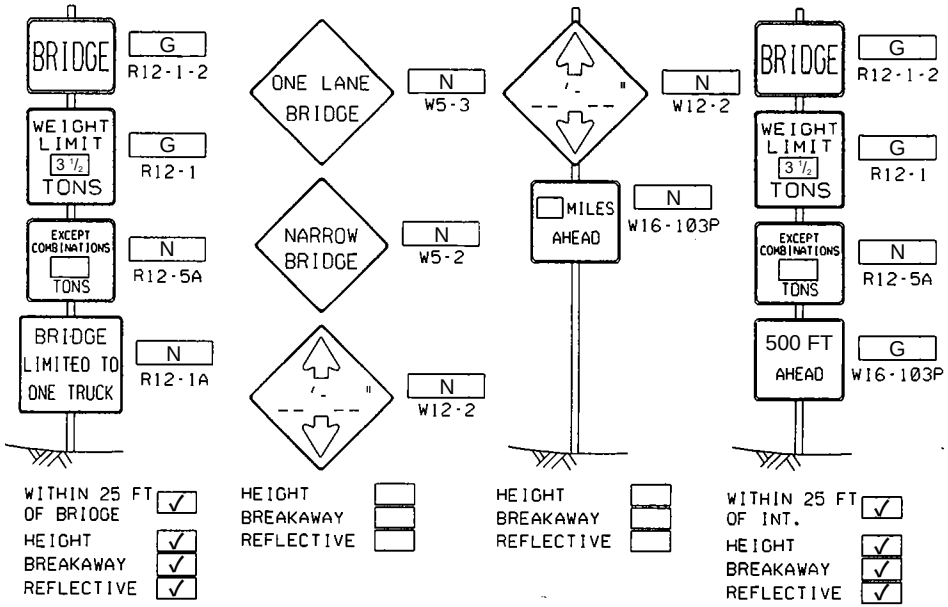
BMS NUMBER
5A01 09 7101 0090 6434

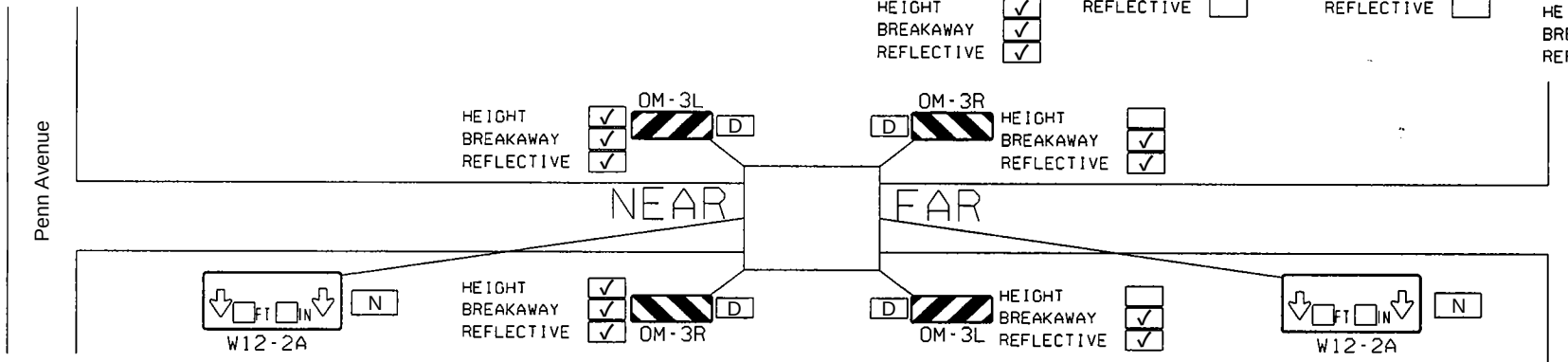
Randall Avenue OVER AMTRAK

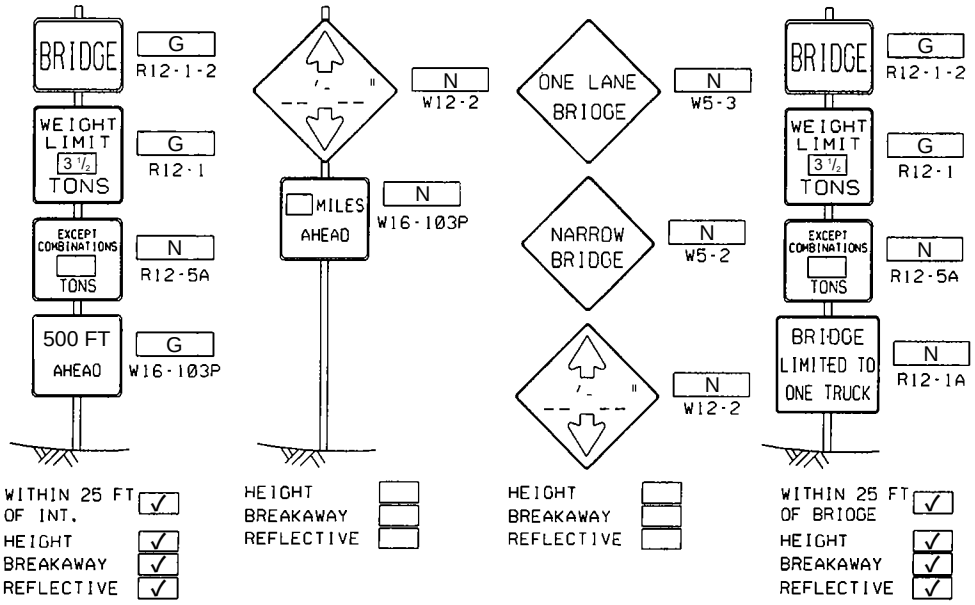
Additional Weight Limit Load Posting Signs -
NEAR: An additional load posting is set at the NL corner. All signs are in place and have several scrapes and minor graffiti. The load posting shares a post with the NL hazard clearance sign and is scraped.

FAR: An additional load posting is set at the FR corner. All signs are in place and in good condition. The load posting shares a post with the street sign and FR hazard clearance sign.

Hazard Clearance Signs -
NL: Shares post with supplemental load posting. Graffiti. Minor bend at top.
NR: Shares post with load posting. Minor graffiti.
FL: Too low. Minor graffiti.
FR: Too low, shares post with supplemental load posting and street sign. Minor graffiti, scraped.







LEGEND:
D - SIGNS DAMAGED OR PLACED INCORRECTLY
M - SIGNS MISSING
G - SIGNS IN PLACE
N - SIGN NOT NEEDED
✓ - MEETS STANDARD

Weight Limit Load Posting Signs -
N ADV (at Penn Ave/Edgely Rd); "500 FT AHEAD" with auxiliary "Right Arrow" sign : All required signs are in place and in good condition with no problems noted.

N ADV (at Penn Ave & Randall Ave); "300 FT AHEAD" with auxiliary "Left Arrow" sign: All required signs are in place and in good condition with no problems noted.

