

**CHESAPEAKE BAY
BRIDGE and TUNNEL DISTRICT**



BID PROPOSAL AND CONTRACT

STEEL BRIDGE PAINTING

**PROJECT NUMBER: RMF 5044.5122
BID NUMBER: M-26-001**

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INSTRUCTION TO BIDDERS

SCOPE OF WORK

This project consists of the surface preparation and painting of all structural steel at the following locations on the Chesapeake Bay Bridge and Tunnel facility:

- Northbound North Channel Bridge NCB-NB
- Southbound North Channel Bridge NCB-SB
- Northbound Fisherman Inlet Bridge FIB-NB
- Southbound Fisherman Inlet Bridge FIB-SB
- Trestle Span ASB1
- Trestle Span ASB204
- Trestle Span BSB1
- Trestle Span BSB202
- Trestle Span CSB1
- Trestle Span BNB1-2

Included in this Project as part of the Northbound North Channel Bridge is the steel cross-girder and associated steel details, including the steel bearings, located in Trestle Span CNB322 at Pier NCB-NB1 and in Trestle Span DNB1 at Pier NCB-NB18.

The structures reside on the main facility between the North and South Toll Plazas. All work shall be performed in accordance with the details shown on the Project Drawings, Technical Specifications, Special Provisions, and as directed by the District. The scope of work is further defined in the Technical Specifications, but generally consists of the following:

- 1) Cleaning and painting of existing and repair steel surfaces in the areas shown on the Project Drawings or as directed by the District. Cleaning and Painting shall be in accordance with the Technical Specifications, including all coats of paint, any required stripe coats, sealants, caulking, and repair painting.
- 2) Providing environmental protection and containment during blast cleaning and painting operations to collect and contain all removed waste materials resulting from paint surface preparation to prevent exposure of District personnel, Contractor personnel, District property, the public and public property to these materials and to keep these materials out of the Chesapeake Bay.
- 3) Legally disposing of all removal and waste materials collected and contained during cleaning, preparation and painting operations.
- 4) Removing and replacing deteriorated rivets and bolts in accordance with the Technical Specifications or as directed by the District.
- 5) Completing all steel repairs as shown in the plan sheets and as described in the Specifications.

SUBMISSION OF BIDS

Sealed bids for this project will be received until 2:00 p.m. on February 24, 2026 in the office of the Director of Maintenance, Chesapeake Bay Bridge and Tunnel District, 32386 Lankford Highway, Cape Charles, Virginia 23310, Attention: Mr. Timothy R. Holloway, at which time the bids will be publicly opened.

Bids may also be submitted electronically online via eVA using the Bidder's established eVA Supplier account. To learn how to submit an online bid in eVA please refer to the online supplier training page at: <https://eva.virginia.gov/supplier-training-materials.html>, however the District prefers that you submit sealed bids to us as reference in first paragraph in Submission of Bids.

Bids must be submitted with the project number, bid number, name of bidder, and the opening date clearly marked on the outside face of the envelope; otherwise, your bid will be opened upon receipt in order to determine the inquiry to which it is applicable. The project number for this project is RMF 5044.5122 and the bid number for this project is M-26-001.

PRE-BID CONFERENCE

A **mandatory** pre-bid conference will be held on January 27, 2026, at 10:00 a.m. It will be held at the Chesapeake Bay Bridge and Tunnel District Administration Building, located at the North Toll Plaza, U.S. Route 13, Northampton County, VA. The pre-bid conference is open to all interested potential contractors, subcontractors and/or suppliers. Interested parties should contact Mr. Timothy R. Holloway, Director of Maintenance, by phone at (757) 331-2960 at least two days in advance of the conference date in order to arrange for toll-free passage.

NOTE: Attendance at the pre-bid conference is **mandatory** for Bidders and a prerequisite for submitting a bid. Bidders shall register in writing with the District at the pre-bid conference. Failure on the part of a Bidder to attend the pre-bid conference for this project and to register their attendance with the District will be cause for their bid to be rejected. Such bids will not be opened, but will be returned to the Bidder.

PROJECT SCHEDULE REQUIREMENTS

All project work shall be completed within **611** Calendar Days of Notice to Proceed.

PLANS AND SPECIFICATIONS

Plans and Specifications for this project are available on the District's website at <https://www.cbbt.com/requests-for-proposals/>. To bid you must complete the required **Fillable Bid Document** that may be obtained on the District's webpage at <https://www.cbbt.com/requests-for-proposals/>. All addenda (if applicable) will be posted on the District's webpage at <https://www.cbbt.com/requests-for-proposals/>, no later than 10 calendar days prior to the date of bid submittal, to allow Bidders to contact their prospective subcontractors and suppliers prior to submission of the Bid. It is the responsibility of the Bidder to provide all appropriate plans,

specifications, addenda (if applicable), and all other contract documents to proposed subcontractors and suppliers.

TOLLS

Bidders shall ***not*** include payment of Chesapeake Bay Bridge and Tunnel tolls in their Bid. The District will furnish passes to the successful contractor for his use, as needed, during the time limit set forth in the Contract.

INTERPRETATION OF DOCUMENTS

Any comments or questions concerning specifications or other provisions of this Request for Bid should be directed via email to Mr. Timothy R. Holloway, Director of Maintenance at tholloway@cbbt.com and shall be received at least 15 days prior to receipt of bid, February 13, 2026 with an answer to be given at least 10 days prior to bid, February 20, 2026. The District is not responsible for any explanation, clarification or approval made or given in any manner except by addendum. A copy of each addendum (if applicable) will be posted on the District's webpage at <https://www.cbbt.com/requests-for-proposals/>. Any addenda so issued are to be considered part of this bid, please insert date of any addenda on the Acknowledgement of Revisions page, which is included in the **Fillable Bid Document**.

SUBMITTAL REQUIREMENTS

The Bidders' attention is directed to the points noted herein, as compliance with all provisions is mandatory in order to be considered responsive. Sealed bids only, will be received for this project.

TO BID THIS PROJECT – PLEASE PERFORM THE FOLLOWING STEPS:

1. Download and read the project specifications: <https://www.cbbt.com/requests-for-proposals/>
2. Open and complete the Fillable Bid Document: <https://www.cbbt.com/requests-for-proposals/>
3. Print Completed Fillable Bid Document and sign it in the appropriate locations. Add your executed Certificate of Insurance, and current QP1 & QP2 accreditation per SP-2 entitled Prequalification. Place all in a sealed envelope.
4. Deliver sealed bid by 2:00 p.m. on February 24, 2026. Sealed bids for this project will be received until 2:00 p.m. on Tuesday, February 24, 2026 in the office of the Director of Maintenance, Chesapeake Bay Bridge and Tunnel District, 32386 Lankford Highway, Cape Charles, VA 23310, Attention: Mr. Timothy Holloway, at which time the bids will be publicly opened. The common delivery services, including priority mail, FedEx and UPS do not guarantee delivery to the lower Eastern Shore (Cape Charles area) by 2:00

p.m. Use of these services to deliver a proposal may result in delivery to the District after the submittal deadline.

Bids may also be submitted electronically online via eVA using the Bidder's established eVA supplier account.

To learn how to submit an online bid on eVA please refer to the online supplier training page at: <https://eva.virginia.gov/supplier-training-materials.html>, however the District prefers bids to be mailed or hand delivered to us as reference on page 2, under "Submission of Bids".

Bids must be submitted with the project number, bid number, name of Bidder, and the opening date clearly marked on the outside of the package. The project number for this project is RMF No. 5044.5122 and the Bid No. is M-26-001.

5. Bids Conditioned by the Bidder with proposed alternates, other than those specified or permitted will **not** be considered.
6. The bid shall be prepared in accordance with all requirements of the project Specifications in their entirety.

AWARD OF CONTRACT

The District reserves the right to reject or cancel this solicitation and any or all bids, waive any information and irregularities in the bidding; to accept or reject any or all items of bid; and to accept other than the lowest bid should it be deemed to be in the best interest of the District.

The award of the contract, if it is awarded, will be made to the lowest responsible and responsive Bidder. In determining the lowest responsible and responsive Bidder, the following factors shall be considered:

1. The Bidder's total bid price to complete the Contract.
2. Ability, capability, and skills of the Bidder to perform the Contract work.
3. Proof that the Bidder can perform the Contract work promptly and within the time frame specified.
4. Character, integrity, reputation, judgment, experience, and efficiency of the Bidder and his proposed subcontractors.
5. The quality of performance of previous contracts.
6. The financial resources and ability of the Bidder to perform the contract work.
7. Ties between two lowest responsible and responsive Bidders will be decided by lot.

8. A bidder may withdraw a bid, provided the request for the withdraw is written and signed by a person (s) who qualifies to execute the bid. The request must be received by the District at least one hour prior to the time specified for receiving bids.

The anticipated timeline for this project is to receive bids on February 24, 2026 and recommend the lowest responsible and responsive bid to the Commission on March 10, 2026. If awarded, the successful Bidder will be called the afternoon of March 10, 2026 with a verbal Notice of Award.

Within 15 days of Notice of Award, the District shall provide an executed Notice to Proceed.

Within 15 days of Notice of Award, the Successful Bidder shall provide the following:

- Payment & Performance Bonds in the General Provisions, Section 103.05.
- A signed Contract, which is included after the Instructions to Bidder Section of the Specifications.
- A draft Schedule of Values
- A draft Project Schedule
- Appendix A- Title VI Evaluation Form

CONTRACT

This **Contract**, dated this _____ day of _____, 2026, by and between the **Chesapeake Bay Bridge and Tunnel District** hereinafter called the Owner; and _____ (a corporation, or an unincorporated organization organized and existing under the laws of the State/ Commonwealth of Virginia or, an individual trading under the above name) hereinafter called the Contractor.

WITNESSETH: The Owner and Contractor, for the consideration stated herein, agree as follows:

A. Scope of Work

This Project consists of the surface preparation and painting of all structural steel at the following locations on the Chesapeake Bay Bridge and Tunnel facility:

- Northbound North Channel Bridge NCB-NB
- Southbound North Channel Bridge NCB-SB
- Northbound Fisherman Inlet Bridge FIB-NB
- Southbound Fisherman Inlet Bridge FIB-SB
- Trestle Span ASB1
- Trestle Span ASB204
- Trestle Span BSB1
- Trestle Span BSB202
- Trestle Span CSB1
- Trestle Span BNB1-2

Included in this Project as part of the Northbound North Channel Bridge is the steel cross-girder and associated steel details, including the steel bearings, located in Trestle Span CNB322 at Pier NCB-NB1 and in Trestle Span DNB1 at Pier NCB-NB18.

The structures reside on the main facility between the North and South Toll Plazas. All work shall be performed in accordance with the details shown on the Project Drawings, Technical Specifications, Special Provisions, and as directed by the District. The scope of work is further defined in the Technical Specifications, but generally consists of the following:

- 1) Cleaning and painting of existing and repair steel surfaces in the areas shown on the Project Drawings or as directed by the District. Cleaning and Painting shall be in accordance with the Technical Specifications, including all coats of paint, any required stripe coats, sealants, caulking, and repair painting.
- 2) Providing environmental protection and containment during blast cleaning and painting operations to collect and contain all removed waste materials resulting from paint surface preparation to prevent exposure of District personnel, Contractor personnel, District property, the public and public property to these

materials and to keep these materials out of the Chesapeake Bay.

- 3) Legally disposing of all removal and waste materials collected and contained during cleaning, preparation and painting operations.
- 4) Removing and replacing deteriorated rivets and bolts in accordance with the Technical Specifications or as directed by the District.
- 5) Completing all steel repairs as shown in the plans sheets and as described in the specifications.

B. Guarantee

Unless otherwise specified in the Special Provisions, all materials and equipment, furnished by the Contractor, and all construction involved in this Contract are hereby guaranteed by the Contractor to be free from defects owing to faulty materials or workmanship for a period of two (2) years after date of Completion of the work. All work that proves defective, by reason of faulty material or workmanship within said period of two (2) years, shall be replaced by the Contractor free of cost to the Owner. These guarantees shall not operate as a waiver of any of the Owner's rights and remedies for default under or breach of the Contract which rights and remedies may be exercised at any time within the period of any applicable statute of limitations.

C. Contract Price

The Owner shall pay the Contractor as just compensation for the satisfactory performance of the Work, subject to any additions or deductions as provided in the Contract Documents, the unit and/or lump sum price as contained in the Bid Schedule attached hereto.

The Contract Price is _____ (\$) based upon unit and/or lump sum prices extended as herein contained.

D. Payments

The Chesapeake Bay Bridge Tunnel District will pay the Contract Price to the Contractor in the manner and at such times as set forth in the approved Progress Schedule, found in General Provision 108.03, and associated Schedule of Values.

E. Time

The undersigned Contractor agrees to complete all work under this Contract within the phased specified timelines on page 2 of the Instruction to Bidders, under Project Schedule Requirements.

F. Applicable Law/Compliance

1. Applicable Law

This Contract shall be deemed to be a Virginia contract and shall be governed as to

all matters of validity, interpretations, obligations, performance, or otherwise, exclusively by the laws of the Commonwealth of Virginia, and all questions arising with respect thereto shall be determined in accordance with such laws. Regardless of where actually delivered and accepted, this Contract shall be deemed to have been delivered and accepted by the parties in the Commonwealth of Virginia.

2. Compliance with all Laws

Contractor shall comply with all Federal, state and local statutes, ordinances, and regulations, now in effect or hereafter adopted, in the performance of work set forth herein. Contractor represents that it possesses all necessary licenses and permits required to conduct its business and will acquire any additional license and permits necessary for performance of this Contract prior to the initiation of work. Contractor shall at all times observe all health and safety measures and precautions necessary for the sanitary and safe performance of the contract work.

3. Venue

Any and all suits for any claims or for any breach or dispute arising out of these Contract Documents shall be maintained in the appropriate court of competent jurisdiction in Northampton County, Virginia.

4. Environmental Considerations

Any cost or expense associated with environmentally related violations of the law, the creation or maintenance of a nuisance, or releases of hazardous substance, including but not limited to, the cost of any cleanup activities, removals, remediation, responses, damages, fines, administrative or civil penalties or charges imposed on the Owner, whether because of actions or suits by any governmental or regulatory agency or by any private party, as a result of the release of any hazardous substances, or any noncompliance with or failure to meet any Federal, state or local standards, requirements, laws, statutes, regulations or the law of nuisance by the Contractor (or its agents, officers, employees, subcontractors, consultants, sub-consultants, or any other persons, corporations, or legal entities employed, utilized, or retained by the Contractor) in the performance of this Contract or related activities, shall be paid by the Contractor.

5. Non-Discrimination/Drug-Free Workplace Provisions

a. Employment discrimination by Contractor shall be prohibited. Contractor agrees to comply with all Federal and State Laws. Furthermore, during the performance of this Contract, Contractor agrees as follows:

i. Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide

occupational qualification/consideration reasonably necessary to the normal operation of Contractor.

Contractor will conform to the provisions of the Virginia Fair Employment Act of 1975, as amended, the Virginians With Disabilities Act, and the Code of Virginia § 2.2-4311.

If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the Contract on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body.

Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

- ii. Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that Contractor is an equal opportunity employer.
- iii. Notices, advertisements and solicitations placed in accordance with Federal law, rule or regulations shall be deemed sufficient for the purpose of meeting the requirements of this section.
- iv. Contractor will include the provisions of the foregoing subsections (i) and (ii), and (iii) in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor

b. During the performance of this Contract, Contractor agrees as follows:

- i. Contractor will provide a drug-free workplace for Contractor's employees.
- ii. Contractor will post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in Contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition.

- iii. Contractor will state in all solicitations or advertisements for employees placed by or on behalf of Contractor that Contractor maintains a drug-free workplace.
- iv. Contractor will include the provisions of the foregoing subsections (i), (ii) and (iii) in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
- v. For the purposes of this section, "Drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a Contractor, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession, or use of any controlled substance or marijuana during the performance of the contract."

c. "The *Chesapeake Bay Bridge and Tunnel District (District)*, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies the Contractor, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award."

d. The below adopted clauses were taken directly from, "**The United States Department of Transportation (USDOT) Standard Title VI/Non-Discrimination Assurances DOT Order No. 1050.2A, Appendix A**". During the performance of this Contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

1. **Compliance with Regulations:** The Contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, the Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The Contractor, with regard to the work performed by it during the Contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the Contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of

the Contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. Information and Reports: The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information. (At a minimum, but not limited to, Contractor reporting shall include the District Title VI Evaluation Form, see attached Appendix A.)

5. Sanctions for Noncompliance: In the event of a Contractor's noncompliance with the Nondiscrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

- i. withholding payments to the contractor under the contract until the contractor complies; and/or
- ii. cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Chesapeake Bay Bridge and Tunnel District to enter into any litigation to protect the interests of the Chesapeake Bay Bridge and Tunnel District. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

e. The below clauses to be used were taken directly from, "**The United States Department of Transportation (USDOT) Standard Title VI/Non-Discrimination Assurances DOT Order No. 1050.2A, Appendix E**".

During the performance of this Contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

1. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
2. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
3. Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
4. Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
5. The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
6. Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
7. The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and Contractors, whether such programs or activities are Federally funded or not);
8. Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
9. The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
10. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
11. Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
12. Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq.).

G. Liquidated Damages

The damage and loss to the Owner resulting from failure of the Contractor to complete the Work within the time specified in this Contract, plus any extension of time granted, shall be as stipulated in Section 108.06 of the General Provisions, unless otherwise stated in the Special Provisions.

H. Component Parts of the Contract

This Contract includes all completed components of the Bid and Contract Documents as defined in Section 103.06 of the *General Provisions*. Certain portions of the project are revised by the Project Special Provisions included in the Contract Documents. Project Special Provisions shall control over all other Specifications, plans, and standard drawings.

I. Ownership of Documents

All data, sketches, charts, calculations, plans, specifications, electronic files, correspondence and other documents created or collected under the terms of the Contract Documents shall be considered "works for hire" for which the District owns the copyright. Design Documents shall become the District's property upon preparation; Construction Documents shall become the District's property upon delivery to the District; and other documents prepared or obtained by the Contractor in connection with the performance of its obligation under the Contract Documents, including studies, manuals, Record Drawings, technical and other reports and the like, shall become property of the District upon the Design Builder's preparation or receipt thereof. Copies of Design Documents and Construction documents shall be furnished to the District upon preparation or receipt thereof by the Contractor.

J. Binding

This Contract shall be binding upon all parties hereto and their respective heirs, executors, and administrators, successors, and assigns.

K. *Counterparts and Electronic Signatures.*

This Contract may be executed in one or more counterparts, each of which will be deemed to be an original copy and all of which, when taken together, will be deemed to constitute one and the same Contract or documents, and will be effective when counterparts have been signed by each of the Parties and delivered to the other party. The manual signatures for this Contract shall be delivered by an image which shall be transmitted electronically and will constitute an original signature for all purposes.

L. Changes to the Contract

No provision of this Contract shall be changed, amended, modified, waived, or discharged except as agreed to in writing by the Chesapeake Bay Bridge and Tunnel District and the Contractor.

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be executed as of the day and first above written in (_____) counterparts each of which shall for all purposes be deemed an original.

Chesapeake Bay Bridge and Tunnel District _____

Owner

Contractor

By: _____ *Jeffrey B. Holland* _____

Name

By: _____

Name

Signature: _____

Signature: _____

Title: _____ *Executive Director* _____ Title: _____

Attest: _____ Attest: _____

Address: _____ Address: _____

Contractor's Registration No.: _____ (Corporate Seal)

(If Contractor is a corporation or an unincorporated organization, attach evidence of authority to sign)

**CHESAPEAKE BAY
BRIDGE and TUNNEL DISTRICT**



FILLABLE BID DOCUMENT

PROJECT DESCRIPTION:

STEEL BRIDGE PAINTING

PROJECT NUMBER: 5044.5122; BID NUMBER: M-26-001

(Name of Individual, Firm or Corporation)

CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT

ACKNOWLEDGEMENT OF REVISIONS

Acknowledgement shall be made of receipt of any and all revisions and/or addenda pertaining to the above designated project which are issued by the District prior to the bid opening date shown herein. Failure to include this acknowledgement in the bidding may result in the rejection of your bid.

By signing this bid, the Bidder acknowledges receipt of the following revision and/or addenda to the bid and/or plans for the above designated project which were issued under cover letter(s) of the date(s) shown hereon:

1. Cover Letter of _____
(Date)
2. Cover Letter of _____
(Date)
3. Cover Letter of _____
(Date)

CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT

WORK REFERENCES

Both the bridge painter and the steel repair contractor, shall list at least three (3) similar projects performed in the past five (5) years. Each listed project shall include the name, address, contact person(s) and the telephone number of the Owner and Owner's representative for whom the work was performed, the description and value of the portion of the project with work of a similar nature. Each listed project shall also include the project location, completion date and the names of the Bidder's project manager and superintendent(s). If for any of the listed projects, the Bidder's participation was that of a subcontractor, the value of the subcontracted work performed by the Bidder shall be included. In such cases, the Owner of the project is the General Contractor.

Project Name: _____

Date of Project: _____ Project Value: _____

Contact Person: _____ Telephone Number: _____

Description of Work Performed: _____

Project Name: _____

Date of Project: _____ Project Value: _____

Contact Person: _____ Telephone Number: _____

Description of Work Performed: _____

Project Name: _____

Date of Project: _____ Project Value: _____

Contact Person: _____ Telephone Number: _____

Description of Work Performed: _____

CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT

NON-COLLUSION AFFIDAVIT

THIS FORM must be completed, signed, notarized and returned with Bid; and failure to do so, may result in the rejection of your Bid. A separate form must be submitted by each principal of a joint venture Bid.

1. In preparing and submitting this Bid, I, the firm, corporation or officers, agents or employees thereof did not, either directly or indirectly, enter into any combination or arrangement with any person, firm or corporation or enter into any agreement, participate in any collusion, or otherwise take any action in the restraint of free, competitive bidding in violation of the Sherman Act (15 U.S.C. Section 1) or Article 1.1 or Chapter 12 of Title 18.2 (Virginia Governmental Frauds Act), Sections 59.1-9.1 through 59.1-9.17 or Sections 59.1-68.6 through 59.1-68.8 of the Code of Virginia.

2. I, the firm, corporation or officers, agents or employees thereof have neither directly nor indirectly entered into any combination or arrangement with any person, firm or corporation or entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this Contract, the effect of which is to prevent competition or increase the cost of construction of this Contract.

During the preceding 12 months, I (we) have been a member of the following Highway Contractor's Associations, as defined in Section 33.1-336 of the Code of Virginia (1970). (If none, so state).

| Name | Location of Principal Office |
|-------|------------------------------|
| _____ | _____ |

3. The undersigned is duly authorized by the Bidder to make the foregoing statements to be filed with Bids submitted on behalf of the Bidder for this Project.

Signed at _____, this _____ day of _____, 20 ____.

Name of Organization _____

By: _____
(Signature and Title)

State of _____
To-wit:

County (city) of _____,

I, _____, a Notary Public in and for the State and County (City) aforesaid, hereby certify
that this day _____ personally appeared before me and made oath that he is duly authorized to make the
above statements and that such statements are true and correct:

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

Notary Public
My commission expires _____.

| Item # | Item Description | QTY | Unit | Unit Price | Amount |
|---------------|-------------------------------|------------|-------------|-------------------|---------------|
| 1 | Mobilization | 1 | Lump Sum | \$ _____ | \$ _____ |
| 2 | Rivet or Bolt Replacement | 20,000 | Each | \$ _____ | \$ _____ |
| 4 | Clean and Repaint - NCB-NB | 1 | Lump Sum | \$ _____ | \$ _____ |
| 5 | NCB-NB FB Repair Type 1 | 75 | Each | \$ _____ | \$ _____ |
| 6 | NCB-NB FB Repair Type 2 | 35 | Each | \$ _____ | \$ _____ |
| 7 | NCB-NB FB Repair Type 3 | 20 | Each | \$ _____ | \$ _____ |
| 8 | NCB-NB FB Repair Type 4 | 100 | Each | \$ _____ | \$ _____ |
| 9 | NCB-NB FB Repair Type 5 | 10 | Each | \$ _____ | \$ _____ |
| 10 | NCB-NB FB Repair Type 6 | 2 | Each | \$ _____ | \$ _____ |
| 11 | NCB-NB Stringer Repair Type 1 | 40 | Each | \$ _____ | \$ _____ |
| 12 | NCB-NB Bracing Repair Type 1 | 90 | Each | \$ _____ | \$ _____ |
| 13 | NCB-NB Bracing Repair Type 2 | 40 | Each | \$ _____ | \$ _____ |
| 14 | NCB-NB Bracing Repair Type 3 | 10 | Each | \$ _____ | \$ _____ |
| 15 | NCB-NB Truss Repair Type 1 | 15 | Each | \$ _____ | \$ _____ |
| 16 | NCB-NB Truss Repair Type 2 | 35 | Each | \$ _____ | \$ _____ |
| 17 | NCB-NB Truss FB Repair Type 1 | 6 | Each | \$ _____ | \$ _____ |

| Item # | Item Description | QTY | Unit | Unit Price | Amount |
|---------------|--------------------------------------|------------|-------------|-------------------|---------------|
| 18 | NCB-NB Truss FB Repair Type 2 | 20 | Each | \$ _____ | \$ _____ |
| 19 | NCB-NB Truss Stringers Repair Type 1 | 20 | Each | \$ _____ | \$ _____ |
| 20 | NCB-NB Truss Stringers Repair Type 3 | 5 | Each | \$ _____ | \$ _____ |
| 21 | NCB-NB Truss Portal Repair Type 1 | 2 | Each | \$ _____ | \$ _____ |
| 22 | NCB-NB Truss Portal Repair Type 2 | 15 | Each | \$ _____ | \$ _____ |
| 23 | NCB-NB Truss Lateral Repair Type 1 | 3 | Each | \$ _____ | \$ _____ |
| 24 | NCB-NB Truss Ladder Repair Type 1 | 4 | Each | \$ _____ | \$ _____ |
| 25 | NCB-NB Truss Ladder Repair Type 2 | 2 | Each | \$ _____ | \$ _____ |
| 26 | NCB-NB Truss Ladder Repair Type 3 | 2 | Each | \$ _____ | \$ _____ |
| 27 | Clean and Repaint - NCB-SB | 1 | Lump sum | \$ _____ | \$ _____ |
| 28 | NCB-SB Repair Type 1 | 2 | Each | \$ _____ | \$ _____ |
| 29 | Clean and Repaint - FIB-SB | 1 | Lump sum | \$ _____ | \$ _____ |
| 30 | FIB-SB Girders Repair Type 1 | 10 | Each | \$ _____ | \$ _____ |
| 31 | FIB-SB Girders Repair Type 2 | 50 | Each | \$ _____ | \$ _____ |
| 32 | FIB-SB Bracing Repair Type 1 | 10 | Each | \$ _____ | \$ _____ |
| 33 | FIB-SB Bracing Repair Type 2 | 2 | Each | \$ _____ | \$ _____ |

| Item # | Item Description | QTY | Unit | Unit Price | Amount |
|--|------------------------------------|-----|----------|------------|-----------------------------|
| 34 | FIB-SB Bracket Repair Type 1 | 2 | Each | \$ _____ | \$ _____ |
| 35 | Clean and Repaint - FIB-NB | 1 | Lump sum | \$ _____ | \$ _____ |
| 36 | Clean and Repaint - ASB204 | 1 | Lump sum | \$ _____ | \$ _____ |
| 37 | Clean and Repaint - BSB1 | 1 | Lump sum | \$ _____ | \$ _____ |
| 38 | Clean and Repaint - BNB1-2 | 1 | Lump sum | \$ _____ | \$ _____ |
| 39 | Clean and Repaint - BSB202 | 1 | Lump sum | \$ _____ | \$ _____ |
| 40 | Clean and Repaint - CSB1 | 1 | Lump sum | \$ _____ | \$ _____ |
| 41 | Simple Span Beam Repair Type 1 | 20 | Each | \$ _____ | \$ _____ |
| 42 | Simple Span Utility Repair Type 1 | 20 | Each | \$ _____ | \$ _____ |
| 43 | Simple Span Utility Repair Type 1A | 10 | Each | \$ _____ | \$ _____ |
| 44 | Simple Span Utility Repair Type 2 | 30 | Each | \$ _____ | \$ _____ |
| 45 | Spot Painting - ASB1 | 500 | Sq Ft | \$ _____ | \$ _____ |
| Total for BRIDGE PAINTING PROJECT | | | | | Total Price \$ _____ |

BID PRICE MUST BE WRITTEN AND SHOWN IN NUMBERS, IN CASE OF DISCREPANCY THE WRITTEN AMOUNT WILL SUPERSEDE.

TOTAL PRICE FOR CONTRACT BID ITEMS 1 to 45

\$ _____

DISTRICT TITLE VI CONTRACTOR EVALUATION FORM

This Title VI Evaluation Form is used for both a Pre-award Review and Post-award Review. The Chesapeake Bay Bridge Tunnel District (District) is required to conduct routine assessments prior to releasing funds to ensure Title VI compliance. A pre- award review assists the District in determining whether applicants operate in a nondiscriminatory manner. Pre-award reviews can also be used to require applicants to take preventive measures to ensure that discrimination will not occur in their services as a condition of receiving contracts. Pre-award reviews represent a frontline approach to eliminating and preventing discrimination before it occurs.

Post-Award Reviews are generally conducted after a contractor begins the scope of work. However, to minimize the burden on the District's contractors, a form that serves as both a pre-award and post- award compliance tool is herein provided.

The District will also conduct on-site reviews of prime contractors periodically to ensure that the contractor remains in compliance with Title VI and to verify that the contractor has preventive measures to ensure Title VI compliance by their sub-contractors.

| | | |
|--|--|---|
| Name of Preparer: | Preparer's Title: | |
| Phone #: | Email Address: | |
| Name of Organization: | Address of Organization: | |
| | | |
| Type of Contractor/Organization: | <input type="checkbox"/> Private Organization <input type="checkbox"/> Supplier <input type="checkbox"/> Governmental Agency <input type="checkbox"/> Other _____ | |
| Workforce for CBBT District Project | | |
| Total | % Minority | % Female |
| Business Ownership/Control Minority Yes <input type="checkbox"/> No <input type="checkbox"/> Female Yes <input type="checkbox"/> No <input type="checkbox"/> | | DBE Certified Yes <input type="checkbox"/> No <input type="checkbox"/> SWAM Certified Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Does your organization currently have contracts or subcontracts with the District? | | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| What is your organization's most recent date of District Title VI approval? | | |
| Status of Project(s): | | Value of current Contract(s): |
| What does your organization have in place to ensure nondiscrimination in your CBBT District scope of work and your programs and services? | | |

Virginia Workforce
CONSULTANT EQUAL EMPLOYMENT OPPORTUNITY WORKFORCE ANALYSIS

Employment at this establishment – Report all permanent full and part-time employees including apprentices and on-the job trainees unless specifically excluded as set forth in the instructions. Enter the appropriate figures on all lines and in all columns. Blank spaces will be considered zeros.

Organization, Staffing, & Training

1. What type of services will your organization provide the CBBT District?
2. Identify the person responsible for the administration of Title VI policies and procedures (a Title VI Coordinator), and provide the name, position, and contact information.

Title VI/Nondiscrimination

1. Is your Title VI Coordinator, project managers, and other staff made aware of Title VI compliance and regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21 and the Federal Highway Administration's 23 Code of Federal Regulations 200? Please explain how they are made aware.
2. What procurement procedures does your organization have in place to ensure nondiscrimination in the selection and retention of subcontractors including procurements of materials and leases of equipment? *** Please note N/A is not an acceptable response, please provide a complete answer**
3. How does your organization notify your subcontractors and suppliers of their obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, national origin, sex, age, disability and low-income populations? *** Please note N/A is not an acceptable response, please provide a complete answer**
4. Are facilities and meeting areas fully accessible to persons with disabilities?
5. Does your organization have a system in place to accommodate persons with disabilities? If yes, how does your organization notify the public? If no, please explain. *** Please note N/A is not an acceptable response, please provide a complete answer**
6. How are limited English proficient persons made aware that they can receive translation services for access to services? *** Please note N/A is not an acceptable response, please provide a complete answer**

7. Has your organization been reviewed by any governmental agencies for compliance with Title VI and other laws and regulations? If yes, provide a copy of the letter identifying the review findings?
8. Does your organization receive federal assistance (grants, loans, donations of property, or detail of personnel) from any Federal government entity?
9. List any discrimination complaints and/or lawsuits received in Virginia during the reporting period. Include the basis for the complaint (ethnicity, gender, etc.) and summarize the outcome or resolution. If applicable, include a copy of the investigation report.

Disadvantaged Business Enterprises (DBE)

1. Did your organization award any contracts/subcontracts related to CBBT District work to DBEs during the reporting period?

Yes No

If yes, provide the following:

 1. The DBE's name and amount awarded.
 2. Total # of contracts awarded to DBEs.
 3. Total dollar amount of contracts awarded to DBEs.

I certify that the data given in this report is correct to the best of my knowledge.
(Report has to be submitted with original signature, not a photocopy.)

Signature:

(Authorized Officer)

(Title)

(Date)

For Office Use Only:

Provide award? Yes _____ No _____

Recommendations:

CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT

RMF 5044.5122

STEEL BRIDGE PAINTING PROJECT

**NORTHBOUND AND SOUTHBOUND NORTH CHANNEL BRIDGES,
NORTHBOUND AND SOUTHBOUND FISHERMAN INLET BRIDGES,
TRESTLE STEEL SPANS,
STRUCTURAL STEEL REPAIRS**

SPECIAL PROVISIONS

SP-1 SCOPE OF WORK

This project consists of the surface preparation and painting of all structural steel in accordance with these specifications at the following locations on the Chesapeake Bay Bridge and Tunnel facility:

- Northbound North Channel Bridge NCB-NB
- Southbound North Channel Bridge NCB-SB
- Northbound Fisherman Inlet Bridge FIB-NB
- Southbound Fisherman Inlet Bridge FIB-SB
- Trestle Span ASB1
- Trestle Span ASB204
- Trestle Span BSB1
- Trestle Span BSB202
- Trestle Span CSB1
- Trestle Span BNB1-2

Included in this Project as part of the Northbound North Channel Bridge is the steel cross-girder and associated steel details, including the steel bearings, located in Trestle Span CNB322 at Pier NCB-NB1 and in Trestle Span DNB1 at Pier NCB-NB18.

The structures reside on the main facility between the North and South Toll Plazas. All work shall be performed in accordance with the details shown on the Project Drawings, in the Technical Specifications, in these Special Provisions, and as directed by the District. The scope of work is further defined in the Technical Specifications, but generally consists of the following:

- 1) Cleaning and painting of existing and repair steel surfaces in the areas shown on the Project Drawings or as directed by the District. Cleaning and Painting shall be in accordance with the Technical Specifications, including all coats of paint, any required stripe coats, sealants, caulking, and repair painting.

- 2) Providing environmental protection and containment during blast cleaning and painting operations to collect and contain all removed waste materials resulting from paint surface preparation to prevent exposure of District personnel, Contractor personnel, District property, the public and public property to these materials and to keep these materials out of the Chesapeake Bay.
- 3) Legally disposing of all removal and waste materials collected and contained during cleaning, preparation and painting operations.
- 4) Removing and replacing deteriorated rivets and bolts in accordance with the Technical Specifications or as directed by the District.
- 5) Completing all steel repairs as shown in the plans sheets and as described in the specifications.

SP-2 **PREQUALIFICATION**

Contractors must be prequalified by the Association of Materials Protection and Performance (AMPP, formerly SSPC) to the accreditation programs for “FIELD APPLICATION OF COATINGS COMPLEX STRUCTURES SSPC – QP1” and “INDUSTRIAL HAZARDOUS PAINT REMOVAL SSPC – QP 2”. Bidder shall submit current QP1 and QP2 accreditation with the Bid.

SP-3 **GENERAL PROVISIONS**

The Division I General Provisions of the VDOT 2020 Road and Bridge Specifications is amended or deleted by the General Provisions contained herein.

SP-4 **CHANGES TO GENERAL PROVISIONS**

Section 103.02, Award of Contract is amended to include the following:

The detailed work plan will also be considered in determining the successful bidder.

Section 107.17, Construction Safety and Health Standards shall be replaced with the following:

Compliance with construction safety and health standards is a condition of the Contract, and shall be made a condition of each subcontract entered into pursuant to the Contract, that the Contractor and any subcontractor shall not require any worker employed in performance of the Contract to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to their health or safety, as determined under construction safety and health standards promulgated by the U.S. Secretary of Labor. The Contractor shall comply with all applicable federal, state, and local regulations.

The Contractor shall supply all required training, equipment, or other services needed for District and District Representative's full access to the work at all times.

SP-5 MOBILIZATION

Mobilization shall be in accordance with Section 513 of the VDOT 2020 Road and Bridge Specifications.

SP-6 SCHEDULING REQUIREMENTS

All work must be completed in accordance with the plans and specifications and within the time limits as herewith set forth, which is **611 Calendar Days**. No weather days will be permitted – see definition of Calendar Days in General Provisions.

As described in Section 108.02 of the General Provisions, the District does not permit work on Sundays, holidays and normal workdays preceding and following the holidays listed therein. The District may, upon written notification by the Contractor, waive such restrictions on normal workdays preceding and following the holidays when the Contractor's operations have no effect on vehicular traffic, as determined by the District.

Except as otherwise approved by the District, the Contractor's operations in Span ASB1 will not be permitted between the hours of 7 p.m. and 7 a.m. where such work, as determined by the District, adversely impacts the normal environment of the adjacent homes and residences.

SP-7 LIMITATIONS OF OPERATIONS

Lane closures complying with SP-10 will be allowed around the clock from the second Monday in September through the last weekend in June. From July 1 to the 1st Thursday after Labor Day in September, the Contractor may have lane closures from Monday morning through 12 noon on Friday, excluding Holidays. The Contractor shall make allowances for the District to perform scheduled bridge inspections during September. No more than two simultaneous lane closures will be allowed at any time. This is anticipated to be the structure currently being worked on and as that structure is being completed, placing equipment on the next structure.

The Contractor will not be allowed to tie-off floating equipment, such as equipment barges, attended or otherwise, to the trestle bents or bridge piers. The Contractor may, if he chooses, contact the U.S. Coast Guard concerning a special permit to install a temporary mooring buoy, at a location acceptable to the Coast Guard and the District.

Operations shall also be limited by the necessary minimum and maximum temperature and environmental conditions set forth by the Technical Specifications, Section 411 and the product manufacturers for application of their products.

The Work required under this project is to be performed on 10 individual structures along the facility. The Work is set forth on the Plans and described in Special Provision No. SP-1. The Contractor must complete the Work on one structure, prior to starting Work in any other area. Any set-up work to install rigging, scaffolding, or other work platforms that will aid in performing the work, may take place at the next work location prior to the completion of the work at the current location, to allow an uninterrupted work schedule.

The Contractor shall only work on one structure at a time and shall not work more than one 12-hr shift per day. Lane closure mobilization and demobilization may occur outside the limits of the 12-hr shift. When requested by the Contractor and approved by the District, simultaneous work may be performed at structures ASB1, ASB204, BNB1-2, BSB1, BSB202, and CSB1. Lane closure restrictions will remain in effect for all work.

All vehicles crossing the facility to deliver equipment, materials or supplies for this project shall comply fully with the limitations stated in the current edition of the Virginia Department of Transportation publication entitled *Size, Weight and Equipment Requirements for Trucks, Trailers and Towed Vehicles*. Any vehicles that are scheduled to be used, which do not meet these criteria may be used only with the written permission of the District. In requesting permission from the District to use non-complying vehicles, the Contractor shall specify whether the non-complying equipment will enter the facility from the south or north end. The District may require that any non-complying vehicles be accompanied by an escort, the cost of which will be borne by the District.

SP-8 PROGRESS MEETINGS

The District will establish and conduct monthly progress meetings with representatives of the Contractor. More frequent or less frequent meetings shall be held to the extent that the District reasonably determines that construction conditions make it advisable to do so. These meetings will be maintained throughout the entire construction period until final Project inspection by the District and for the primary purposes of assessing the progress of the Contractor's work, recommending such remedial actions as are necessary to maintain its progress within the Project schedule, and discussing the Contractor's and its subcontractors' respective safety performance. Unless otherwise directed by the District, attendance should include the following Contractor personnel (and, if necessary, its corresponding subcontractors' personnel): its Project Manager, its designated safety representative, and its superintendents as may be appropriate to meet agenda requirements.

SP-9 CONSTRUCTION RECORD DRAWINGS

The Contractor shall maintain, in readable condition at his project site office, one complete set of plans, specifications and working drawings for his work including all shop drawings. Such drawings and specifications shall be available for use by the District or his authorized representative.

As the work progresses, the Contractor shall keep a complete record of any and all variations between actual Project installations and Contract Plans and Specification requirements. Upon the completion of the Project, two sets of drawings and specifications shall be marked in red to show all such variations and shall be submitted to the District within 30 days of final acceptance.

SP-10 TRAFFIC CONTROL

The Contractor shall provide all traffic control personnel and equipment during all phases of his operations for temporary lane closures on the facility. Procedures shall follow those detailed in the traffic control plan approved by the District. Traffic control shall be in accordance with the

current version of the *Virginia Work Area Protection Manual*. Brief total traffic close-downs (both lanes) of fifteen minutes or less may be allowed, provided the Contractor receives prior approval from the District. The District will provide traffic control during these total shutdown times. The Contractor will be required to request all traffic control work on or before the Wednesday prior to the week of work for incorporation into the District's road schedule. The District will have final approval of all such requests.

The Contractor shall provide all traffic control for Lookout Road when working on Span ASB1. The traffic control plan for Lookout Road shall meet the requirements of and be approved by the City of Virginia Beach, including any detours and signage as required. This work will require an approved permit issued by Virginia Beach.

SP-11 ON-SITE TEMPORARY STORAGE

The District will provide space on Portal Island 4 as a storage area for materials and equipment. The Contractor will not be allowed, under any circumstances, to store any materials or equipment in any of the ventilation buildings or in the tunnels. The materials and equipment must be securely stowed in the storage area to prevent their movement by high winds. Furthermore, all materials and equipment must be removed from the storage area at least 12 hours in advance of any time for which the National Weather Service predicts winds within a 20-mile radius of the storage site to exceed a speed of 75 mph. A two lane width (24-ft minimum) travel-way for vehicular traffic must also be maintained around the storage area along the length of the portal island and through the security gates.

Upon request, the District will make available to the Contractor, a fenced-in area at the North end District Maintenance Yard.

The Contractor will not be allowed, under any circumstances, to store any materials along or underneath any of the trestles or bridges, or on Chesapeake Beach, Wise Point or Fisherman Island.

SP-12 AVAILABILITY/ACCESSIBILITY OF EMERGENCY UTILITIES

During the execution of the work, the Contractor shall keep the emergency telephones available and accessible to emergency personnel at all times. During the prosecution of the work, the navigation aid lighting shall also be considered as an emergency utility and also kept accessible to emergency personnel. Any damage done to these emergency utilities due to Contractor activity shall be repaired immediately and continuously until the utilities are restored. The Contractor shall be responsible for any damage to any emergency utilities that are attributable to his neglect or methods of performing the work and make appropriate repairs, as approved by the District, at no additional cost to the District.

SP-13 WORK AROUND EXISTING ELECTRICAL UTILITIES

A portion of the work contained in this contract will involve working adjacent to energized "live" electrical wiring, in the cable trays that are typically located on the west sides of the structures and in the light standards located on both sides of some of the structures

A small electrical equipment room is attached to the superstructure in Span 10 of the northbound North Channel Bridge adjacent to the east girder just north of Pier No. 10.

There is also energized “live” electrical wiring in conduit hanging the steel girders for the navigational aid lights on the North Channel and Fisherman Inlet Bridges.

The Contractor shall immediately notify the District Representative of any damage done to the existing utilities (conduits, wiring, cable trays, etc.) during any portion of the work. If utility service is interrupted due to Contractor activity, repair work shall be continuous until service is restored. The Contractor shall be responsible for any damage to any utilities that are attributable to his neglect or methods of performing the work and make appropriate repairs, as approved by the District, at no additional cost to the District.

SP-14 CONTAINMENT OF BLASTING MEDIA, WASH WATER, DEBRIS AND NEW MATERIALS

The Contractor shall contain all materials used during the cleaning process and all materials removed from the structures and shall not allow any of the materials to be dropped into the Chesapeake Bay beneath the applicable structures, nor to the property or existing infrastructure beneath Span ASB1. The Contractor shall also take care not to drop or spill any new painting materials into the waters beneath the applicable structures, onto the substructure units supporting the structures, nor onto the property or existing infrastructure beneath Span ASB1.

SP-15 PROTECTION OF EXISTING FACILITY

During the progress of the work, the Contractor shall provide temporary protection as is determined appropriate to protect the existing facility from damage due to Contractor activity. The Contractor shall immediately notify the District Representative of any damage done to the facility during any portion of the work. If utility service is interrupted, roadway surface damaged or any portions of the structures damaged, repair work shall be continuous until service is restored. All repair work shall be done in accordance with District specifications and requires approval by the District prior to commencing the repair work. The Contractor shall be responsible for any damage to any facility components that are attributable to his neglect or methods of performing the work and shall make appropriate repairs, as approved by the District, at no additional cost to the District.

Such items to be protected include, but are not limited to, the bridge deck, substructure bents and piers, fender systems, prestressed concrete girders and modular units, structural steel members, curb, railing, light standards, navigational aid lights, the cable trays and the utilities in them.

All costs associated with the Work in this Special Provision will be considered as incidental to other items of Work.

SP-16 ACCESS TO CONSTRUCTION

During the progress of the work, the Contractor shall provide for the District, and all authorized visitors, means of safe and ready access to all parts of the work, such as scaffolds, ladders, transportation, water-based vessels and any other required aids to facilitate the inspection of the work. This access shall be provided at times during which work is in progress.

SP-17 WORK ON WATER

The Contractor shall conduct his Work on and adjacent to navigable waters in accordance with Section 107 of the General Provisions and the following:

The Contractor shall conduct his operations in accordance with the regulations and restrictions set forth by the Virginia Marine Resources Commission and any other authority with jurisdiction. It shall be the responsibility of the Contractor to comply with all applicable regulations, secure all necessary permits, and provide and maintain all required temporary navigation lights and signals as may be required by the U.S. Coast Guard and these Contract Documents.

The Contractor shall conduct his Work in such a manner as to minimize obstruction to, and interference with, navigation. He shall provide proper signals by day and lights by night upon all vessels, equipment, barges, stakes, buoys, towers and other structures which may be in such locations as to endanger or obstruct navigation.

The location of the Work is in an area where there are navigation channels and passageways for large and small marine vessels in addition to vessels operated by the Contractor and his suppliers. Should it become necessary to shift or move floating equipment or to interrupt the Contractor's operations to accommodate the movement of vessels and floating equipment, the Contractor will not be entitled to extra compensation under the Contract for damage resulting there from. The Contractor shall be responsible to obtain all necessary Obstruction to Navigation and other marine permits.

The Contractor shall not dump or throw overboard any material. Should the Contractor, during the progress of Work, lose, sink or misplace any material, machinery, equipment or appliance which in the opinion of the District and/or an appropriate government agency, may be dangerous to or obstruct navigation or may be otherwise objectionable or contribute to pollution of the water, he shall recover and remove such with utmost dispatch and immediately cease or revise his operations. The Contractor shall give immediate notice with description and location of such obstructions or objectionable material to the necessary government agency and to the District and where required shall mark or buoy such until removed. Should the Contractor refuse, neglect or delay compliance with this requirement, such obstruction or objectionable material may be removed by others, and the cost of such removal shall be deducted from any payment for Work due or to become due the Contractor.

The Contractor shall be responsible for all damages resulting from any neglect or failure to comply with maritime regulations.

All costs associated with the Work in this Special Provision will be considered as incidental to other items of Work.

SP-18 REMOVAL OF BIRD DEBRIS

Any removal of, or disposal of bird debris and excrement will be considered incidental to the bid price for the various items of work.

SP-19 SAFETY REQUIREMENTS

The Contractor shall prepare, implement and maintain health and safety plans – programs and procedures that comply with the requirements of these Specifications, and especially in accordance with Section 107.17 of the General Provisions (see SP-4 – Changes to General Provisions) and in accordance with Section 411 of the Specifications, and as specified herewith. The Contractor shall comply with all applicable regulations even if the regulation is not specifically referenced herein for this Work. If a state or local regulation is more restrictive than the requirements of this Specification, the Contractor shall follow the more restrictive requirements.

The Contractor shall submit to the District the project specific health and safety plans, the project specific Environmental Plan of Action, the project specific Waste Handling Plan along with the Preparedness, Prevention and Emergency Procedures Plan for large quantity generators prepared under the direction of, and approved by, a Certified Industrial Hygienist (CIH) or Certified Safety Professional (CSP) for the protection of the Contractor, any subcontractors, workers, the District, the public and the environment from all recognized and foreseeable hazards on the job site in accordance with 29 CFR 1926 and 29 CFR 1910, as applicable, as well as the requirements of this Work. These plans shall be submitted for compliance with applicable regulations and received by the District. These plans shall be submitted to the District not less than 45 days prior to commencing operations.

Health and Safety Plan Criteria: Contractor's Health and Safety Plans must provide procedures addressing each applicable element of the following, at a minimum:

- General Safety and Health Provisions – in accordance with applicable sections of Subpart C of 29 CFR 1926 including safety training and education, first aid and medical attention, housekeeping and control of site access at a minimum.
- Occupational Health – in accordance with applicable sections of Subparts D and Z of 29 CFR 1926 including occupational noise; gases, fumes, dusts and mists; hazard communication; lead, cadmium, arsenic, chromium and other toxic metals.
- Fire Protection and Prevention, and Emergency Response – in accordance with the requirements of 29 CFR 1926.24 and 1926.150 for the control, storage and handling of flammable and combustible materials, including a site-specific Emergency Response Plan in accordance with the requirements of 1926.65(q) at a minimum.
- Electrical Safety – in accordance with 29 CFR 1926.400, 1926.403, and all applicable provisions of 29 CFR 1926, Subpart K.
- Lockout/Tagout Plan – in accordance with 29 CFR 1910.147 and 1910.333 that will be followed for lockout/tagout of existing electrical utilities within containment or other work areas as appropriate. Include provisions for coordinating lock-out/tag-out activities with the District.
- Scaffolds, Work Platforms and Fall Protection – in accordance with applicable sections of Subparts L and M of 29 CFR 1926.

- Site-Specific Traffic Safety Program – in accordance with the current Virginia Work Area Protection Manual, an appropriate safety program for working in and around the lane closures and for getting traffic safely through the work zones that are located on or beneath each of the structures. This safety program shall have project specific safety guidelines for all facets of the work.

The Contractor shall not construe District receipt of Contractor submittals under this special provision to imply approval of any particular method or sequence for conducting the work, or for addressing health and safety. Receipt of the plans do not relieve the Contractor from the responsibility to conduct the work in strict accordance with the requirements of these Specifications, or to adequately protect the health and safety of all workers involved in the project including any members of the public who may be affected by the project. The Contractor remains solely responsible for the adequacy and completeness of the programs and work practices, and adherence to them.

SP-20 SUBMITTALS

Contractor's submittals, including working plans and construction record drawings, shall be in accordance with Section 105.10 of the General Provisions, the Technical Specifications associated with this project, and the following:

1. The Contractor shall submit to the District, within 30 days after Notice to Proceed, a schedule of specific dates for submission of working and shop drawings required by the General Provisions, the Technical Specifications, and these Special Provisions. In addition, this submittal shall also include a progress schedule in accordance with Section 108.03 of the General Provisions for the District's review and approval.
2. The Contractor shall submit one (1) electronic copy of each submittal to the District for review and approval. Each submittal shall have been reviewed by the Contractor prior to submittal to the District and shall bear the Contractor's stamp of approval. All plan submittals shall be prepared in either a 22" x 34" format with a 2-inch border on the left side, or 11" x 17" format with a 1-inch border on the left.
3. The District will review for conformance with Contract Documents each submittal and shall return one (1) print duly marked with thirty (30) calendar days after receipt from the Contractor. The Contractor shall revise and resubmit any submittal returned to him for correction after review by the District. Upon receipt by the District of a resubmittal with required corrections, the District shall return one (1) print to the Contractor duly marked "Approved".

All submittals shall be submitted via email to Mr. Timothy Holloway at tholloway@cbbt.com

SP 21 EXISTING CONDITIONS

The Contractor is fully responsible for all existing conditions at the Project. The District makes no representation with regard to the number, type, thickness, and condition of the existing paint coatings. The District makes no representation with regard to the extent and volume of bird excrement on the bridges. The existing paint coatings may contain lead and other toxic materials. The existing paint coatings may be missing and/or may be in excess of 50 mils thickness. The existing paint coatings may be well adhered to the bridge steel. The District makes no representation with regard to the type, condition, or amount of existing paint, mill scale, or corrosion on the various metal members that make up the bridges or the condition of the metal surfaces.

The Contractor is fully responsible to determine all existing conditions at the work site that may affect the Contractor's bid and that may affect the Contractor's work required under this contract. The Contractor's bid should include all required work as it relates to compliance with governmental regulations and the collection, handling, storage, and disposal of existing debris, paint or any other toxic or hazardous material that is inadvertently or intentionally removed during the course of the construction.

SP 22 PAYMENT AND UNIT PRICES

Payment for each line item on the bid sheet shall constitute a full compensation for any and all labor, material and equipment costs associated with providing a fully completed, functional pay item. Compensation for incidental items not specifically called for herein or on project plans, but are necessary for the successful completion of a pay item in accordance with applicable codes, standards and project requirements, shall be included in the compensation for that pay item.

SP-23 SUBSTITUTIONS

1. The Contractor may recommend substitutions for certain materials after the bid has been awarded. This should not be perceived as an allowance to bid on a different system/product than what is described in the Specifications. Recommendations shall be based on one or both of the following:
 - a. Alternative materials to improve quality, schedule or pricing.
 - b. Exceptions to the Specifications covering materials, manner of application, or other details.
2. To recommend substitutions regarding the above subjects the Contractor shall:
 - a. Submit a written description of proposed changes or modifications to the District for review. In accordance with SP-20 Submittals, the District requires 30 days for review of proposed substitutions.
 - b. Include catalog data sheets as a minimum and shop drawings, samples and other supportive information as necessary for the District to evaluate the proposed materials.

- c. The District will review any substitution requests and will be the sole judge in determining whether the proposed item meets is considered equal to the specified item. The Districts' decision regarding the proposed substitution shall be final.
- d. It is the Contractor's responsibility to notify and receive written approval from the District for substitutions that deviate from contract documents.
- e. Do not proceed with proposed changes or modifications until authorized to do so by the District in writing. The cost of work performed on proposed changes or modifications without the District's written approval will be at the Contractor's expense, as well as any cost for correcting such unauthorized work.

Division I
GENERAL PROVISIONS

SECTION 101—DEFINITIONS OF ABBREVIATIONS, ACRONYMS, AND TERMS

101.01—Abbreviations and Acronyms

In these Specifications and other Contract Documents, the following abbreviations and acronyms shall be interpreted as follows:

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| AAR | Association of American Railroads |
| AASHTO | American Association of State Highway and Transportation Officials |
| ABS | Acrylonitrilebutadienestyrene (an elastomer) |
| AC | Alternating current |
| ACI | American Concrete Institute |
| ADT | Annual average daily traffic |
| AED | Associated Equipment Distributors |
| AISC | American Institute of Steel Construction |
| AISI | American Iron and Steel Institute |
| ANSI | American National Standards Institute |
| APA | Engineered Wood Association |
| API | American Petroleum Institute; American Pipe Institute |
| ASCE | American Society of Civil Engineers |
| ASME | American Society of Mechanical Engineers |
| ASTM | American Society for Testing and Materials |
| AWG | American wire gage |
| AWPA | American Wood Preservers Association |
| AWS | American Welding Society |
| AWWA | American Water Works Association |
| BOCA | Building Officials and Code Administrators |
| C | Celsius, when preceded by “degree(s)” |
| CABB | Contractor Advertisement Bulletin Board |
| CBR | California bearing ratio |
| CRSI | Concrete Reinforcing Steel Institute |
| DBE | Disadvantaged Business Enterprise |
| DC | Direct current |
| DHV | Design hourly volume |
| ECTC | Erosion Control Technology Council |
| EEI | Edison Electric Institute |
| EEO | Equal employment opportunity |
| EIA | Electronic Industries Alliance |
| EPA | Environmental Protection Agency |
| EPDM | Ethylenepropylenedienemonomer (an elastomer) |
| ESCCC | Erosion and Sediment Control Contractor Certification |
| F | Fahrenheit, when preceded by “degree(s)” |
| F/A | Filler/asphalt ratio |
| FAT | Field Acceptance Test |

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| FHWA | Federal Highway Administration |
| FOOH | Field Office Overhead |
| FS | Federal Specifications, General Services Administration |
| HOOH | Home Office Overhead |
| ICEA | Insulated Cable Engineers Association |
| IMSA | International Municipal Signal Association |
| ITE | Institute of Transportation Engineers |
| LCD | Liquid crystal display |
| LPG | Liquid petroleum gas |
| MEKP | Methyl ethyl ketone peroxide |
| MIL | Military specifications |
| MSDS | Materials Safety Data Sheet |
| MUTCD | <i>Manual on Uniform Traffic Control Devices for Streets and Highways</i> and theVirginia Supplement to same |
| NEC | National Electrical Code |
| NEMA | National Electrical Manufacturers Association |
| NIST | National Institute of Standards and Technology |
| NOAA | National Oceanic and Atmospheric Administration |
| NRC | Nuclear Regulatory Commission |
| PCI | Precast / Prestressed Concrete Institute |
| PE | Polyethylene |
| PTL | Plywood Testing Laboratory |
| PVC | Polyvinylchloride |
| PVF | Polyvinylfluoride |
| SAE | Society of Automotive Engineers |
| SAT | System Acceptance Test |
| SOR | Schedule of Record |
| SP | Special Provision |
| SPCN | Special Provision Copied Note |
| SPIB | Southern Pine Inspection Bureau |
| SS | Supplemental Specification |
| SSPC | Society for Protective Coatings |
| SWaM | Small, Women-Owned, and Minority-Owned Businesses |
| SWPPP | Storm Water Pollution Prevention Plan |
| TAPPI | Technical Association of the Pulp and Paper Industry |
| TFE | Polytetrafluoroethylene |
| TIE | Ticket Information Exchange (Miss Utility) |
| TOCIT | Traffic Operations Center Integration Test |
| UL | Underwriters' Laboratories, Inc. |
| VAC | Volts alternating current |
| VDC | Volts direct current |
| VDOT | Virginia Department of Transportation |
| VEP | Value engineering proposal |

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| VFA | Voids filled with asphalt |
| VMA | Voids in mineral aggregate |
| VOSH | Virginia Occupational Safety and Health |
| VTM | Virginia Test Methods; voids in total mix |
| VWAPM | Virginia Work Area Protection Manual |

101.02—Terms

In these Specifications and other Contract Documents, the following terms and pronouns used in place of them shall be interpreted as follows:

-A-

Adjustment. An increase or decrease in the Contract amount or in the Contract time, unless the context dictates otherwise.

Advertisement, Notice of. A public announcement, as required by law, inviting bids for work to be performed or materials to be furnished that indicates, among other terms and conditions, approximate quantities of work to be performed, location of work to be performed, character and quantity of materials to be furnished, and time and place for opening bids.

Affiliate. Any business entity that is closely associated to another business entity so that one has the power to control the other either directly or indirectly; or, where one business entity systematically shares resources, officers, and/or other management with another business entity to the extent that a business relationship legally exists or is publicly perceived to exist; or, when a third party has the power to control both; or, where one business entity has been so closely allied with another through an established course of dealings, including but not limited to the lending of financial wherewithal or engaging in joint ventures, so as to cause a public perception that the two firms are one entity.

Alkali Soil. Soil in which total alkali chlorides calculated as sodium chloride are more than 0.10 percent based on total solids.

Award. The decision of the Commission to accept the bid of the lowest responsive and responsible bidder for the Work or such other criteria set forth in the solicitation. The award of the Contract is subject to the execution and approval of a satisfactory Contract for the Work, and such other approvals and conditions as may be specified or required by law.

Award Date. The date on which the decision is made by the Commission to accept the bid or proposal of the lowest responsive and responsible bidder or such other criteria set forth in the solicitation.

-B-

Backfill. Material used to replace or the act of replacing material removed during construction; may also denote material placed or the act of placing material adjacent to structures.

Balance Point. The approximate point, based on estimated shrinkage or swell, where the quantity of earthwork excavation and borrow, if required, is equal to the quantity of embankment material plus any surplus excavation material.

Base Course. A layer of material of specified thickness on which the intermediate or surface course is placed.

Base Flood. The flood or tide having a one percent chance of being exceeded in any given year.

Bid. The offer of a bidder, submitted by electronic proposal (or on paper if so specified in the Proposal) to perform the Work and furnish the materials, equipment, and labor at the prices set forth therein; valid only when properly signed and guaranteed.

Bidder. Any individual, partnership, corporation, limited liability company, or joint venture that formally submits a bid for the work contemplated, or for any portion thereof, acting directly or through a duly authorized representative.

Bids, Invitation for. See **Advertisement, Notice of. Board.** Commonwealth Transportation Board.

Borrow. Suitable material not available from designated Regular Excavation or other sources of useable materials on-site that is used primarily for embankment.

Brackish Water. Water in which total alkali chlorides calculated as sodium chloride are more than 0.10 percent based on total solids.

Bridge. A structure, including supports, that is erected over a depression or an obstruction, such as water, a highway, or a railway, that has a track or passageway for carrying traffic.

Bridge Lift. A layer of fill material placed in excess of standard depth over an area that does not support the weight of hauling equipment and for which compaction effort is not required.

Business. Any corporation, partnership, limited liability company, joint venture, firm, association, individual, or sole proprietorship operated for profit.

-C-

Calendar Day. Any day shown on the calendar, including Saturday and Sunday, beginning at 12:01 a.m. and ending at midnight.

Camber. A vertical curvature induced or fabricated into beams or girders and a deck slab or slab span formwork; a vertical curvature set in the grade line of a pipe culvert to accommodate differential settlement.

Change Order. A written order (Form C-10) signed by the Engineer to incorporate changes, alterations or other modifications into the Contract. A Change Order may be used to add, modify, or delete: pay items, Contract time, Contract Documents, or other terms of the Contract. Change Orders

may be issued on a bilateral or unilateral basis. The term change order means bilateral Change Order, except where the Change Order is designated or understood from the context as being a unilateral Change Order.

Change Order, Bilateral. A written change order signed by both the Engineer and the Contractor where the Engineer and Contractor agree upon the scope, the cost, and the time adjustment for the proposed change, alteration, or other modification to the Contract. Form C-10 shall be used to modify the Contract to include the approved change. This type of change order is what is typically meant when the term change order is used elsewhere in Department publications.

Change Order, Unilateral. A written change order signed only by the Engineer used to effect a change, alteration, or other modification to the Contract when the Engineer and the Contractor cannot agree upon the scope, the cost, or the time estimation of the proposed change, alteration, or other modification to the Contract or where due to issues of emergency, safety, environmental damage, or other similar critical factors the District must act quickly and unilaterally to effect the change. In these cases, the District must act unilaterally to establish a scope, cost, or time adjustment for, the change, alteration, or other modification to the Contract. Form C-10 shall be used to modify the Contract to include the approved change.

Channel. A watercourse or drainage way.

Claim. The Contractor's written request or demand for an adjustment to the Contractor's compensation or to the Contract time, for costs, expenses, or other damages, adjustment of the Contract terms, or for any entitlement available under the Contract, made within the time, in the form, and pursuant to the provisions for claims specified in the Contract Documents.

Commissioner. The Chief Executive Officer of the Chesapeake Bay Bridge Tunnel District.

Commonwealth. Commonwealth of Virginia.

Completion Date. The date specified in the Contract, on Form C-7, by which the Contractor shall achieve Final Acceptance according to Section 108.09.

Completion Date, Substantial. The date on or before which the project is complete such that it can be safely and effectively used by the public without delays, disruption, or other impediments and only clean up and Work of a minor nature, as agreed to by the Engineer, remains to be finished.

Composite H. A graph showing the mean daily discharge versus the calendar day, indicating trends in high and low flow for a one-year period.

Construction Area. The area where authorized construction occurs.

Construction Limits. (On-Site). The disturbed area required for the construction of a Project including the intersection of side slopes with the original ground, plus slope rounding and slopes for drainage ditches, bridges, culverts, channels, temporary or incidental construction, and identified by the surface planes as shown and/or described within the Contract Documents.

Contract. The written agreement executed by and between the District and the Contractor that sets forth the obligations of the parties thereunder. The documents that make up the Contract are specified in Section 103.06. Oral agreements, representations or promises will not be considered a part of the Contract.

Contract Amount. The sum stated as the bid total in the executed Proposal (Form C-7), as adjusted according to the Contract.

Contract Engineer. See **State Construction Contract Engineer.**

Contract Execution Date. The date on which the Contract is signed by the Executive Director.

Contract Item, Bid Item, or Pay Item. A specifically described unit of work for which a price is provided in the Contract Schedule of Items.

Contract Time. The time allowed in the Contract for final completion of the Work, including all authorized time extensions, beginning on the notice to proceed date and ending at the Contract time limit.

Contract Time Limit. The date, whether set by a number of calendar days or fixed calendar date, for final completion of the Work prescribed in the Contract, including all authorized time extensions.

Contractor. The business that has a direct contract with the District, which is in writing and signed by the Executive Director, to perform the prescribed Work as an independent contractor and not as an agent for the District or Commission.

Confirmation Of Verbal Instructions. (COVI) - Contractor-requested written confirmation of the District's instructions concerning the Work. When time and/or costs are or will be impacted, the Contractor must comply with the requirements applicable to requests for adjustments of the Contract amount or Contract time.

Controlling Item Of Work. See **Critical Path Work.**

Contractor Change Requests. (CCR) - Requests where the Contractor asks the District to make an adjustment to the Contract because of excusable and/or compensable events, instructions that have or have not been given, or other work requiring time and/or cost beyond that specified or envisioned within the Contract.

Corporation. A business entity organized and existing under the laws of the Commonwealth or other jurisdiction by virtue of articles of incorporation, amendment, or merger.

Critical Activity. Any activity on the critical path.

Critical Path. The longest continuous sequence of work or chain of activities throughout the project that defines the overall time needed to complete the project.

Critical Path Work. Any work on the critical path. A delay to any critical path work is expected to delay completion of the project.

Culvert. A structure that is not classified as a bridge which provides an opening under any roadway.

Cut. When used as a noun with reference to earthwork, that portion of a roadway formed by excavating below the existing surface of the earth and limited by design or the direction of the Engineer.

Cut Slope. See also **Fill Slope.** A surface plane generally designated by design or the direction of the Engineer which is formed during excavation below existing ground elevations that intersects with existing ground at its termini.

-D-

Day. A Calendar Day, unless specifically stated otherwise.

Deflection. The vertical or horizontal movement occurring between the supports of a bridge superstructure, guardrail, other structure, or the components (beams, girders, and slabs) thereof that results from their own weight and from dead and live loads. Although all parts of a structure are subject to deflections, usually only those deflections that occur in the superstructure are of significance during construction.

Design Flood. The magnitude of flood that a given structure can convey without exceeding a designated flood level.

Detour. The removal of traffic from one roadway or highway to an alternate roadway or highway.

Digital Identification. (I.D.) An encrypted signature that is the legal equivalent of a written signature thus allowing for the digital signing of the bid.

Direct Costs. Project-specific costs the Contractor incurs in the performance of the Work, consisting of labor; material; ownership cost, operating expense, or invoiced rental rates of equipment; and job-site general and administrative overhead.

Disincentive. If provided for in the Contract, an agreed monetary sum that the District deducts from compensation due or to become due to the Contractor if a specified milestone is not satisfactorily completed on or before the specified milestone date.

Disposable Material. Material generally found to be unsuitable for roadway construction or surplus material that is to be placed in a disposal area, unless specified otherwise.

Disposal Areas. Areas generally located outside of the Construction Limits identified in the Contract where unsuitable or surplus material is deposited.

Disqualification. The suspension or revocation of a bidder's prequalification privileges.

District. The Chesapeake Bay Bridge and Tunnel District

Diversion. A traffic shift that temporarily moves an existing Road to a new alignment.

Drainage Ditch. An artificial depression constructed to carry off surface water.

-E-

Earthwork. The work consisting of constructing roadway earthwork in conformity with the specified tolerances for the lines, grades, typical sections, and cross sections shown on the plans or as established by the Engineer. Earthwork shall include regular, borrow, undercut and minor structure excavation; constructing embankments; disposing of surplus and unsuitable material; shaping; grading; compaction; sloping; dressing; and temporary erosion control work.

Easement. A grant of the right to use property for a specific use.

Electronic Bid Submittals

Embankment. A structure of soil, soil aggregate, soil-like materials, or broken rock between the existing ground and subgrade.

Employee. Any person working on the project who is under the direction or control of or receives compensation from the Contractor or subcontractor at any tier.

Engineer. The District Deputy Director, Infrastructure, as designated by the Commission, who acts directly or through his duly authorized representative(s) and who is responsible for highway design, construction, and maintenance. The Engineer and his representative(s) act within the scope of the particular duties or the authority given to them by the Commission, these Specifications, and the Contract Documents.

Equipment. Machinery, tools, and other apparatus, together with the necessary supplies for upkeep and maintenance, that are necessary for acceptable completion of the work.

Excavation. (Excavate) The act of creating a man-made cavity in the existing soil for the removal of material necessary to obtain a specific elevation or to install a structure, material, component, or item necessary to complete a specific task or form a final surface or subsurface.

Extra Work. Any work that was not provided for or included in the Contract as awarded but the Engineer determines is essential to the satisfactory fulfillment of the Contract within its intended scope and is identified in an authorized change order for its execution subject to the limitations, exceptions and provisions in Sections 104.02, 104.03, and 109.05.

-F-

Falsework. A temporary framework used to support work in the process of constructing permanent structural units.

Federal Agencies or Officers. An agency or officer of the federal government and any agency or officer succeeding in accordance with the law to the powers, duties, jurisdictions, and authority of the agency or officer mentioned.

Fill Slope. See also **Cut Slope.** A surface plane formed during embankment above existing ground elevations that intersects with existing ground at its termini.

Final Acceptance. Acceptance of the project after Final Completion of all the Work specified in the Contract, as determined by and contingent on a final inspection by the Engineer.

Firm. A commercial partnership of two or more persons formed for the purpose of transacting business.

Flood Frequency. A statistical average recurrence interval of floods of a given magnitude.

Force Account Work. A type of extra work for which the Contractor is compensated as specified in Section 109.05 (b) Payment by Force Account pursuant to an executed Force Account authorization (Form C-1 15), for use when the scope or quantity of the extra work is undefined.

Formwork. A temporary structure or mold used to retain the plastic or fluid concrete in its designated shape until it hardens. Formwork shall be designed to resist the fluid pressure exerted by plastic concrete and additional fluid pressure generated by vibration and temporary construction loads.

-G-

Gage. U.S. Standard Gage.

Grade Separation. Any structure that provides a traveled way over or under another traveled way or over a body of water.

-H-

Highway. The entire right of way reserved for use in constructing or maintaining the roadway and its appurtenances.

Historical Flood Level. The highest flood level that is known to have occurred at a given location.

Holidays. The days specifically set forth in Section 105.14 or in the Contract Documents.

Hydrologic Data Sheet. A tabulation of hydrologic data for facilities conveying a 100-year discharge equal to or greater than 500 cubic feet per second.

-I-

Incentive. If provided for in the Contract, an agreed monetary sum that the District pays to the Contractor if a specified milestone or condition is satisfactorily completed or achieved, and accepted by the District on or before the specified milestone date.

Inspector. The District's authorized representative who is assigned to make detailed inspections of the quality and quantity of the work and its conformance to the requirements and provisions of the Contract.

Invert. The lowest point in the internal cross-section of a pipe or other drainage structure.

-J, K-

Joint Venture. Two or more businesses that join together in the nature of a partnership for the purpose of bidding on and constructing a project, for which they are all jointly and individually liable to the District.

-L-

Laboratory. The testing laboratory of the District or any other testing laboratory that may be designated by provisions in the Contract or by the District.

Liquidated Damages. As used in Section 108.06, the agreed damages the Contractor owes to the District when the Contractor fails to complete the project within the specified Contract time limit. These damages include, but are not limited to, additional costs associated with administration, engineering, supervision, and inspection of the project, and other expenses.

-M-

Major Item. Any pay item specifically indicated as such in the Schedule of Items included in the Contract.

Material. Any substance that is used in the Work specified in the Contract.

Median. The portion of a divided highway that separates the traveled ways.

Milestone. An event or a date that marks the start or completion of a specified portion of the Work. If provided for in the Contract, milestones are used to specify when the Work or a specified portion thereof must be completed in accordance with the Contract Documents. The Contract may provide for one or more Completion milestone.

Minimum Plan Concept Project. A project of a very limited scope and duration that requires few details to describe the proposed work.

Minor Item. Any pay item that is not specified as being a Major Item in the Schedule of Items included in the Contract.

-N-

Non-Contract Item. Item(s) of work that is required to permit completion of the specified work in an acceptable manner, located within the Limits of Construction, but is not included in the Contract Documents and will be completed by others prior to or during the construction of the Project.

No Plan Project. Generally, a project of a very limited scope and duration that requires no plans to describe proposed work.

Notice to Proceed. Written notice to the Contractor authorizing the prosecution of work.

-O-

Ordinary High Water. A water elevation based on analysis of all daily high waters that will be exceeded approximately 25 percent of the time during any 12- month period.

-P, Q-

Pavement Structure. The combination of select or stabilized materials, subbase, base, and surface courses, described in the Typical Pavement Section in the Plans that is placed on a subgrade to support the traffic load and distribute it to the roadbed.

Pay Item. See Contract item.

Phase Inspection. The inspection of work at predetermined stages in lieu of continuous inspection.

Plans. The approved project plans and profiles, which may include but are not limited to survey data, typical sections, summaries, general notes, details, plan and profile views, cross-sections, special design drawings, computer output listings, supplemental drawings or exact reproductions thereof, and all subsequently approved revisions thereto which show the location, character, dimensions, and details of the Work specified in the Contract.

Prequalification. The procedure for qualifying a contractor or subcontractor to bid or work on District contracts, as specified in the Department's Rules Governing Prequalification Privileges.

Profile Grade. The line of a vertical plane intersecting the top surface of the proposed wearing surface, usually along the longitudinal centerline of the roadbed.

Project. The designated section of highway, roadway, or property including all work to be performed according to the Contract Documents.

Project Showing. The scheduled event at which the District's representative meets with prospective bidders to describe and answer questions regarding the proposed work.

Proposal (Bid Proposal). The District documents in the Notice of Advertisement for Bids that contain the project requirements and other information upon which a bid is to be based. The Proposal includes the plans, Specifications, Special Provisions, Supplemental Specifications, referenced Standards, addenda, revisions, all other documents referred to therein, whether or not attached, and the electronic forms on which the District requires bids to be submitted.

-R-

Ramp. A connecting roadway between two highways or traveled ways or between two intersecting highways at a grade separation.

Requests For Information. (RFI) - Requests where either the Contractor or the District asks that the other party supply information to provide better understanding of or to clarify a certain aspect of the Work.

Requests for Department Action. (RDA) - Requests where the Contractor asks the District to take certain action that the Contractor feels is required for proper completion of all or a portion of the Work.

Right of Way. A general term denoting the District's land, property, or interest therein, that is acquired for or devoted to a highway or other transportation facilities. As used herein, the term does not denote the legal nature of the District's ownership.

Road. A general term denoting a public way for purposes of vehicular travel including the entire area within the right of way; the entire area reserved for use in constructing or maintaining the roadway and its appurtenances.

(VDOT) Road and Bridge Specifications 2016. The standard specifications applicable to contracts awarded by the Commission.

Roadbed. The graded portion of a highway within the top and side slopes that is prepared as a foundation for the pavement structure and shoulders.

Roadbed Material. The material below the subgrade in cuts, embankments, and embankment foundations that extends to a depth and width that affects the support of the pavement structure.

Roadside. A general term that denotes the area within the right of way that adjoins the outer edges of the roadway; extensive areas between the roadways of a divided highway.

Roadside Development. Items that are necessary to complete a highway that provide for the preservation of landscape materials and features; rehabilitation and protection against erosion of areas disturbed by construction through placing seed, sod, mulch, and other ground covers; and such suitable plantings and other improvements as may increase the effectiveness and service life and enhance the appearance of the highway.

Roadway. The portion of a highway within the limits of construction and all structures, ditches, channels, and waterways which are necessary for the correct drainage thereof.

Rootmat. Any material that, by volume, contains approximately 60 percent or more roots.

-S-

Schedule Impact Analysis. (SIA) A process of analyzing a schedule to determine the impact on the project schedule of a change in the Work or condition, or of a delay event, for the purposes of quantifying and apportioning the effects to the party responsible for the impact.

Schedule Of Record. (SOR) The most recent baseline progress schedule accepted by the Engineer. Upon acceptance by the Engineer, the initial baseline progress schedule or a subsequently revised baseline progress schedule shall be the SOR. The SOR is the agreed, official and only baseline schedule with which all work required to complete the project will be planned and executed, on which all subsequent schedule updates shall be based, and against which progress of the Work will be evaluated.

Seawater. Water in which total alkali chlorides calculated as sodium chloride are more than 0.10 percent of total solids.

Select Borrow. Borrow material that has specified physical characteristics.

Select Material. Material obtained from roadway cuts, borrow areas, or commercial sources that is designated or reserved for use as a foundation for the subbase, subbase material, shoulder surfacing, or other specified purposes designated in the Contract Documents.

Shoulder. The portion of the roadway contiguous with the traveled way that is for the accommodation of stopped vehicles, emergency use, and lateral support of the base and surface courses.

Sidewalk. The portion of the roadway constructed primarily for the use of pedestrians.

Skew. The acute angle formed by the intersection of a line normal to the centerline of the roadway with a line parallel to the face of the abutments or, in the case of culverts, with the centerline of the culverts.

Special Provision. (SP) Specifications or requirements for a particular project that add to or modify the standard specifications.

Special Provision Copied Note. (SPCN) Specific specifications or requirements, usually limited in scope, for a particular project.

Specialty Item. A Contract item designated as a “Specialty Item” in the Proposal that requires highly specialized knowledge, abilities, craftsmanship, or equipment not ordinarily provided by contractors pre-qualified to bid on the Contract as a whole. Specialty Items are usually limited to minor components of the overall Contract.

Specifications. A general term that includes all directions, provisions, and requirements, necessary for the proper fulfillment of the Contract. Specifications are found in the following Contract Documents:

Standard Drawings. Unless otherwise specified, applicable drawings in the VDOT Road and Bridge Standards and such other standard drawings as are referred to on the plans.

State. Commonwealth of Virginia.

State Construction Contract Engineer. The Chief Engineer's authorized representative for administering the Notice of Advertisement for Bids, receiving bids for such, and awarding contracts for the Department.

Station. When used as a definition or term of measurement, 100 linear feet.

Storm Sewer System. A drainage system consisting of a series of at least two interconnecting pipes and structures (minimum of two drop inlets, manholes, junction boxes, etc.) designed to intercept and convey storm water runoff from a specific storm event without surcharge.

Street. A general term denoting a public way for purposes of vehicular travel including the entire area within the right of way; the entire right of way reserved for use in constructing or maintaining the roadway and its appurtenances.

Structures. Bridges, culverts, catch basins, inlets, retaining walls, cribs, manholes, end walls, buildings, steps, fences, sewers, service pipes, underdrains, foundation drains, and other features that may be encountered in the work and are not otherwise classed herein.

Subbase. A layer(s) of specified or selected material of designed thickness that is placed on a subgrade to support a base course.

Subcontract. A contract between the Contractor and any other business to perform part of the Contract subject to the requirements of the Contract Documents including, but not limited to, Sections 102.01 and 105.06.

Subcontractor. Any business that has a subcontract, including any business that provides on-site labor, but not any business that furnishes or supplies only materials or equipment for the Project.

Subgrade. The top earthwork surface of a roadbed, prior to application of Select or Stabilized material courses, shaped to conform to the typical section on which the pavement structure and shoulders are constructed, or the surface that must receive an additional material layer, such as Topsoil, Stone or other Select Material.

Subgrade Stabilization. The modification of roadbed soils by admixing with stabilizing or chemical agents that will increase the load bearing capacity, firmness, and resistance to weathering or displacement.

Sublet. See **Subcontract**.

Submittals. Documents required by the Contract that the Contractor must submit for the District's review, acceptance, or approval. Submittals may include shop drawings, working drawings, material test reports, material certifications, project progress schedules, and schedule updates. The Contractor shall provide submittals as early as practicable so as not to delay review, acceptance, or approval of the Work.

Substructure. The part of a structure that is below the bearings of simple and continuous spans, skew-backs of arches, and tops of footings of rigid frames, together with the back walls, wingwalls, and wing protection railings.

Superintendent. The Contractor's Project representative who is authorized to receive and fulfill instructions from the Engineer and who supervises and directs the Work on the Contractor's behalf.

Superstructure. The portion of a structure that is above the substructure.

Supplemental Specifications.(SS) Additions and revisions to the Road and Bridge Specifications.

Supplier. Any business who manufactures, fabricates, distributes, supplies, or furnishes materials or equipment, but not on-site labor, for use in performing the Work on or for the project according to the requirements of the Contract Documents including, but not limited to, Sections 102 and 106.

Surety. A business bound with and for the Contractor for full and complete fulfillment of the Contract and for payment of debts pertaining to the Work. When applied to the proposal guaranty, it refers to the business that engages to be responsible in the execution by the bidder, within the specified time, of a satisfactory Contract and the furnishing of an acceptable payment and contract bond.

Surface Course. One or more top layers of a pavement structure designed to accommodate the traffic load, which is designed to resist skidding, traffic abrasion, and disintegrating effects of weather. Also see wearing course.

Surplus Material. Material that is present on a project as a result of unbalanced earthwork quantities, excessive swell, slides, undercutting, or other conditions beyond the control of the Contractor, or is designated as surplus material in the Contract Documents.

Suspension. A written notice issued by the Engineer to the Contractor that orders the Work on a project to be stopped wholly or in part as specified. The notice will include the reason for the suspension.

-T-

Temporary Structure. Any structure that is required to maintain traffic while permanent structures or parts of structures specified in the Contract are constructed or reconstructed. The

temporary structure shall include earth approaches.

Theoretical Maximum Density. The maximum compaction of materials that can be obtained in accordance with the values established VTM-1.

Tidewater, Virginia. Areas within the Commonwealth as defined in the Department of Conservation and Recreation Erosion and Sediment Control Manual.

Time Impact Analysis. (TIA) A forward-looking, prospective schedule impact analysis method that adds a modeled delay to the current schedule in place at the time of a change or delay to determine the possible time impact of the change or delay to project completion.

Ton. A short ton; 2,000 pounds avoirdupois.

Top of earthwork. The uppermost surface of the regular or embankment excavation, not including select material, which is shaped to conform to the typical section shown in the plans or directed by the Engineer.

Topsoil. The uppermost original layer of material that will support plant life and contains more than five (5) percent organic material reasonably free from roots exceeding one (1) inch in diameter, brush, stones larger than three (3) inches in the largest dimension, and toxic contaminants.

Traveled Way. The portion of the roadway for the movement of vehicles, not including shoulders.

-U-

Unsuitable Material. Any material which contains more than five (5) percent by weight organic matter, or which has unstable bearing capacity, excessive moisture content, plasticity indexes or liquid indexes, or other characteristics defined by the Engineer or the Contract Documents as unsuitable for the use intended.

Utilities. Private, county, city, municipal or public facility, structure, or infrastructure, designed, owned and maintained for public use or to provide a public service such as electricity, water, sanitary sewer, storm sewer, drainage culverts, telecommunications, conduits, gas, oil, fiber optics, cable television, that is not identified as a Pavement Structure, Roadway, Highway, Street or Traveled Way.

-V-

VDOT. Virginia Department of Transportation

Vouchered. The action of approval by the Department; constitutes the date of release to the State Comptroller for payment.

-W,X,Y,Z-

Wearing Course. (See **Surface course**) The top and final layer of any pavement.

Work. The furnishing of all materials, labor, tools, equipment, and incidentals necessary or convenient for the successful completion of the project and the carrying out of the duties and obligations specified in the Contract.

Working Drawings. Stress sheets, shop drawings, erection plans, falsework plans, framework plans, cofferdam plans, bending diagrams for reinforcing steel, or any other supplementary plans or similar data the Contractor is required to submit to the Engineer for review.

SECTION 102— BIDDING REQUIREMENTS AND CONDITIONS

102.01—Not Used

102.02—Content of Proposal

- (a) Standard Proposal - The Proposal will be defined in the Instructions to Bidders.

102.03—Not Used

102.04—Examination of Site of Work and Proposal

(a) Evidence of Examination of Site of Work and Proposal

The submission of a bid will be considered conclusive evidence that the bidder has (1) conducted a reasonable examination of the site of the proposed Work, the Proposal and other documents referenced therein, and the plans before submitting a bid, (2) is satisfied as to the nature, character, qualities, quantities, and conditions to be encountered in performing the Work and the requirements specified in the Proposal, and (3) has taken such matters into consideration when submitting the bid. A reasonable site investigation may include investigating the project site, borrow sites, disposal areas, and hauling routes related to the performance of the Work.

(b) Subsurface Data

Subsurface data may be included in the Proposal or may be made available for review by the bidder in the office of the District. . Data not included in the Proposal are not part of the Contract, but are made available to the bidder in good faith to notify the bidder of information in possession of the District. The District does not warrant any data not included in the Proposal or Contract, or any conclusions drawn from such data, either expressly or by implication. The bidder shall make his own interpretation of the subsurface data that may be available and satisfy himself with regard to the nature, condition, and extent of the material to be excavated, graded, or driven through. The submission of a bid will be considered conclusive evidence that the bidder is satisfied with regard to the subsurface conditions to be encountered in the work and has taken such conditions into consideration when submitting the bid.

(c) Notice of Alleged Ambiguities, Conflicts, Errors or Omissions

If a bidder has any questions or doubts about a word, phrase, clause, specification, or any other portion of the Proposal or alleges an ambiguity, conflict, error, or omission, the bidder shall submit a question about the ambiguity, conflict, error, or omission not later than 10 days prior to the due date of receipt of bids and request an interpretation thereof. Authorized interpretations will be issued by the District to each person who received a Proposal, and will be posted on the District Website. The District will not be responsible for any other explanations or interpretations of the alleged ambiguities, conflicts, errors or omissions.

The bidder shall not take advantage of obvious or apparent ambiguities, conflicts, errors, or omissions in the Proposal. If the bidder fails to submit a question and requests an interpretation of an obvious or apparent ambiguity, conflict, error, or omission within the specified time, the bidder shall waive any right it may have had to its own interpretation of the ambiguity, conflict, error, or omission. Further, if awarded the Contract the bidder waives any claims and shall not be entitled to any additional compensation or time, or entitled to sue the District based on such obvious or apparent ambiguity, conflict, error, or omission. It is recognized that the bidder's review of the Proposal is made in the bidder's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract. The bidder is not required to ascertain that the Contract is in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations, but any non-conformity discovered by or made known to the bidder shall be reported promptly to the District.

(d) Utilities

In general, the bid proposal will indicate the various utility items known to exist, will indicate items to be adjusted or improvements proposed by the respective owners and will designate any items that are to be adjusted by the Contractor. Information contained in the bid proposal regarding utility locations is advisory only and shall not be construed as being a representation of completeness or accuracy. The bidder shall contact the owners of the various utilities to determine the exact location of the utilities and the owner's schedule of work. Unless otherwise noted, all utility adjustments will be performed by the Utility or its representative. The Contractor shall cooperate with the owners of any utilities in their adjustment operations. Prior to preparing a bid, the bidder shall contact known utility owners to determine the nature, extent, and location of existing, adjusted, or proposed new utility facilities within the areas of construction. It is understood and agreed that the Contractor (1) has considered in his bid all of the permanent and temporary utility appurtenances in their present and relocated positions and, any proposed utility capital improvements, and (2) the Contractor has contacted the utility owner with regard to the Contractor's proposed schedule of work. The Contractor shall include in his proposed schedule the amount of time to make utility adjustments, from time estimates furnished by the utility owners. Any costs associated with contacting, and coordinating with the utilities shall be reflected in the bid price for other items in the Contract. In the event the utility owners are non-responsive to the Contractor's efforts to contact them, the Contractor shall notify the District prior to submitting a bid.

102.05—Preparation of Bid

(a) General

The bidder shall submit its bid by approved electronic media, unless otherwise provided for in the Proposal. The bidder shall furnish a unit or lump sum price as called for in the Proposal, in numerical figures, for each pay item listed. The bidder shall also show the products of the unit prices and quantities in numerical figures in the column provided for that purpose and the total amount of the bid.

If a unit or lump sum price is omitted, the bid will be rejected. If there is a discrepancy between the unit price and its extension, the unit price will govern. In the event there is a discrepancy between the bidder's electronically generated Proposal form and the official Proposal form as furnished by the District, the official Proposal form will govern.

Bids will be considered irregular and may be rejected for any of the reasons stated in Section 102.06.

The bidder shall submit a proposal guaranty in accordance with Section 102.07.

A bid will be rejected and the bidder disqualified for any of the reasons stated in Section 102.08.

(b) Design Options

Except as otherwise specified in the Proposal, when regular and alternate design options are shown in the Proposal, the bidder shall submit a bid price for at least one design option. The District may award the Contract to the responsive and responsible bidder who submitted the lowest bid for the regular design option or the lowest bid for the alternate design option, whichever is deemed to be in the best interest of the District.

(c) Debarred Suppliers

The bidder is cautioned against utilizing price quotes for materials for use in the preparation of bids from suppliers or vendors that are debarred by VDOT. VDOT's Engineer will not approve for use any material furnished by a supplier debarred by VDOT. The bidder shall ascertain from VDOT's listings which suppliers are debarred. Lists of approved suppliers can be found on VDOT's website at www.virginiadot.org/business/resources/Materials/Approved-Lists

If a previously debarred supplier is reinstated to eligibility subsequent to the award of a contract, the Engineer may approve the use of the supplier when requested by the Contractor.

(d) Required Certifications

A bidder who makes a false certification on the Bidder Certification of Prequalification Classification will be subject to forfeiture of his proposal guaranty or disqualification from bidding on future work for a 90-day period, or both. The Executive Director will determine the imposition and extent of such sanctions. A sworn statement shall be executed by the bidder or his agent certifying that the bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action to restrain free competitive bidding in connection with the Proposal. The sworn statement shall be part of the electronic bid or in the form of an affidavit furnished by the Department and shall be sworn to before a person who is authorized by the laws of the Commonwealth to administer oaths. The electronic bids shall contain the identical sworn statement. For the purpose of this Section, affixing a Digital ID to the bid will be considered by the Department conditional

evidence of signing before a person who is authorized by the laws of the Commonwealth to administer oaths.

(e) Acknowledgement of Addenda

The bidder shall acknowledge all addenda to the Proposal documents issued prior to receipt of bids by entering the date of any Addenda on the Acknowledgement of Revisions page included in the bid package. Bidders are responsible for checking the District's website to ensure that they have seen and considered all addenda before submitting a bid. Failure to acknowledge any addendum by the method outlined above may result in the bid being rejected as non-responsive and irregular.

(f) Signing the Bid

Bids shall be signed with a digital identification. The names of persons authorized to sign bids shall be on file with the Department. A name will be considered to be on file if it appears as that of an officer, a partner, a member, a manager or an owner on the current Contractor's Prequalification Application. Requests by the bidder to revise the list of persons authorized to sign bids on their behalf shall be submitted in writing and approved prior to the date bids are opened. A bid signed by someone whose name is not on file as someone authorized by the bidder may be rejected. If the individual signing the bid for a joint venture is not previously identified as authorized to sign a bid, the firm of record is responsible for the bid.

102.06—Irregular Bids

Bids will be considered irregular and may be rejected for any of the reasons below.

- (a) The bidder fails to comply with Sections 102.05 and 102.07.
- (b) The bidder adds any provisions reserving the right to accept or reject an award or enter into a contract pursuant to an award except as otherwise permitted in these Specifications.
- (c) The bidder fails to provide Certification of Prequalification Classification.
- (d) The bid is not properly signed.
- (e) The bidder fails to acknowledge all addenda.
- (f) There are unauthorized additions, conditional or alternate bids, or irregularities of any kind that may make the bid incomplete, indefinite, or ambiguous.
- (g) The prices in the bid are obviously mathematically and materially unbalanced, either in excess or below the cost analysis values as determined by the District. A mathematically unbalanced bid is a bid containing lump sum or unit price items that do not include reasonable labor, equipment, and material costs plus a reasonable

proportionate share of the Bidder's overhead costs, other indirect costs, and anticipated profit. A materially unbalanced bid is when the Department determines that an award to the Bidder submitting a mathematically unbalanced bid will not result in the lowest ultimate cost to the District.

- (h) The bidder fails to submit a Non-Collusion Affidavit
- (i) The bid submitted identifies a project different than the project for which the bid is submitted.
- (j) The bid is not totaled or is totaled incorrectly.
- (k) Erasures or alterations in the bidder's entries on paper bids, when allowed, are not initialed by the bidder.
- (l) Attachments included in the bid are detached or altered when the bid is submitted except as otherwise provided for herein.
- (m) The bidder, if required, fails to register or obtain authorization to transact business in Virginia from the State Corporation Commission prior to bidding.

102.07—Proposal Guaranty (Bid Bond)

A bid in excess of \$350,000.00 will be rejected unless accompanied by a proposal guaranty, also known as a bid bond, made payable to the District. The amount of the proposal guaranty shall be 5 percent of the total bid. The proposal guaranty shall be accompanied by a certified copy of the power of attorney for the surety's attorney-in-fact.

When the principal is a joint venture, each member of the joint venture shall be named and shall execute the proposal guaranty. Each surety to the proposal guaranty shall be named, and shall execute the proposal guaranty, and shall provide a certified copy of the power of attorney for the surety's attorney-in-fact.

102.08—Disqualification of Bidder

- (a) Any of the reasons set out in the Rules Governing Prequalification Privileges may be considered sufficient for the disqualification of a bidder or the rejection of a bid, or both. Such reasons for disqualification are not exclusive and disqualification may occur based on other requirements in these Specifications.
 - 1. The bidder does not have sufficient financial ability to perform the Contract. If a bond is required to ensure performance of a Contract, evidence that the bidder can acquire a surety bond from a corporation included on the U. S. Treasury Listing of Approved Sureties in the amount and type required by the public body will be sufficient to establish the financial ability of the bidder to perform the Contract.
 - 2. The bidder or any current officer, director, owner, project manager, procurement

manager, or chief financial official thereof has been convicted of, or pled guilty or nolo contendere within the past 10 years to a crime related to governmental or nongovernmental construction or contracting, including, but not limited to, a violation of (i) Ethics in Public Contracting statutes, § 2.2-4367 et seq. of the Code of Virginia, (ii) the Virginia Governmental Frauds Act, § 18.2-498.1 et seq. of the Code of Virginia, (iii) Conspiracy to Rig Bids to Government statutes § 59.1-68.6 et seq. of the Code of Virginia, (iv) any substantially similar law of the United States or another state, or (v) any criminal offense indicating a lack of moral or ethical integrity as may reasonably be perceived to relate to or reflect upon the bidder's business practices.

3. The bidder or any officer, director or owner thereof is currently debarred pursuant to an established debarment procedure from bidding or contracting by any public body, agency of another state, or agency of the federal government.
4. The bidder failed to respond to the District's request for clarifying information requested by the District relevant to the preceding paragraphs 1 through 3.
5. The bidder fails to register and participate in the E-Verify program as required by § 2.2-4308.2 of the Code of Virginia.
6. The bidder or any officer, director, or owner thereof has had a judgment entered against them for violation of the Virginia Fraud Against Taxpayers Act (Code of Virginia § 8.0 1- 216.1, et seq.).
7. More than one bid for the same work is submitted by an individual, partnership, corporation or joint venture under the same or different name. A bid submitted by an affiliate of an individual, partnership, corporation, or any party of a joint venture will be considered as more than one bid submitted for the same work. Affiliate as used herein shall conform to the definition in Section 101.02 - Terms.
8. Evidence of collusion among bidders; participants in such collusion will not be considered for future bids until new applications for prequalification are approved according to the Rules Governing Prequalification Privileges.
9. Incompetency or inadequate machinery, plants, or other equipment as revealed by the bidder's financial and experience statements required by these Specifications and the Rules Governing Prequalification Privileges.
10. Unsatisfactory workmanship or unsatisfactory progress toward timely completion of the Work as described within Sections 102.01, 102.08, 105.05, 108.03, 108.07, or other applicable Specifications as demonstrated by performance records of current or past work for the District, other agencies or departments of the Commonwealth, other public bodies in the Commonwealth, or agencies or departments of other states in the United States or federal government.
11. Uncompleted work under contract with the District that in the judgment of the Engineer might hinder or prevent prompt completion of additional work if awarded.

12. Failure to promptly pay or settle satisfactorily all undisputed bills for materials, labor, equipment, supplies, or other items specified in contracts in force at the time the new work comes before the Commission for award.
13. Failure to comply with any prequalification rule or regulation of the District.
14. Failure to cooperate properly with representatives of the Commonwealth inspecting, monitoring or administering construction or disorderly conduct toward any such representative in contracts.
15. Default under a previous contract with the Commonwealth.
16. Failure to pay amounts owed to the District, as specified in Section 109.10, on other contracts.
17. Making materially false statements in a bid or certified statement submitted to the District.

(b) Temporary disqualification of a bidder as provided herein will result in the temporary disqualification of each member of a joint venture and any affiliate of the bidder having substantially the same operational management or drawing from the same equipment or labor resource pool. Temporary disqualification will also result in disqualification of the bidder, each member of a joint venture, and affiliates as defined herein, for performance of work as subcontractors that in the opinion of the District, could adversely affect other work under contract to the District.

102.09—Withdrawal of Bid

A bidder may withdraw a bid in accordance with the following.

(a) **Standard Withdrawal:** Bids may be withdrawn until bid closing. A bidder may withdraw a bid provided the request for the withdrawal is written and signed by a person(s) who qualifies to execute the bid in accordance with Section 102.05.

102.10—Not Used

102.11—Public Opening of Bids

Electronic bids, along with all other bids will be opened and read publicly at the time and place specified in the Instruction to Bidders. Interested parties are invited to be present at the opening or can find the results on the District website at: www.cbbt.com. The as read results will be posted on this website as soon as possible on the day of the reading.

102.12—Not Used

SECTION 103—AWARD AND EXECUTION OF CONTRACTS

103.01—Consideration of Bids

After bids have been opened and read, the District will evaluate bid submittals to determine whether all requirements of Section 102 and the Proposal have been met. Bids not submitted in accordance with Section 102 and the Proposal will be rejected.

Bids will be compared on the basis of the summation of the products of the quantities shown in the bid schedule and the unit bid prices.

The District may correct arithmetical errors in the bid prior to such comparison, in accordance with Section 102.05. The results of the comparisons will be available to the public after the determination has been made to award the Contract.

The District reserves the right to reject any or all bids, waive informalities, advertise for new bids, or proceed to do the Work otherwise if it deems that the best interest of the District would be promoted thereby.

The District may, as part of its deliberations toward award of a contract, enter into a Memorandum of Understanding (MOU) with the apparent lowest responsive and responsible bidder if any of the following is determined to be necessary:

- (a) Provide and document further clarification of a specification or drawing.
- (b) Establish an order of priority (ranking) where there are conflicting specification requirements.
- (c) Ensure proper understanding of the intent\meaning of a specification or drawing.
- (d) Document the inclusion of inadvertently excluded pages from the Contract.
- (e) Document the correct unit of measurement where a conflict exists within the bid documents.
- (f) Document the elimination of an item(s).
- (g) Limit the District's exposure to contract overruns or potential unbalancing of a bid item.

This listing is not to be interpreted as all inclusive, but is provided to give examples of the types of issues that may be addressed in such an agreement. The MOU is not intended to be used to negotiate "as bid" unit prices/quantities or to renegotiate bid requirements with the apparent lowest responsive

and responsible bidder, but merely to address intent, clarify points of confusion or limit the possible future effects of such issues on project budget. If the terms of the MOU are acceptable to both parties, the District and the apparent lowest responsive and responsible bidder will document their acceptance of the terms of the MOU by both parties' signatures. The MOU will be added to and become part of the executed Contract.

103.02—Award of Contract

If the Contract is awarded, the award will be made to the lowest responsive and responsible bidder without discrimination on the grounds of race, color, gender, or national origin. In the event of tie bids, preference will be given to the lowest responsive and responsible bidder who is a resident of Virginia otherwise the tie will be decided by lot.

Whenever any bidder is a resident of any other state and such state under its laws allows a resident contractor of that state a preference, a like preference may be allowed to the lowest responsive and responsible bidder who is a resident of Virginia. The award date will not be later than midnight on the 60th day after the opening of bids. If the Commission; where permitted by law, has not awarded the Contract within this period, the bidder may withdraw his bid without penalty or prejudice unless the time limit is extended by mutual consent.

103.03—Cancellation of Award

The Commission, where permitted by law, may cancel the award of any contract at any time before the execution of the Contract by all parties without liability to the District.

103.04—Forfeiture of Proposal Guaranty

The apparent low bidder's proposal guaranty shall be subject to forfeiture if the apparent low bidder withdraws his bid prior to award, or fails to sign and return the Contract. The proposal guaranty shall be forfeited according to the forfeiture provisions in Code of Virginia (§ 2.2-4336) and the proposal guaranty. The apparent low bidder's refusal to sign a Memorandum of Understanding shall not be grounds for proposal guaranty forfeiture.

103.05—Requirements of Contract Bond

Within 15 calendar days after notification of award of the Contract the successful bidder shall furnish the following bonds for contracts in excess of \$350,000.00:

- (a) A performance bond in the sum of the Contract amount, conditioned upon the faithful performance of the Contract in strict conformity with the plans, Specifications and conditions of the Contract, and.
- (b) A payment bond in the sum of the Contract amount, conditioned upon the prompt payment for all labor, materials, public utility services and rental of equipment used in the prosecution of the work for the Contract.

Bidders will not be awarded an unbonded contract when their bid plus the balance of other unbonded contracts exceeds \$350,000.00 or as otherwise limited by their current prequalification status.

The bonds shall be made on Standard AIA forms and shall be executed by the bidder and a surety company carrying a minimum “Best Rating” of “B +” and authorized to do business in Virginia in accordance with the laws of Virginia and the rules and regulations of the State Corporation Commission. To be considered properly executed, the bonds shall include authorized signatures and titles.

103.06—Contract Documents

The Contract shall include the following documents unless otherwise specified by Special Provisions or Special Provision Copied Notes:

(a) **Contract:** The Contract shall include:

- The fully executed Proposal including all addenda or revisions thereto issued prior to the bid date; the Schedule of Items showing the prices submitted by the bidder; and any Supplemental Specifications, Special Provisions, Special Provision Copied Notes, and attachments issued with the Proposal.
- These Specifications.
- The Plans.
- The edition of the Road and Bridge Standard Drawings cited on the title sheet of the Plans including all addenda or revisions thereto issued prior to the bid date.
- Any Memoranda of Understanding agreed to between the Engineer and the Contractor conforming to Section 103.01.
- Any change orders that the Engineer issues after the Contract execution date.

(b) **Contract Performance and Payment Bonds:** Contract bonds shall conform to Section 103.05.

(c) **Affidavits and Documents:** Affidavits and documents shall include those required to be made a part of the Contract by any federal or state law in effect on the date of the Notice of Advertisement.

(d) **Workers’ Compensation Insurance Certificate:** The Contractor shall procure and continue to maintain for the duration of the Work until final acceptance, Workers’ Compensation and Employers’ Liability Insurance for all of its employees engaged in the Work in an amount not less than the minimum required by Code of Virginia (§ 2.2-4332), and the Virginia Workers’ Compensation Act, Code of Virginia §65.2-100 et seq. When any of the Work is

sublet, the Contractor shall require each subcontractor to provide similar Workers' Compensation and Employers' Liability Insurance for all of the subcontractor's employees engaged in the Work.

Within 15 days after the date of the notice of award of the Contract, the bidder shall submit a Certificate of Insurance, verifying Workers' Compensation coverage using the Department's forms (Form C-73). The certificate shall be executed by an approved and authorized insurance company as required by state law and shall cover the Contract. The Contractor shall likewise obtain a Certificate of Insurance for Workers' Compensation coverage from each subcontractor prior to performance of work and shall provide a copy to the District.

The Contractor shall notify the District in writing at least 30 days prior to the cancellation or reduction of the bonds or insurance required under this Section. The Contractor shall cease all operations on the effective date of the cancellation or reduction unless and until new bonds or insurance are in force and the same evidence of bonds or insurance are provided to the District.

- (e) **Progress Schedule:** The Contractor shall submit a progress schedule in accordance with Section 108.03 or as specified in the Contract.
- (f) **Contractor's Bodily Injury and Property Damage Liability Insurance Certificate:** The Contractor shall procure and maintain at his own expense, for the duration of the Work until final acceptance, insurance of the kinds and in the amounts specified herein. The minimum limits of liability for this insurance shall be as follows:

A Combined Single Limit for Bodily Injury Liability and Property Damage Liability

| | |
|-------------|-----------------|
| \$1,000,000 | Each Occurrence |
| \$2,000,000 | Aggregate |

Within 15 days after the date of the notice of award of the Contract, the bidder shall submit Certificates of Insurance showing compliance with the above using the Department's form (Form C-73). The certificates shall be executed by an approved and authorized insurance company authorized to do business in Virginia and with a minimum "*Best Rating*" of "*B+*", and shall cover the Contract it accompanies.

The Contractor's Bodily Injury and Property Damage Liability Insurance shall cover liability of the Contractor for damage because of bodily injury to, or death of persons and damage to, or destruction of property, that may be suffered by persons other than the Contractor's own employees as a result of the negligence of the Contractor in performing the Work.

Insurance provided in compliance with this Section shall include liability of the Contractor for damage to or destruction of property that may be suffered by persons other than the Contractor's

own employees as a result of blasting operations of the Contractor in performing the work covered by the Contract of any part of the Work is sublet, insurance meeting the same requirements shall be provided by or on behalf of the subcontractors and evidence of such insurance shall be submitted with the sublet request.

Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve the Contractor or subcontractor(s) of liability in excess of such coverage, nor shall it preclude the District from taking such actions as are available to it under any other provision of this Contract or otherwise in law.

103.07—Failure to Furnish Bonds or Certificate of Insurance

The successful bidder's failure to furnish to the District acceptable bonds, workers' compensation insurance certificates or the Contractor's Bodily Injury and Property Damage Liability Insurance certificates within 15 days after the date of Award Letter shall be considered just cause for cancellation of the award and forfeiture of the proposal guaranty. In such event, the proposal guaranty shall become the property of the District, not as a penalty but in liquidation of damages sustained. The Contract may then be awarded to the next lowest responsive and responsible bidder, or the Work may be re-advertised or constructed otherwise, as determined by the District.

103.08—Contract Audit

The Contractor shall permit the District to audit, examine, and copy all documents, computerized records, electronic mail, or other records of the Contractor during the life of the Contract and for a period of not less than five years after the date of final payment, or the date the Contractor is declared in default of Contract, or the date of termination of the Contract. The documents and records shall include, but not be limited to:

- (a) Those that were used to prepare and compute the bid, prepare all schedules used on the project, record the progress of work on the project, accounting records, purchasing records, personnel payments, or records necessary to determine employee credentials, vendor payments, and written policies and procedures used to record, compute, and analyze all costs incurred on the project, including those used in the preparation or presentation of claims to the District.
- (b) Records pertaining to the project as the District may deem necessary in order to permit adequate evaluation and verification of Contractor's compliance with Contract requirements, compliance with the District's business policies, and compliance with provisions for pricing change orders or claims submitted by the Contractor or the Contractor's subcontractors, insurance agents, surety bond agents, and material suppliers shall be made available to the auditor(s) at the District's request. The Contractor shall make his personnel available for interviews when requested by the District.
- (c) Upon request, the Contractor shall provide the District with data files on data disks or other suitable alternative computer data exchange format. Data furnished by the Contractor that cannot be verified will be subject to a complete audit by the District.

The Contractor shall ensure that the requirements of this provision are made applicable to his subcontractors, insurance agents, surety bond agents, and material suppliers. The Contractor shall cooperate and shall cause all related parties to furnish or make available in an expeditious manner all such information, materials, and data.

The Contractor shall provide immediate access to records for the audit and provide immediate acceptable facilities for the audit. Failure on the part of the Contractor to afford the District immediate access or proper facilities for the audit will be considered failure to cooperate and will result in disqualification as a bidder in accordance with Section 102.08.

Upon completion of the Contract audit, any adjustments or payments the Contractor owes to the District as a result of the audit shall be made to the District within 60 days from presentation of the District's findings to the Contractor. Failure on the part of the Contractor to make such payment may result in disqualification as a bidder in accordance with Section 102.08.

If the Contractor disagrees with the findings of the District's audit, the Contractor may dispute the findings in accordance Section 105.19 or the Code of Virginia as amended and as applicable, except that if the time provided for the Contractor to submit a claim within 60 days after final payment has expired, the Contractor shall instead submit a written claim to dispute the findings to the Engineer within 60 days from the date the Contractor received the findings. Failure on the part of the Contractor to submit a claim disputing the District's findings within such 60-day period shall constitute a waiver and release of any claim disputing the District's findings.

103.09—Execution of Contract

- (a) **The bid as submitted**, including the Contract Documents specified in Section 103.06 shall constitute the Contract upon submittal of the Contract bond, Contractor's bodily injury and property damage liability insurance certificates, and workers' compensation insurance certificate and the District's final execution of the Contract. After the District has recommended the bid for award, the apparent low bidder shall be required to sign and return a paper copy of the Contract to the District. Failure to sign and return the Contract will result in cancellation of the award and forfeiture of the proposal guaranty. If the Contract is not awarded within the time limit specified in Section 103.02, the bidder may withdraw his bid without penalty or prejudice unless the time limit is extended by mutual consent. The District will execute the Contract upon receipt of the Contractor's signed Contract. The Contract shall be considered binding and effective only when it has been fully executed by all parties.
- (b) **Notice of Contract execution.** The Engineer will notify the Contractor of the date that the District has executed the Contract. The Engineer or his designee will confirm the Contract execution date in such notice. The notice will identify the Engineer's authorized representative responsible for written directives and changes to the Contract, who will contact the Contractor to arrange a pre-construction and scheduling conference.
- (c) **Unbonded Contracts**

In the event the successful bidder on an unbonded contract is unwilling or unable to fulfill the Contract and fails to notify the District prior to the District's execution of the Contract, the bidder will be declared in default in accordance with Section 108.07.

In the event the bidder, on an unbonded contract, notifies the District prior to the District's execution of the Contract of such unwillingness or inability to fulfill the Contract, the bidder will be enjoined from bidding on unbonded contracts for a period of no less than 90 days from the date of notice by the District.

A bidder who has never been enjoined or defaulted on an unbonded contract and who notifies the District prior to the District's execution of the Contract of such unwillingness or inability to fulfill the Contract will not be enjoined for the first occurrence; however, said bidder will not be permitted to rebid or perform work on that specific Contract.

103.10—Assignments, Transfers, or Assumptions of the Contract

The Contractor shall not assign, transfer, convey, or allow any person or business to assume or take over, in whole or in part, the Contract, the Contractor's duties, or performance obligations, arising under, from or relating to the Contract, except for subcontracting as provided in Section 105.06 or the rights of a surety issuing a performance bond for the Contract, without the Engineer's specific written authorization. Any such unauthorized assignment, transfer, conveyance, assumption, or take over agreement shall be void and shall constitute a material breach of the Contract. No assignment, transfer, conveyance, assumption, or take over agreement shall relieve the Contractor from its duties and obligations under the Contract, or release the Contractor of any liability under the Contract bonds.

SECTION 104—SCOPE OF WORK

104.01—Intent of Contract

The intent of the Contract is to provide for completion of the Work specified therein in accordance with the Contract for the Contract amount and within the Contract time limit. Further, it is understood that the Contractor shall perform the Work under the Contract as an independent contractor and not as an agent of the District or the Commission.

104.02—Changes in Quantities or Alterations in the Work

(a) General

The Engineer reserves the right to make, in writing, at any time during the Work, such changes in quantities and such alterations in the work as are necessary to complete the project satisfactorily. Such changes in quantities and alterations shall not invalidate the Contract or release the surety, and the Contractor shall agree to perform the Work as altered. No change

alteration or modification in or deviations from the Contract, or the giving by the District of any extension of time for the performance of the Contract, or the forbearance on the part of the District shall release or exonerate in whole or in part either the Contractor or any surety on the obligations of any bond given in connection with the Contract. Neither the District nor the Contractor shall be under any obligation to notify the surety or sureties of any such alteration, change, extension or forbearance, notice thereof being expressly waived. Any increase in the Contract amount shall automatically result in a corresponding increase in the penal amount of the bonds without notice to or consent from the surety, such notice and consent being hereby waived. Decreases in the Contract amount shall not, however, reduce the penal amount of the bonds unless specifically provided in any change order as authorized in accordance with Section 109.05 decreasing the scope of the work.

(b) Significant Changes in the Character of Work

The work or changes in quantities, significantly change the character of the work under the Contract, an adjustment, excluding anticipated profits for reduced or eliminated work, may be made to the Contract. The basis for the adjustment shall be agreed upon prior to the performance of the affected Work. If a basis cannot be agreed upon, an adjustment will be made either for or against the Contractor in such amount as the Engineer may determine to be fair and equitable.

The Engineer may, at his option, direct the Contractor to accomplish the change or alteration on a force account basis when the circumstances meet the requirements for force account work under Section 109.05.

If the Engineer's changes or alterations do not result in a significant change in the character of the Work, the changed or altered work will be paid for at the Contract price for the actual quantities of work performed.

The term significant change shall be construed to apply only to the following circumstances:

1. When the character of the Work, as changed or altered, differs materially in kind or nature from that involved or included in the original proposed construction.
2. When the actual quantity of a Major Item of work, as defined elsewhere in the Contract, increases or decreases more than 25 percent of the original Contract quantity. Any adjustment for an increase or decrease in cost due to an increase in quantity of more than 25 percent shall be calculated only on that quantity in excess of 125 percent of the original pay item quantity. Any adjustment for an increase or decrease in cost due to a decrease in quantity to less than 75 percent of the original pay item quantity shall apply to the actual amount of work performed.

(c) Value Engineering Proposals

The Contractor may submit to the Engineer, written Value Engineering Contractor Proposals

(VECP) for modifying the plans, Specifications, or other Contract requirements for the purpose of reducing the total cost and/or Contract time without reducing the design capacity or quality of the finished product. If the District accepts the VECP, the District and the Contractor will equally divide the net savings or Contract time, or both. When an accepted VECP includes Contract time savings, one-half of such time savings shall be used to reduce the Contract time and the remaining one-half of such time savings shall be used exclusively by the Contractor as extra time. The Contractor shall identify in the SOR, a VECP contractor float activity for each accepted VECP that includes Contract time savings. The VECP extra time may be used by the Contractor to mitigate its delays on the project.

Each VECP shall result in a net savings over the Contract cost or Contract time, or both, without impairing essential functions and characteristics of the item(s) or of any other part of the project, including, but not limited to, service life, reliability, economy of operation, ease of maintenance, aesthetics, and safety. At least the following information shall be submitted with each VECP:

- Statement that the proposal is submitted as a VECP.
- Statement concerning the basis for the VECP benefits to the District and an itemization of the pay items and requirements affected by the VECP.
- Detailed estimate of the cost or Contract time, or both, under the existing Contract and under the VECP.
- Proposed specifications and recommendations as to the manner in which the VECP changes are to be accomplished.
- Statement as to the time by which a Contract change order adopting the VECP must be issued so as to obtain the maximum cost-effectiveness.

The District will process the VECP in the same manner as prescribed for any other proposal that would necessitate issuance of a change order. The District may accept a VECP in whole or part by issuing a change order that will identify the VECP on which it is based. The District will not be liable to the Contractor for failure to accept or act on any VECP submitted pursuant to these requirements or for delays in the work attributable to any VECP. Until a VECP is put into effect by a change order, the Contractor shall remain obligated to the terms and conditions of the existing Contract. If an executed change order has not been issued by the date on which the Contractor's proposal specifies that a decision should be made or such other date as the Contractor may subsequently have specified in writing, the VECP shall be deemed rejected.

The change order effecting the necessary modification of the Contract will establish the net savings agreed on, and provide for adjustment of the Contract prices or Contract time, or both. The Contractor shall absorb all costs incurred in preparing a VECP. Costs for reviewing and administering a VECP will be borne by the District. The District may include in the agreement any conditions it deems appropriate for consideration, approval, and implementation of the VECP. The Contractor's 50 percent share of the net savings or Contract time, or both, shall

constitute full compensation to him for effecting all changes pursuant to the VECP change order.

Unless specifically provided for in the change order authorizing the VECP, acceptance of the VECP and performance of the work thereunder will not change the Contract time limit.

The District may adopt a VECP for general use in contracts the Department administers if it determines that the VECP is suitable for application to other contracts. VECPs identical with or similar to previously submitted VECPs will be eligible for consideration and compensation under these provisions if the District has not previously adopted the VECPs for general application to other contracts the District administers. When a VECP is adopted for general use, compensation pursuant to these requirements will be applied only to those awarded contracts for which the VECP was submitted prior to the date of adoption of the VECP.

Proposed changes in the basic design of a bridge or pavement type or those changes that require different right of way limits will not normally be considered an acceptable VECP. If a VECP is based on or is similar to a change in the plans, Specifications, or Special Provisions the District has adopted prior to submission of the VECP, the Engineer will not accept the VECP.

The Engineer will be the sole judge of the acceptability of a VECP. The requirements herein apply to each VECP initiated, developed, and identified as such by the Contractor at the time of its submission to the Engineer. However, nothing herein shall be construed as requiring the Engineer to approve a VECP.

Subject to the provisions herein, the District or any other public agency shall have the right to use all or part of an accepted VECP without obligation or compensation of any kind to the Contractor.

If the District accepts a VECP, Section 104.02(b) herein, which pertains to the adjustment of Contract unit prices attributable to alterations of Contract quantities, will not apply to the items adjusted or deleted as a result of putting the VECP into effect by a change order.

104.03—Differing Site Conditions

Type I: During the progress of the Work, if subsurface or latent physical conditions differing materially from those indicated in the Contract are encountered at the site, the Contractor shall promptly notify the Engineer in writing of the specific differing conditions before the site is disturbed further and before the affected work is performed.

Type II: During the progress of the Work, if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the Contract, are encountered at the site the Contractor shall promptly notify the Engineer in writing of the specific differing conditions before the site is disturbed further and before the affected work is performed.

Upon receipt of such written notification, the Engineer will acknowledge receipt and investigate the

conditions. If it is determined by the Engineer that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the Contract, an adjustment, excluding anticipated profits, will be made and the Contract may be modified in writing accordingly. The Engineer will notify the Contractor of the determination whether or not an adjustment of the Contract is warranted.

No adjustment that results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.

SECTION 105—CONTROL OF WORK

105.01—Notice to Proceed

Unless otherwise indicated in the Contract, the Notice to Proceed date will be the date selected by the Contractor on which the Contractor intends to begin the work. That date shall be no earlier than 15 nor later than 30 calendar days after the date of Contract execution. The District will contact the Contractor on the date of Contract execution to inform him that the Contract has been executed. The District will also confirm this date in the Letter of Contract Execution. Within 10 calendar days after the date of Contract execution the Contractor shall submit to the Engineer written notice of the date he has selected as his Notice to Proceed date. If the Contractor fails to provide written notice of his selected Notice to Proceed Date within 10 calendar days of Contract execution, the selected Notice to Proceed Date will become the date 15 calendar days after the date of Contract execution. The Contractor shall begin work no later than 10 calendar days after the date he has selected as his Notice to Proceed date, unless the Notice to Proceed date is otherwise indicated in the Contract, in which case the Contractor shall begin work within 10 calendar days after the specific Notice to Proceed date indicated in the Contract.

Contract Time will commence on the date of the Notice to Proceed. The Letter of Contract Execution will identify the District's authorized representative, hereafter referred to as the Engineer, who is responsible for written directives and changes to the Contract. The Engineer will contact the Contractor after notice of award to arrange a pre-construction conference.

In the event the Contractor, for matters of his convenience, wishes to begin work earlier than 15 calendar days or later than 30 calendar days after the date of Contract execution, he shall make such a request in writing to the Engineer within 10 calendar days of the date of Contract execution or once a Notice to Proceed Date has been established, if he wishes to begin work more than 10 calendar days after his selected Notice to Proceed date or the Notice to Proceed Date indicated in the Contract, he shall make such a request to the Engineer in writing no later than 5 calendar days after the Notice to Proceed date. If this requested start date is acceptable to the District, the Contractor will be notified in writing; however, the Contract Completion Date will not be adjusted but will remain binding. The Contractor's request to adjust the start date for the work on the Contract will not be considered as a basis for claim that the time resulting from the Contractor's adjusted start date, if accepted by the Engineer, is insufficient to accomplish the work nor shall it relieve the Contractor of his responsibility to perform the

work in accordance with the scope of work and Contract requirements. In no case shall work begin before the District executes the Contract or prior to the Notice to Proceed date unless otherwise permitted by the Contract or authorized by the Engineer. The Contractor shall notify the Engineer at least 24 hours prior to the date on which he will begin the work.

105.02—Pre-Construction Conference

After notification of award and prior to the Notice to Proceed date the Contractor shall attend a pre-construction conference scheduled by the Engineer to discuss the Contractor's planned operations for prosecuting and completing the Work in accordance with the Contract. At the pre-construction Conference the Engineer and the Contractor will identify in writing the authorities and responsibilities of project personnel for each party. The Contractor and the District shall also come prepared to discuss key issues and project specific requirements necessary for preparation and submittal of the baseline progress schedule; unless a separate Scheduling Conference is otherwise scheduled as mutually agreed to by the Engineer and the Contractor, in accordance with Section 108.03 and other applicable Contract provisions.

The Engineer will be responsible for setting the conference agenda, conducting discussions, and ensuring that minutes of the conference are taken and later timely distributed to all attendees. The pre-construction conference will be the time to review the Contract plans and documents. To that end, the conference agenda may include but not be limited to discussions on the general sequence of work, including the expected primary work tasks as defined by the Contractor, and proposed means and methods for the entire scope of work, potential problems or impacts, constructability issues, special considerations such as limitations and access issues, agreements with local agencies or governments, utility impacts or relocations including railroads, coordination with schedules of the utilities and subcontractors and associated work, sources and delivery of critical materials, submittals required by Contract including shop drawings, location of field office, labs, etc., environmental concerns including permits and erosion and siltation efforts and maintenance of traffic issues.

The Contractor shall provide the Engineer with a list of all equipment available for use in the prosecution of the Work on the Contract at the pre-construction conference or no later than one week prior to the first monthly progress estimate. The make, model, size, capacity, and year of manufacture shall be listed for each piece of equipment. Where possible the Contractor shall provide this list in an electronic format. This list may take the form of the Contractor's fleet list of equipment. The Contractor shall provide the Engineer an updated list of equipment as changes occur.

105.03—Authorities of Project Personnel, Communication and Decision Making

(a) Authority of Engineer

During prosecution of the Work, the Engineer will answer all questions that may arise as to the quantity, quality, and acceptability of materials furnished and work performed; rate of progress of the Work; interpretation of the plans and Specifications; the Contractor's acceptable fulfillment of the Contract; disputes and mutual rights between contractors; and the Contractor's compensation.

The Engineer has the authority to suspend the Work wholly or in part if the Contractor has created conditions that are unsafe or fails to correct conditions that are unsafe for workers or the general public or fails to carry out the provisions of the Contract. The Engineer may also suspend the Work for such periods as he may deem necessary because of catastrophic or extraordinary weather as defined in Section 108.04, conditions considered unsuitable for prosecution of the Work, or any other condition or reason deemed to be in the public interest.

The Engineer may issue written clarifications or directives that either enhance or alter the Contract. The Engineer may issue written orders for such work as may be necessary to complete the Contract satisfactorily.

(b) Authority of Inspector

Inspectors representing the District are authorized to inspect all work performed and materials furnished. Inspection may extend to all or any part of the Work and to the preparation, fabrication, and manufacture of the materials to be used. The Inspectors are not authorized to alter or waive the provisions of these Specifications or make changes in the plans.

The Inspectors are not authorized to make final acceptance of the project, approve any operation or item, or act as foreman for the Contractor. However, the Inspectors will have the authority to reject defective work and material and suspend work that is being improperly performed, subject to the concurrence of the Engineer. Such inspections shall not relieve the Contractor of any obligation to furnish acceptable materials or provide completed construction that is in accordance with the Contracts requirements. The Inspectors will exercise only such additional authority as the Engineer may delegate. The Engineer will advise the Contractor in writing of delegations of authority that will affect his operations.

(c) The Contractor

The Contractor shall not construe reviews, approvals, or inspections by the District, the Engineer, or the District's inspectors, agents, and employees as a waiver, release, warranty, or assumption of liability on the part of the District. The Contractor understands and agrees that reviews, approvals, and inspections are for the District's sole use and benefit. Any such reviews, approvals, and inspections shall not relieve the Contractor of its contractual duties and obligations or be conclusive as to the acceptability of the Contractor's performance.

(d) Communication and Decision Making

- 1. Description** The intent of this provision is to establish procedures, processes and guidelines for making decisions and managing communications regarding the Work. The information contained herein is not meant to be all inclusive but to serve as a minimal general framework for promoting efficient and effective communication and decision making at both the project and, if needed, executive administrative level. It is also not

meant to override the decision-making processes or timeframes of specific Contract requirements.

2. Definitions

- a. **Confirmation Of Verbal Instructions (COVI)** - Contractor-requested written confirmation of the District's instructions concerning the Work. When time and/or costs are or will be impacted, the Contractor must comply with the requirements applicable to requests for adjustments of the Contract amount or Contract time.
- b. **Requests for District Action (RDA)** - Requests where the Contractor asks the District to take certain action that the Contractor feels is required for proper completion of all or a portion of the Work.
- c. **Contractor Change Requests (CCR)** - Requests where the Contractor asks the District to make an adjustment to the Contract because of excusable and/or compensable events, instructions that have or have not been given, or other work requiring time and/or cost beyond that specified or envisioned within the Contract.

3. Process for Decision Making

- a. Project teams composed of the Contractor's and the District's representatives, who are directly responsible for the administration, prosecution, and inspection of the Work, shall define and agree upon the field decision-making process during the pre-construction conference. This process should be written down and distributed to all affected parties once it is established. Where there are responsibilities, authority or personnel changes associated with this process, such changes shall be distributed to all affected parties as quickly as practicable after they are effective so as not to delay or impede this process.

105.04—Gratuities

The Contractor and its subcontractors and suppliers shall not offer, give or confer upon any of the District's employees or personnel any gifts, gratuities, payments, loans, subscriptions, advances, deposits of money, services, favors, or anything of more than nominal value, present or promised, unless consideration of substantially equal or greater value is exchanged.

The Contractor shall not employ any personnel of the District for any services without the Engineer's prior written consent.

If the Engineer determines after investigation that the Contractor or the Contractor's employees, representatives, or agents of any person acting in his behalf have violated this Section, the Engineer may, at his discretion, disqualify the Contractor from bidding on future contracts with the District for a period of 6 months from the date of the Engineer's determination of such violation. Any implicated employees, agents, or representatives of the Contractor may be prohibited from working on any contract the District awards for the period of the Contractor's disqualification.

105.05—Character of Workers, Work Methods, and Equipment

(a) Workers

Workers shall have sufficient skill and experience to perform properly the Work assigned to them. Workers engaged in special or skilled work shall have sufficient experience in such work and in the operation of equipment required to perform it properly and satisfactorily. The term "workers" means the Contractor's employees, its subcontractors at any tier, or any of their respective employees.

The Contractor shall immediately remove from the Project any workers who, in the Engineer's opinion, do not perform their work in a proper, skillful and satisfactory manner or are intemperate or disorderly. The Engineer shall direct the Contractor to do so in writing and such workers shall not be employed again on any portion of the Work without the Engineer's written approval. If the Contractor fails to immediately remove the workers, or furnish suitable and sufficient workers for satisfactory prosecution of the Work, the Engineer may withhold all monies that are or may become due the Contractor and may suspend the Work until the Contractor has complied with the Engineer's directive.

(b) Equipment

Equipment shall be of sufficient size and quantity, and in such good mechanical condition as to comply with the Contract requirements and to produce a satisfactory quality of work. Equipment shall be such that no damage to the roadway, adjacent property, other highways, or no danger to the public, will result from its use. The Engineer may order the removal and require replacement of unsatisfactory equipment.

(c) Work Methods

When methods and equipment to be used by the Contractor are not prescribed in the Contract, the Contractor is free to use whatever methods or equipment he feels will accomplish the Work in conformity with the Contract requirements.

When the Contract specifies that construction be performed by the use of particular methods and equipment, they shall be used unless others are authorized by the Engineer. If the Contractor desires to use a different method or type of equipment, he may request permission from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment he proposes to use and an explanation of the reasons for desiring to make the change. If permission is not given, the Contractor shall use the specified methods and equipment. If permission is given, it will be on the condition that the Contractor shall be fully responsible for producing construction work in conformity with Contract requirements. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not strictly conform to the Contract requirements, the Contractor shall discontinue the use of the substitute method or equipment

and shall complete the remaining construction with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of the specified quality or take such other corrective action as the Engineer may direct. No change will be made in the basis of payment for the construction items involved or the Contract time limit as the result of authorizing or denying a change in methods or equipment under these provisions.

105.06—Subcontracting

- (a) No portion of the Contract shall be subcontracted or otherwise disposed of without the written consent of the Engineer. The Contractor shall notify the Engineer of the name of the firm to whom the work will be subcontracted, and the amount and items of work involved. Such notification shall be made and verbal approval given by the Engineer prior to the subcontractor beginning work.
- (b) The Contractor shall perform with his own organization work amounting to not less than 30 percent of the total original Contract amount, excluding any specialty items designated by the District. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original Contract amount before computing the amount of work required to be performed by the Contractor's own organization.

The term “perform work with its own organization” refers to workers employed or leased by the Contractor, and equipment owned or rented by the Contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the Contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the Contractor meets all of the following conditions:

1. The Contractor maintains control over the supervision of the day-to-day activities of the leased employees;
2. The Contractor remains responsible for the quality of the work of the leased employees;
3. The Contractor retains all power to accept or exclude individual employees from work on the project; and
4. The Contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

- (c) The Contractor shall not subcontract any part of the Contract work to a contractor who is not prequalified with VDOT in accordance with Section 102.01, unless otherwise indicated in the Contract. This restriction does not apply to Contract specialty items, service providers, engineers, consultants, manufacturers, suppliers, or haulers. Consent to subcontract or otherwise dispose of any portion of the Contract work shall not relieve the Contractor of any

responsibility for the satisfactory fulfillment of the entire Contract. All subcontracts shall be evidenced by written binding agreements that shall be available to the Department upon request, before, during, and after their approval.

105.07—Cooperation of Contractor

The Contractor shall give the Work the constant attention necessary to facilitate quality and progress, and shall fully cooperate with the Engineer, Inspector, and other contractors involved in the prosecution of the Work. If any portion of a project is located within the limits of a municipality, military installation, or other federally owned property, the Contractor shall cooperate with the appropriate officials and their agents in the prosecution of the Work to the same extent as with the District.

The Contractor shall have on the project at all times during prosecution of the Work a competent Superintendent who is capable of reading and understanding the plans and Specifications, experienced in the type of work being performed, and who shall receive instructions from the Engineer or his authorized representatives. The Superintendent shall have full authority to execute the orders and directions of the Engineer without delay and supply promptly such materials, equipment, tools, labor, and incidentals as may be required.

105.08—Cooperation With Regard to Utilities

The adjustment of utilities consists of the relocation, removal, replacement, rearrangement, reconstruction, improvement, disconnection, connection, shifting, or altering of an existing utility in any manner.

Existing utilities within the District's knowledge at the design stage of the project will be indicated on the plans. Where possible, the District will make arrangements for adjusting these utilities prior to project construction. The utility owner will adjust existing private and public utilities that require adjustment, unless the Contract requires the Contractor to perform such adjustment as a pay item. The new location of such utilities will not normally be shown on the plans. Some utilities may remain or be adjusted within the construction limits simultaneously with project construction operations.

The Contractor shall coordinate project construction with planned utility adjustments and take all necessary precautions to prevent disturbance of the utilities. The Contractor shall report to the Engineer any failure on the part of the utility owner to cooperate or proceed with the planned utility adjustments.

The Contractor shall perform Contract utility work in a manner that will cause the least inconvenience to the utility owner and those being served by the utility owner.

The Contractor shall protect existing, adjusted, or new utilities that are shown on the plans, marked by Miss Utility, or otherwise known to the Contractor that are to remain within the right of way so as to prevent disturbance or damage resulting from construction operations. If during prosecution of the work the Contractor encounters an existing utility that requires adjustment, he shall not interfere

with the utility but shall take the proper precautions to protect the utility and shall promptly notify the Engineer of the need for adjustment.

If the Contractor desires the temporary or permanent adjustment of utilities for his own benefit, he shall conduct all negotiations with the utility owners and pay all costs in connection with the adjustment.

The Contractor shall promptly notify the Engineer in writing if the Contractor encounters utilities that are not shown on the plans, marked by Miss Utility, or otherwise known to the Contractor before the site is disturbed further and before the affected work is performed. Upon receipt of the Contractor's written notification, the Engineer will acknowledge receipt and investigate the conditions. The Engineer will notify the Contractor whether or not an adjustment to the Contract is warranted. Adjustments will be made according to Sections 108.04 and 109.05, as applicable. No adjustment that results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.

105.09—Cooperation among Contractors

The District may at any time contract or approve concurrent Contracts for performance of other work on, near, or within the same geographical area of the work specified in an existing Contract. Contractors shall not impede or limit access to such work by others.

When separate Contracts are awarded within the limits of one project, contractors shall not hinder the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other. In the case of dispute, all Contractors shall proceed as directed by the Engineer.

When Contracts are awarded to separate Contractors for known concurrent construction in a common area, the Contractors, in conference with the Engineer, shall establish a written joint schedule of operations. The schedule shall be based on the limitations of the individual Contracts and the joining of the work of one Contract with the others. The schedule shall set forth the approximate dates and sequences for the several items of work to be performed and shall ensure completion within the respective Contract time limit. The schedule shall be submitted to the Engineer for review and approval no later than 30 days after the award date of the later Contract and prior to the first monthly progress estimate. The schedule shall be agreeable to, signed by, and binding on each Contractor. The Engineer may allow modifications of the schedule when benefit to the Contractors and the District will result.

Any modification of the schedule shall be in writing, mutually agreed to and signed by the contractors, and shall be binding on the contractors in the same manner as the original agreement.

If the contractors fail to agree on a joint schedule of operations, they shall submit their individual schedules to the Engineer, who will prepare a schedule that will be binding on each Contractor.

The joint schedule and any modification thereof shall become a part of each Contract involved. The failure of any Contractor to abide by the terms of the joint schedule will be justification for declaring the Contractor in default of his Contract.

Each Contractor shall assume all liability, financial or otherwise, in connection with his Contract and shall protect and save harmless the District from any and all damages and claims that may arise because of any inconvenience, delay, or loss he experiences as a result of the presence and operations of other contractors working in or near the work covered by his Contract. He shall also assume all responsibility for any of his work not completed because of the presence or operation of other Contractors.

The District will not assume any responsibility for acts, failures, or omissions of one Contractor that delay the work of another except as provided herein.

105.10—Plans and Working Drawings

(a) General

The Contractor will be supplied with two copies of the executed Contract. The VDOT's Road and Bridge Specifications and the VDOT's Road State and Bridge Standards are available on VDOT's website.

(b) Plans

Plans will be furnished to the Contractor, in electronic format, without charge.

The Contractor shall keep one complete set of plans, standard drawings, Contract assemblies, and Specifications available on the project at all times. For maintenance projects, certain sign projects, and other projects having no field office or on which the Contractor has no office, the Contractor shall keep one complete set of plans, Contract assemblies, and Specifications with him while prosecuting the work. In the event items of work are required as per the Standard Drawings, the Contractor shall also keep the appropriate Standard Drawings on the project during the performance of that work.

Plans consisting of general drawings and showing such details as are necessary to give a comprehensive understanding of the work specified will be furnished by the District. Except as otherwise shown on the plans, dimensions shown on the plans are measured in the respective horizontal or vertical planes. Dimensions that are affected by gradients or vertical curvatures shall be adjusted as necessary by the Contractor to accommodate actual field conditions and shall be specifically denoted as "field adjusted" on the working drawings. Failure on the part of the Contractor to so denote field adjustments on the working drawings shall not relieve the Contractor of the responsibility to accommodate and incorporate such existing conditions into the finished work.

(c) Working Drawings

The Contractor shall furnish nine sets of detailed working drawings to the extent and with the details required by the Contract Documents unless otherwise indicated in the Contract documents. Working drawings and submittals shall be identified by the complete state project and job designation number, as well as the federal project number if applicable. Items or component materials shall be identified by the specific Contract item number and

Specification reference in the Contract. Any changes from the requirements of the Contract shall be specifically denoted, together with justification, and submitted to the Engineer for review. Working drawings shall be submitted in sufficient time to allow for review, discussion and correction prior to the beginning of the work they reference and avoid causing any delay to the Work. Work shall not be performed or materials ordered prior to the completion of the District's review of the working drawings.

Reviewed working drawings will be returned to the Contractor within 30 days from the date of receipt by the District. If a railroad, municipality, or other entity as specified in the Contract or on the plans is required to review the working drawings, the reviewed working drawings will be returned within 45 days from the date of receipt by the District. If the working drawings are not returned by the time specified, no additional compensation will be allowed except that an extension of time in accordance with Section 108.04 will be considered if the work element detailed by the working drawings is on the project's critical path or involves a controlling item of work. Three sets of working drawings marked with any suggested modifications or comments will be returned to the Contractor. The other sets will be retained by the District.

The District's review of the Contractor's working drawings will be limited to evaluation for conformance with the Contract requirements. The District's review will not relieve the Contractor from responsibility for errors in the working drawings or from complying with the Contract requirements for a fully functional finished work item as specified or designed. Deviations from the Contract requirements initiated by the Contractor shall be requested in writing and clearly identified on the working drawings. Explicit supporting justification shall be furnished specifically describing the reason for the requested deviations, as well as any impact such deviations shall have on the schedule of work. Failure to address time or other impacts associated with the Contractor's request will be cause for rejection of the Contractor's request. Deviations from the Contract requirements shall not be made unless authorized by the Engineer. Such authorization shall not relieve the Contractor from the responsibility for complying with the Contract requirements for a fully functional finished work item as specified or designed.

If working drawings detailing change(s) initiated by the Contractor require more than two resubmissions or revisions, the cost of additional reviews by the District or its designated representative(s) will be assessed to the Contractor.

The Contractor shall submit as-built working drawings upon completion of the Work, if required by the Contract.

The cost of working drawings furnished by the Contractor shall be included in the cost of appropriate Contract items.

The Contractor may authorize the fabricator in writing to act for him in matters relating to working drawings. Such authorization shall have the force and effect of any other representative of the Contractor's organization.

Provide working drawings according to the following:

1. Steel Structures

Working drawings for steel structures, including metal handrails, shall consist of shop detail, erection, and other working drawings showing details, dimensions, sizes of units, and other information necessary for the fabrication and erection of metal work.

2. Falsework

Working drawings for falsework supporting a bridge superstructure shall be signed and sealed by a Professional Engineer, holding a valid license to practice engineering in the Commonwealth of Virginia.

3. Concrete Structures and Prestressed Concrete Members

Working drawings for concrete structures and prestressed concrete members shall provide such details as required for the successful prosecution of the work and which are not included in the plans furnished by the District. Drawings shall include plans for items such as prestressing strand details and elongation calculations, location of lift points, falsework, bracing, centering, form work, masonry, layout diagrams, camber management plan for prestressed members, and bending diagrams for reinforcing steel when necessary or when requested. Such drawings shall be signed and sealed by a Professional Engineer, holding a valid license to practice engineering in the Commonwealth of Virginia.

4. Lighting, signal and pedestal poles, overhead and bridge mounted sign structures, breakaway support systems, anchor bolts, framing units, panels, and foundations

Prior to fabrication or construction, the Contractor shall submit for review one original and six copies of each working drawing and design calculation for lighting, signal and pedestal poles, overhead and bridge mounted sign structures, breakaway support systems, anchor bolts, framing units, panels, and foundations. All sheets of these submittals shall include the Professional Engineer's signature and seal. Certification for foundations will be required only when the designs are furnished by the Contractor. The designs shall be in accordance with the specific editions of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals as required in Section 700. Such designs shall be signed and sealed by a Professional Engineer, holding a valid license to practice engineering in the Commonwealth of Virginia.

5. Reinforced Concrete Pipe

When specified, and prior to manufacture of reinforced concrete pipe, the Contractor shall furnish to the District a certification of the acceptability of the design of such pipe, as determined from a review that has been signed and sealed by a Professional

Engineer holding a valid license to practice engineering in the Commonwealth of Virginia. Such certification shall cover all design data, supporting calculations and materials. Pipe designs previously certified or approved by the District will not require recertification.

105.11—Conformity with Plans and Specifications

All materials to be used in the Work shall conform to the qualities, technical requirements, values or range of values specified in the Contract. Less than complete conformity may be permitted if obtaining exact or complete conformity would not be feasible and if authorized in writing by the Engineer.

Permissible tolerances for the elevation of subgrade and finished grade and for the thickness of the various courses of pavement structure are specified in the Contract. If permissive tolerances are exceeded, or if consistent deviations from the plans or abrupt changes in grade occur, even though within the tolerances, the affected areas shall be reconstructed to conform to the specified tolerance and provide a smooth riding surface. When it is not feasible to reconstruct the areas, payment will be made in accordance with the applicable specification for each material placed or adjusted in accordance with Section 105.18.

When the plans require the finished surface to tie into any structural item whose elevation is fixed, the elevation of the finished surface must coincide with the elevation of the structural item.

105.12—Coordination of Plans, General Provisions, Special Provisions and Technical Specifications

The plans, General Provisions, Special Provisions, Technical Specifications and other Contract Documents defined in Section 103.06 are parts of the Contract. A requirement occurring in one Contract Document shall be as binding as though occurring in all. The Contract Documents are

intended to be complementary, and to include, describe and provide all items necessary for the Contractor's proper and complete performance of the Work.

In case of a discrepancy, the following order of priority will apply, with the highest governing item appearing first and the least governing item appearing last:

- (a) Special Provision will govern over the Plans, General Provisions and the Technical Specifications.
- (b) Plans will govern over the General Provisions and Technical Specifications.
- (c) Technical Specifications will govern over the General Provisions.
- (d) Calculated dimensions, unless obviously incorrect, will govern over scaled dimensions.

The Contractor shall not take advantage of any obvious or apparent ambiguity, conflict, error or

omission in the plans or the Contract. If after beginning work the Contractor discovers an ambiguity, conflict, error, or omission in the Contract, he shall immediately notify the Engineer and before proceeding further with the affected work. The Engineer will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the Contract.

105.13 – Not Used

105.14—Maintenance during Construction

(a) Traffic Control for Projects in the Roadway

The Contractor shall have a Superintendent on the project site during all work operations. This person shall be responsible for the oversight of work zone traffic control within the project limits in compliance with the Contract requirements, the VWAPM, and the MUTCD. This person's duties shall include the supervision of the installation, adjustment (if necessary), inspection, maintenance, and removal when no longer required, of all work zone traffic control devices on the project.

(b) Maintenance of Traffic

1. The Contractor shall prosecute the Work so as to avoid obstructions to traffic to the greatest extent practicable. The Contractor shall provide for the safety and convenience of the general public and residents along the roadway, and for the protection of persons and property.

Highways closed to traffic shall be protected by barricades and other warning devices as required by the Contract, the VWAPM, and the MUTCD. Barricades and warning devices shall be illuminated where required during periods of darkness and low visibility. The Contractor shall erect warning devices in advance of a location on the project where operations or obstructions may interfere with the use of the road by traffic and at all intermediate points where the new work crosses or coincides with an existing roadway. The Contractor shall maintain sign faces and reflective surfaces of warning devices in a clean and visible condition. The Contractor shall cover or remove signs when the messages thereon are not applicable. Barricades, warning signs, lights, temporary signals, and other protective devices shall conform to Section 512.

2. The road shall be kept open to all traffic while undergoing improvements, unless otherwise permitted in the Contract. The Contractor shall keep the portion of the project being used by public, pedestrian, and vehicular traffic in such condition that all such traffic will be safely and adequately accommodated. However, removal of snow and control of ice on roads open to public travel will be performed by the District.

The Contractor shall keep the portions of the road being used by the public free from irregularities and obstructions that could present a hazard or annoyance to traffic. Holes in hard surface pavements shall be filled with approved asphalt patching material. Where such work is not specified in the Contract and determined to be required by the Engineer,

and not the result of any failure or fault of the Contractor and due to causes beyond the Contractor's control, the cost to remedy such hazards will be handled according to Section 109.05.

If any damage is sustained by an accepted unit or portion of the project attributable to causes beyond the control of the Contractor, the Engineer may authorize the Contractor to make the necessary repairs. These repairs will be paid for at the Contract price for the items requiring repair. In the absence of Contract prices covering the items of repair, the repair work will be paid for in accordance with Section 109.05.

3. **Holidays:** No Lane Closures shall be permitted on the following holidays, as well as the normal workday preceding and following these holidays, without permission of the Engineer:

- a) New Year's Eve Day
- b) New Year's Day
- c) Martin Luther King, Jr. Day
- d) Presidents Day
- e) Easter
- f) Mother's Day
- g) Memorial Day
- h) Juneteenth Day
- i) July 4th
- j) Labor Day
- k) Columbus Day
- l) Veterans Day
- m) Thanksgiving Day
- n) Day after Thanksgiving
- o) Christmas Day

If any of these holidays occurs on a Sunday, the following Monday shall be considered the holiday. If occurring on a Saturday, the preceding Friday will be considered as the holiday.

If the Holiday occurs on a Sunday or Monday: from noon on the preceding Friday to Noon on the following Tuesday.

The District may waive, with written request within 72 hours, the restriction of working on days preceding and following the above listed holidays when the Contractor's operations have no effect on vehicular traffic, when determined by the District.

4. **Tunnel Lane Closures:** Work that requires a lane closure in the open approach or tunnel shall only be completed at night from 9:00 p.m. through 6:00 a.m. on Monday through Thursday. Closure must be scheduled with the District one week prior and the Maintenance of Traffic shall be provided by the District.
5. **Restrictions:** Lane closures on the approach roadways and trestles shall not be

permitted on Friday, Saturday or Sunday from May 1st through September 30th, unless approved in writing by the District.

Lane Closures on the approach roadways and trestles shall be permitted October 1st through April 30th, Sunday through Saturday, except for holidays as noted above.

6. **Maintenance of Traffic During Suspension of Work:** During any suspension of work, the Contractor shall temporarily open to traffic such portions of the project and temporary roadways as may be agreed upon by the Contractor and Engineer.
7. **Minimizing Traffic Delays:** Two-way traffic shall be maintained at all times unless the Contract or the Engineer permits one-way traffic. The Contractor shall not stop traffic without the Engineer's permission.
8. **Connections and Entrances:** Connections with other roads and public and private entrances shall be kept in a reasonably smooth condition at all times. Stabilization or surfacing material shall be applied to connections and entrances. The Contractor shall schedule construction operations so that approved continuous access is provided for all property adjacent to the construction when the property is shown on the plans to require access.

The Contractor shall not disturb connections or entrances until necessary. Once disturbed, the Contractor shall maintain and complete connections or entrances as follows:

- a. **Connections:** Connections that had an original paved surface shall be brought to a grade that will smoothly and safely accommodate vehicular traffic through the intersection, using temporary pavement as soon as practicable after connections are disturbed. Connections that had an original unpaved surface shall be brought to a grade that will smoothly and safely accommodate vehicular traffic through the intersection, using either the required material or a temporary aggregate stabilization course that shall be placed as soon as practicable after connections are disturbed.

If there are delays in prosecution of work for connections, connections that were originally paved shall have at least two lanes maintained with a temporary paved surface. Those that were not originally paved shall be maintained with a temporary aggregate stabilization course.

- b. **Entrances:** Entrances shall be graded concurrently with the roadway with which they intersect. Once an entrance has been disturbed, it shall be completed as soon as is practicable, including placing the required base and surface course or stabilization. If the entrance must be constructed in stages, such as when there is a substantial change in the elevation of the roadway with which it intersects, the surface shall be covered with a temporary aggregate stabilization course or other suitable salvaged material until the entrance can be completed and the required base and surface or stabilization course can be placed.

6. **Obstruction Crossing Roadways:** Where the Contractor places obstructions such as

suction or discharge pipes, pump hoses, steel plates, or any other obstruction that must be crossed by vehicular traffic, they shall be bridged as directed by the Engineer at the Contractor's expense. Traffic shall be protected by the display of warning devices both day and night. If operations or obstructions placed by the Contractor damage an existing traveled roadway, the Contractor shall cease operations and repair damages to the roadway at no additional cost to the District.

7. **Temporary Structures:** The Contractor shall construct, maintain, and remove temporary structures and approaches necessary for use by traffic. Unless otherwise specified in the Contract, the cost of these operations shall be included in pay items for the new structure. After new structures have been opened to traffic, temporary structures and approaches shall be removed. The materials contained therein shall remain the property of the Contractor.

The proposed design of temporary structures shall be submitted to the Engineer prior to the beginning of construction in accordance with Section 105.10.

8. **Haul Route:** The Contractor shall select haul routes between the project and material source(s) that will minimize disturbance to the community. The Contractor shall furnish to the Engineer, for review, his plan for the haul route and for minimizing the adverse effects of hauling operations on persons who reside adjacent to the haul route or persons who otherwise use a portion of the haul route for ingress or egress to their residential or work area. The District may select alternate haul routes, divide the hauling traffic over several routes, and impose other restrictions deemed necessary to minimize the impact of the hauling operation on local residents.

9. **Opening Sections of Projects to Traffic**

Certain sections of the Work may be opened to traffic when specified in the Contract or when directed by the Engineer. Such opening shall not constitute acceptance of the Work or any part thereof or a waiver of any provision of the Contract.

On any section of the Work opened by order of the Engineer where the Contract does not provide for traffic to be carried through the Work, the Contractor will not be required to assume any expense entailed in maintaining the road for traffic. The District will pay such expense or will compensate the Contractor in accordance with Section 109.05. Repair of slides and repair of damage attributable to traffic will be compensated for in accordance with Section 109.05. Slides shall be removed by the Contractor in accordance with Section 303.

On any section of the Work opened by order of the Engineer where the Contract does not provide for traffic to be carried through the Work, any additional cost incurred to complete other items of work solely because of the changed working conditions will be

compensated according to Section 109.05.

If the Contractor is not continuously prosecuting the Work to the Engineer's satisfaction as determined by the Schedule of Record, the Contractor shall not be relieved of the responsibility for maintenance of the completed work during the period that the section of the Work is opened to traffic prior to final acceptance. The Contractor shall be responsible for any expense resulting from the opening of such portions of the Work under these circumstances, except for slides. The Contractor shall conduct the remainder of the construction operations so as to cause the least obstruction to traffic.

(c) Maintenance of Work

1. The Contractor shall maintain the Work, the project site, construction area and roadway from the beginning of construction operations until final acceptance with adequate equipment and forces to keep the roadway and structures in a safe and satisfactory condition at all times and to ensure the continuous and effective day by day prosecution of the Work. The District will perform maintenance of items outside of the scope of work of the Contract. As determined by the Engineer, where maintenance is necessary within the project limits but does not affect Contract work, and not the result of any failure or fault of the Contractor and due to causes beyond the Contractor's control, the cost to perform such maintenance will be handled according to Section 109.05.

If any damage is sustained by an accepted unit or portion of the project attributable to causes beyond the control of the Contractor, the Engineer may authorize the Contractor to make the necessary repairs. These repairs will be paid for at the Contract price for the items requiring repair. In the absence of Contract prices covering the items of repair, the repair work will be paid for in accordance with Section 109.05.

2. Where the Contract specifies placing a course on another course or subgrade of embankment, base, subgrade, concrete, asphalt pavement, or other courses previously constructed, the Contractor shall maintain the courses or subgrades previously constructed in accordance with the Contract requirements when placing such course. This maintenance includes, but is not limited to draining, re-compacting, re-grading, or, if unacceptable or destroyed, the removal of work the District previously accepted.

(d) Grading Operations:

When the Contractor elects to complete the rough grading operations for the entire project or exceed the length of one full day's surfacing operations, the rough grade shall be machined to a uniform slope from the top edge of the existing pavement to the ditch line.

When the surface is to be widened on both sides of the existing pavement, construction operations involving grading or paving shall not be conducted simultaneously on sections directly opposite each other.

The surface of pavement shall be kept free from soil and other materials that might be hazardous to traffic. Prior to opening of new pavement to traffic, shoulders shall be roughly dressed for a distance of 3 feet from the edge of the paved surface.

(e) Maintenance Cost

The Contractor shall bear all costs of performing maintenance work before final acceptance, and of constructing and maintaining necessary approaches, crossings, intersections, and other features without direct compensation except as provided for herein. When the Contractor confines his operation to the surface of the roadway and reasonable width of the shoulder and the surface is disturbed or damaged by his operations or equipment, he shall be responsible for the restoration and maintenance of the surface that is disturbed or damaged.

(f) Failure to Maintain Roadway or Structures:

If the Contractor fails to remedy unsatisfactory maintenance immediately after receipt of a notice by the Engineer, the Engineer may proceed with adequate forces, equipment, and material to maintain the project. The cost of the maintenance, plus 25 percent for supervisory and administrative personnel, will be deducted from monies due the Contractor for the project.

105.15—Removing and Disposing of Structures and Obstructions

The Contractor shall remove and dispose of or store, as directed by the Engineer, fences, buildings, structures, or encumbrances within the construction limits unless separate pay items for this work are included in the Contract. Payment for these operations will be in accordance with Section 301.03. Materials so removed, including existing drains or pipe culverts, shall become the property of the Contractor, with the exception of those materials to be stored or delivered to the District or others as designated in the Contract.

(a) Signs: The Contractor shall relocate all signs within the construction limits that conflict with construction work as approved by the Engineer. Signs that are not needed for the safe and orderly control of traffic during construction as determined by the Engineer shall be removed and stored at a designated location within the project limits. The removed signs shall be stored above ground in a manner that will preclude damage and shall be reinstalled in their permanent locations prior to final acceptance. If any of the removed signs are not to be reinstalled, the Contractor shall notify the Engineer at the time the signs have been properly stored. Such signs will be removed from the storage area by the District. Any sign that is damaged or lost because of the fault of the Contractor shall be repaired or replaced at his expense. Costs for removing, storing, protecting, and reinstalling such signs shall be included in the price bid for other items in the Contract, and no additional compensation will be made.

105.16—Cleanup

Removal from the project of rubbish, scrap material, and debris caused by the Contractor's personnel or construction operations shall be a continuing process throughout the course of the Work. The work site shall be kept in a neat, safe and orderly condition at all times.

Before final acceptance, the highway, borrow pits, quarries, disposal areas, storage areas, and all ground occupied by the Contractor in connection with the Work shall be cleaned of rubbish, surplus materials, and temporary structures, except where the Contractor owns or controls the property. All parts of the Work shall be left in a neat, safe and orderly condition.

Within 30 days after final acceptance, the Contractor shall remove his equipment, materials and debris from the right of way and from property adjacent to the project that he does not own or control.

105.17—Inspection of Work

Inspection will be performed at critical stages. However, all stages, materials, and details of the Work are subject to inspection. The Contractor shall provide the Engineer and Inspectors full and safe access to all parts of the Work. The Contractor shall furnish the Engineer and Inspectors such information and assistance as required to make complete, timely and detailed inspections. The Engineer, Inspectors and their appointed representatives shall have ready access to machines, plants and plant equipment used in processing or placing materials.

Prior to the beginning of operations, the Engineer will meet with the Contractor to establish an understanding of the critical stages of work that shall be performed in the presence of the Inspector. In order for the District to schedule inspection of the critical stages of work, the Contractor shall keep the Engineer informed of planned operations in accordance with Section 108.03. The Contractor shall advise the Engineer at least 24 hours in advance of any changes in the Contractor's planned operations or critical stage work requiring District inspection.

If the Engineer requests it, the Contractor shall remove or uncover such portions of the finished work as may be directed at any time before final acceptance. The Contractor shall restore such portions of the finished work to comply with the appropriate Contract specification requirements. If the work exposed is acceptable, the uncovering or removing and replacing the covering or making good the parts removed will be paid for as extra work in accordance with Section 104.02. If the work is unacceptable, the cost of uncovering or removing and replacing the covering or making good the parts removed shall be borne by the Contractor.

If materials are used or work is performed without inspection by an authorized representative of the Department, the Contractor may be ordered to remove and replace such work or material at his own expense unless the District's representative failed to inspect the work or material after having been given reasonable notice in writing that the material was to be used or the work was to be performed.

If an inspection reveals that work has not been properly performed, or materials used are unacceptable, the Contractor will be so advised and he shall immediately inform the District of his schedule for correcting such work and materials, and the time when a re-inspection can be made.

105.18—Removal of Unacceptable and Unauthorized Work

Work that does not conform to the Contract requirements, whether the result of unacceptable

workmanship, use of unacceptable materials, damage through carelessness, or any other cause within the Contractor's control, will be considered unacceptable work.

Unacceptable work shall be remedied or removed as determined by the Engineer and replaced in an acceptable manner at the Contractor's expense. The Engineer may accept the unacceptable work at a reduced price when acceptance is considered to be in the best interest of the District.

Work that is done contrary to the instructions of the Engineer, contrary to the requirements of the Contract, beyond the lines shown on the plans or as designated by the Engineer except as specified herein, or without authority will be considered unauthorized and will not be paid for. The Engineer may order the Contractor to remove or replace unauthorized work at the Contractor's expense.

The Contractor shall not perform destructive sampling or testing of the work without written authorization of the Engineer. Unauthorized destructive sampling or testing will cause the work to be considered unacceptable.

In the event the Contractor is granted authorization to perform destructive sampling or testing, the Contractor shall obtain the approval of the Engineer for the method and location of each test prior to beginning such sampling or testing. In addition, destructive sampling and testing shall be performed in the presence of the Engineer.

If the Contractor fails to comply immediately with any order of the Engineer made under this Section, the Engineer will have the authority to cause unacceptable or unauthorized work to be removed and replaced and to deduct the cost of such removal and replacement, plus 25 percent for supervisory and administrative personnel, from any monies due or to become due the Contractor.

105.19—Submission and Disposition of Claims

(a) Notice of Intent to File a Claim

Early or prior knowledge by the District of an existing or impending claim for damages could alter the plans, scheduling, or other District action or result in mitigation or elimination of the basis for the claim. Therefore, the Contractor shall submit a written statement describing the act of omission or commission by the District or its agents that allegedly caused damage to the Contractor and the nature of the claimed damage to the Engineer at the time of each and every occurrence that the Contractor believes to be the basis of a claim or prior to the beginning of the work upon which a claim and any subsequent action will be based. "Occurrence" includes, but is not limited to the Engineer's denial of the Contractor's timely request for time extension, additional compensation, change order, adjustment, or other request under the Contract, or any other decision, instruction, directive, or order that the Contractor believes will result in a claim. The written statement shall clearly state that it is a "notice of intent to file a claim." If such damage is deemed certain in the opinion of the Contractor to result from his acting on an order from the Engineer, he shall immediately take written exception to the order. Submission of a notice of intent to file a claim as specified

shall be mandatory. Failure to submit such notice of intent shall be a conclusive waiver to such claim for damages by the Contractor. An oral notice or statement will not be sufficient nor will a notice or statement after the event. Oral statements recorded in meeting minutes also will not be sufficient.

In addition, at the time of each and every occurrence that the Contractor believes to be the basis of a claim or prior to beginning the work upon which a claim and any subsequent action will be based, the Contractor shall furnish the Engineer an itemized list of materials, equipment, and labor for which additional compensation will be claimed. The Contractor shall afford the Engineer every facility for keeping an actual cost record of the work. The Contractor and the Engineer shall compare records and bring them into agreement at the end of each day. Failure on the part of the Contractor to afford the Engineer proper facilities for keeping a record of actual costs will constitute a waiver of a claim for such extra compensation except to the extent that it is substantiated by the District's records. The filing of such notice of intent by the Contractor and the keeping of cost records by the Engineer shall in no way establish the validity of a claim.

(b) Time for Submittal of Claim

Upon completion or termination of the Contract, the Contractor may, within 60 days after the final estimate date established by the District pursuant to Code of Virginia § 33.2-1101, deliver to the District a certified written claim, which must be a signed original claim document, along with an electronic copy of the claim document as a Portable Document Format (PDF) file, for the amount he deems he is entitled to under the Contract. For the purpose of this Section, the final estimate date shall be that date set forth in a letter from the Department to the Contractor sent by certified mail and shall be considered as the date of notification of the District's final estimate. Regardless of the manner of delivery of the claim, the Engineer must receive and have physical possession of the Contractor's written claim within the 60-day period that commences with the final estimate date. Submittals received by the District either before the final estimate date or after the 60-day period shall not have standing as a claim.

(c) Content of Claim

The Contractor's certified written claim shall set forth in detail the facts upon which the claim is based, including but not limited to the following:

1. A detailed statement of the facts upon which the claim is based providing items of work affected and included in each claim, and the date(s) on which actions or events resulting in the claim occurred or conditions resulting in the claim became evident; and
2. All pertinent data, documents, and correspondence that may substantiate the claim. The District shall have the right, at its expense, to review and copy all of the Contractor's non-privileged project files and documents, both electronic and paper, for use in analyzing the claim; and

3. Identification of the provisions of the Contract that the District allegedly breached, and the acts or omissions constituting such breach.
4. A detailed statement of the amount of the actual cost for materials, labor and equipment sought in the claim.
5. A copy of the notice(s) of intent to file a claim that the Contractor submitted to the District for the claim(s).

(d) Certification of Claim.

The Contractor shall submit with the claim a written certification of the claim in the following form:

Pursuant to the Code of Virginia, I hereby certify that this Contract claim submission for Chesapeake Bay Bridge Tunnel District Project No. in Northampton County, Virginia, is a true and accurate representation of additional costs, expenses, damages and/or delays incurred by (Contractor) or its subcontractors or suppliers in the performance of the required Contract work. Any statements, representations, writings, or documents, made or used and known to be false, shall be considered a violation of the Virginia Governmental Frauds Act, punishable as allowed by the Code of Virginia for a Class 6 Felony, and shall be considered a violation of the Virginia Fraud Against Taxpayers Act, subject to the civil penalties allowed by the Code of Virginia.

By: _____
(Contractor)

As officer or duly appointed agent of _____ (Contractor)

Title: _____ Date: _____

State Of: _____ City/County of _____, to Wit:

I, the undersigned, a Notary Public in and for the City/County and State aforesaid, do hereby certify that _____, Whose name is signed to the foregoing instrument, bearing the date of the _____ day of _____ 20____, has this day acknowledged the same before me in my city/county and State aforesaid.

Given under my hand this _____ day of _____, 20____.

Notary Public: _____

Notary Registration No.: _____

My Commission Expires: _____

Claims submitted by the Contractor for itself or its subcontractors or suppliers during the statutory period for submitting Contract claims that are submitted without the Contractor's certification described above shall not have standing as a claim and shall not be considered by the District.

(e) Review of Claim

Within 90 days from the receipt of the claim, the District will make an investigation and notify the Contractor by certified mail of its decision. However, by mutual agreement, the District and Contractor may extend the 90-day period for another 30 days.

If the Contractor is dissatisfied with the District's decision, within 30 days from receipt of the decision the Contractor shall notify the Executive Director in writing that it desires to appear before the Executive Director, whether in person or through counsel, and present additional facts and arguments in support of its claim. The Executive Director will schedule and meet with the Contractor within 30 days after receiving the request. However, the Executive Director and Contractor, by mutual agreement, may schedule the meeting to be held after 30 days but before the 60th day from the receipt of the Contractor's written request. Within 45 days from the date of the meeting, the Executive Director will investigate the claim, including the additional facts presented, and notify the Contractor in writing of his decision. However, the Executive Director and Contractor, by mutual agreement, may extend the 45-day period for another 30 days. If the Executive Director deems that all or any portion of a claim is valid, he shall have the authority to negotiate a settlement with the Contractor subject to any approvals required by the Code of Virginia.

Any monies that become payable as the result of claim settlement after payment of the final estimate will not be subject to payment of interest unless such payment is specified as a condition of the claim settlement.

(f) Compensation for Claims

The Engineer will determine time extension according to Section 108.04 and compensation according to Section 109.05 if the District concludes that the Contractor has established entitlement to compensation or a time extension for the claim.

SECTION 106—CONTROL OF MATERIAL

106.01—Source of Supply and Quality Requirements

The materials used throughout the Work shall conform to the requirements of the Contract. The Contractor shall regulate his supplies so that there will be a sufficient quantity of tested material on hand at all times to prevent any delay of work. Except as otherwise specified, materials, equipment, and components that are to be incorporated into the finished Work shall be new and fit for their intended purpose. Within 30 days after notification of award of the Contract, but not later than 7 days prior to the beginning of construction operations under the Contract, the Contractor shall submit

a statement of the known origin, composition and manufacture of all materials to be used in the work, including optional or alternate items. Material requirements not previously reported shall be submitted at least 60 days prior to their use on the project, but not less than 2 weeks prior to delivery. The Contractor's statement shall be electronically submitted by use of Form C-25 and shall be identified by the complete project number, and all items or component materials shall be identified by the specific Contract item number and the Specification reference shown in the Contract.

At the option of the Engineer, materials may be approved at the source of supply. If it is found during the life of the Contract that previously approved sources of supply do not supply materials or equipment conforming to the Contract requirements, do not furnish the valid test data required to document the quality of the material or equipment, or do not furnish documentation to validate quantities to document payment, the Contractor shall change the source of supply and furnish material or equipment from other approved sources. The Contractor shall notify the District of this change, and provide the same identifying information noted in this Section, at least 60 days prior to their use on the project, but not less than 2 weeks prior to delivery.

Materials shall not contain toxic, hazardous, or regulated solid wastes or be furnished from a source containing toxic, hazardous or regulated solid wastes.

When optional materials are included in the Contract, the Contractor shall advise the Engineer in writing of the specific materials selected. Thereafter, the Contractor shall use the selected materials throughout the project unless a change is authorized in writing by the Engineer. However, when the Contractor has an option as to the type of pipe that may be used, he may use any of the approved types for each size of pipe, but he shall use the same type for a particular line. The Engineer may authorize other types and sources in an emergency that will not unreasonably delay delivery of the selected material.

Equipment and material guaranties or warranties that are normally given by a manufacturer or supplier, or are otherwise required in the Contract, shall be obtained by the Contractor and assigned to the District in writing. The Contractor shall also provide an in-service operation guaranty on all mechanical and electrical equipment and related components for a period of at least 12 months, beginning on the date of partial acceptance of that specific item(s) or final acceptance of the project.

106.02—Material Delivery

The Contractor shall advise the Engineer at least 2 weeks prior to the delivery of any material from a commercial source. Upon delivery of any such material to the project, the Contractor shall provide the Engineer with one copy of all invoices (prices are not required). The following materials shall also comply with Section 109.01: asphalt concrete; dense graded aggregate, to include aggregate base, subbase, and select material; fine aggregate; open graded coarse aggregate; crusher run aggregate; and road stabilization aggregate. The printed weights of each load of these materials, as specified in Section 109.01, shall accompany the delivery, and such information shall be furnished to the Inspector at the project.

106.03—Local Material Sources (Pits and Quarries)

The requirements set forth herein apply exclusively to non-commercial pits and quarries from which materials are obtained for use on contracts awarded by the District.

- (a) Local material sources shall be concealed from view from the completed roadway and any existing public roadway. Concealment shall be accomplished by selectively locating the pit or quarry and spoil pile, providing environmentally compatible screening between the pit or quarry site and the roadway, or using the site for another purpose after removal of the material, or restoration equivalent to the original use (such as farm land, pasture, turf, etc.). The foregoing requirements shall also apply to any pit or quarry opened or reopened by a subcontractor or supplier. However, the requirements will not apply to commercial sand and gravel and quarry operations actively processing material at the site prior to the date of the Notice of Advertisement.
- (b) The Contractor shall furnish the Engineer a statement signed by the property owner in which the property owner agrees to the use of his property as a source of material for the project. Upon completion of the use of the property as a material source, the Contractor shall furnish the Engineer a release signed by the property owner indicating that the property has been satisfactorily restored. The requirements for a signed statement and release will not apply to commercial sources, sources owned by the Contractor, and sources furnished by the District.
- (c) Local material pits and quarries that are not operated under a local or State permit shall not be opened or reopened without authorization by the Engineer. The Contractor shall submit for approval a site plan, including, but not limited to, the following:
 1. The location and approximate boundaries of the excavation;
 2. Procedures to minimize erosion and siltation;
 3. Provision of environmentally compatible screening;
 4. Restoration;
 5. Cover vegetation;
 6. Other use of the pit or quarry after removal of material, including the spoil pile;
 7. The drainage pattern on and away from the area of land affected, including the directional flow of water and a certification with appropriate calculations that verify all receiving channels are in compliance with Minimum Standard 19 of the Virginia Erosion and Sediment Control Regulations;
 8. Location of haul roads and stabilized construction entrances if construction equipment will enter a paved roadway;
 9. Constructed or natural waterways used for discharge;

10. A sequence and schedule to achieve the approved plan; and
11. The total drainage area for temporary sediment traps and basins shall be shown. Sediment traps are required if the runoff from a watershed area of less than three acres flows across a disturbed area. Sediment basins are required if the runoff from a watershed area of three acres or more flows across a disturbed area. The Contractor shall certify that the sediment trap or basin design is in compliance with VDOT Standards and Specifications, and all local, state, and federal laws. Once a sediment trap or basin is constructed, the dam and all outfall areas shall be immediately stabilized.

The Contractor's design and restoration shall be in accordance with the Contract requirements and in accordance with the requirements of the federal, state, and local laws and regulations.

If the approved plan provides for the continued use or other use of the pit or quarry beyond the date of final acceptance, the Contractor shall furnish the District a bond made payable to the Chesapeake Bay Bridge Tunnel District in an amount equal to the Engineer's estimate of the cost of performing the restoration work. If the pit or quarry is not used in accordance with the approved plan within eight months after final acceptance, the Contractor shall perform restoration work as directed by the Engineer, forfeit his bond, or furnish the Engineer with evidence that he has complied with the applicable requirements of the State Mining Law.

- (d) Topsoil on District owned or furnished borrow sites shall be stripped and stockpiled as directed by the Engineer for use as needed within the construction limits of the project or in the reclamation of borrow and disposal areas.
- (e) If payment is to be made for material measured in its original position, material shall not be removed until Digital Terrain Model (DTM) or cross-sections have been taken. The material shall be reserved exclusively for use on the project until completion of the project or until final DTM or cross-sections have been taken.
- (f) If the Contractor fails to provide necessary controls to prevent erosion and siltation, if such efforts are not made in accordance with the approved sequence, or if the efforts are found to be inadequate the District will withdraw approval for the use of the site and may cause the Contractor to cease all contributing operations and direct his efforts toward corrective action. If the Contractor does not perform such work, the cost of performing the work, plus 25 percent for supervisory and administrative personnel, will be deducted from monies due or to become due the Contractor.
- (g) Costs for applying seed, fertilizer, lime, mulch, and for restoration drainage, erosion and siltation control, regrading haul roads, and screening shall be included in the Contract price for the type of excavation or other appropriate Contract items.
- (h) If the Contractor fails to fulfill the provisions of the approved plan for screening or restoring

material sources, the District may withhold and use for the purpose of performing such work any monies due the Contractor at the time of the final estimate. The Contractor shall be liable for penalties, fines, or the District's costs or damages that result from his failure to prevent erosion or siltation and take restorative action.

- (i) After removing all the material needed from the local material sources, the Contractor shall remove metal, lumber, and other debris resulting from his operations and shall shape and landscape the area in accordance with the approved plan for such work.

106.04—Disposal Areas

The Contractor shall dispose of unsuitable or surplus material shown on the plans according to Contract requirements. The Contractor shall dispose of unsuitable or surplus material off the right of way. The Contractor shall obtain the necessary rights to property to be used as a disposal area.

The Contractor shall handle and dispose of the materials specified in this Section in accordance with the following requirements.

(a) Disposal Areas

The Contractor shall dispose of materials not used on the project off the right of way. If an approved disposal area is not designated in the Contract, the Contractor shall obtain the necessary rights to property to be used as an approved disposal area. Prior to the District approving the Contractor's proposed disposal area, the Contractor shall submit a site plan that shall show:

1. The location and approximate boundaries of the disposal area.
2. Procedures to minimize erosion and siltation.
3. Provision of environmentally compatible screening.
4. Restoration.
5. Cover vegetation.
6. Other use of the disposal site.
7. The drainage pattern on and away from the area of land affected, including the directional flow of water and a certification with appropriate calculations that verify all receiving channels are in compliance with Minimum Standard 19 of the Virginia Erosion and Sediment Control Regulations.
8. Location of haul roads and stabilized construction entrances if construction equipment will enter a paved roadway.

9. Constructed or natural waterways used for discharge.
10. A sequence and schedule to achieve the approved plan.
11. The total drainage area for temporary sediment traps and basins shall be shown. Sediment traps are required if the runoff from a watershed area of less than three acres flows across a disturbed area. Sediment basins are required if the runoff from a watershed area of 3 acres or more flows across a disturbed area. The Contractor shall certify that the sediment trap or basin design is in compliance with VDOT Standards and Specifications, all local, state, and federal laws. Once a sediment trap or basin is constructed, the dam and all outfall areas shall be immediately stabilized.

Disposal areas shall be cleared but need not be grubbed. The clearing work shall not damage grass, shrubs, or vegetation outside the limits of the approved area and haul roads thereto. After the material has been deposited, the area shall be shaped to minimize erosion and siltation of nearby streams and landscaped in accordance with the approved plan for such work or shall be used as approved by the Engineer. The Contractor's design and restoration shall conform to the Contract requirements and federal, state, and local laws and regulations.

If the Contractor fails to provide and maintain necessary controls to prevent erosion and siltation, if such efforts are not made in accordance with the approved sequence, or if the efforts are found to be inadequate, the District will withdraw approval for the use of the site and may cause the Contractor to cease all contributing operations and direct his efforts toward corrective action, or may perform the work as determined by the Engineer and deduct the cost of performing the work, plus 25 percent for supervisory and administrative personnel, from monies due or to become due the Contractor.

The Contractor shall furnish the Engineer a statement signed by the property owner in which the owner agrees to the use of his property for the deposit of material from the project. Upon completion of the use of the property as an approved disposal area, the Contractor shall furnish the Engineer a release signed by the property owner indicating that the property has been satisfactorily restored. This requirement will not apply to commercial sources, sources owned by the Contractor, and sources furnished by the District.

(b) Materials encountered by the Contractor shall be handled and disposed of as follows:

1. Unsuitable material for the purpose of this Specification is defined as material having poor bearing capacity, excessive moisture content, extreme plasticity or other characteristics as defined by the Engineer that makes it unacceptable for use in the Work and shall be disposed of at an approved disposal area, landfill licensed to receive such material, or as the Engineer directs in writing.
2. Surplus material as shown on the plans shall be disposed of by flattening slopes, used

to fill in ramp gores and medians, or if not needed, disposed of at an approved disposal area, a landfill licensed to receive such material, or as the Engineer directs in writing. Surplus material stockpile areas on the right of way shall be cleared but need not be grubbed. The clearing work shall not damage grass, shrubs, or vegetation outside the limits of the approved area and the haul roads thereto. Placement of fill material shall not adversely affect existing drainage structures. If necessary, modified existing drainage structures, as approved by the Engineer, shall be paid for in accordance with Section 109.05. Within 7 days after the material has been deposited, the area shall be shaped and stabilized to minimize erosion and siltation.

3. Organic materials such as, but not limited to, tree stumps and limbs (not considered merchantable timber), roots, rootmat, leaves, grass cuttings, or other similar materials shall be chipped or shredded and used on the project as mulch, given away, sold as firewood or mulch, burned at the Contractor's option if permitted by local ordinance, or disposed of at a facility licensed to receive such materials. Organic material shall not be buried in state rights-of-way or in an approved disposal area.
4. Inorganic materials such as brick, cinder block, broken concrete without exposed reinforcing steel, or other such material may be used in accordance with Section 303.04 or shall be disposed of at an approved disposal area or landfill licensed to receive such materials. If disposed of in an approved disposal area, the material shall have enough cover to promote soil stabilization in accordance with Section 303 and shall be restored in accordance with other provisions of this Section.

Concrete without exposed reinforcing steel, may be crushed and used as rock in accordance with Section 303. If approved by the Engineer, these materials may be blended with soils that meet AASHTO M57 requirements and deposited in fill areas within the right of way in accordance with the requirements of Section 303 as applicable.

5. Excavated rock in excess of that used within the project site in accordance with Section 303 shall be treated as surplus material.
6. Other materials such as, but not limited to, antifreeze, asphalt (liquid), building forms, concrete with reinforcing steel exposed, curing compound, fuel, hazardous materials, lubricants, metal, metal pipe, oil, paint, wood or metal from building demolition, or similar materials shall be disposed of at a landfill licensed to receive such material.
7. Coal or other valuable materials uncovered during prosecution of the Work that are not specifically addressed by the Contract shall be disposed of as the Engineer directs in writing.