NEAR: All required signs are in place and in good condition with no problems noted. Shares a post with the near right hazard clearance marker.

FAR: All required signs are in place and in good condition with no problems noted.

F ADV (at Radcliffe St); "500 FT AHEAD": All required signs are in place and in good condition with no problems noted. The bottom left corner of the 3 1/2 Tons sign is bent.

SUPP F ADV (at Radcliffe St); "500 FT AHEAD": All signs are in place and in good condition. The load posting is rotated for traffic traveling northbound on Radcliffe Street. The "5" is peeling.

McCORMICK TAYLOR

Randall Avenue
Over
AMTRAK

SHEET NO. 1 of 1
JOB NO. E04825
BY: CMN DATE: 07/14/22
CK: MAK DATE: 07/14/22

FAR LEFT - IA02 3247

END TREATMENT
- [x] Continuous (>87.5')
- [ ] Turned Down RC-52
- [x] Boxing Gove
- [ ] Impact Attenuator
- [ ] In Clear Zone

- [ ] None
- [x] Damage
- [ ] BCT (Steel Post)
- [ ] BCT (Timber Post)
- [ ] Buried in Bank
- [ ] :
- [ ] Out of Clear Zone

Impact damage 75' from bridge. Boxing glove damaged.

APPROACH Height: 35"
Length:
- [x] 25' [ ] <25' w/Restriction [ ] <25'w/No Restrict.

Type: [ ] Standard [ ] 2-SC [x] 2-S

- [x] Damage
- [ ] None

Offset Bracket:
- [ ] Steel [ ] Timber [ ] Composite [x] None
- [ ] Approach is not provided [ ] &/or not warranted

TRANSITION Height: N/A
Length:
- [ ] 25' [ ] <25' w/Restriction [ ] <25'w/No Restrict.

Type: [ ] Standard [ ] 2-SC [ ] 2-S

- [ ] Damage
- [x] None

Boxing glove at end of structure mounted guide rail.

Offset Bracket:
- [ ] Steel [ ] Timber [ ] Composite [x] None

Check if Present: [ ] Gradually Stiffened
- [ ] Rub Rail [ ] Spacer Tube [ ] Nested First
- [x] Transition is not provided [ ] &/or not warranted

Approach rail not attached.

Trailing end of One-Way Road

NEAR LEFT - IA02 3238

TRANSITION Height: N/A
Length:
- [ ] 25' [ ] <25' w/Restriction [ ] <25'w/No Restrict.

Type: [ ] Standard [ ] 2-SC [ ] 2-S

- [ ] Damage
- [x] None

Boxing glove at end of structure mounted guide rail.

Offset Bracket:
- [ ] Steel [ ] Timber [ ] Composite [x] None

Check if Present: [ ] Gradually Stiffened
- [ ] Rub Rail [ ] Spacer Tube [ ] Nested First
- [x] Transition is not provided [ ] &/or not warranted

Approach rail not attached; blunt end.

APPROACH Height: 30"
Length:
- [x] 25' [ ] <25' w/Restriction [ ] <25'w/No Restrict.

Type: [ ] Standard [ ] 2-SC [x] 2-S

- [ ] Damage
- [ ] None

Rail only attached to posts with one bolt at splice sections.

Offset Bracket:
- [ ] Steel [ ] Timber [ ] Composite [x] None
- [ ] Approach is not provided [ ] &/or not warranted

END TREATMENT
- [x] Continuous (>87.5')
- [ ] Turned Down RC-52
- [x] Boxing Gove
- [ ] Impact Attenuator
- [x] In Clear Zone

- [ ] None
- [ ] Damage
- [ ] BCT (Steel Post)
- [ ] BCT (Timber Post)
- [ ] Buried in Bank
- [ ] :
- [ ] Out of Clear Zone

Continuous Type 2-S with no offset brackets.

Trailing end of One-Way Road

FAR RIGHT - IA02 3244

END TREATMENT
- [ ] Continuous (>87.5')
- [ ] Turned Down RC-52
- [ ] Boxing Gove
- [ ] Impact Attenuator
- [ ] In Clear Zone

- [x] None
- [ ] Damage
- [ ] BCT (Steel Post)
- [ ] BCT (Timber Post)
- [ ] Buried in Bank
- [ ] :
- [ ] Out of Clear Zone

none provided due to roadway restriction

APPROACH Height: N/A
Length:
- [ ] 25' [ ] <25' w/Restriction [ ] <25'w/No Restrict.

Type: [ ] Standard [ ] 2-SC [ ] 2-S

- [ ] Damage
- [x] None

None provided due to roadway restriction.

Offset Bracket:
- [ ] Steel [ ] Timber [ ] Composite [x] None
- [x] Approach is not provided [x] &/or not warranted

TRANSITION Height: N/A
Length:
- [ ] 25' [ ] <25' w/Restriction [ ] <25'w/No Restrict.

Type: [ ] Standard [ ] 2-SC [ ] 2-S

- [ ] Damage
- [x] None

Boxing glove at end of structure mounted guide rail.

Offset Bracket:
- [ ] Steel [ ] Timber [ ] Composite [x] None

Check if Present: [ ] Gradually Stiffened
- [ ] Rub Rail [ ] Spacer Tube [ ] Nested First
- [x] Transition is not provided [ ] /or not warranted

Trailing end of One-Way Road

NEAR RIGHT - IA02 3237

TRANSITION Height: N/A
Length:
- [ ] 25' [ ] <25' w/Restriction [ ] <25'w/No Restrict.

Type: [ ] Standard [ ] 2-SC [ ] 2-S

- [x] Damage
- [x] None

Boxing glove at end of str. mounted guide rail; damaged.

Offset Bracket:
- [ ] Steel [ ] Timber [ ] Composite [x] None

Check if Present: [ ] Gradually Stiffened
- [ ] Rub Rail [ ] Spacer Tube [ ] Nested First
- [x] Transition is not provided [ ] /or not warranted

Approach rail not attached; blunt end.

APPROACH Height: 36"
Length:
- [x] 25' [ ] <25' w/Restriction [ ] <25'w/No Restrict.

Type: [ ] Standard [ ] 2-SC [x] 2-S

- [x] Damage
- [ ] None

Several areas of damage throughout.