106.05—Rights For and Use of Materials Found on Project

With the approval of the Engineer, the Contractor may use in the project any materials found in the excavation that comply with the requirements of the Specifications. Unless otherwise specified, the Contractor will be paid for both the excavation of such materials at the Contract unit price and for

the Contract item for which the excavated material is used. However, the Contractor shall replace at his own expense with other acceptable material the excavation material removed and used that is needed for use in embankments, backfills, approaches, or otherwise. The Contractor shall not excavate or remove any material from within the construction limits that is not within the grading limits, indicated by the typical section, slope and grade lines shown in the plans without written authorization by the Engineer. The Contractor shall not own and shall not have the right to sell, trade or exchange, any coal or other valuable materials uncovered during the prosecution of the work without the Engineer's specific written authorization.

106.06—Samples, Tests, and Cited Specifications

Materials will be inspected and tested by the Engineer before or during their incorporation in the Work. However, the inspection and testing of such material shall not relieve the Contractor of the responsibility for furnishing material that conforms to the Specifications. The District may retest all materials that have been accepted at the source of supply after delivery and will reject those that do not conform to the requirements of the Specifications. Stored material may be re-inspected prior to use. Work in which untested materials are used without the written permission of the Engineer may be considered unacceptable.

Unless reference is made to a specific dated Specification, references in these Specifications to AASHTO, ASTM, VTM, and other standard test methods and materials requirements shall refer to either the test specifications that have been formally adopted or the latest interim or tentative specifications that have been published by the appropriate committee of such organizations as of the date of the Notice of Advertisement. Unless otherwise indicated, tests for compliance with specification requirements will be made by and at the District's expense except that the cost of retests, exclusive of the first retest, shall be borne by the Contractor. Samples shall be furnished by the Contractor at his expense, and those that are not tested by the Contractor will be tested by a representative of the District.

The inspection cost of structural steel items fabricated in a country other than the continental United States shall be borne by the Contractor. Inspection of structural fabrication shall be performed in accordance with the requirements of the appropriate VTM by a commercial laboratory approved by the District. Additional cleaning or repair necessary because of environmental conditions in transit shall be at the Contractor's expense.

In lieu of testing, the Engineer may approve the use of materials based on the receipt of the manufacturer's certification furnished by the Contractor. However, furnishing the certificate shall not relieve the Contractor of the responsibility for furnishing materials that conform to the Specifications or the Contract requirements.

Materials requiring an MSDS will not be accepted at the project site for sampling or at the District's laboratories for testing without the document.

106.07—Plant Inspection

If the Engineer inspects materials at the source, the following conditions shall be met:

- (a) The Engineer shall have the cooperation and assistance of the Contractor and producer of the materials.
- (b) The Engineer shall have full access to parts of the plant that concern the manufacture or production of the materials being furnished.
- (c) For materials accepted under a quality assurance plan, the Contractor or producer shall furnish equipment and maintain a plant laboratory at locations approved for plant processing of materials. The Contractor or producer shall use the laboratory and equipment to perform quality control testing.

The laboratory shall be of weatherproof construction, tightly floored and roofed, and shall have adequate lighting, heating, running water, ventilation, and electrical service. The ambient temperature shall be maintained between 68 degrees F and 86 degrees F and thermostatically controlled. The laboratory shall be equipped with a telephone, intercom, or other electronic communication system connecting the laboratory and scale house if the facilities are not in close proximity to each other. The laboratory shall be constructed in accordance with the requirements of local building codes.

The Contractor or producer shall furnish, install, maintain, and replace, as conditions necessitate, testing equipment specified by the appropriate ASTM, AASHTO method or VTM being used and provide necessary office equipment and supplies to facilitate keeping records and generating test reports. The Contractor or producer's technician shall maintain current copies of test procedures performed in the laboratory. The Contractor shall calibrate or verify all balances, scales and weights associated with testing performed as specified in AASHTO R18. The Contractor or producer shall also provide and maintain an approved test stand for accessing truck beds for the purpose of sampling and inspection. The District may approve a single laboratory to service more than one plant belonging to the same Contractor or producer.

For crushed glass, the plant equipment requirements are waived in lieu of an independent third-party evaluation and certification of crushed glass properties by an AASHTO Materials Reference Laboratory (AMRL)-accredited commercial soil testing laboratory demonstrating that the supplied material conforms to Section 203. Random triplicate samples will be evaluated and analyzed for every 1,000 tons of material supplied to the project. The averaged results will be used for evaluation purposes. Suppliers of crushed glass shall maintain third party certification records for a period of 3 years.

106.08—Storing Materials

Materials shall be stored in a manner so as to ensure the preservation of their quality and fitness for the Work. When considered necessary by the Engineer, materials shall be stored in weatherproof buildings on wooden platforms or other hard, clean surfaces that will keep the material off the ground. Materials shall be covered when directed by the Engineer. Stored material shall be located so as to facilitate their prompt inspection. Approved portions of the right of way may be used for storage of material and equipment and for plant operations. However, equipment and materials shall

not be stored within the clear zone of the travel lanes open to traffic.

The Contractor shall provide additional required storage space at his expense. Private property shall not be used for storage purposes without the written permission of the owner or lessee. The Contractor shall furnish copies of the owner's written permission to the Engineer. Upon completion of the use of the property, the Contractor shall furnish the Engineer a release signed by the property owner indicating that the property has been satisfactorily restored.

Chemicals, fuels, lubricants, bitumens, paints, raw sewage, and other harmful materials as determined by the Engineer and the VPDES *General Permit for Discharge of Stormwater from Construction Activities* shall not be stored within any floodplain unless no other location is available and only then shall the material be stored in a secondary containment structure(s) with an impervious liner. Also, any storage of these materials in proximity to natural or man-made drainage conveyances or otherwise where the materials could potentially reach a waterway if released under adverse weather conditions, must be stored in a bermed or diked area or inside a container capable of preventing a release. Double-walled storage tanks shall meet the berm/dike containment requirement except for storage within flood plains. Any spills, leaks or releases of such materials shall be addressed in accordance with Section 107.16(b) and (e). Accumulated rain water may also be pumped out of the impoundment area into approved dewatering devices. All proposed pollution prevention measures and practices must be identified by the Contractor in his Pollution Prevention Plan as required by the Specifications, other Contract documents and/or the VDPES *General Permit for Discharge of Stormwater from Construction Activities*.

106.09—Handling Materials

Materials shall be handled in a manner that will preserve their quality, integrity and fitness for the Work. Aggregates shall be transported in vehicles constructed to prevent loss or segregation of materials.

106.10—Unacceptable Materials

Materials that do not conform to the Contract requirements shall be considered unacceptable. Such materials, whether in place or not, will be rejected, and shall be removed from the site of the work and replaced at no cost to the District. If it is not practical for the Contractor to remove rejected material immediately, the Engineer will mark the rejected material for identification. Rejected material whose defects have been corrected shall not be used until the Engineer gives written approval for its use. Upon the Contractor's failure to comply promptly with any order of the Engineer made under this Section, the Engineer may, in addition to other rights and remedies, have the unacceptable material removed and replaced, and deduct the cost of such removal and replacement from monies due or to become due the Contractor.

106.11—Material Furnished by the Department

The Contractor shall furnish all materials required to complete the Work except those specified to be furnished by the District.

Material furnished by the District will be delivered or made available to the Contractor at the locations specified in the Contract. The cost of handling and placing materials after delivery to the Contractor shall be included in the Contract price for the Contract item with which they are used.

After receipt of the materials, the Contractor shall be responsible for material delivered to him, including shortages, deficiencies, and damages that occur after delivery, and any demurrage charges.

106.12—Critical Materials

Raw or manufactured materials or supplies that are necessary for the fabrication, construction, installation, or completion of any item of work that is or becomes in extremely short supply regionally or nationally as substantiated by recognized public reports such as news media, trade association journals, or government reports, due to catastrophic events of nature, needs of national defense, or industrial conditions beyond the control of the District or Contractor, will be declared critical materials by the District.

When the supply of materials becomes critical, the provisions of this Section will become applicable to the Contract.

When all items of work involving noncritical materials have been completed by the Contractor or have progressed to a point where no further work is practicable prior to receipt of critical materials, a complete suspension of work will be granted by the District. Requests for partial suspension orders because of delays attributable to non-receipt of critical materials will be considered on the basis of merit in each case.

The District reserves the right to substitute critical materials or methods by means of a change order. Contractors, via their manufacturers or suppliers, that request relief due to critical shortage of materials as specified in this Section shall immediately supply information and other supporting data to permit the District an opportunity to assess possible alternatives or methods to avoid undue delay or expenditure.

SECTION 107—LEGAL RESPONSIBILITIES

107.01—Laws to Be Observed

The Contractor shall keep fully informed of federal, state, and local laws, bylaws, ordinances, orders, decrees, and regulations of governing bodies, courts, and agencies having any jurisdiction or authority that affects those engaged or employed on the Work, the conduct of the Work, or the execution of any documents in connection with the Work. The Contractor shall observe and comply with such laws, ordinances, regulations, orders, or decrees and shall defend, indemnify, and hold harmless the Commonwealth and its agents, officers, or employees from and against any claim for liability, fine, penalty, or cost, including attorney's fees, arising from or based on their violation, whether by himself, his agents, employees, or subcontractors. The Contractor shall execute and

file the documents, statements, certifications, and affidavits required under any applicable federal or state law or regulation required by or affecting his bid, or the Contract, or prosecution of the Work thereunder. The Contractor shall permit examination of any records made subject to such examination by any federal or state law or by regulations promulgated thereunder by any state or federal agency charged with enforcement of such law.

107.02—Permits, Certificates, and Licenses

(a) General

The Contractor shall conform to the permit conditions as shown in the Contract. Construction methods shall conform to the stipulations of the permit or certification conditions, or both. The Contractor shall assume all obligations and costs incurred as a result of complying with the terms and conditions of the permits and certificates.

If any of the permits listed below are applicable to the project, the Contract will indicate such and the applicable permit stipulations or conditions will be considered a part of the Contract.

1. **Department of the Army, Corps of Engineers Nationwide Permits:** A nationwide permit is issued to the District by the U.S. Army Corps of Engineers to place fill or dredge material in waters of the United States including wetlands.
2. **Virginia Marine Resources Commission – Virginia General Permit (VGP-1):** A VGP-1 permit is issued to the District by the Virginia Marine Resources Commission and is required on projects that cross in, on, or over state-owned land which is submerged below low water (channelward of the mean low water line), in tidal areas, including tidal wetlands, or below ordinary high water anywhere in the Commonwealth of Virginia.
3. **Virginia Water Protection Permit (VWPP):** The VWPP is issued to the District by the Virginia Department of Environmental Quality, Water Division and is required for activities that result in a discharge to surface waters and wetlands. The VWPP is issued as an individual or general permit.
4. **Virginia Department of Environmental Quality – VPDES General Permit For Discharge of Stormwater From Construction Activities (VPDES Construction Permit):** All construction activities undertaken by or for the District involving land disturbances equal to or exceeding one acre must be covered by the VPDES Construction Permit.
5. The Contractor shall be responsible for all costs to obtain VPDES Construction Permit coverage for all support facilities (both on-site and off-site) not included in the construction plans or Contract for the project. The District will not be responsible for any inconvenience, delay, or loss experienced by the Contractor as a result of his failure to gain access to any support facility areas at the time contemplated.

6. **Coastal Zone Management (CZM) Consistency Concurrence:** This clearance is issued to the District by the Virginia Department of Environmental Quality for projects in navigable waters requiring a U.S. Coast Guard bridge permit.
7. **U.S. Coast Guard Bridge Permit:** This permit is required for bridge projects over navigable waters. The District is responsible for acquiring these permits.
8. **Other Permits, Certificates and Licenses:** Except as otherwise specified herein, the Contractor shall procure all necessary permits, certificates or licenses that have not been obtained by the District. The Contractor shall pay all charges, fees, and taxes and shall comply with all conditions of the permits, certificates or licenses.

(b) The Contractor shall not stockpile materials (including fill, construction debris, and excavated and woody materials) within the waterway or wetlands. The Contractor shall construct cofferdams, stream channel retaining structures, and all necessary dikes using non-erodible materials or, if specified in the permit(s), faced with coarse non-erodible materials. If faced with non-erodible material, filter cloth shall be placed between the granular fill and riprap in accordance with Sections 204, 245, 303.03, and 414. Temporary structures shall be removed from the waterway with minimal disturbance of the streambed. Discharge of dredge or fill material shall be placed in accordance with the best management practice, project permits, and all applicable laws and regulations. Dredged or fill material shall be removed to an approved, contained, upland location in accordance with Section 106.04. The disposal area will be of sufficient size and capacity to properly contain the dredge material, to allow for adequate dewatering and settling of sediment, and to prevent overtopping. The disposal area shall be stabilized prior to placement of dredge material.

(c) The Contractor's activities shall not substantially disrupt the movement of those species of aquatic life indigenous to the water body including those species that normally migrate through the area. The Contractor, to the maximum extent practicable, shall not permanently restrict or impede the passage of normal or expected high flows or cause the relocation of the water. The Contractor shall avoid and minimize all temporary disturbances to surface waters during construction. The Contractor shall remove any temporary fill in its entirety and return the affected areas to their preexisting elevation conditions within 30 days of completing work, which shall include re-establishing pre-construction contours and planting or seeding with appropriate wetland vegetation according to cover type (emergent, scrub/shrub, or forested). The Contractor shall perform all work activities during low-flow conditions and shall isolate the construction area via the implementation of non-erodible cofferdams, sheet piling, stream diversions, or similar structures.

(d) The Contractor shall accomplish all construction, construction access (e.g., cofferdams, sheet piling, and causeways) and demolition activities associated with this project in a manner that minimizes construction or waste materials from entering surface waters. Access roads and associated bridges or culverts shall be constructed to minimize the adverse effects on surface waters. Access roads constructed above preconstruction contours and elevations in surface waters must be bridged or culverted to maintain surface flows. All utility line work in

surface waters shall be performed in a manner that minimizes disturbance, and the area shall be returned to its original contours and restored within 30 days of completing work in the area.

- (e) The Contractor shall 1) stockpile excavated material in a manner that prevents reentry into the stream, 2) restore original streambed and streambank contours, 3) revegetate barren areas, and 4) implement strict erosion and sediment control measures throughout the project period.
- (f) The Contractor shall provide fill material that is clean and free of contaminants in toxic concentrations or amounts in accordance with all applicable laws and regulations. The Contractor shall comply with all applicable FEMA-approved state or local floodplain management requirements.
- (g) The Contractor shall adhere to any time-of-year restriction conditions as required by state and federal permitting agencies. No in-stream work shall be permitted during in-stream time-of-year restriction.
- (h) The Contractor shall prohibit wet or uncured concrete from entry into surface waters. The Contractor shall not dispose of excess or waste concrete in surface waters and prevent wash water from discharging into surface waters. The Contractor shall employ measures to prevent spills of fuels or lubricants into state waters. All pollution prevention measures and practices proposed by the Contractor shall be identified in the Contractor's Pollution Prevention Plan as required by the Specifications, other Contract documents and/or the VPDES *General Permit for Discharge of Stormwater from Construction Activities*.
- (i) The Contractor shall not violate the water quality standards as a result of the construction activities. The Contractor shall not alter the physical, chemical, or biological properties of surface waters and wetlands or make them detrimental to the public health, to animal or aquatic life, to the uses of such waters for domestic or industrial consumption, for recreation, or for other uses.
- (j) The Contractor shall not proceed with work covered by a permit until the work is released in writing by the Engineer.
- (k) If the District has not released work covered by a U.S. Army Corps of Engineers permit and the Contractor has completed all other work within the limits of the project, the Contractor shall so advise the Engineer in writing. Upon receipt of the notification, the Engineer will evaluate the status of the project and advise the Contractor within 45 days of the portion of the project that is acceptable under Section 108.09. If the Engineer determines that all of the work except that encumbered by the permit application is acceptable under Section 108.09, the Contractor will be notified accordingly. The District or the Contractor may then elect to continue or terminate the remaining portion of the Contract.

- (l) The party electing to terminate the Contract shall so advise the other party in writing after the 45-day period. The terms of Contract termination will be in accordance with Section 108.08. No compensation will be made for delays encountered or for work not performed except for an extension of time as determined in accordance with Section 108.04.
- (m) The Contractor shall submit a request to the Engineer in writing if he wants to deviate from the plans or change his proposed method(s) regarding any proposed work located in waterways or wetlands. Such work may require additional environmental permits. If the Engineer determines that the activities are necessary for completion of the work, the Contractor shall furnish the Engineer all necessary information pertaining to the activity. The Contractor shall be responsible for designing and supplying all plans, sketches and notes necessary to acquire any permit modification required for changes in the proposed construction methods. Such information shall be furnished at least 180 days prior to the date the proposed changed activity is to begin. For other than the VPDES *General Permit for Discharge of Stormwater from Construction Activities*, the District will apply for the necessary permits modifications to the permits obtained by the District. The Contractor shall not begin the activity until directed to do so by the Engineer. Additional compensation will not be made for delay to the work or change in the Contractor's proposed methods that result from jurisdiction agency review or disapproval of the Contractor's proposed methods.
- (n) If additional permits are required to perform dredging for flotation of construction equipment or for other permanent or temporary work as indicated in the Contractor's accepted plan of operation, but have not been obtained by the District, the Contractor shall furnish the Engineer, at least 75 days prior to the proposed activity, all necessary information pertaining to the proposed activity in order for the Department to apply for the permits. The Contractor shall not begin the proposed activity until the additional permits have been secured and the Engineer has advised the Contractor that the proposed activity may proceed.
- (o) The Contractor shall permit representatives of state and federal environmental regulatory agencies to make inspections at any time in order to insure that the activity being performed under authority of the permit(s) is in accordance with the terms and conditions prescribed herein.

107.03—Not Used

107.04 – Not Used

107.05 - Patented Devices, Materials, and Processes

If the Contractor employs any design, device, material, or process covered by a patent or copyright outside the Contract requirements he shall provide for its use by obtaining a legal agreement with the patentee or owner. The Contractor and the surety shall defend, indemnify, and save harmless the District, any affected third party, or political subdivision from and against any and all claims, lawsuits, or legal actions for infringement because of such use. The Contractor shall indemnify the

District for costs, expenses, or damages, including attorneys' fees, resulting from infringement during prosecution or after completion of the Work.

107.06—Personal Liability of Public Officials

In carrying out any of the provisions of these Specifications or in exercising any power or authority granted to them by or within the scope of the Contract, there shall be no liability upon the Commission, Executive Director, Engineer, or their authorized representatives, either personally or as officials of the District. In all such matters, they act solely as agents and representatives of the District.

107.07—No Waiver of Legal Rights

The District shall not be precluded or estopped by any measurement, estimate, approval, acceptance, or certificate made either before or after final acceptance of the Work, or payment therefor, from showing (1) the true amount and character of the work performed and materials furnished by the Contractor, (2) that any such measurement, estimate, acceptance, certificate or payment is untrue or incorrectly made, or (3) that the work or materials do not comply with the Contract requirements. The District shall not be precluded or estopped, notwithstanding any such measurement, estimate, approval, acceptance, certificate, or payment in accordance therewith, from recovering from the Contractor or his surety, or both, such cost or damage as the District may sustain by reason of the Contractor's failure to comply with the Contract requirements. The District's acceptance of the whole or any part of the Work, or the District's payment for the whole or any part of the Work, or the District's granting of any extension of time, or the District's taking any possession of any part of the Work, shall not operate as a waiver of any portion of the Contract or of any right or power herein reserved, or of any right to costs or damages. The District's express written waiver of any breach of the Contract shall not be held to be a waiver of any other or subsequent breach.

107.08—Protecting and Restoring Property and Landscape

The Contractor shall preserve property and improvements along the boundary lines of and adjacent to the Work unless their removal or destruction is specified in the Contract. The Contractor shall use suitable precautions to prevent damage to such property.

When the Contractor finds it necessary to enter on private property, beyond the limits of the construction easement shown on the plans, he shall secure from the owner or lessee a written permit for such entry prior to moving thereon. An executed copy of this permit shall be furnished to the Engineer.

The Contractor shall be responsible for any damage or injury to property during the prosecution of the work resulting from any act, omission, neglect, or misconduct in the Contractor's method of executing the work or attributable to defective work or materials. This responsibility shall not be released until final acceptance of the project and a written release from the owner or lessee of the property is obtained.

When direct or indirect damage is done to property by or on account of any act, omission, neglect, or misconduct in the Contractor's method of executing the Work or in consequence of the non-execution thereof on the part of the Contractor, the Contractor shall restore such property to a condition similar or equal to that existing before such damage was done by repairing, rebuilding, or restoring, as may be directed by the Engineer, or shall make a settlement with the property owner for such property damage. The Contractor shall secure from the owner a written release from any claim against the District without additional compensation therefor. A copy of this release shall be furnished the Engineer.

107.09—Contractor's Responsibility for Utility Property and Services

At points where the Contractor's operations are on or adjacent to the properties of any utility, including railroads, and damage to which might result in expense, loss, or inconvenience, work shall not commence until arrangements necessary for the protection thereof have been completed.

The Contractor shall cooperate with owners of utilities so that removal and adjustment operations may progress in a timely, responsible, and reasonable manner, duplication of adjustment work may be reduced to a minimum, and services rendered by those parties will not be unnecessarily interrupted.

If any utility service is interrupted as a result of accidental breakage or of being exposed or unsupported, the Contractor shall promptly notify the proper authority and shall cooperate fully with the authority in the restoration of service. If utility service is interrupted, repair work shall be continuous until service is restored. No work shall be undertaken around fire hydrants until provisions for continued service have been approved by the Engineer. The Contractor shall be responsible for any damage to utilities that, in the investigation and determination of the Engineer, is found to be attributable to the Contractor's neglect, means or methods of performing the work. Nothing in this Section shall be construed to be in conflict with Section 107.08.

The Contractor shall comply with all requirements of the Virginia Underground Utility Damage Prevention Act (the Miss Utility law). The Contractor shall not make or begin any excavation or demolition without first notifying the Miss Utility notification center for the area where the project is located. The Contractor shall wait to begin its excavation or demolition until 7:00 a.m. on the third working day following the Contractor's notice to the notification center, unless the underground utilities cannot be marked within that time due to extraordinary circumstances. The Contractor may commence excavation or demolition work only if confirmed through the Ticket Information Exchange (TIE) System, or the Contractor is notified directly, that all applicable utilities have either marked their underground line locations or reported that no lines are present in the work vicinity.

107.10—Restoration of Work Performed by Others

The District may construct or reconstruct any utility service within the construction limits or grant a permit for the same at any time. The Contractor shall not be entitled to any damages occasioned thereby other than a consideration of an extension of time, unless the Contractor's Work is damaged, altered or impeded by the condition.

When authorized by the Engineer, the Contractor shall allow any person, firm, or corporation to make an opening in the highway within the limits of the project upon presentation of a duly executed permit from the District or any municipality for sections within its corporate limits. When directed by the Engineer, the Contractor shall satisfactorily repair portions of the work disturbed by the openings. The work for such repairs as authorized and directed by the Engineer will be paid for in accordance with Section 109.05 and shall be subject to the same conditions as the original work performed.

107.11 – Not Used

107.12—Responsibility for Damage Claims

- (a) The Contractor shall defend, indemnify, and save harmless the Commonwealth, the Commission, and their respective officers, agents, and employees, from and against any suits, actions, or claims for costs, expenses or damages, including attorneys' fees, brought for or on account of any injuries or damages received or sustained by any persons or property resulting from or arising out of the following:
 - 1. the Work performed by the Contractor;
 - 2. by or in consequence of any neglect in safeguarding the Work by the Contractor;
 - 3. through the use of unacceptable materials in the construction or the improvement; or
 - 4. resulting from any act, omission, neglect, or misconduct of the Contractor.

The Executive Director may retain as much of the monies due or to become due the Contractor under and by virtue of his Contract as the District considers necessary to ensure that a fund will be available to pay a settlement or judgment of such suits, actions, or claims. If no monies are due, the Contractor's surety and insurers will be held accountable until all such suits, claims and actions have been settled and suitable evidence to that effect has been furnished the Commission. Any extension of time granted the Contractor, in which to complete the Contract shall not relieve him or his surety of this responsibility.

- (b) It is not intended by any of the provisions of any part of the Contract to establish the public or any member thereof as a third party beneficiary of the Contract, or to authorize anyone not a party to the Contract to enter into a suit for personal injuries or property damage pursuant to the terms or provisions of the Contract.
- (c) The Contractor shall comply with all requirements, conditions, and terms of the Contract, including but not limited to, environmental permits, commitments identified in the Contract, and applicable environmental laws and regulations. The Contractor shall not cause damage, except as allowed under the terms of the Contract, or as allowed under applicable permits or laws, to the air, water, soil, or other natural resources, or cause damage to adjacent or off-site property. When any act, omission, or work performed or neglected by

other action of the Contractor occurs, that violates the requirements, conditions, or terms of the Contract, and affects the health, safety, or welfare of the public or natural resources, the Engineer will direct the Contractor to take prompt action to repair, replace, or restore the damage or injury within a time frame established by the Engineer, and to comply with Section 107.01. If the Contractor fails to make such repair, replacement, or restoration within the established time frame, the Engineer will have the damage or injury repaired, replaced, or restored and will deduct the cost of such repair, replacement, or restoration from monies due or to become due the Contractor.

(d) If the District determines by its own investigation that injury or damage has occurred as a result of an act, omission, or work performed or neglected by the Contractor, the District may suspend the Contractor from future bidding for a period of time commensurate with the severity of the injury or damage as determined by the Engineer. Injury is defined as harm or impairment to persons, property or natural resources. Damage is defined as the loss or harm resulting from an injury. In addition, the District may recover either (i) the loss or damage that the District suffers as a result of such act, omission or other action or (ii) any liquidated damages established in such Contract; plus (iii) reasonable attorney's fees, expert witness fees, staff salaries, incidental and equipment charges associated with any investigation.

Upon the District's determination that injury or damage has occurred as a result of an act, omission, or work performed or neglected by the Contractor, the Contractor shall be responsible for and shall reimburse the District for all expenses associated with the injury or damage. Expenses include, but are not limited to: costs for investigating the injury or damage, financial penalties incurred by the District as a result of the injury or damage, salary and expenses incurred by employees or consultants of the District, road user expenses as determined by the District due to damage or loss of use of the project area, attorneys' fees, and expert witness fees. The District may deduct the reimbursement of expenses from any payments due or to become due the Contractor.

Upon determination by the District of willful, flagrant, or repetitious acts, omissions, or work performed or neglected by the Contractor related to injury or damage as provided in this Section, the Contractor shall in addition to reimbursing the District for all expenses as provided herein, be subject to other appropriate sanctions, as permitted by law, policy, and Specifications, including but not limited to, suspension of work, termination for default, and removal from the bidders' list.

If the Contractor disputes the District's determination in any respect, the Contractor, may submit a claim in accordance with Section 105.19.

107.13 – Not Used

107.14 – Not Used

107.15 – Not Used

107.16—Environmental Stipulations

By signing the bid, the bidder shall have stipulated (1) that any facility to be used in the performance of the Contract (unless the Contract is exempt under the Clean Air Act as amended [42 U.S.C. 1857, et seq., as amended by P.L. 91-604], the Federal Water Pollution Control Act as amended [33 U.S.C. 1251 et seq. as amended by P.L. 92-500], and Executive Order 11738 and regulations in implementation thereof [40 C.F.R., Part 15]) is not listed on the EPA's List of Violating Facilities pursuant to 40 C.F.R. 15.20; and (2) that the bidder shall promptly notify Department prior to the award of the Contract if the bidder receives any communication from the Director, Office of Federal Activities, EPA, indicating that a facility to be used for the Contract is under consideration to be listed on the EPA's List of Violating Facilities.

No separate payment will be made for the work or precautions described herein except where provided for as a specific item in the Contract or except where provision has been made for such payment in these Specifications.

(a) **Erosion and Siltation:** The Contractor shall exercise every reasonable precaution, including temporary and permanent soil stabilization measures, throughout the duration of the project to control erosion and prevent siltation of adjacent lands, rivers, streams, wetlands, lakes, and impoundments. Soil stabilization and/or erosion control measures shall be applied to erodible soil or ground materials exposed by any activity associated with construction, including clearing, grubbing, and grading, but not limited to local or on-site sources of materials, stockpiles, disposal areas, and haul roads.

The Contractor shall comply with Sections 301.02 and 303.03. Should the Contractor as a result of negligence or noncompliance, fail to provide soil stabilization in accordance with these specifications, the cost of temporary soil stabilization in accordance with Section 303 shall be at the Contractor's expense. If the delay in stabilizing an exposed area of land is due to circumstances beyond the Contractor's control, the District will be responsible for the expense.

Temporary measures shall be coordinated with the work to ensure effective and continuous erosion and sediment control. Permanent erosion control measures and drainage facilities shall be installed as the work progresses.

For projects that disturb 2,500 square feet or greater the Contractor shall have within the limits of the project during land disturbance activities, an employee certified by VDOT in erosion and sediment control who shall inspect erosion and sediment control and pollution prevention practices, devices and measures for proper installation and operation and promptly report their findings to the Inspector. Failure on the part of the Contractor to maintain appropriate erosion and sediment control or pollution prevention devices in a functioning condition may result in the Engineer notifying the Contractor in writing of specific deficiencies. Deficiencies shall be corrected immediately or as otherwise directed by the Engineer. If the Contractor fails to correct or take appropriate actions to correct the specified deficiencies within 24 hours (or as otherwise directed) after receipt of such notification, the District may do one or more of the following: require the Contractor to suspend work in other areas and concentrate efforts towards correcting the specified deficiencies,

withhold payment of monthly progress estimates, or proceed to correct the specified deficiencies and deduct the entire cost of such work from monies due the Contractor. Failure on the part of the Contractor to maintain a VDOT certified erosion and sediment control employee within the project limits when land disturbance activities are being performed will result in the Engineer suspending work related to any land disturbance activity until such time as the Contractor is in compliance with this requirement.

(b) **Pollution:**

1. **Water:** The Contractor shall exercise every reasonable precaution throughout the duration of the project to prevent pollution of rivers, streams, and impoundments. Pollutants such as, but not limited to, chemicals, fuels, lubricants, bitumens, raw sewage, paints, sedimentation, and other harmful material shall not be discharged into or alongside rivers, streams, or impoundments or into channels leading to them. The Contractor shall provide the Engineer a contingency plan for reporting and immediate actions to be taken in the event of a dump, discharge, or spill within 8 hours after he has mobilized to the project site.

Construction discharge water shall be filtered to remove deleterious materials prior to discharge into state waters. Filtering shall be accomplished by the use of a standard dewatering basin or a dewatering bag or other measures approved by the Engineer. Dewatering bags shall conform to Section 245. During specified spawning seasons, discharges and construction activities in spawning areas of state waters shall be restricted so as not to disturb or inhibit aquatic species that are indigenous to the waters. Neither water nor other effluence shall be discharged onto wetlands or breeding or nesting areas of migratory waterfowl. When used extensively in wetlands, heavy equipment shall be placed on mats. Temporary construction fills and mats in wetlands and flood plains shall be constructed of approved non-erodible materials and shall be removed by the Contractor to natural ground when the Engineer so directs.

If the Contractor dumps, discharges, or spills any oil or chemical that reaches or has the potential to reach a waterway, he shall immediately notify all appropriate jurisdictional state and federal agencies in accordance with Sections 107.01 and 107.16(e) and the VP-DES *General Permit For Discharge of Stormwater From Construction Activities* and shall take immediate actions to contain, remove, and properly dispose of the oil or chemical.

Solids, sludges, or other pollutants removed in the course of the treatment or management of pollutants shall be disposed of in a manner that prevents any pollutant from such materials from entering surface waters in compliance with all applicable state and federal laws and regulations.

Excavation material shall be disposed of in approved areas above the mean high water mark shown on the plans in a manner that will prevent the return of solid or suspended materials to state waters. If the mark is not shown on the plans, the mean high water mark shall be considered the elevation of the top of stream banks.

Constructing new bridge(s) and dismantling and removing existing bridge(s) shall be accomplished in a manner that will prevent the dumping or discharge of construction or disposable materials into rivers, streams, or impoundments.

Construction operations in rivers, streams, or impoundments shall be restricted to those areas where identified on the plans and to those that must be entered for the construction of structures. Rivers, streams, and impoundments shall be cleared of falsework, piling, debris, or other obstructions placed therein or caused by construction operations. Stabilization of the streambed and banks shall occur immediately upon completion of work or if work is suspended for more than 14 days.

The Contractor shall prevent stream constriction that would reduce stream flows below the minimum, as defined by the State Water Control Board, during construction operations.

If it is necessary to relocate an existing stream or drainage facility temporarily to facilitate construction, the Contractor shall design and provide temporary channels or culverts of adequate size to carry the normal flow of the stream or drainage facility. The Contractor shall submit a temporary relocation design to the Engineer for review and acceptance in sufficient time to allow for discussion and correction prior to beginning the work the design covers. Costs for the temporary relocation of the stream or drainage facility shall be included in the Contract price for the related pipe or box culvert, unless specifically provided for under another Pay Item. Stabilization of the streambed and banks shall occur immediately upon completion of, or during the work or if the work is suspended for more than 14 days.

2. **Air:** The Contractor shall comply with Section 107.01 and the State Air Pollution Control Law and Rules of the State Air Pollution Control Board, including notifications required therein.

Asphalt mixing plants shall be designed, equipped, and operated so that the amount and quality of air pollutants emitted will conform to the rules of the State Air Pollution Control Board.

3. **Noise:** The Contractor's operations shall be performed so that exterior noise levels measured during a noise-sensitive activity shall not exceed 80 decibels. Such noise level measurements shall be taken at a point on the perimeter of the construction limit that is closest to the adjoining property on which a noise sensitive activity is occurring. A noise-sensitive activity is any activity for which lowered noise levels are essential if the activity is to serve its intended purpose and not present an unreasonable public nuisance. Such activities include, but are not limited to, those associated with residences, hospitals, nursing homes, churches, schools, libraries, parks, and recreational areas.

The District may monitor construction-related noise. If construction noise levels exceed 80 decibels during noise sensitive activities, the Contractor shall take corrective action before proceeding with operations. The Contractor shall be responsible for costs

associated with the abatement of construction noise and the delay of operations attributable to noncompliance with these requirements.

The District may prohibit or restrict to certain portions of the project any work that produces objectionable noise between 10 PM and 6 AM. If other hours are established by local ordinance, the local ordinance shall govern.

Equipment shall in no way be altered so as to result in noise levels that are greater than those produced by the original equipment.

When feasible, the Contractor shall establish haul routes that direct his vehicles away from developed areas and ensure that noise from hauling operations is kept to a minimum.

These requirements shall not be applicable if the noise produced by sources other than the Contractor's operation at the point of reception is greater than the noise from the Contractor's operation at the same point.

(c) **Forest Fires:** The Contractor shall take all reasonable precautions to prevent and suppress forest fires in any area involved in construction operations or occupied by him as a result of such operations. The Contractor shall cooperate with the proper authorities of the state and federal governments in reporting, preventing, and suppressing forest fires. Labor, tools, or equipment furnished by the Contractor upon the order of any forest official issued under authority granted the official by law shall not be considered a part of the Contract. The Contractor shall negotiate with the proper forest official for compensation for such labor, tools, or equipment.

(d) **Archeological, Paleontological, and Rare Mineralogical Findings:** In the event of the discovery of prehistoric ruins, Indian or early settler sites, burial grounds, relics, fossils, meteorites, or other articles of archeological, paleontological, or rare mineralogical interest during the prosecution of work, the Contractor shall act immediately to suspend work at the site of the discovery and notify the Engineer. The Engineer will immediately notify the proper state authority charged with the responsibility of investigating and evaluating such finds. The Contractor shall cooperate and, upon the request of the Engineer, assist in protecting, mapping, and removing the findings. Labor, tools, or equipment furnished by the Contractor for such work will be paid for in accordance with Section 104.03. Findings shall become the property of the Commonwealth unless they are located on federal lands, in which event they shall become the property of the U.S. government.

When such findings delay the progress or performance of the work, the Contractor shall notify the Engineer in accordance with Sections 108.03 and Section 109.05.

(e) **Storm Water Pollution Prevention Plan and VPDES General Permit for the Discharge of Stormwater from Construction Activities**

A Stormwater Pollution Prevention Plan (SWPPP) identifies potential sources of pollutants

which may reasonably be expected to affect the stormwater discharges from the construction site and any on-site or off-site support facilities located on District rights of way and easements. The SWPPP also describes and ensures implementation of practices which will be used to minimize or prevent pollutants in such discharges.

The SWPPP shall include, but not be limited to, the approved Erosion and Sediment Control (ESC) Plan, the approved Stormwater Management (SWM) Plan (if applicable), the approved Pollution Prevention Plan and all related Specifications, Standards, and notes contained within all Contract documents and shall be required for all land-disturbing activities that disturb 2,500 square feet or greater.

Land-disturbing activities that disturb one acre or greater require coverage under the Department of Environmental Quality's VPDES General Permit for the Discharge of Stormwater from Construction Activities (hereafter referred to as the VPDES Construction Permit). The Contractor shall be responsible for securing VPDES Construction Permit coverage and complying with all permit conditions.

The required contents of a SWPPP for those land disturbance activities requiring coverage under the VPDES Construction Permit are found in Section II of the permit.

While a SWPPP is an important component of the VPDES Construction Permit, it is only one of the many requirements that must be addressed in order to be in full compliance with the conditions of the permit.

The Contractor and all other persons that oversee or perform activities covered by the VPDES Construction Permit shall be responsible for reading, understanding, and complying with all of the terms, conditions, and requirements of the permit and the project's SWPPP including, but not limited to, the following:

1. Project Implementation Responsibilities

The Contractor shall be responsible for the installation, maintenance, inspection, and, on a daily basis, ensuring the functionality of all erosion and sediment control measures and all other stormwater runoff control and pollution prevention measures identified within or referenced within the SWPPP, the construction plans, the specifications, all applicable permits, and all other Contract documents.

The Contractor shall be solely responsible for the temporary erosion and sediment control protection and permanent stabilization of all borrow areas and soil disposal areas.

The Contractor shall prevent or minimize any stormwater or non-stormwater discharge that will have a reasonable likelihood of adversely affecting human health or public and/ or private properties.

2. Unauthorized Discharges and Reporting Requirements

The Contractor shall not discharge into state waters sewage, industrial wastes, other

wastes, or any noxious or deleterious substances nor shall he otherwise alter the physical, chemical, or biological properties of such waters that render such waters detrimental for or to domestic use, industrial consumption, recreational, or other public uses.

a. Notification of non-compliant discharges

The Contractor shall immediately notify the Engineer upon the discovery of or the potential of any unauthorized, unusual, extraordinary, or non-compliant discharge from the land construction activity or any of support facilities located on District right of way or easement. Where immediate notification is not possible, such notification shall be not later than 24 hours after said discovery.

b. Detailed report requirements for non-compliant discharges

The Contractor shall submit to the Engineer within 5 days of the discovery of any actual or potential non-compliant discharge a written report describing details of the discharge to include a description of the nature and location of the discharge; the cause of the discharge; the date of occurrence; the length of time that the discharge occurred, the volume of the discharge; the expected duration and total volume if the discharge is continuing; a description of any apparent or potential effects on private and/or public properties and state waters or endangerment to public health; and any steps planned or taken to reduce, eliminate, and prevent a recurrence of the discharge.

3. Changes and Deficiencies

The Contractor shall report to the Engineer when any planned physical alterations or additions are made to the land disturbing activity or deficiencies in the project plans or Contract are discovered that could significantly change the nature of or increase the potential for pollutants discharged from the land disturbing activity to surface waters and that have not previously been addressed in the SWPPP.

4. Amendments, Modifications, Revisions and Updates to the SWPPP

- a. The Contractor shall amend the SWPPP whenever site conditions, construction sequencing or scheduling necessitates revisions or modifications to the erosion and sediment control plan, the pollution prevention plan, or any other component of the SWPPP for the land disturbing activity or onsite support facilities.
- b. The Contractor shall amend the SWPPP to identify any additional or modified erosion and sediment control and pollution prevention measures implemented to correct problems or deficiencies identified through any inspection or investigation process.
- c. The Contractor shall amend the SWPPP to identify any new or additional person(s)

or Contractor(s) not previously identified that will be responsible for implementing and maintaining erosion and sediment control and pollution prevention devices.

- d. The Contractor shall update the SWPPP to include:
 - 1) A record of dates when major grading activities occur, construction activities temporarily or permanently cease on a portion of the site, and stabilization measures are initiated.
 - 2) Documentation of replaced or modified erosion and sediment control and pollution prevention controls where periodic inspections or other information have indicated that the controls have been used inappropriately or incorrectly.
 - 3) Identification of areas where final stabilization has occurred and where no further SWPPP or inspection requirements apply.
 - 4) The date of any prohibited discharges, the discharge volume released, and what actions were taken to minimize the impact of the release.
 - 5) A description of any measures taken to prevent the reoccurrence of any prohibited discharge.
 - 6) A description of any measures taken to address any issues identified by the required erosion and sediment control and pollution prevention inspections.
- e. The Contractor shall update the SWPPP no later than 7 days after the implementation and/or the approval of any amendments, modifications, or revisions to the erosion and sediment control plan, the pollution prevention plan, or any other component of the SWPPP.
- f. The record set of plans shall be maintained with other SWPPP documents on the project site or at a location convenient to the project site where no onsite facilities are available.

107.17—Construction Safety and Health Standards

- (a) In the performance of this Contract the Contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The Contractor, subcontractors at any tier, and their respective employees, agents and invitees, shall at all times while in or around the project site comply with all applicable laws, regulations, provisions, and policies governing safety and health under the Virginia Occupational Safety and Health (VOSH) Standards adopted under the Code of Virginia, and any laws, regulations, provisions, and policies incorporated by reference including but not limited to the Federal Construction Safety Act (Public Law 9 1-54), 29 CFR Chapter XVII, Part 1926, Occupational Safety and Health Regulations for Construction, and the Occupation Safety and Health Act (Public Law 9 1-596), 29 CFR Chapter XVII, Part 1910 Occupational

Safety and Health Standards for General Industry, and subsequent publications updating these regulations.

- (b) The Contractor shall provide all safeguards, safety devices and protective equipment, and take any other needed actions as it determines, or as the Engineer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public, and to protect property in connection with the performance of the Work. The Contractor shall be responsible for maintaining and supervising all safety and health protections and programs to ensure compliance with this Section. The Contractor shall routinely inspect the project site for safety and health violations. The Contractor shall immediately abate any violations of the safety and health requirements or duties at no cost to the District.
- (c) It is a condition of this Contract, and shall be made a condition of each subcontract, which the Contractor enters into pursuant to this Contract, that the Contractor and any subcontractor shall not permit any employees, in performance of the Contract, to work in surroundings or under conditions which are unsanitary, hazardous, or dangerous to their health or safety, as determined by the Virginia Work Area Protection Manual or under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).
- (d) VOSH personnel, on all Federal-aid construction contracts and related subcontracts, pursuant to 29 CFR 1926.3, the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out their duties.

107.18—Sanitary Provisions

The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of employees as may be necessary to comply with the requirements of the state and local Board of Health or other bodies or tribunals having jurisdiction.

107.19—Railway-Highway Provisions

If the Contractor's work requires hauling materials across the tracks of a railway, he shall make arrangements with the railway for any new crossing(s) required. Access to existing rail crossings with off-road heavy equipment shall also be arranged by the Contractor. Charges made by the railway company for the construction or use of new or existing crossings and their subsequent removal and for watchperson or flagger service at such crossings shall be reimbursed by the Contractor directly to the railway company under the terms of their separate individual arrangements before final acceptance.

Work to be performed by the Contractor in construction on or over the railway right of way shall be

performed at times and in a manner that will not unnecessarily interfere with the movement of trains or traffic on the railway track. The Contractor shall use care to avoid accidents, damage, or unnecessary delay or interference with the railway company's trains or other property. If any interruption of railway traffic is required by the Contractor's actions, he shall obtain prior written approval from the railway company.

The Contractor shall conduct operations that occur on or over the right of way of any railway company fully within the rules, regulations, and requirements of the railway company and in accordance with the requirements of any agreements made between the District and the railway company that are a part of the Contract. Said agreements are included within the Contract.

(a) **Flagger or Watchperson Services:** Flagger or watchperson services required by the railway company for the safety of railroad operations because of work being performed by the Contractor or incidental thereto will be provided by the railway company. The cost for such services as required for work shown on the plans will be borne by the District. Any cost of such services resulting from work not shown on the plans or for the Contractor's convenience shall be borne by the Contractor and shall be paid directly to the railway company(s) under the terms of their separate individual agreement.

No work shall be undertaken on or over the railway right of way until the watchpersons or flaggers are present at the project site. The Contractor shall continuously prosecute the affected work to completion to minimize the need for flagger or watchperson services. Costs for such services that the Engineer determines to be unnecessary because of the Contractor's failure to give notice as required herein before; initially starting, intermittently continuing, or discontinuing work on or over the railway right of way shall be borne by the Contractor and will be deducted from monies due him.

(b) **Approval of Construction Methods on Railway Right of Way:** The Contractor shall submit to the District a plan of operations showing the design and method of proposed structural operations and shall obtain its approval before performing any work on the railway company's right of way unless otherwise indicated in the railroad agreement. The plan shall be clear and legible, and details shall be drawn to scale. The plan shall incorporate any stipulations or requirements the railroad may impose for the evaluation of the Contractor's contemplated operations. The plan shall show, but not be limited to, the following:

1. Proximity of construction operations to tracks.
2. Depth of excavation with respect to tracks.
3. Description of structural units.
4. Vertical and horizontal clearances to be afforded the railroad during installation and upon completion of excavation.
5. Sheeting and bracing.
6. Method and sequence of operations.

Approval shall not relieve the Contractor of any liability under the Contract. The Contractor shall arrange the work so as not to interfere with the railway company's operation except by agreement with the railway company.

(c) **Insurance:** In addition to insurance or bonds required under the terms of the Contract, the Contractor shall carry insurance covering operations affecting the property of the railway company. The original railroad protective liability insurance policy and certificate of insurance showing insurance carried by the Contractor and any subcontractors shall be submitted to the railway company for approval and retention.

Neither the Contractor nor any subcontractor shall begin any work affecting the railway company until the railway company has received the insurance.

Notice of any material change in or cancellation of the required policies shall be furnished the District and the railway company at least 30 days prior to the effective date of the change or cancellation. The insurance shall be of the following kinds and amounts:

1. **Contractor's public liability and property damage insurance:** The Contractor shall furnish evidence to the District with respect to the operations to be performed that he carries regular contractor's public liability insurance. The insurance shall provide for a limit of at least the dollar value specified in the Contract for all damages arising out of bodily injuries to or the death of one person, and subject to that limit for each person, a total limit of at least the dollar value specified in the Contract for all damages arising out of bodily injuries to or death of two or more persons in any one occurrence, and regular contractor's property damage insurance providing for a limit of at least the dollar value specified in the Contract for all damages arising out of bodily injury to or destruction of property in any one occurrence, and subject to that limit per occurrence, a total or aggregate limit of at least the dollar value specified in the Contract for all damages arising out of injury to or destruction of property during the policy period. The Contractor's public liability and property damage insurance shall include explosion, collapse, and underground damage coverage. If the Contractor subcontracts any portion of the work, he shall secure insurance protection in his own behalf under the Contract's public liability and property damage insurance policies to cover any liability imposed on him by law for damages because of bodily injury to, or death of persons and injury to, or destruction of property as a result of work undertaken by the subcontractors. In addition, the Contractor shall provide similar insurance protection for and on behalf of any subcontractors to cover their operation by means of separate and individual contractor's public liability and property damage policies. As an alternative, he shall require each subcontractor to provide such insurance in his own behalf.
2. **Railroad protective insurance and public liability and property damage:** The policy furnished the railway company shall include coverage for contamination, pollution, explosion, collapse, and underground damage. The policy shall be of the type specified hereinafter and shall be expressed in standard language that may not be amended. No part shall be omitted except as indicated hereinafter or by an endorsement

that states an amendment or exclusion of some provision of the form in accordance with the provisions of a manual rule. The form of the endorsement shall be approved as may be required by the supervising authority of the state in which the policy is issued. A facsimile of the Policy Declarations form as shown in the proposal shall be made a part of the policy and shall be executed by an officer of the insurance company. The several parts of the requirements and stipulations specified or inferred herein may appear in the policy in such sequence as the company may elect.

a. **For a policy issued by one company:**

NAME AND LOCATION OF INDEMNITY COMPANY, a Type of Company, Insurance Company, herein called the Company, agrees with the insured named in the Policy Declarations made a part hereof, in consideration of the payment of the premium and in reliance upon the statements in the Policy Declarations made by the named insured and subject to all of the terms of his policy.

For a policy issued by two companies:

NAME AND LOCATION OF INDEMNITY COMPANY and NAME AND LOCATION OF INDEMNITY COMPANY, each Insurance Company, Type of Company, herein called the Company, severally agree with the insured named in the Policy Declarations made a part hereof, in consideration of the payment of the premium and in reliance upon the statements in the Policy Declaration made by the named insured and subject to all of the terms of this policy, provided the named Indemnity Company shall be the insured with respect to Coverage and no other and the named Insurance Company shall be the insurer with respect to Coverage and no other.

b. **Insuring agreements:**

- 1) **Coverages: Coverage A—Bodily injury liability:** To pay on behalf of the insured all sums that the insured shall become legally obligated to pay as damages because of bodily injury, sickness, or disease including death at any time resulting therefrom (hereinafter called bodily injury) either (1) sustained by any person arising out of acts or omissions at the designated job site that are related to or are in connection with the work described in Item 6 of the Policy Declarations; or (2) sustained at the designated job site by the Contractor, any employee of the Contractor, any employee of the governmental authority specified in Item 5 of the Policy Declarations, or any designated employee of the insured, whether or not arising out of such acts or omissions.

Coverage B—Property damage liability: To pay on behalf of the insured all sums the insured shall become legally obligated to pay as damages because of physical injury to or destruction of property, including loss of use of any property because of such injury or destruction (hereinafter called property damage) arising

out of acts or omissions at the designated job site that are related to or are in connection with the work described in Item 6 of the Policy Declarations.

Coverage C—Physical damage to property: To pay for direct and accidental loss of or damage to rolling stock and other contents, mechanical construction equipment, or motive power equipment (hereinafter called loss) arising out of acts or omissions at the designated job site that are related to or are in connection with the work described in Item 6 of the Policy Declarations; provided such property is owned by the named insured or is leased or entrusted to the named insured under a lease or trust agreement.

- 2) **Definitions:** *Insured* means and includes the named insured and any executive officer, director, or stockholder thereof while acting within the scope of his duties as such. *Contractor* means the Contractor designated in Item 4 of the Policy Declarations and includes all subcontractors of the Contractor but not the named insured. *Designated employee* of the insured means (1) any supervisory employee of the insured at the job site; (2) any employee of the insured while operating, attached to, or engaged on work trains or other railroad equipment at the job site that is assigned exclusively to the Contractor; or (3) any employee of the insured not within (1) or (2) who is specifically loaned or assigned to the work of the Contractor for prevention of accidents or protection of property, the cost of whose services is borne specifically by the Contractor or governmental authority. *Contract* means any contract or agreement to carry a person or property for a consideration or any lease, trust, or interchange contract or agreement respecting motive power, rolling stock, or mechanical construction equipment.
- 3) **Defense and settlement supplementary payments:** With respect to such insurance as is afforded by this policy under Coverages A and B, the Company shall defend any suit against the insured alleging such bodily injury or property damage and seeking damages that are payable under the terms of this policy, even if any of the allegations of the suit are groundless, false, or fraudulent. However, the Company may make such investigation and settlement of any claim or suit as it deems expedient.

In addition to the applicable limits of liability, the Company shall pay (1) all expenses incurred by the company, all costs taxed against the insured in any such suit, and all interest on the entire amount of any judgment therein that accrues after entry of the judgment and before the Company has paid or tendered or deposited in court that part of the judgment that does not exceed the limit of the Company's liability thereon; (2) premiums on appeal bonds required in any such suit and premiums on bonds to release attachments for an amount not in excess of the applicable limit of liability of this policy, but without obligation to apply for or furnish any such bonds; (3) expenses incurred by the insured for first aid to others that shall be imperative at the time of the occurrence; and (4) all reasonable expenses, other than loss of earnings, incurred by the insured at the Company's request.

- 4) **Policy period and territory:** This policy applies only to occurrences and losses during the policy period and within the United States, its territories or possessions, or Canada.
 - c. **Exclusions:** This policy does not apply to the following:
 - 1) Liability assumed by the insured under any contract or agreement except a contract as defined herein.
 - 2) Bodily injury or property damage caused intentionally by or at the direction of the insured.
 - 3) Bodily injury, property damage, or loss that occurs after notification to the named insured of the acceptance of the work by the governmental authority, other than bodily injury, property damage, or loss resulting from the existence or removal of tools, uninstalled equipment, and abandoned or unused materials.
 - 4) Under Coverage A(1), B, and C, to bodily injury, property damage, or loss, the sole proximate cause of which is an act or omission of any insured.
 - 5) Under Coverage A, to any obligation for which the insured or any carrier as his insurer may be held liable under any workers' compensation, employment compensation, or disability benefits law or under any similar law; provided that the Federal Employer's Liability Act, U.S. Code (1946) Title 45, Sections 51-60, as amended, shall for the purpose of this insurance be deemed not to be any similar law.
 - 6) Under Coverage B, to injury to or destruction of property owned by the named insured or leased or entrusted to the named insured under a lease or trust agreement.
 - 7) Under any liability coverage, to injury, sickness, disease, death, or destruction (1) with respect to which an insured under the policy is also an insured under a nuclear energy liability policy issued by the Nuclear Energy Liability Insurance Association, Mutual Atomic Energy Liability Underwriters, or Nuclear Insurance Association of Canada or would be an insured under any such policy but for its termination upon exhaustion of its limit of liability; or (2) resulting from the hazardous properties of nuclear material and with respect to which any person or organization is required to maintain financial protection pursuant to the Atomic Energy Act of 1954 or any law amendatory thereof or the insured is (or had this policy not been issued would be) entitled to indemnity from the United States or any agency thereof under any agreement entered into by the United States, or any agency thereof, with any person or organization.

- 8) Under any Medical Payments Coverage or any Supplementary Payments provision relating to immediate medical or surgical relief or to expenses incurred with respect to bodily injury, sickness, disease, or death resulting from the hazardous properties of nuclear material and arising out of the operation of a nuclear facility by any person or organization.
- 9) Under any liability coverage, to injury, sickness, disease, death, or destruction resulting from the hazardous properties of nuclear material if (1) the nuclear material is at any nuclear facility owned or operated by or on behalf of an insured or has been discharged or dispersed therefrom; (2) the nuclear material is contained in spent fuel or waste at any time possessed, handled, used, processed, stored, transported, or disposed of by or on behalf of an insured; or (3) the injury, sickness, disease, death, or destruction arises out of the furnishing by an insured of services, materials, or parts for equipment in connection with the planning, construction, maintenance, operation, or use of any nuclear facility; if such facility is located in the United States, its territories or possessions, or Canada, this exclusion applies only to injury to or destruction of property at such nuclear facility.
- 10) Under Coverage C, to loss attributable to nuclear reaction, nuclear radiation, or radioactive contamination or to any act or condition incident to any of the foregoing.
- 11) As used in exclusions (7), (8), and (9), the following definitions apply:

Disposable material means material containing byproduct material and resulting from the operation by any person or organization of any nuclear facility included in the definition of nuclear facility under (i) or (ii) below.

Hazardous properties include radioactive, toxic, or explosive properties.

Injury or destruction with respect to injury to or destruction of property, includes all forms of radioactive contamination of property.

Nuclear facility means:

- a) Any nuclear reactor.
- b) Any equipment or device designed or used for separating the isotopes of uranium or plutonium; processing or utilizing spent fuel; or handling, processing, or packaging waste.
- c) Any equipment or device designed or used for the processing, fabricating, or alloying of special nuclear material if at any time the total amount of such material in the custody of the insured at the premises where such equipment or device is located consists of or contains more than 25 grams

of plutonium or uranium 233 (or any combination thereof) or more than 250 grams of uranium 235.

- d) Any structure, basin, excavation, premises, or place prepared or used for the storage or disposal of waste (includes the site on which any of the foregoing is located, all operation conducted on such site, and all premises used for such operations).

Nuclear material means source material, special nuclear material, or byproduct material.

Nuclear reactor means any apparatus designed or used to sustain nuclear fission in a self-supporting chain reaction or to contain a critical mass of fissionable material.

Source material, special nuclear material, and byproduct material have the meanings given them in the Atomic Energy Act of 1954 or in any law amendatory thereof.

Spent fuel means any fuel element or fuel component (solid or liquid) that has been used or exposed to radiation in a nuclear reaction.

- d. **Conditions:** The following conditions, except conditions (3) through (12), apply to all coverages. Conditions (3) through (12) apply only to the coverage noted thereunder.

- 1) **Premium:** The premium bases and rates for the hazards described in the Policy Declarations are stated therein. Premium bases and rates for hazards not so described are those applicable in accordance with the requirements of the manuals used by the Company. The term "Contract cost" means the total cost of all work described in Item 6 of the Policy Declaration. The term "rental cost" means the total cost to the Contractor for rental or work trains or other railroad equipment, including the remuneration of all employees of the insured while operating, attached to, or engaged thereon. The advance premium stated in the Policy Declarations is an estimated premium only. Upon termination of this policy, the earned premium shall be computed in accordance with the Company's rules, rates, rating plans, premiums, and minimum premiums applicable to this insurance. If the earned premium thus computed exceeds the estimated advance premium paid, the Company shall look to the Contractor specified in the Policy Declarations for any such excess. If the earned premium is less than the estimated advance premium paid, the Company shall return to the Contractor the unearned portion paid. In no event shall payment or premium be an obligation of the named insured.
- 2) **Inspection:** The named insured shall make available to the Company records of information relating to the subject matter of this insurance. The Company

shall be permitted to inspect all operations in connection with the work described in Item 6 of the Policy Declarations.

- 3) **Limits of liability, Coverage A:** The limit of bodily injury liability stated in the Policy Declarations as applicable to “each person” is the limit of the Company’s liability for all damages (including damages for care and loss of services) arising out of bodily injury sustained by one person as the result of any one occurrence. The limit of such liability stated in the Policy Declarations as applicable to “each occurrence” is (subject to the provision respecting each person) the total limit of the Company’s liability for all such damage arising out of bodily injury sustained by two or more persons as the result of any one occurrence.
- 4) **Limits of liability, Coverages B and C:** The limit of liability under Coverages B and C stated in the Policy Declarations as applicable to “each occurrence” is the total limit of the Company’s liability for all damages and all loss under Coverages B and C combined arising out of physical injury to, destruction of, or loss of all property of one or more persons or organizations, including the loss or use of any property attributable to such injury or destruction under Coverage B, as the result of any one occurrence. Subject to the provision respecting “each occurrence”, the limit of liability under Coverages B and C stated in the Policy Declaration as “aggregate” is the total limit of the Company’s liability for all damages and all loss under Coverages B and C combined arising out of physical injury to, destruction of, or loss of property, including the loss or use of any property attributable to such injury or destruction under Coverage B. Under Coverage C, the limit of the Company’s liability for loss shall not exceed the actual cash value of the property, or if the loss is a part thereof, the actual cash value of such part, at time of loss, nor what it would then cost to repair or replace the property of such part thereof with other of like kind and quality.
- 5) **Severability of interests, Coverages A and B:** The term the insured is used severally and not collectively. However, inclusion herein of more than one insured shall not operate to increase the limits of the Company’s liability.
- 6) **Notice:** In the event of an occurrence or loss, written notice containing particulars sufficient to identify the insured and also reasonably obtainable information with respect to the time, place, and circumstances thereof and the names and addresses of the injured and of able witnesses shall be given by or for the insured to the Company or any of its authorized agents as soon as is practicable. If a claim is made or a suit is brought against the insured, he shall immediately forward to the Company every demand, notice, summons, or other process received by him or his representative.
- 7) **Assistance and cooperation of the insured, Coverages A and B:** The insured shall cooperate with the Company and upon the Company’s request attend hearings and trials and assist in making settlements, securing and giving evidence,

obtaining the attendance of witnesses, and conducting suits. Except at his own cost, the insured shall not voluntarily make any payment, assume any obligations, or incur any expense other than for first aid to others that shall be imperative at the time of an accident.

- 8) **Action against Company, Coverages A and B:** No action shall lie against the Company unless as a condition precedent thereto the insured shall have fully complied with all the terms of this policy, nor until the amount of the insured's obligation to pay shall have been finally determined either by judgment against the insured after actual trial or by written agreement of the insured, the claimant, and the Company. Any person or organization or the legal representative thereof who has secured such judgment or written agreement shall thereafter be entitled to recover under this policy to the extent of the insurance afforded by this policy. No person or organization shall have any right under this policy to join the Company as a part to any action against the insured to determine the insured's liability. Bankruptcy or insolvency of the insured or of the insured's estate shall not relieve the Company of any of its obligations hereunder.
- 9) **Action against Company, Coverage C:** No action shall lie against the Company unless as a condition precedent thereto there shall have been full compliance with all the terms of this policy nor until 30 days after proof of loss is filed and the amount of loss is determined as provided in this policy.
- 10) **Insured's duties in event of loss, Coverage C:** In the event of loss, the insured shall protect the property, whether or not the loss is covered by this policy. Any further loss attributable to the insured's failure to protect shall not be recoverable under this policy. Reasonable expenses incurred in affording such protection shall be deemed incurred at the Company's request.

The insured shall also file with the Company, as soon as practicable after loss, his sworn proof of loss in such form and including such information as the Company may reasonably require and shall, upon the Company's request, exhibit the damaged property.

- 11) **Appraisal, Coverage C:** If the insured and the Company fail to agree as to the amount of loss, either may demand an appraisal of the loss within 60 days after the proof of loss is filed. In such event the insured and the Company shall each select a competent appraiser, and the appraisers shall select a competent and disinterested umpire. An award in writing or any two shall determine the amount of loss. The insured and the Company shall each pay his chosen appraiser and shall bear equally the other expenses of the appraisal and umpire. The Company shall not be held to have waived any of its rights by any act relating to appraisal.
- 12) **Payment of loss, Coverage C:** The Company may pay for the loss in money, but there shall be no abandonment of the damaged property to the Company.

- 13) **No benefit to bailee coverage:** The insurance afforded by this policy shall not enure directly or indirectly to the benefit of any carrier or bailee (other than the named insured) liable for loss to the property.
- 14) **Subrogation:** In the event of any payment under this policy, the Company shall be subrogated to all of the insured's rights of recovery therefor against any person or organization. The insured shall execute and deliver instruments and papers and do whatever else is necessary to secure such rights. The insured shall do nothing after loss to prejudice such rights.
- 15) **Application of insurance:** The insurance afforded by this policy is primary insurance. If the insured has other primary insurance against a loss covered by this policy, the Company shall not be liable under the policy for a greater proportion of such loss than the applicable limit of liability stated in the Contract bears to the total applicable limit of all valid and equitable insurance against such loss.
- 16) **3-year policy:** A policy period of 3 years is comprised of three consecutive annual periods. Computation and adjustment of earned premium shall be made at the end of each annual period. Aggregate limits of liability as stated in this policy shall apply separately to each annual period.
- 17) **Changes:** Notice to any agent of knowledge possessed by any agent or by any other person shall not affect a waiver or a change in any part of this policy or stop the Company from asserting any right under the terms except by endorsement issued to form a part of this policy signed by *provided, however, changes may be made in the written portion of the Policy Declaration by *when initialed by such *or by endorsement issued to form a part of this policy signed by such [*Insert titles of authorized company representatives.]
- 18) **Assignment:** Assignment of interest under this policy shall not bind the Company until its consent is endorsed hereon.
- 19) **Cancellation:** This policy may be cancelled by the named insured by mailing to the Company written notice stating when the cancellation shall become effective. This policy may be cancelled by the Company by mailing to the named insured, Contractor, and governmental authority at the respective addresses shown in this policy written notice stating when such cancellation shall be effective (not less than 30 days thereafter). The mailing of notice shall be sufficient proof of notice. The effective date and hour of cancellation stated in the notice shall become the end of the policy period. Delivery of such written notice either by the named insured or the Company shall be equivalent to mailing. If the named insured cancels, the earned premium shall be computed in accordance with the customary short rate table and procedure. If the Company cancels, the earned premium shall be computed pro rata. The premium may be adjusted either at the

time cancellation is effected or as soon as practicable after the cancellation becomes effective, but payment or tender of unearned premium is not a condition of cancellation.

20) **Policy Declarations:** By acceptance of this policy, the named insured agrees that such statements in the Policy Declarations as are made by him are his agreements and representations, that his policy is issued in reliance on the truth of such representations, and that this policy embodies all agreements existing between himself and the Company or any of its agents relating to this insurance.

e. **For a policy issued by one company:**

In witness whereof the Indemnity Company has caused this policy to be signed by its president and a secretary at _____ and countersigned on the Policy Declarations page by a duly authorized agent of the Company.

(Facsimile of Signature)
Secretary

(Facsimile of Signature)
President

For a policy issued by two companies:

In witness whereof the Indemnity Company has caused this policy with respect to Coverages and such other parts of the policy as are applicable thereto to be signed by its president and a secretary at _____ and countersigned on the Policy Declarations page by a duly authorized agent of the Company.

(Facsimile of Signature)
Secretary

(Facsimile of Signature)
President

f. **Submitting Copies of Insurance Policies:** Prior to beginning construction operations on or over the railway right of way, the Contractor shall submit to the Department evidence of the railway company's approval and a copy of the required insurance policies. The Commonwealth will not be responsible for any claims from the Contractor resulting from delay in the acceptance of any of these policies by the railway company other than consideration of an extension of time. If the delay is caused by the failure of the Contractor or his insurer to file the required insurance policies promptly, an extension of time will not be granted.

g. **Beginning Construction:** Preliminary contingent work or other work by the railway company may delay the starting or continuous prosecution of the work by the Contractor. The Contractor shall be satisfied as to the probable extent of such work and its effect on the operations prior to submitting a bid for the work. The Commonwealth will not be responsible for any claims by the Contractor resulting from such delays except that an extension of time may be considered.

h. Arranging for Tests:

1. **Railroad specifications:** When ordering materials that are to conform to railroad specifications, the Contractor shall notify the railway company, who will arrange for tests. The Contractor shall specify in each order that the materials are to be tested in accordance with the requirements of the railroad specifications and not those of the Department.
2. **Highway Specifications:** When ordering materials that are to conform to highway Specifications, the Contractor shall specify in each order that the materials are to be tested in accordance with the requirements of Department Specifications.

107.20 – Not Used

107.21—Size and Weight Limitations

(a) **Hauling or Moving Material and Equipment on Public Roads Open to Traffic:** The Contractor shall comply with legal size and weight limitations in the hauling or moving of material and equipment on public roads open to traffic unless the hauling or moving is covered by a hauling permit.

Furnishing Items in Component Parts of Sections: If the size or weight of fabricated or manufactured items together with that of the hauling or moving vehicle exceeds the limitations covered by hauling permit policies and other means of transportation are not available, permission will be given to furnish the items in component parts of sections with adequately designed splices or connections at appropriate points. Permission for such adjustments shall be requested in writing, and approval in writing shall be secured from the

District prior to fabrication or manufacture of the items. The request shall state the reasons for adjustment and shall be accompanied by supporting data, including working drawings where necessary.

(b) **Construction Loading of Structures:** In the construction, reconstruction, widening, or repair of bridge, culvert, retaining wall, and other similar type structures including approaches, the Contractor shall consider construction loads during the planning and prosecution of the work. Construction loads include but are not limited to the weight of cranes, trucks, other heavy construction, or material delivery equipment, as well as the delivery or storage of materials placed on or adjacent to the structure or parts thereof during the various stages (phases) of the work in accordance with the Contractor's proposed work plan. The Contractor shall consider the effect(s) of construction loads on the loading capacity of these type structure(s) in his sequencing of the work and operations, including phase construction. At the Engineer's request the Contractor shall be prepared to discuss or review his proposed operations with the Engineer with regard to construction loads to

demonstrate he has taken such into consideration in the planning and execution of the work.

SECTION 108—PROSECUTION AND PROGRESS OF WORK

108.01—Prosecution of Work

The Contractor shall provide sufficient labor, materials, equipment, and tools; and shall prosecute the Work with such means and methods and with such diligence as is required to attain and maintain a rate of progress necessary to ensure completion of the project within the Contract time limit in accordance with the plans, specifications, and other requirements of the Contract.

Once the Contractor has begun work, the Contractor shall prosecute the Work continuously and to the fullest extent possible except for suspensions authorized or ordered by the Engineer according to Section 108.05. If approval is given to suspend the work temporarily, the Contractor shall notify the Engineer at least 24 hours in advance of resuming operations.

The Contractor shall notify the Engineer at least 24 hours in advance of any changes in the Contractor's planned operations or work requiring inspection.

108.02—Limitation of Operations

(a) General

The Contractor shall conduct the work in a manner and sequence that will ensure its expeditious completion with the least interference to traffic and shall have due regard for the location of detours and provisions for handling traffic. The Contractor shall not open any work to the prejudice or detriment of work already started. The Engineer may require the Contractor to finish a section of work before work is started on any other section.

(b) Holidays

Except as is necessary to maintain traffic, work shall not be performed on Sundays or the following holidays, as well as the normal workday preceding and following these holidays, without the permission of the Engineer: January 1, Easter, Memorial Day, July 4, Labor Day, Thanksgiving Day, and Christmas Day.

If any of these holidays occurs on a Sunday, the following Monday shall be considered the holiday. If occurring on Saturday, the preceding Friday will be considered as the Holiday.

If the Holiday occurs on a Sunday or Monday: From noon on the preceding Friday to noon on the following Tuesday.

108.03—Progress Schedule

Unless otherwise indicated in the Contract, the Contractor shall, at a minimum, be governed by the following:

(a) General Requirements

The Contractor shall plan and schedule the work and shall submit his overall work plan in the form of a written Progress Schedule, as described herein, for the Engineer's review and acceptance. The accepted Progress Schedule will be used by the Engineer for planning and coordination of the District activities, resources, and expenditures, and for evaluation of the Contractor's rate of progress and the effects of time-related impacts on the project. When preparing the Progress Schedule, the Contractor shall consider all known constraints and restrictions such as holidays, seasonal, weather, traffic, utility, railroad, right-of-way, environmental, permits, or other known or specified limitations to the work.

At the Pre-Construction Conference the Contractor shall be prepared to discuss his planned or contemplated operations relative to the Contract requirements.

Delays resulting from the Contractor's failure to provide the Progress Schedule will not be considered just cause for extension of the Contract time limit or for additional compensation.

(b) Progress Schedule Submission Requirements

The Contractor shall submit to the Engineer three (3) copies of the written Baseline Progress Schedule at least 7 calendar days prior to beginning work. The Progress Schedule shall represent the Contractor's overall work plan to accomplish the entire scope of work in accordance with the requirements of the Contract. The Progress Schedule shall include all work including, as applicable, the work to be performed by sub-contractors, the District, or others. The Progress Schedule submittal shall consist of a written Narrative to:

- Describe the Contractor's proposed general sequence to accomplish the work;
- Indicate the general schedule of work to be completed each month in terms of the major operations, routes, or segments of work as delineated in the Contract or in the absence of such delineations, as agreed to by the Contractor and the Engineer. A bar-chart schedule may be substituted at the Contractor's option.

The Progress Schedule, including the Initial and any subsequent Revised Progress Schedules requested by the Engineer or originated by the Contractor, will not be measured or paid for separately. All associated costs to prepare, update, revise, and/or furnish the Progress Schedule in accordance with the requirements herein shall be considered incidental to the work.

1. Two Week Look-ahead (TWLA) Progress Schedule.

At least 7 calendar days prior to beginning work, the Contractor shall submit to the

Engineer, an initial written TWLA Progress Schedule for any work planned for the first two weeks. Every week thereafter, on a day agreed to by the Contractor and the Engineer, the Contractor shall submit to the Engineer, a written TWLA Progress Schedule for the following two-week period. The TWLA schedule shall provide a detailed list of operations to indicate the type of operation, locations of the work, proposed working days and hours, and the start and finish dates for any work planned, started, in progress, or scheduled for completion during the two-week period. The TWLA Progress Schedule shall also indicate any critical stages of work requiring District oversight or inspection. The Contractor shall submit 3 copies of the TWLA Progress Schedule to the Engineer in any legible format.

The Contractor may revise his TWLA Progress Schedule at his discretion. However, the Contractor shall notify the Engineer at least 48 working hours in advance of any changes in the Contractor's planned operations or critical stage work requiring District oversight or inspection. In the event of extenuating circumstances deemed by the Engineer to be beyond the Contractor's control, the Engineer may grant verbal concurrence of changes in the Contractor's planned operations with less advance notice, as the need arises.

2. **Progress Schedule Revisions.** The Contractor may revise his overall plan of operations at any time; however, the Contractor shall submit a Revised Progress Schedule to reflect any changes in his overall sequence of operations or general schedule. The Contractor may be required, as determined by the Engineer, to submit a Revised Progress Schedule. Circumstances that may prompt the Engineer's decision to request a Revised Progress Schedule may include deviations from the overall sequence of operations or if the actual progress of work varies by one month or more from the currently accepted Progress Schedule.

When required by the Engineer, the Revised Progress Schedule shall be submitted within 7 calendar days of receipt of the Engineer's written request. The Revised Progress Schedule shall be submitted in the form of the Progress Schedule as defined herein, to reflect the changes in the Contractor's overall work plan. The accepted Revised Progress Schedule will replace any previously accepted Progress Schedule for the remainder of the work.

(c) Submittal and Reporting Format

If requested by the Engineer, the Contractor shall submit its progress schedule in the following manner.

1. A transmittal letter to the Engineer listing the items, date, and number of copies of items being submitted.
2. Three printed legible paper copies of the progress schedule and progress schedule narrative.

3. Electronic “PDF” copies of the progress schedule, progress schedule narrative, and an electronic back-up file copy of the working progress schedule. Each electronic file submittal shall have a unique file name indicating the Contract ID, submission number, submittal type, and data date of the submission (e.g. C00012345C01_B01_Narrative_6-04-12.pdf).

(d) Engineer’s Review and Acceptance

The Engineer will review the Baseline or subsequent Revised Progress Schedule submittals for acceptance within 7 calendar days of receipt of the Contractor’s complete submittal.

Review and acceptance by the Engineer will be based on conformance with the requirements of this provision and the Contract.

Review and acceptance by the Engineer will not constitute a waiver of any Contract requirements and will in no way assign responsibilities of the work plan, scheduling assumptions, and validity of the work plan or schedule to the District. Failure of the Contractor to include in the Progress Schedule any element of work required by the Contract for timely completion of the Contract shall not excuse the Contractor from his contractual obligations.

(e) Failure to Comply with Progress Schedule Submission Requirements

With the exception of project start-up activities approved in writing by the Engineer, the Contractor shall not commence work, until 7 days after the date the Contractor submits a complete Baseline Progress Schedule, unless otherwise approved by the Engineer in writing.

If the Contractor fails to comply with any of the Progress Schedule submissions within the time and in the manner specified, the Engineer may withhold approval of the Contractor’s ensuing monthly progress estimates until the Contractor has satisfied the submission requirements. If the Contractor fails to submit the Final As-Built Schedule in the time and manner required, the Engineer may withhold approval of the final payment until the Contractor satisfies the submission requirement.

The District shall not be responsible for any delays, costs or damages resulting from the Contractor’s failure to submit the schedule submittals in accordance with the requirements of the Contract.

108.04—Determination and Extension of Completion Date

The District will specify the Completion Date in the Contract. The District will not consider any request for an extension of time that is based on a claim that the Completion Date as originally established is insufficient to complete the Work.

When Contract execution is not within 60 calendar days after the opening of bids, or when the Contractor is unable to commence work because of any failure of the District, the Contractor will

be given an extension of time based on the number of days delayed beyond the 60 calendar days. No time extension will be allowed for a delay in the date of Contract execution when the delay is the fault of the Contractor.

The Engineer will determine if an extension of the Contract time limit for completion is warranted by additions to the Contract. The Contractor shall inform the District, in writing, of a request for time extensions in his Work Order in accordance with the applicable portion(s) of Section 104 or 109. The Contractor shall provide written supporting data for any request for extension of time due to quantity additions and or additional or altered work.

During prosecution of the work, the Contractor shall identify the causes for any delays attributable to conditions he deems to be beyond his control and shall identify the particular construction operations affected, their criticality to project milestones or overall Contract completion, and the significant dates that encompass the periods of delay. The Contractor shall furnish all such information necessary for the District to make an adequate evaluation of any request received from the Contractor for an extension of the Contract time limit within 3 days of experiencing such a delay.

- (a) **Fixed Date:** Unless otherwise indicated in the Contract, the Contract time limit will be specified as a fixed date for completion. The Contractor shall take into consideration normal conditions considered unfavorable for the prosecution of the work, and shall place sufficient workers and equipment on the project to complete the work in accordance with the specified Contract time limit.

If the Contract identifies a contract-specific Notice to Proceed date and the Contract is not executed by that date, the Contractor will receive an extension of time equal to the number of days between the contract-specific Notice to Proceed date and the eventual date of Contract execution.

If the Notice to Proceed date is selected by the Contractor and after prior approval the Engineer directs the Contractor not to begin work on that date, the Contractor will receive an extension of time equal to the number of days between the Contractor's selected Notice to Proceed date and the eventual date the Engineer informs the Contractor that he may commence the work.

The Engineer may give consideration for extension of time when a delay occurs due to unforeseen causes beyond the control of or without the fault or negligence of the Contractor. However, consideration will not be given to extensions of time attributable to normal adverse weather conditions or conditions resulting from normal adverse weather.

For the purposes of this Section normal adverse weather is defined as that which is not considered extraordinary or catastrophic and is not reasonably conducive to the Contractor progressively prosecuting critical path work under the Contract. Weather events considered extraordinary or catastrophic include, but are not limited to tornados, hurricanes, earthquakes, and floods that exceed a 25-year storm event as defined by National Oceanic and Atmospheric Administration (NOAA) for the NOAA data gathering location that is nearest the project site.

If there is a delay in the progress of the work due to unforeseen causes described within these Specifications, and the delay extends the Contract time limit into the period between November 30 of one year and April 1 of the following year and working conditions during such period are unsuitable for the continuous prosecution or completion of the work, then consideration may only be given to granting an extension of time that will encompass a suitable period during which such work can be expeditiously and acceptably performed.

108.05—Suspension of Work Ordered by the Engineer

- (a) If the Engineer orders the Contractor in writing to suspend performance of all or any portion of the Work for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the Contractor believes that additional compensation or Contract time is due as a result of such suspension, the Contractor shall submit to the Engineer a written request for adjustment according to Section 108.04 within 7 days after receipt of the notice to resume work. The Contractor's request shall set forth the reasons and support for such adjustment.
- (b) Upon receipt, the Engineer will review the Contractor's documentation and evaluate the Contractor's request. If the Engineer agrees that the cost or time required for the performance of the Contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the Contractor, his suppliers, or subcontractors at any tier, and was not caused by weather, the Engineer will make an adjustment (excluding profit and consequential damages) and modify the Contract in writing accordingly. The Engineer will notify the Contractor of the determination regarding whether or not an adjustment of the Contract is warranted.
- (c) No Contract adjustment will be allowed unless the Contractor has submitted the request for adjustment within the time and in the manner prescribed.
- (d) No Contract adjustment will be allowed under this Section to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided for or excluded under any other term or condition of the Contract.

108.06—Failure to Complete on Time

(a) General

For each calendar day that any work remains incomplete after the Contract time limit specified for the completion of the work, the District will assess liquidated damages against the Contractor. Liquidated damages will be assessed at the rate applicable to the Contract in accordance with the Schedule of Liquidated Damages, Table I-1, or as otherwise specified in the Contract provisions. Liquidated damages will be deducted from any monies due the Contractor for each calendar day of additional time consumed until final completion and acceptance of the Work, subject to such adjustments as provided in accordance with the requirements of Section 108.04, not as a penalty, but as liquidated damages. The

Contractor waives any defense as to the validity of any liquidated damages stated in the Contract or these Specifications and assessed by the District against the Contractor on the grounds that such liquidated damages are void as penalties or are not reasonably related to actual damages.

(b) Liquidated Damages

Liquidated damages of \$1,000 per day, representing the cost of administration, engineering, supervision, inspection and other expenses, will be charged against the Contractor for each calendar day beyond the Contract time limit that the Contract remains in an incomplete state:

108.07—Default of Contract

The Contractor may be declared in default if he does any one of the following:

- (a) Fails to begin the Work within 10 days after the notice to proceed date, except as otherwise permitted by specific Contract language, or the provisions of Section 105.01 or Section 108.02;
- (b) fails to perform the Work with sufficient workers and equipment or with sufficient materials to ensure prompt completion of the Work;
- (c) performs the Work in such manner that it is unacceptable, or fails, neglects or refuses to promptly remove and replace materials or work that are unacceptable;
- (d) discontinues prosecution of the Work without an order to do so from the Engineer;
- (e) fails to resume work that has been discontinued within a reasonable time after notice to do so;
- (f) becomes insolvent, is declared bankrupt, or commits any act of bankruptcy or insolvency;
- (g) allows any final judgment to stand against him unsatisfied for a period of 10 days;
- (h) makes an assignment for the benefit of creditors;
- (i) fails for any other cause whatsoever to carry on the work in accordance with the Contract or to perform contractual obligations in an acceptable manner;
- (j) disregards laws, regulations, ordinances, the Engineer's written instructions, or otherwise remains in substantial violation of any provision of the Contract.

If any of these conditions exists, the Engineer will give notice in writing to the Contractor and his surety of the delay, neglect, or default. If within 10 days after the date of such notice the Contractor or his surety has not taken measures that will, in the judgment of the Engineer, ensure satisfactory progress of the work or give assurances satisfactory to the Engineer that the provisions of the Contract will be fully carried out and instructions complied with, the Executive Director may then, or at any time thereafter, declare the Contractor in default. Without violating the Contract,

the Executive Director may call upon the Contractor's surety for the satisfactory and expeditious completion of all work under the Contract, the removal and replacement of any unacceptable or unauthorized work, or may otherwise terminate the Contract in accordance with the provisions of Section 108.08. If the Executive Director declares the Contractor in default, payments to the Contractor will be withheld and may be made directly to the Contractor's surety. Further negotiations regarding the remaining work will be conducted with the Contractor's surety.

If the Contractor's surety fails or refuses to proceed in accordance with the Executive Director's instructions, the Commissioner will appropriate and use any or all materials and equipment on the

project site that are suitable and acceptable and will enter into an agreement with others for the completion of the work, or he will use such other methods as he deems necessary to ensure the completion of the work.

Costs and charges incurred by the District, including the cost of completing the Work under the Contractor the cost of removal and replacement of any unacceptable or unauthorized work, will be deducted from any monies due or that will become due the Contractor and his surety. If the expense incurred by the District is less than the sum that would have been payable under the Contract had the work been completed by the Contractor, the Contractor and his surety will be entitled to receive the difference. If the expenses exceed the sum that would have been payable under the Contract, the Contractor and his surety shall be liable for and shall pay to the District the amount of the excess.

108.08—Termination of Contract

(a) **Conditions for Termination:** The District may terminate the Contract or any portion thereof because of any of the following conditions:

1. Default.
2. National emergency.
3. Action by the Commonwealth, U.S. government, or court order.
4. Conditions beyond the control of the District.
5. For the convenience of the District.

Termination of the Contract or a portion thereof shall not relieve the Contractor of his responsibilities for completed Work, nor shall it relieve his surety of its obligation for and concerning any just claims arising out of the Work performed or remaining to be performed.

Termination for Convenience: The Engineer will deliver to the Contractor and surety written notice of termination for convenience specifying the extent of the termination and the effective date. A termination for convenience may be directed at any time after the notice of award of the Contract. Termination for convenience will be accomplished in

accordance with the following:

1. **Procedure:** The Contractor shall immediately upon receipt of the notice of termination do the following:
 - a. Stop work as directed in the notice.
 - b. Promptly place disturbed areas in an acceptable condition as directed by the Engineer.
 - c. Place no further subcontracts or orders for materials, services, or equipment, unless necessary for any part of the Work not terminated or to protect any part of the Work completed.
 - d. Terminate all subcontracts or orders to the extent related to the terminated work, unless instructed otherwise by the District.
 - e. Settle all outstanding liabilities with subcontractors and suppliers arising from the termination.
 - f. Transfer title and deliver to the District any work in progress, completed work, materials, supplies, equipment, drawings, plans, information, warranties, or other property that were purchased, acquired, fabricated, produced, supplied, or constructed for the Work, whether completed or terminated, and would be required to be furnished to the District on completion of the Contract.
 - g. Complete performance of Work not terminated, if any.
 - h. Inventory along with the Engineer any acceptable materials obtained, but not incorporated into the Work.
 - i. Take any action necessary or that the Engineer may direct for the protection and preservation of the site or other property that is in the Contractor's possession or control in which the District has or may acquire an interest.

2. **Payment**

Within 30 days after the Contractor receives the District's notice of termination for convenience, or within such time as the Contractor and the Engineer mutually agree, the Contractor shall submit a request for payment due for work performed through the effective date of termination and as a result of the termination for convenience. The

Contractor shall submit with the request sufficient cost records to substantiate the payment amount requested.

The District shall pay and the Contractor shall accept, as full payment for all work and materials provided, a sum mutually agreed to by the Contractor and the District determined

as follows:

- a. Work on Contract pay items performed prior to termination for which the Contractor has not been paid will be paid at the Contract price according to Section 109.03, or in the absence of Contract unit prices, in accordance with the requirements of Section 109.05 (Extra and Force Account Work). Items eliminated entirely by termination will be paid for as provided in Section 109.07. No claim for loss of anticipated profits will be considered, and the provisions of Section 104.02 will not apply for costs that are then incurred as a result of the termination.
- b. Reimbursement for organizing the Work when not specified in the Contract and moving equipment to and from the project site will be considered where the volume of work completed is too small to compensate the Contractor for these expenses under the Contract unit prices.
- c. At the option of the Engineer, materials the Contractor obtains for the Work that have been inspected, tested, and accepted by the Engineer and that have not been incorporated in the Work may be purchased from the Contractor at actual costs as shown by receipted bills, purchase orders, bills of lading, paid invoices, or other similar actual cost records at such points of delivery as will be designated by the Engineer.
- d. The Contractor shall be reimbursed for any actual costs incurred to terminate sub contracts or purchase orders, as shown by receipted bills, bills of lading, paid invoices, or other similar actual cost records at such points of delivery as will be designated by the Engineer.
- e. If a sum cannot be agreed upon, the Contractor shall be paid by unilateral change order and may seek recourse for the disputed amount in accordance with Section 105.19.
- f. When requested by the District, the Contractor shall furnish itemized statements of the cost of the work performed and shall give the District (and/or the District's Auditors) access to any and all financial and/or project records and documents, relating thereto. Unless the Contractor, when requested to do so, furnishes such itemized statements and access to any and all financial and/or project records and documents, the Contractor shall not be entitled to payment for work for which such information is sought by the District.

3. The Contractor shall incorporate the provisions of this Section as provisions in its contracts with each of their subcontractors.

Termination for Default:

In the event the Executive Director declares the Contractor in default as provided in Section 108.07, the District may terminate the Contract in accordance with the following:

1. Upon such termination becoming effective, the District shall provide written notice to the surety confirming that the Contract is terminated, and that the District is proceeding to finish the Work as set forth in the Contract performance bond, Form C-1 8A, and the terms and conditions therein if the Surety declines to complete the project. The District will also take possession of the project site and of all materials purchased for the project thereon. If the expense of completing the Work, including compensation for additional managerial and administrative services, exceeds the unpaid balance of the Contract amount and the penal amount of the Contract performance bond, the Contractor shall pay the difference to the District, together with any other costs and expenses of terminating the Contract and having it completed by others.
2. If it should be judicially determined that the District's termination for default was improper or in error, then the termination shall be deemed to be a termination for convenience and the Contractor's rights and remedies shall be limited exclusively to those provided under Section 108.08(b).
3. Termination for default as provided herein is in addition to and without prejudice to the District's other rights or remedies. Any of the District's actions permitted herein shall not be deemed a waiver of any other right or remedy of the District under the Contract or under the law. The District may offset any claims it may have against the Contractor against the amounts due or to become due to the Contractor under any other contract the Contractor may have with the District. The provisions of this Section shall survive termination of the Contract.
4. When the Contractor is terminated for default, any claims timely identified in a written notice of intent may be submitted in accordance with provisions of Section 105.19 or the Code of Virginia as amended and as applicable, except that the Contractor shall submit the required claim within 60 days after the District's notice of termination for default to the Contractor. Failure on the part of the Contractor to submit a claim within such 60-day period shall constitute a waiver and release of such claim.