Offset Bracket:
- [ ] Steel [ ] Timber [ ] Composite [x] None
- [ ] Approach is not provided [ ] &/or not warranted

END TREATMENT
- [x] Continuous (>87.5')
- [ ] Turned Down RC-52
- [x] Boxing Gove
- [ ] Impact Attenuator
- [x] In Clear Zone

- [ ] None
- [x] Damage
- [ ] BCT (Steel Post)
- [ ] BCT (Timber Post)
- [ ] Buried in Bank
- [ ] :
- [ ] Out of Clear Zone

Type 2-S with no offsets. Missing panel > 87.5'.

DECK GEOMETRY 4 **POSTED SPEED LIMIT** 25 **NHS** _____ **NON-NHS** ✔

BMS # 09 7101 0090 6434
Randall Avenue over AMTRAK

NEAR ADVANCE POSTING
West, At the Penn Avenue and Randall Avenue Intersection

All required signs are in place and in good condition with no problems noted.

July 14, 2022

NEAR ADVANCE POSTING
West, At the Penn Avenue and Edgely Road Intersection

All required signs are in place and in good condition with no problems noted.

July 14, 2022

McCORMICK TAYLOR

NEAR APPROACH
West

All required signs are in place and in good condition with no problems noted. A supplemental posting is in place at the near left corner.

July 14, 2022

FAR APPROACH
East

All required signs are in place and in good condition with no problems noted. A supplemental posting is in place at the far right corner.

July 14, 2022

FAR ADVANCE POSTING
East, At the Radcliffe Street Intersection

All required signs are in place and in good condition.

July 14, 2022

SUPPLEMENTAL FAR ADVANCE POSTING
East, Traveling Northbound at the Radcliffe Street Intersection

All signs are in place and in good condition with no problems noted.

July 14, 2022

McCORMICK TAYLOR

LEFT ELEVATION
North

July 14, 2022

RIGHT ELEVATION
South

July 14, 2022

LOOKING LEFT
Looking North

July 14, 2022

LOOKING RIGHT
Looking South

July 14, 2022

NEAR ABUTMENT
West

July 14, 2022

NEAR ABUTMENT BRIDGE SEAT
Left End

The bridge seat has 10' long by 20" high by 20" deep spalling in front of the left bearing.

July 14, 2022

NEAR ABUTMENT BRIDGE SEAT
Right End

The bridge seat has 8’ long by 20” high by 16” deep spalling in front of the right bearing with very minor bearing loss.

July 14, 2022

SPAN 1, GENERAL VIEW OF THE UNDERSIDE
Looking Ahead

July 14, 2022

SPAN 2, GENERAL VIEW OF THE UNDERSIDE
Looking Ahead

July 14, 2022

SPAN 2, RIGHT GIRDER, BAY 5
Looking Right

The exposed bottom flange has knife edging and a 5" long by 1" wide area of 100% section loss.

October 13, 2022

SPAN 2, FALLEN CONCRETE, BELOW BAYS 11 AND 12
Looking Back

Several areas of the right girder encasement concrete have fallen and landed on and adjacent to the railroad tracks.

FLOORBEAM 13, RIGHT END
Looking Ahead

There is 0.71" remaining bottom flange thickness for 3' length at the right girder.

October 12, 2022

McCORMICK TAYLOR

FLOORBEAM 14, RIGHT END
Looking Ahead

The bottom flange is exposed for 3' length at the right girder and has 0.76" remaining thickness.

October 12, 2022

SPAN 2, RIGHT GIRDER, FLOORBEAM 13
Looking Ahead

The bottom flange encasement is heavily spalled with exposed coverplate intermittently full length.

PIER 2, RIGHT BEARING
Looking Right

The bearing is severely delaminated and pitted with moderate section loss.

October 12, 2022

SPAN 3, GENERAL VIEW OF THE UNDERSIDE
Looking Ahead

July 14, 2022

McCORMICK TAYLOR

FAR RIGHT BEARING
Looking Ahead

There is 22" long (full length of plate) by up to 1.5" of bearing loss along the right side of the bearing.

July 14, 2022

FAR ABUTMENT
East

July 14, 2022

FAR ABUTMENT BRIDGE SEAT
Left End

The spalling along the left side of the bridge seat measures 18'-4" wide by 20" high by 15" deep to the front face of the bearing.

July 14, 2022

FAR ABUTMENT BRIDGE SEAT
Right End

The bridge seat has 12' long by 20" high by 15" deep spalling in front of the far right bearing and spalling beneath the bearing continuing to the right end of the stem wall.

July 14, 2022

McCORMICK TAYLOR

GENERAL VIEW OF THE WEARING SURFACE
Looking Ahead

July 14, 2022

RIGHT GIRDER, TYPICAL
Looking Ahead

July 14, 2022

NEAR TRANSITION POTHOLE
Looking Ahead

There is a 16” long by 21” wide by 2” deep pothole exposing the steel joint at the center of the right lane.

July 14, 2022

FAR TRANSITION POTHOLE
Looking Right

There are several potholes exposing the steel joint.

July 14, 2022

McCORMICK TAYLOR

July 15, 2022

The Township of Bristol
2501 Bath Road
Bristol, PA 19007-2150

ATTENTION: Ms. Randee Elton, Township Manager

REFERENCE: **Randall Avenue over AMTRAK**
BMS # 09 7101 0090 6434

Dear Ms. Elton:

McCormick Taylor, Inc. is currently under contract with PennDOT to perform inspections of locally owned bridges located within District 6-0. Please be advised that we recently started an interim inspection of the Randall Avenue bridge.

The following High Priority Maintenance Items are recommended, and in accordance with PennDOT Publication 238, Bristol Township should complete the listed maintenance items within six months of notification.

- Repair the severely spalled concrete abutments adjacent to the bearings at each corner. (12 CY)
- Repair the bituminous potholes exposing the joint steel at the near and far transitions. (2 SY)

LEFT: General view of the reinforced concrete near (west) abutment.

RIGHT: General view of the reinforced concrete far (east) abutment.

LEFT:	The bridge seat has 10’ long x 20” high x 20” deep spalling in front of the near left bearing.
RIGHT:	The bridge seat has 8’ long x 20” high x 24” deep spalling in front of the near right bearing.

LEFT:	The bridge seat has 18’-4” long x 20” high x 15” deep spalling in front of the far left bearing and up to 2’ deep spalling to the right of the bearing.
RIGHT:	The bridge seat has 12’ long x 20” high x 15” deep spalling in front of the far right bearing and spalling beneath the bearing continuing to the right end of the stem wall.

Note: Spalling dimensions did not change significantly since the previous inspection.

LEFT: The near transition has a 16" long by 21" wide by 2" deep pothole exposing the steel joint at the center of the right lane.

RIGHT: The far transition has three potholes, up to 6" long by 18" wide by 1.5" deep, exposing the steel joint along both wheel paths of the left lane and the center of the right lane.

According to PennDOT Publication 238, Bridge Safety Inspection Manual, Section IP 2.14, a Plan of Action (POA) is required for all Priority 1 maintenance items. The POA should be completed within seven (7) days of identification and the deficiencies resolved or mitigated within six (6) months of identification. We understand the Township is working with Gilmore & Associates to pursue funding to repair/rehabilitate the bridge. **Please respond with any updates, including the schedule to correct the reported deficiencies.**

Should you have any questions or require additional information, please do not hesitate to call me or Jennifer Payne at 610-640-3500.

Sincerely,

Christopher M. Nguyen, P.E., CBSI
Structural Engineer

cc: Township of Bristol
Charley Dearnley
PennDOT District 6-0
Shawn Larkins, P.E.
Steve Bartkovich, P.E.
Din Abazi, P.E.
TranSystems
Meg Sherman, P.E.
McCormick Taylor, Inc.
Jennifer Payne, E.I.

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

December 19, 2025

Project No.: 130-3057.01

VIA ELECTRONIC FILING:
Michael B. Scheib,
Public Utility Commission 400 North Street
Harrisburg, PA 17120

Re:

Application for Structure Reopening for the Randall Avenue Bridge Over Six (6) AMTRAK Railroad Tracks Located In Bristol Township, Bucks County, PA
PennDOT BMS # 09 7101 0090 6434
AAR # - AAR 530 983 U

Dear Mr. Scheib:

Enclosed for filing, please find the As-Built plans documenting the repairs to the Randall Avenue Bridge for the purpose of addressing the High Priority (Priority 1) and several other Priority Maintenance items identified during the October 2022 bridge inspection. Bristol Township has satisfactorily completed the Phase II repairs on Monday, December 22, and hereby request the bridge to be reopened. Phase I repairs were approved under Commission proceeding docketed at A-2024-3045880.

A copy of this Filing has been electronically transmitted to the parties in the Certificate of Service to the Application.

Should you have any questions or concerns, please feel free to contact Kurt Schroeder, Bristol Township Engineer at kschroeder@gilmore-assoc.com or Jacob Brink, Gilmore & Associates Structural Engineer at jbrink@gilmore-assoc.com.

Sincerely,

Kurt M. Schroeder, P.E.
Bristol Township Engineer
Gilmore & Associates, Inc.