108.09—Acceptance

- (a) **Contractor's Responsibility for Work:** Until final acceptance of the work by the Engineer in accordance with the requirements of this Section, the Contractor shall have charge and care thereof and shall take every precaution against damage to any part thereof by action of the elements or from any other cause. The Contractor shall rebuild, repair, restore, and make good on damage to any portion of the work occasioned by any of the foregoing causes before final acceptance and shall bear the expense thereof. The District may reimburse the Contractor for repair of damage to work attributable to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor as determined by the Engineer.

In case of suspension of work, the Contractor shall be responsible for the project and shall take such precautions as may be necessary to prevent damage to the work, provide for erosion control and drainage, and erect any necessary temporary structures, signs, or other facilities as

determined by the Engineer. During the suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established plantings, seedlings, and soddings furnished under the Contract and shall take adequate precautions to protect new tree growth and other important vegetation against damage.

(b) **Partial Acceptance:** If at any time during the prosecution of the project the Contractor completes a unit or portion of the project, such as a structure, an interchange, slopes, pavement, or a section of a roadway in its entirety, he may ask the Engineer to make final inspection of such work. If the Engineer finds upon inspection that the work conforms to the requirements of the Contract and that acceptance is in the best interest of the public, he may accept the work as being completed, and the Contractor will be relieved of further responsibility for the work. Partial acceptance shall in no way void or alter any terms of the Contract.

If any damage is sustained by an accepted unit or portion of the project attributable to causes beyond the control of the Contractor, the Engineer may authorize the Contractor to make the necessary repairs. These repairs will be paid for at the Contract price for the items requiring repair. In the absence of Contract prices covering the items of repair, the repair work will be paid for in accordance with the requirements of Section 109.05.

(c) **Final Acceptance:** Upon receipt of a written notice from the Contractor of presumptive completion of the entire project, the Engineer will make an inspection. If all work specified in the Contract has been completed, the inspection will constitute the final inspection and the Engineer will make the final acceptance. The Contractor will be notified in writing, of the determination of final acceptance within five days of the date of the Engineer's final acceptance.

If the Engineer's inspection discloses that any work, in whole or in part, is incomplete or unacceptable, the Contractor shall immediately correct the deficiency. A written list of deficiencies will be provided to the Contractor by the Engineer. Upon completion or correction of the work, another inspection will be made of the deficient work. If the work is then satisfactory, the Engineer will notify the Contractor in writing within 5 days of the Engineer's final acceptance. In any event, the Contractor shall be responsible for and maintain the project until final acceptance except under conditions that may be specifically exempted by the Specifications or other Contract documents.

108.10—Termination of Contractor's Responsibilities

The Contract will be considered fully complete upon final acceptance. The Contractor's responsibility for the Work will then cease except as set forth in his bonds, and Sections 107.12, 109.08, 109.10, and other provisions of the Contract that extend the Contractor's responsibility beyond final acceptance.

SECTION 109—MEASUREMENT AND PAYMENT

109.01—Measurement of Quantities

(a) **General:** Work specified in the Contract will be measured by the Engineer in accordance with U.S. Standard Measure. The methods of measurement and computations to be used to determine quantities of material furnished and work performed will be those generally recognized as conforming to good engineering practice.

Specific methods of measurement shall be as indicated in the specific Section for the Contract item.

Longitudinal measurements for surface area computations will be made along the surface, and transverse measurements will be the surface measure shown on the plans or ordered in writing by the Engineer. Individual areas of obstructions with a surface area of 9 square feet or less will not be deducted from surface areas measured for payment.

Structures will be measured in accordance with the neat lines shown on the plans.

Items that are measured by the linear foot will be measured parallel to the base or foundation upon which they are placed.

Allowance will not be made for surfaces placed over an area greater than that shown on the plans or for any material moved from outside the area of the cross-section and lines shown on the plans.

When standard manufactured items are specified and are identified by weights or dimensions, such identification will be considered nominal. Unless more stringently

controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

(b) **Measurement by Weight:** Materials that are measured or proportioned by weight shall be weighted on accurate scales as specified in this Section. When material is paid for on a tonnage basis, personnel performing the weighing shall be certified by the District and shall be bonded to the Commonwealth of Virginia in the amount of \$10,000 for the faithful observance and performance of the duties of the weighperson required herein. The bond shall be executed on a form having the exact wording as the Weighpersons Surety Bond Form furnished by the District and shall be submitted to the District prior to the furnishing of the tonnage material.

The Contractor shall have the weighperson perform the following:

1. Furnish a signed weigh ticket for each load that shows the date, load number, plant name, size and type of material, project number, schedule or purchase order number, and the weights specified herein.
2. Maintain sufficient documentation so that the accumulative tonnage and distribution of each lot of material, by Contract, can be readily identified.

3. Submit by the end of the next working day a summary of the number of loads and total weights for each type of material by Contract.

Trucks used to haul material shall be equipped with a cover suitable to protect the material and to protect the traveling public.

The truck tare to be used in the weighing operation shall be the weight of the empty truck determined with full tank(s) of fuel and the operator seated in the cab. The tare weight of trucks shall be recorded to the nearest 20 pounds. At the option of the Contractor, a new tare may be determined for each load. When a new tare is obtained for each load, the requirement for full tank(s) of fuel will be waived.

Net rail shipment weights may be used for pay quantities when evidenced by railroad bills of lading. However, such weights will not be accepted for pay quantities of materials that subsequently pass through a stationary mixing plant.

Scales shall conform to the requirements for accuracy and sensitivity as set forth in the National Institute of Standards and Technology Handbook No. 44 for Specification Tolerances and Requirements for Commercial and Weighing Devices. Scales used in the weighing of materials paid for on a tonnage basis shall be approved and sealed in accordance with the requirements of the policies of the Bureau of Weights and Measures of the Department of Agriculture and Consumer Services, or other approved agencies, at least once every six months and upon being moved. Hopper and truck scales shall be serviced and tested by a scale service representative at least once every six months. Hopper scales shall be checked with a minimum 500 pounds of test weights and truck scales shall be checked with a minimum 20,000 pounds of test weights.

Copies of scale test reports shall be maintained on file at the scale location for at least 18 months, and copies of all scale service representative test reports shall be forwarded to the Department.

The quantity of materials paid for on a tonnage basis shall be determined on scales equipped with an automatic printer. Truck scale printers shall print the net weight and either the gross or tare weight of each load. Hopper scale printers shall print the net weight of each load. The weigh ticket shall also show the legal gross weight for material weighed on truck scales and the legal net weight for material weighed on hopper scales.

If the automatic printer becomes inoperative, the weighing operation may continue for 48 hours provided satisfactory visual verification of weights can be made. The written permission of the District Materials Engineer shall be required for the operation of scales after 48 hours.

If significant discrepancies are discovered in the printed weight, the ultimate weight for payment will be calculated on volume measurements of the materials in place and unit weights determined by the Engineer or by other methods deemed appropriate to protect the interests of the Commonwealth.

(c) **Measurement by Cubic Yard:** Material that is measured by the cubic yard, loose measurement or vehicular measurement, shall be hauled in approved vehicles and measured therein at the point of delivery. Material measured in vehicles, except streambed gravel, silt cleanout, or other self-consolidating material will be allowed at the rate of 2/3 the volume of the vehicle. The full volume of the vehicle will be allowed for streambed gravel. Such vehicles may be of any size or type acceptable to the Engineer provided the body is of such shape that the actual contents can be readily and accurately determined. Unless all approved vehicles are of uniform capacity, each vehicle shall bear a plainly legible identification mark indicating the specific approved capacity. Each vehicle shall be loaded to at least its water level capacity.

When approved by the Engineer in writing, material specified to be measured by the cubic yard may be weighed and such weights converted to cubic yards for payment purposes. Factors for conversion from weight to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before they are used.

(d) **Measurement by Lump Sum:** When used as an item of payment, the term lump sum will mean full payment for completion of the corresponding item of work described in the Contract. When a complete structure or structural unit is specified as a Contract item, the unit of measurement will be lump sum, and shall include all necessary fittings and accessories. The quantities may be shown on the plans for items for which lump sum is the method of measurement. If shown, the quantities are approximate and are shown for estimating purposes only and no measurement of quantities will be made for payment. Items that are to be measured as complete units will be counted by the Inspector in the presence of a representative of the Contractor.

(e) **Excavation, embankment, and borrow:** In computing volumes of excavation, embankment, and borrow, methods having general acceptance in the engineering profession will be used. When the measurement is based on the cross-sectional area, the average end area method will be used.

109.02 – Not Used

109.03—Scope of Payment

Payments to the Contractor will be made for the actual quantities of Contract items performed in accordance with the plans and the requirements of the Specifications and other Contract documents. If, upon completion of the Work, the actual quantities vary, either by an increase or decrease from the estimated quantities shown in the Contract, the Contract unit prices shall prevail and payment will be made for actual quantities performed at such unit prices, unless the unit prices have been modified by written change orders according to Sections 104 and 109.04, as determined by the Engineer.

Quantities appearing on the Proposal are estimated quantities for the basic design shown on the plans. With the Engineer's approval, the Contractor may furnish other design(s) that may involve changes in quantities or the use of different materials. However, payment will be made for the original quantities listed in the Contract only and in the units of measure given in the Contract for the basic

design unless the dimensions for the basic design are changed by an authorized change order to conform to field conditions encountered. In this event, the original quantities listed will be modified based on the change in dimension, and the modified quantities will be used for pay quantities at Contract unit prices for the items listed on the Proposal.

The Contractor shall accept the compensation provided for in the Contract as full payment for the following:

- (a) Furnishing all materials, labor, tools, equipment, and incidentals necessary to complete the Work according to the Contract.
- (b) Performing all work specified in the Contract.
- (c) All loss or damage arising from the nature of the Work or from action of the elements or any other unforeseen difficulties that may be encountered during prosecution of the Work and until its final acceptance.
- (d) Any license, use, or infringement of a patent, trademark, or copyright.
- (e) The completion of the work in accordance with the Contract requirements.

If the payment clause in the Specifications relating to any unit price in the Contract requires that the unit price cover and be considered compensation for certain work or material essential to the item, the work or material will not be measured or paid for under any other item except as provided in Section 106.05.

The payment of any partial estimate, the final estimate, or any retainage shall in no way affect the obligation of the Contractor to repair or replace any unacceptable, unauthorized or defective work or materials, or to be responsible for all damages attributable to such unacceptable, unauthorized or defective work or materials.

109.04—Payment for Non-Significant Changes and Additional Units of In-scope Work

When the accepted quantities of work vary from the estimated quantities set forth in the Contract, whether or not there have been any alterations in the plans, the quantities of work, or the character of work, the Contractor shall accept as payment in full, so far as Contract items are concerned, payment at the original Contract unit prices for the accepted quantities of work performed, except where such variance is a significant change as set forth in Section 104.02. No allowance or other adjustment except as provided for a significant change in Section 104.02 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting directly from such variance, or from the Contractor's unbalanced allocation among the Contract items of overhead expense and subsequent loss of expected reimbursements therefor, or from any other cause.

109.05—Payment for Contract Changes

The District will pay the Contractor for adjustments to the Contract amount based on one of the following methods.

(a) Payment for Extra Work

The District may add any extra work that in the judgment of the Engineer is necessary for the satisfactory fulfillment of the Contract within its intended scope. Extra work may be accomplished by change order if the scope is defined as provided in this Section (a), or on a force account basis, if the scope is not defined as provided in Section 109.05(b). Where possible, the District and Contractor will each proceed to secure any information, documentation, or plans to assist in detailing the extent and character of such work, if known, in sufficient detail to define, analyze, and estimate the cost and time required to perform such work. Extra work does not include overruns of Contract items according to 104.02.

1. The Engineer may notify the Contractor in writing that extra work is necessary. When no such notice is given, but the Contractor believes extra work is necessary, he shall notify the Engineer in writing within 2 days of such a determination or before performing any such work. If the Engineer agrees with the Contractor, the Engineer will notify the Contractor that extra work is necessary. Within 7 days of the Engineer notifying the Contractor of extra work, or within such time as mutually decided with the Engineer, the Contractor shall submit a proposal that includes a determination of the extent of such work, and the additional compensation and/or time he seeks, if any, relative to his determination. The Contractor's request shall be in sufficient detail to enable the Engineer to determine the basis for and extent of the Contractor's entitlement to additional compensation or time. Failure on the part of the Contractor to furnish sufficient documentation or to qualify his reason for failure to do so will delay the determination of entitlement for such work. If such delay occurs, it will in no way relieve the Contractor of his obligation to meet the contract time limits or other Contract requirements or constitute basis for a Contractor to make a delay claim.
2. If the Contractor requests a time extension based on extra work, the requested time extension will only be considered if the extra work impacts the critical path, a controlling work item, or an interim milestone established in the Contract to the extent that it extends the Completion Date of the project beyond the lattermost of the Contract Completion Date or its most recent extension. The Contractor shall submit detailed documents and information showing how the extra work or interim milestone impacted the critical path in accordance with Section 108.04. Any time extension given, including time extensions in accordance with Section 108.04, must be included in the executed change order.
3. Upon receipt and review of the Contractor's costs for the proposed extra work, if it is found that the Contractor's prices or the time differ considerably from the District's estimate, the Engineer may request the Contractor to provide support for his prices or his requested time extension. Where the District and the Contractor can determine and agree upon an accurate cost and time estimation for the proposed work, the

Engineer will issue a Bilateral Change Order to authorize the work. When the Contractor and the District cannot agree upon the cost or the time estimation for the extra work after the Engineer's analysis and subsequent discussion with the Contractor, or where due to issues of emergency, safety, environmental damage, other similar critical factors as determined by the District, the Engineer will act unilaterally and issue a Unilateral Change Order to authorize the work. The issuance of a Unilateral Change Order by the Engineer shall in no way invalidate or relinquish the Contractor's rights under Section 105.19.

(b) Payment by Force Account

The District will require the Contractor to proceed with extra work on a force account basis when neither the District nor the Contractor can firmly establish a reliable estimate for the cost of the extra work because either the scope or the quantity of work is unknown, is of such character that a price cannot be determined to a reasonable degree of accuracy, or the level of effort required to perform and complete the extra work is unknown or not quantifiable at the time of discovery or start of the extra work, and will be determined as work progresses. The compensation provided for in this Section for force account work applies only to extra work the Engineer orders in writing to be performed on a force account basis, and does not apply to any other work performed under the Contract or to claims.

The Contractor shall be paid for all labor, materials, equipment, services, supplies, taxes, overhead, profit and miscellaneous costs or expenses, for extra work performed on a force account basis in the following manner:

1. **Labor:** Unless otherwise approved, the Contractor will receive the rate of wage or scale as set forth in his most recent payroll for each classification of laborers, forepersons, and superintendent(s) who are in direct charge of the specific operation. The time allowed for payment will be the number of hours such workers are actually engaged in the work. If overtime work is authorized, payment will be at the normal overtime rate set forth in the Contractor's most recent payroll. If workers performing the class of labor needed have not been employed on the project, mutually agreed on rates will be established. However, the rates shall be not less than those predetermined for the project, if applicable. An amount equal to 45 percent of the approved force account payroll will be included in the payment for labor to cover administrative costs, profit, and benefits and/or deductions normally paid by the Contractor.
2. **Insurance and Tax:** The Contractor will receive an amount equal to 25 percent of the approved force account payroll exclusive of additives of administrative cost as full compensation for property damage and liability, workers' compensation insurance premiums, unemployment insurance contributions, and social security taxes of force account work.
3. **Materials:** The Contractor will receive the actual cost of materials accepted by the Engineer that are delivered and used for the work including taxes, transportation, and handling charges paid by the Contractor, not including labor and equipment rentals as

herein set forth, to which 15 percent of the cost will be added for administration and profit. The Contractor shall make every reasonable effort to take advantage of trade discounts offered by material suppliers. Any discount received shall pass through to the

District. Salvageable temporary construction materials will be retained by the District, or their appropriate salvage value shall be credited to the District.

4. **Equipment:** The Contractor shall provide the Engineer a list of all equipment to be used in the work. For each piece of equipment, the list shall include the serial number; date of manufacture; location from which equipment will be transported; and, for rental equipment, the rental rate and name of the company from which it is rented. The Contractor will be paid rental rates for pieces of machinery, equipment, and attachments necessary for prosecution of the work that are approved for use by the Engineer. Equipment rental will be measured by time in hours of actual time engaged in the performance of the work and necessary traveling time of the equipment within the limits of the project or source of supply and the project. Hourly rates will not exceed 1/176 of the monthly rates of the schedule shown in the Rental Rate Blue Book modified in accordance with the Rental Rate Blue Book rate adjustment tables that are current at the time the force account is authorized. Equipment rental rates not modified by the adjustment factors or rate modifications indicated in the Rental Rate Blue Book will not be considered. Hourly rates for equipment on standby will be at 50 percent of the rate paid for equipment performing work. Operating costs shall not be included in the standby rate. For the purposes herein "standby time" is defined as the period of time equipment ordered to the jobsite by the Engineer is available on-site for the work but is idle for reasons not the fault of the Contractor or normally associated with the efficient and necessary use of that equipment in the overall operation of the work at hand.

Payment will be made for the total hours the equipment is performing work. When equipment is performing work less than 40 hours for any given week and is on standby, payment for standby time will be allowed for up to 40 hours, minus hours performing work. Payment will not be made for the time that equipment is on the project in excess of 24 hours prior to its actual performance in the force account work. An amount equal to the Rental Rate Blue Book estimated operating cost per hour will be paid for all hours the equipment is performing work. This operating cost shall be full compensation for fuel, lubricants, repairs, greasing, fueling, oiling, small tools, and other incidentals. No compensation will be paid for the use of machinery or equipment not authorized by the Engineer.

The Contractor will be paid freight cost covering the moving of equipment to and from the specific force account operation provided such cost is supported by an invoice showing the actual cost to the Contractor. However, such payment will be limited to transportation from the nearest source of available equipment. If equipment is not returned to the nearest equipment storage lot but is moved to another location, the freight cost paid will not exceed the cost of return to the nearest storage lot.

The rates for equipment not listed in the Rental Rate Blue Book schedule shall not exceed the hourly rate being paid for such equipment by the Contractor at the time of the force account authorization. In the absence of such rates, prevailing rates being paid in the area where the authorized work is to be performed shall be used.

If the Contractor does not possess or have readily available equipment necessary for performing the force account work and such equipment is rented from a source other than a company that is an affiliate of the Contractor, payment will be based on actual invoice rates, to which 15 percent of the invoice cost will be added for administrative cost and profit. If the invoice rate does not include the furnishing of fuel, lubricants, repairs, and servicing, the invoice rate will be converted to an hourly rate, and an amount equal to the Rental Rate Blue Book estimated operating cost per hour will be added for each hour the equipment is performing work.

5. **Miscellaneous:** No additional allowance will be made for attachments that are common accessories for equipment as defined in the Rental Rate Blue Book, general superintendents, timekeepers, secretaries, the use of small hand held tools or other costs for which no specific allowance is herein provided. The Contractor will receive compensation equal to the cost of the bond, special railroad insurance premiums, and other additional costs necessary for the specific force account work as determined by the Department. The Contractor shall supply documented evidence of such costs.
6. **Compensation:** The compensation as set forth in this Section shall be accepted by the Contractor as payment in full for work performed on a force account basis. At the end of each day, the Contractor's representative and the Inspector shall compare and reconcile records of the hours of work and equipment, labor and materials used in the work as ordered on a force account basis. Such accounting may not include actual costs or labor rates where these are not available but shall be used to verify quantities, types of materials or labor, and number and types of equipment.

If all or a portion of the force account work is performed by an approved subcontractor, the Contractor will be paid 10 percent of the subcontract net force account costs to cover the Contractor's profit and administrative cost. The amount resulting will not be subject to any further additives. The itemized statements of costs as required below shall be submitted on a form that separates the subcontracted portions of the force account labor, materials, and equipment from the other force account costs.

7. **Statements:** Payments will not be made for work performed on a force account basis until the Contractor has furnished the Engineer duplicate itemized statements of the cost of such work detailed as follows:
 - a. payroll indicating name, classification, date, daily hours, total hours, rate, and extension of each laborer, foreperson, and superintendent.
 - b. designation, dates, daily hours, total hours, rental rate, and extension for each unit of

equipment.

- c. quantities of materials, prices, and extensions.
- d. transportation of materials.

Statements shall be accompanied and supported by invoices for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices, the Contractor shall furnish an affidavit certifying that such materials were taken from his stock; that the quantity claimed was actually used; and that the price, transportation, and handling claimed represented his actual cost.

(c) Payment for Significant Changes

When the Contractor alleges that there is a significant change as defined in Section 104.02, then, within a mutually agreed upon timeframe, he shall submit a request for the additional compensation, excluding anticipated profits for reduced or eliminated work, for such significant change. The Contractor's request shall be in sufficient detail to enable the Engineer to determine the basis for and extent of the Contractor's entitlement to additional compensation.

Failure on the part of the Contractor to furnish sufficient documentation or to qualify his reason for failure to do so will delay the determination of entitlement to additional compensation. If such delay occurs, it will in no way relieve the Contractor of his obligation to meet milestone dates, the Contract time limit, or other Contract requirements, or constitute the basis for a claim of any kind.

(d) Payment for Differing Site Conditions

When the Contractor encounters a differing site condition as defined in Section 104.03, then, within a mutually agreed upon timeframe, he shall submit a written request for the additional compensation, excluding anticipated profits, he seeks as a result of such condition. The Contractor's request shall be in sufficient detail to enable the Engineer to determine the basis for and extent of the Contractor's entitlement to additional compensation.

Failure on the part of the Contractor to furnish sufficient documentation or to qualify his reason for failure to do so will delay the determination of entitlement to additional compensation. If such delay occurs, it will in no way relieve the Contractor of his obligation to meet the Contract time limits or other Contract requirements or constitute basis for a claim of any kind.

If the Engineer determines that the conditions materially differ and cause an increase or decrease in the cost required for the performance of any of the Work, an adjustment, excluding anticipated profits, will be made and the Contract may be modified accordingly.

(e) Payment for Compensable Delay

The Contractor is entitled to compensation for a compensable delay. Compensable delays are critical delays that are not the Contractor's fault or responsibility and are the District's fault or responsibility. Compensable delays may include, but are not limited to:

- Delays due to alteration of quantities or character of work according to 104.02.
- Delays due to differing site conditions according to 104.03.
- Delays due to an Engineer-ordered suspension according to 108.05.
- Delays due to the acts or omissions of the District or its failure to act in a timely manner. The following delays are not compensable:
 - Acts or omissions of the Contractor, its agents, employees, subcontractors or suppliers or causes within their control; or conditions that the Contractor could reasonably have foreseen or avoided.
 - Floods, tidal waves, tornadoes, hurricanes, lightning strikes, earthquakes, fires, epidemics, or similar natural phenomena.
 - Normal adverse weather.
 - Extraordinary, unforeseen, and unavoidable delays in material deliveries.
 - Acts of government entities other than the District.
 - Unforeseen and unavoidable industry-wide labor strikes affecting the Contractor or its subcontractors' or suppliers' workforce that are beyond the Contractor's control.
 - Actions of third parties that are not the responsibility of the Contractor or within its or the District's control.
 - Civil disturbances or sovereign acts of the State, including but are not limited to states of emergency or epidemic or quarantine restrictions.

To request payment for a compensable delay, the Contractor shall within 14 days after the end date of a delay event, unless directed otherwise in writing by the Engineer, submit a written request for a change order for the Engineer's approval. With the request, the Contractor shall submit a Schedule Impact Analysis (SIA) and all supporting data to objectively substantiate its request. The Engineer will evaluate the Contractor's SIA and all supporting data to determine entitlement and the appropriate amount of compensation.

109.06 – Not Used

109.07—Eliminated Items

If all or a part of any Contract item is determined to be unnecessary for the proper completion of the Work, the District may, upon written notice to the Contractor and issuance of an appropriate change order, eliminate all or part of such item from the Contract. Payment will not be made for such item except that the Contractor will be compensated for the actual cost of any work performed for such item and the net cost of materials purchased, including freight and tax costs, as evidenced by invoice. No additional compensation will be made for overhead or anticipated profit.

109.08—Partial Payments

(a) General

Partial payments will be based on a monthly progress estimate consisting of approximate quantities and value of work performed as determined by the Engineer. When the method of measurement for a Contract item is in units of each or lump sum, the value of work accomplished for partial payment will be determined on a pro rata basis. Partial payments will be made once each month for the work performed in accordance with the Contract requirements. The Contractor will be given the opportunity to review the monthly progress estimate prior to each partial payment. Upon final acceptance, one last monthly estimate will be prepared and any additional payment due will be submitted for payment.

For contracts without a payment bond, the Contractor shall submit to the Engineer a letter from each materials supplier and subcontractor involved stating that the Contractor has paid or made satisfactory arrangements for settling all bills for materials and subcontracted work that was paid on the previous month's progress estimate. The District will use the source of supply letter and approved subletting request to verify that certifications have been received for work that was paid on the previous monthly estimate. The Contractor shall furnish these and other certificates as are required as a prerequisite to the issuance of payment for the current monthly estimate.

The District may withhold the payment of any partial or final estimate voucher or any sum(s) thereof from such vouchers if the Contractor fails to make payment promptly to all persons supplying equipment, tools, or materials; or for any labor he uses in the prosecution of the Contract work. Unless otherwise provided under the terms of the Contract, interest shall accrue at the rate of one percent per month.

(b) Payment to Subcontractors

Upon District payment of the subcontractor's portion of the work as shown on the monthly progress estimate and the receipt of payment by the Contractor for such work, the Contractor shall make compensation in full to the subcontractor. For the purposes of this Section, payment of the subcontractor's portion of the Work shall mean that payment has been issued for that portion of the Work that was identified on the monthly progress estimate for which the subcontractor has performed service.

Payment to subcontractors shall be in accordance with the provisions of Code of Virginia §2.2- 4354 and § 2.2-4355. The Contractor shall take one of the following two actions within 7 days after receipt of payment from the District for the subcontractor's portion of the Work as shown on the monthly progress estimate:

1. Pay the subcontractor for the proportionate share of the total payment received from the agency attributable to the Work performed by the subcontractor; or
2. Notify the District and subcontractor, in writing, of his intention to withhold all or a part of the subcontractor's payment along with the reason for nonpayment.

In the event payment is not made as required, the Contractor shall pay interest at the rate of one percent per month, unless otherwise provided in the Contract, to the subcontractor on all amounts that remain unpaid after 7 days, except for the amounts withheld as provided in this Section. The Contractor shall include in each of its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower tier subcontractor.

If the Contractor fails to make payment to the subcontractor within the time frame specified herein, the subcontractor shall notify the Engineer and the Contractor's bonding company.

(c) Retainage

If the Engineer determines the Contractor's progress is unsatisfactory according to Section 108.03 or other applicable Contract documents, the Engineer will send a notice of unsatisfactory progress to the Contractor advising him of such determination. This notification will also advise the Contractor that five percent retainage of the monthly progress estimate is being withheld and will continue to be withheld for each month the Contractor's actual progress is determined to be unsatisfactory.

When the Engineer determines that the Contractor's progress is satisfactory in accordance with these requirements, the 5 percent retainage previously withheld because of unsatisfactory progress will be released in the next monthly progress estimate, and the remaining monthly progress estimates will be paid in full provided the Contractor's progress continues to be satisfactory.

109.09—Payment for Material on Hand

When requested in writing by the Contractor, payment allowances may be made for materials secured for use on the project and required to complete the project. Such material payments will be made for only those actual quantities of materials identified in the Contract, approved change orders, or otherwise authorized and documented by the Engineer based on delivery tickets, bills of lading, or paid invoices. All such payments shall be in accordance with the following terms and conditions:

- (a) **Structural Steel or Reinforcing Steel:** An allowance of 100 percent of the cost to the Contractor for structural steel or **reinforcing steel** materials secured for fabrication not to exceed 60 percent of the Contract price may be made when such material is delivered to the fabricator and has been adequately identified for exclusive use on the project. The provisions of this section for steel reinforcement will only apply where the quantity of steel reinforcement is identified as a separate and distinct bid item for payment. An allowance of 100 percent of the cost to the Contractor for superstructure units and reinforcing steel, not to exceed 90 percent of the Contract price, may be made when fabrication is complete. Prior to the granting of such allowances, the materials and fabricated units shall have been tested or certified and found acceptable to the District and shall have been stored in accordance with the requirements specified herein. Allowances will be based on invoices, bills, or the estimated value as approved by the Engineer and will be subject to the retainage requirements of Section 109.08. For the purposes of this section fabrication is defined as any manufacturing process such as bending, forming, welding, cutting or coating with paint or anti-corrosive materials which alters, converts, or changes raw material for its use in the permanent finished work.
- (b) **Other Materials:** For aggregate, pipe, guardrail, signs and sign assemblies, and other nonperishable material, an allowance of 100 percent of the cost to the Contractor for materials, not to exceed 90 percent of the Contract price, may be made when such material is delivered to the project and stockpiled or stored in accordance with the requirements specified herein. Prior to the granting of such allowances, the material shall have been tested and found acceptable to the District. Allowances will be based on invoices, bills, or the estimated value of the material as approved by the Engineer and will be subject to the retainage provisions of Section 109.08.
- (c) **Excluded Items:** No allowance will be made for fuels, form lumber, falsework, temporary structures, or other work that will not become an integral part of the finished construction.

Additionally, no allowance will be made for perishable material such as cement, seed, plants, or fertilizer.

- (d) **Storage:** Material for which payment allowance is requested shall be stored in an approved manner in areas where damage is not likely to occur. If any of the stored materials are lost or become damaged, the Contractor shall repair or replace them at no additional cost to the District. Repair or replacement of such material will not be considered the basis for any extension of Contract time. If payment allowance has been made prior to such damage or loss, the amount so allowed or a proportionate part thereof will be deducted from the next progress estimate payment and withheld until satisfactory repairs or replacement has been made.

When it is determined to be impractical to store materials within the limits of the project, the Engineer may approve storage on private property or, for structural units and reinforcing steel, on the manufacturer's or fabricator's yard. Requests for payment allowance for such

stored material shall be accompanied by a release from the owner or tenant of such property or yard agreeing to permit the removal of the materials from the property without cost to the District. The District must be allowed access to the materials for inspection during normal business hours.

(e) **Materials Inventory:** If the Contractor requests a payment allowance for properly stored material, he shall submit a certified and itemized inventory statement to the Engineer no earlier than 5 days and no later than 2 days prior to the progress estimate date. The statement shall be submitted to the District and shall be accompanied by supplier's or manufacturer's invoices or other documents that will verify the material's cost. Following the initial submission, the Contractor shall submit to the Engineer a monthly-certified update of the itemized inventory statement within the same time frame. The updated inventory statement shall show additional materials received and stored with invoices or other documents and shall list materials removed from storage since the last certified inventory statement, with appropriate cost data reflecting the change in the inventory. If the Contractor fails to submit the monthly-certified update within the specified time frame, the Engineer will deduct the full amount of the previous statement from the progress estimate.

At the conclusion of the project, the cost of material remaining in storage for which payment allowance has been made will be deducted from the progress estimate.

109.10—Final Payment

When final acceptance has been duly made by the Engineer as provided for in Section 108.09 the Engineer will prepare the final statement of the quantities of the items of work performed. Thereafter, the Contractor will be afforded 10 days in which to review the final estimate before payment. The

time may be extended by mutual agreement, and the extension added to the 90-day criteria set forth within this Section.

Prior partial estimates and payments shall be subject to correction in the final estimate and payment.

For Contracts not requiring a payment bond, the Contractor shall certify to the District that he has paid or made satisfactory arrangements for settling all bills for materials, labor, equipment, supplies, and other items entering into or used on the work and shall furnish other certificates as are required by the District as a prerequisite to the issuance of final payment.

Failure by the Contractor to provide required information and certifications will extend the 90-day period for final payment by the number of days equivalent to the delay attributable to the Contractor.

Upon review of the final estimate by the Contractor and approval by the Engineer, the Contractor will be paid the entire sum due after previous payments are deducted and other amounts are retained or deducted under the provisions of the Contract. Final payment will become due within 90 days after final acceptance.

Interest will accrue on the amount the District owes to the Contractor that remains unpaid after 7 days following the 90-day payment date. The rate of interest will be the base rate on corporate loans (prime rate) at large U.S. money center commercial banks as reported daily in The Wall Street Journal. When a split rate is published, the lower of the two rates shall be used. The rate effective on the 91st day following final acceptance will be applicable throughout the period of time for which interest is paid. However, in no event shall the rate of interest paid exceed the rate of interest established pursuant to the Code of Virginia. The period subject to payment of interest will begin on the 91st calendar day after final acceptance and will extend through the date of the payment of the final estimate.

When the payment date is delayed beyond the 90-day period by the fault of the Contractor and monies are due the District, the Contractor will be assessed annual interest on the balance due the District for the time delay attributable to the Contractor. The rate of interest will be determined as specified hereinbefore. The District may deduct monies owed to the District from the final payment. If the final payment is insufficient, monies owed to the District will become due and payable within 30 days of Contractor's receipt of a certified letter giving notification of the amount owed. The Contractor will be assessed annual interest at the rate determined as specified within this Section for any balance that remains unpaid after 37 days from receipt of the letter.

SECTION 199 – CONTRACT CLOSEOUT PROCEDURES

RMF 5044.5122

199.01 General

- (a) The requirements set forth herein are in addition to and shall be considered as complementary to the balance of Specifications and the Contract Drawings.
- (b) Compliance with the requirements of this Section is a condition precedent to the issuance of Final Payment.

199.02 Final Cleanup

- (a) Perform final cleaning prior to Final Completion, as applicable, including but not limited to the following activities:
 1. Leave the work area(s) and storage site(s) ready for use by the District and without the need of further cleaning of any kind.
 2. Remove all tools, appliances, equipment, waste, surplus materials, and rubbish.
 3. Remove all temporary construction equipment and materials.
 4. Perform final grading and seeding to all disturbed laydown areas, if applicable.

199.03 Certification

- (a) Prior to acceptance of Work, submit a written notification to the District certifying that:
 1. Work has been completed in accordance with these Specifications and Drawings.
 2. Work has been inspected for compliance with these Specifications and Drawings.
 3. Work is completed and ready for final inspection.
- (b) The District will inspect to verify the status of completion after receipt of such certification.
- (c) Should the District consider that the Work is incomplete or defective:
 1. The District will notify the Contractor in writing, by form of a punch list, listing the incomplete or defective Work.
 2. The Contractor shall take immediate steps to remedy the stated deficiencies and send a second or subsequent written certification to the District stating that the Work is complete.
 3. The District will re-inspect the Work.

(d) Upon completion of the Work, the District will direct the Contractor to submit closeout documents.

199.04 Closeout Documentation

(a) Provide final spreadsheet of repair types and locations.

199.05 Final Application for Payment

(a) Upon Final Completion of the Work, as determined by the District, the Contractor may request Final Payment in accordance with the Contract Terms and Conditions.

End of Section

SECTION 411 - PROTECTIVE COATING OF METAL IN STRUCTURES

RMF 5044.5122

DELETE: VDOT 2020 Road and Bridge Specifications Section 411

INSERT: The following

411.01 Description

Clean and paint all steel surfaces to include existing structural steel, painted steel appurtenances, new steel, and replacement steel. Repair new and existing coatings damaged during repairs or by the Contractor's operations to be in conformance with these specifications.

The term "All Steel Surfaces" includes steel superstructure elements including but not limited to steel beams, girders, rockers, bearing assemblies, trusses, floor beams, stringers, joists, purlins, cross-bracings, lateral-bracings, diaphragms, sway-bracings, railings, ladders, scupper downspouts, and support brackets for utilities, light poles, and sidewalks. It does not include substructure elements, sign structures, utilities, or light poles.

Clean and paint each structure using the paint systems identified below:

| Bridge Name | Scope of Work and Paint System |
|---|---|
| Northbound North Channel Bridge (NCB-NB) Southbound North Channel Bridge (NCB-SB) Northbound Fisherman Inlet Bridge (FIB-NB) Southbound Fisherman Inlet Bridge (FIB-SB) Trestle Span ASB204 Trestle Span BSB1 Trestle Span BSB202 Trestle Span CSB1 Trestle Span BNB1-2 | Clean and Repaint the entirety of each structure as required by Section 411.05. Use the 2 Coat Inorganic paint system. |
| Trestle Span ASB1 | Spot Paint all coating damage over the entirety of each structure as required by Section 411.05. Use paint System W |

All structures have existing coatings that may contain toxic metals. All containment systems to be used shall consist of SSPC Class 2A containment at a minimum as outlined in SSPC's Guide 6.

Unpainted galvanized surfaces, unpainted aluminum, and surfaces protected with other coatings shall not be coated unless specified otherwise in the contract. Cast, ductile, and nodular iron castings need not be coated. Application procedures not specified herein shall be as specified by the coatings manufacturer and approved by the District.

(a) Items designated as **Clean and Repaint** shall include:

1. Containment construction and performance according to SSPC Guide 6 Class 2A with Level 1 visible emissions and a solid floor.
2. Cleaning per 411.04 Method 1 (SP 1), Method 7 (pressure wash), and Method 5 (SP 10).
3. Installation of the 2 coat inorganic paint system, including full primer coat coverage, stripe coat of primer, penetrating sealer as-needed, full finish coat coverage, and caulking as-needed.
4. Any repair painting for coordinating with steel repairs and completing the paint system to be in full compliance with these specifications.

(b) Items designated as **Spot Paint** shall include:

1. Containment construction and performance according to SSPC Guide 6.
2. Cleaning per 411.04 Method 1 (SP 1) and Method 7 (pressure wash) at all spots of degraded coating, then either Method 4 (SP 11 within Class 3P containment) or Method 5 (SP 10 within Class 2A containment).
3. Installation of paint System W (3-coat maintenance paint) to the cleaned spots only.
4. Any repair painting for coordinating and completing the paint system to be in full compliance with these specifications.

Notify the District of structural defects including cracks, missing bolts or rivets, and deterioration detected during cleaning and painting.

Protect utility pipes, cable trays, conductors, light fixtures, and conduits from these operations. Do not clean and paint them unless specified.

Perform Quality Control (QC) inspections to ensure that each phase of the work meets Specification requirements.

All maintenance of traffic required for corrective action shall be at no additional cost to the District.

Ensure that all operations meet the requirements of OSHA, including exposure to lead, arsenic, chromium and cadmium. Comply with 29 CFR 1926 construction standards and the applicable Federal, State, and local laws.

Existing paint systems and abrasives used for blast cleaning may include toxic metals such as lead, arsenic, cadmium, and chromium. Consider them as hazardous waste when removed, unless tests conducted as specified in the Toxicity Characteristic Leaching Procedure (TCLP), EPA Method 1311 prove otherwise.

Prior to bidding, become familiar with the current environmental regulations and safety procedures. When required via waste characterization testing, obtain an EPA Hazardous Waste Generator ID Number, and dispose of waste under manifest as required by RCRA (40 CFR 260 through 265, and 271).

Prevent waste from entering the environment by containing, collecting, storing, testing, and disposing of all waste in accordance with Federal, State, and local regulations.

(c) Submit the following drawings, plans, and information for accomplishing the work. Do not proceed with the work until the submittals are received by the District.

1. Personnel Qualifications. Provide applicable personnel qualifications to the District prior to using the personnel on site.
2. Quality Control (QC) Plans. Refer to 411.04 for detailed submittal requirements for Quality Control Plans.
3. Containment Plans. Refer to 411.09. Make submittals as specified.
4. Environmental Protection Plan of Action. Required when abrasive blast cleaning is conducted in the field. Refer to 411.09.
5. Waste Handling Program. Required for the handling of all hazardous waste regardless of the presence of toxic metals. The Waste Handling Program shall include disposal of unused paint and solvent. Refer to 411.09.
6. Worker Protection Compliance Program. Required when abrasive blast cleaning is conducted in the field. Refer to 411.10.

Do not construe receipt of the submittals to imply approval of any particular method or sequence for conducting the work, or for addressing health and safety concerns. Receipt of the proposed plans shall not remove the responsibility to conduct the work in accordance with Federal, State, or local regulations, this Specification, or to protect the health and safety of all workers involved in the project and any members of the public who may be affected by the project. The Contractor remains responsible for the adequacy and completeness of the programs and work practices, and adherence to them.

411.02 Materials

(a) Coatings shall conform to Table IV-6 in Section 411.04.

(b) Penetrating Sealant shall be supplied by the paint manufacturer for the 2 coat inorganic paint system. Penetrating Sealer shall have a viscosity of 75 to 101 KU and be able to penetrate and seal existing coatings and substrate. The sealer shall be cross-linked amido-amine epoxy primer/sealer having two components mixed in accordance with the manufacturer's recommendations. It shall be a minimum 95 percent solids by weight.

(c) Caulking used to completely seal off crevices and pack rusted areas shall be Tremco Dymonic 100, or other District approved sealant. Caulking shall be reviewed and approved for use with the paint system by the paint manufacturer. Caulking shall be tinted by the manufacturer so that the supplied material matches the finish coating color of the project.

(d) Water used in cleaning operations shall be potable. If water is recycled, it shall be filtered prior to reuse. Recycled water shall be used only on the bridge from which it was generated and shall be

subsequently tested after cleaning operations but prior to disposal in accordance with Section 411.09 and then properly disposed of.

(e) Abrasives used in cleaning operations shall be one of the following categories:

1. Expendable abrasives shall conform to SSPC-AB 1, Type I or Type II, Class A, except that the District will not permit the use of silica and quartz sands. The abrasive shall not contain total levels of any of the heavy metals listed in 40 CFR 261.24, Table 1, in excess of 20 times the specified regulatory leachable limits. Expendable abrasives shall be selected from the VDOT Materials Division Approved Products List 18 and shall not contain chemical additives that render the waste non-hazardous under the Toxicity Characteristic Leaching Procedure.
2. Recyclable abrasives, newly manufactured or re-manufactured steel, shall conform to SSPC- AB 3. Recycled abrasive shall be examined by the Contractor for oil contamination prior to start up and at least once per 8-hour shift in accordance with VTM-82. Recycled abrasive in use shall conform to SSPC-AB 2 Section 4.

411.03 Certifications

(a) SSPC QP-1 Requirement: The Contractor shall be certified to perform coating applications according to SSPC QP-1, Standard Procedure for Evaluating Qualifications of Industrial/Marine Painting Contractors, Field Applications in Complex Structures in order to perform coating operations on all steel structures. The Contractor shall submit proof of such current certification to the District before starting the Work.

(b) SSPC QP-2 Requirement: The Contractor shall be certified to perform coating removal operations according to SSPC QP-2, Standard for Evaluating Painting Contractors, Removal of Hazardous Coatings from Industrial/Marine Steel Structures in order to perform coating removal operations. The Contractor shall submit proof of this certification to the District before starting the Work. The SSPC QP-2 certified Contractor shall assign a SSPC QP-2 qualified Competent Person to oversee removal activities to protect the environment and workers safety and health while performing removal activities under the contract. For the purposes herein a Competent Person is an individual who meets the qualifications defined in the document SSPC-QP2 – Qualifications, Section 2. The SSPC QP-2 Competent Person shall be present during startup, surface preparations, removal operations, and waste removal/disposal activities to ensure and verify environmental protection and worker safety and health practices and procedures comply with the prepared plans.

The SSPC QP-2 Competent Person shall submit written certification that the Contractor's work operations are meeting the environmental and worker safety and health plans requirements each week. The SSPC QP-2 Competent Person shall submit written certification at the completion of the project that the environmental and worker safety and health plans fully complied with all applicable regulations and was fully implemented by the Contractor. If there are any emissions or discharges noted, the Competent Person shall submit in writing, within 24 hours of the time of the discharge, corrective actions taken by the Contractor to remedy the noncompliance.

(c) Certified Industrial Hygienist (CIH) or Certified Safety Professional (CSP): Provide the services of a CIH or CSP when the work involves the disturbance or removal of paint containing toxic metals or

when abrasive blast cleaning. Provide evidence that the CIH or CSP has the following qualifications and insurance requirements:

1. Valid certification by the American Board of Industrial Hygiene or Board of Certified Safety Professionals.
2. Field sampling and oversight experience involving removal of paint that contains toxic metals from structures.
3. Errors and omissions insurance coverage of not less than \$1,000,000 for the type of work specified.

All field sampling and testing shall be performed by the CIH/CSP, or by an employee working under the direct supervision of the CIH/CSP and shall be witnessed by the District. Notify the District at least 24 hours prior to sampling and testing.

The CIH/CSP shall review all results of sampling and testing performed on the project. The CIH/CSP, or a person working under the direction of the CIH/CSP, shall prepare written reports interpreting these results for compliance to the applicable regulations. Submit a copy of all reports, analysis, etc., to the District within five working days after sampling.

(d) Paint Manufacturer Certifications and Letters: Submit the following information listed below to the District prior to any work.

1. When detergents or additives are proposed to be incorporated into the water used for washing, provide MSDS and a letter from the coating manufacturer that approves the use of the detergents with their coating.
2. The manufacturer shall provide a letter that approves any proposed solvents for use in solvent cleaning prior to painting or between coats. Provide MSDS for the solvents.
3. Provide the paint manufacturer's application and thinning instructions, MSDS, and product data sheets.
4. When caulking is used, provide a letter from the coating manufacturer identifying the recommended caulking material, the application sequence for integrating the caulking into the coating system, and the minimum cure time prior to paint application.

(e) QC Inspectors: A QC inspector shall be on site full-time during cleaning and painting operations. Provide documentation that personnel performing quality control related functions are experienced and qualified to perform the work, and have completed the training specified for SSPC-QP1, and when paint containing toxic metals is being disturbed, SSPC-QP2.

(f) Professional Engineer: When the erection of any waste or emissions containment structure includes the bridge as the primary means of support, the Contractor shall describe such system as specified in Section 411.09 and provide certification by a Professional Engineer, holding a valid license to practice structural design engineering in the Commonwealth of Virginia. The certification shall verify the structural integrity of the containment structure and that the containment system does not adversely

affect any portion of the bridge. This requirement will not apply to any containment structure with a total weight-bearing capacity of less than 1,000 pounds.

411.04 General Surface Preparation and Application Standards

Prior to being coated, the Contractor shall ensure surfaces are clean and free from rust, loose or brittle paint, chalking, oil, grease, salt contaminants, dirt, and other substances that would prevent coatings from tightly adhering to the intended surfaces. Surfaces shall be prepared in accordance with SSPC specifications as required herein.

When blast cleaning is specified for surface preparation, the Contractor shall use SSPC PA-17, Procedure for Determining Conformance to Steel Profile Requirements, including information in Appendix B, Determining Compliance Based on Process Control Procedure.

Should an area of steel that has previously been cleaned become soiled, contaminated, or rusted, the Contractor shall reclean the area to the satisfaction of the District prior to the application of coating at no additional cost to the District.

Regardless of the method of cleaning, surface imperfections described in the “Procedures Following Blast Cleaning and Immediately Prior to Painting Section” of SSPC-SP 10 and any other matter that will prohibit a smooth unobstructed surface for the application of the specified coating, shall be removed.

(a) **Quality Control (QC) Plan, Inspection Procedures, and Recording Systems:** Submit a Quality Control Plan for providing daily job quality control according to SSPC-QP1 for surface preparation and painting operations. The Quality Control Plan shall include the following:

1. Records of standards and specifications for coating inspection work and their utilization.
2. System for filing inspection reports.
3. Demonstration that inspection equipment and calibration standards and procedures for calibrating the inspection equipment are available.
4. Procedures to stop nonconforming work.
5. Procedures for verifying proper coating application.
6. Procedures to ensure that each major operation is inspected and the inspection results documented. Contractor QC inspections shall include:
 - i. Effectiveness of protective coverings to control project debris, paint spatters, overspray, drips, paint spills, etc., while painting over roadways, waterways, machinery areas, and areas in the vicinity of abutments and private properties.
 - ii. Ambient conditions.
 - iii. Compressed air cleanliness and, if required, acceptability for breathing.

- iv. Surface preparation (solvent cleaning, pressure washing, hand/ power tool or abrasive blast cleaning, etc.).
- v. Coating application (specified materials, mixing, thinning, and wet film thickness).
- vi. Dry film thickness per coat.
- vii. Recoat times and cleanliness between coats.
- viii. Coating continuity and coverage (free from runs, sags, overspray, dryspray, pinholes, shadow-through, skips, etc.).

Maintain on-site copies of the daily job quality control records and make them available to the District upon demand. Submit records from on-site audits and inspections from SSPC, VOSHA, OSHA, EPA, and Virginia Department of Environmental Quality.

(b) **Inspection Equipment:** Provide for the exclusive use of the District, the following equipment for the QA observations of the cleaning and painting operations. Maintain, calibrate, and verify the equipment in a condition that is satisfactory to the District. The equipment will remain the property of the Contractor at the conclusion of the Contract.

- 1. The latest editions of SSPC Vis 1, SSPC Vis 3, or SSPC Vis 4, as applicable to the project, or other approved visual standards.
- 2. SSPC Manual Volumes 1 and 2 (Latest Editions).
- 3. Spring Micrometer with Coarse and Extra Coarse Surface Profile Replica Tape.
- 4. Electric or Sling Psychrometer.
- 5. U.S. Weather Bureau Psychrometric Tables.
- 6. Surface Thermometer, 0 F to 150 F.
- 7. Probe Thermometer for Paint Temperature.
- 8. High/Low Thermometer for Paint Storage Area.
- 9. Wet Film Thickness Gauge.
- 10. Digital Magnetic Dry Film Coating Thickness Gauge capable of transferring data to a computer (SSPC-PA 2, Type 2).
- 11. Plastic Calibration Shims for Digital Magnetic Dry Film Thickness Gauge.
- 12. Inspector's Mirror.
- 13. Wind Meter.

14. Clean, White, Lint-Free, Absorbent Rags.
15. Light Meter for measuring light intensity during all phases of work.
16. Putty Knife at least 40 mils thick and 1 in. to 3 in. wide.
17. Blotter Paper.
18. Dry film thickness calibration plates traceable to the National Institute of Standards and Technology.
19. Measuring stick or pole to measure platform under clearance. The stick or pole shall be collapsible and have a minimum measuring height of 20 ft.
20. Chloride testing equipment and consumables.

(c) **Surface Preparation:** The Contractor shall prepare the surfaces scheduled to be coated in accordance with one or more of the following Methods prior to the application of coating(s). Surfaces to be coated shall be cleaned in accordance with Method 1 (SP 1) followed by Method 7 (pressure wash) prior to the use of other surface preparation methods, except as provided herein.

1. Method 1: Solvent, emulsion, or steam shall remove oil, dust, dirt, grease, concrete, chalking, and salt in accordance with SSPC-SP-1. The Contractor shall remove emulsions and/or contaminated solvent before they evaporate by wiping or rinsing with clean solvents to prevent a film of contaminants from remaining on the surface. Solvents used in the work shall be those recommended by the coating manufacturer.
2. Method 2: The Contractor shall employ hand-tool cleaning shall remove loose coating, loose rust, and loose mill scale in accordance with SSPC-SP-2.
3. Method 3: The Contractor shall employ power-tool cleaning to remove loose coatings, loose rust, and loose mill scale in accordance with SSPC-SP-3. After cleaning, locations cleaned to bare metal shall have a minimum 1 mil profile.
4. Method 4: The Contractor shall employ power-tool cleaning to remove coating, rust, and mill scale to bare metal in accordance with SSPC-SP-11. Surface profile shall be a minimum of 1 mil with continuous pattern with no smooth unprofiled areas.
5. Method 5: The Contractor shall employ abrasive blast cleaning to remove visible coating, rust, and mill scale in accordance with SSPC-SP-10/NACE No. 2. Expendable abrasives that comply with SSPC AB1, Class A, Grades 1, 2, or 3 may be used. Recyclable abrasives that comply with SSPC AB 2 and SSPC AB 3 may be used. The Contractor shall collect, remove and properly dispose of all expendable abrasives after use. The permitted use of any Type, Class or Grade of abrasive does not relieve the Contractor from meeting the cleanliness defined by SP 10.

After blast cleaning, the surface profile shall be an average from 2 to 4 mils with no individual readings below 1.5 mils or above 4.5 mils. All abrasive blasted surfaces shall be coated within 8

hours of blast cleaning. If rust bloom develops before coating, the Contractor shall repeat blast cleaning at no additional cost to the District until the surface meets the required cleanliness.

During or after blast cleaning, local areas to be caulked during painting (see 411.05) shall have impacted corrosion removed so that it is recessed between a sound steel perimeter. No pack rust or impacted corrosion shall protrude from the area to be caulked.

6. Method 6: The Contractor shall employ brush-off blasting to remove loose or brittle coatings, loose rust, and loose mill scale in accordance with SSPC-SP-7/NACE No. 4. Bare steel locations shall have a uniform 1 mil minimum profile. Abrasives used shall be as described in Method 5.
7. Method 7: The Contractor shall use low-pressure water cleaning (LPWC) to remove dust, debris, and salt contaminants. A soluble salt remover shall be added to the wash water in accordance with the manufacturer's instructions for concentration, washing, and rinsing processes. Method 7 can be used exclusively (i.e., in lieu of Method 1) and without a soluble salt remover for the cleaning of new shop-primed or new field-primed steel provided that no salt, oil or grease is present or when oil and grease are removed separately by Method 1. However, tests shall be performed to verify no oil or grease is present and that chloride levels are at or below manufacturer's recommendations prior to coating application.

The pressure washer shall be capable of achieving a minimum of 3,000 pounds per square inch at the nozzle when used prior to blast cleaning, and a minimum of 5,000 pounds per square inch at the nozzle when used to remove loose or brittle coatings. The Contractor shall maintain the nozzle no more than 10 inches from the surface and consistently hold it at 90 degrees to each surface being cleaned. Any detergents or cleaners used in conjunction with this cleaning method shall be those allowed or recommended by the coating manufacturer and as approved by the District. All water generated by this washing technique must be collected and tested in accordance with Section 411.09 and disposed of in accordance with Section 411.09.

The Contractor shall prevent contaminants coming in contact with surfaces during surface preparation and coating operations.

The Contractor shall collect and contain solid and liquid wastes. Waste shall be characterized and properly disposed of in accordance with Section 411.09

The waste material(s) generated from all work shall be tested in accordance with EPA Method 1311, Toxicity Characteristic Leaching Procedure (TCLP), and corresponding EPA 6000 or 7000 series metals analytical method for, but not limited to, the following metals to determine if the waste material(s) requires management as hazardous waste: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. The exception to this testing protocol is that waste generated from abrasive blasting with recycled steel abrasives for Method 5 (SP 10) shall be tested for total concentrations of the aforementioned heavy metals in lieu of the TCLP analysis. Waste material(s) shall be properly disposed of in accordance with all federal, state, and local regulations.

(d) **Coating Application:** The Contractor shall apply coatings in accordance with SSPC-PA 1. The specified method of surface preparation is required to be met and maintained immediately before coating application. Coatings shall not be applied under any of the following conditions unless recommended by the manufacturer and approved by the District:

1. When air, coating, or metal temperature is below 40 degrees F.
2. When air, coating, or metal temperature is expected to fall below 40 degrees F before the coating has cured to a recoat-able condition.
3. When snow, sleet, or rain is falling.
4. When moisture is visible on metal.
5. When relative humidity is above 90% for the inorganic silicate coatings or above 85% for System W.
6. When relative humidity is below 30% for the inorganic silicate coatings.
7. When the temperature of the steel or metal surface to be coated may cause blistering of the coating as indicated in the manufacturer's product data sheet.
8. When the steel surface temperature is less than 5 degrees F above the dew point or is expected to fall to that point before the coating has dried or cured to a recoat-able condition.

Prior to application of coatings, the surface shall be dry. The Contractor shall apply coatings in a neat and orderly manner by brushing, rolling, or spraying as recommended by the manufacturer.

Apply the full coat of IOZ by spray only. The District will not allow the Contractor to use rollers, daubers, paint brushes or sheepskins to apply a full coat of inorganic zinc rich coatings. Zinc-rich coatings shall be applied by brush for the stripe coat.

Coatings shall be applied in a manner to provide a tight film of specified uniform thickness well bonded to metal or underlying coating, including crevices and corners, and shall be free from laps, lint from rollers, bristles from brushes, streaks, sags, runs, overspray, dry spray, shadow-through, skips, pin holes, holidays, excessive film build-up, mud cracking, misses, and other defects. A full coat of paint shall meet these criteria before approval by the District.

Apply the stripe coat(s) to all edges, welds, crevices, rivets, bolt threads, bolt heads, areas of pitted steel and other surface irregularities. Extend the stripe coat approximately 1" from all surface irregularities. Apply the stripe coat by brush only. Stripe coats may be thinned to allowable levels to promote better application performance. When brushing zinc coatings, repeatedly stir the material during use to prevent settling of the zinc. The dry film thickness of stripe coats will not be measured for verification and coverage of stripe coats will be verified visually and with the aid of inspection mirrors. Stripe coats shall dry or cure to touch before overcoating.

Apply spot coats to fully cover the prepared spot locations with straight boundaries of rectangular shape. Overlap successive spot coats to provide full coverage of each underlying coat.

Deficient, impaired, or damaged areas of each coat shall be repaired according to the coatings manufacturer's recommendations.

The Contractor shall not apply successive coatings until each preceding coat has dried and cured in accordance with the manufacturer's recommendations and has been approved by the District. Coatings shall be applied in accordance with Table IV-6.

| TABLE IV-6 Coating Systems | | | | |
|----------------------------|--------------|-----------------------|-------------------|--------------------------------|
| Coating System | Coat | Coating | Color | Dry Film Thickness (DFT) (mil) |
| 2 coat Inorganic * | Primer | Inorganic Zinc-Rich * | Standard Green | 3.0 – 4.0 mils |
| | Finish | Inorganic Silicate * | G186 Light blue** | 3.0 – 5.0 mils |
| System W (List 40)*** | Primer | 101 | Brown 595-30045 | 2.0 – 4.0 mils |
| | Intermediate | 102 | White | 2.0 – 4.0 mils |
| | Finish | 103 | As Specified** | 2.0 – 4.0 mils |

* Carbozinc 11HS and Armorlast inorganic coatings or approved equal.

** Color as specified. If not specified, color shall be Federal No. 595-25526 Pastel Blue.

*** Or approved equal 3-coat spot maintenance paint system.

Finish coats shall completely cover the underlying coat. The Dry Film Thickness of any coat when it is applied shall be in accordance with Restriction Level 3 of SSPC PA-2, these specifications and the manufacturer's instructions unless otherwise specified in the Contract.

(e) **Paint Storage and Mixing:** Store paints and thinners in well-ventilated areas that are not subject to excessive heat, open flames, electrical discharge, and direct rays of the sun. Adhere to the manufacturer's storage recommendations. Store materials in heated areas when necessary. Use materials on a rotating stock basis, and leave containers closed until used. Store paint in tightly covered containers at an ambient temperature of at least 45 F. Maintain containers in a clean condition, free of foreign materials and residue.

Coatings shall be mixed in strict accordance with the manufacturer's instructions. Individual components of multicomponent coatings shall be mixed separately prior to mixing with other components of the kit. The Contractor shall use a power mixer to perform mixing. Multicomponent material shall not be mixed in proportions less than the packaged quantities.

Zinc-rich coatings shall be applied from containers equipped with a mechanical agitator, which shall be in motion throughout the application period unless otherwise specified by the manufacturer.

Coatings shall not be thinned beyond the volatile organic compound (VOC) limit or the manufacturer's recommendation, whichever is the most restrictive. Do not thin the paint unless authorized by the paint manufacturer and approved. The District shall be present whenever the paint is thinned.

Remove waste chemical solutions, oily rags, and other waste daily. Take precautionary measures to ensure protection of workers and work areas from fire hazards and health hazards resulting from handling, mixing, and applying materials.

(f) Quality Control Measurements:

1. Water and/or Oil in Compressed Air: The Contractor shall perform a Blotter Test in accordance with ASTM D 4285 with equipment at operating conditions, prior to the start of work and once per 8 hour shift. The Contractor shall perform this test daily in the presence of the District, record the findings, and provide a copy to the District for inclusion to the project records.
2. Illumination in containment: The minimum illumination in foot candles stated in SSPC Guide 12 shall be confirmed in the general work areas and task specific areas such as surface preparation, inspection, and coating application activities prior to start of each shift's operations when working in containment areas.
3. Presence of Oil or Grease: The Contractor shall check surfaces for oil and/or grease contamination prior to coating application by verifying surfaces using a water break test. A black light may also be used to confirm the presence of hydrocarbons.
4. Chloride Testing: Chloride concentrations shall be no greater than $7\mu\text{g}/\text{cm}^2$ on structures as prepared for paint application. The Contractor shall perform chloride tests at a frequency of three tests per span or work area after surface preparation is completed. Sampling (retrieval) and analysis of chloride shall be performed using any patch, cell, or sleeve extraction equipment in accordance with SSPC Guide 15. The District will select test locations on existing structures to represent the greatest amount of corrosion in the span. Should chloride concentrations not be in compliance with $7\mu\text{g}/\text{cm}^2$ the location(s) of non-conformance shall be re-cleaned and re-tested along with two additional test locations. Should the re-cleaned location(s) or any additional test not meet the compliance requirements, the entire span shall be rewashed using a soluble salt remover and retested as stated above until the span complies.
5. Blast Cleaning Process Control: When the contract or plans designate Method 5 (SP 10) surface preparation, the Contractor shall identify and document the processes used at the start of each shift, or blasting operation, in the presence of the District in accordance with SSPC PA-17, including information in Appendix B. When establishing the blasting process, the Contractor shall inspect surfaces for surface profile produced and the degree of cleanliness as specified. This information shall be recorded daily.
6. Surface Profile Measurements: When the contract or plans designate Method 5 (SP 10) surface preparation, surfaces shall be measured in 3 locations per span using a compressible foam tape in accordance with ASTM D 4417, Method C and in accordance with the tape manufacturer's instructions. Should surface profile tests not conform to specification profile range, the Contractor shall measure the extent of non-conforming profile in accordance with SSPC PA-17. The Contractor shall correct any non-conforming location(s) at no additional cost to the District. When measuring surface profile for methods other than Method 5 (SP 10), the Contractor shall take readings in accordance with ASTM D 4417, Method B at a sufficient number of locations to verify profiles conform to the specifications requirements.

7. Coating Preparation/Mixing: Procedures used for mixing coatings shall be included in daily project records. These records shall also include product name, batch number, material temperatures, ambient temperatures, relative humidity, time of day mixed, dwell times, pot life and product number of thinner and quantities, if used.
8. Film Thickness: The Contractor shall measure the dry film thickness (DFT) of each full coat applied using a Type 2 film thickness gage. The Type 2 gage shall be calibrated according to the frequency and procedure specified by the manufacturer and in accordance with ASTM 7091. Prior to taking measurements, a verification of combined accuracy shall be performed in accordance with SSPC PA-2, Appendix 8. The combined accuracy shall be within the manufacturer's tolerance of the gage and the tolerance of the standard shim(s) used. If the gage does not meet the combined tolerance, it shall not be used. The Contractor shall furnish another gage which passes accuracy testing for use. Coatings shall be measured in accordance with SSPC PA-2 and comply with thickness Restriction Level 3 after they have dried or cured. In the event coatings are applied and individual coat thicknesses are not documented by the Contractor and confirmed by the District, the undocumented surfaces shall be re-cleaned and coatings reapplied at no additional cost to the District.

(g) **Hold Point Inspections:** The following hold point inspections shall be required for all coating methods and all field surface preparation and coating applications performed. Before moving to the next phase of work, each of the following activities must be confirmed by the District and documented by the Contractor's representative as it applies to the work specified (Confirmation will be as required by the paint process used to verify compliance).

1. The following hold points apply to the 2 coat inorganic paint system:
 - i. Cleanliness of surfaces prior to surface preparation
 - ii. Surface preparation and cleanliness prior to primer application
 - iii. Full coat primer prior to stripe coat
 - iv. Primer stripe coat prior to spot sealer
 - v. Spot sealer coat prior finish coat
 - vi. Full finish coat
 - vii. Caulking installation
 - viii. Cleanliness of surfaces after steel repairs (spot work)
 - ix. Spot / stripe coat of primer to steel repairs (spot work)
 - x. Full finish coat to steel repairs (spot work)
2. The following hold points apply to the System W, 3-coat spot painting:

- i. Cleanliness of surfaces prior to surface preparation
- ii. Surface preparation and cleanliness prior to primer application
- iii. Spot coat primer
- iv. Spot coat intermediate
- v. Spot coat finish paint

The District will verify each hold point by means of visual and/or instrumentation methods. The Contractor shall be responsible for documenting the completeness of the work. The Contractor shall employ a Paint Quality Control Officer to accompany the District during all hold point inspections. The Paint Quality Control Officer shall schedule and coordinate all hold point inspections with the District and complete all required documentation.

If deficiencies are detected during a hold point inspection, such deficiencies shall be corrected to conform to the Specifications requirements and the area shall be reinspected until the hold point inspection is accepted by the District. All hold point inspections shall be documented by the District and the Contractor's designated Paint Quality Control Officer.

- (h) **Paint Representative:** The representative shall be a technical representative of the paint manufacturer. During initial execution of the work, the District shall require the paint representative to be on site to review with the District the degree of cleanliness prior to painting and the methods of application of the coating system. The paint representative is not required after all cleaning and painting methods and procedures have been reviewed with the District and documented by the paint representative. The District shall stop paint operations for failure to meet this requirement and require all areas cleaned or painted without paint representative review be recleaned.
- (i) **Record Keeping and Protective Coating Identification:** The Contractor shall maintain a record that establishes and describes the location and limits of the work area where protective coating removal or application of a protective coating has been performed. Such records shall be maintained and completed on a daily basis and shall provide, at a minimum, the following information: Contractor's name, date, time work began, time work completed, ambient air and structure temperatures, relative humidity ranges during coating and curing operations, all quality control measurements, signed hold point inspections, and manufacturer and name of coating system applied.

411.05 Existing Structures

Coated steel structures may contain mill scale. Coatings applied to existing structures are qualified as systems and therefore shall be applied as listed. Mixing and matching of coatings is not allowed unless permitted in writing by the coatings manufacturer(s) and approved by the District.

The Contractor shall test for chloride when preparing surfaces. Chloride levels shall be tested on bare steel and/ or completely prepared surfaces in accordance with the manufacturer's test instructions.

(a) Coating application will be performed as follows:

1. **Clean and Repaint:** The Contractor shall clean the entire structure in accordance with Method 1 (SP 1) followed by Method 7 (pressure wash) using a pressure of 2,500 to 3,500 pounds per square inch at the nozzle. The entire structure shall be cleaned to bare metal in accordance with Method 5 (SP 10). The structure shall be recoated using the 2 coat Inorganic System in Table IV-6.
2. **Spot Paint:** The Contractor shall prepare the entire structure in accordance with Method 1 (SP 1) followed by Method 7 (pressure wash) using a pressure of 4,000 to 5,000 pounds per square inch at the nozzle. All spots of missing or degraded paint shall be cleaned in accordance with Method 4 (SP 11) or Method 5 (SP 10). Prepared areas shall be spot-primed with primer. Intermediate and finish coats shall be applied to spot-primed areas only and shall be feathered into the existing finish coat to produce a uniform homogeneous appearance on the existing structure. The coating system shall be System W in accordance with Table IV-6.

If a winter season elapses between applications of coats, the Contractor shall prepare the structure again in accordance with Method 1 (SP 1) prior to resuming application of additional coatings at no additional cost to the District.

- (b) Repair of Surface Imperfections: Regardless of the method of cleaning, remove surface imperfections such as sharp fins and slivers, rust scale, weld spatter, and pack rust by a combination of cleaning procedures such as using hand or power impact tools (chipping hammers or scaling hammers), blast cleaning, etc. Grinding will be permitted for localized, non-structural steel edges and appurtenances with the approval of the District.
- (c) Feathering and Removal of Defects in Existing Coating: For projects involving the touch up or overcoating of newly installed steel or existing coatings in the field, regardless of the method used for cleaning, feather the edges of old paint permitted to remain. Remove portions of paint on previously painted surfaces that are chalky, powdered, cracked, or otherwise unacceptable. Remove runs and sags in the existing paint on the outside facing surfaces of fascia beams over highways. Ensure a smooth appearance after application of the new coating.
- (d) Surface Condition Prior to Painting: Remove residual dust, dirt, and grease from the surface as the final procedure prior to painting and between coats whenever the coating is contaminated. Cleaning includes the removal of all dust, puddles, grease, oil, exhaust from trucks, debris, concrete spatter, and other foreign matter on the surfaces being painted. Also remove debris on surfaces adjacent to those being painted. Concrete spatter stains that discolor the primer need not be removed provided material is not dislodged when wiping the surface with a cloth. Cleaning involves vacuuming, solvent cleaning, hand/power tool cleaning, and pressure washing as appropriate. Should an area of previously cleaned

steel become soiled, contaminated, or rusted, reclean the area prior to painting at no additional cost to the District. Move all hooks, cables, beam clamps, and outriggers during cleaning operation to allow the underlying surfaces to be cleaned.

(e) Caulking: Caulk the following areas with a material approved by the paint manufacturer. Install caulking that is tinted to match the finish paint after painting, or as recommended by the paint manufacturer and accepted by the District:

1. Areas of plate deformation that create a 3/16 in. or greater space between plate steel.
2. Gaps between steel members that are 3/16 in. or greater.
3. Gaps at the interface of steel and concrete surfaces that cannot be cleaned and painted.

(f) Defective Work and Repair Painting: Neither conditions during application nor acceptance of paint shall remove the responsibility of obtaining a satisfactory paint system. When rusting occurs or a paint coat lifts, blisters, wrinkles, or shows evidence of having been applied under unfavorable conditions, the workmanship is poor, impure or unauthorized paint has been used, or for any other reason the painting is unsatisfactory, the Contractor shall remove the affected paint and thoroughly clean the steel and repaint. Ensure that there is a uniform appearance throughout the structure. This shall be at no additional cost to the District.

411.06 New Structures – section not used

411.07 Metal-Based Coatings – section not used

411.08 Observation Period

In order for the Contractor to meet the 2 year warranty, stated in the Contract, the Contractor shall maintain responsibility for the Clean and Repaint coating system for an 18-month observation period beginning on the date when the project is “finalized” and/or accepted by the District. The Contractor shall guarantee the preparation and installation of the coating system under the payment and performance bond. To successfully complete the observation period, the coating system must meet the following requirements after 18 months in service:

- (a) No visible rust or rust stains from coated surfaces.
- (b) No blisters, peeling, cracking or other abnormalities of any coat applied.

The District will perform a visual inspection of the structures after the 18-month observation period, but no longer than 20 months. The Contractor shall participate in this inspection with the District. Any

locations not meeting the criteria above shall be repainted or repair painted using methods and procedures in these specifications and reviewed by the paint manufacturer at no cost to the District.

411.09 Environmental Protection

In accordance with Section 107, the Contractor shall protect the public and the environment from lead paint or hazardous material resulting from coating preparation, cleaning, removal operations, blast abrasives, rust, and overspray.

The District will not allow the depositing or dropping of waste materials into water, onto the ground, onto roadways, or outside the containment system. Tarpaulins shall cover all pavements and surfaces underneath removal and recycling operations including equipment or other equipment handling hazardous materials and storage during active and inactive operations such as retention or storage until characterization analysis and disposal.

Waterways, travel-ways and the public shall be protected against coating drift and overspray. Equipment and containment devices shall arrive at the site in a decontaminated condition and shall be decontaminated prior to relocating or moving unless otherwise properly disposed. Residues from decontamination and any associated disposable items shall be properly disposed of in accordance with all applicable federal, state, and local regulations.

The Contractor shall at all times be in compliance with these specifications and the regulations of, but not exclusive to, the following agencies: U.S. Environmental Protection Agency, U.S. Department of Transportation, Virginia Department of Environmental Quality, Virginia Department of Labor and Industry, and the U.S. Coast Guard. The Contractor shall immediately report all instances of non-compliance to the District.

(a) **Environmental Protection:** The Contractor shall design a containment structure for all cleaning and painting work as specified in this Section. Criteria for design of an SSPC Class 2A containment shall include:

1. Working drawings of the proposed containment system, showing the design of the paint removal, containment, rigging, and ventilation system (if applicable), including all calculations and assumptions. The working drawings shall:
 - i. Indicate which structures are covered by the plans submitted. Show the containment system in plan and elevation views, including details of clips and hangers.
 - ii. Identify all containment system components on the plan sheets.
 - iii. Indicate the type and size of scaffolding or rigging to be used.
 - iv. Indicate sizes of the containment areas, and when ventilation is specified, the capacity of the dust collectors, equipment data sheets, and types of airflow systems to be provided including volume of air from ventilation fans and minimum velocity of air movement.

2. The containment system and equipment shall allow at least 14'6" clearance over the roadway surface at all locations.
3. Secure all curtains, screens, and tarpaulins used for containment. Make connections to the steel work of the structure with clamps or other approved devices. Do not drill holes into the existing structure or weld to the existing steel work. Do not make permanent attachments or fastenings to the structure. Do not attach any load to the structure railings unless details and calculations showing loading have been approved.
4. Use fire retardant containment curtains, screens, and tarpaulins.
5. Indicate maximum waste load permitted on the containment system, expressed in inches of debris.
6. When the containment or rigging system or methods of erection will apply a load to the structure (e.g., suspended platform) the submittals shall include an analysis of the load that will be added to the existing structure, including blast waste. When vehicles containing surface preparation materials or waste will be stationed on the structure, indicate allowable load and location. The load analysis shall be performed, signed, and sealed by a professional engineer registered in the State of Virginia. The analysis shall ensure that the system will not affect the structural integrity of the structure. When the containment or rigging system does not impose a load to the structure (e.g., tarpaulin materials suspended from the structure to grade), a professional engineer analysis and review of the drawings is not required.
7. Prepare and submit all drawings requiring a professional engineer review and seal as defined in (7) above. When a professional engineer stamp is required, sign and seal each sheet by the professional engineer. Provide the submittal letter on company letterhead. Provide all drawings in Adobe .pdf format to the District.
8. The contractor shall ensure that the floor of the containment system has a rigid flooring system. The use of chain link fencing and other flexible floor systems are prohibited.
9. All steel corrugated decking containment materials shall have either fire retardant plastic, impermeable screen or tarpaulins laid on top to prevent the leaking of grit, dust, toxic metals and debris during blast cleaning activities.
10. The Contractor shall protect all utilities attached to the superstructure. Any damage to utilities caused by the Contractor's operation shall be repaired at the expense of the Contractor. Contractor shall include utility protection means and methods in the containment system plans.
11. The Contractor shall be aware of the District's Wind Restrictions, details of which can be found on the District's website: www.cbbt.com/weather/. Specifically, the Contractor may not be able to access the bridge when winds reach 40 mph or more. The Contractor shall take the wind restriction policy into consideration when planning the work and in the process of designing the containment system. The District will provide historical wind readings for the facility for the period 2022 – 2024.
12. The Contractor's containment system shall not impart lateral or vertical loads on the existing system that exceed the member capacities considering the loading and capacities as specified by

the AASHTO LRFD Bridge Design Specifications, 10th Edition and the AASHTO Guide Design Specifications for Bridge Temporary Works. No overloading of the existing structure will be allowed. The Contractor shall analyze the containment system in the fully installed condition with the maximum allowable operating wind speed as determined by the Contractor. All tarpaulins shall be connected in such a way that they will tear away from the structure when the operating wind speed is exceeded. In addition, the Contractor shall analyze the containment system in the fully "stowed" condition for the maximum wind speed as defined in the AASHTO LRFD Bridge Design Specifications, 10th Edition. Where required, temporarily reinforce existing structural steel. Under no circumstances shall local bending of the truss elements and out-of-plane bending of plate elements be allowed. The Contractor shall have his design and analysis completed and signed by a professional engineer registered in the Commonwealth of Virginia. Design calculations and design drawings shall be submitted to the District for review and acceptance prior to the erection of any containment system components.

13. Include an **Environmental Protection Plan of Action (EPPA)** as part of the environmental protection / containment plans. An EPPA confirming that the environment is protected from contamination is required when the coatings are being abrasive blast cleaned (regardless of the presence of toxic metals), or the coating being disturbed contains toxic metals (regardless of the method of preparation). When an EPPA is required, it shall be reviewed and sealed by a CIH or CSP and shall include procedures for monitoring air, soil, and water.

Include a location plan showing the type and location of high-volume ambient air monitors if applicable, low volume air sampling pumps and the procedures that will be followed for visible emissions assessments and inspections of the soil, water, surrounding property, structures, and pavement. Submit 5 copies of each plan signed and sealed by the CIH or CSP. All submittals shall be in writing and on company letterhead. At least one copy shall have an original seal. Address the proposed procedures that will be implemented for the following:

- i. For any paint disturbance using dry methods of preparation, address the daily visual emissions observations that will be performed and the corrective action that will be implemented in the event emissions or releases occur.
- ii. When paint is being disturbed by abrasive blast cleaning address the provisions for high volume ambient air monitoring (TSP-Monitoring); monitor citing, calibration, and operation; filter handling and shipping; and laboratory analysis, including the name and qualifications of the laboratory as well as the procedures for regulated area monitoring. Test results shall be reviewed and summarized by the CIH or CSP. Provide copies to the District within 5 workdays of sample collection by CIH or CSP or someone under their direction.
- iii. For any paint disturbance, address the visual assessments for soil/water/sediment that will be undertaken each day throughout the Contract, together with the proposed cleanup activities.
- iv. The SSPC QP-2 Competent Person shall submit written certification each week to the District that removal operations and coating work is being performed in compliance with the received Environmental Protection Plan and that the project is meeting the environmental requirements therein. Further the SSPC QP-2 Competent Person shall submit certification to the District at

the completion of the project that the Environmental Protection Plan fully complied with all applicable regulations and was fully implemented.

At the end of the shift each day and upon completion of all project activities, clean the surrounding property and the entire project area so that it is free of visible debris from the cleaning and painting activities.

The received site-specific Environmental Protection Plan shall become part of the District's records for the project. The Contractor shall not construe the received submittal as implying any approval of means and methods by the District. The Contractor shall provide one comprehensive Plan that covers all facets of operation. No work shall proceed until the District has notified the Contractor of Plan receipt. The Environmental Protection Plan shall include controls for capture, containment, collection, air monitoring, storage, and transportation of waste material generated by the work. The Contractor shall use the most effective method possible for capture, collection, containment, and transportation operations. The Plan shall include measures for accidental spill cleanup and spill reporting to the appropriate regulatory agencies.

After project award but not less than 3 weeks prior to commencing operations covered by this Plan, the Environmental Protection Plan shall be submitted to the District. This Plan shall not be submitted to the District for approval but shall be submitted for the District's review and record.

(b) **SSPC Level 1 Visible Emissions:** The following Level 1 visible emissions criteria apply when any paint is disturbed by dry methods such as blast cleaning or power tool cleaning.

Level 1 Emissions are defined as random visible emissions of a cumulative duration of no more than 1 percent of the workday or approximately five minutes in an eight-hour day. Level 1 is required for all structures. The Contractor's QC person, or Competent Person in the case of toxic metals projects, shall perform at least two 15-minute documented observations during each work shift. In addition to the 15-minute observations, direct all Contractor personnel to routinely observe the work area and to report unacceptable emissions to QC or supervisory personnel, or to the Competent Person. When unacceptable emissions are detected, locate and immediately correct the source of the emissions. Retain the records on site and make them available to the District.

(c) **Emissions Monitoring:** The Contractor shall perform continuous visual inspections of the containment structures, the dust collector system and abrasive recycling equipment to detect and control the release of any emissions into the unconfined air space. Emissions will not be permitted outside the containment system. The Contractor shall immediately correct any visual emissions outside the containment system to comply with emission standards. If there are any emissions or discharges noted, the SSPC QP-2 Competent Person shall submit in writing, within 24 hours of notice, what corrective actions were taken to contain the errant emissions or discharges.

Minimal visible air emissions will be allowed for properly operating vacuum-assisted power tools provided that a secondary means for collecting large particles is employed and the technology is applied using usual and customary industry practices inherent to such work. Excessive emissions caused by improperly operating or functioning equipment shall be immediately corrected. Any exhausts from gasoline or diesel equipment used shall be located outside or directed outside of the containment area. The Contractor shall provide adequate lighting as necessary to aid proper

performance of the work and visual inspections in accordance with the minimum requirements for illumination as stated in SSPC, Guide 12.

The Contractor shall be responsible for performing perimeter air monitoring for all project work areas using high-volume air samplers equipped for the collection of Total Suspended Particulate (TSP) samples. Air monitoring equipment used shall be employed, maintained and calibrated in accordance with the manufacturer's instructions. The filters shall be replaced daily in the presence of the District and analyzed for lead in accordance with EPA 40 CFR Part 50, Appendix G. Daily ambient air monitoring at each structure being abrasive blast cleaned shall begin one day prior to beginning work and during the first 10 days of productive abrasive blast cleaning operations. When the results indicate that the containment is controlling emissions, full-time monitoring may be discontinued unless otherwise directed. Ensure monitoring is repeated for 1 day every month thereafter during the work shift while blast cleaning or other dust producing operations are underway.

When the results of the original 10 days of monitoring or the periodic monthly tests are unacceptable, ensure that monitoring continues full-time. Monthly monitoring may be initiated or resumed only when approved, and only after the results of the testing indicates that the containment is controlling emissions.

Resume full-time monitoring when unacceptable visible emissions or residues are observed on the ground or water and as directed.

The Contractor shall place air monitors within 500 feet downwind of the structure at the point of maximum potential environmental impact of paint abatement, dust collection, and abrasive recycling equipment and at other locations of potential public or environmental exposure as directed by the District. Monitors shall be maintained at downwind positions at all times during the work in the event of shifting wind patterns.

As measured by perimeter monitoring, the Contractor shall be responsible for maintaining emissions levels below the National Ambient Air Quality Standard for lead (40 CFR Part 50) using the Adjusted Daily Allowance (ADA) procedure outlined in SSPC-Guide 6, Method D. Should emissions exceed the limits set herein or material begins to reach the ground or enter State waters, the Contractor or the SSPC QP-2 Competent Person shall notify the District and operations shall be halted until such time that corrective actions are implemented. The results of all sample analyses shall be submitted to the District within 48 hours for the first two days of monitoring, and within 5 business days thereafter.

Regulated area air monitoring shall also be done using NIOSH methods for lead, cadmium, chromium and arsenic. Air monitoring equipment shall be in operation for a minimum of 8 hours per day while blasting operations are being performed. Refer to SSPC Technology Update No. 7 Section 8 Method C. Monitoring shall be done until 3 consecutive results show all levels to be below the action level for the 4 toxic metals listed above.

(d) **Waste Characterization and Storage:** Solid material shall be contained, collected, and stored in closed 55-gallon USDOT approved steel drums. The Contractor shall, with the oversight of the District; collect and analyze samples for analysis according to RCRA statutes using TCLP analysis.

Solid waste samples shall be randomly collected and shall be representative of the contained waste. The solid waste generated will be tested in accordance with EPA Method 1311, Toxicity Characteristic Leaching Procedure (TCLP).

All liquid waste shall be tested by the Contractor in accordance with EPA Method 1311, Toxicity Characteristic Leaching Procedure (TCLP) to determine waste disposal requirements.

Contractor shall pay all costs for laboratory testing and provide the test results to the District prior to disposal.

The Contractor shall use space provided on Portal Island 4 as a temporary, lockable, storage area for waste material. The storage area shall provide access and egress through a gate or door. The Contractor shall collect the material at the end of each workday and shall transport the waste material to the storage area in a closed container that will not permit leakage. Each container shall be marked indicating the origin of the material; the date the material was placed in the storage area; and a 24-hour telephone number for the Contractor and the District representative. Prominent warning signs shall be displayed around the perimeter of the storage area. The signs shall be located at a distance from the storage area that will allow personnel to read the sign and take the necessary protective actions required before entering the storage area. Warning signs and notices shall be posted in accordance with CFR 29 Part 1926, Section 62.

The specific site for the temporary storage of the waste material shall be approved by the District prior to its establishment and shall not be located within a drainage area or where water will pond. Containers of waste material shall at all times have tops secured and be covered with waterproof coverings. The site shall be secured against unauthorized entry. The Contractor shall be responsible for ensuring any over-the-road transport of hazardous waste complies with all local, state, or federal permitting, licensing, manifesting, and/or fee requirements.

(e) **Disposal:** Solid waste material that is determined by the District not to be a hazardous waste shall be disposed of in a sanitary landfill Resource Conservation and Recovery Act (RCRA) Subtitle D or licensed industrial landfill that has a permit from the Virginia Department of Environmental Quality or an equivalent state or federal agency for out-of-state disposal facilities. The Contractor shall identify the landfill used by name, address, and permit number and shall certify that the waste material actually submitted for disposal met the above criteria and was properly disposed.

Liquid waste that is determined not to be a hazardous waste shall be legally disposed of in a publicly owned treatment works facility (POTW). The Contractor shall identify the POTW used by name, address, and permit number and shall certify that the waste material actually disposed of was not hazardous and was properly disposed.

If waste material is classified as hazardous, the Contractor shall obtain a provisional hazardous waste generator number from the Virginia Department of Environmental Quality in accordance with applicable federal and state regulations and shall legally store, package, label, and ship such material by a transporter with an RCRA Hazardous Waste Transporter permit to a RCRA, Subtitle C, Treatment Storage and Disposal Facility (TSDF) for treatment and disposal. The Contractor shall prepare a hazardous waste shipping manifest(s) with the site identified by the federal structure ID or if no federal structure ID, then the state structure ID with the Route and County shall be used; the manifest shall be

provided to the District for signature. The District's or District Representative's signature on the waste shipping manifest does not relieve the Contractor of the Contractor's obligations as co-generator of the waste.

The Contractor shall dispose of all surface preparation and coating removal wastes within 90 days of the time it is generated and no waste shall remain on site more than 60 days following completion of all coating removal operations.

(f) **Certifications:** The Environmental Protection Plan of Action shall be implemented in accordance with the provisions contained therein; any deviations from the Plan shall be separately submitted by the Contractor and approved by the District. The SSPC QP-2 Competent Person providing the Plan certification shall at a minimum be present during startup and removal operations to ensure that the Plan is fully implemented. Within 1 week following completion of final waste disposal activities, the Contractor shall submit for the District's record a written certification by the SSPC QP-2 Supervisor/Competent Person, including notations of any areas of non-compliance and corrective actions taken, that all work has been completed in full compliance with all applicable regulations and requirements as set forth in these specifications and that the Plan on record was fully implemented. The Contractor shall forward for the District's record one copy of the Environmental Protection Plan of Action complete with all revisions and results from the air monitoring activities, including notations of any areas of non-compliance and corrective actions taken.

411.10 Health and Safety Protection

In accordance with Section 107, the Contractor shall protect the health and safety of the workers, the public, and the environment from all hazardous material resulting from coating preparation (cleaning) removal operations, blast abrasive, rust treatment, pre-cleaning, surface preparation, coating preparation, coating application, and overspray.

(a) **Plan:** The Worker Health and Safety Plan shall be in accordance with the Virginia Occupational Safety and Health Administration, 29 CFR 1926.62 requirements and the applicable requirements of 29 CFR 1910.1025, and other applicable toxic metal standards, whichever is more restrictive.

The Worker Health and Safety Plan shall be reviewed and approved by the CIH or CSP prior to the start of work.

This Plan shall not be submitted to the District for approval but shall be submitted for the District's review and record. After project award but not less than 3 weeks prior to commencing operations, the Worker Health and Safety Plan shall be submitted to the District.

(b) **Monitoring:** The SSPC QP-2 Competent Person providing plan approval shall be present during startup, during surface preparation periods, and as needed during removal operations throughout the duration of the project to ensure the provisions of the Worker Safety and Health Plan are properly implemented.

(c) **Certification:** At completion of the project, the SSPC QP-2 Competent Person shall submit a written statement of certification for the District's record, complete with all revisions including notations of

any areas of non-compliance and corrective actions taken, that the Worker Safety and Health Plan fully complied with all regulations and that the Plan was fully implemented.

411.11 Measurement and Payment

(a) Coating of new metal on structures (i.e., **clean and repaint**) will not be measured and will be paid for at the contract lump sum price per structure.

The Contract lump sum price for the item specified will be full compensation for all cleaning and painting, caulking, sealants, scaffolding, platforms, containment systems, permits, plans, working drawings, daily quality control records, professional engineer's services used for containment, industrial hygienist services, air monitoring, sampling and testing of materials for toxic metal content, including any revisions and resubmissions that may be required during the execution of the work, providing safe access for inspections, hand wash station/clean up area, floodlighting, test plates, drums, collection and storage at the temporary storage site, hauling and disposal at an approved industrial waste site or hazardous waste site, removing and replacing planking, removal of debris, and all material, labor, equipment (including test equipment), tools, and incidentals necessary to complete the work.

Partial payments will be made. The contract lump sum price will be prorated based on the percentage of the structure prorated per span.. For each payment request, payments will be made as follows: 60% after District approved surface preparation, priming and stripe coat; 20% after District approved application of penetrating sealer and finish coat; 10% after District approved installation of caulking; 5% after District approved completion of final touch up and repair painting; and 5% after District approved completion of material/debris disposal, permit closures, record receipt, and full removal of all Contractor equipment and material from District property. Note that there will be no separate pay item for cleaning and painting of repair/replacement steel or for repair painting performed on structural steel repairs.

(b) Prepare and spot coat existing structure ASB1 (i.e., **spot paint**) will be measured in square feet of surface area and will be paid for at the unit price per square foot of bridge steel that is painted.

The Contract unit price for the item specified will be full compensation for all cleaning and painting, scaffolding, platforms, containment systems, permits, plans, working drawings, daily quality control records, professional engineer's services used for containment, industrial hygienist services, air monitoring, sampling and testing of materials for toxic metal content, including any revisions and resubmissions that may be required during the execution of the work, providing safe access for inspections, hand wash station/clean up area, floodlighting, test plates, drums, collection and storage at the temporary storage site, hauling and disposal at an approved industrial waste site or hazardous waste site, removing and replacing planking, removal of debris, and all material, labor, equipment (including test equipment), tools, and incidentals necessary to complete the work.

Environmental protection and health and safety will not be measured or paid and shall be included in the bid price for the various items of work.

Disposal of material will not be measured or paid and shall be included in the bid price for the various items of work.

Payment for each line item shall constitute a full compensation for any and all labor, material and equipment costs associated with providing a fully completed, functional pay item. Compensation for incidental items not specifically called for herein or on project plans, but are necessary for the successful

completion of a pay item in accordance with applicable codes, standards and project requirements, shall be included in the compensation for that pay item.

End of Section

SECTION 499 – RIVET AND BOLT REPLACEMENT

RMF 5044.5122

499.01 Description

The work specified in this section consists of removing existing deteriorated rivets and bolts and the subsequent installation of high-strength bolts at locations designated in the field by the District Representative during the prosecution of the work. It is the responsibility of the Contractor to remove the rivets and bolts and replace with high-strength bolts in such a manner and sequence necessary to maintain the strength of the connection and stability of the structure. It is anticipated that most of the rivet and bolt replacement work will be on the northbound North Channel Bridge, but there are corroded connectors on all of the structures, some of which will need to be evaluated for replacement, following cleaning operations.

499.02 Removal Criteria

- (a) The criteria for rivet and bolt removal shall be a 33% or greater loss of head or nut. Additionally, a bolt should also be replaced if the nut exhibits enough section loss such that the width between the bolts threads and the edge of the nut is less than 1/8-in. at the mid-height of the nut.
- (b) The Contractor shall coordinate with the District Representative to locate and mark rivets and/or bolts that meet replacement criteria. Corroded areas on the structure under the removed fasteners shall be prepared in accordance with Section 411 Method 4 (SP 11) or Method 5 (SP 10) as required followed with a spot coat of the inorganic zinc primer.

499.03 Removal of Existing Rivets and Bolts

- (a) Rivets and bolts shall be removed utilizing mechanical or pneumatic tools in a manner that will not damage the connected steel material. Drilling/grinding of the existing bolt/rivet or use of an air hammer equipped with a rivet chisel or similar attachment for head removal is permissible. If necessary, the shank of existing rivets or bolts may be removed by drilling a hole through the shank of the same size as the existing rivet/bolt hole. Flame cutting shall not be used for rivet or bolt removal.
- (b) The Contractor shall be responsible, at no additional cost to the District, for any damage inflicted to the connected steel material resulting from his rivet/bolt removal operations and shall correct the damage to the satisfaction of the District Representative prior to the installation of the new bolt.
- (c) The Contractor shall calculate the number and location of rivets and/or bolts in a connection that may be removed at a time; however, no more than 20% of the rivets and/or bolts in a connection of any individual member shall be removed at a time. For the main truss members of the NCB-NB, rivets and/or bolts shall only be removed and replaced on the truss line adjacent to the closed traffic lane and shall only be removed at one truss joint location at a time. For the approach spans of the NCB-NB, main longitudinal girder rivets and/or bolts shall only be removed and replaced on the girder line adjacent to the closed traffic lane. Once a grouping of rivets or bolts is removed, replacement bolts shall be properly installed at the removal locations prior to removing any additional bolts or rivets.
- (d) If all rivets are removed that connect the old knee-brace connection angle to the top flange of the longitudinal girders of the NCB-NB, the connection angle can be removed and discarded and need not

be replaced. The exposed steel shall be cleaned according to Section 411 Method 4 (SP 11) or Method 5 (SP 10) as required followed by application of the 2 coat inorganic paint system. Open holes shall be filled with a replacement high strength bolt.

499.04 Replacement with High-Strength Bolts

- (a) The bolts and rivets that were removed shall be replaced with new galvanized ASTM F3125 Grade A325 bolt assemblies as noted in the plans. Materials shall be in accordance with Section 226.02 of the VDOT 2020 Road and Bridge Specifications. The thread extension beyond the new nut shall be 1/16-in. minimum and 3/8-in. maximum. A hardened washer shall be used under the head and under the nut at locations where rivets were removed. The Contractor shall verify size, including diameter and length, prior to ordering new bolts, washers, nuts, Direct Tension Indicators, tension control fasteners, and associated tools as applicable.
- (b) New replacement bolts shall be slip-critical connectors requiring proper installation in accordance with the requirements of Section 407.06(c) of the VDOT 2020 Road and Bridge Specifications. Contractor shall use Direct Tension Indicators or tension control bolt-nut-washer assemblies.

499.05 Measurement and Payment

- (a) Removal of existing rivets and bolts and replacement with high-strength bolts required under this Section shall be measured and paid for on an each basis. The extent of bolt and rivet removal and replacement may vary from the estimated quantity stated in the Plans, but the contract unit price shall prevail regardless of the variation, which is an exception to Section 104.02 of the General Provisions. Such payment shall be full compensation for all rivet and bolt replacement work described under this Section or shown on the Plans. This includes all bolt and rivet removal; legal disposal of all removed materials and debris, and other items indicated on the Plans or required herein; furnishing and installing all required new galvanized replacement bolts, nuts and washers; nut lubrication; all access to the work locations; all furnishing and removal of formwork required to catch or retain the demolition debris; all connector cleaning for removal of lubricants; all surface preparation; all quality control testing; all required submittals; and all labor, tools, equipment, material and incidentals necessary to complete the work.
- (b) Localized cleaning at bolt and rivet replacement locations, as specified in this Section, shall be included in the applicable pay items as listed in Section 411 of these Technical Specifications.
- (c) Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|---------------------------|-----------------|
| Rivet or Bolt Replacement | Each |

End of Section

PROJECT NOTES:

1. UNLESS OTHERWISE NOTED, ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2020 VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS WITH 2022 SUPPLEMENT.
2. ALL ELEMENTS ARE NUMBERED FROM SOUTH TO NORTH OR WEST TO EAST AS APPROPRIATE.

STEEL CLEANING AND REPAIR NOTES:

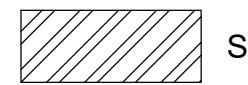
1. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO DRILLING. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL NOTIFY THE OWNER ABOUT ANY a) DISCREPANCIES AND INTERFERENCES OR b) UNIDENTIFIED CORROSION AND SECTION LOSS EXTENDING INTO ADJACENT ELEMENTS FOR WHICH NO REPAIR IS PROPOSED HEREIN.
2. USE HAND TOOLS AND POWER TOOLS TO CLEAN ALL CORRODED AREAS ACCORDING TO SSPC-SP-2 AND -11 AFTER INITIAL ABRASIVE BLAST CLEANING. GRIND KNIFE EDGES UNTIL A 1/8" MINIMUM THICKNESS IS ATTAINED.
3. STEEL REPAIRS ARE TO BE PERFORMED AFTER INSTALLATION OF ACCESS FOR THE CLEANING AND PAINTING WORK AND AFTER INITIAL ABRASIVE BLAST CLEANING AND PRIME COATING OF THE BRIDGE WITHIN EACH REPAIR AREA. USE THE SAME ACCESS PLATFORMS FOR THE STEEL REPAIRS WITH ADDITIONAL STRENGTHENING OR AUGMENTATION AS NECESSARY TO COMPLETE THE WORK. TOUCH-UP PRIME COAT PAINTING AND APPLICATION OF SUBSEQUENT COATINGS SHALL BE INCLUDED AS PART OF THE OVERALL CLEANING AND PAINTING WORK DESCRIBED.
4. CONTACT SURFACES BETWEEN EXISTING AND NEW STEEL SHALL MEET THE FOLLOWING CLEANING AND PAINTING CRITERIA AND BE IN ACCORDANCE WITH SLIP COEFFICIENT AND CREEP RESISTANCE TESTING CERTIFICATES FROM THE PAINT MANUFACTURER:
 - ALL EXISTING STEEL SHALL BE CLEANED VIA ABRASIVE BLASTING AND PAINTED WITH INORGANIC ZINC PRIMER OR SHALL BE CLEANED VIA ABRASIVE BLASTING AND PAINTED WITH THE 2-COAT INORGANIC PAINT SYSTEM (MAXIMUM 8 MILS DFT PER CERTIFICATE OF SLIP COEFFICIENT AND CREEP RESISTANCE TESTING) OR SMALL LOCALIZED SPOTS OF UNPAINTED STEEL SHALL BE CLEANED TO SSPC-SP 11 AND PAINTED WITH INORGANIC ZINC PRIMER.
 - ALL NEW / REPAIR STEEL PIECES SHALL BE ABRASIVE BLAST CLEANED TO SSPC-SP 10 AND PAINTED WITH INORGANIC ZINC PRIMER.
5. IN AREAS WHERE BOLTED CONNECTIONS ARE USED, USE STEEL-FILLED EPOXY PUTTY TO FILL IN SECTION LOSS AND PITTING PRIOR TO INSTALLING THE NEW STEEL PLATES. APPLY THE METAL REINFORCED EPOXY FILLER AND ENSURE THAT IT REMAINS WORKABLE IMMEDIATELY PRIOR TO PLACING THE NEW STEEL PLATE. APPLY A SUFFICIENT QUANTITY OF THE FILLER SO THAT EXCESS MATERIAL WILL BE SQUEEZED OUT DURING THE INSTALLATION OF THE BOLTS. PROPERLY DRESS EXCESS MATERIAL IN A WORKMANLIKE MANNER PRIOR TO HARDENING. STEEL-FILLED EPOXY PUTTY SHALL BE FASTEEL STEEL-FILLED EPOXY PUTTY BY POLYMERIC SYSTEMS INC., PLASTIC STEEL PUTTY BY ITW DEVCON OR APPROVED EQUAL.
6. STRUCTURAL STEEL REPAIR ELEMENTS SHALL CONFORM TO THE FOLLOWING DESIGNATION UNLESS OTHERWISE NOTED: AASHTO M270, GRADE 50 (ASTM A709, GRADE 50).
7. REMOVE AND REPLACE ALL EXISTING FASTENERS MEETING SECTION LOSS CRITERIA SPECIFIED IN SECTION 499 USING FASTENERS OF THE SAME SIZE AS THOSE REMOVED. SEE THE FOLLOWING NOTE FOR FASTENER SPECIFICATION REQUIREMENTS.
8. UNLESS OTHERWISE NOTED, USE GALVANIZED HIGH STRENGTH BOLTS AND ASSOCIATED HARDWARE IN ACCORDANCE WITH VDOT SPECIFICATION SECTION 226.02H WITH THREADS EXCLUDED THAT MEET OR EXCEED ANY OF THE FOLLOWING SPECIFICATIONS:
 - ASTM F3125 GRADE A325 WITH DIRECT TENSION INDICATORS (ASTM F959), OR
 - ASTM F3125 GRADE F1852 OR GRADE F2280
9. ALL FASTENERS NOTED IN REPAIR DETAILS ARE $\frac{7}{16}$ " DIAMETER HIGH STRENGTH BOLTS AND INSTALLED IN $\frac{15}{16}$ " DIA. HOLES UNLESS OTHERWISE NOTED. DRILLED HOLES SHALL BE DEBURBED WITH EDGES ROUNDED. SEE THE PREVIOUS NOTE FOR FASTENER SPECIFICATION REQUIREMENTS.
10. FOR NEW STIFFENERS, A "MILL TO BEAR" CALLOUT IS DEFINED AS ALLOWING A GAP OF UP TO 0.026" BETWEEN THE STIFFENER AND THE FLANGE.
11. FOR NEW STIFFENERS, A "TIGHT FIT" CALLOUT IS DEFINED AS ALLOWING A GAP OF UP TO 2 mm ($\frac{1}{16}$) BETWEEN THE STIFFENER AND THE FLANGE.
12. PERFORM ALL GRINDING OF CORRODED EDGES IN ACCORDANCE WITH VDOT SPECIFICATION 426.03 [SURFACE PREPARATION] (A). PREPARE ALL NEW STEEL ELEMENTS IN ACCORDANCE WITH VDOT SPECIFICATION 407.04. PERFORM ALL REQUIRED CUTTING OF EXISTING STRUCTURE IN ACCORDANCE WITH VDOT SPECIFICATIONS EXCEPT FLAME AND TORCH CUTTING ARE PROHIBITED.
13. PERFORM ALL REQUIRED WELDING IN ACCORDANCE WITH VDOT SPECIFICATION 407.04.
14. STEEL PLATE MATERIAL IS SPECIFIED IN REPAIR DETAILS. IT IS PERMISSIBLE TO SUBSTITUTE REPAIR ELEMENTS FABRICATED FROM EQUIVALENT BAR SECTIONS PROVIDED THAT MINIMUM AND MAXIMUM FASTENER EDGE DISTANCE REQUIREMENTS, AS SPECIFIED, ARE SATISFIED.
15. ALL STEEL AND ALUMINUM REPAIR DETAILS PROVIDED IN THESE PLANS ARE IDENTIFIED ACCORDING TO THE DETAIL / ITEM NAME DEFINED IN THE INDEX OF SHEETS TABLE ON THIS SHEET. ALL DETAILS WILL BE MEASURED IN UNITS OF EACH AND WILL BE PAID AT THE CONTRACT UNIT COST PER EACH. THE COST SHALL INCLUDE ALL WORK ITEMS REQUIRED TO COMPLETE THE WORK DEPICTED ON THE RESPECTIVE DETAIL DRAWING SHEET(S) INCLUDING, BUT NOT LIMITED TO, ALL MATERIAL, LABOR, AND EQUIPMENT, AS WELL AS SHOP DRAWINGS, SURFACE PREPARATION, WELDING, CERTIFIED WELDERS AND WELDING INSPECTORS, NON-DESTRUCTIVE TESTING BY CERTIFIED TECHNICIANS, WELDING INSPECTION, OTHER TYPES OF NON-DESTRUCTIVE TESTING WHERE REQUIRED, DISPOSAL OF REMOVED MATERIAL, ENVIRONMENTAL AND WORKER HEALTH AND SAFETY PROTECTION, TESTING, AND COATING STEEL OR ALUMINUM MEMBERS.

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LEGEND



EXISTING FASTENER LOCATIONS TO BE PICKED UP



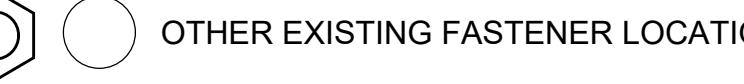
SECTION CUT SURFACE



PROPOSED FASTENER LOCATIONS



SECTION LOSS OR OTHER DAMAGE



OTHER EXISTING FASTENER LOCATIONS



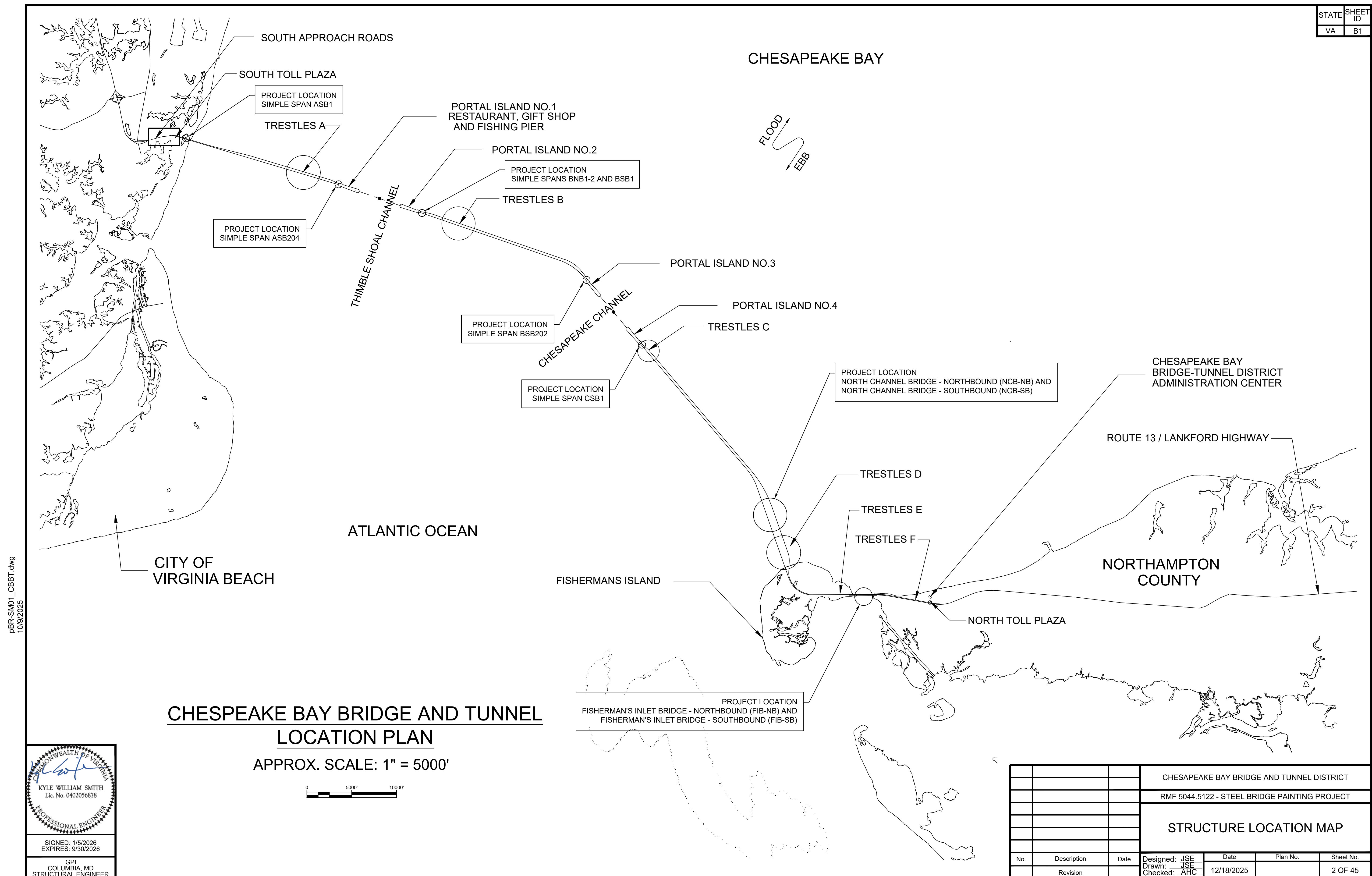
MATERIAL TO BE REMOVED

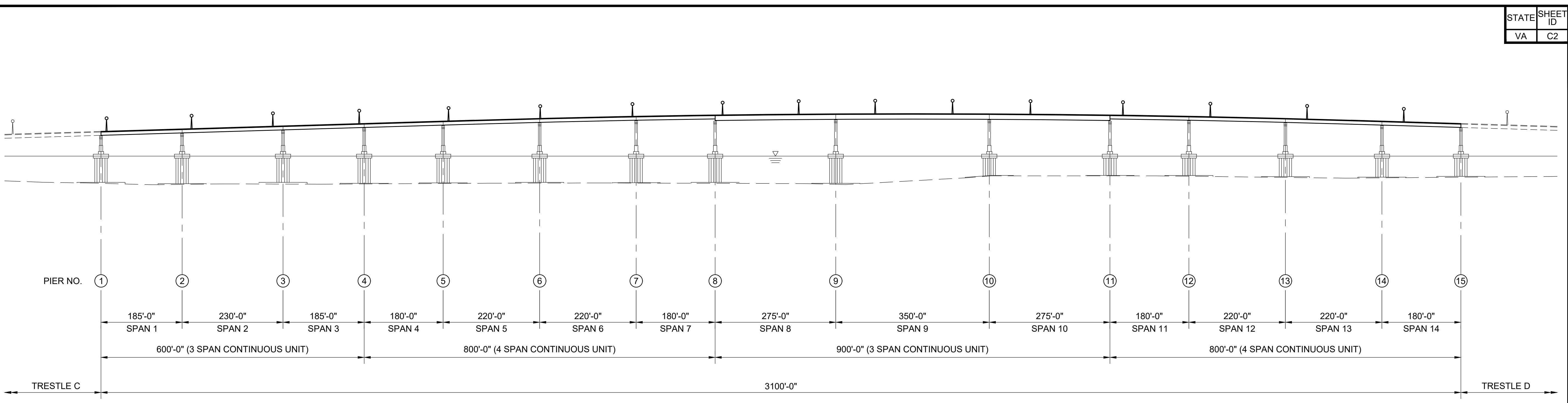
PAINTING NOTES:

1. THE COLOR OF THE FINISH COAT FOR ALL PAINT ITEMS SHALL BE CARBOLINE ARMORLAST II FINISH COAT COLOR G186 (LIGHT BLUE) OR A DISTRICT APPROVED EQUAL. SEE SPECIFICATIONS FOR MATERIAL SUBMITTAL REQUIREMENTS.
2. THIS WORK SHALL CONSIST OF THE CLEANING AND PAINTING OF ALL EXISTING STRUCTURAL STEEL. THE BOUNDARIES OF THIS CONTRACT ARE AS DESCRIBED IN THE SPECIFICATIONS.
3. THE 2 COAT INORGANIC PAINT SYSTEM IS DESCRIBED IN THE SPECIFICATIONS AND INCLUDES SSPC-SP 10 SURFACE PREPARATION, A FULL COAT OF INORGANIC ZINC PRIMER, A STRIPE COAT OF INORGANIC ZINC PRIMER, A FULL COAT OF INORGANIC FINISH PAINT, AND AS-NEEDED CAULKING INSTALLATION. THE STRIPE COAT SHALL BE APPLIED TO ALL EDGES, RIVET HEADS, BOLT HEADS AND THREADS, NUTS, BUILT-UP SURFACES, PITTED AREAS, CREVICES, AND OTHER APPURTENANT ITEMS AS IDENTIFIED IN THE SPECIFICATIONS. CAULKING SHALL BE INSTALLED IN ANY AND ALL GAPS OR Crevices BETWEEN SOUND STEEL OF 3/16" OR LARGER.
4. THE DISTRICT OR DESIGNATED REPRESENTATIVE WILL INSPECT ALL PHASES OF THE WORK TO ENSURE THAT IT IS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ACCESS, INCLUDING ALL EQUIPMENT NECESSARY, FOR THE DISTRICT AND THE DISTRICT'S REPRESENTATIVES. THE PRESENT OF THE DISTRICT INSPECTIONS SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PROVIDE ADEQUATE INSPECTIONS OF HIS OWN TO ASSURE COMPLIANCE WITH THE CONTRACT DOCUMENTS.
5. ALL STEEL USED FOR REPAIRS SHALL BE CLEANED AND PAINTED WITH THE PRIMER ONLY OF THE "2 COAT INORGANIC PAINT SYSTEM" BEFORE THE STEEL IS USED FOR REPAIR. THE COST OF CLEANING AND PAINTING SHALL BE INCLUDED IN THE STEEL REPAIR ITEM.
6. AFTER STEEL REPAIRS ARE INSTALLED, THE PAINT WORK SHALL CONFORM TO THE REQUIREMENTS OF THE "2 COAT INORGANIC PAINT SYSTEM" INCLUDING STRIPE COAT, SEALER, AND CAULKING AS REQUIRED. PAYMENT FOR EACH REPAIR TYPE SHALL INCLUDE THE COST OF CLEANING AND PAINTING THE STEEL REPAIR AND AFFECTED SURROUNDING AREA.

| INDEX OF SHEETS | | | |
|---|--|--|----------|
| STRUCTURE | DETAIL GROUP (# SHEETS) | DETAIL / ITEM NAME | SHEET ID |
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| ALL | STRUCTURE LOCATION MAP (1) | STRUCTURE LOCATION MAP | B1 |
| NORTH CHANNEL BRIDGE - NB | | NORTH CHANNEL BRIDGE - NB | C1 |
| NORTH CHANNEL BRIDGE - SB | | NORTH CHANNEL BRIDGE - SB | C2 |
| FISHERMAN'S INLET BRIDGE - NB | | FISHERMAN'S INLET BRIDGE - NB | C3 |
| FISHERMAN'S INLET BRIDGE - SB | | FISHERMAN'S INLET BRIDGE - SB | C4 |
| SIMPLE SPAN BRIDGES | | SIMPLE SPAN BRIDGES (ASB1 AND PORTAL APPROACHES) | C5 |
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| | | NCB-NB STRINGER REPAIR TYPE 1 | D1 |
| | | NCB-NB TRUSS STRINGER REPAIR TYPE 1 | D2 |
| | | NCB-NB TRUSS FLOORBEAM REPAIR TYPE 1 | D3 |
| | FLOORBEAM STIFFENER REPAIRS (6) | NCB-NB FLOORBEAM REPAIR TYPE 4 | E1 |
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| | GIRDER PLATING REPAIRS (1) | FIB-SB GIRDER REPAIR TYPE 1 | K1 |
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| | UTILITY REPAIRS (2) | SIMPLE SPAN UTILITY REPAIR TYPE 1 | O1 |
| | | SIMPLE SPAN UTILITY REPAIR TYPE 2 | O2 |

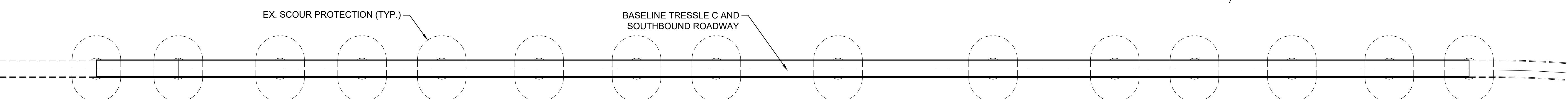
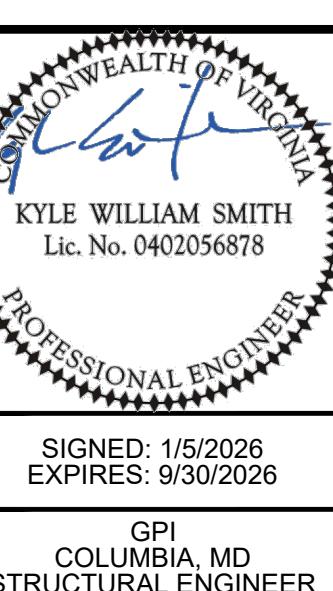
| | | | |
|---------------|-------------|------|---|
| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT |
| PROJECT NOTES | | | |
| No. | Description | Date | Designed: JSE Drawn: BSB Checked: AHC |
| | Revision | | 12/18/2025 |
| | | | Sheet No. 1 OF 45 |



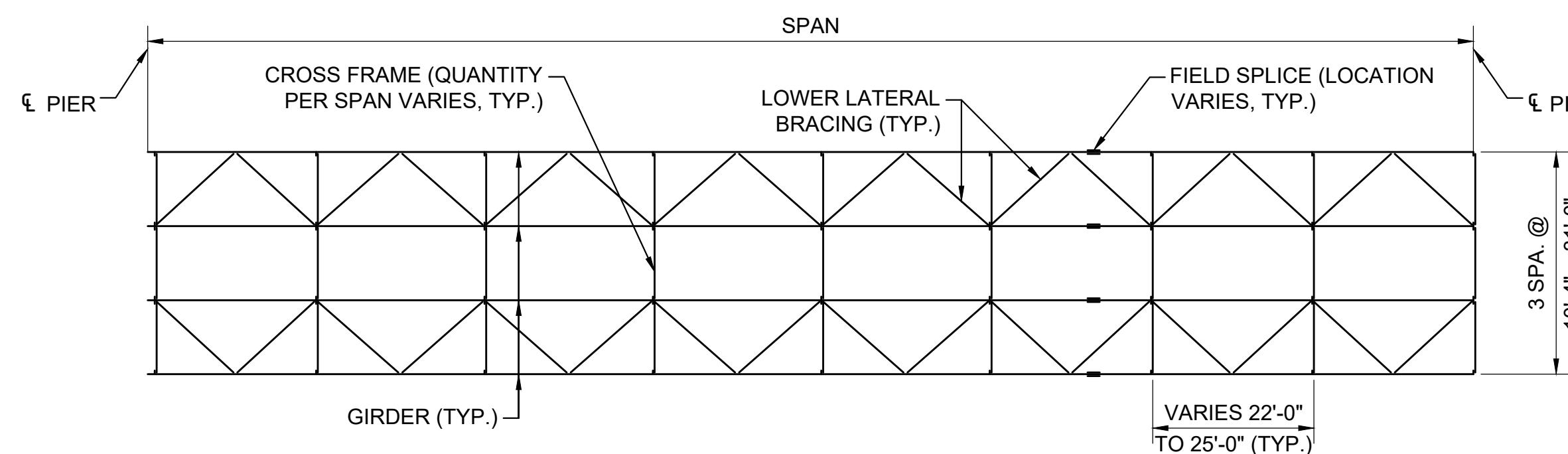


ELEVATION
SCALE: 1" = 120'

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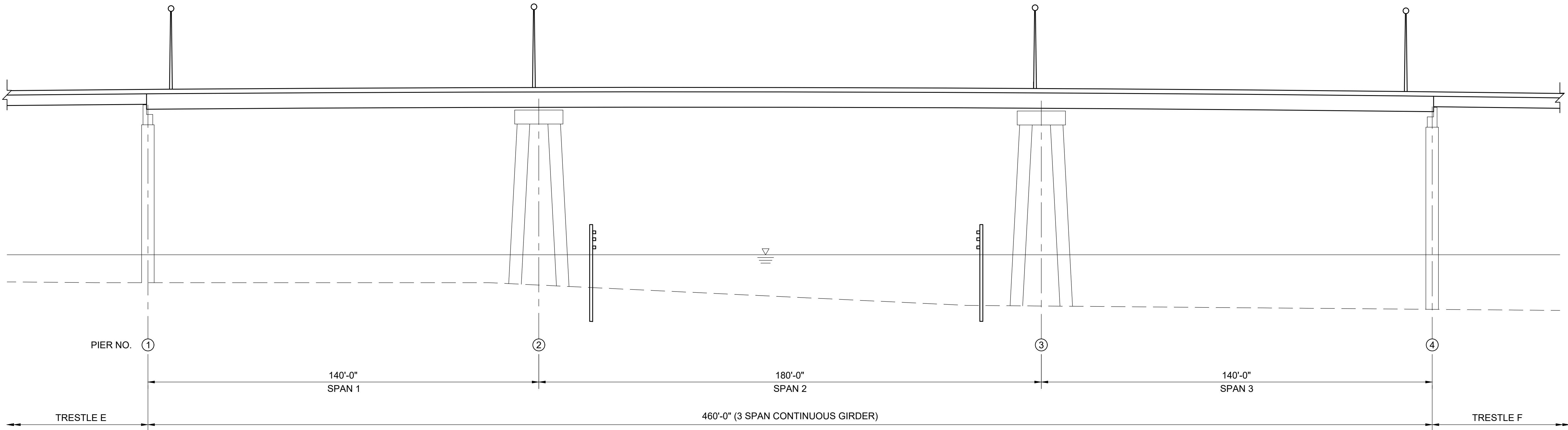


PLAN
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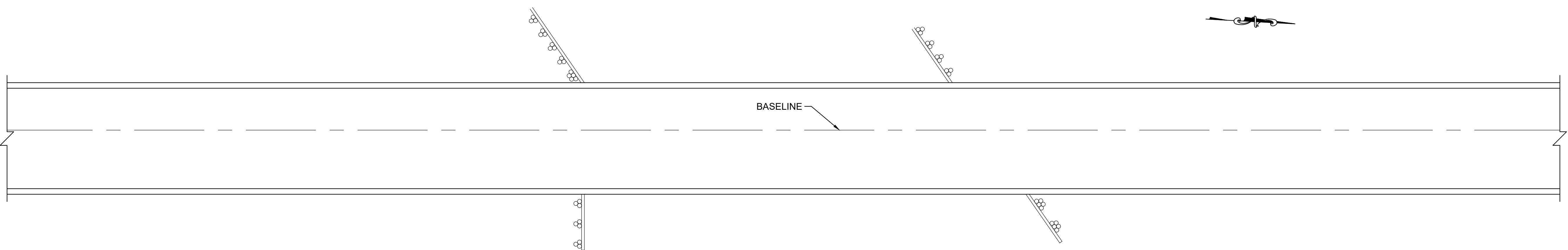
PART FRAMING PLAN
NOT TO SCALE

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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | |
| | | | NORTH CHANNEL BRIDGE SB GENERAL PLAN AND ELEVATION | | |
| No. | Description | Date | Designed: JSE Drawn: BSB Checked: AHC | Date | Plan No. |
| | Revision | | | 12/18/2025 | 4 OF 45 |



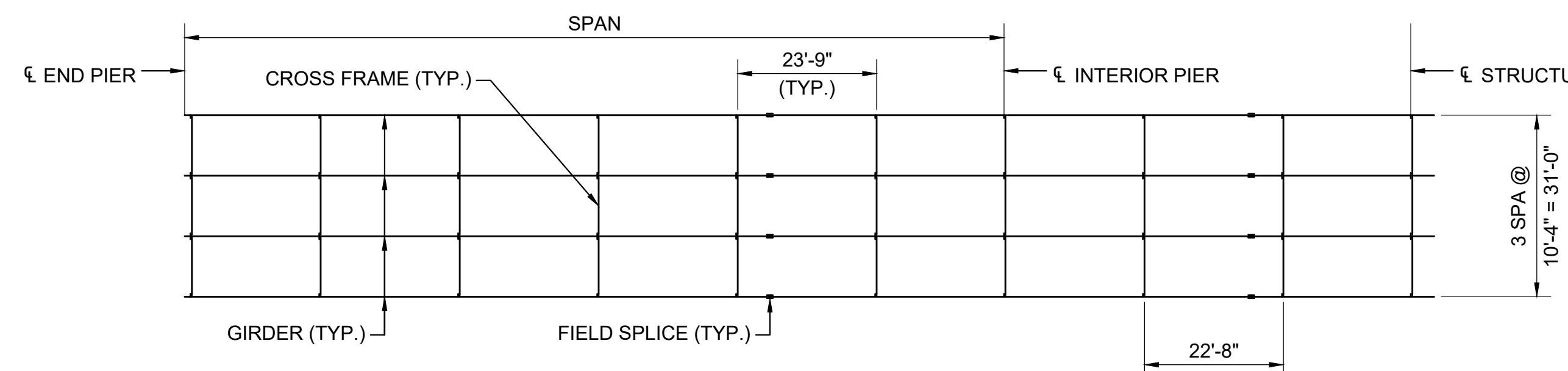
ELEVATION

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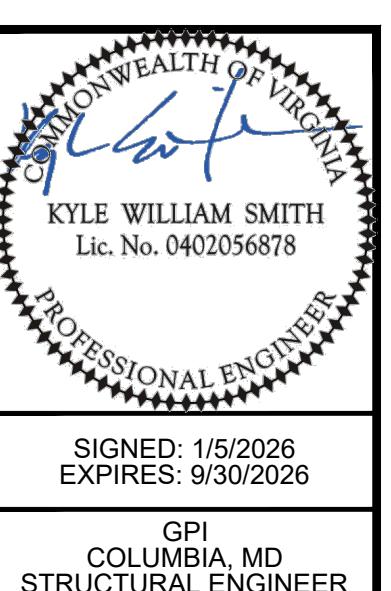
PLAN

SCALE: 1" = 20'



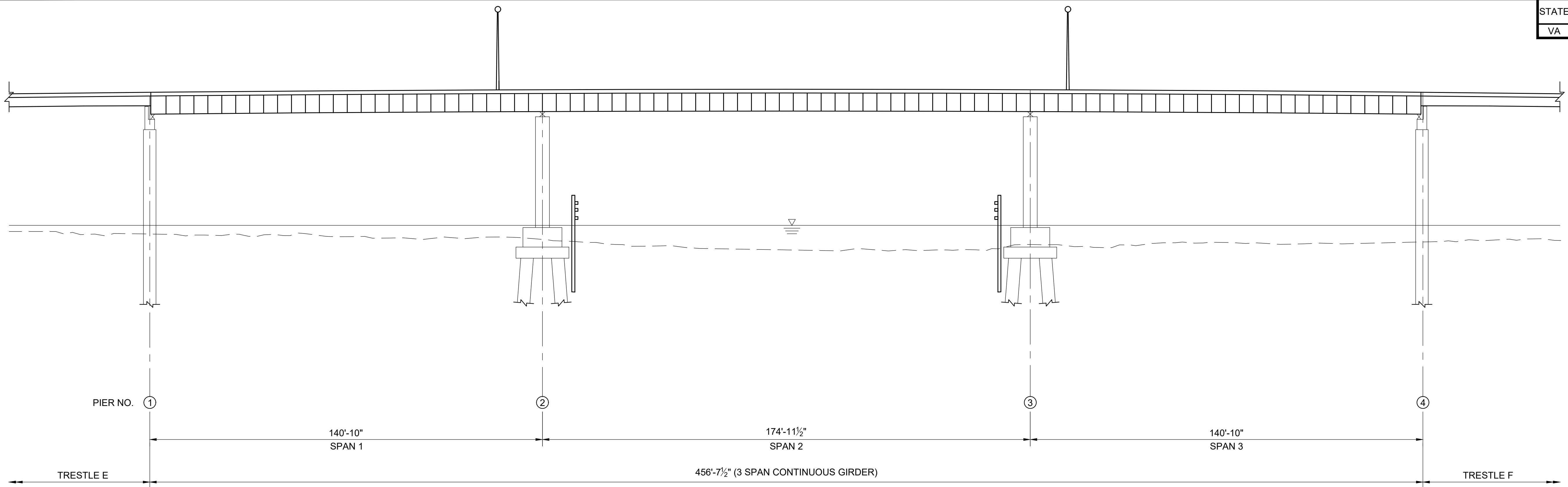
PART FRAMING PLAN

SCALE: 1" = 20'

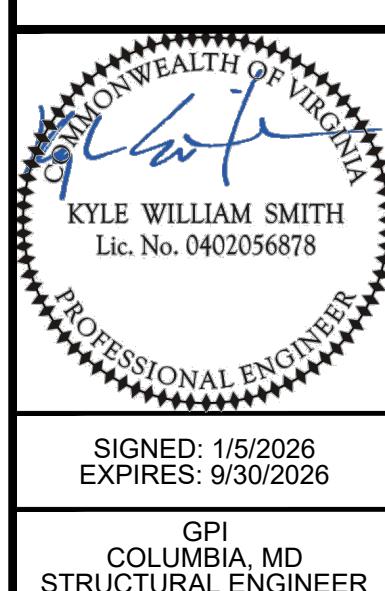
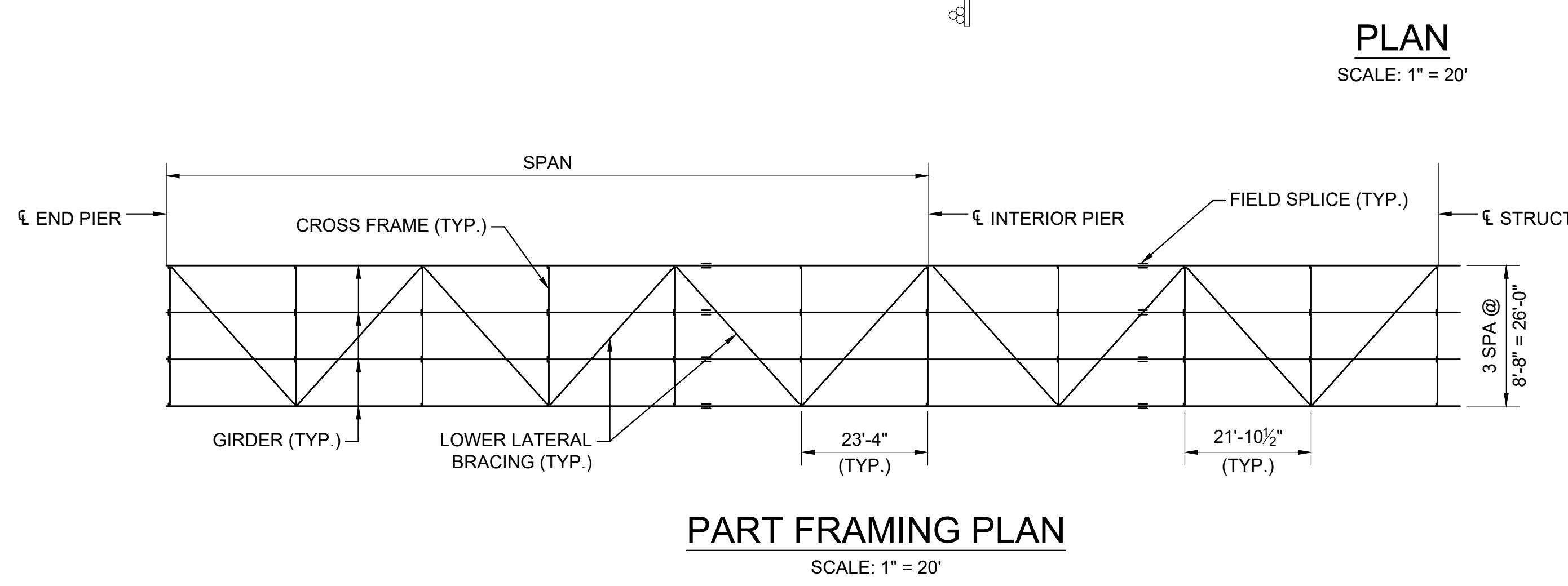


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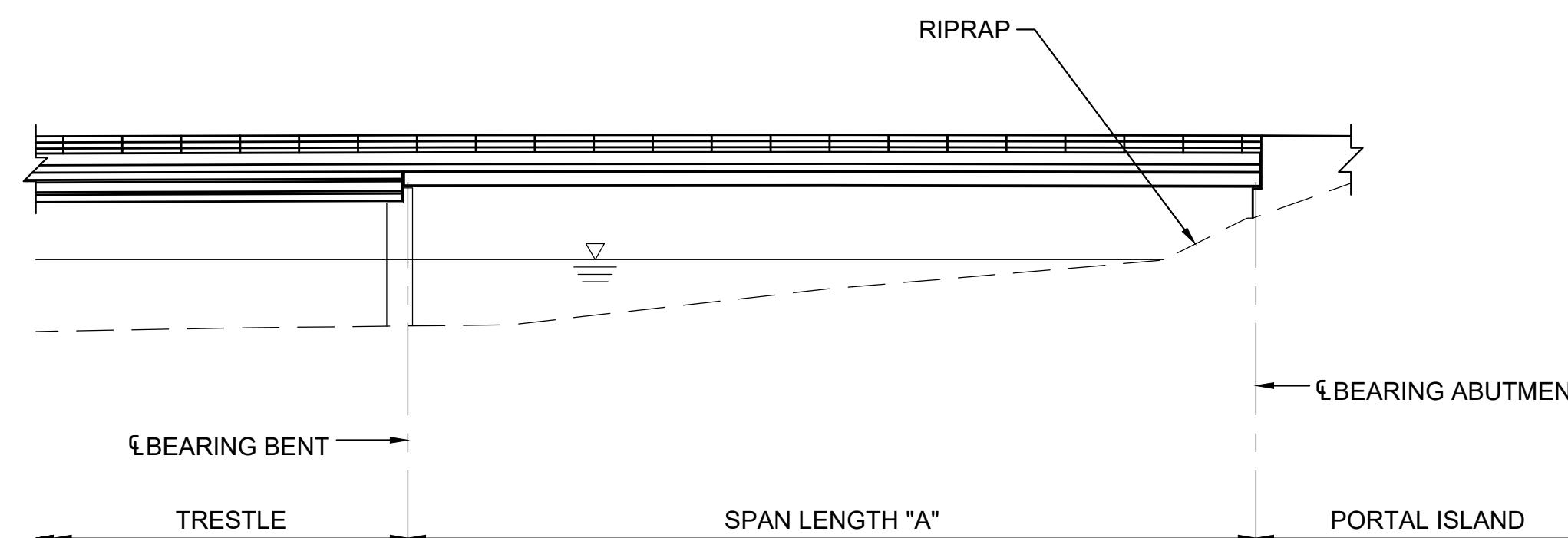
| CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | | |
|---|-------------|------|-----------------------------|------------|----------------------|
| RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | | |
| FISHERMANS INLET BRIDGE NORTHBOUND GENERAL PLAN AND ELEVATION | | | | | |
| No. | Description | Date | Designed: JSE Drawn: BSB | Date | Plan No. |
| | | | Checked: AHC | 12/18/2025 | Sheet No. 5 OF 45 |
| | Revision | | | | |



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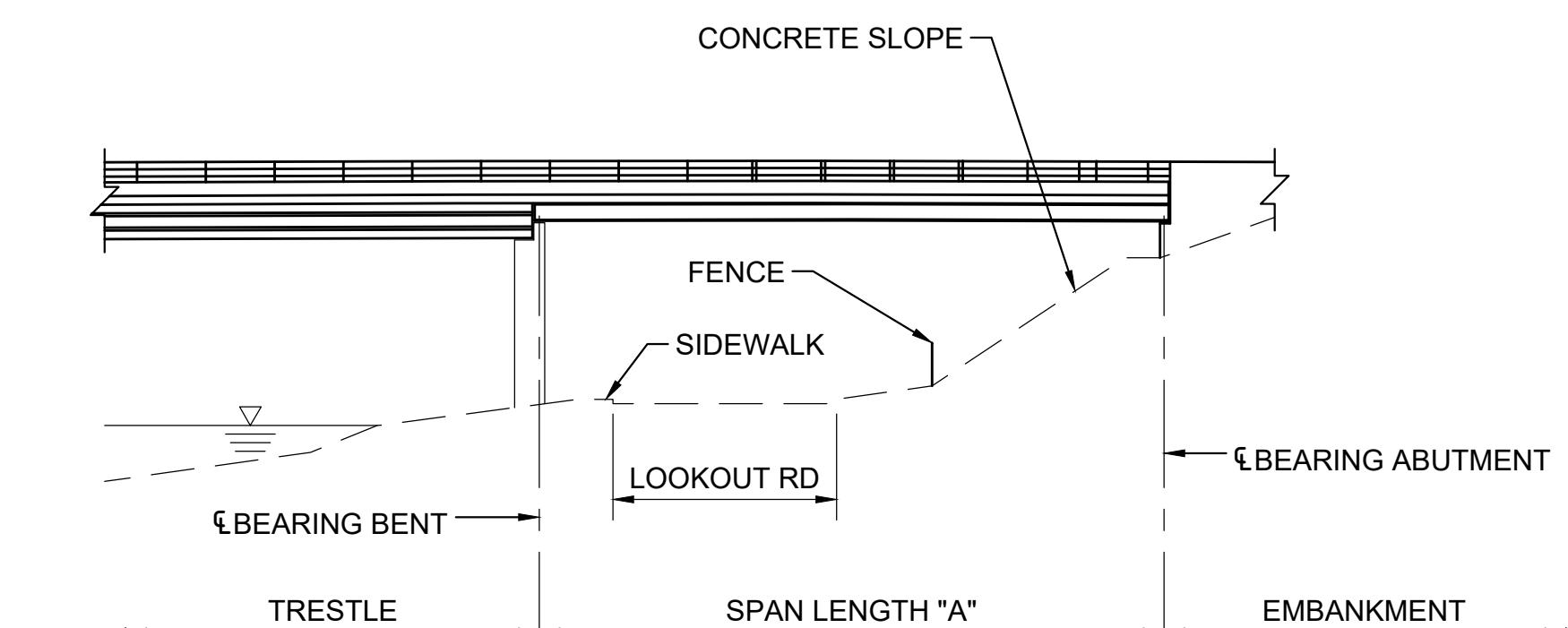


| CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | |
|---|---|------------|-----------|
| RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | |
| FISHERMANS INLET BRIDGE SOUTHBOUND GENERAL PLAN AND ELEVATION | | | |
| No. | Description | Date | Sheet No. |
| | Designed: JSE Drawn: BSB Checked: AHC | | |
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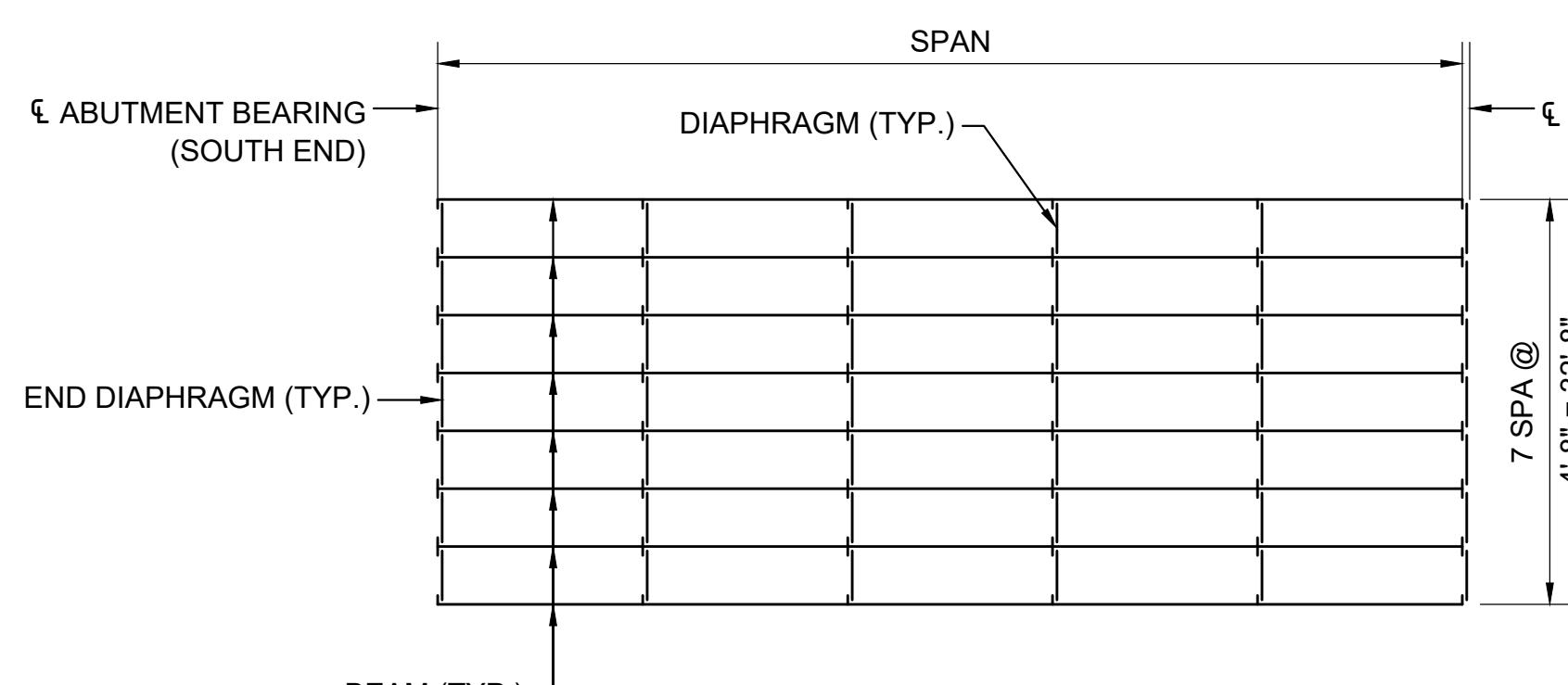
TYPICAL ELEVATION (PORTAL APPROACH SPANS)

SCALE: 1" = 20'



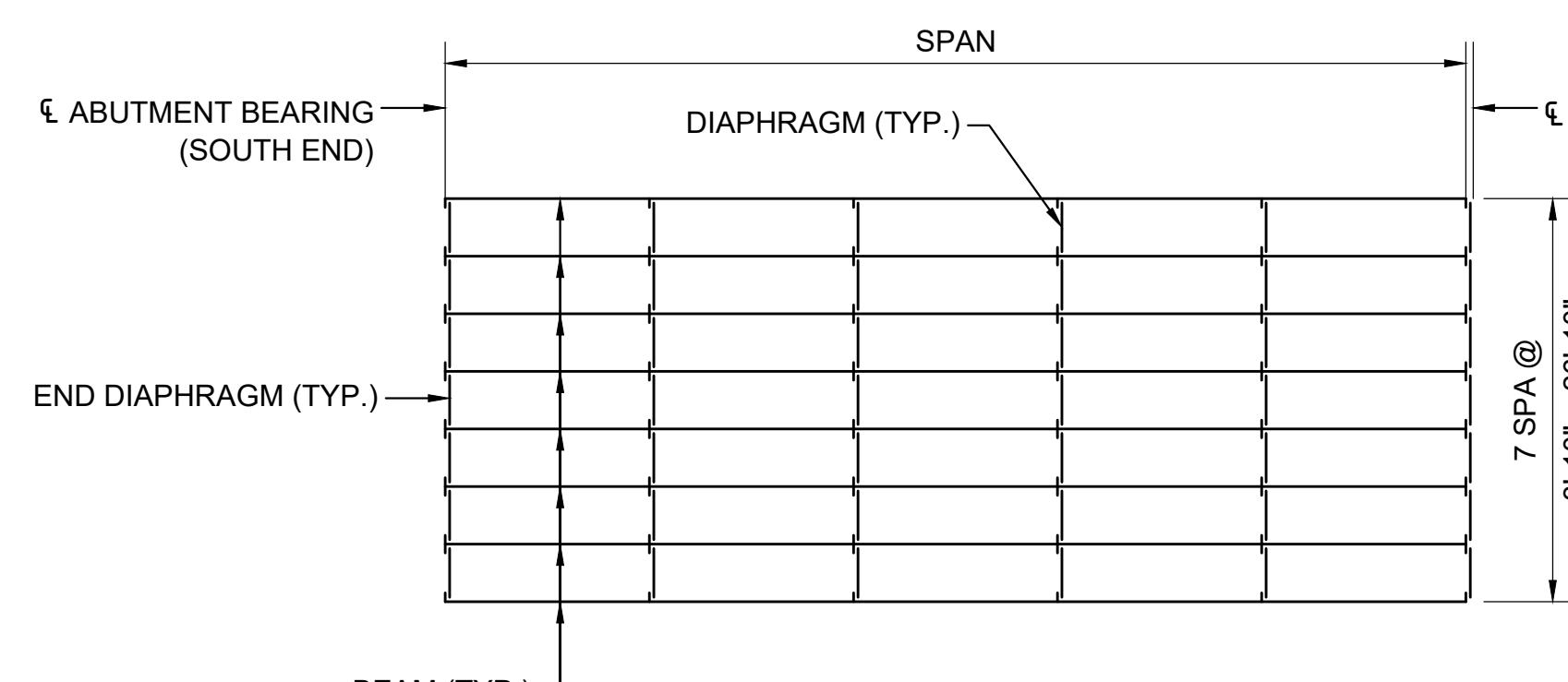
ELEVATION (ASB1 ONLY)

SCALE: 1" = 20'



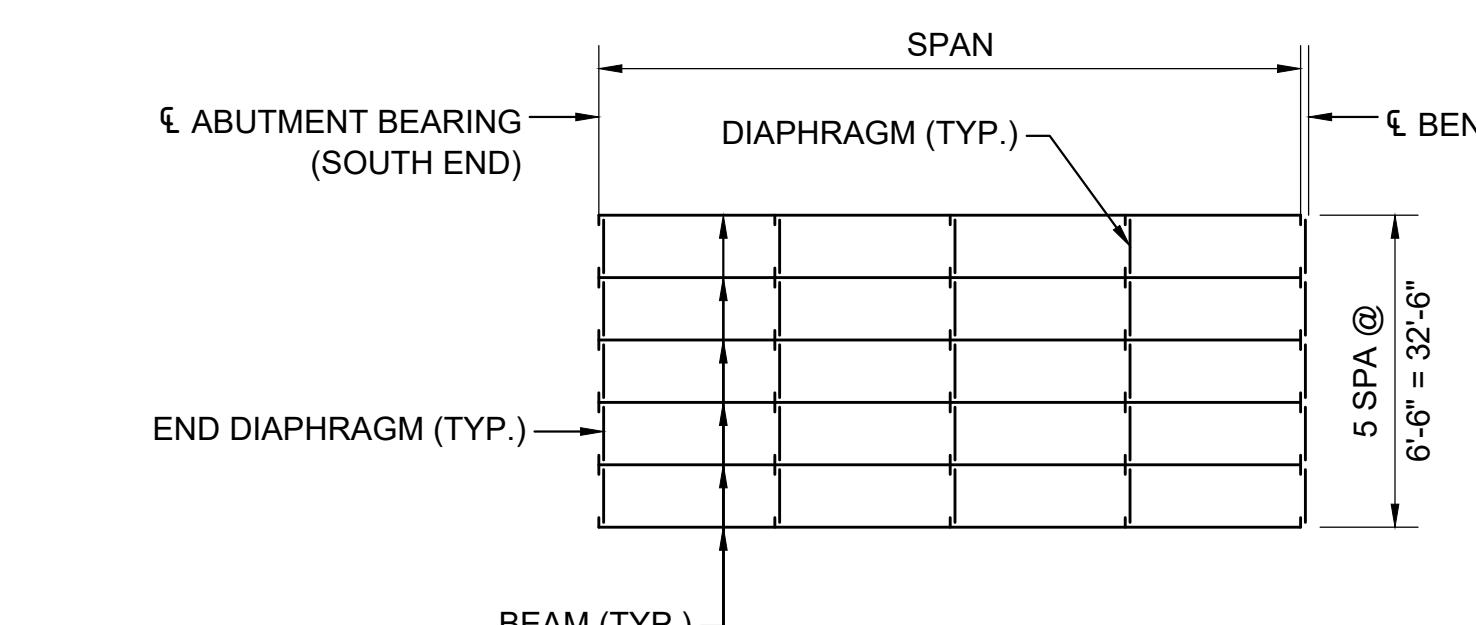
FRAMING PLAN
SPANS BSB1 AND CSB1

SCALE: 1" = 20'



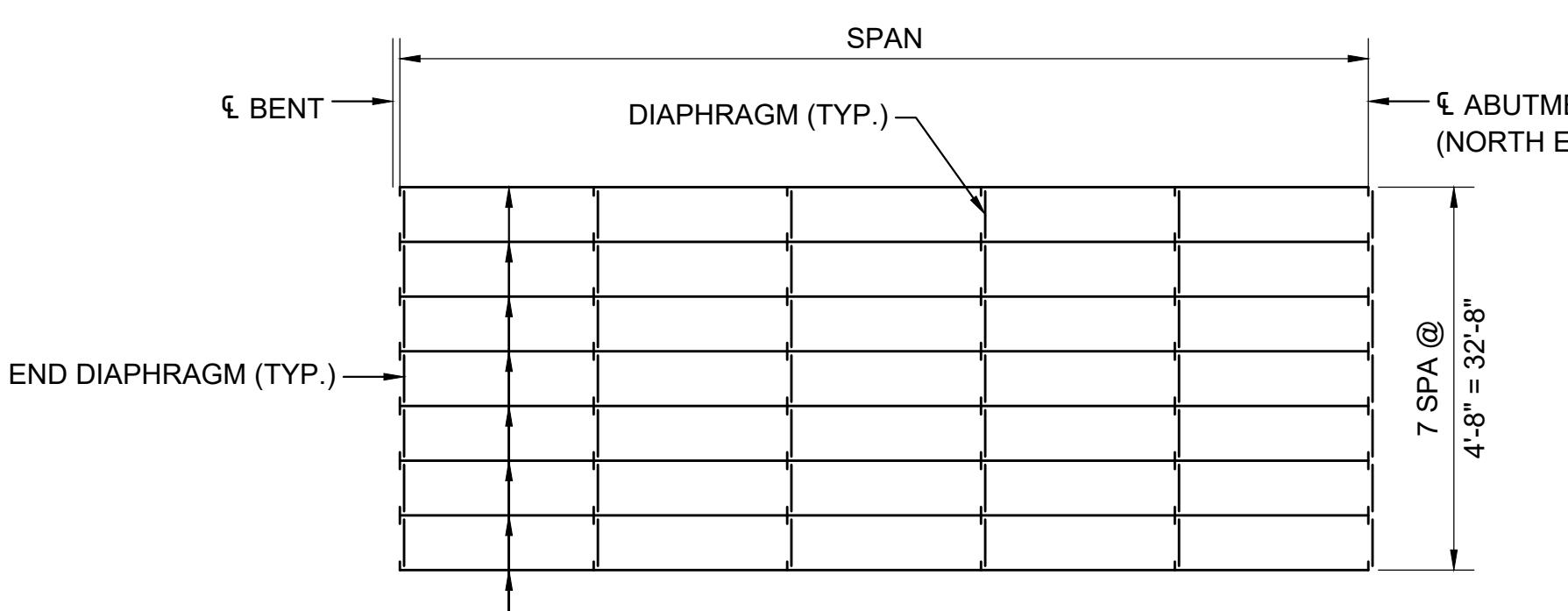
FRAMING PLAN
SPAN BNB1-2

SCALE: 1" = 20'



FRAMING PLAN
SPAN ASB1

SCALE: 1" = 20'

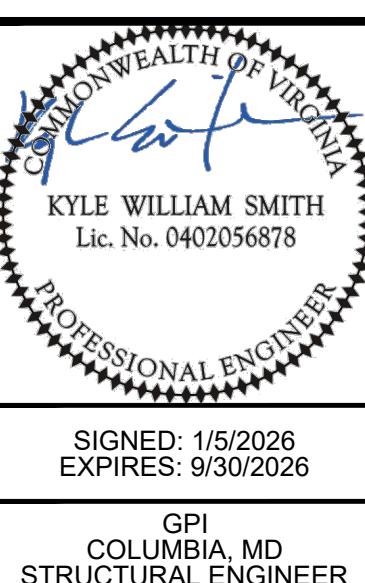


FRAMING PLAN
SPANS ASB204 AND BSB202

SCALE: 1" = 20'

| SPAN | SPAN LENGTH "A" |
|--------|-----------------|
| ASB1 | 73'-1" |
| ASB204 | 115'-1 1/4" |
| BNB1-2 | 107'-1 1/2" |
| BSB1 | 107'-10 11/16" |
| BSB202 | 114'-0 1/8" |
| CSB1 | 112'-11" |

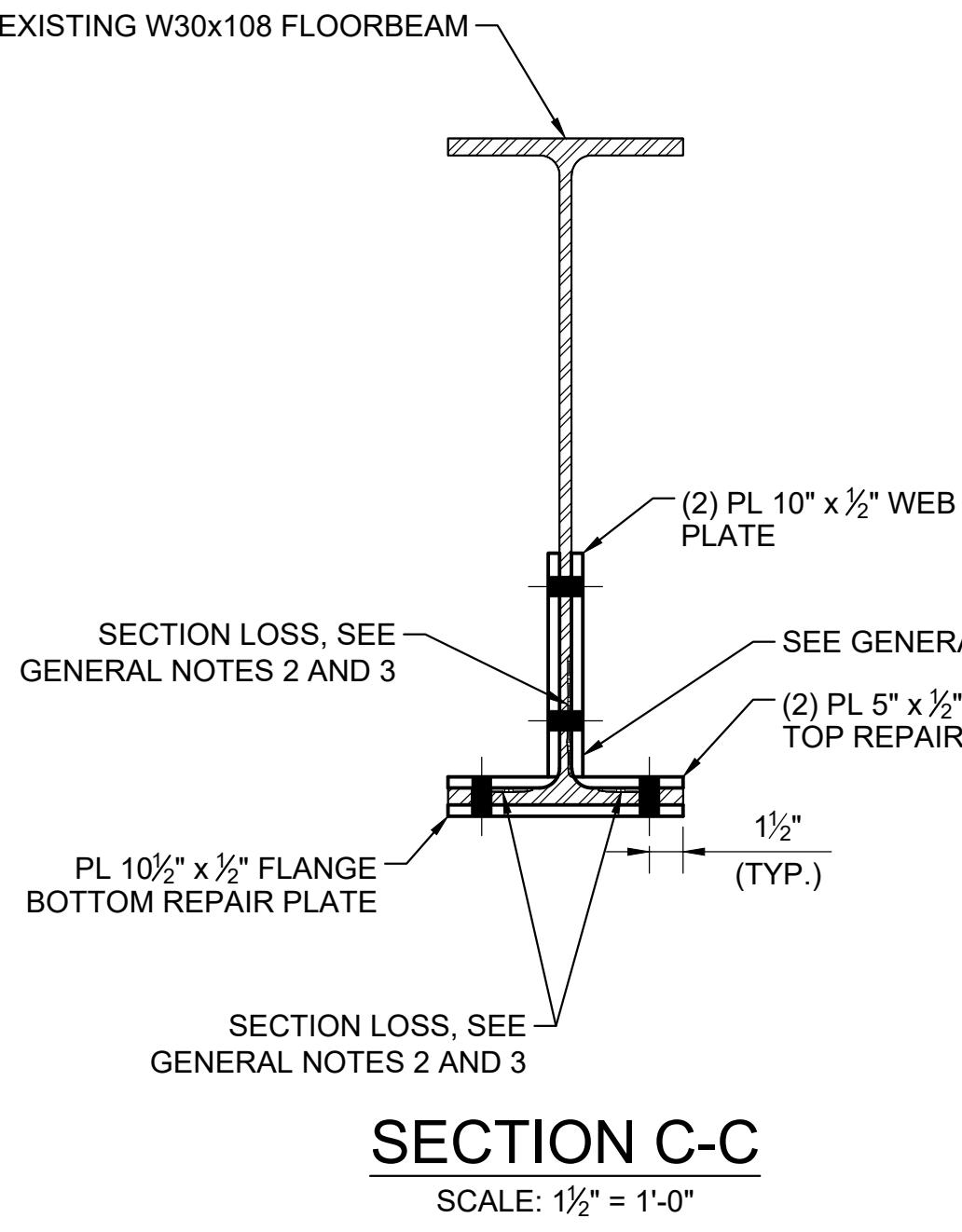
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CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT
RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT

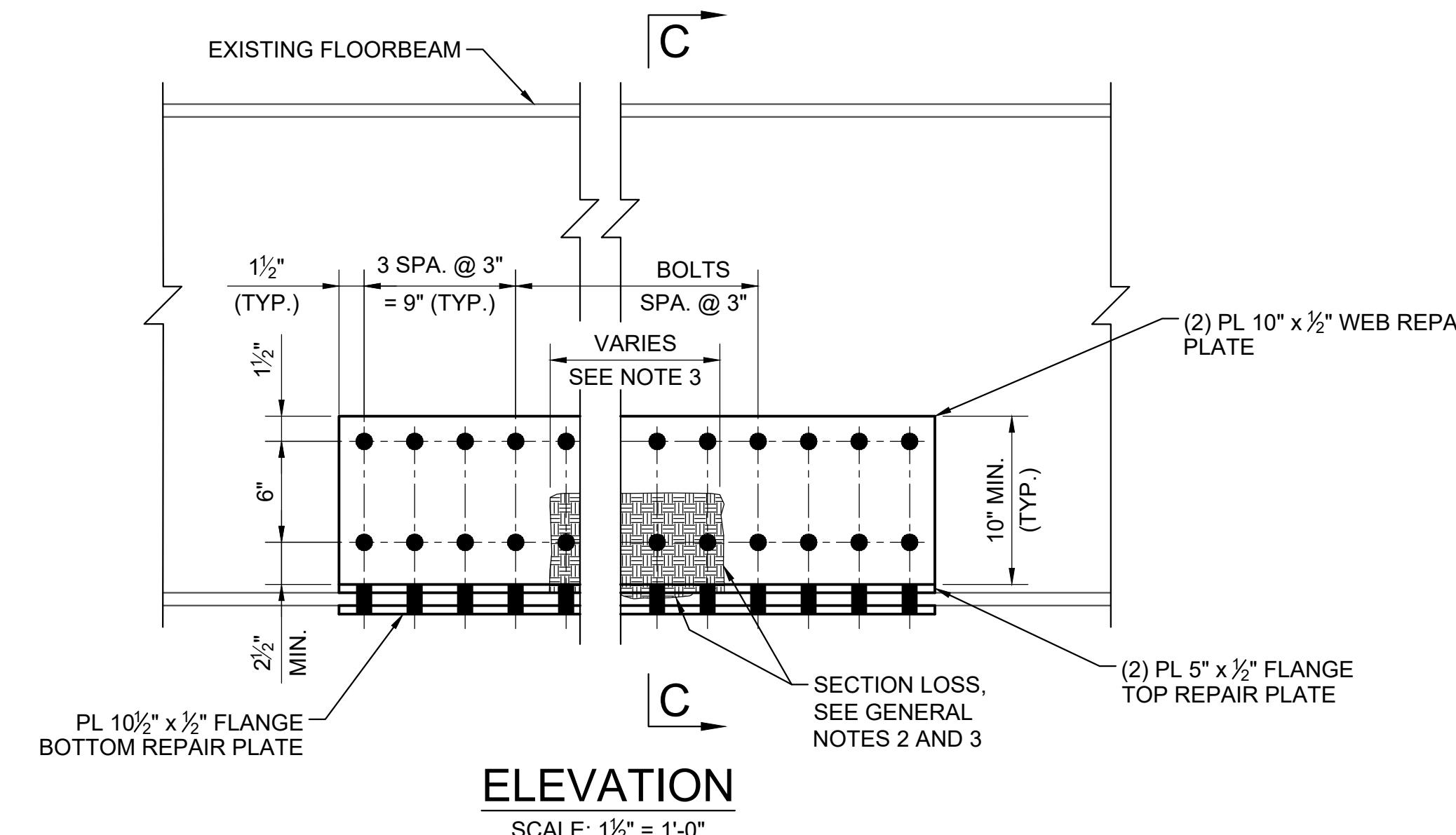
**SIMPLE SPAN BRIDGES
(ASB1 AND PORTAL APPROACHES)
GENERAL PLAN AND ELEVATION**

| No. | Description | Date | Designed: JSE | Date | Plan No. | Sheet No. |
|-----|-------------|------|---------------|------------|----------|-----------|
| | | | Drawn: BSB | | | |
| | Revision | | Checked: AHC | 12/18/2025 | | 7 OF 45 |



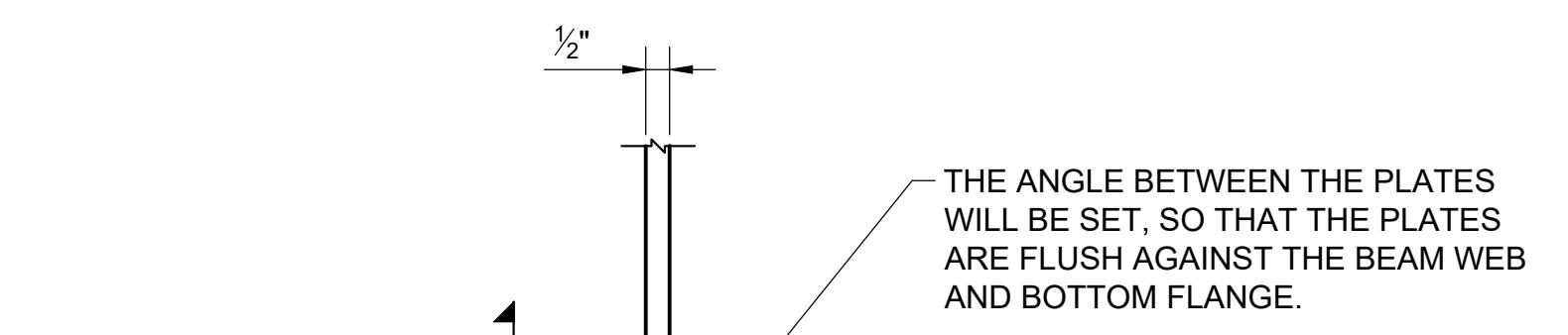
SECTION C-C

SCALE: 1 1/2" = 1'-0"



ELEVATION

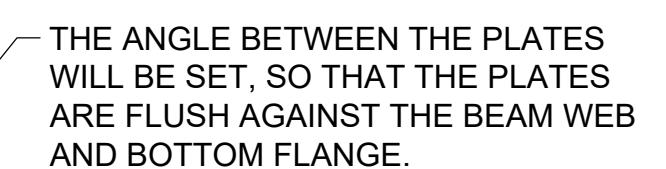
SCALE: 1 1/2" = 1'-0"



MILL TO MATCH EXISTING MEMBER AS SHOWN SO THAT EDGES OF NEW PLATE FIT FLUSH AGAINST EXISTING STEEL.

DETAIL 'A'

SCALE: 3" = 1'-0"



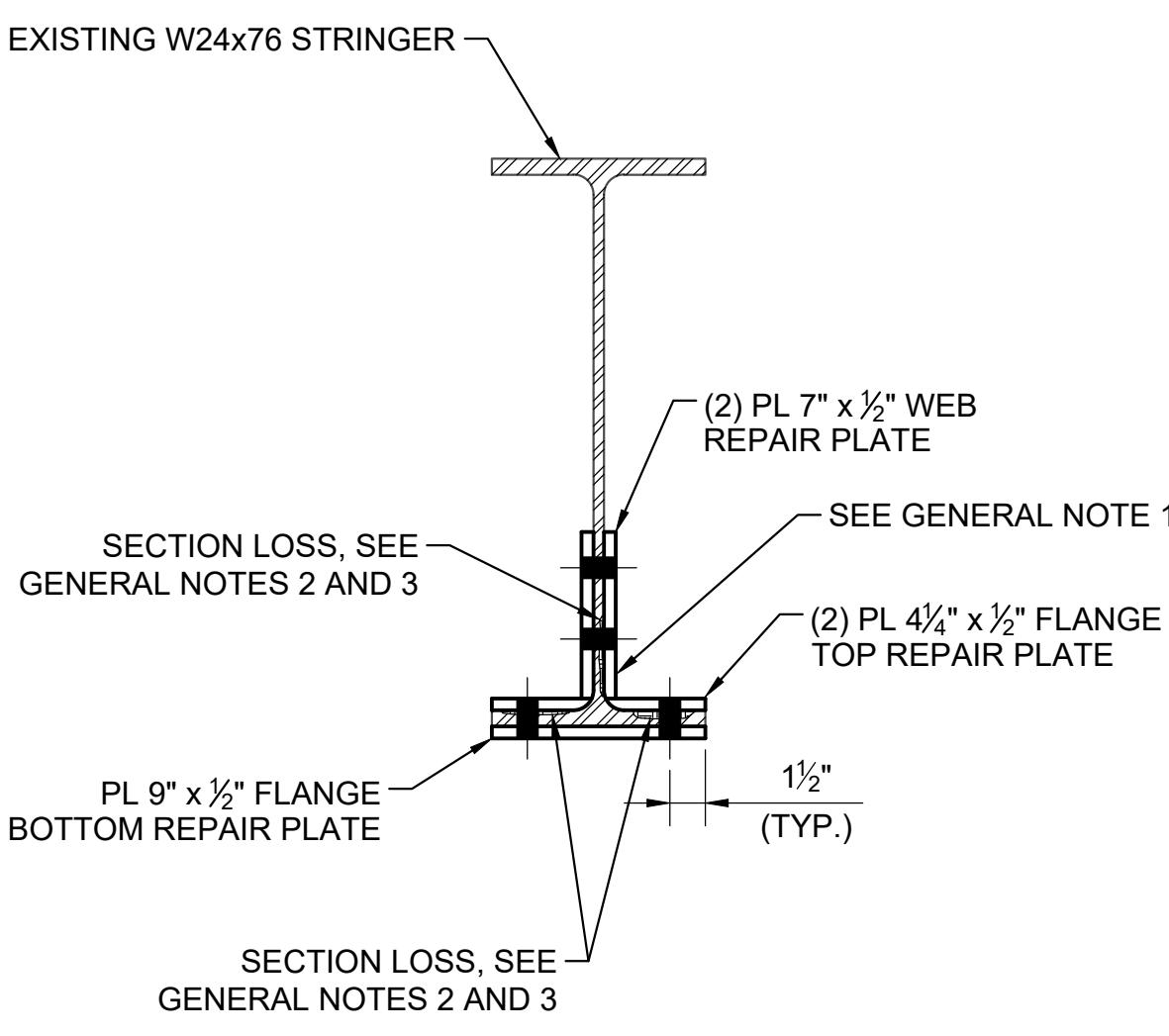
DETAIL 'B'

SCALE: 3" = 1'-0"

NCB-NB FLOORBEAM REPAIR TYPE 2

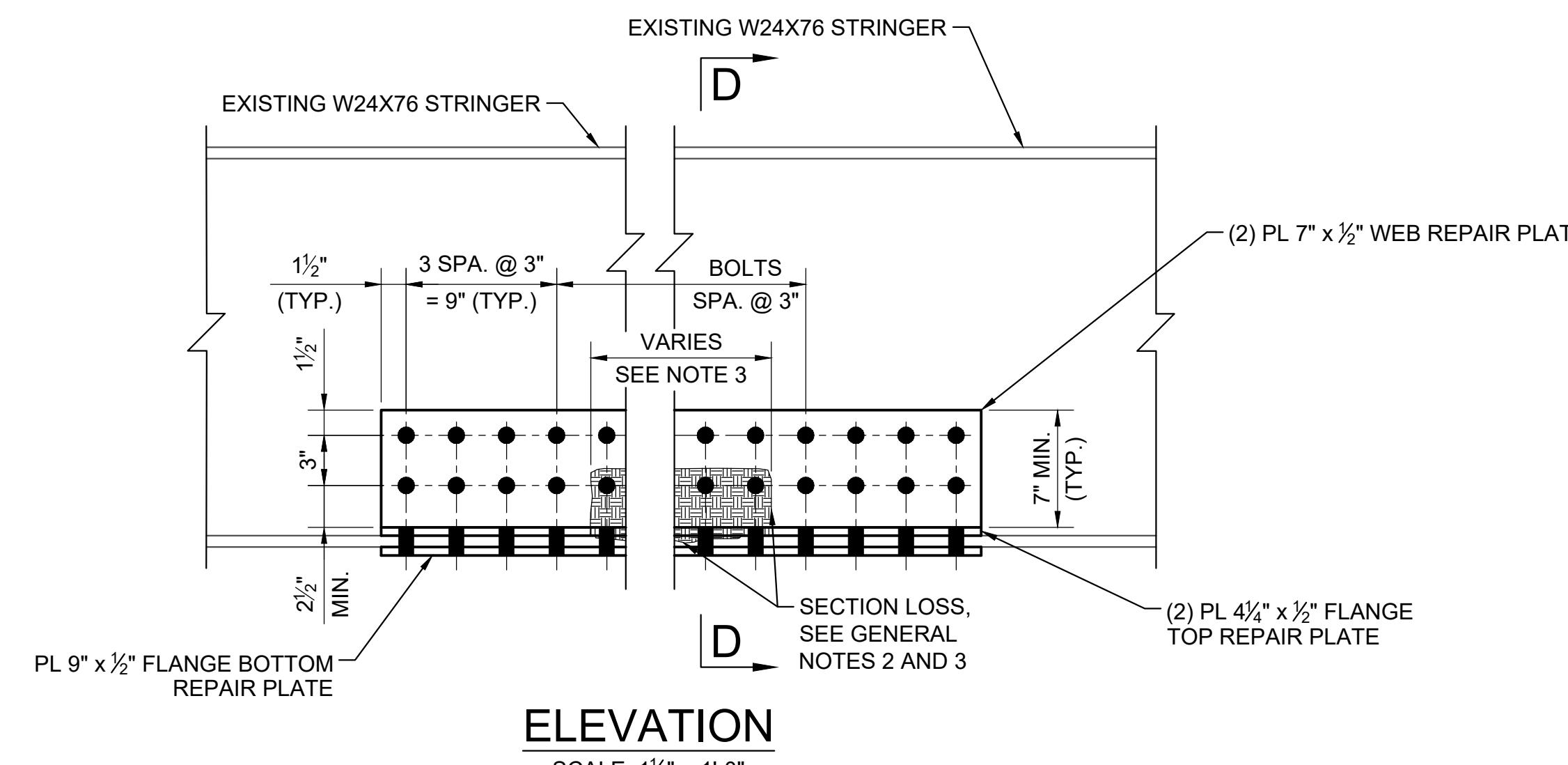
DETAIL-SPECIFIC NOTES

1. PERFORM THIS REPAIR IN NCB-NB SPANS 1-8 AND 10-17 FOR FLOORBEAMS WITH BOTTOM FLANGE CORROSION TOTAL SECTION LOSS EXCEEDING 10% OF THE ORIGINAL CROSS-SECTIONAL AREA OF THE FLANGE (APPROX. 0.76" THICK x 10.5" W) AS APPROVED BY THE DISTRICT.
2. IF FLANGE SECTION LOSS EXCEEDS 50% OF THE ORIGINAL FLANGE SECTION OR IF WEB SECTION LOSS EXCEEDS 1/4" DEEP AND EXTENDS FURTHER THAN 6" FROM THE BOTTOM FLANGE, CONTACT THE DISTRICT FOR DIRECTION.
3. TOTAL LENGTH OF REPAIR FOR THIS DETAIL IS EXPECTED TO VARY FROM APPROX. 4' TO APPROX. 12', WITH A TYPICAL AVERAGE OF 8'.



SECTION D-D

SCALE: 1 1/2" = 1'-0"



ELEVATION

SCALE: 1 1/2" = 1'-0"

NCB-NB STRINGER REPAIR TYPE 1

DETAIL-SPECIFIC NOTES

1. PERFORM THIS REPAIR IN NCB-NB SPANS 1-8 AND 10-17 FOR STRINGERS WITH BOTTOM FLANGE CORROSION TOTAL SECTION LOSS EXCEEDING 10% OF THE ORIGINAL CROSS-SECTIONAL AREA OF THE FLANGE (APPROX. 0.68" THICK x 9.0" W) AS APPROVED BY THE DISTRICT.
2. IF FLANGE SECTION LOSS EXCEEDS 50% OF THE ORIGINAL FLANGE SECTION OR IF WEB SECTION LOSS EXCEEDS 1/4" DEEP AND EXTENDS FURTHER THAN 4" FROM THE BOTTOM FLANGE, CONTACT THE DISTRICT FOR DIRECTION.
3. TOTAL LENGTH OF REPAIR FOR THIS DETAIL IS EXPECTED TO VARY FROM APPROX. 4' TO APPROX. 12', WITH A TYPICAL AVERAGE OF 8'.

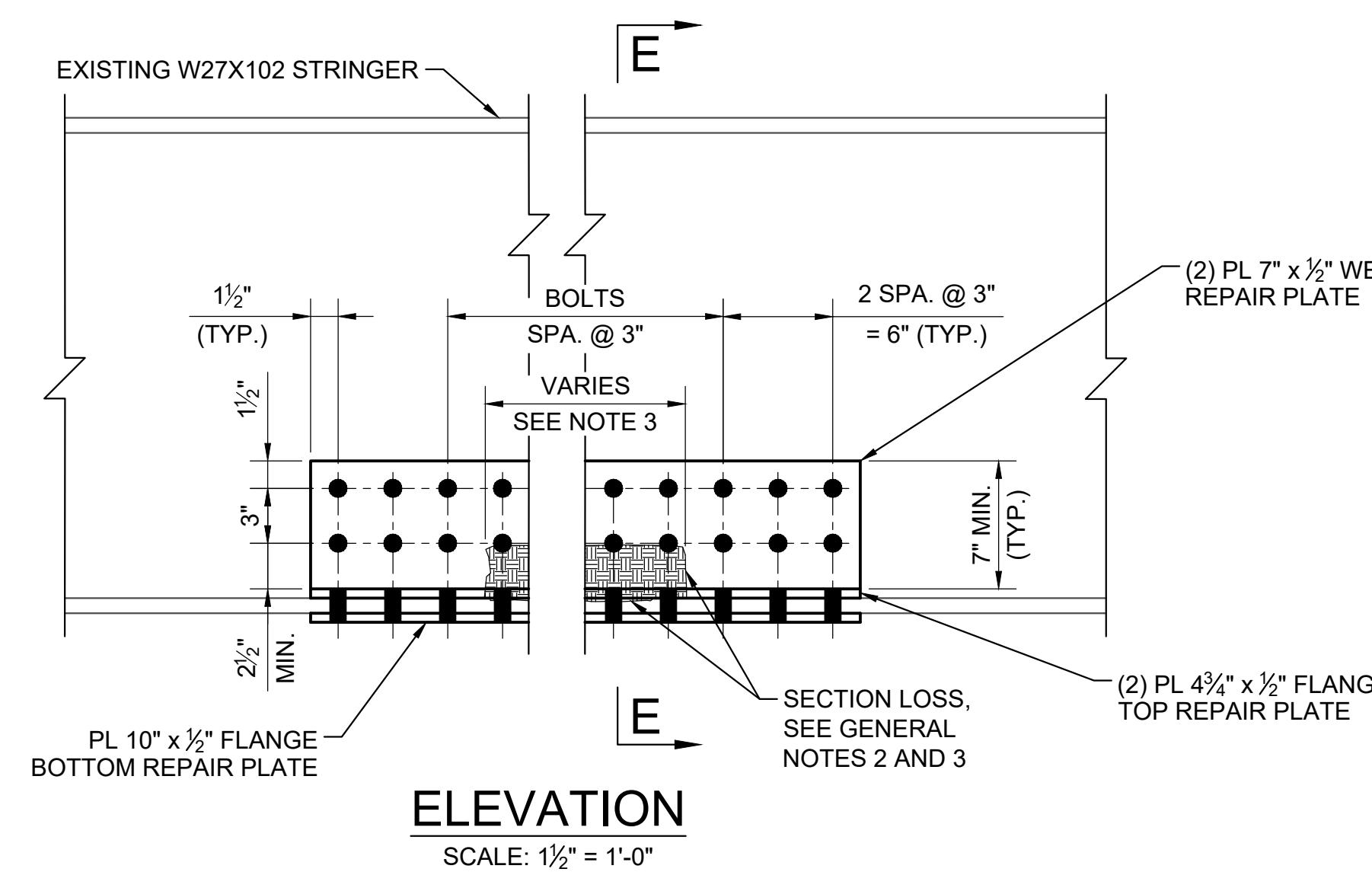
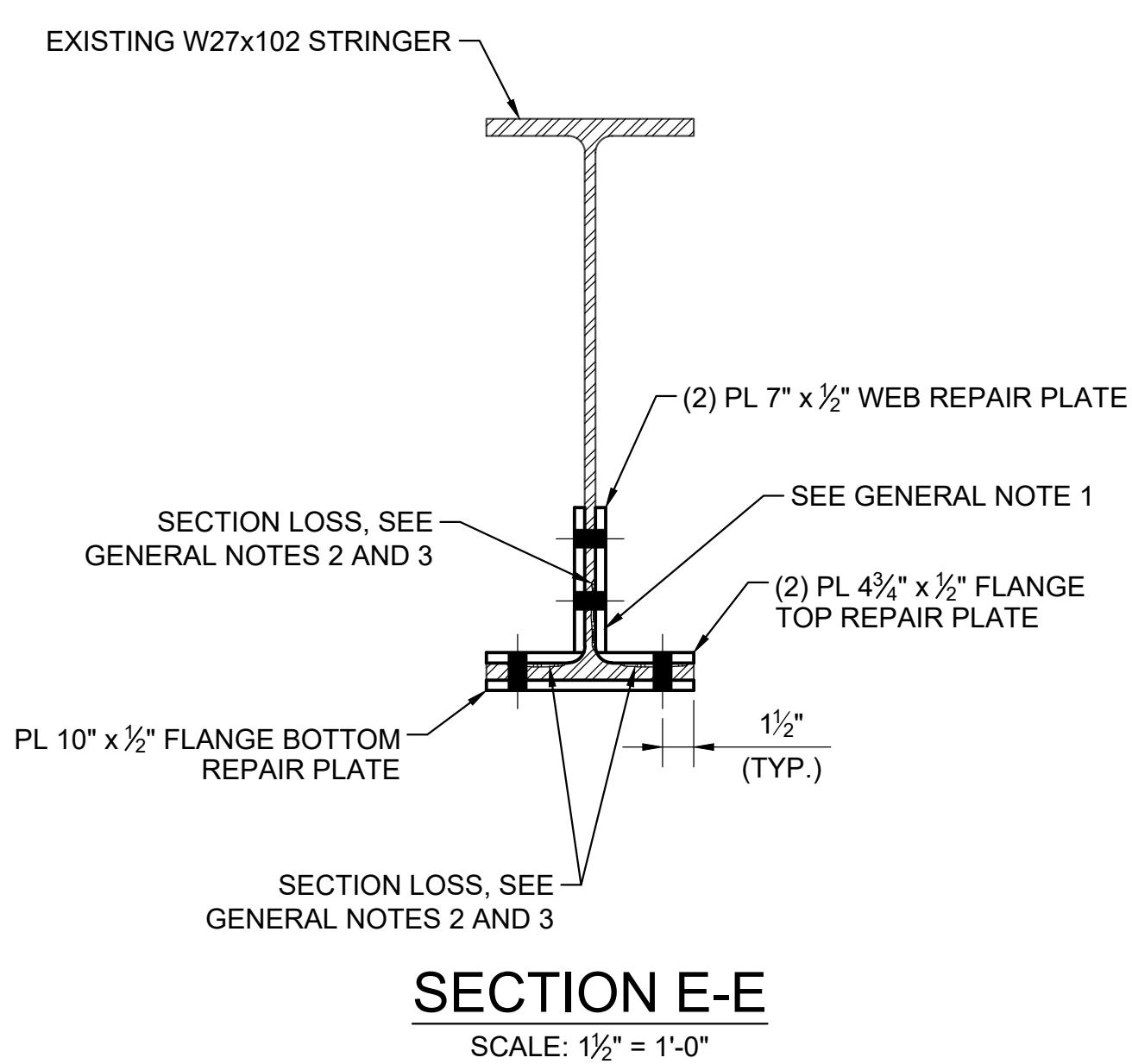
GENERAL NOTES

1. DETAILS ARE SHOWN AND ANNOTATED ASSUMING REPAIR PLATES ARE ASSEMBLED ACCORDING TO DETAIL 'A'. THE CONTRACTOR MAY SUBSTITUTE ASSEMBLY IN ACCORDANCE WITH DETAIL 'B' AT NO ADDITIONAL COST TO THE DISTRICT.
2. GRIND ALL CORROSION TO SMOOTH BARE METAL.
3. FILL ALL GAPS WITH STEEL-FILLED EPOXY PUTTY.
4. ADJUST PLATING PER BEAM END ALTERNATE DETAIL ON NEXT SHEET IF SECTION LOSS OCCURS AT END OF STRINGER OR FLOORBEAM. MAINTAIN FASTENER AND PLATE DETAILS BETWEEN SECTION LOSS AND CENTER OF STRINGER OR FLOORBEAM SPAN PER STRUCTURE-SPECIFIC DETAILS.

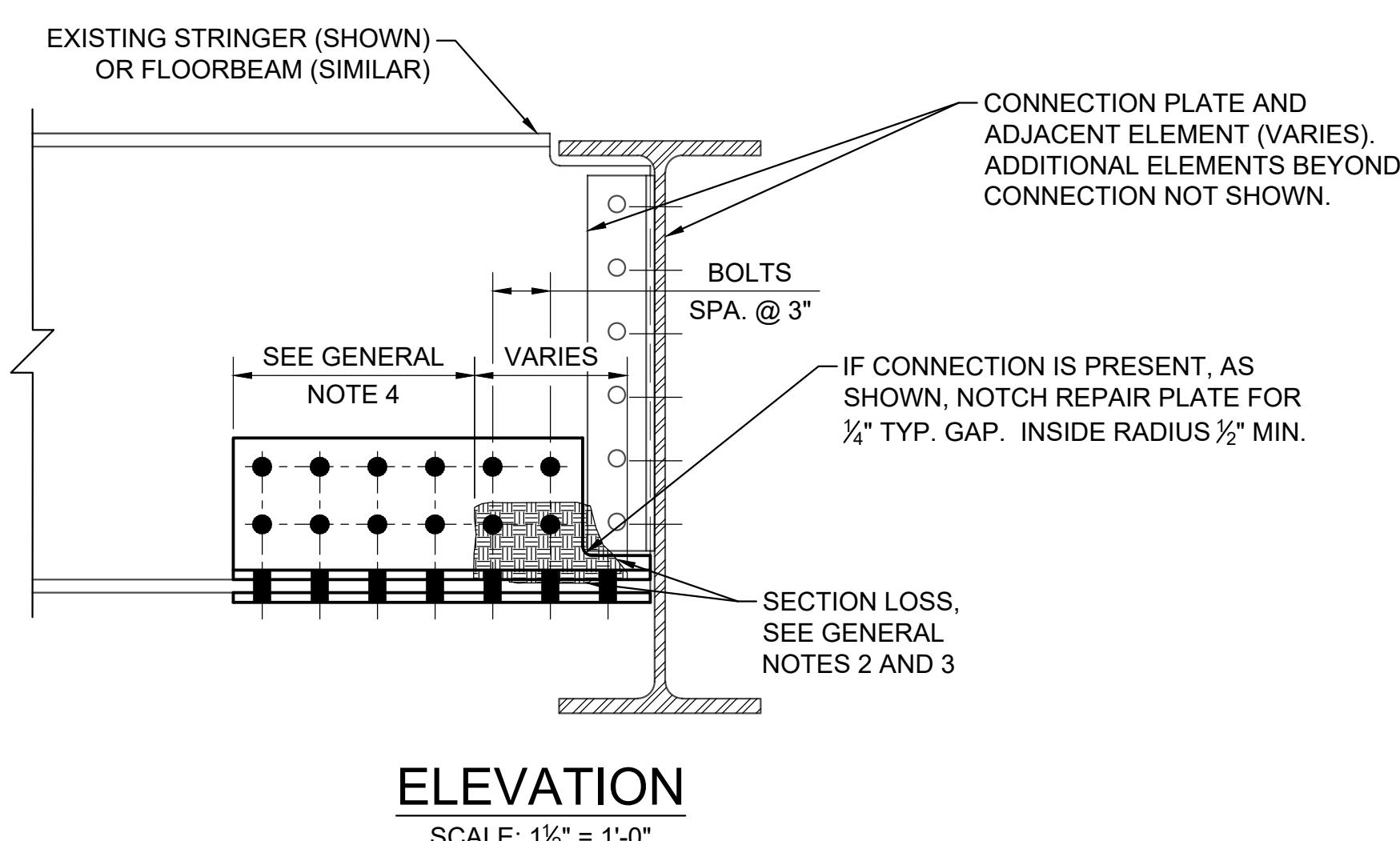
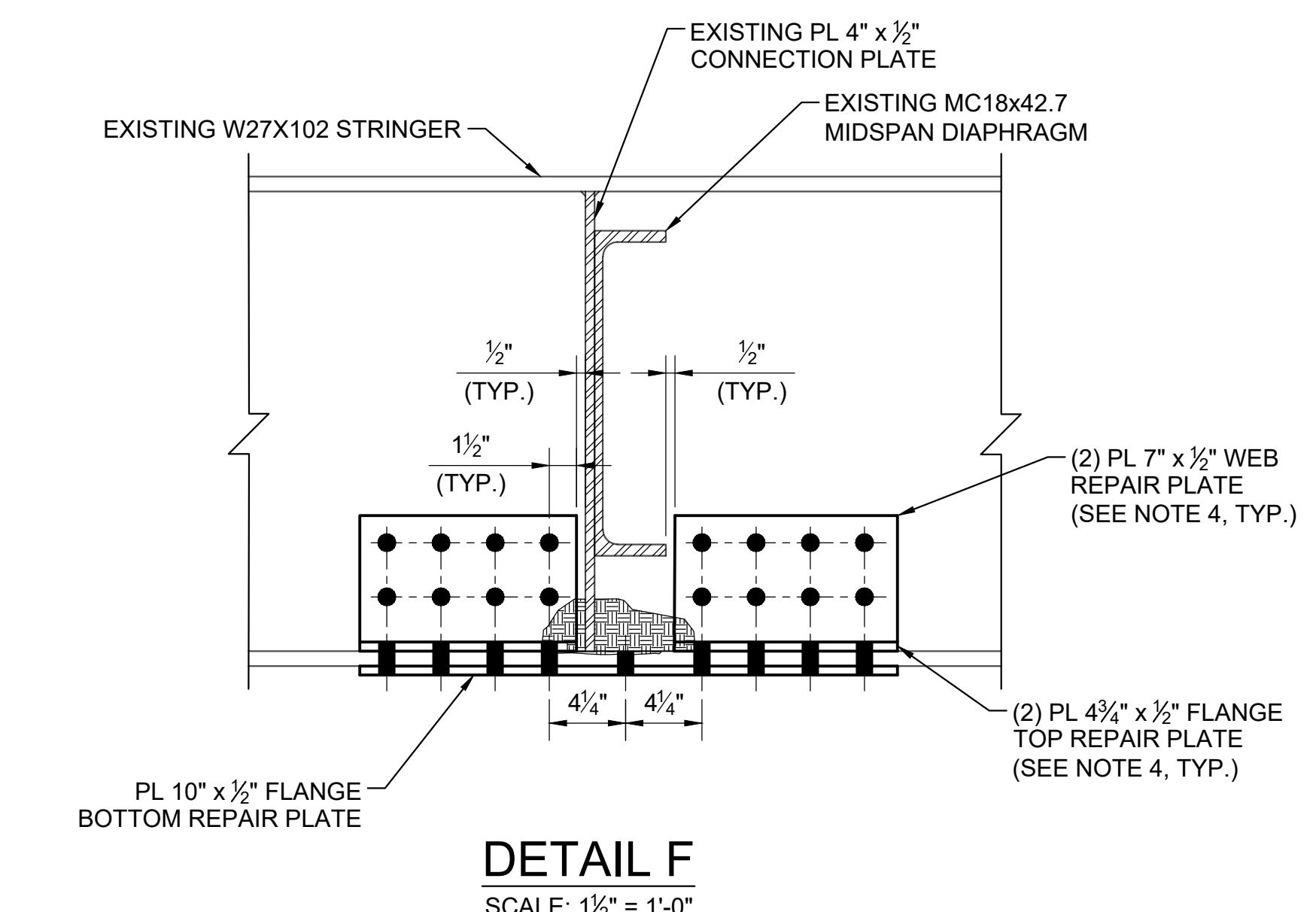
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|--|-------------|------|-----------------------------|------------|---|
| | | | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT |
| | | | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT |
| NORTH CHANNEL BRIDGE NB STRINGER AND FLOORBEAM PLATING REPAIRS | | | | | |
| No. | Description | Date | Designed: JSE Drawn: BSB | Date | Plan No. |
| | Revision | | Checked: AHC | 12/18/2025 | Sheet No. 8 OF 45 |

DETAIL-SPECIFIC NOTES

1. PERFORM THIS REPAIR FOR NCB-NB SPAN 9 (TRUSS SPAN) STRINGERS WITH BOTTOM FLANGE CORROSION TOTAL SECTION LOSS EXCEEDING 10% OF THE ORIGINAL CROSS-SECTIONAL AREA OF THE FLANGE (APPROX. 0.83" THICK X 10.0" W) AS APPROVED BY THE DISTRICT.
2. IF FLANGE SECTION LOSS EXCEEDS 50% OF THE ORIGINAL FLANGE SECTION OR IF WEB SECTION LOSS EXCEEDS $\frac{1}{4}$ " DEEP AND EXTENDS FURTHER THAN 3" FROM THE BOTTOM FLANGE, CONTACT THE DISTRICT FOR DIRECTION.
3. TOTAL REPAIR LENGTH FOR THIS DETAIL IS EXPECTED TO AVERAGE APPROXIMATELY 3'.
4. IF SECTION LOSS OCCURS AT OR NEAR A MIDSPAN DIAPHRAGM CONNECTION PLATE, ADJUST PLATING AS SHOWN IN DETAIL F. MAINTAIN MINIMUM OF (6) FASTENERS THRU FLANGE AND (6) FASTENERS THRU WEB ON EACH SIDE OF EXISTING SECTION LOSS.

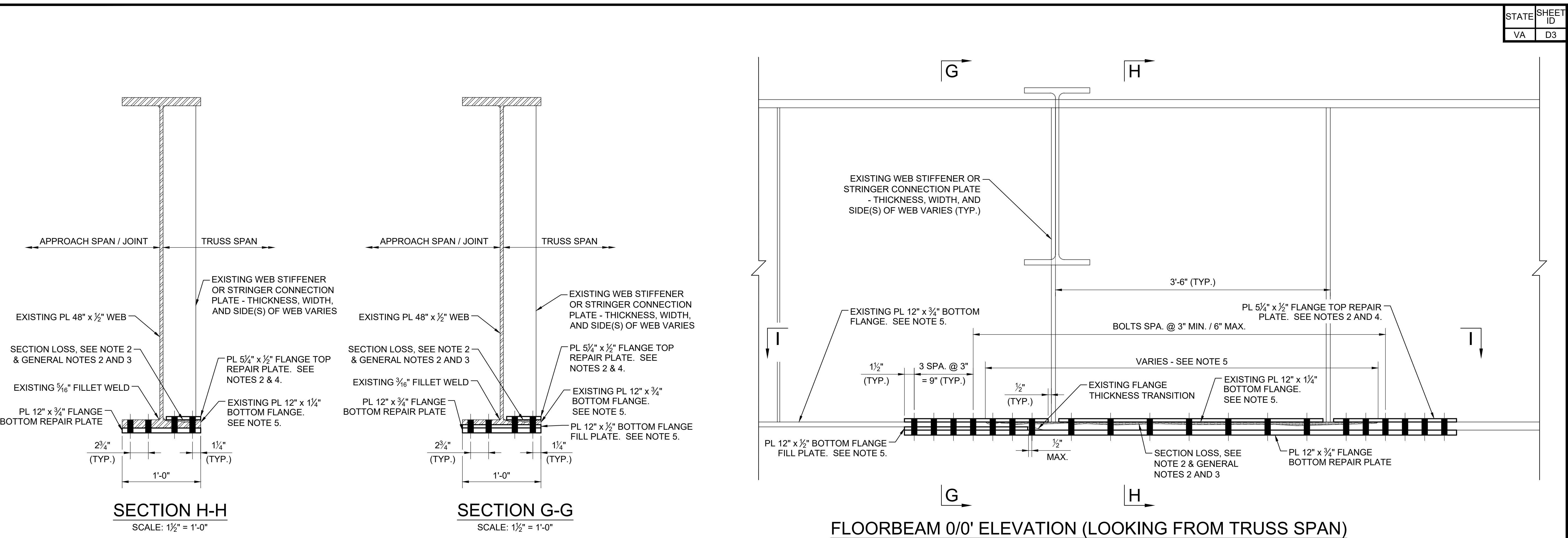


NCB-NB TRUSS STRINGER REPAIR TYPE 1



BEAM END ALTERNATE DETAIL

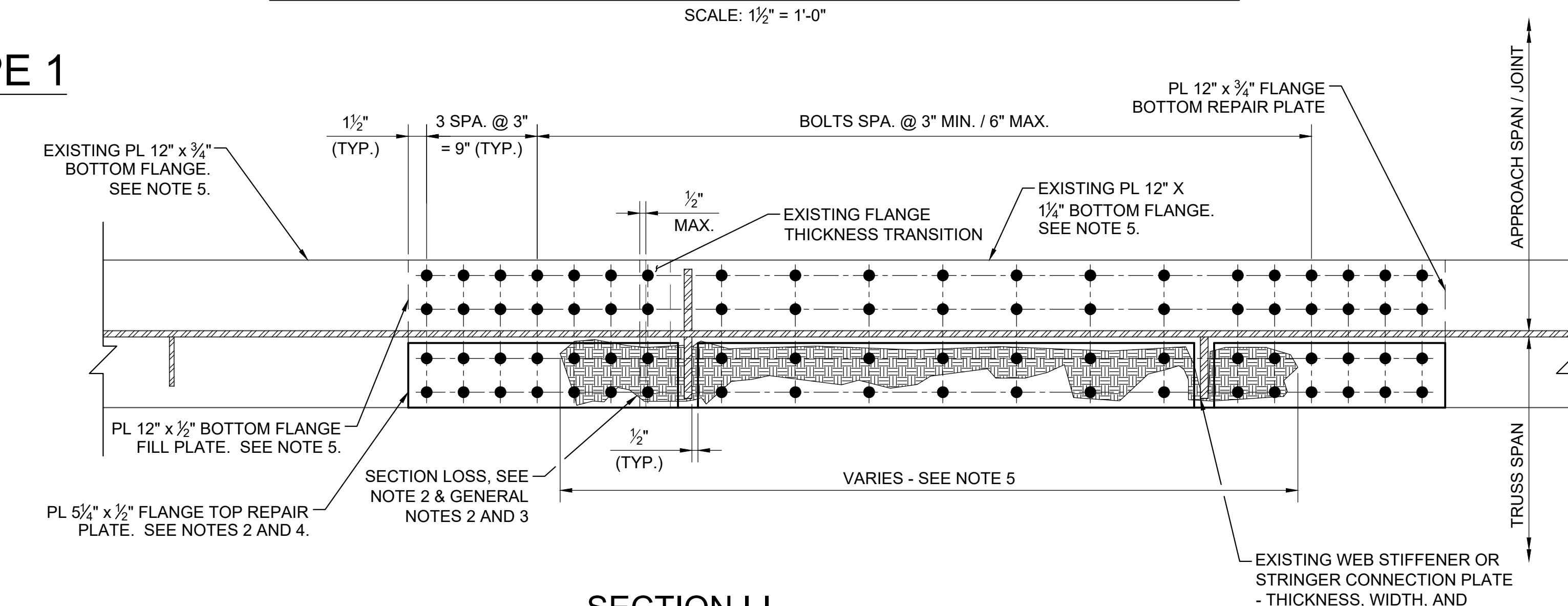
| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | |
|-----|-------------|------|--|------------|-----------|
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | |
| | | | NORTH CHANNEL BRIDGE NB STRINGER AND FLOORBEAM PLATING REPAIRS | | |
| No. | Description | Date | Designed: JSE | Date | Plan No. |
| | | | Drawn: JSE | | Sheet No. |
| | Revision | | Checked: AHC | 12/18/2025 | 9 OF 45 |



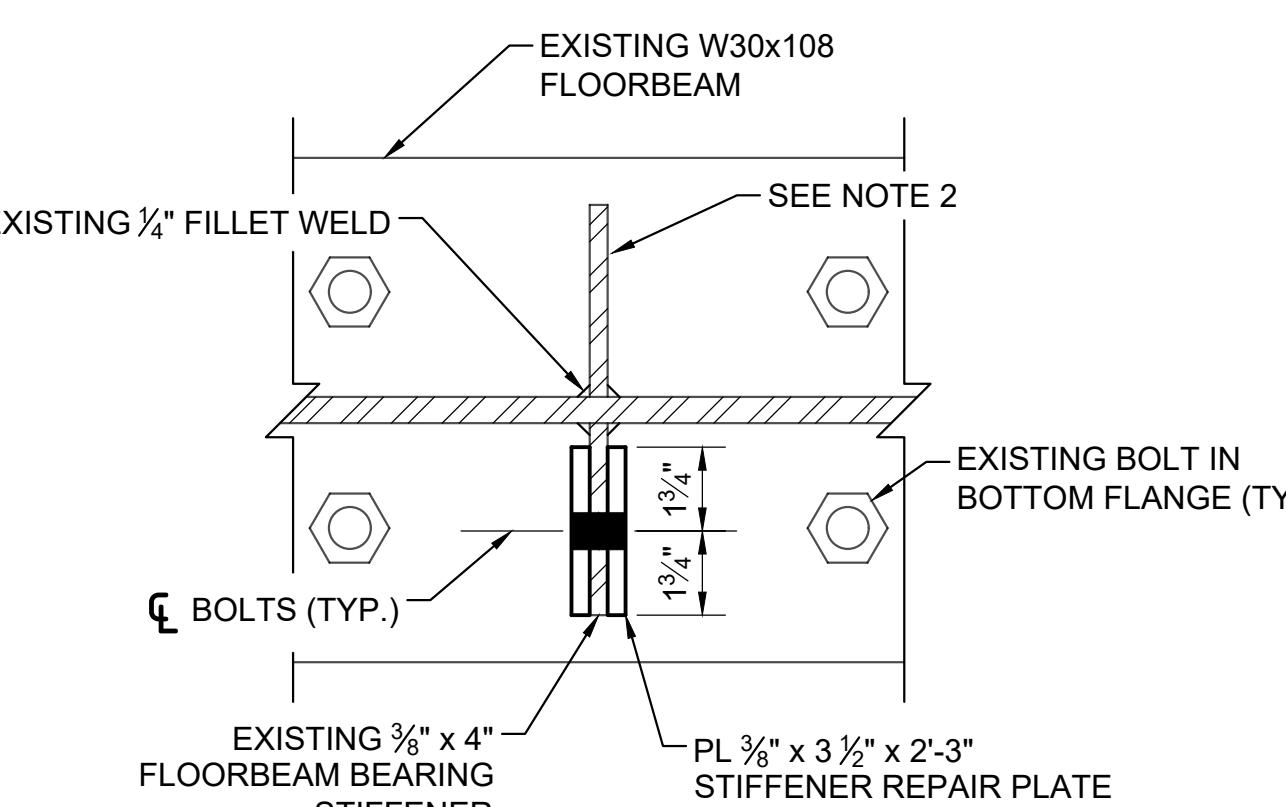
NCB-NB TRUSS FLOORBEAM TYPE 1

DETAIL-SPECIFIC NOTES

1. PERFORM THIS REPAIR FOR NCB-NB SPAN 9 (TRUSS SPAN) FLOORBEAMS 0 AND 0' FOR LOCATIONS WITH BOTTOM FLANGE TOP SURFACE CORROSION SECTION LOSS EXCEEDING 10% OF THE ORIGINAL CROSS-SECTIONAL AREA OF THE FLANGE AS APPROVED BY THE DISTRICT. IF SECTION LOSS EXCEEDS 50% OF THE ORIGINAL FLANGE CROSS-SECTIONAL AREA CONTACT THE DISTRICT FOR DIRECTION.
2. ALL CORROSION SECTION LOSS OF $\frac{1}{4}$ " OR DEEPER IS EXPECTED TO BE ON THE TRUSS-SPAN-SIDE TOP SURFACE OF THE BOTTOM FLANGE. IF CORROSION SECTION LOSS OF $\frac{1}{4}$ " OR DEEPER x 3" WIDE FOR GREATER THAN 2" LONG IS EXHIBITED ON THE APPROACH-SPAN/JOINT-SIDE OF THE BOTTOM FLANGE, PLACE AN ADDITIONAL FLANGE TOP REPAIR PLATE, SIZE AS NOTED IN DETAIL, ON THAT SIDE OF THE FLANGE.
3. IF WEB SECTION LOSS EXCEEDS $\frac{1}{8}$ " DEEP FOR AN AREA LARGER THAN 4" DIAMETER, CONTACT THE DISTRICT FOR DIRECTION.
4. CUT FLANGE TOP REPAIR PLATE FULL-WIDTH AT STIFFENERS AND CONNECTION PLATES TO LEAVE $\frac{1}{2}$ " GAP TO STIFFENER OR CONNECTION PLATE. ADJUST BOLT SPACING ALONG LENGTH OF FLOORBEAM AS NEEDED TO SATISFY THE FOLLOWING REQUIREMENTS:
 - 4.1. MIN. CENTER SPACING: $2\frac{5}{8}$ "
 - 4.2. MAX. CENTER SPACING: 6"
 - 4.3. MIN. END DISTANCE: $1\frac{1}{8}$ "
 - 4.4. MAX. END DISTANCE: 4"
 - 4.5. MAINTAIN MINIMUM OF (16) FASTENERS ON EACH SIDE OF EXISTING SECTION LOSS
5. EXISTING BOTTOM FLANGE THICKNESS IS $\frac{3}{4}$ " FOR $10\pm$ AT EACH END AND $1\frac{1}{4}$ " ELSEWHERE. BOTTOM FLANGE FILL PLATE IS ONLY NEEDED IF REPAIR SPANS AN EXISTING BOTTOM FLANGE THICKNESS TRANSITION. OMIT OTHERWISE.
6. TOTAL LENGTH OF REPAIR FOR THIS DETAIL IS EXPECTED TO AVERAGE APPROXIMATELY 7'.



| No. | Description | Date | Designed: JSE | Date | Plan No. | Sheet No. |
|-----|-------------|------|---|------------|----------|-----------|
| | | | Drawn: JSE | | | |
| | Revision | | Checked: AHC | 12/18/2025 | | 10 OF 45 |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | |
| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | |
| | | | NORTH CHANNEL BRIDGE NB | | | |
| | | | STRINGER AND FLOORBEAM | | | |
| | | | PLATING REPAIRS | | | |



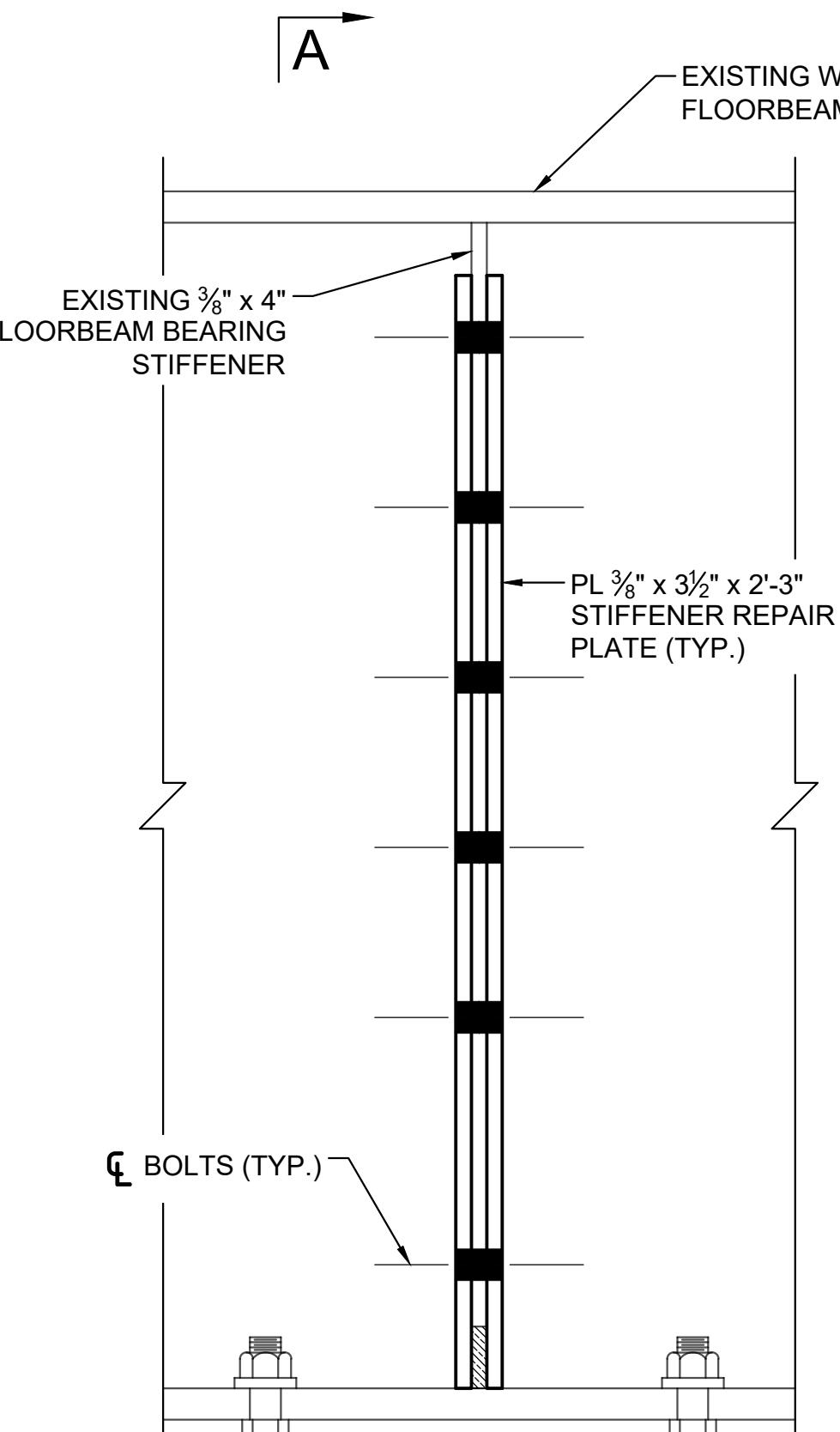
PLAN VIEW

SCALE: 3" = 1'-0"

DETAIL-SPECIFIC NOTES

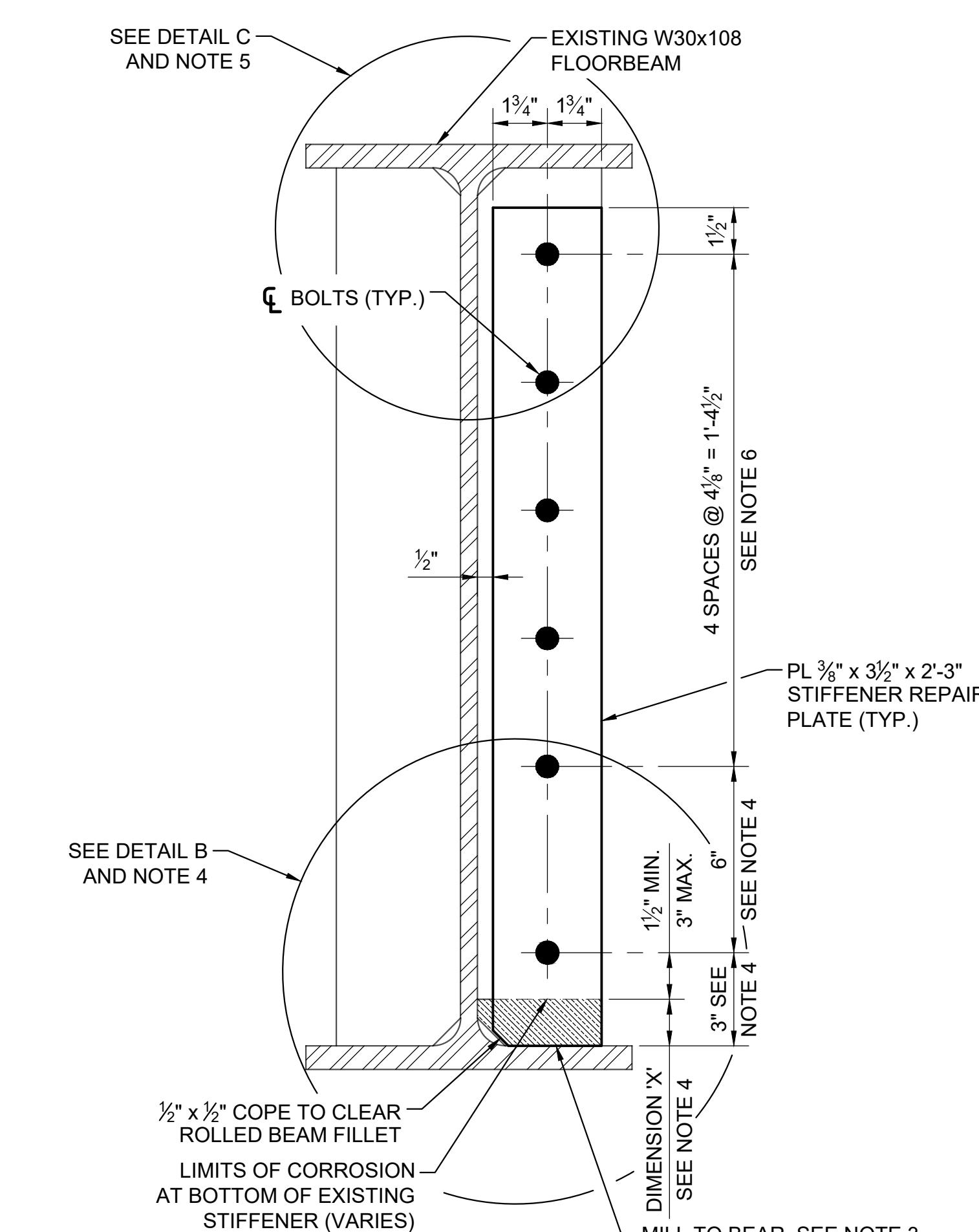
1. PERFORM THIS REPAIR IN NCB-NB SPANS 1-8 AND 10-17 FOR FLOORBEAM BEARING STIFFENERS (ABOVE THE GIRDERS) EXHIBITING CORROSION AT OR NEAR THE TOP OR BOTTOM END WITH LESS THAN 1/4" REMAINING OVER 3" OR MORE OF THE STIFFENER WIDTH AS APPROVED BY THE DISTRICT.
2. BACK TO BACK REPAIR CONDITIONS (EITHER SIDE OF FLOORBEAM) WILL EXIST.
3. RESTORE MILL TO BEAR CONTACT, LOST DUE TO CORROSION OF EXISTING BEARING STIFFENER, IN PROPOSED STIFFENER REPAIR PLATES.
4. DIMENSION 'X' IS THE HEIGHT OF CORROSION AT THE BOTTOM END OF THE BEARING STIFFENER.
 - 4.1. WHEN DIMENSION 'X' IS 1 1/2" OR LESS, PERFORM THE REPAIR AS SHOWN IN SECTION A-A.
 - 4.2. WHEN DIMENSION 'X' > 1 1/2" AND < 6", ADJUST THE REPAIR AS SHOWN IN DETAIL B.
5. IF ONE OR MORE CORROSION HOLES ARE PRESENT NEAR THE TOP EDGE OF THE BEARING STIFFENER, EXTEND STIFFENER REPAIR PLATES TO ACHIEVE TIGHT FIT CONDITION WITH TOP FLANGE AND ADJUST THE REPAIR AS SHOWN IN DETAIL C.
 - 5.1. ADJUST HEIGHT OF REPAIR FILL PLATE AND EXISTING STIFFENER REMOVAL \pm 1" IF NEEDED TO ACCOMMODATE EXISTING FASTENERS. SEE NOTE 6.
6. ADJUST PROPOSED FASTENER SPACING ALONG HEIGHT OF STIFFENER IF NECESSARY TO ACCOMMODATE EXISTING FASTENER LOCATIONS. ENSURE THAT THE FOLLOWING REQUIREMENTS ARE SATISFIED:
 - 6.1. MIN. CENTER SPACING: 2 5/8"
 - 6.2. MAX. CENTER SPACING: 6"
 - 6.3. MIN. END DISTANCE: 1 1/8"
 - 6.4. MAX. END DISTANCE: 3"
7. MATCH DRILL OPPOSING SPLICE PLATES IN THE SHOP.
8. PL 1/2" x 3 1/2" x 2'-3" IS AN ACCEPTABLE SUBSTITUTE FOR STIFFENER REPAIR PLATE.

1/5/2026
pBR-DE05_CBBT NCB-NB FB Stiffener Details.dwg



ELEVATION

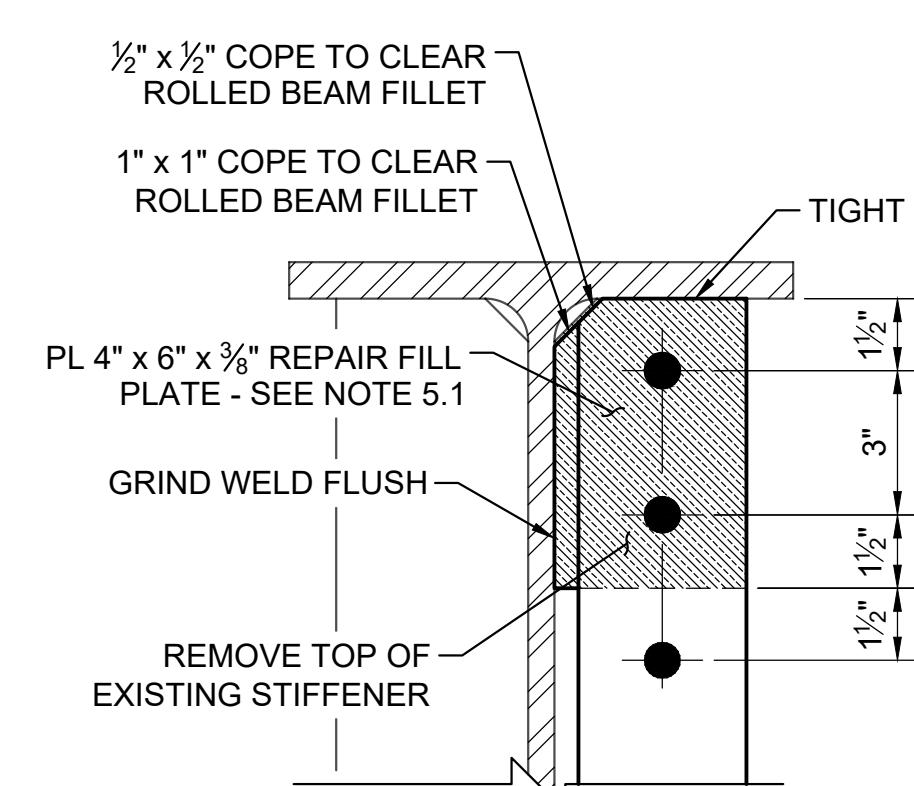
SCALE: 3" = 1'-0"



SECTION A-A

SCALE: 3" = 1'-0"

NCB-NB FLOORBEAM REPAIR TYPE 4



DETAIL B

SCALE: 3" = 1'-0"

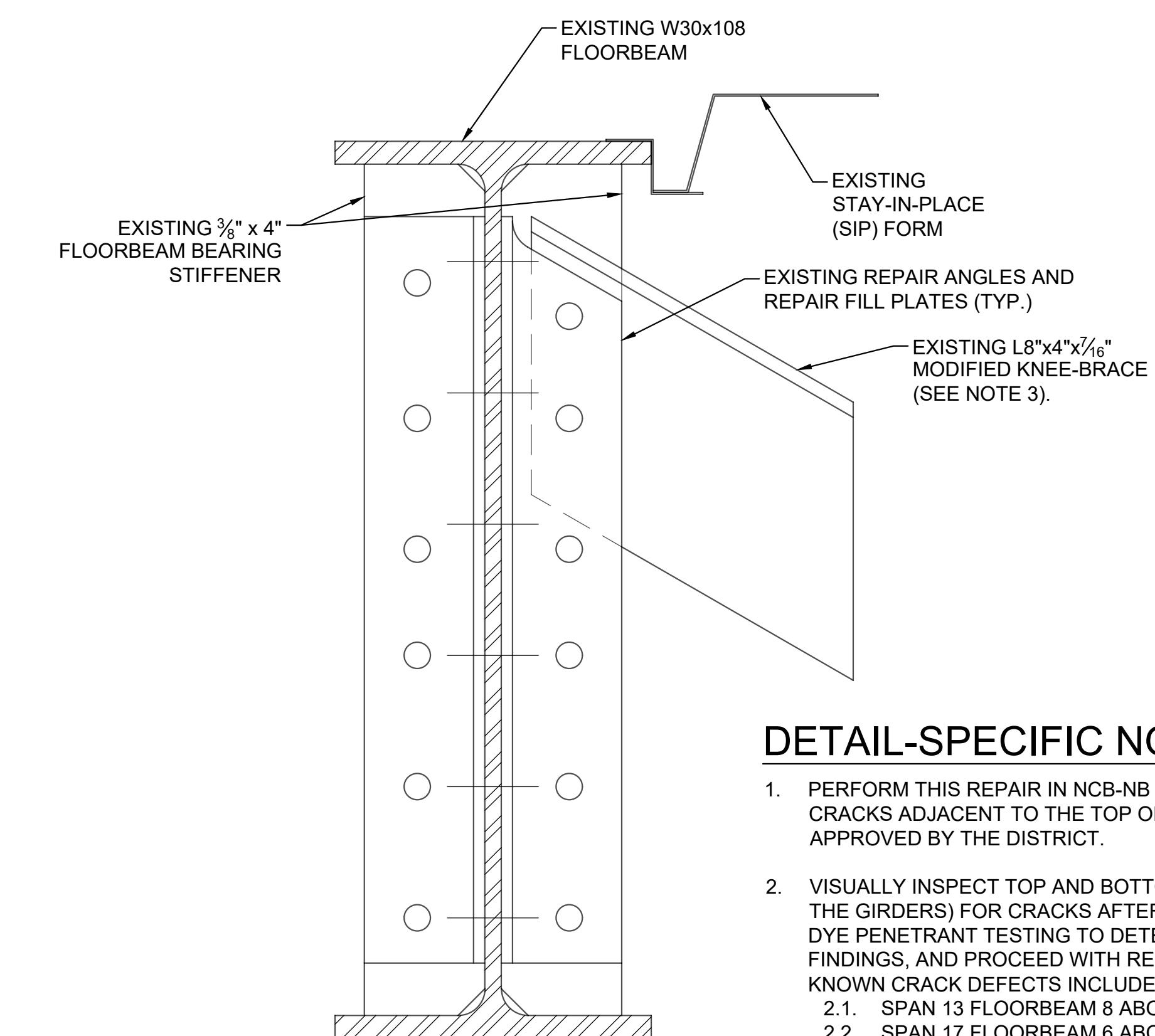
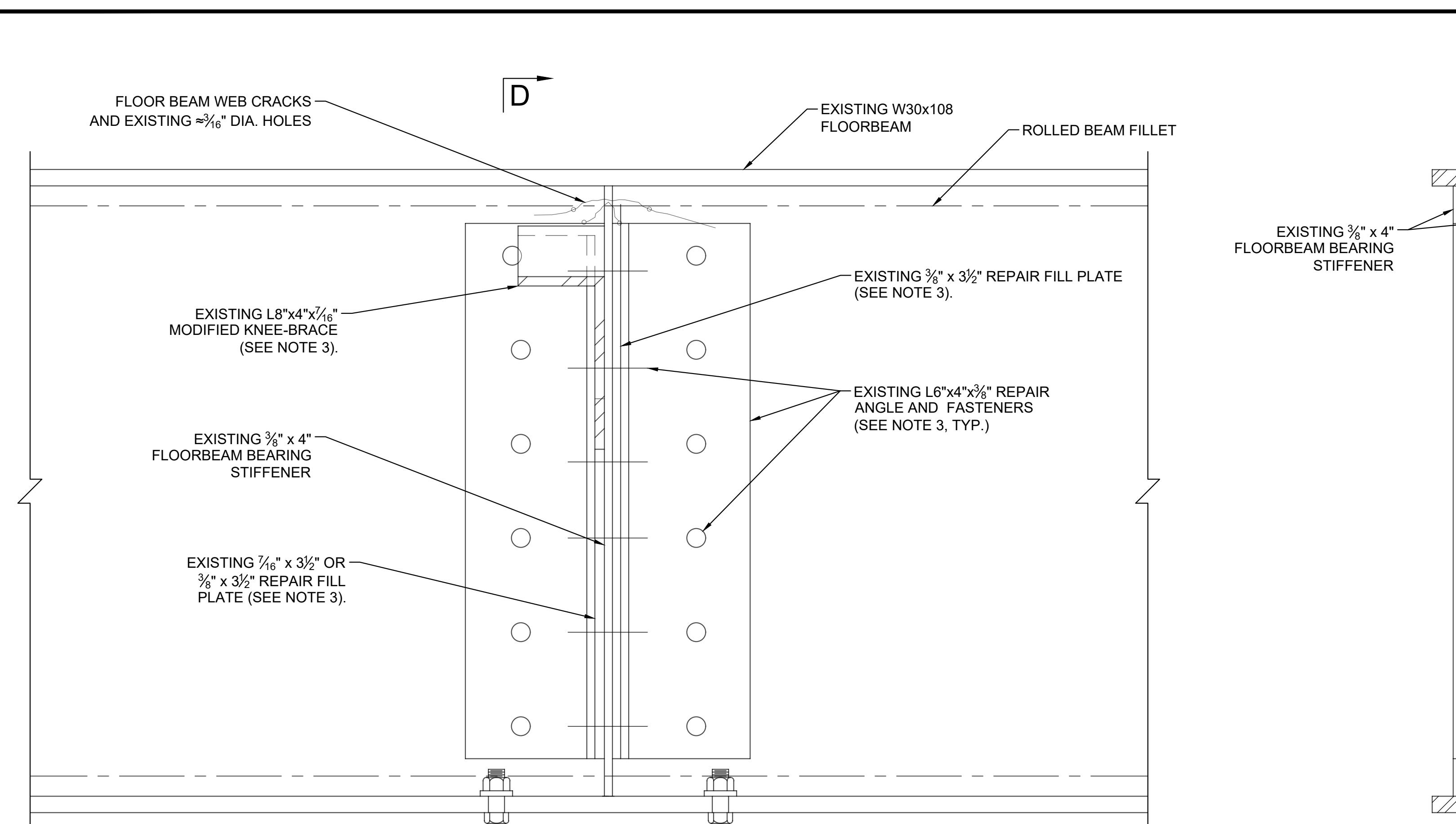
DETAIL C

SCALE: 3" = 1'-0"

SEQUENCE NOTES

- A. CLEAN AND GRIND CORRODED AREAS PER PROJECT NOTES AS REQUIRED. AS PART OF CLEANING AND PREPARING THE TOP OF THE BOTTOM FLANGE, BOTTOM FLANGE SECTION LOSS UP TO 1/8" DEEP IS ACCEPTABLE. IF BOTTOM FLANGE SECTION LOSS EXCEEDS 1/8" DEEP, NOTIFY THE DISTRICT PRIOR TO PROCEEDING WITH THE REPAIR. DETERMINE IF SECTION A-A OR DETAIL B IS APPLICABLE (SEE NOTE 4).
- B. VISUALLY INSPECT TOP AND BOTTOM OF FLOORBEAM WEB AT BEARING STIFFENER FOR CRACKS. IF CRACKS ARE APPARENT, PERFORM DYE PENETRANT TESTING AND NOTIFY THE DISTRICT OF FINDINGS. IF NDT INDICATES CRACKS, PERFORM NCB-NB FLOORBEAM REPAIR TYPE 5.
- C. ACHIEVE MILL TO BEAR CONDITION (BOTTOM) AND/OR TIGHT FIT CONDITION (TOP) FOR THE REPAIR PLATES AND TEMPORARILY CLAMP THEM IN PLACE. ENSURE ALIGNMENT OF THE CLAMPED POSITION WILL PROVIDE EDGE DISTANCE (1 1/2") FOR THE NEW HOLES. INSERT FILL PLATE IF REQUIRED.
- D. REMOVE THE TEMPORARILY CLAMPED REPAIR AND FILL PLATES. APPLY STEEL-FILLED EPOXY PUTTY TO ALL MATING SURFACES AND TO FILL ALL GAPS, SMOOTHED TO MATCH EXISTING SURFACE. BOLT THE REPAIR AND FILL PLATES TO BOTH SIDES OF THE FLOORBEAM STIFFENER.

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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | |
| NORTH CHANNEL BRIDGE NB FLOORBEAM STIFFENER REPAIRS | | | | | |
| No. | Description | Date | Designed: JSE | Date | Plan No. |
| | | | Drawn: BSB | | Sheet No. |
| | Revision | | Checked: AHC | 12/18/2025 | 11 OF 45 |



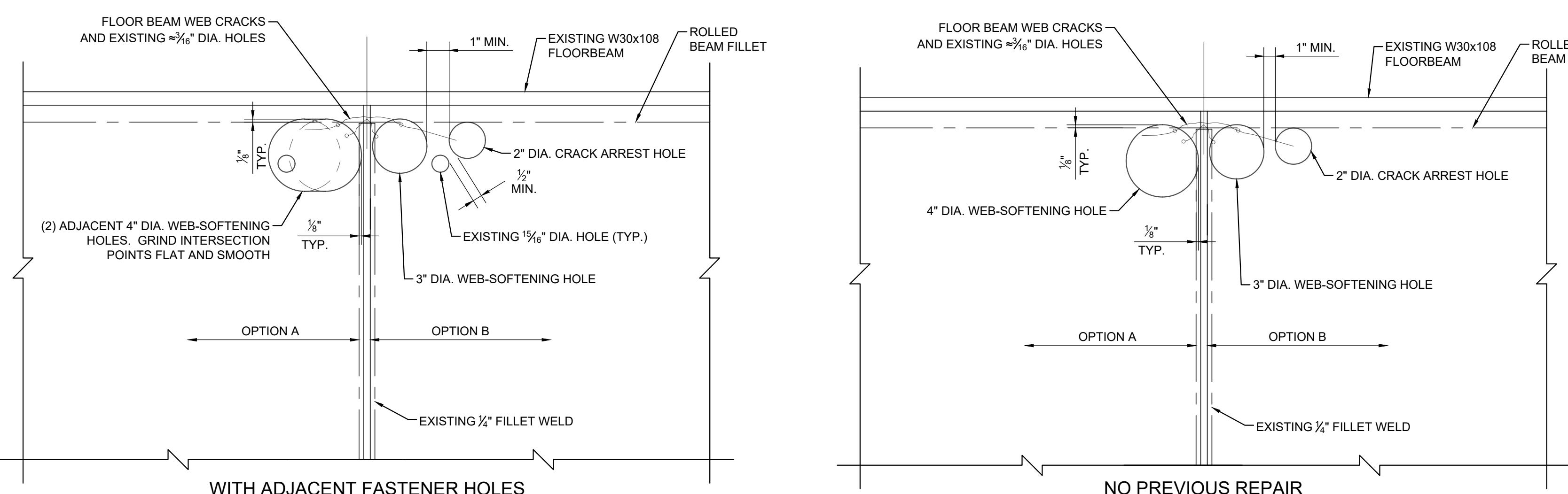
DETAIL-SPECIFIC NOTES

1. PERFORM THIS REPAIR IN NCB-NB SPANS 1-8 AND 10-17 FOR FLOORBEAM WEBS EXHIBITING CRACKS ADJACENT TO THE TOP OF THE BEARING STIFFENER (ABOVE THE GIRDERS) AS APPROVED BY THE DISTRICT.
2. VISUALLY INSPECT TOP AND BOTTOM OF FLOORBEAM WEB AT BEARING STIFFENER (ABOVE THE GIRDERS) FOR CRACKS AFTER PAINT REMOVAL. IF CRACKS ARE APPARENT, PERFORM DYE PENETRANT TESTING TO DETERMINE THE EXTENT OF CRACKING, NOTIFY THE DISTRICT OF FINDINGS, AND PROCEED WITH REPAIR ONCE APPROVED BY THE DISTRICT. LOCATIONS WITH KNOWN CRACK DEFECTS INCLUDE BUT ARE NOT LIMITED TO
 - 2.1. SPAN 13 FLOORBEAM 8 ABOVE EAST GIRDER
 - 2.2. SPAN 17 FLOORBEAM 6 ABOVE EAST GIRDER
3. EXISTING CONDITIONS:
 - 3.1. DIMENSIONS AND LAYOUT OF EXISTING CRACK AND PREVIOUS REPAIR HOLES/ELEMENTS ARE ESTIMATED. ADJUST REPAIR AS NEEDED TO SUIT CONDITIONS. MAINTAIN MIN. 1/2" FASTENER EDGE DISTANCE AND 3" MIN. / 5/8" MAX. FASTENER SPACING FOR ALL FASTENERS.
 - 3.2. SOME STIFFENER LOCATIONS CONTAIN EXISTING PARTIALLY-REMOVED KNEE-BRACE ANGLE (AS SHOWN THIS SHEET), WHICH IS TO BE REMOVED IF PRESENT FOR LOCATIONS SUBJECT TO THIS REPAIR DETAIL (AS SHOWN NEXT SHEET).
 - 3.3. SOME STIFFENER LOCATIONS CONTAIN EXISTING REPAIR ELEMENTS (AS SHOWN THIS SHEET), WHICH ARE TO BE REMOVED AND REPLACED WITH PROPOSED REPAIR ELEMENTS FOR LOCATIONS SUBJECT TO THIS REPAIR DETAIL (AS SHOWN NEXT SHEET). IF NO PREVIOUS REPAIR ELEMENTS ARE PRESENT AT A GIVEN LOCATION, DRILL CRACK ARREST AND/OR WEB SOFTENING HOLES BUT OMIT PROPOSED REPAIR ELEMENTS.
4. TWO ACCEPTABLE OPTIONS ARE PROVIDED FOR WEB SOFTENING AND CRACK ARREST HOLES, AS SHOWN. DRILL HOLES USING A MAG DRILL AND ANNULAR CUTTER BITS. NOTE THAT THE ADJACENT SIP FORM AND CONCRETE DECK SOFFIT MAY REQUIRE LOW PROFILE BITS.
 - 4.1. OPTION A: (1) OR (2) 4" DIA. WEB SOFTENING HOLES.
 - 4.1.1. HOLE(S) SHALL FULLY CAPTURE CRACK TIP(S).
 - 4.1.2. HOLE(S) SHALL EITHER FULLY OVERLAP EXISTING FASTENER HOLE (IF PRESENT) OR MAINTAIN 1/2" MIN. CLEAR DISTANCE TO IT.
 - 4.1.3. GRIND INTERSECTION POINTS FLAT AND SMOOTH.
 - 4.1.4. IF POSSIBLE WHILE ALSO SATISFYING PRECEDING REQUIREMENTS, HOLE(S) SHOULD OVERLAP FLOOR BEAM FILLET BY 1/8".
 - 4.1.5. IF POSSIBLE WHILE ALSO SATISFYING PRECEDING REQUIREMENTS, HOLE ADJACENT TO STIFFENER SHOULD OVERLAP STIFFENER-WEB WELD BY 1/8".
 - 4.2. OPTION B: (1) 3" DIA. WEB SOFTENING HOLE AND (1) 2" DIA. CRACK ARREST HOLE.
 - 4.2.1. CRACK ARREST HOLE SHALL FULLY CAPTURE CRACK TIP(S).
 - 4.2.2. HOLES SHALL MAINTAIN 1/2" MIN. CLEAR DISTANCE TO EXISTING FASTENER HOLE (IF PRESENT) AND 1" MIN. CLEAR DISTANCE BETWEEN EACH OTHER.
 - 4.2.3. IF POSSIBLE WHILE ALSO SATISFYING PRECEDING REQUIREMENTS, WEB SOFTENING HOLE SHOULD OVERLAP BOTH FLOOR BEAM FILLET AND STIFFENER-WEB WELD BY 1/8".
5. 1/8" THICK REPAIR ELEMENTS, WITH OTHER DIMENSIONS AS NOTED IN THE DETAIL, ARE ACCEPTABLE ALTERNATES TO 3/16" THICK ELEMENTS SPECIFIED.

ELEVATION

SCALE: 3" = 1'-0"

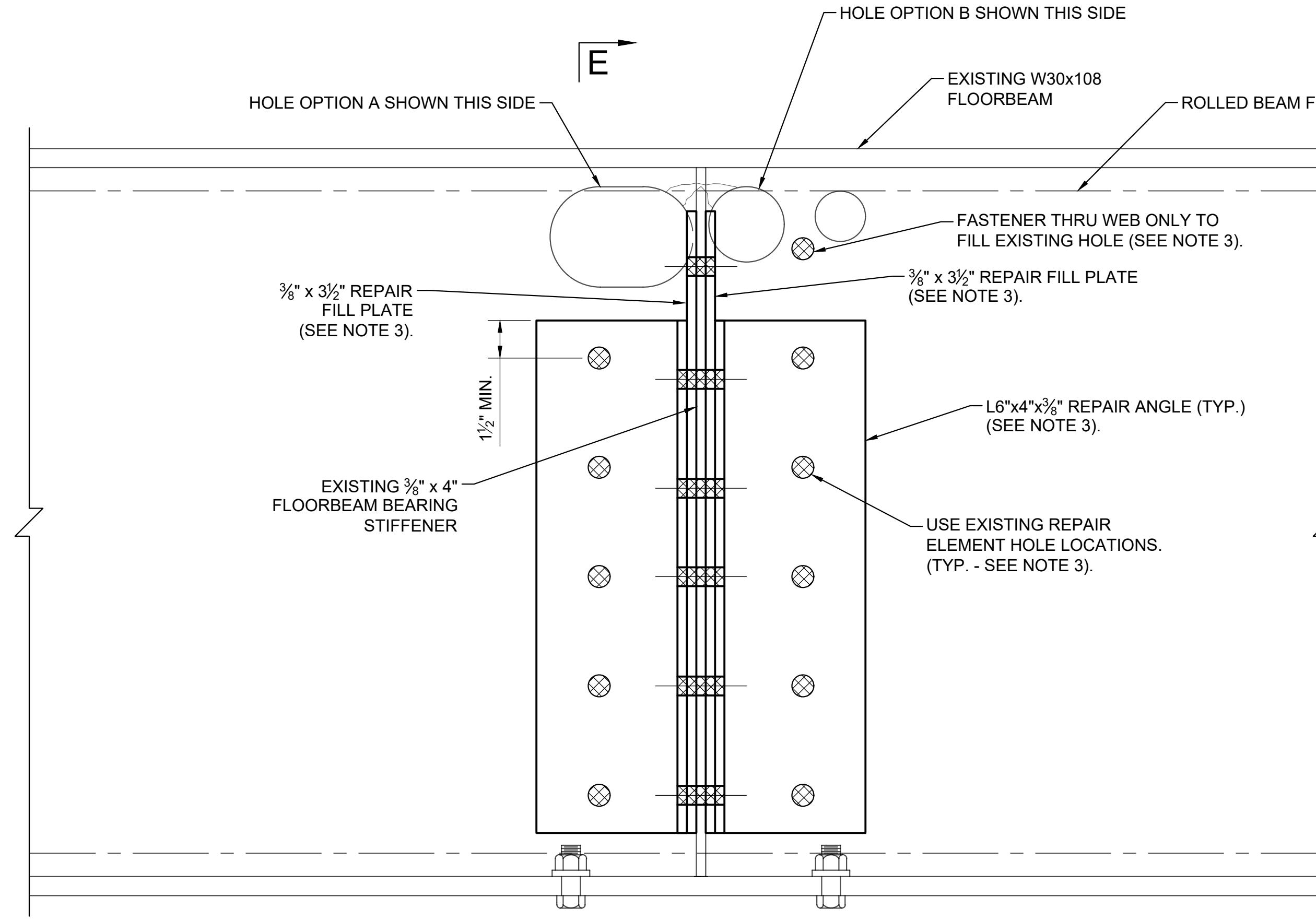
NCB-NB FLOORBEAM REPAIR TYPE 5 EXISTING CONDITION



SOFTENING AND/OR CRACK ARREST HOLES

SCALE: 3" = 1'-0"

| No. | Description | Date | Designed: JSE | Date | Drawn: JSE | Date | Plan No. | Sheet No. |
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| | Revision | | | | Checked: AHC | 12/18/2025 | | 12 OF 45 |

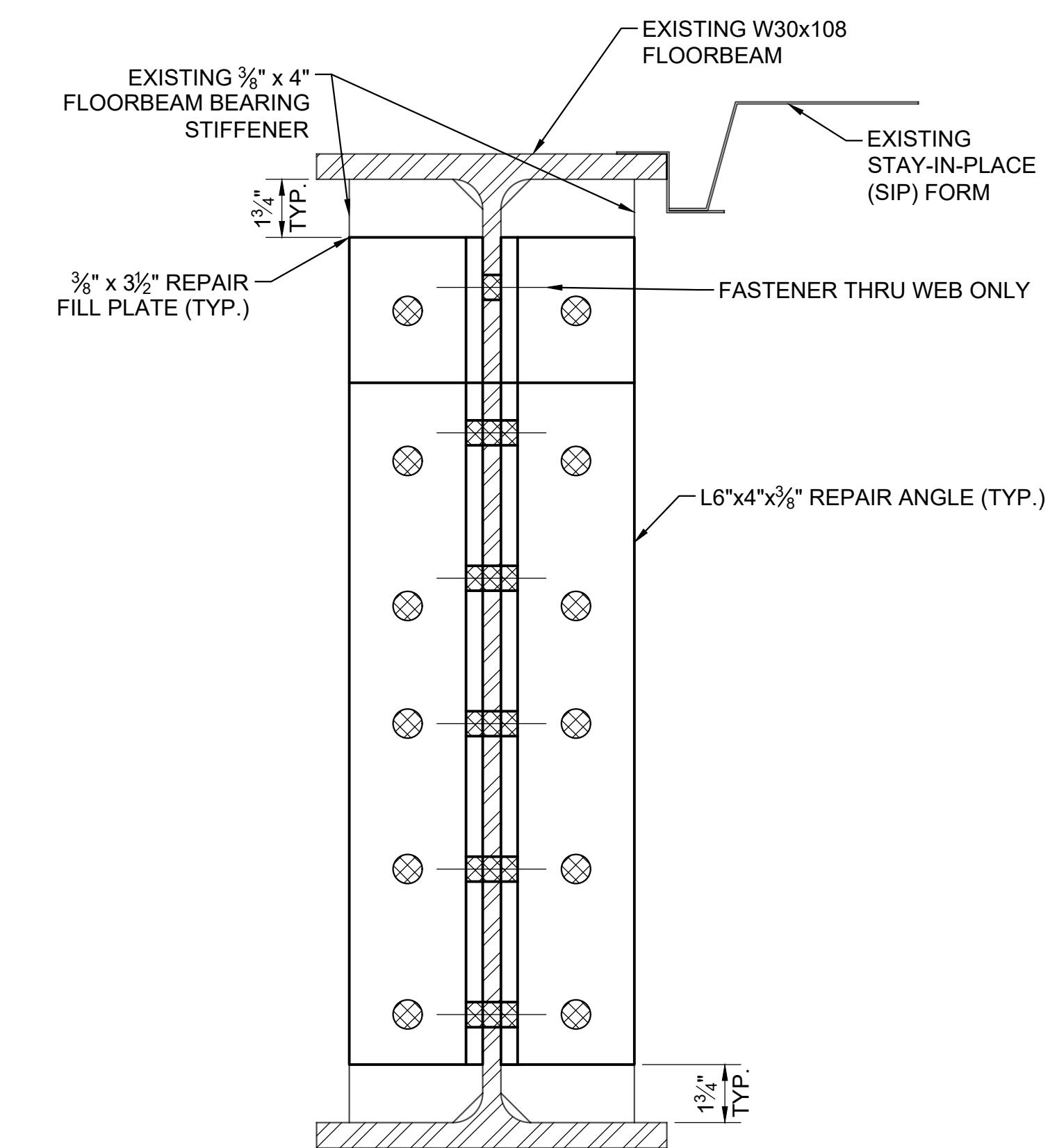


ELEVATION

SCALE: 3" = 1'-0"

NCB-NB FLOORBEAM REPAIR TYPE 5
REPAIRED CONDITION

pBR-DE05_CBR1 NCB-NB FB Stiffener Details.dwg
1/5/2026



SECTION E-E

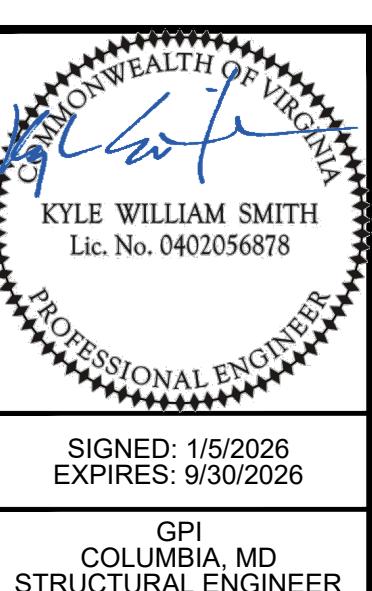
SCALE: 3" = 1'-0"

SEQUENCE NOTES

- IF EXISTING REPAIR ELEMENTS ARE PRESENT, REMOVE BOLTS AND EXISTING REPAIR ELEMENTS. CLEAN AND GRIND CORRODED AREAS AS REQUIRED. PERFORM DYE PENETRANT TESTING TO IDENTIFY LOCATION OF CRACK TIP(S).
- LAY OUT WEB SOFTENING AND/OR CRACK ARREST HOLES. ENSURE THAT CONDITIONS SPECIFIED IN DETAIL-SPECIFIC NOTES WILL BE MET PRIOR TO DRILLING HOLES. DRILL HOLE(S).
- OMIT THIS STEP IF NO EXISTING REPAIR ELEMENTS ARE PRESENT:

IF EXISTING REPAIR ELEMENTS ARE PRESENT, USE AS A TEMPLATE TO DRILL THROUGH PROPOSED REPAIR ELEMENTS. APPLY STEEL-FILLED EPOXY PUTTY TO ALL MATING SURFACES AND TO FILL ALL GAPS, SMOOTHED TO MATCH EXISTING SURFACE. DO NOT FILL WEB SOFTENING OR CRACK ARREST HOLES WITH EPOXY. BOLT THE REPAIR AND FILL PLATES AND ANGLES TO BOTH SIDES OF THE FLOORBEAM STIFFENER. PLACE BOLT(S) THROUGH THE FLOOR BEAM WEB AT UPPER FASTENER HOLE(S).

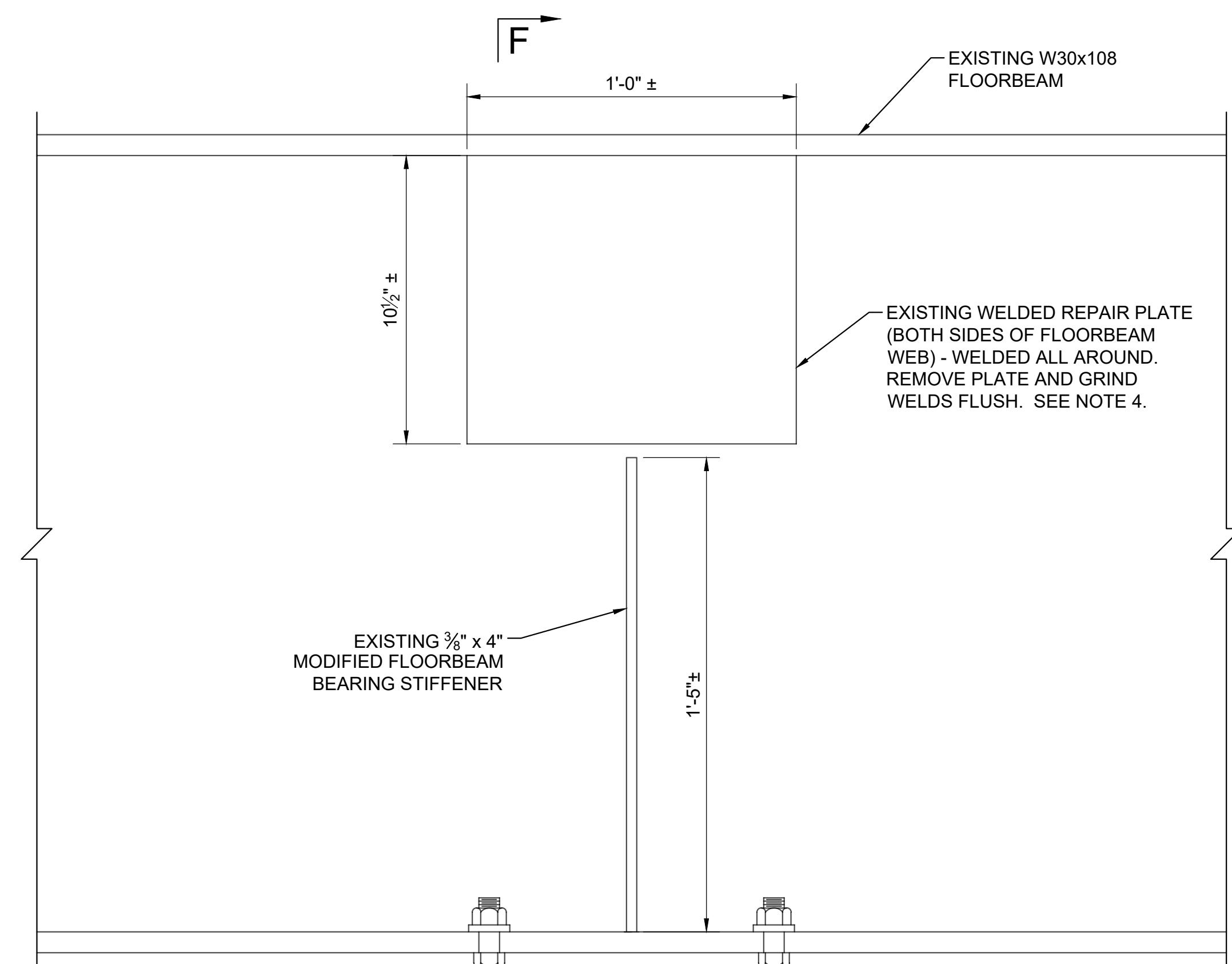
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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | |
| NORTH CHANNEL BRIDGE NB FLOORBEAM STIFFENER REPAIRS | | | | | | | |
| No. | Description | Date | Designed: <u>JSE</u> | Drawn: <u>JSE</u> | Date | Plan No. | Sheet No. |
| | Revision | | Checked: <u>AHC</u> | | 12/18/2025 | | 13 OF 45 |



KYLE WILLIAM SMITH
Lic. No. 0402056878

SIGNED: 1/5/2026
EXPIRES: 9/30/2026

GPI
COLUMBIA, MD
STRUCTURAL ENGINEER

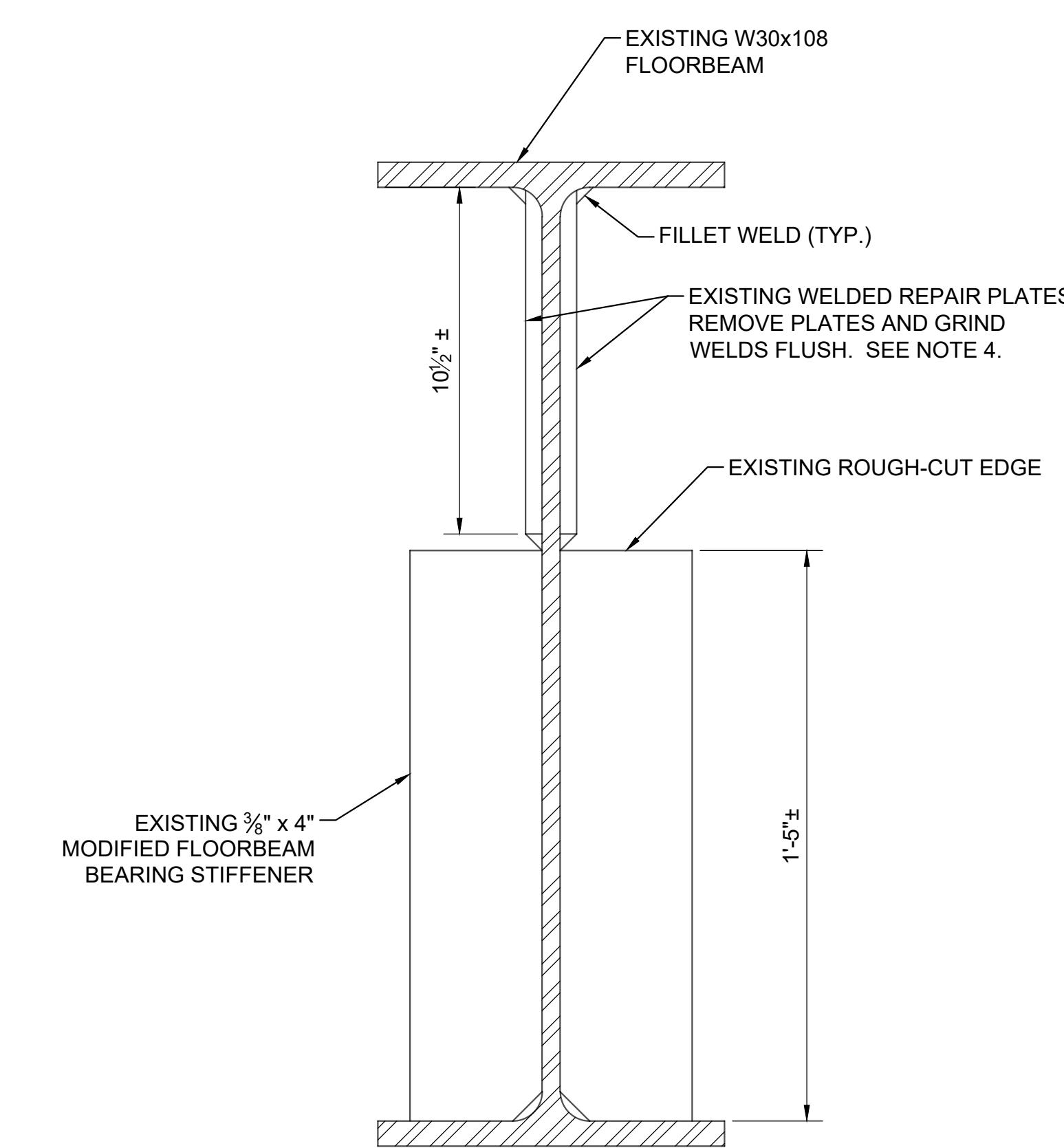


ELEVATION

SCALE: 3" = 1'-0"

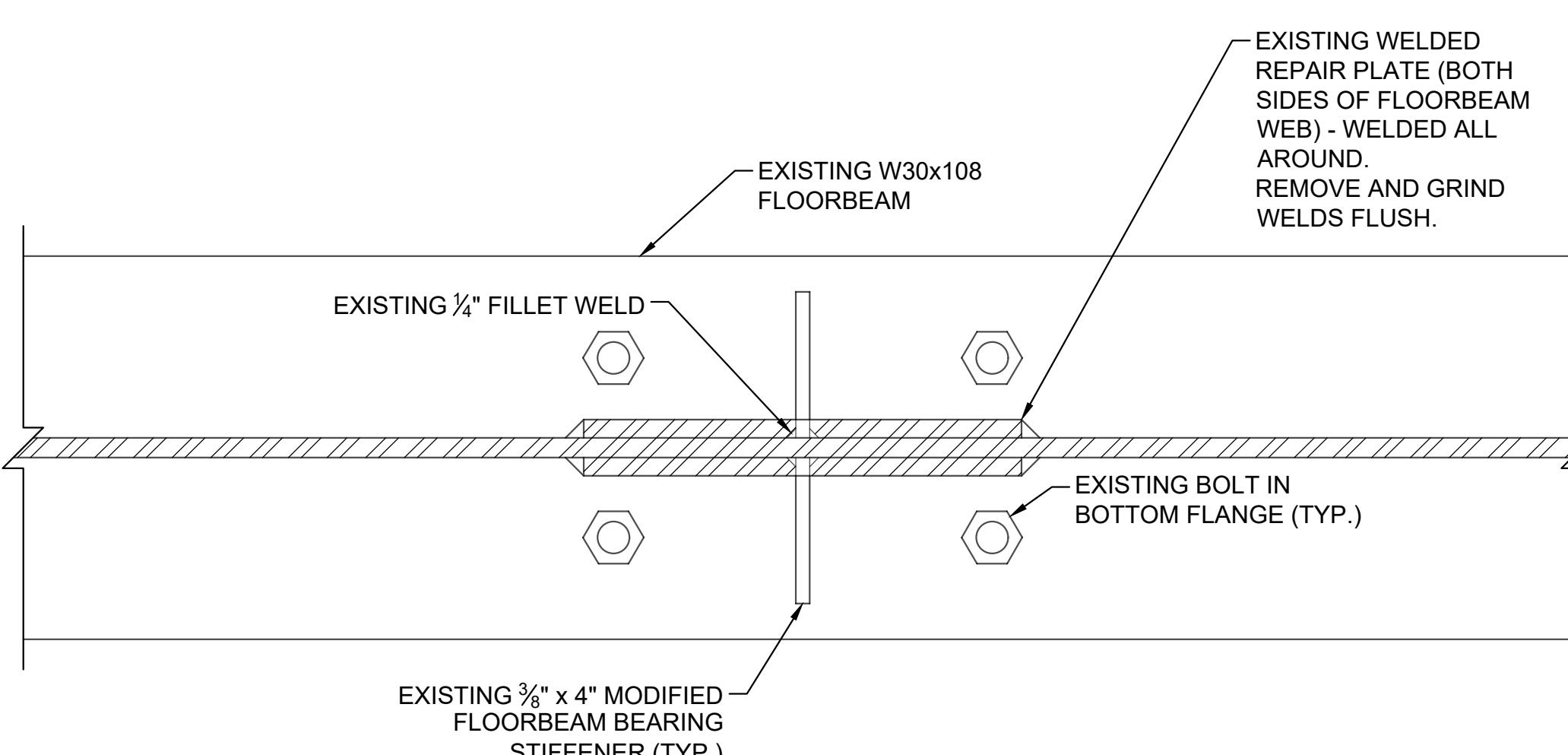
NCB-NB FLOORBEAM REPAIR TYPE 6

EXISTING CONDITION



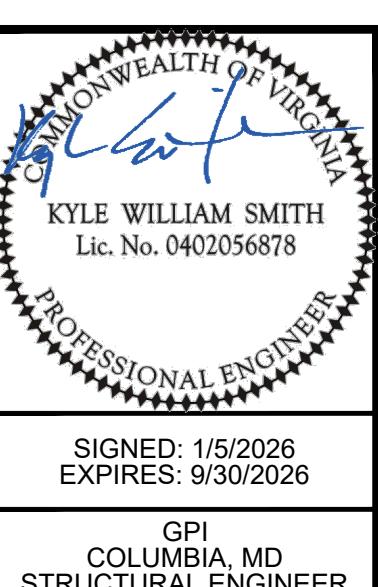
SECTION F-F

SCALE: 3" = 1'-0"



PLAN VIEW

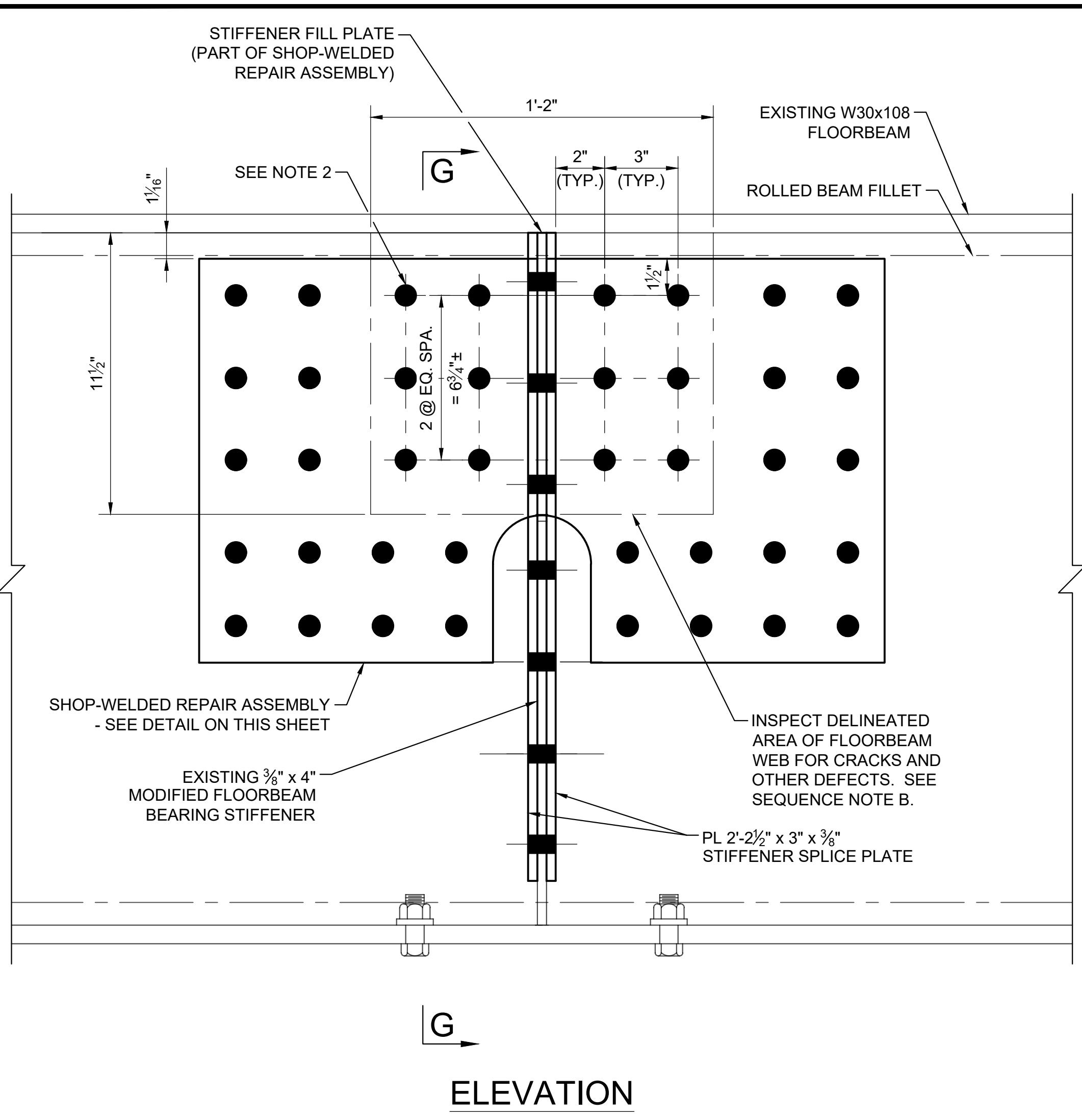
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DETAIL-SPECIFIC NOTES

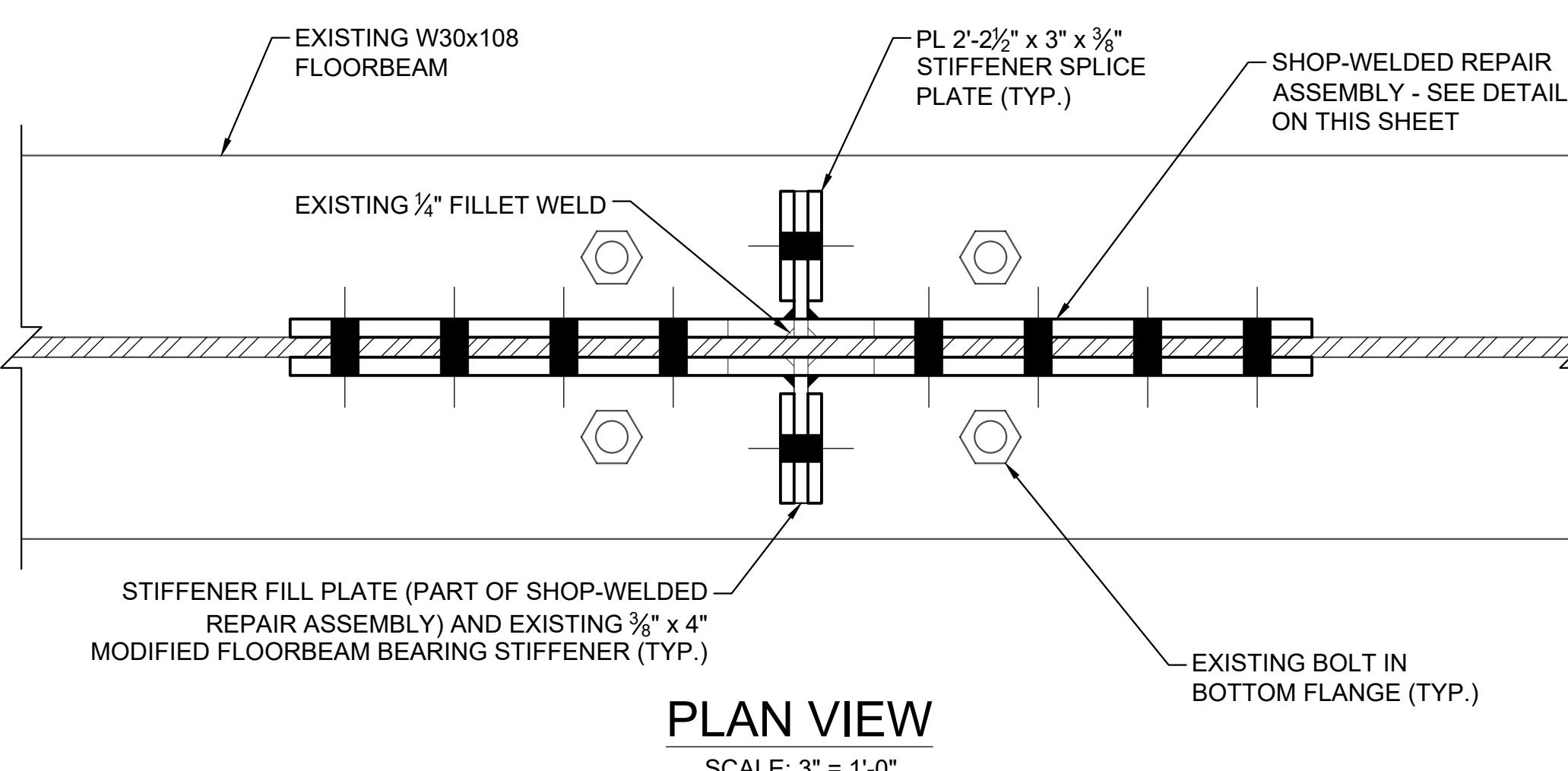
1. PERFORM THIS REPAIR AT THE NCB-NB SPAN 14 FLOORBEAM 2 BEARING STIFFENERS ABOVE THE EAST GIRDER.
2. EXISTING CONDITION OF WEB WITHIN FOOTPRINT OF EXISTING WELDED REPAIR PLATE IS UNKNOWN. THE (12) FASTENERS SHOWN WITHIN FOOTPRINT ARE TO BE FIELD-LOCATED AND DRILLED, AND LOCATIONS ARE ASSUMED. AFTER EXISTING WELDED REPAIR PLATE IS REMOVED, INSPECT AND CONTACT THE DISTRICT WITH INFORMATION ON EXISTING WEB CONDITION. THE DISTRICT WILL PROVIDE GUIDANCE ON FINAL FASTENER LAYOUT AND/OR CRACK ARREST HOLES REQUIRED PRIOR TO PROCEEDING.
3. MATCH DRILL OPPOSING STIFFENER SPLICE PLATES AND WEB REPAIR PLATES IN THE SHOP.
4. USE CAUTION TO AVOID DAMAGE TO FLOORBEAM WEB OR TOP FLANGE WHEN REMOVING EXISTING WELDED REPAIR PLATE. FLAME CUTTING IS PROHIBITED AS A METHOD FOR REMOVAL FOR THIS DETAIL. IF DAMAGE OCCURS, CONTRACTOR IS RESPONSIBLE FOR REPAIRING IT TO THE SATISFACTION OF THE DISTRICT AT NO COST TO THE DISTRICT.

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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | |
| NORTH CHANNEL BRIDGE NB | | | | | | | |
| FLOORBEAM STIFFENER REPAIRS | | | | | | | |
| No. | Description | Date | Designed: <u>JSE</u> | Drawn: <u>JSE</u> | Date | Plan No. | Sheet No. |
| | Revision | | Checked: <u>AHC</u> | | 12/18/2025 | | 14 OF 45 |

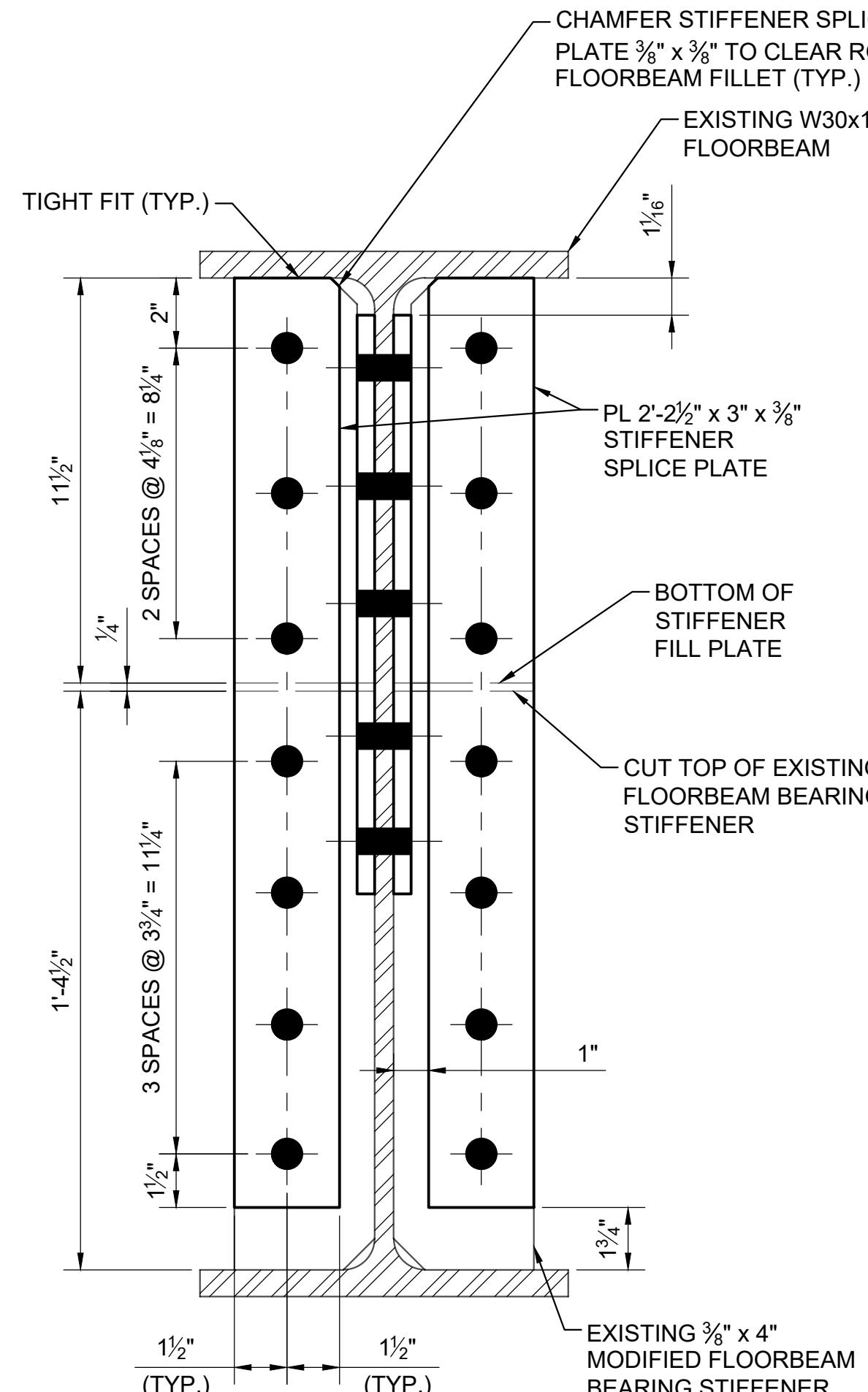


NCB-NB FLOORBEAM REPAIR TYPE 6

REPAIRED CONDITION



SECTION G-C

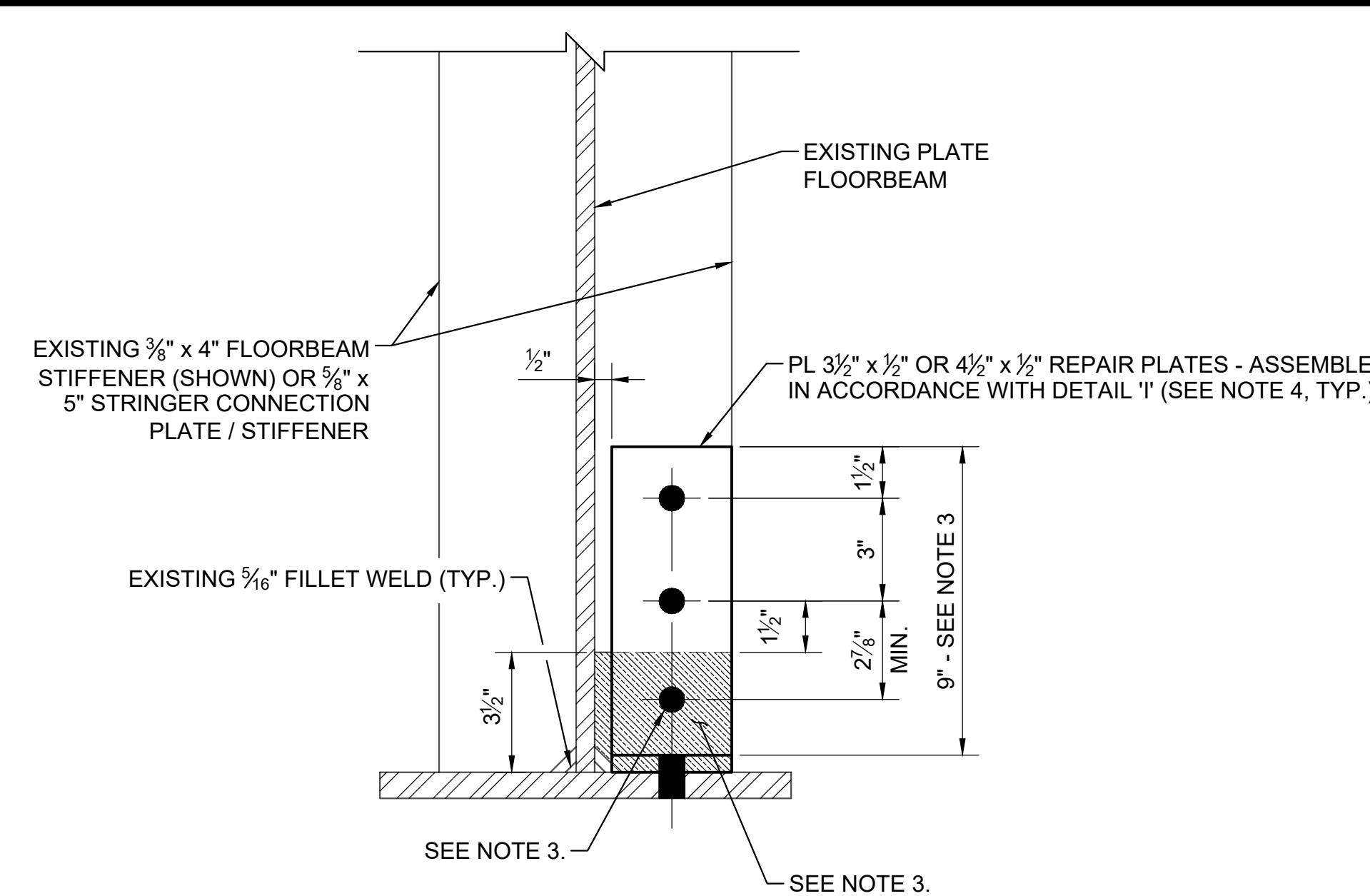
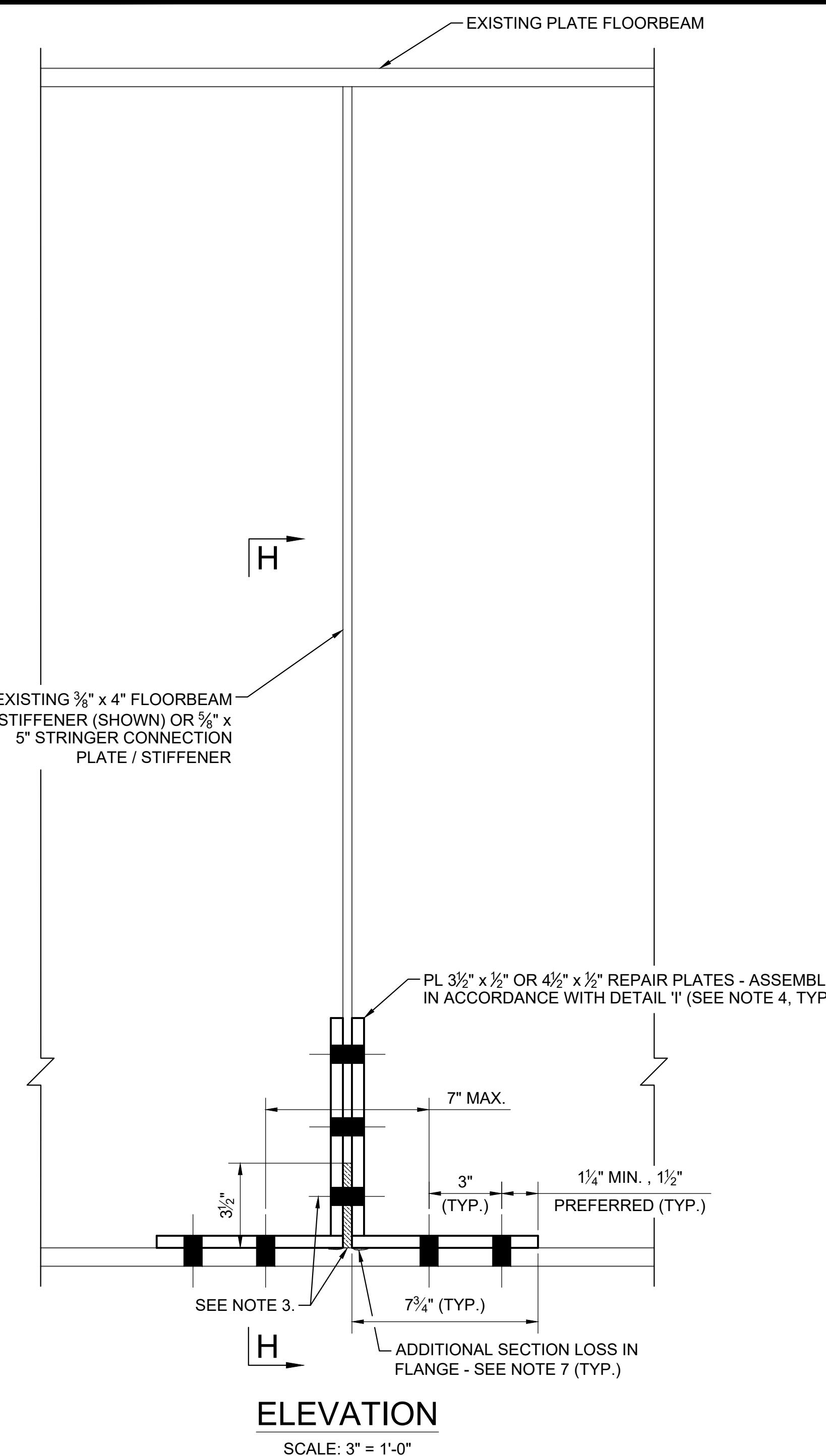


SHOP-WELDED REPAIR ASSEMBLY

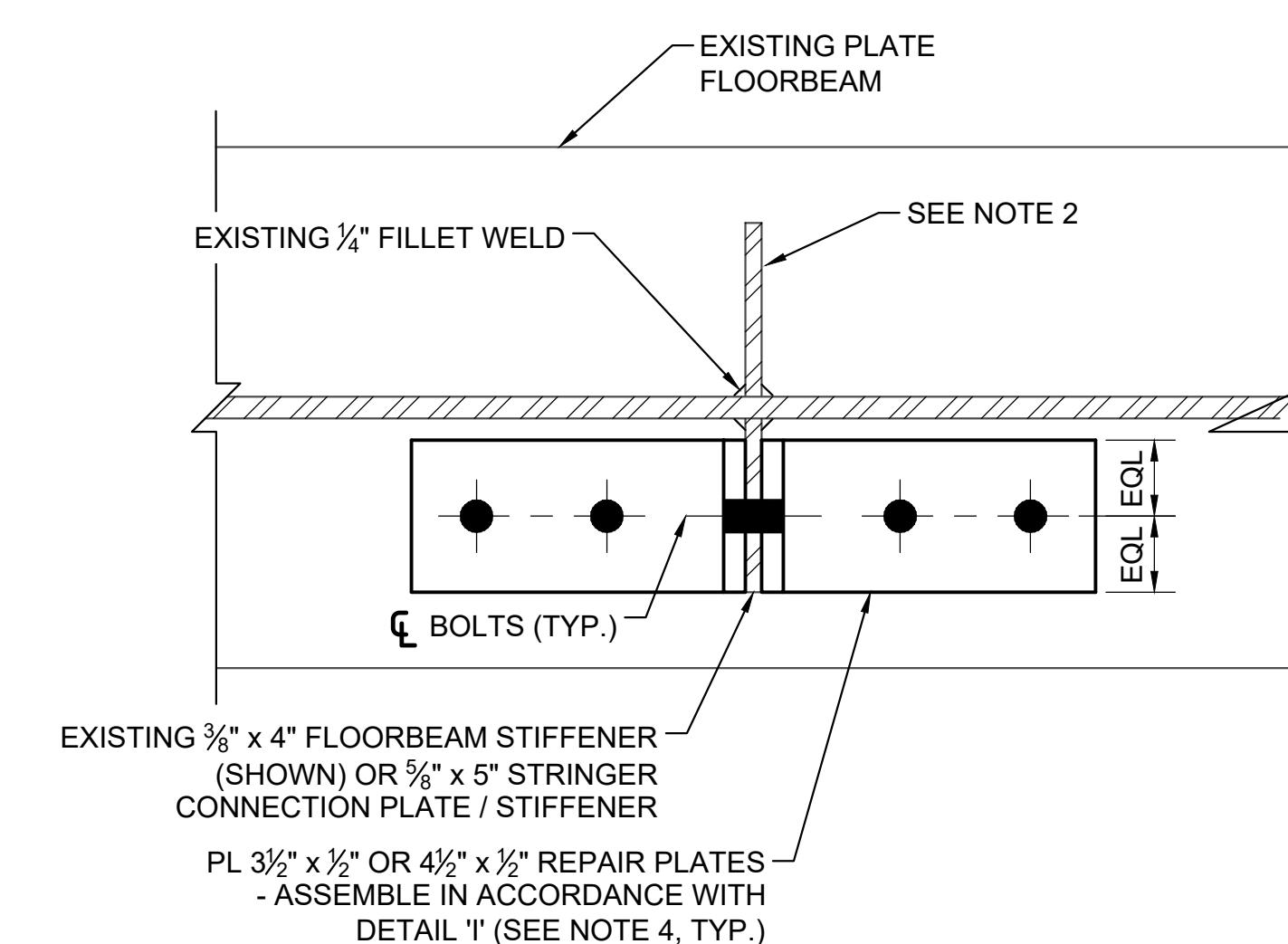
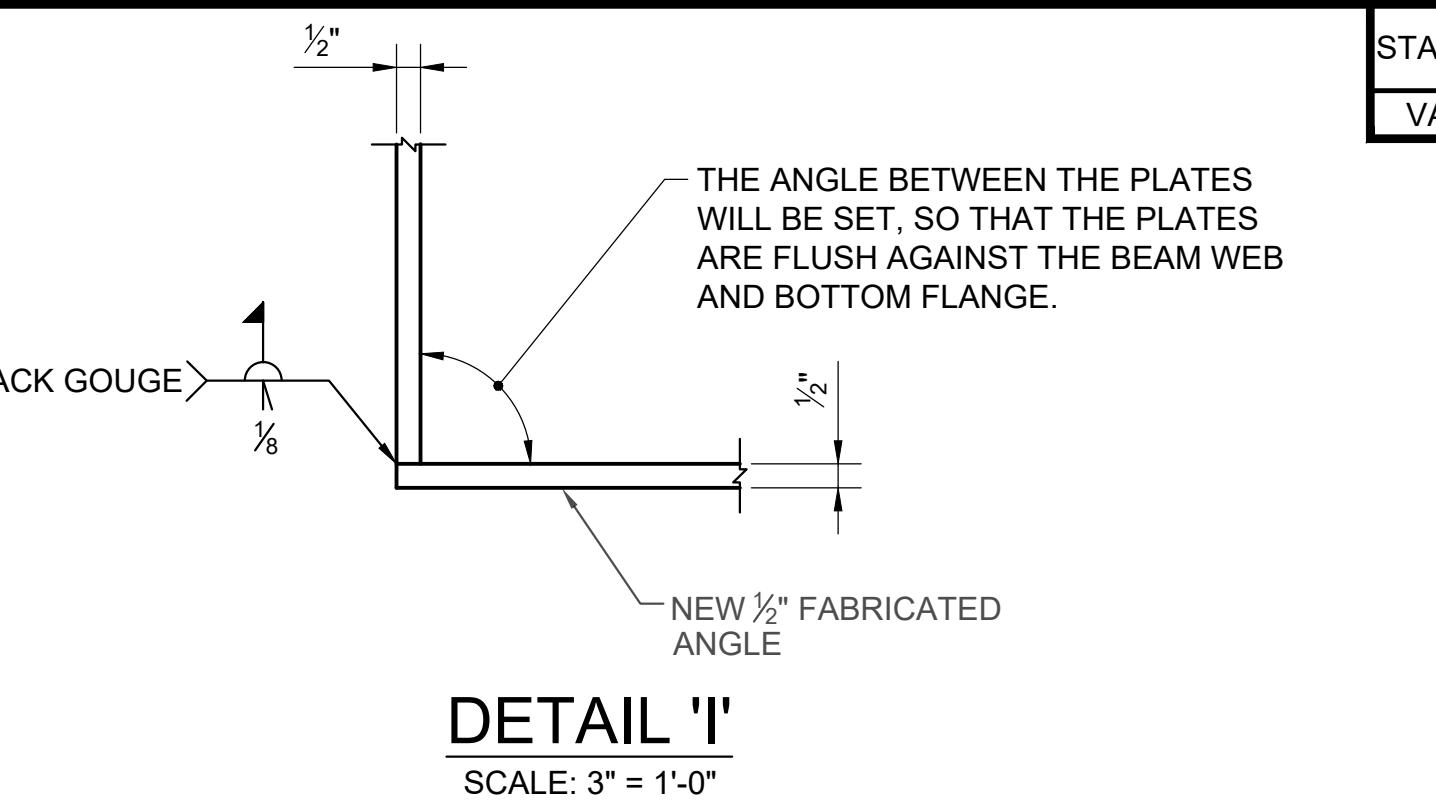
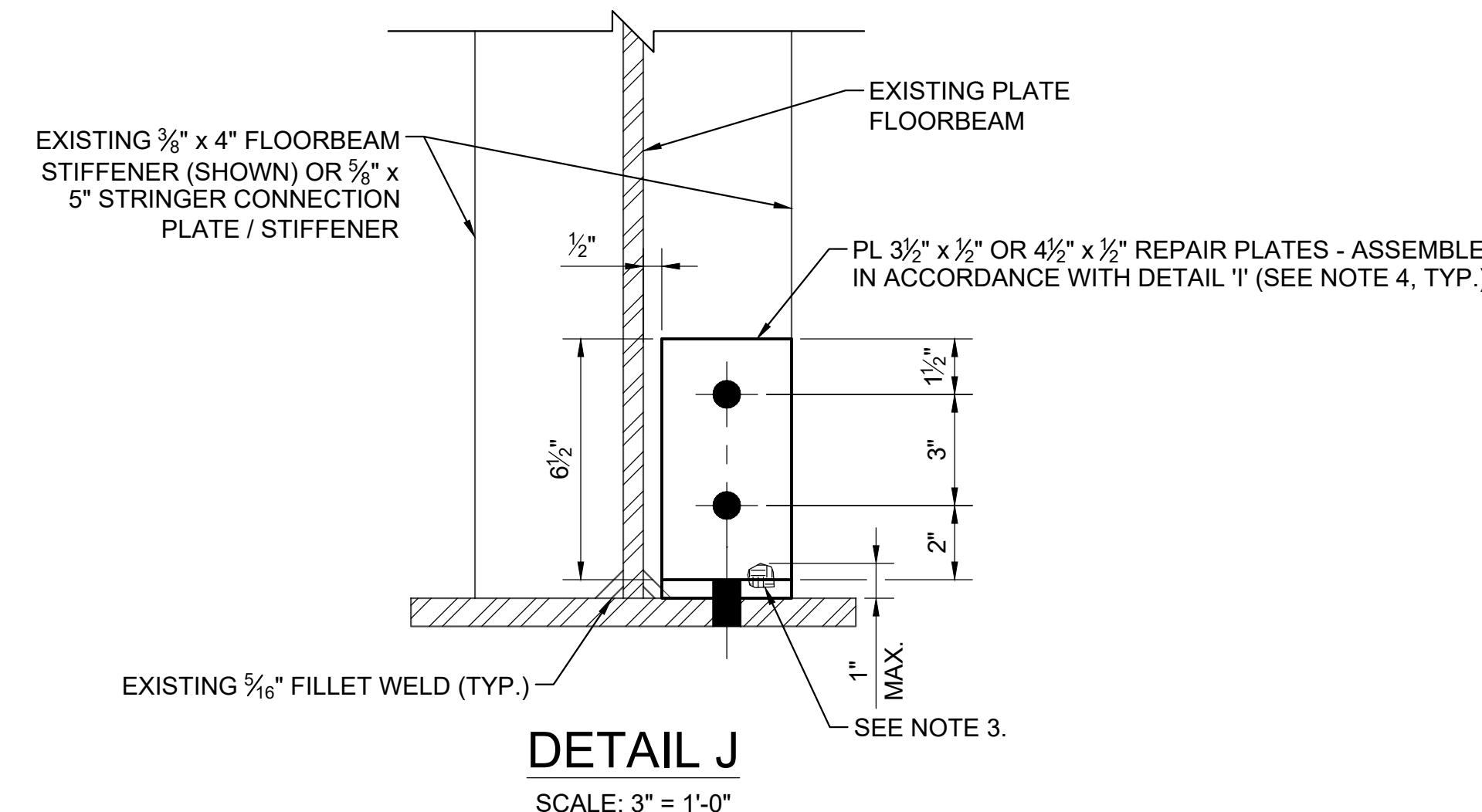
SCALE 3" = 1'-0"

SEQUENCE NOTES

- A. REMOVE EXISTING REPAIR PLATE ON EACH SIDE OF THE WEB AND GRIND WELDS FLUSH AND ALL CORRODED AREAS. CUT EXISTING FLOORBEAM STIFFENERS TO HEIGHT INDICATED.
- B. VISUALLY INSPECT FLOORBEAM WEB FOR CRACKS. IF APPARENT, PERFORM DYE PENETRANT INSPECTION. PROVIDE WEB CONDITION INFORMATION TO THE DISTRICT FOR EVALUATION, FINAL FASTENER LAYOUT, AND DETAILS FOR ANY CRACK ARREST HOLES REQUIRED.
- C. ACHIEVE TIGHT FIT CONDITION FOR THE SHOP-WELDED REPAIR ASSEMBLY ON ONE SIDE OF WEB, ENSURING ALIGNMENT OF THE STIFFENER FILL PLATE WITH THE EXISTING STIFFENER, AND CLAMP ASSEMBLY IN PLACE. TRANSFER REQUIRED FASTENER HOLES TO THE WEB. LOCATE REPAIR ASSEMBLY ON OPPOSITE SIDE OF WEB AND CLAMP IN PLACE.
- D. ACHIEVE TIGHT FIT CONDITION FOR STIFFENER SPLICE PLATES, CLAMP IN PLACE, AND TRANSFER REQUIRED FASTENER HOLES THROUGH THE STIFFENER FILL PLATE AND EXISTING STIFFENER.
- E. LOCATE AND FIELD-DRILL REMAINING FASTENER HOLES THROUGH THE WEB REPAIR PLATE AND WEB, ADJUSTING AS NECESSARY PER DETAIL-SPECIFIC NOTE 2.
- F. REMOVE THE TEMPORARILY CLAMPED PLATES. APPLY STEEL-FILLED EPOXY PUTTY TO ALL MATING SURFACES AND TO FILL ALL GAPS, SMOOTHED TO MATCH EXISTING SURFACE. BOLT THE REPAIR PLATES TO BOTH SIDES OF THE FLOORBEAM STIFFENER.

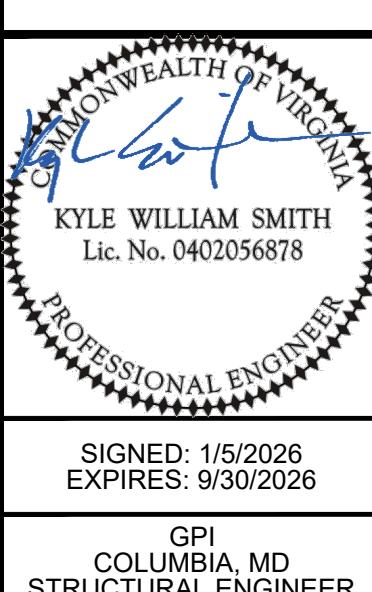


NCB-NB TRUSS FLOORBEAM REPAIR TYPE 2

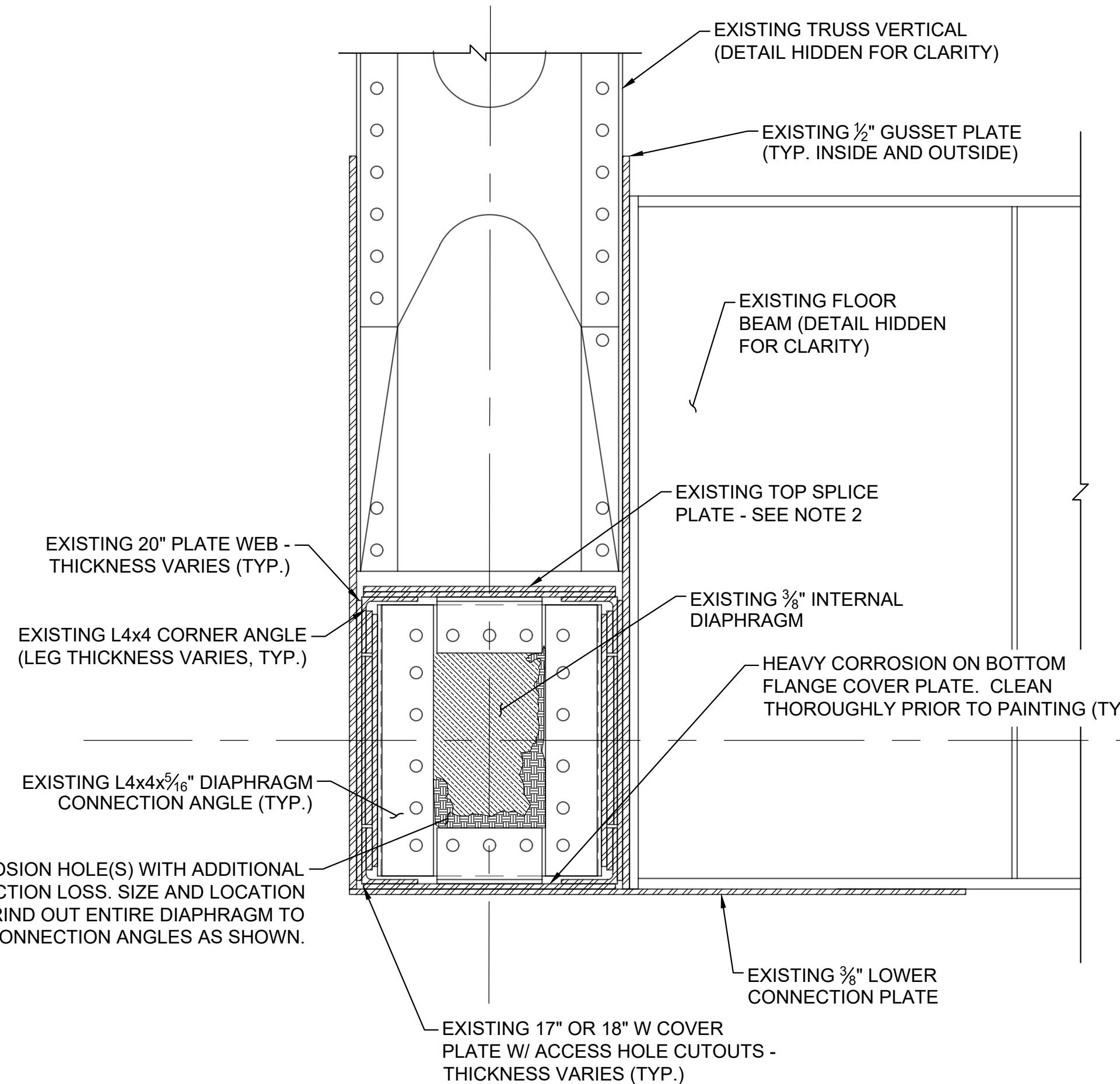


DETAIL-SPECIFIC NOTES

1. PERFORM THIS REPAIR FOR NCB-NB SPAN 9 (TRUSS SPAN) FLOORBEAM STIFFENERS AND STRINGER CONNECTION PLATES EXHIBITING CORROSION AT BOTTOM END WITH LESS THAN 1/4" REMAINING THICKNESS OVER 3" OR MORE OF THE STIFFENER WIDTH AS APPROVED BY THE DISTRICT.
2. BACK TO BACK REPAIR CONDITIONS (EITHER SIDE OF FLOORBEAM) WILL EXIST.
3. CORROSION ANTICIPATED AT THE BOTTOM END OF THE BEARING STIFFENER IS UP TO APPROXIMATELY 3 1/2" HIGH x UP TO FULL WIDTH x UP TO FULL THICKNESS (CORROSION HOLE).
 - 3.1. IF CORROSION IS LESS THAN 1" WIDE OR 1" HIGH, GRIND CORROSION SMOOTH, FILL GAP WITH EPOXY PUTTY, AND ADJUST REPAIR AS SHOWN IN DETAIL J.
 - 3.2. IF CORROSION IS > 1 1/2" AND < 3 1/2" HIGH, CUT-OUT BOTTOM OF STIFFENER 3 1/2" ABOVE BOTTOM FLANGE ACROSS FULL WIDTH AND PLACE 3/8" x 4" OR 5/8" x 5" FILL PLATE (TO MATCH EXISTING STIFFENER) AS SHOWN IN SECTION H-H.
 - 3.3. IF CORROSION EXCEEDS 3 1/2" HIGH, CONTACT THE DISTRICT FOR DIRECTION.
4. USE 3 1/2" WIDE REPAIR PLATES WHEN REPAIRING 4" WIDE STIFFENERS. USE 4 1/2" WIDE REPAIR PLATES WHEN REPAIRING 5" WIDE STRINGER CONNECTION PLATES.
5. MATCH DRILL OPPOSING REPAIR PLATE ASSEMBLIES IN THE SHOP.
6. IT IS ACCEPTABLE TO SUBSTITUTE ROLLED ANGLE SECTIONS WITH EQUIVALENT FLANGE LENGTH AND THICKNESS IN PLACE OF THE WELDED REPAIR PLATE ASSEMBLIES DEPICTED AT NO ADDITIONAL COST TO THE DISTRICT.
7. GRIND ALL CORROSION TO SMOOTH BARE METAL.
8. FILL ALL GAPS WITH STEEL-FILLED EPOXY PUTTY.



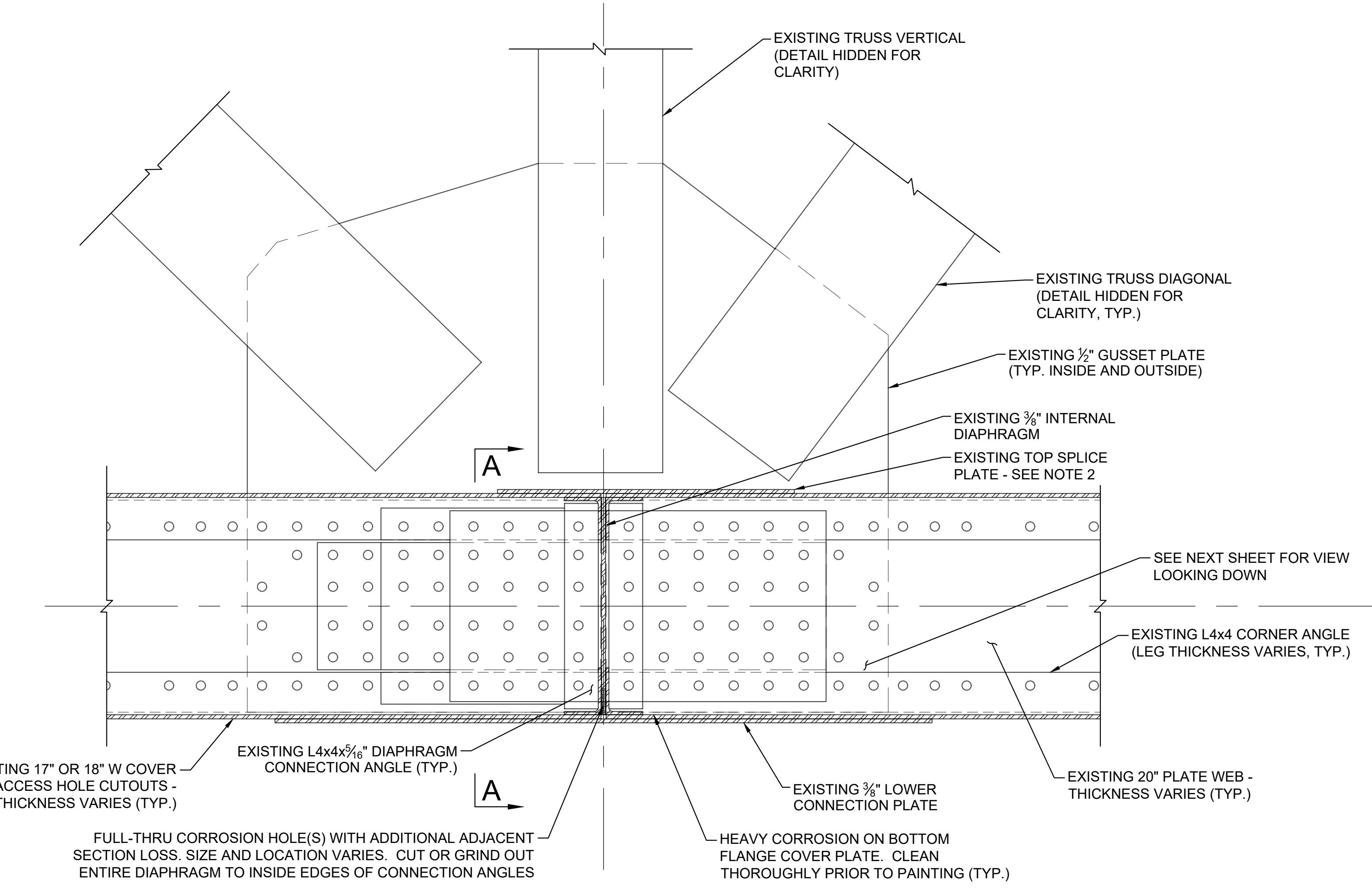
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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | |
| NORTH CHANNEL BRIDGE NB FLOORBEAM STIFFENER REPAIRS | | | | | | |
| No. | Description | Date | Designed: JSE Drawn: BSB Checked: AHC | Date | Plan No. | Sheet No. |
| | Revision | | | | 12/18/2025 | 16 OF 45 |



SECTION A-A

SCALE: 1 1/2" = 1'-0"

1/5/2026
pBR-DE07_CBBT Truss Member Details.dwg



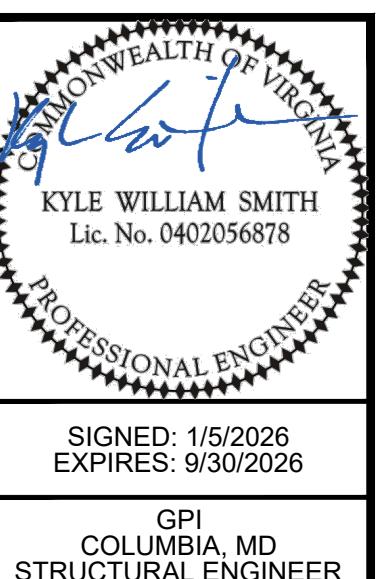
INSIDE VIEW LOOKING OUT

SCALE: 1 1/2" = 1'-0"

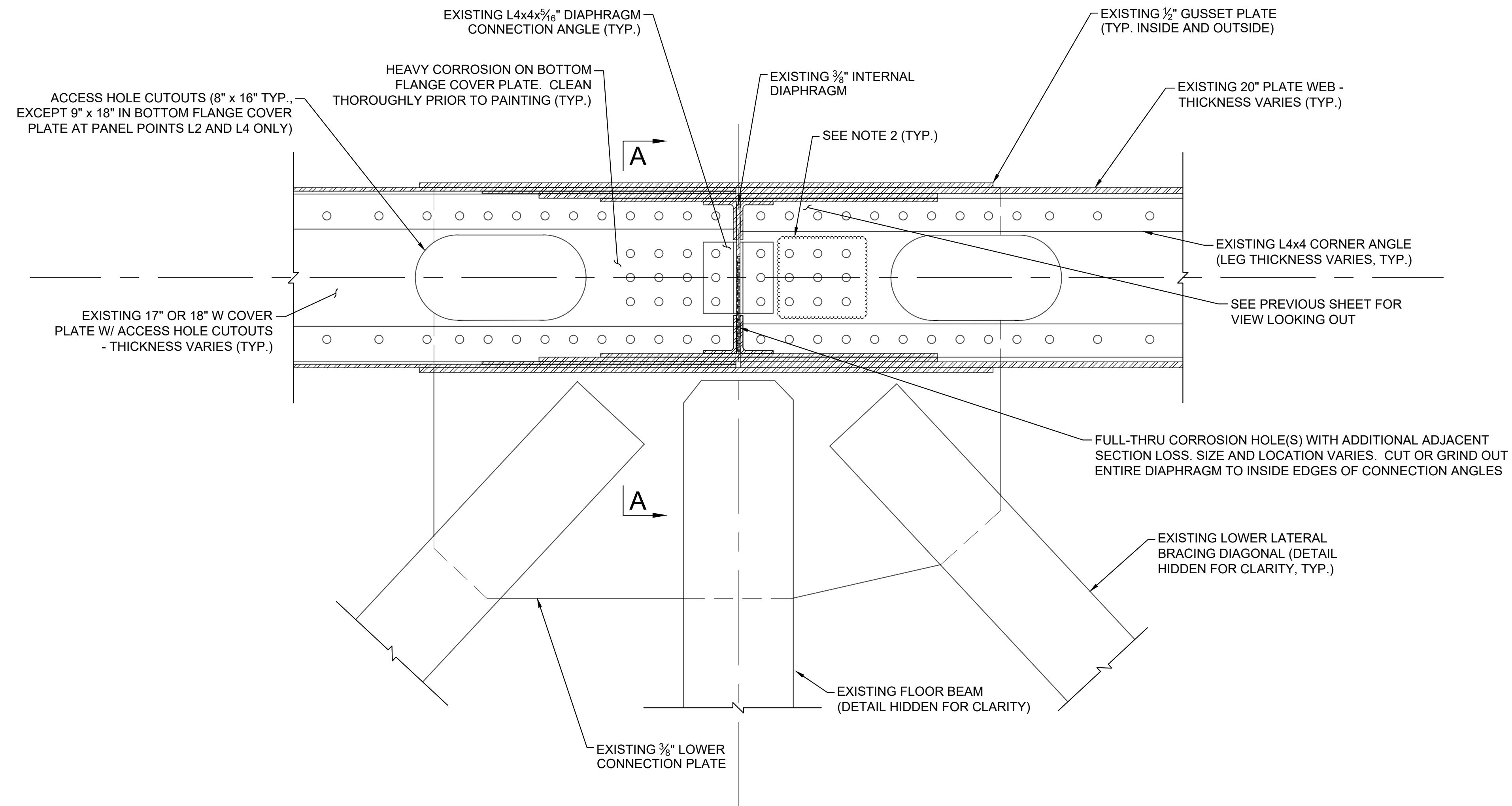
NCB-NB TRUSS REPAIR TYPE 1

DETAIL-SPECIFIC NOTES:

1. PERFORM THIS REPAIR TO NCB-NB SPAN 9 (TRUSS SPAN) TRUSS LOWER CHORD MEMBERS AT PANEL POINTS FOR INTERNAL DIAPHRAGMS WITH CORROSION HOLES AS APPROVED BY THE DISTRICT.
2. TOP SPLICE PLATE (THICKNESS VARIES) $7/16$ " BOTTOM SPLICE PLATE (NOT SHOWN), AND INDICATED ASSOCIATED FASTENERS ON THE BOTTOM COVER PLATE ARE PRESENT AT PANEL POINTS L2 & L4 ONLY.
3. USE CAUTION TO AVOID DAMAGE TO TRUSS MEMBER WEBS, COVER PLATES, CORNER ANGLES, GUSSET PLATES, AND ALL OTHER ADJACENT STRUCTURE. FLAME CUTTING IS PROHIBITED AS A METHOD FOR REMOVAL FOR THE CORRODED AREAS DEPICTED IN THIS DETAIL. IF DAMAGE OCCURS, CONTRACTOR IS RESPONSIBLE FOR REPAIRING IT TO THE SATISFACTION OF THE DISTRICT AT NO COST TO THE DISTRICT.
4. GRIND ALL CORROSION TO SMOOTH BARE METAL.



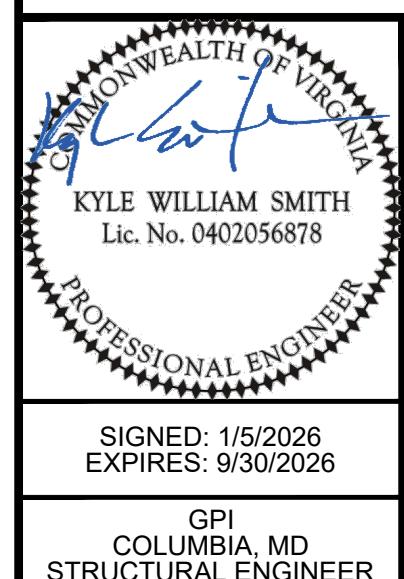
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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | |
| NORTH CHANNEL BRIDGE NB TRUSS MEMBER REPAIRS | | | | | | |
| No. | Description | Date | Designed: JSE Drawn: BSB Checked: AHC | Date | Plan No. | Sheet No. |
| | Revision | | | | | 17 OF 45 |



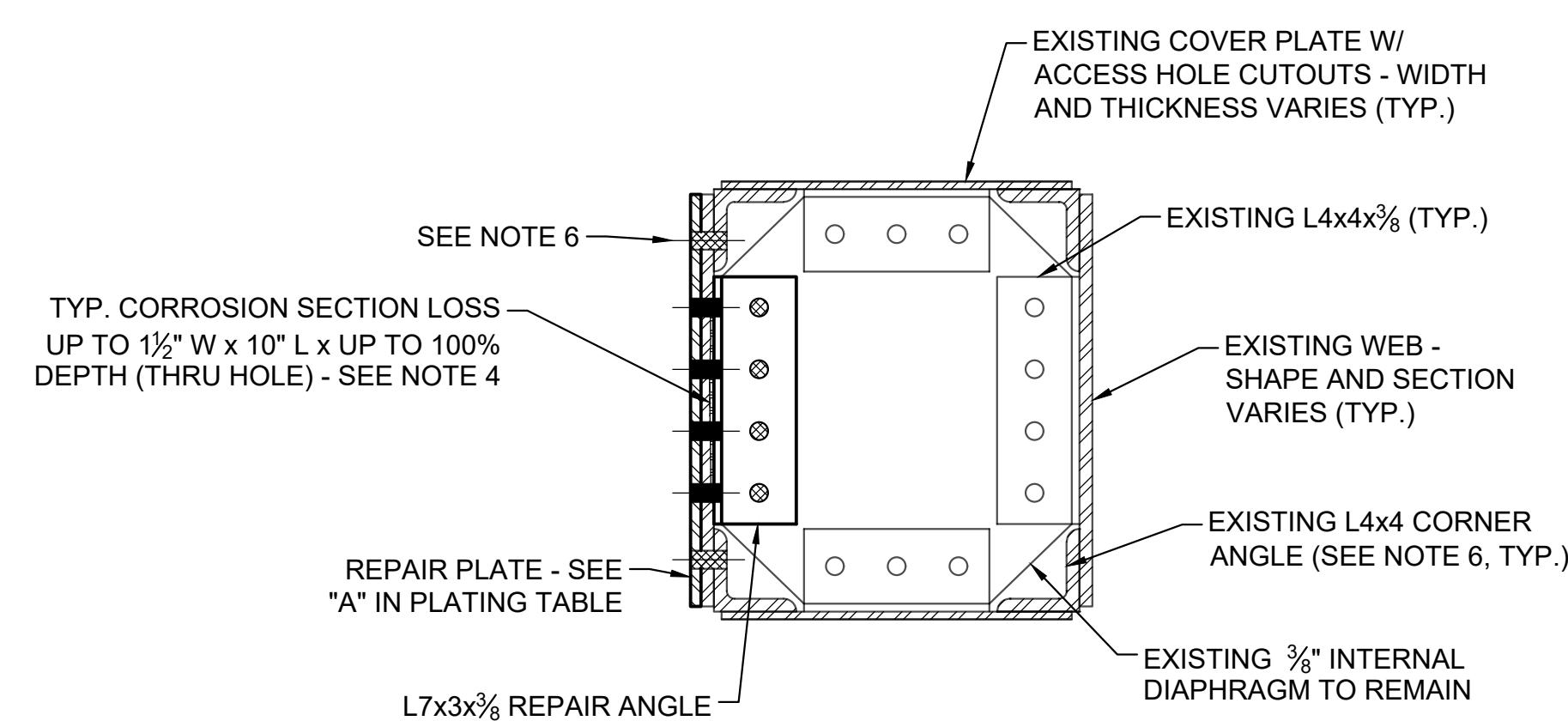
INSIDE VIEW LOOKING DOWN

SCALE: $1\frac{1}{2}$ " = 1'-0"

NCB-NB TRUSS REPAIR TYPE 1

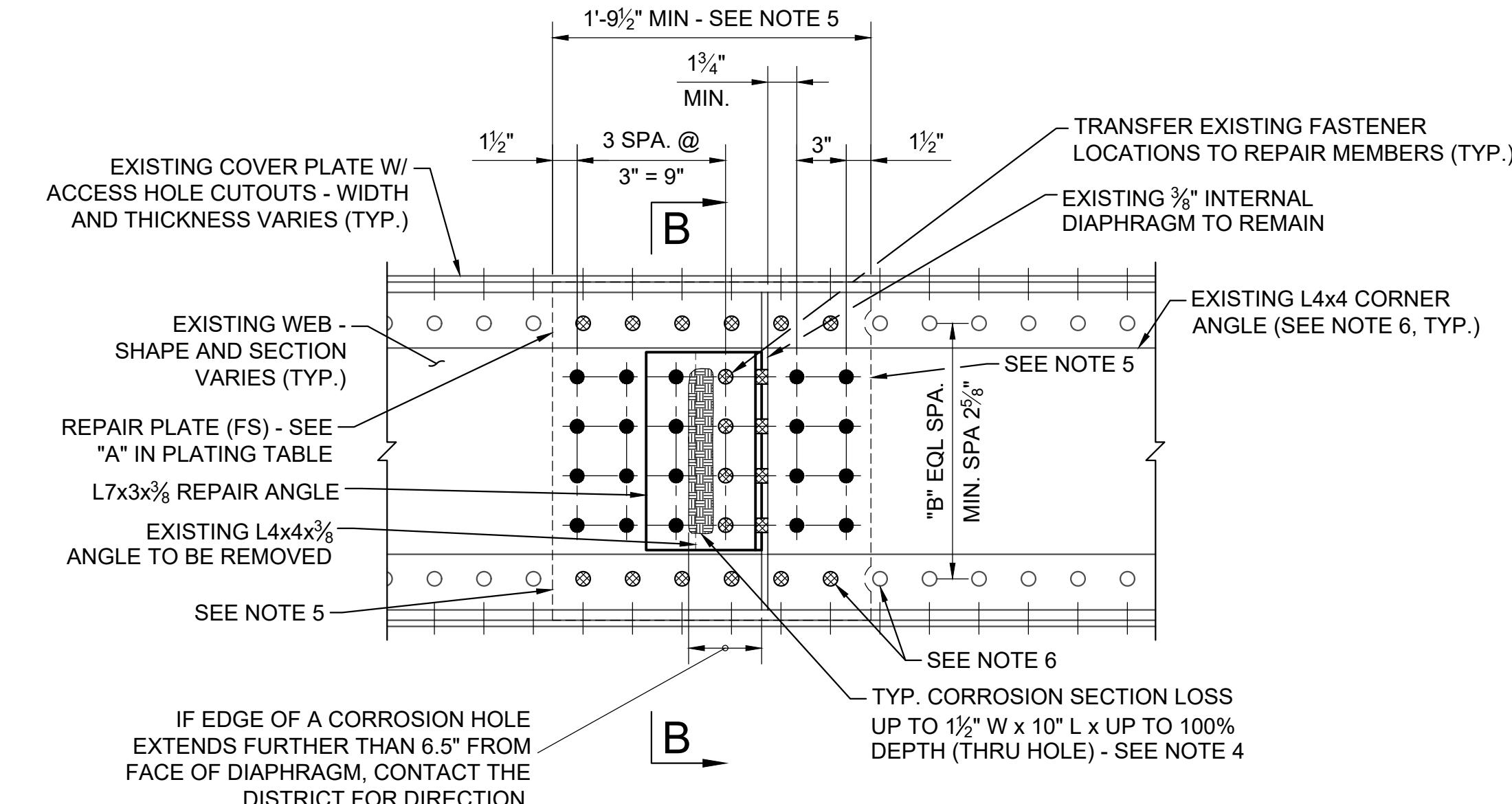


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|--|-------------|------|---|------|----------|-----------|----------|
| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | |
| NORTH CHANNEL BRIDGE NB TRUSS MEMBER REPAIRS | | | | | | | |
| No. | Description | Date | Designed: JSE Drawn: BSB Checked: AHC | Date | Plan No. | Sheet No. | |
| | Revision | | | | | | 18 OF 45 |



SECTION B-B

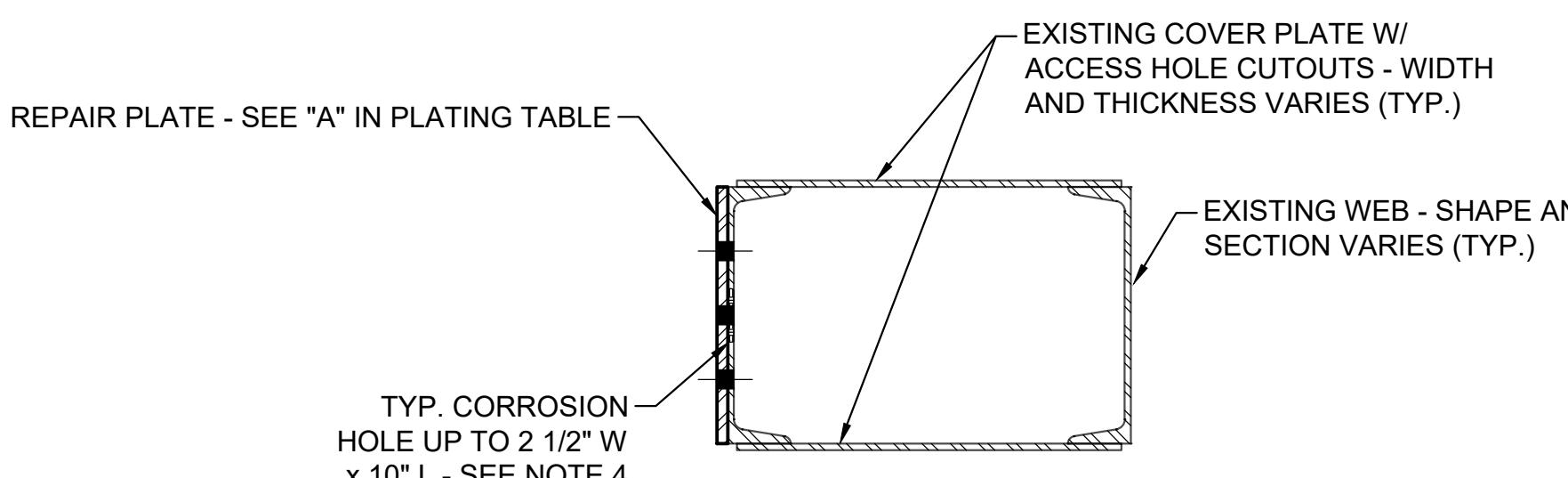
SCALE: 1 1/2" = 1'-0"



INSIDE VIEW LOOKING OUT

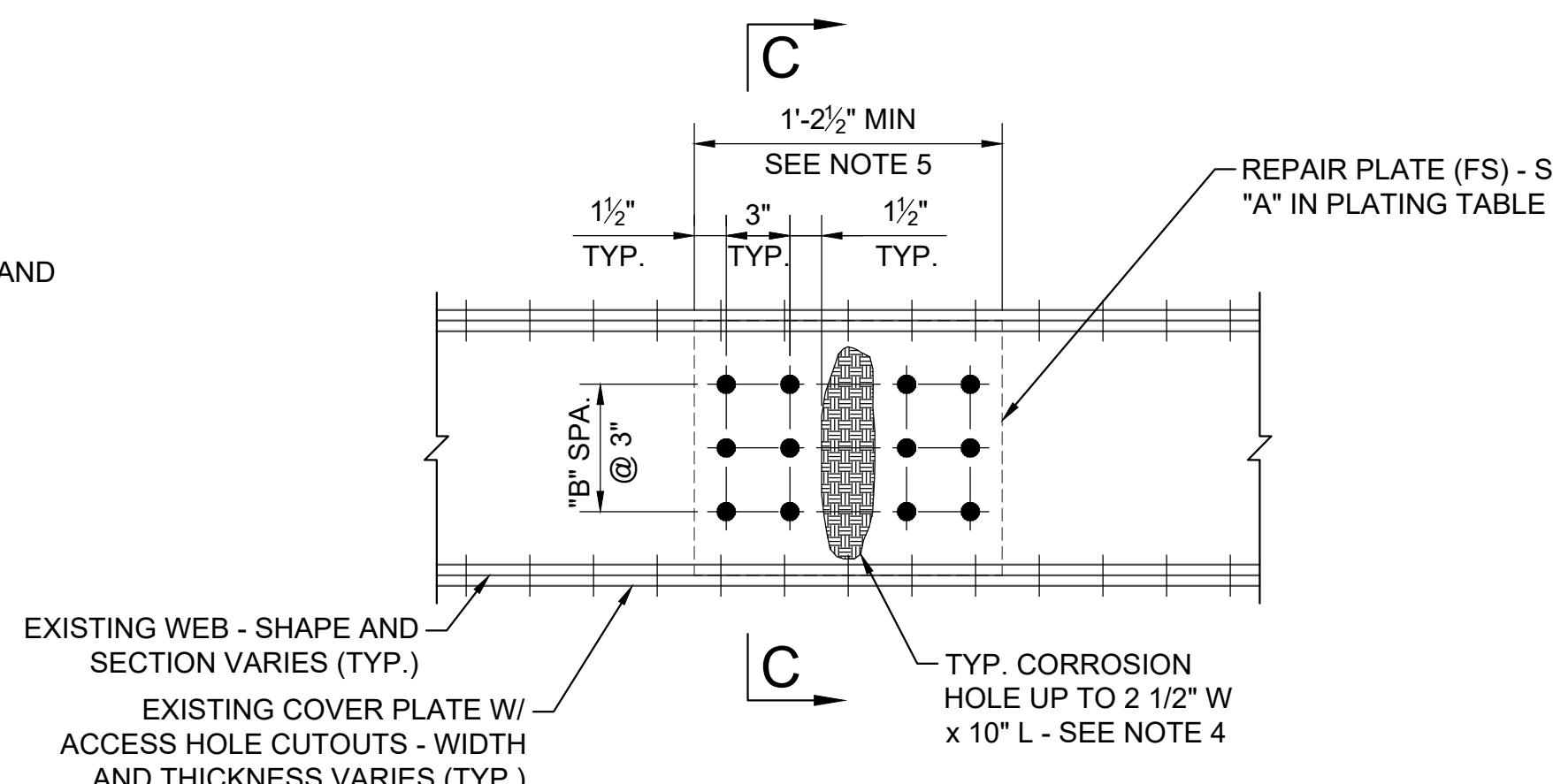
CASE 1

SCALE: 1 1/2" = 1'-0"



SECTION C-C

SCALE: 1 1/2" = 1'-0"



INSIDE VIEW LOOKING OUT

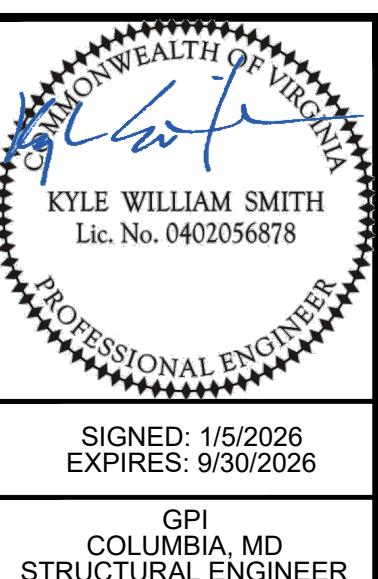
SCALE: 1 1/2" = 1'-0"

CASE 2

NCB-NB TRUSS REPAIR TYPE 2

PLATING TABLE

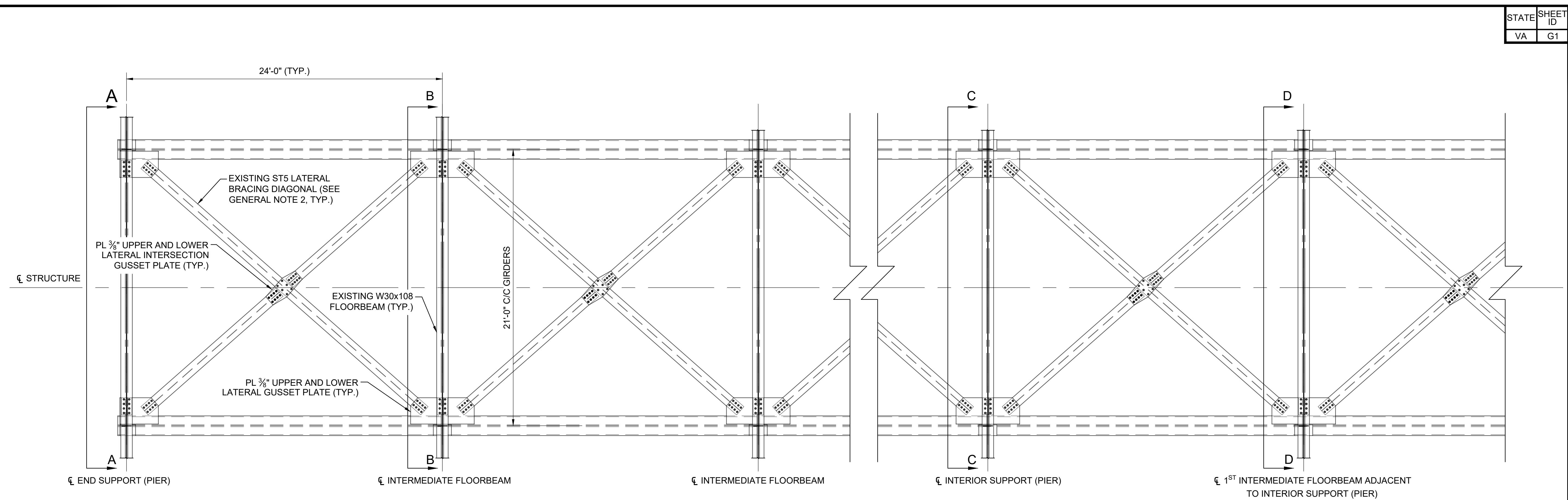
| MEMBER | "A" - REPAIR PLATE WIDTH & THICKNESS | | "B" - FASTENER SPACES PER COLUMN | | MAX. FASTENER SPACING | | MAX. FASTENER EDGE DISTANCE | |
|----------------------|--------------------------------------|-------------------------------------|----------------------------------|-------------|-----------------------|-------------|-----------------------------|-------------|
| | WEB | COVER PLATE | WEB | COVER PLATE | WEB | COVER PLATE | WEB | COVER PLATE |
| LO-U1 | 20" x 5/8" | 17" x 1/2" | 5 | 4 | 6 1/2" | | 5" | |
| U1-L2 | 15" x 5/8" | 18" x 1/2" | 4 | 5 | 6" | | 4" | |
| L2-U3 & L4-U5 | 15" x 1/2" | 18" x 1/2" | 3 | 4 | 5 1/2" | | 3" | |
| U3-L4, U2-L2 & U4-L4 | 12" x 1/2" | 18" x 1/2" | 2 | 4 | 5" | | 2" | |
| U1-L1 | - | 12 5/16" x 1/2" (I-SECTION FLANGES) | - | 3 | 5 1/4" | | - | |
| U3-L3 & U5-L5 | - | 14 5/16" x 1/2" (I-SECTION FLANGES) | - | 3 | 5" | | - | |



DETAIL-SPECIFIC NOTES:

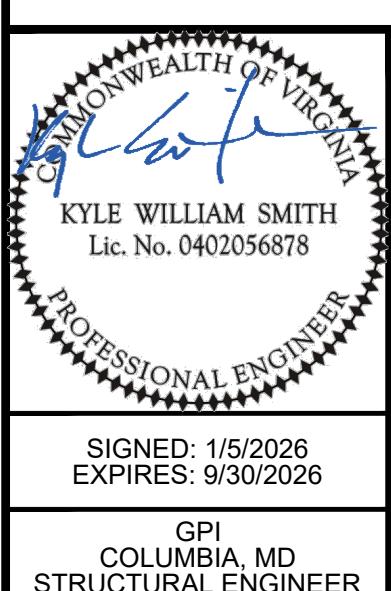
1. PERFORM THIS REPAIR TO NCB-NB SPAN 9 (TRUSS SPAN) TRUSS MEMBERS FOR CORROSION HOLES TO ANY ELEMENT (WEB OR COVER PLATE) OR FOR TOTAL CORROSION SECTION LOSS OF EITHER WEB EXCEEDING 20% AT A GIVEN CROSS SECTION AS APPROVED BY THE DISTRICT. TWO DIFFERENT DEFECT/REPAIR LOCATION CASES ARE NOTED:
 - CASE 1: CORROSION OCCURRING AT AN INTERNAL DIAPHRAGM
 - CASE 2: CORROSION OCCURRING ELSEWHERE
 NOTE THAT ONE OR BOTH "COVER PLATES" CONTAIN 8" x 16" ACCESS HOLES SPACED AT APPROX. 3'-6". WEB PLATE OF U1-L1, U3-L3, AND U5-L5 CONTAIN 6" x 12" HOLES SPACED AT APPROX. 3'-6".
2. DEFECT AND CORRESPONDING REPAIRS ARE SHOWN ON ONE SIDE ONLY FOR EACH CASE SUB-DETAIL. REPEAT AS NEEDED IF QUALIFYING CORROSION OCCURS ON MULTIPLE FACES AT A GIVEN SECTION. REPAIR ONE SIDE AT A TIME AT ANY GIVEN SECTION.
3. GRIND CORROSION SMOOTH AND FILL WITH METAL-FILLED EPOXY. IF CORROSION HOLE EXCEEDS 2 1/4" DIA., INSTALL FILL PLATE (THICKNESS TO MATCH EXISTING PLATE) TO FILL VOID, WITH AT LEAST ONE (1) FASTENER INSTALLED THRU FILL PLATE.
4. IF CORROSION HOLES OCCUR IN COVER PLATES, CUT REPAIR PLATING TO MATCH ACCESS HOLES. ADJUST OR OMIT FASTENER LOCATIONS THAT DO NOT MAINTAIN 1 1/2" EDGE DISTANCE FROM ACCESS HOLES, SUBJECT TO THE FASTENER SPACING AND END DISTANCE RESTRICTIONS PROVIDED IN THE PLATING TABLE ON THIS SHEET. NOTCH OUTER REPAIR PLATE AROUND EXISTING FASTENERS IF 1 1/2" EDGE DISTANCE CAN'T BE MAINTAINED.
5. FOR REPAIRS TO LO-U1 WEB PLATES ONLY, ADD AN ADDITIONAL ROW OF FASTENERS AT EACH LONGITUDINAL END OF THE REPAIR PLATING AND EXTEND REPAIR PLATE LENGTH ACCORDINGLY.
6. L4x4 CORNER ANGLE IS ONLY PRESENT FOR TRUSS MEMBERS WITH PLATE WEBS (AS OPPOSED TO C-CHANNEL WEBS). LEG THICKNESS VARIES. IF PRESENT, MATCH EXISTING FASTENER LOCATIONS ON REPAIR PLATE. IF NOT PRESENT, ADD ROW OF FASTENERS (ADJACENT TO COVER PLATE, AS SHOWN) SUBJECT TO THE FASTENER SPACING AND END DISTANCE RESTRICTIONS PROVIDED IN THE PLATING TABLE ON THIS SHEET. NOTCH OUTER REPAIR PLATE AROUND EXISTING FASTENERS IF 1 1/2" EDGE DISTANCE CAN'T BE MAINTAINED.
7. GRIND ALL CORROSION TO SMOOTH BARE METAL.
8. FILL ALL GAPS WITH STEEL-FILLED EPOXY PUTTY.

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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | |
| NORTH CHANNEL BRIDGE NB TRUSS MEMBER REPAIRS | | | | | |
| No. Description Date Designed: JSE Drawn: BSB Checked: AHC | | | | | |
| | Revision | | | | 12/18/2025 |
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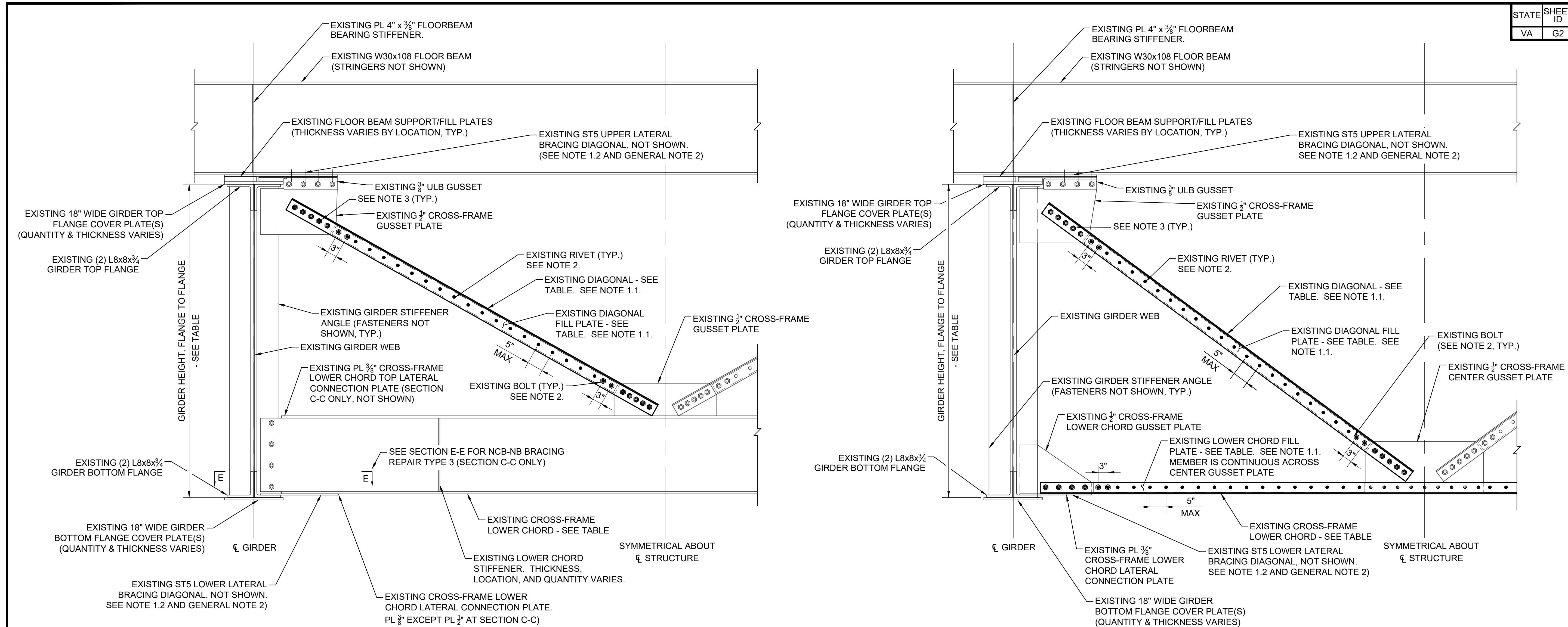


GENERAL NOTES

1. SOME DETAIL OMITTED FOR CLARITY.
2. EXISTING TEE SECTION USED FOR UPPER AND LOWER LATERAL BRACING DIAGONAL MEMBERS MAY VARY. WHEN AFFECTED REPAIRS ARE REQUIRED PER CRITERIA GIVEN IN DETAIL-SPECIFIC NOTES, FIELD VERIFY SECTION AND REPLACE IN KIND.



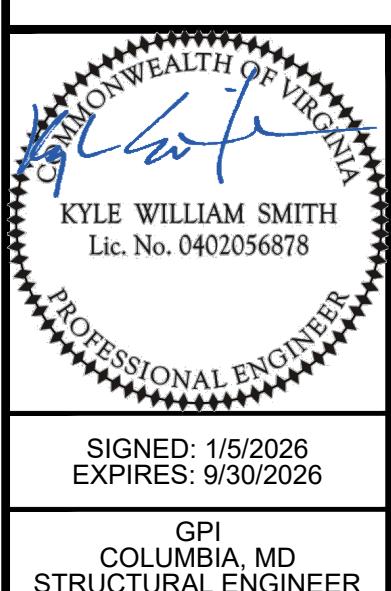
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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | |
| NORTH CHANNEL BRIDGE NB BRACING REPAIRS | | | | | | | |
| No. | Description | Date | Designed: JSE | Date | Plan No. | Sheet No. | |
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| | Revision | | Checked: AHC | 12/18/2025 | | | 20 OF 45 |



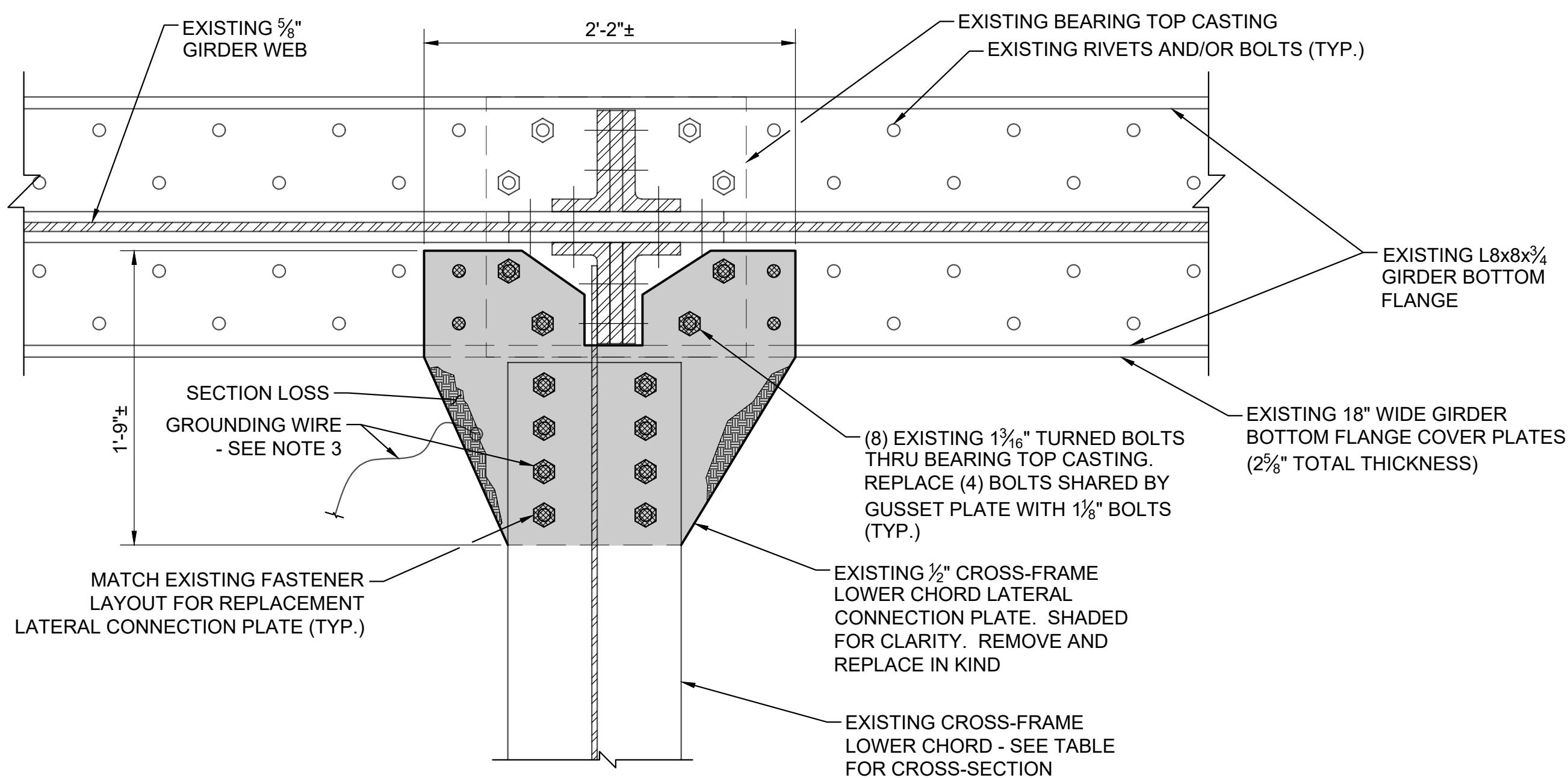
NCB-NB BRACING REPAIR TYPE 1 NCB-NB BRACING REPAIR TYPE 3

DETAIL-SPECIFIC NOTES (NCB-NB BRACING REPAIR TYPE 1)

1. NCB NB BRACING REPAIR TYPE 1 IS APPLICABLE FOR NCB-NB SPANS 1-8 AND 10-17 FOR UPPER AND LOWER LATERAL BRACING MEMBERS AND CROSS FRAME MEMBERS, AS DEPICTED IN THE NOTED VIEWS, WITH FULL-THRU CORROSION HOLES AT ANY LOCATION ALONG LENGTH OF MEMBER AS APPROVED BY THE DISTRICT.
 - 1.1. FOR BUILT-UP TEE SECTION CROSS-FRAME MEMBERS (BACK-TO-BACK ANGLES WITH FILLER PLATE) WITH A CORROSION HOLE, REPLACE ENTIRE MEMBER IN-KIND.
 - 1.2. FOR ROLLED TEE SECTION UPPER AND LOWER LATERAL BRACING MEMBERS WITH A CORROSION HOLE, REPLACE ENTIRE MEMBER IN-KIND.
 - 1.3. FOR A CORROSION HOLE LOCATED ON A WIDE-FLANGE SECTION CROSS-FRAME MEMBER, CONTACT THE DISTRICT FOR DIRECTION.
 - 1.4. FOR SECTION LOSS NOT MEETING THIS CRITERIA, GRIND CORROSION SMOOTH.
2. WHEN FABRICATING REPLACEMENT BUILT-UP TEE SECTION MEMBERS, STITCH MEMBERS TOGETHER WITH BOLTS AT SPACING NOT TO EXCEED 5" SPACING. SPACE FIRST PAIR OF STITCH BOLTS ADJACENT TO GUSSET PLATES AT 3". FOR INTERIOR SUPPORT LOCATIONS, STAGGER FASTENERS TO MATCH EXISTING.
3. WHEN REPLACING MEMBERS, MATCH EXISTING FASTENER LOCATIONS AT GUSSETS, ETC.



| SECTION VIEW | DESCRIPTION | GIRDER HEIGHT | DIAGONAL | | | LOWER CHORD | | |
|---|--|-----------------------|---|--------------|----------------------|--|-------------------|----------------------|
| | | | MEMBER | VERTICAL LEG | FILL PLATE | MEMBER | VERTICAL LEG | FILL PLATE |
| A-A | END SUPPORT | 8'-0 $\frac{1}{2}$ " | (2) L4x3x $\frac{5}{16}$ | 4" | 3" x $\frac{1}{2}$ " | W24x76 | - | - |
| B-B | INTERMEDIATE FLOORBEAM | 8'-0 $\frac{1}{2}$ " | (2) L4x3x $\frac{5}{16}$ | 4" | 3" x $\frac{1}{2}$ " | (2) L4x3 $\frac{1}{2}$ x $\frac{5}{16}$ | 3 $\frac{1}{2}$ " | 3" x $\frac{1}{2}$ " |
| C-C | INTERIOR SUPPORT | 12'-6 $\frac{1}{2}$ " | (2) L5x3 $\frac{1}{2}$ x $\frac{3}{8}$ | 5" | 5" x $\frac{1}{2}$ " | WEB: PL 52" x $\frac{3}{8}$ " FLANGES: PL 12" x $\frac{3}{4}$ " | - | - |
| D-D | 1 ST INTERMEDIATE FLOORBEAM ADJACENT TO INTERIOR SUPPORT | 9'-2" ± | (2) L4x3x $\frac{5}{16}$ | 4" | 3" x $\frac{1}{2}$ " | W14x61 | - | - |
| CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | | | | | |
| RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | | | | | |
| NORTH CHANNEL BRIDGE NB BRACING REPAIRS | | | | | | | | |
| No. | Description | Date | Designed: JSE Drawn: JSE Checked: AHC | Date | Plan No. | Sheet No. | | |
| | Revision | | | | | | 12/18/2025 | 21 OF 45 |



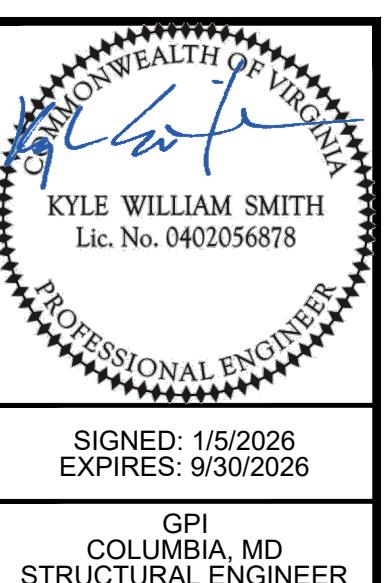
SECTION E-E

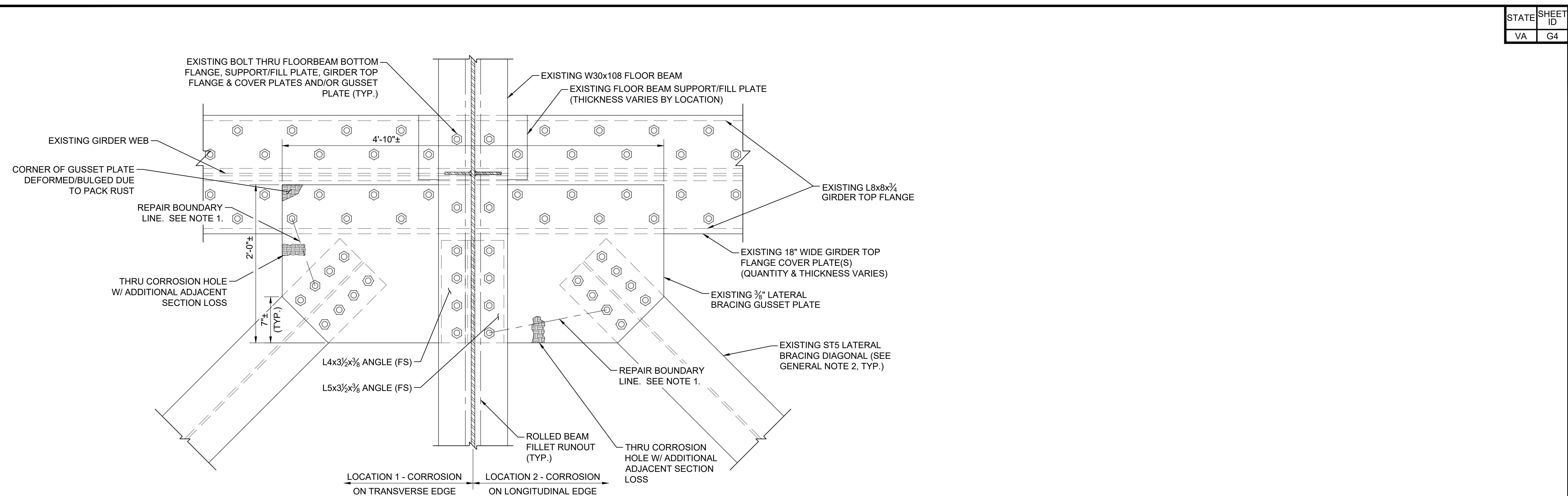
SCALE: $1\frac{1}{2}'' = 1'-0''$

NCB-NB BRACING REPAIR TYPE 3

DETAIL-SPECIFIC NOTES (NCB-NB BRACING REPAIR TYPE 3)

1. NCB NB BRACING REPAIR TYPE 3 IS APPLICABLE FOR NCB-NB SPANS 1-8 AND 10-17 FOR CROSS-FRAME LOWER CHORD LATERAL CONNECTION PLATES LOCATED AT INTERIOR PIERS WITH SECTION LOSS EXCEEDING $\frac{1}{4}$ " DEEP FOR AN AREA GREATER THAN 1" WIDE x 2" LONG AS APPROVED BY THE DISTRICT. IF DAMAGE IS BELOW LIMITS, GRIND SMOOTH PER PROJECT NOTES.
2. USE EXISTING LATERAL CONNECTION PLATE AS TEMPLATE FOR SHAPE AND SIZE OF REPLACEMENT LATERAL CONNECTION PLATE.
3. SOME LATERAL CONNECTION PLATES CONTAIN GROUNDING WIRES ATTACHED APPROXIMATELY AS SHOWN. IF LATERAL CONNECTION PLATE IS REPLACED, RE-ATTACH EXISTING GROUND WIRE TO LOWER CHORD BOTTOM FLANGE HARDWARE AND REPAIR PAINT SYSTEM.
4. WHEN REPLACING MEMBERS, MATCH EXISTING FASTENER LOCATIONS AT LATERAL CONNECTION PLATES, ETC.





PLAN VIEW

SCALE: 1½" = 1'-0"

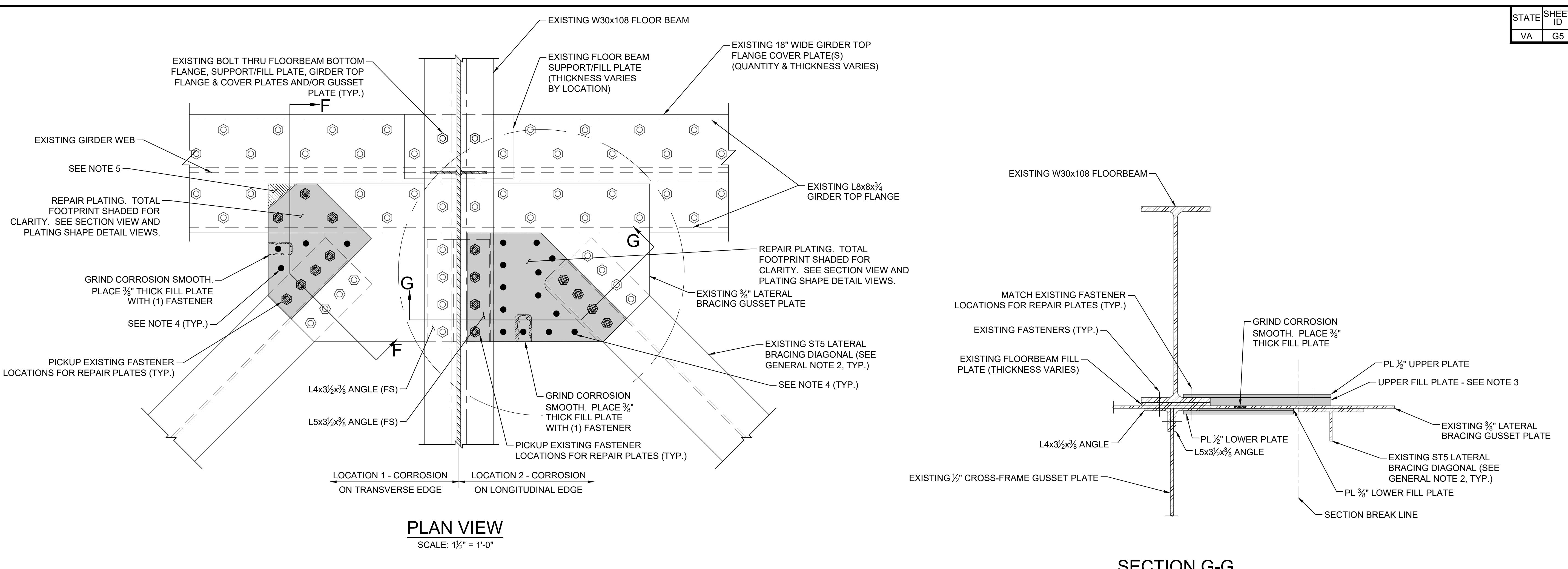
NCB-NB BRACING REPAIR TYPE 2

EXISTING CONDITION AND REPAIR CRITERIA

DETAIL-SPECIFIC NOTES

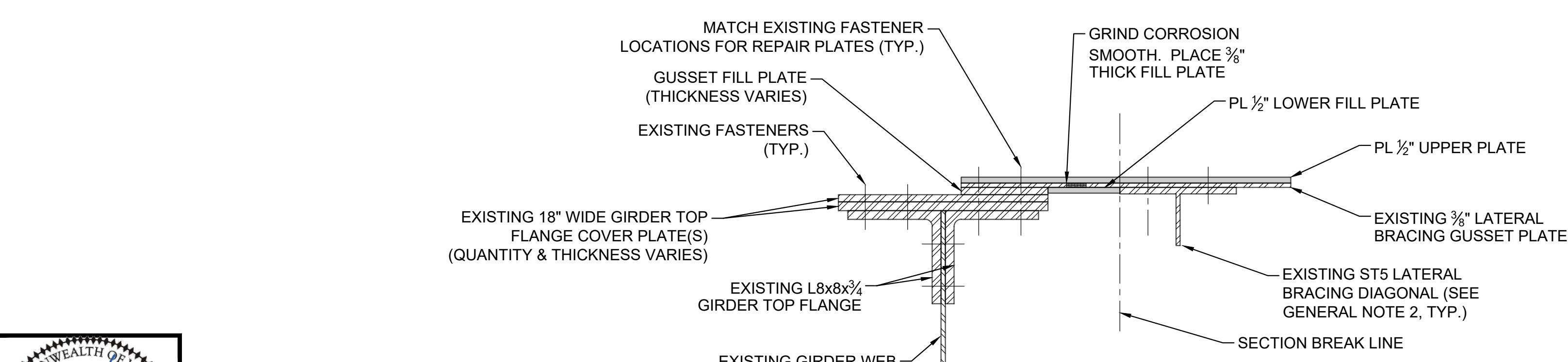
1. THIS REPAIR IS APPLICABLE FOR NCB-NB SPANS 1-8 AND 10-17 FOR UPPER AND LOWER LATERAL BRACING GUSSET PLATES AT GIRDERS. PERFORM PRESCRIBED REPAIR IF FULL-THRU CORROSION HOLE AT GUSSET PLATE EDGE EXTENDS BEYOND INDICATED BOUNDARY LINE AS APPROVED BY THE DISTRICT. IF DAMAGE DOES NOT EXTEND BEYOND INDICATED BOUNDARY LINE, GRIND SMOOTH PER PROJECT NOTES.
2. THIS DETAIL IS APPLICABLE FOR EITHER OF THE TWO REPRESENTATIVE CORROSION DAMAGE LOCATIONS SHOWN (RESPECTIVELY ALONG THE TRANSVERSE OR LONGITUDINAL EDGES), AT ANY LATERAL BRACING GUSSET PLATE. DETAIL IS SHOWN AT INTERMEDIATE FLOORBEAM UPPER LATERAL BRACING LOCATION. ADJUST AS NEEDED FOR OTHER GUSSET LOCATIONS AND FOR LOWER LATERAL BRACING. IF A SINGLE GUSSET PLATE CONTAINS QUALIFYING CORROSION DAMAGE ON MULTIPLE EDGES REQUIRING REPAIR, REPAIR EACH EDGE'S CORROSION ONE AT A TIME.
3. QUANTITY AND THICKNESS OF EXISTING TOP FLANGE COVER PLATES, AND CORRESPONDING THICKNESSES OF EXISTING FILL PLATES, VARIES BY LOCATION. ADJUST THICKNESS OF INDICATED REPAIR FILL PLATES ACCORDINGLY. IT IS PERMISSIBLE TO REPLACE WITH MULTIPLE PLATES, MINIMUM THICKNESS OF ANY INDIVIDUAL PLATE TO BE ¾".
4. PLACE ADDITIONAL FASTENERS THROUGH REPAIR PLATES. FASTENER SPACING MUST SATISFY THE FOLLOWING REQUIREMENTS:
 - 4.1. MIN. CENTER SPACING: 2½"
 - 4.2. MAX. CENTER SPACING ALONG EDGE: 5½"
 - 4.3. MIN. END DISTANCE: 1½"
 - 4.4. MAX. END DISTANCE: 3"
5. CUT OFF AND REMOVE DEFORMED/BULGED PORTION OF EXISTING GUSSET. DO NOT EXTEND REMOVAL BEYOND EDGE OF REPAIR PLATE. CONTACT THE DISTRICT FOR DIRECTION IF THE DEFORMATION INTERFERES WITH REPAIR PLATE INSTALLATION AND EXTENDS PAST THESE LIMITS. USE CAUTION TO AVOID DAMAGE TO GIRDERS TOP FLANGE AND TOP FLANGE COVER PLATES AND ALL OTHER STRUCTURE. FLAME CUTTING IS PROHIBITED AS A METHOD FOR REMOVAL FOR THIS DETAIL. IF DAMAGE OCCURS, CONTRACTOR IS RESPONSIBLE FOR REPAIRING IT TO THE SATISFACTION OF THE DISTRICT AT NO COST TO THE DISTRICT.
6. GRIND ALL CORROSION TO SMOOTH BARE METAL.
7. FILL ALL GAPS WITH STEEL-FILLED EPOXY PUTTY.

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|--|-------------|------|---|------------|----------|-----------|
| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | |
| NORTH CHANNEL BRIDGE NB BRACING REPAIRS | | | | | | |
| No. | Description | Date | Designed: <u>JSE</u> | Date | Plan No. | Sheet No. |
| | Revision | | Drawn: <u>JSE</u> | | | |
| | | | Checked: <u>AHC</u> | 12/18/2025 | | 23 OF 45 |



NCB-NB BRACING REPAIR TYPE 2 REPAIRED CONDITION

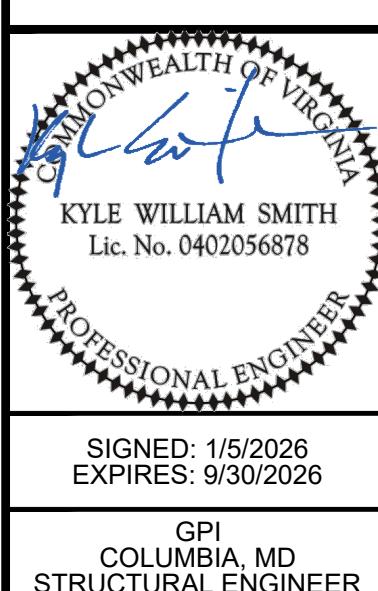
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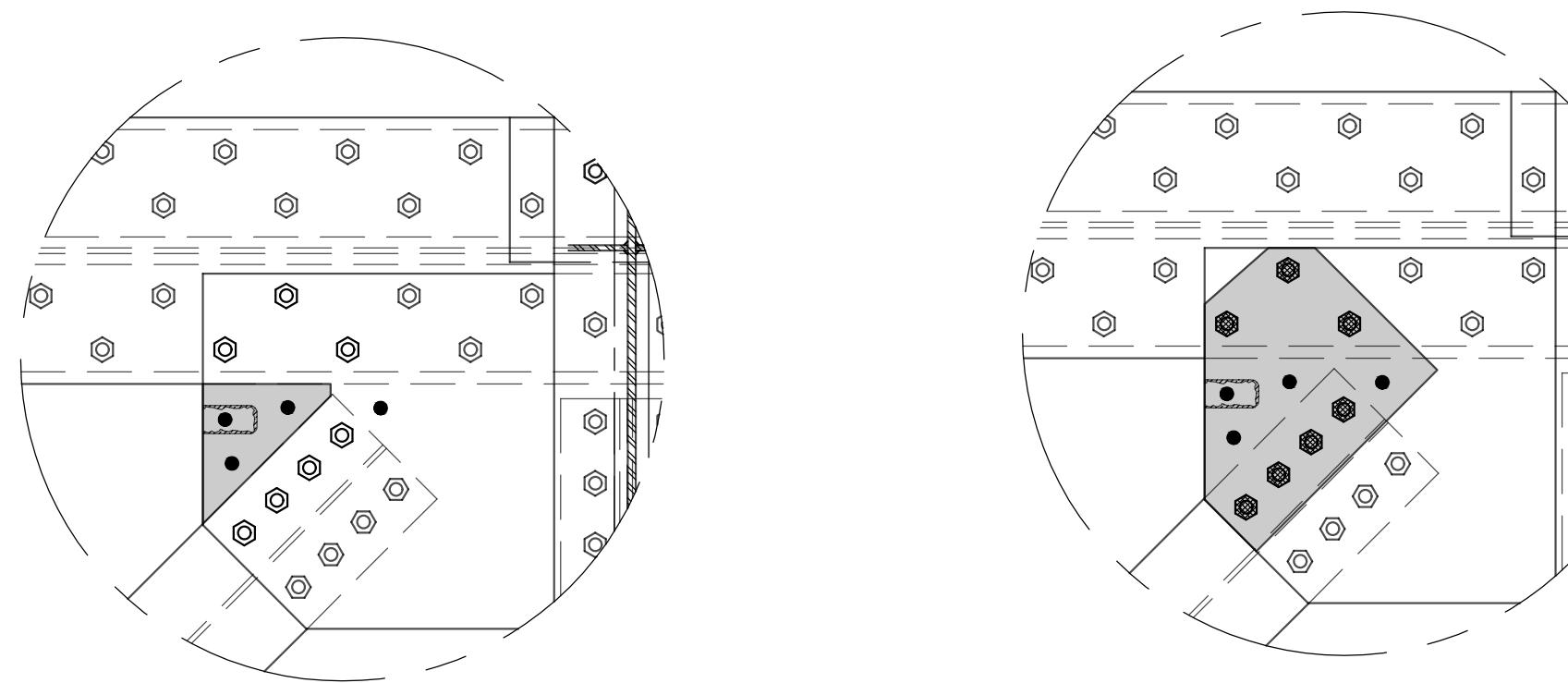


SECTION F-F

SCALE: 1/2" = 1'-0"

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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | |
| NORTH CHANNEL BRIDGE NB BRACING REPAIRS | | | | | | |
| No. | Description | Date | Designed: JSE | Date | Plan No. | Sheet No. |
| | | | Drawn: JSE | | | |
| | Revision | | Checked: AHC | 12/18/2025 | | 24 OF 45 |

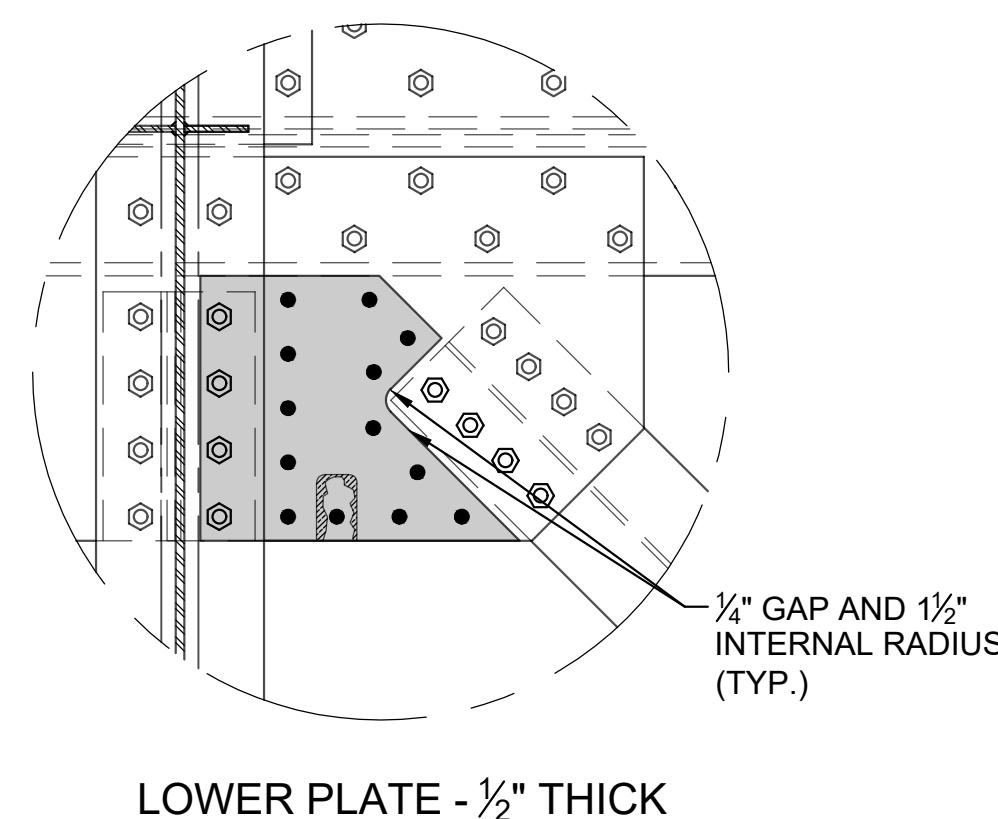




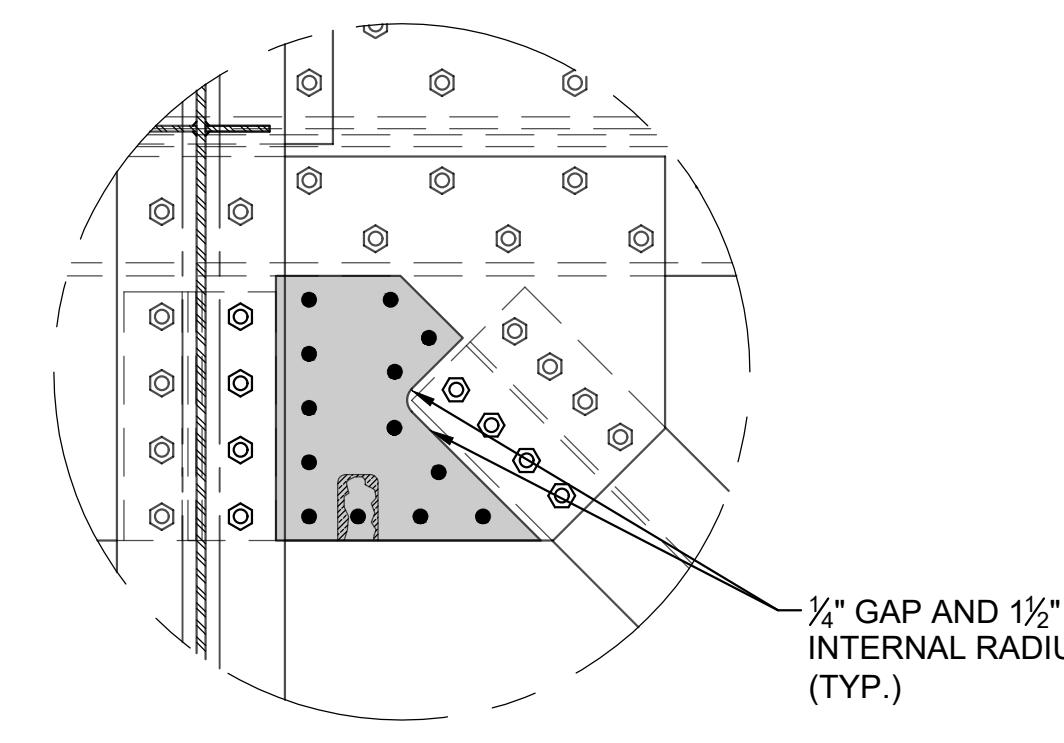
LOWER FILL PLATE - $\frac{1}{2}$ " THICK UPPER PLATE - $\frac{1}{2}$ " THICK

LOCATION 1 PLATING SHAPE DETAIL VIEWS

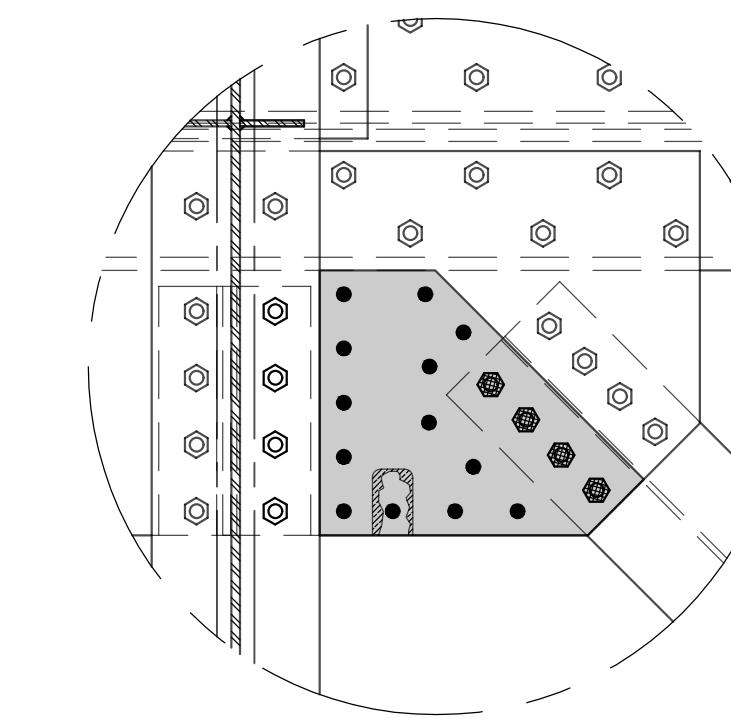
SCALE: 1" = 1'-0"



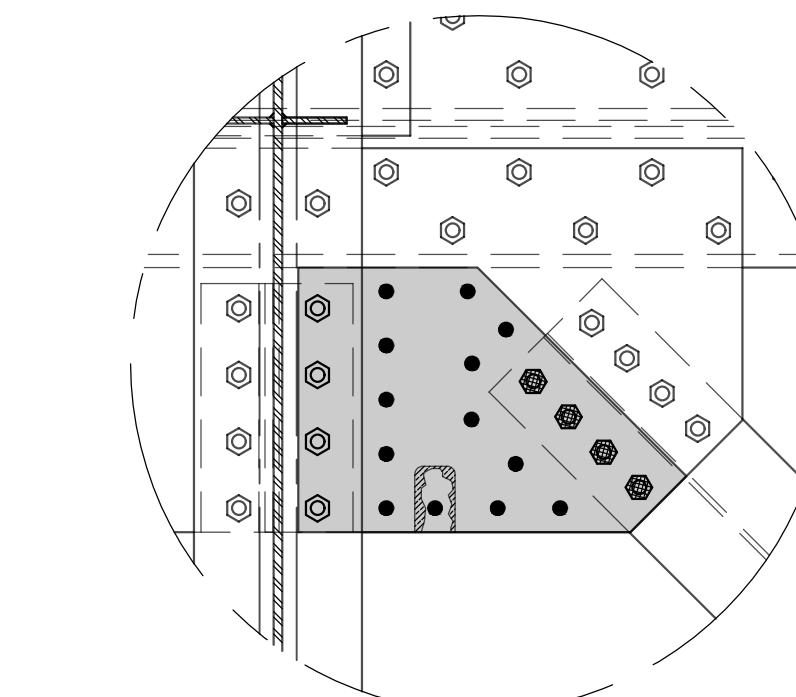
LOWER PLATE - $\frac{1}{2}$ " THICK



LOWER FILL PLATE - $\frac{3}{8}$ " THICK



UPPER FILL PLATE - SEE NOTE 3



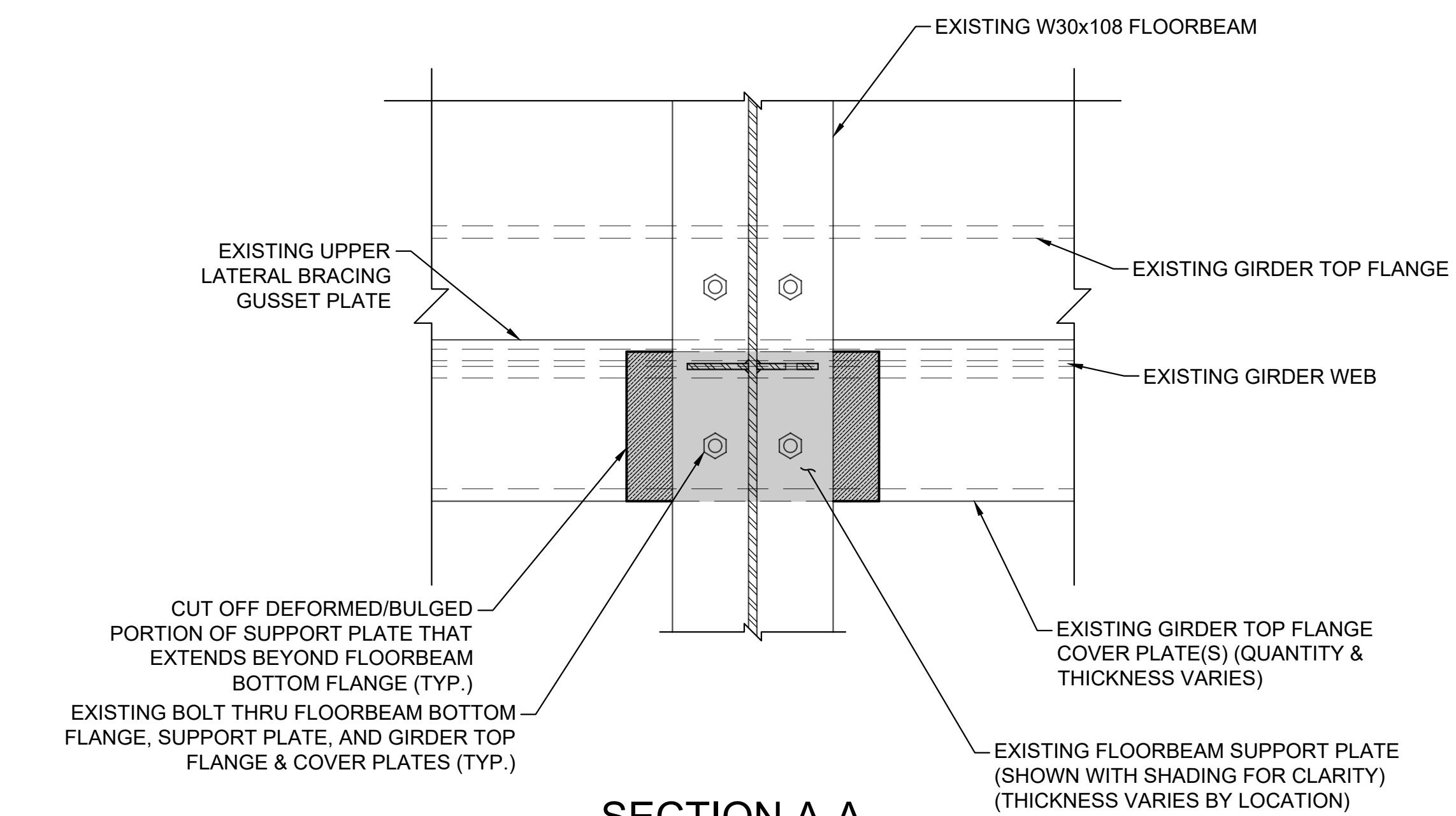
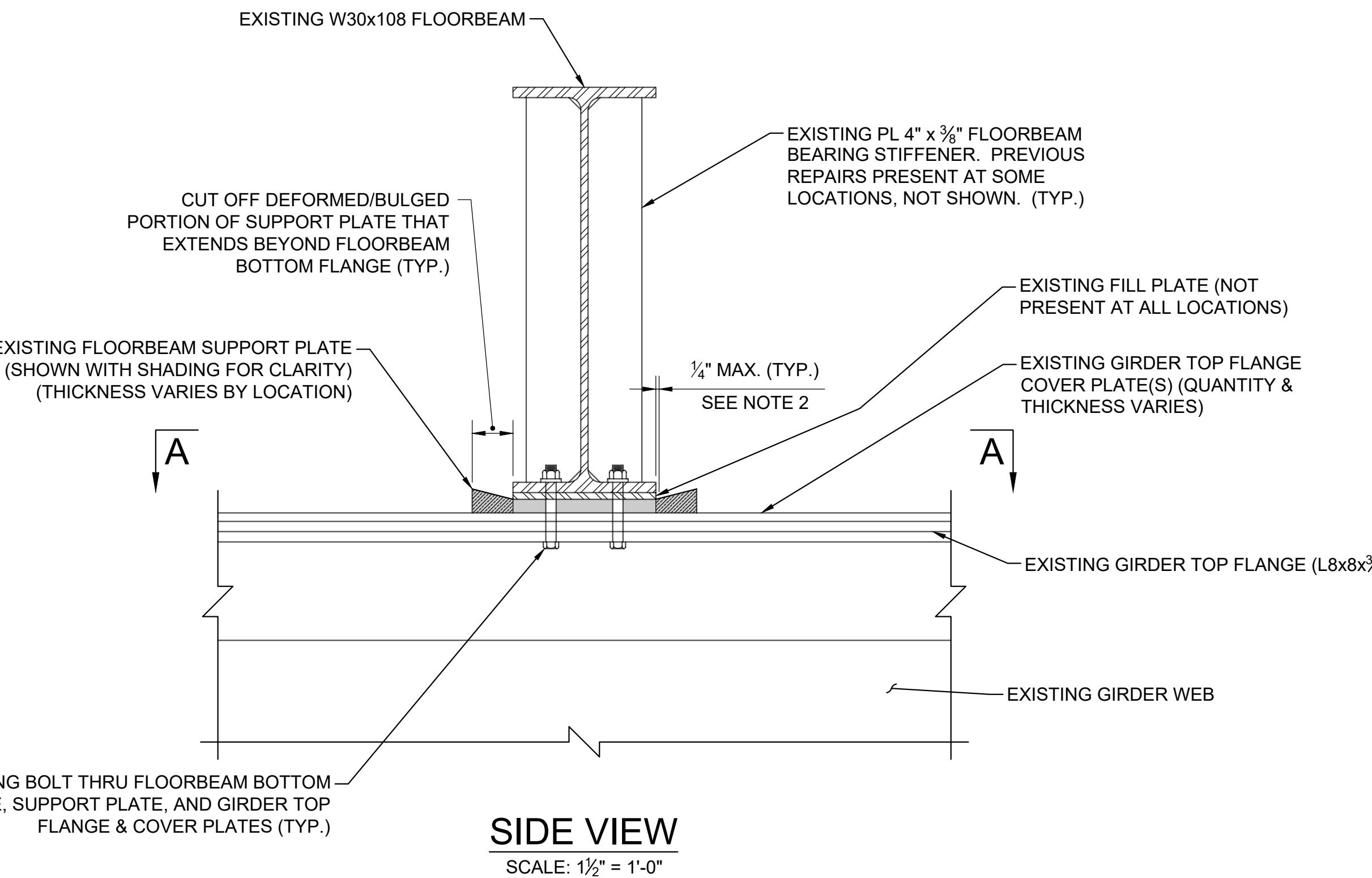
UPPER PLATE - $\frac{1}{2}$ " THICK

LOCATION 2 PLATING SHAPE DETAIL VIEWS

SCALE: 1" = 1'-0"

NCB-NB BRACING REPAIR TYPE 2
REPAIRED CONDITION

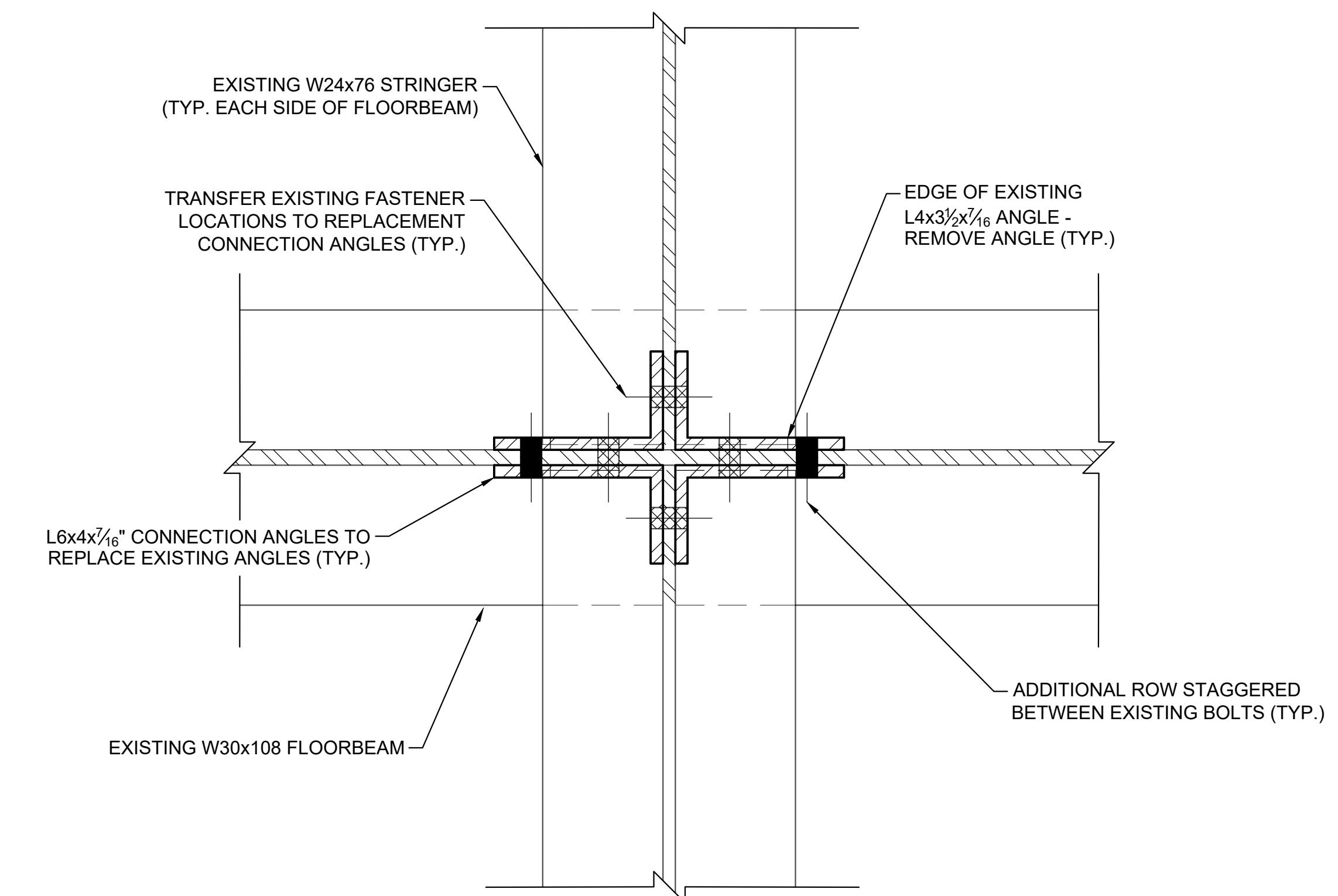
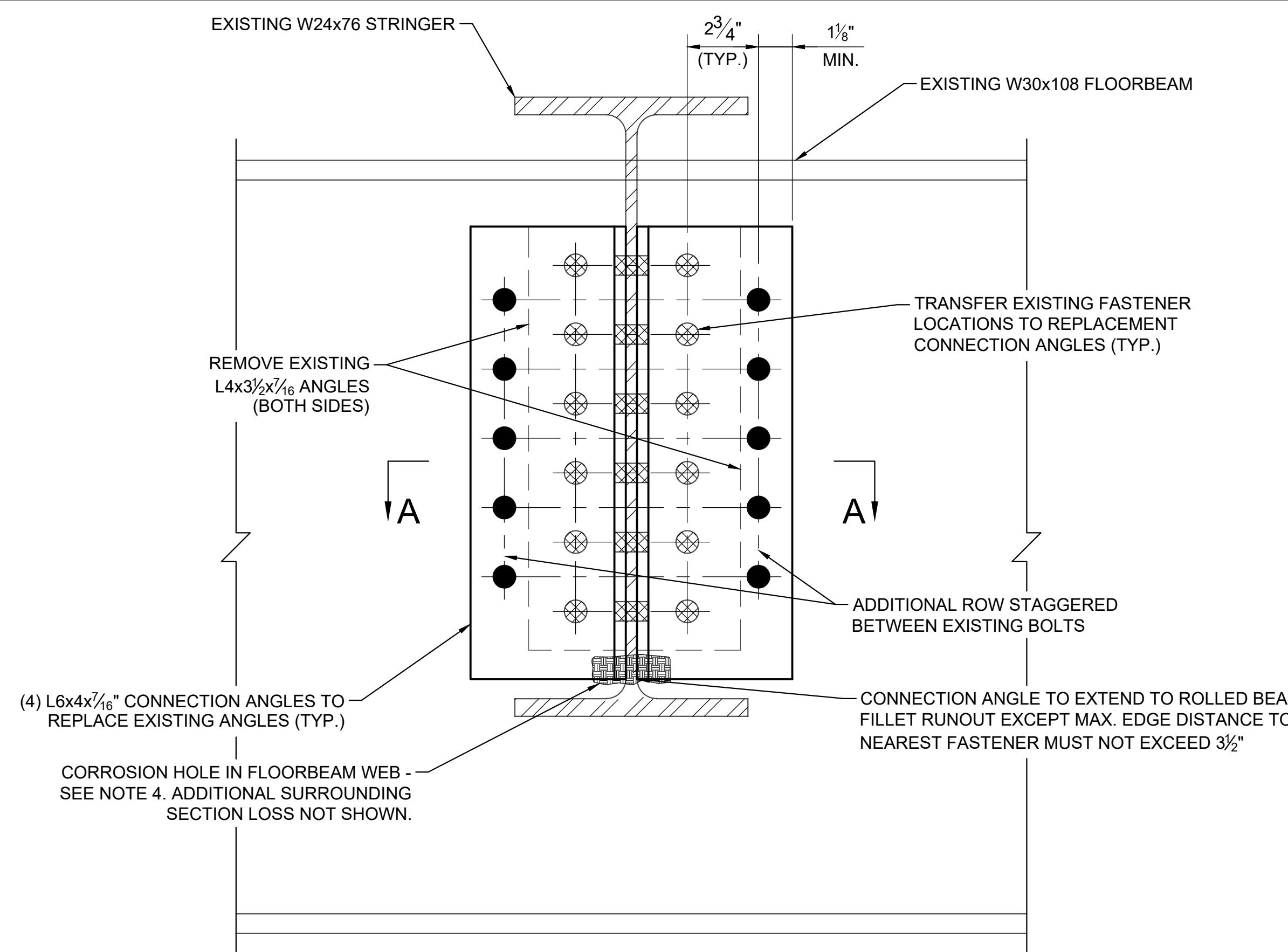
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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | |
| NORTH CHANNEL BRIDGE NB BRACING REPAIRS | | | | | | | |
| No. | Description | Date | Designed: <u>JSE</u> | Drawn: <u>JSE</u> | Date | Plan No. | Sheet No. |
| | Revision | | Checked: <u>AHC</u> | | 12/18/2025 | | 25 OF 45 |



DETAIL-SPECIFIC NOTES

1. PERFORM THIS REPAIR IN NCB-NB SPANS 1-8 AND 10-17 FOR FLOORBEAM SUPPORT PLATES DEFORMED AND/OR BULGED (BEYOND THE EDGE OF THE FLOORBEAM BOTTOM FLANGE) AT LEAST $\frac{1}{2}$ " THICKER THAN ORIGINAL THICKNESS AS APPROVED BY THE DISTRICT.
2. CUT OFF OR OTHERWISE REMOVE DEFORMED AND/OR BULGED PORTION OF FLOORBEAM SUPPORT PLATE TO WITHIN $\frac{1}{4}$ " OF BOTTOM FLANGE EDGE FACE.
3. USE CAUTION TO AVOID DAMAGE TO GIRDERS TOP FLANGE AND TOP FLANGE COVER PLATES, FLOORBEAM, UPPER LATERAL BRACING GUSSET PLATES, AND ALL OTHER STRUCTURE. FLAME CUTTING IS PROHIBITED AS A METHOD FOR REMOVAL FOR THIS DETAIL. IF DAMAGE OCCURS, CONTRACTOR IS RESPONSIBLE FOR REPAIRING IT TO THE SATISFACTION OF THE DISTRICT AT NO COST TO THE DISTRICT.

NCB-NB FLOORBEAM REPAIR TYPE 1



SECTION A-A

SCALE: 3" = 1'-0"

ELEVATION

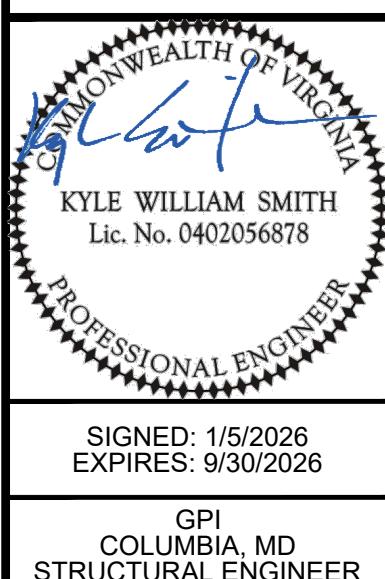
SCALE: 3" = 1'-0"

NCB-NB FB REPAIR TYPE 3

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SUGGESTED SEQUENCE NOTES

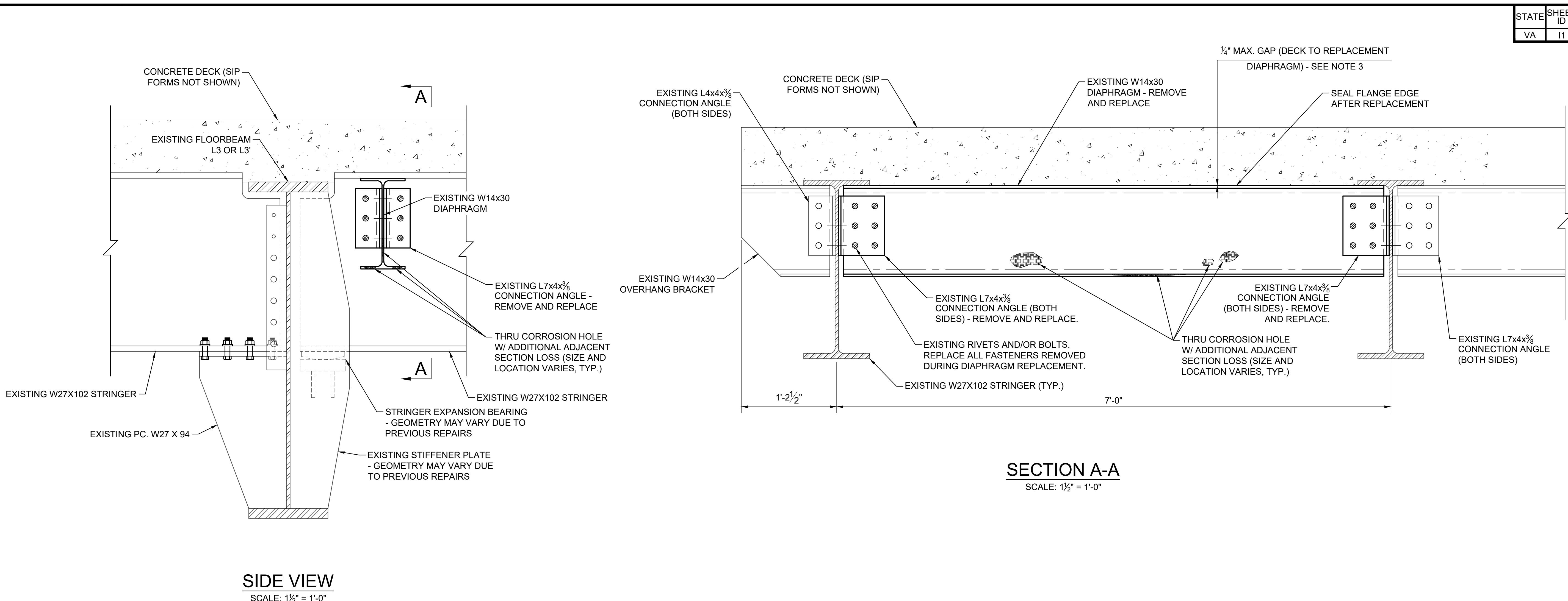
1. PERFORM EACH INSTANCE OF THIS REPAIR TYPE ONE AT A TIME.
2. INSTALL TEMPORARY SUPPORT SYSTEM FOR STRINGERS ON BOTH SIDES OF FLOORBEAM TO BE REPAIRED.
3. REMOVE CONNECTION ANGLES.
4. CLEAN AND GRIND CORRODED AREAS AS REQUIRED.
5. CLAMP REPAIR CONNECTION ANGLES IN PLACE WITH EACH STRINGER AND TRANSFER EXISTING HOLES IN FLOORBEAM AND STRINGER WEBS TO EACH ANGLE.
6. FIELD DRILL ADDITIONAL STAGGERED FASTENERS THRU FLOORBEAM WEB AND CONNECTION ANGLE.
7. REMOVE CLAMPS AND APPLY EPOXY FILLER TO CLEANED AND PAINTED CORROSION ZONE IN FLOOR BEAMS WEB AS NEEDED. ENSURE FINISH IS SMOOTH AND FLUSH.
8. INSTALL CONNECTION ANGLES AND BOLTS. REMOVE TEMPORARY SUPPORT SYSTEM FOR STRINGERS.



DETAIL-SPECIFIC NOTES:

1. PERFORM THIS REPAIR IN NCB-NB SPANS 1-8 AND 10-17 FOR FLOORBEAM - STRINGER CONNECTIONS WITH ONE OR MORE CORROSION HOLES IN THE FLOORBEAM WEB AND/OR REMAINING WEB THICKNESS LESS THAN $\frac{1}{8}$ " FOR A 1" DIA. AREA AS APPROVED BY THE DISTRICT.
2. FILL ALL GAPS WITH STEEL-FILLED EPOXY PUTTY.
3. GRIND ALL CORROSION TO SMOOTH BARE METAL.
4. APPROXIMATE TYPICAL CORROSION HOLE SIZE IS UP TO 3" W x 1" H. ASSUME MAXIMUM CORROSION HOLE SIZE TO BE 4" H x 1 1/2" W AFTER BLASTING. CONTACT THE DISTRICT FOR DIRECTION IF CORROSION HOLE EXTENDS MORE THAN 5 1/2" FROM STRINGER WEB.

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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | |
| NORTH CHANNEL BRIDGE NB MISCELLANEOUS REPAIRS | | | | | | |
| No. | Description | Date | Designed: JSE Drawn: BSB | Date | Plan No. | Sheet No. |
| | Revision | | Checked: AHC | 12/18/2025 | | 27 OF 45 |

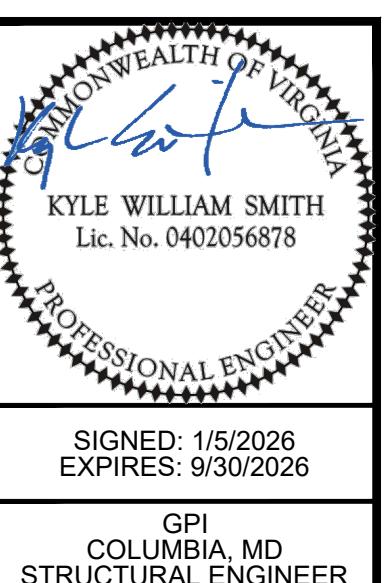


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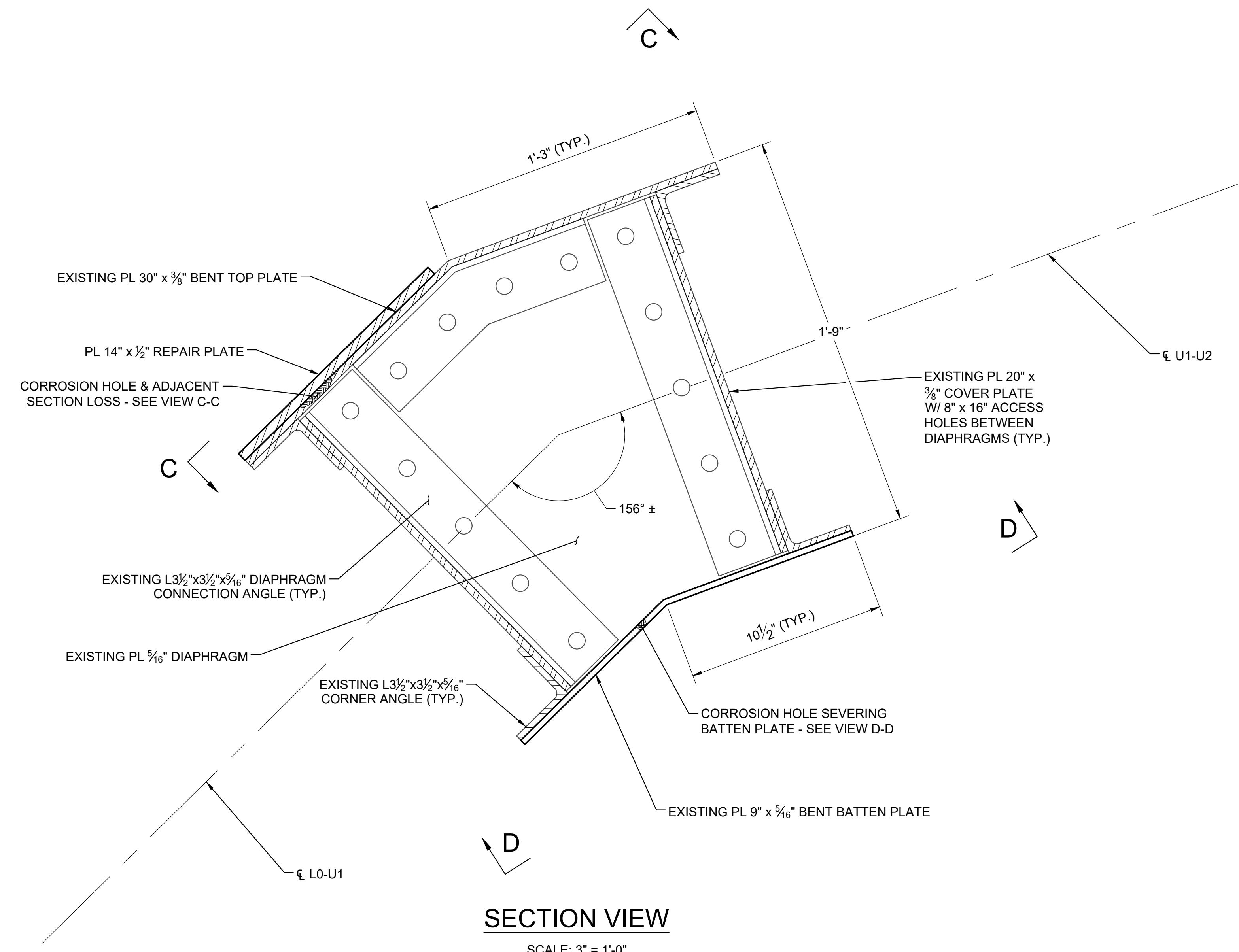
NCB-NB TRUSS STRINGER REPAIR TYPE 3

DETAIL-SPECIFIC NOTES

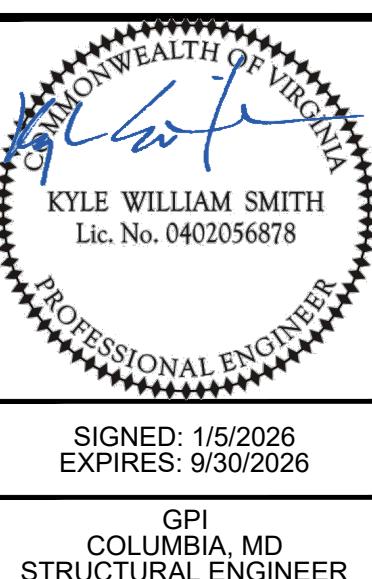
1. PERFORM THIS REPAIR FOR NCB-NB SPAN 9 (TRUSS SPAN) STRINGER BAY END DIAPHRAGMS ADJACENT TO FLOOR BEAMS 3 AND 3' EXHIBITING FULL-THRU CORROSION HOLES AS APPROVED BY THE DISTRICT. REPAIR CONSISTS OF FULL REMOVAL AND REPLACEMENT OF DIAPHRAGM AND (4) L7x4x $\frac{3}{8}$ CONNECTION ANGLES [(2) AT EACH END]. PERFORM EACH DIAPHRAGM REPLACEMENT ONE AT A TIME. SUPPORT OVERHANG BRACKET AND/OR DIAPHRAGM(S) IN THE ADJACENT BAY(S) WHILE PERFORMING REPLACEMENT.
2. EXISTING DECK IS POURED AGAINST EXISTING DIAPHRAGM TOP FLANGE BUT IS NOT COMPOSITE WITH FLANGE. USE CAUTION TO ENSURE THAT DECK AND SOFFIT ARE NOT DAMAGED IN ANY WAY WHEN REMOVING EXISTING DIAPHRAGM. IF DAMAGE OCCURS, CONTRACTOR IS RESPONSIBLE FOR REPAIRING IT TO THE SATISFACTION OF THE DISTRICT AT NO COST TO THE DISTRICT. CAREFULLY REMOVE INTERFERING PORTIONS OF SIP FORMS AS NECESSARY TO REMOVE DIAPHRAGM. IF SIP FORM AND/OR ASSOCIATED BRACKET(S) ARE CUT, ENSURE FINAL CUT EDGE IS STRAIGHT.
3. SEAL EDGES OF DIAPHRAGM TOP FLANGE TO DECK SOFFIT USING CAULK FOR PAINT SYSTEM DESCRIBED IN SECTION 411.



| CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | | | |
|---|-------------|------|---------------|------------|----------|-----------|
| RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | | | |
| NORTH CHANNEL BRIDGE NB TRUSS - MISCELLANEOUS REPAIRS | | | | | | |
| No. | Description | Date | Designed: JSE | Date | Plan No. | Sheet No. |
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| | Revision | | Checked: AHC | 12/18/2025 | | 28 OF 45 |

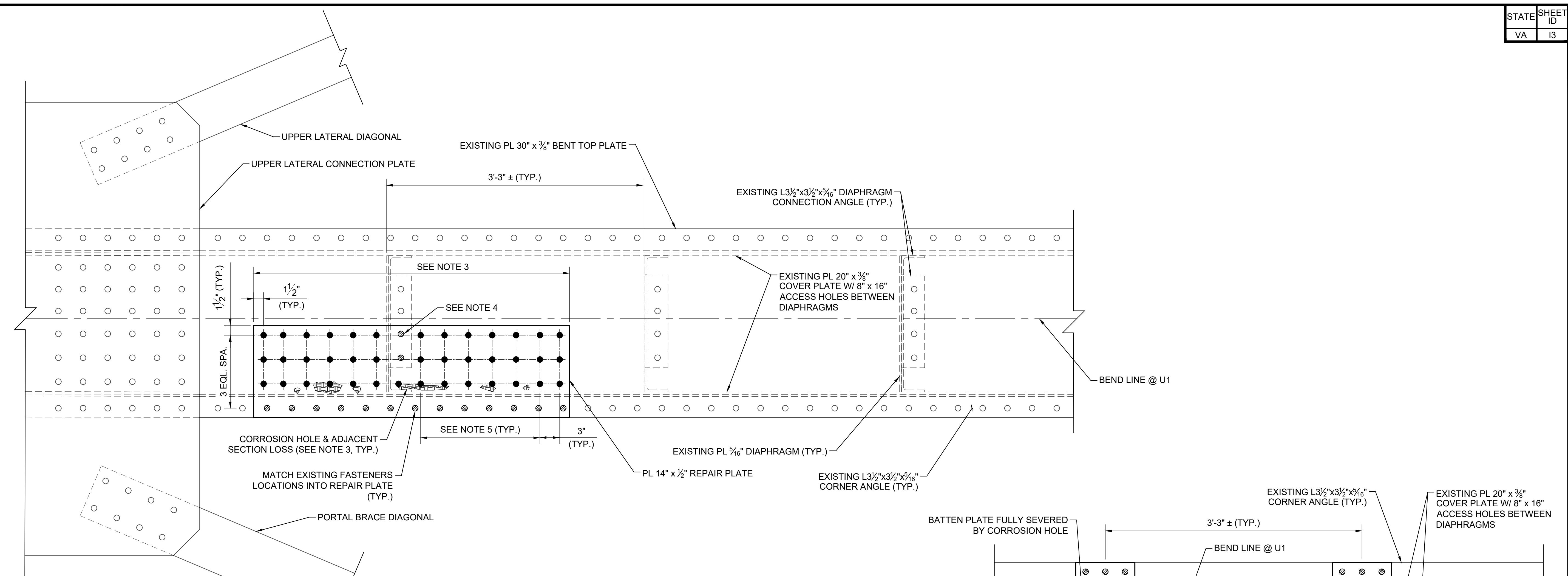


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NCB-NB TRUSS PORTAL REPAIR TYPE 1
NCB-NB TRUSS PORTAL REPAIR TYPE 2

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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | |
| NORTH CHANNEL BRIDGE NB TRUSS - MISCELLANEOUS REPAIRS | | | | | | |
| No. | Description | Date | Designed: JSE | Date | Plan No. | Sheet No. |
| | | | Drawn: JSE | | | |
| | Revision | | Checked: AHC | 12/18/2025 | | 29 OF 45 |



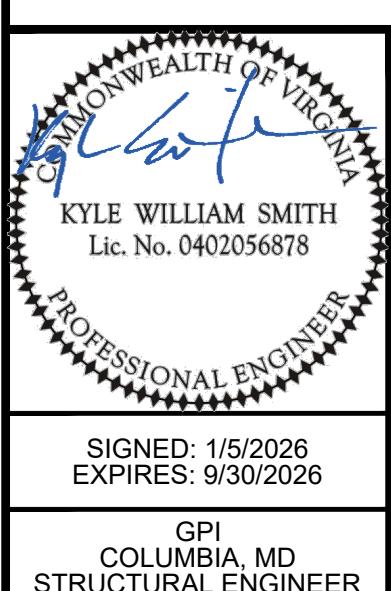
VIEW C-C
SCALE: 1 1/2" = 1'-0"

NCB-NB TRUSS PORTAL REPAIR TYPE 1

DETAIL-SPECIFIC NOTES (NCB-NB TRUSS PORTAL REPAIR TYPE 1)

1. PERFORM THIS REPAIR FOR NCB-NB SPAN 9 (TRUSS SPAN) PORTAL BRACING TOP STRUT (PANEL POINT U1) FOR TOP PLATE FULL-THRU CORROSION HOLES AS APPROVED BY THE DISTRICT.
2. TOP PLATE IS SYMMETRIC ABOUT BEND LINE. ADJACENT REPAIRS ON OPPOSITE SIDES OF THE BEND LINE MAY OCCUR. TREAT SUCH ADJACENT REPAIRS INDEPENDENTLY.
3. SIZE, LOCATION, AND SEVERITY OF CORROSION VARIES. TYPICAL MAXIMUM LENGTH OF CONTIGUOUS DAMAGE IS APPROXIMATELY 3'-0" (TOTAL REPAIR LENGTH APPROX. 4'-0")
4. INCREASE WIDTH OF REPAIR PLATE AS NECESSARY TO ENSURE MINIMUM EDGE DISTANCE OF 1 1/8" FOR DIAPHRAGM CONNECTION ANGLE FASTENERS.
5. SPACE FASTENERS ALONG AXIS OF BEND LINE AT 3" MIN. / 5 1/2" MAX. MAXIMUM SPACING BETWEEN FASTENERS MAY NOT EXCEED 5 1/2".
6. GRIND ALL CORROSION TO SMOOTH BARE METAL.
7. FILL ALL GAPS WITH STEEL-FILLED EPOXY PUTTY.

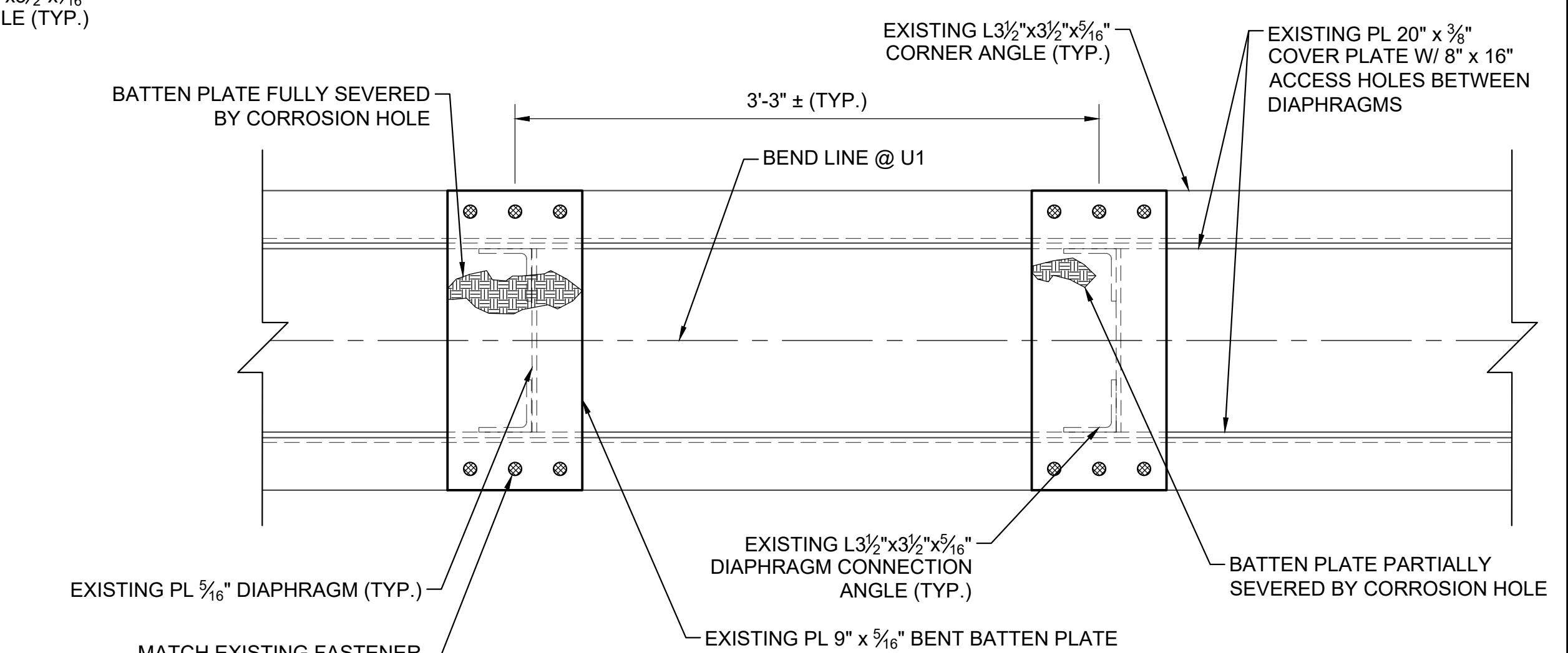
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KYLE WILLIAM SMITH
Lc. No. 040205678

SIGNED: 1/5/2026
EXPIRES: 9/30/2026

GPI
COLUMBIA, MD
STRUCTURAL ENGINEER



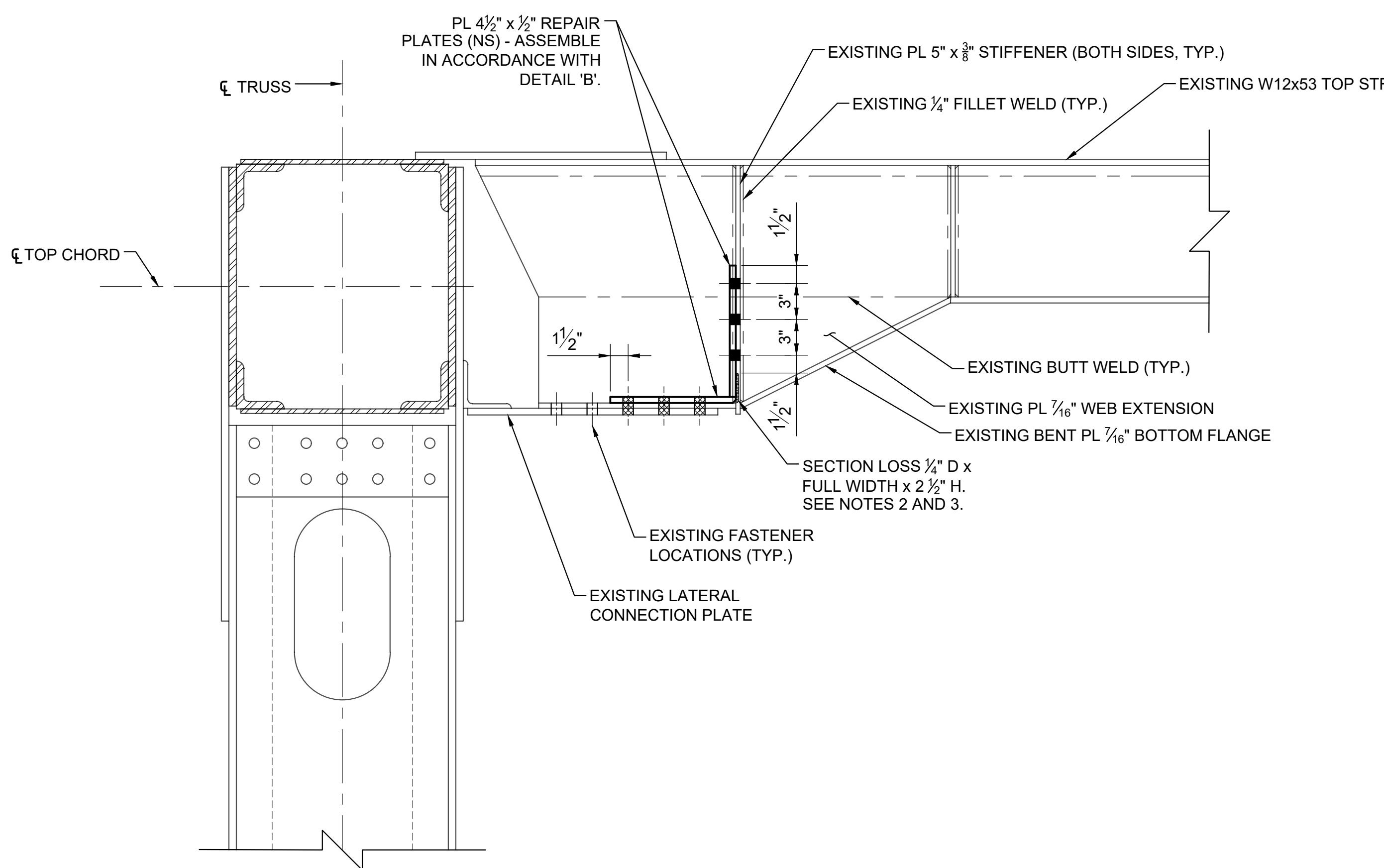
VIEW D-D
SCALE: 1 1/2" = 1'-0"

NCB-NB TRUSS PORTAL REPAIR TYPE 2

DETAIL-SPECIFIC NOTES (NCB-NB TRUSS PORTAL REPAIR TYPE 2)

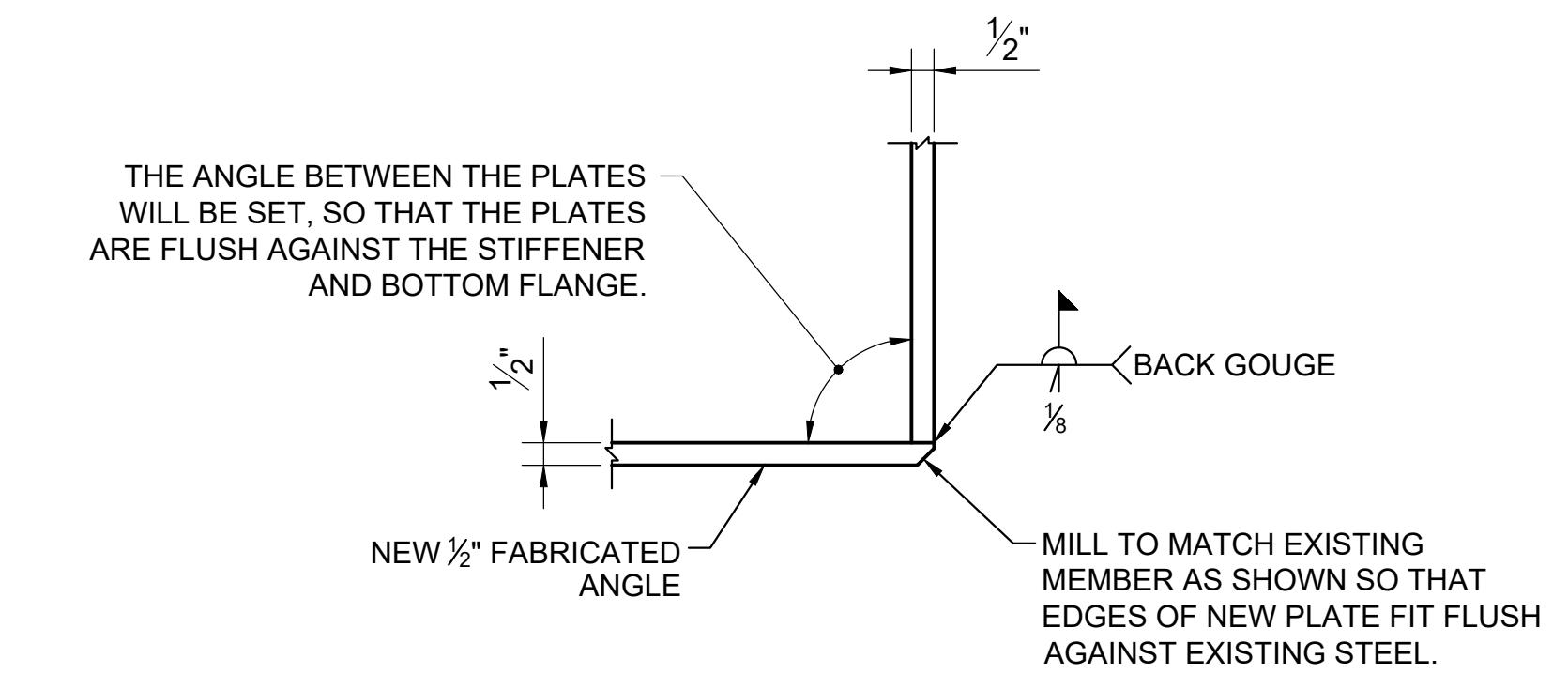
1. PERFORM THIS REPAIR FOR NCB-NB SPAN 9 (TRUSS SPAN) PORTAL BRACING TOP STRUT (PANEL POINT U1) FOR BOTTOM BATTEN PLATES MISSING OR PARTIALLY OR FULLY SEVERED DUE TO CORROSION HOLES AS APPROVED BY THE DISTRICT.
2. IT IS PERMISSIBLE TO SUBSTITUTE 5/8" OR 1/2" THICK PLATE WHEN REPLACING EXISTING 5/16" THICK BATTEN PLATES.

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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | |
| NORTH CHANNEL BRIDGE NB TRUSS - MISCELLANEOUS REPAIRS | | | | | |
| No. | Description | Date | Designed: JSE | Date | Plan No. |
| | | | Drawn: JSE | | Sheet No. |
| | Revision | | Checked: AHC | 12/18/2025 | 30 OF 45 |



ELEVATION

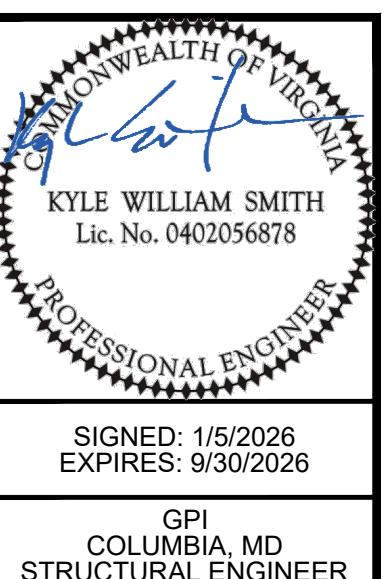
SCALE: 1 1/2" = 1'-0"



DETAIL 'B'

SCALE: 3" = 1'-0"

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DETAIL-SPECIFIC NOTES

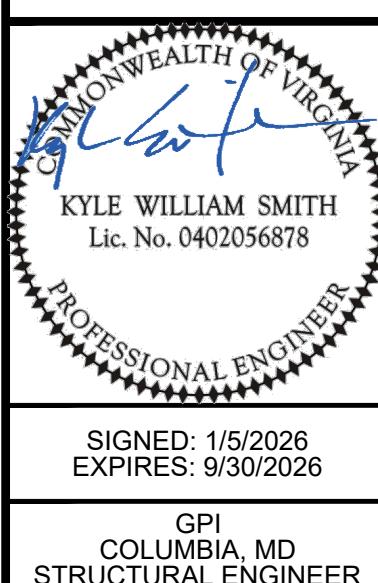
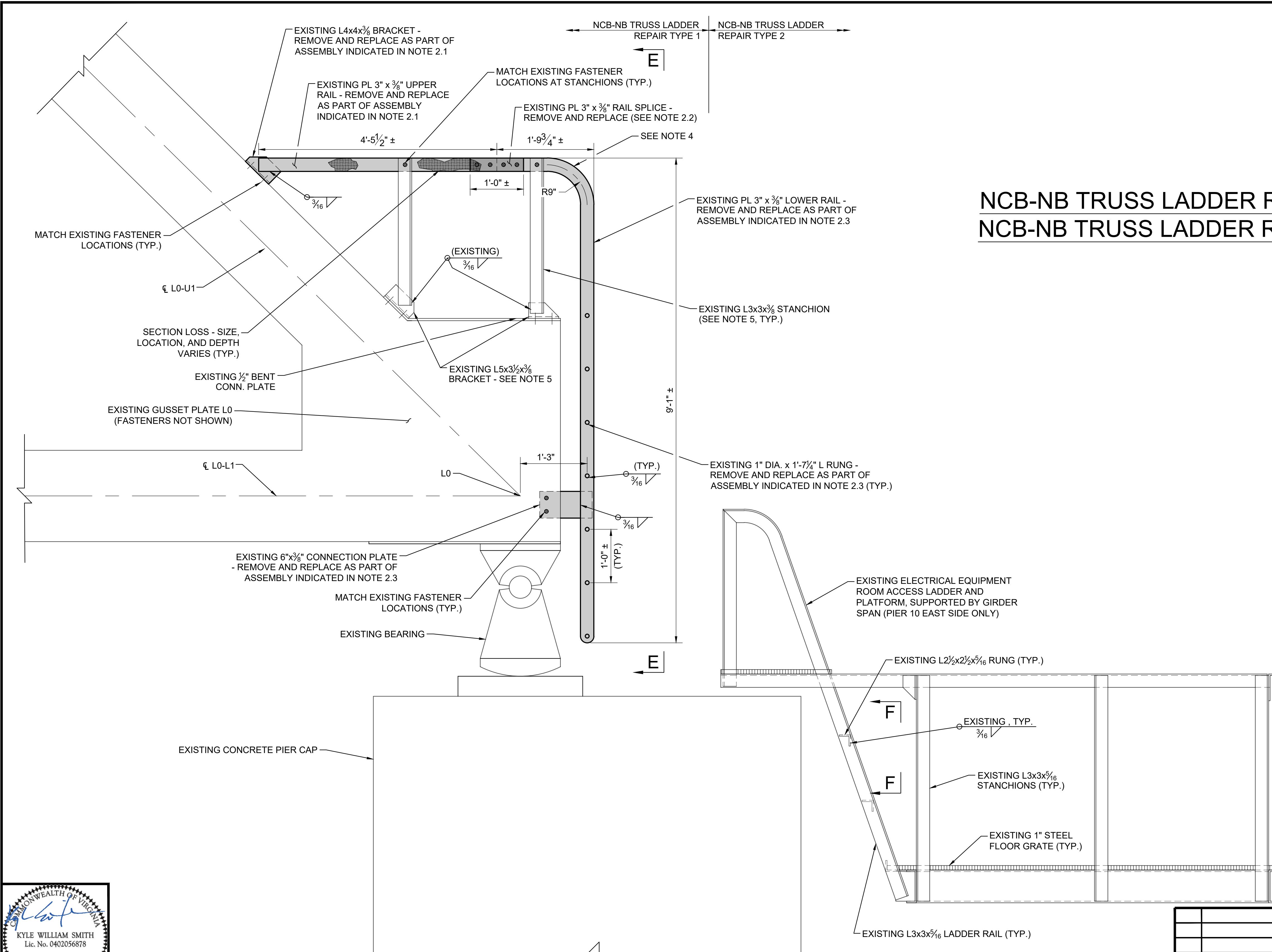
1. PERFORM THIS REPAIR FOR NCB-NB SPAN 9 (TRUSS SPAN) TOP LATERAL STRUT DEPTH-TRANSITION STIFFENERS EXHIBITING CORROSION WITH LESS THAN 1/4" REMAINING OVER 3" OR MORE OF THE STIFFENER WIDTH AS APPROVED BY THE DISTRICT. PERFORM ON EACH SIDE OF THE STRUT AS NEEDED.
2. GRIND ALL CORROSION TO SMOOTH BARE METAL.
3. FILL ALL GAPS WITH STEEL-FILLED EPOXY PUTTY.

NCB-NB TRUSS LATERAL REPAIR TYPE 1

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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | | | | |
| NORTH CHANNEL BRIDGE NB TRUSS - MISCELLANEOUS REPAIRS | | | | | | | | | | |
| No. Description Date Designed: JSE Drawn: JSE Checked: AHC 12/18/2025 | | | | | | | | | | |
| | Revision | | Plan No. | Sheet No. | | 31 OF 45 | | | | |

NCB-NB TRUSS LADDER REPAIR TYPE 1 NCB-NB TRUSS LADDER REPAIR TYPE 2

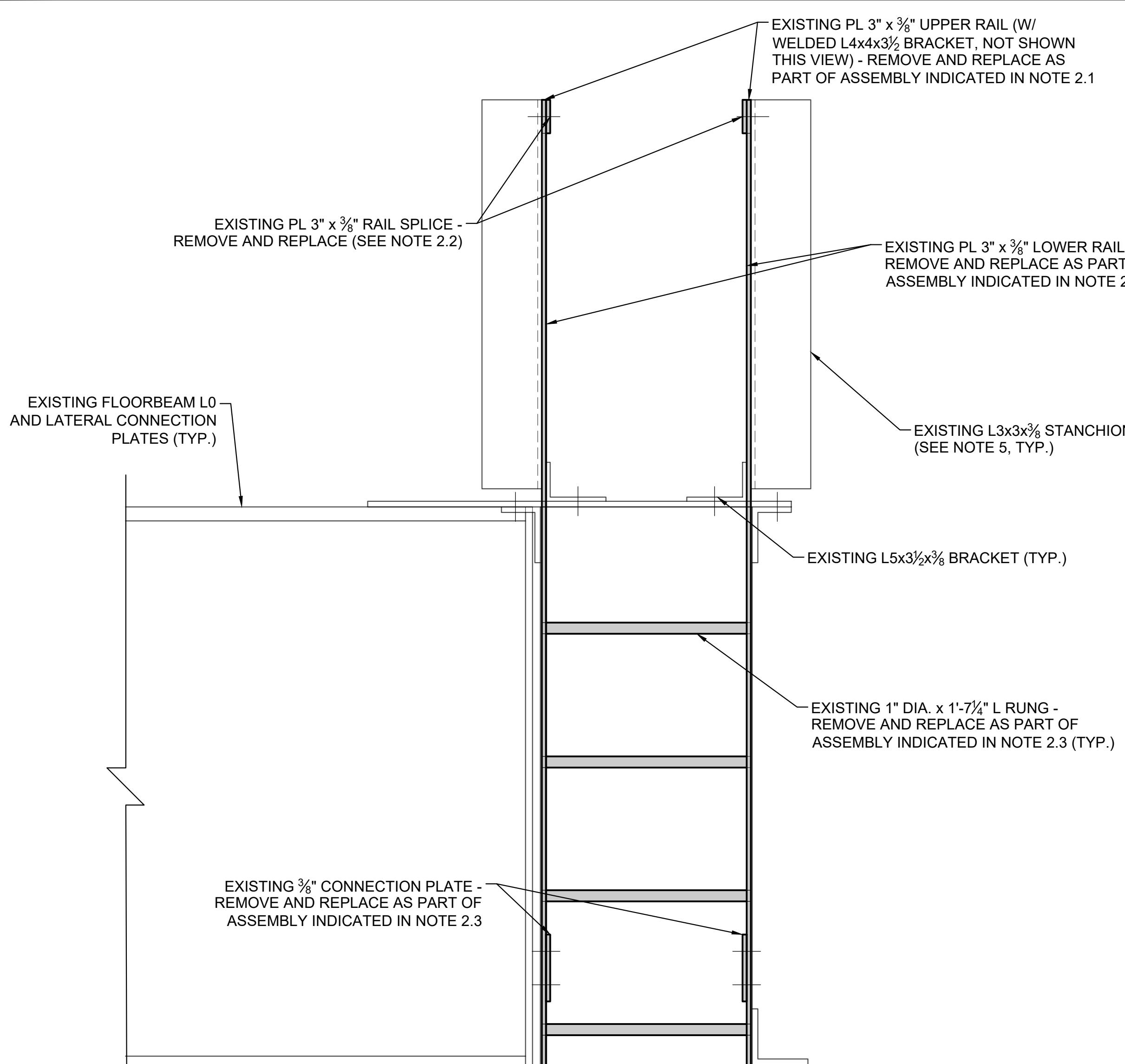
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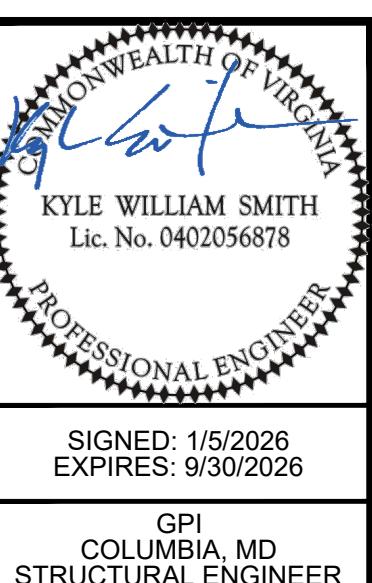
ELEVATION

SCALE: 1" = 1'-0"

| CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | | |
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| RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | | |
| NORTH CHANNEL BRIDGE NB TRUSS - MISCELLANEOUS REPAIRS | | | | | |
| No. | Description | Date | Designed: JSE | Date | Plan No. |
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| | Revision | | Drawn: JSE | | Sheet No. |
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VIEW E-E

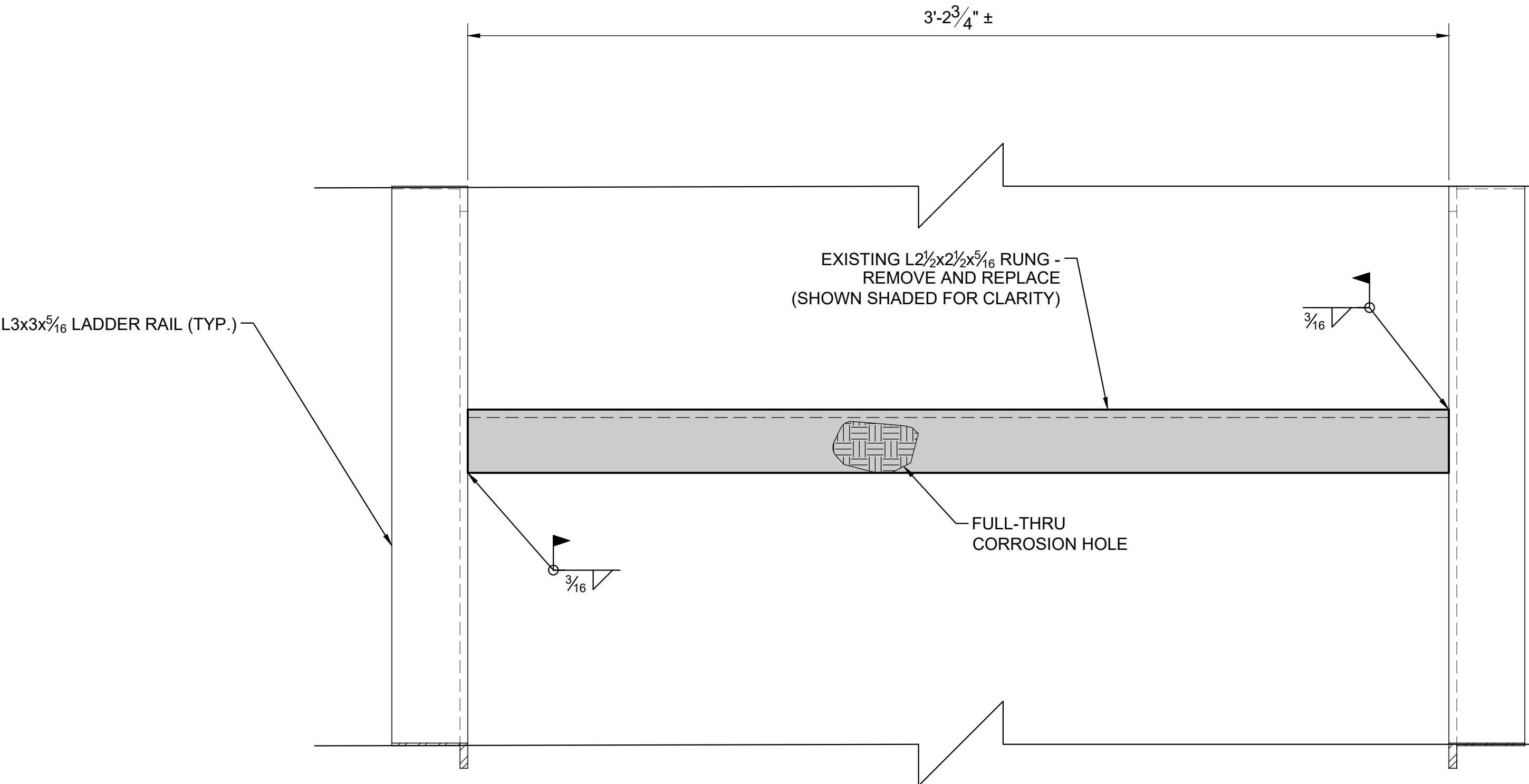
SCALE: 1/2" = 1'-0"

DETAIL-SPECIFIC NOTES (NCB-NB TRUSS LADDER REPAIR TYPE 1)

1. PERFORM THIS REPAIR FOR NCB-NB SPAN 9 (TRUSS SPAN) PIER CAP ACCESS LADDERS (LOCATED AT PIERS 9 AND 10, BOTH SIDES OF TRUSS) AS APPROVED BY THE DISTRICT.
2. REPLACE EXISTING ACCESS LADDER STRUCTURE. MATCH EXISTING GEOMETRY, WELDING DETAILS, AND ASSEMBLY AS SHOWN, EXCEPT AS NOTED BELOW. THE EXISTING LADDER COMPONENTS TO BE REPLACED ARE SHOWN SHADED AND CONSIST OF THE FOLLOWING PIECES AND/OR WELDED ASSEMBLIES:
 - 2.1. (2) WELDED UPPER RAIL SECTIONS, EACH COMPOSED OF:
 - 2.1.1. (1) 3" x 3/8" UPPER RAIL
 - 2.1.2. (1) L4x4x3/8 BRACKET (SEE ELEVATION VIEW ON PREVIOUS SHEET)
 - 2.2. (2) 3" x 3/8" RAIL SPLICES
 - 2.3. (1) WELDED LOWER RAIL SECTION, COMPOSED OF:
 - 2.3.1. (2) 3" x 3/8" LOWER RAILS
 - 2.3.2. (7) 1" DIA. RUNGS
 - 2.3.3. (2) 6" x 3/8" CONNECTION PLATES
3. FIELD-VERIFY ALL DIMENSIONS AND ADJUST AS NECESSARY PRIOR TO FABRICATING REPLACEMENT ELEMENTS.
4. ONE (1) OR MORE OF THE FOUR (4) TOTAL LADDER LOCATIONS MAY HAVE ALTERNATE BEND GEOMETRY DUE TO A PREVIOUS RETROFIT. FABRICATE REPLACEMENT TO MATCH GEOMETRY DEPICTED ABOVE.
5. CONTACT THE DISTRICT FOR DIRECTION IF SECTION LOSS EXCEEDING 3/16" DEEP x FULL WIDTH OF EITHER FLANGE OF AN L3x3x3/16 STANCHION ELEMENT OR 3/16" DEEP x FULL LENGTH OF AN L5x3 1/2x3/8 BRACKET IS OBSERVED.

NCB-NB TRUSS LADDER REPAIR TYPE 1

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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | | | | |
| NORTH CHANNEL BRIDGE NB TRUSS - MISCELLANEOUS REPAIRS | | | | | | | | | | |
| No. Description Date Designed: JSE Drawn: JSE Checked: AHC 12/18/2025 Plan No. Sheet No. Revision | | | | | | | | | | |
| | | | | | | 33 OF 45 | | | | |



VIEW F-F

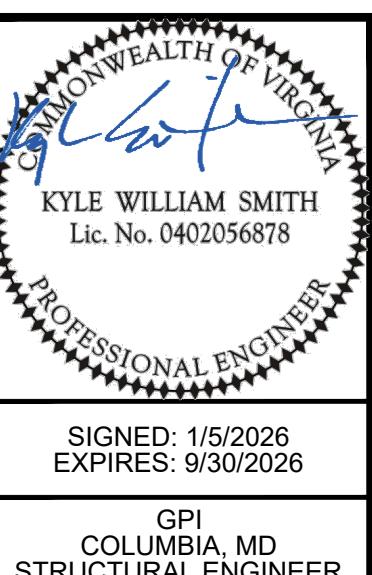
SCALE: 3" = 1'-0"

DETAIL-SPECIFIC NOTES
(NCB-NB TRUSS LADDER REPAIR TYPE 2)

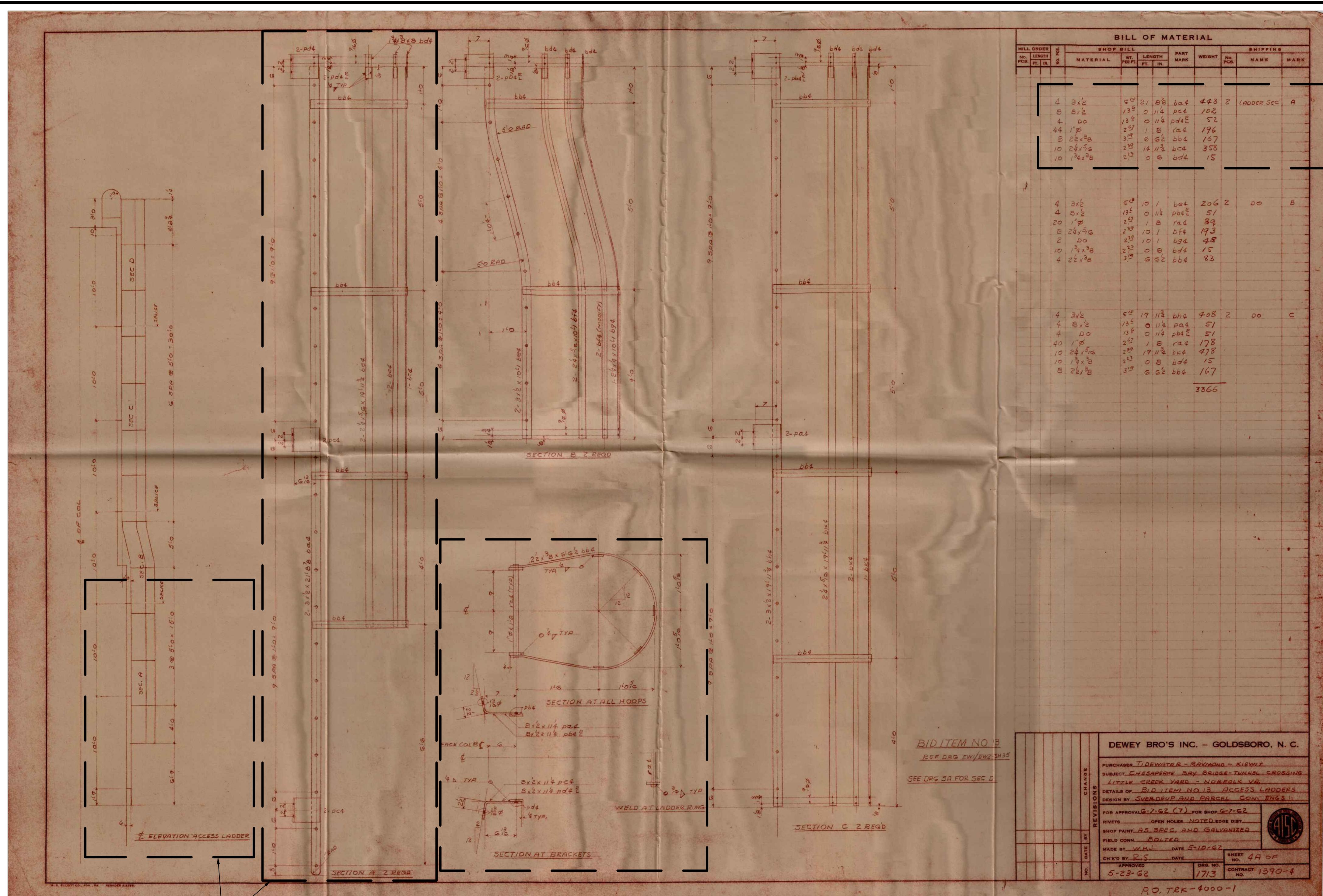
1. PERFORM THIS REPAIR FOR NCB-NB ELECTRICAL EQUIPMENT ROOM ACCESS LADDER (LOCATED AT PIER 10, EAST SIDE OF TRUSS ONLY).

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1/5/2023

NCB-NB TRUSS LADDER REPAIR TYPE 2

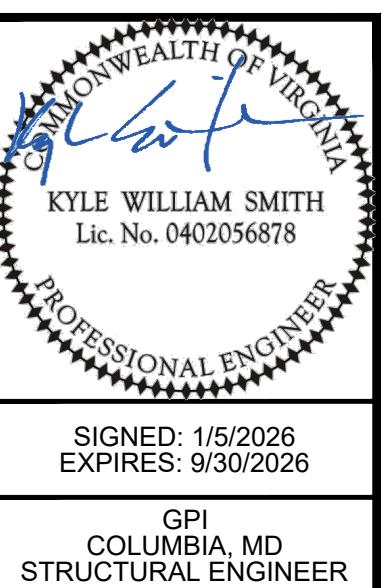


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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | |
| NORTH CHANNEL BRIDGE | | | | | | | |
| NB TRUSS - | | | | | | | |
| No. | Description | Date | Designed: <u>JSE</u> | Date | Plan No. | Sheet No. | |
| | | | Drawn: <u>JSE</u> | | | | |
| | Revision | | Checked: <u>AHC</u> | 12/18/2025 | | | 34 OF 45 |



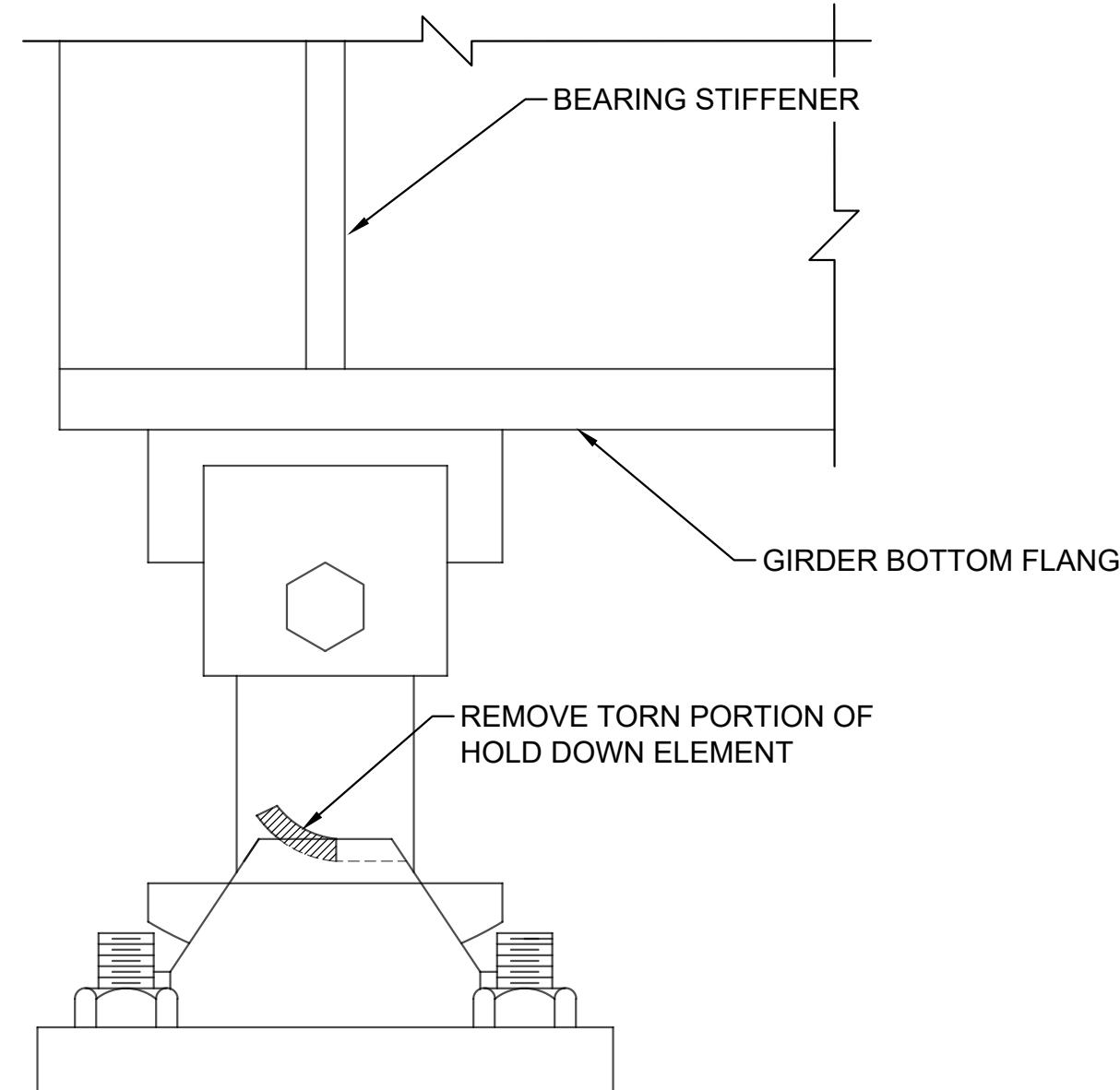
DETAIL-SPECIFIC NOTES (NCB-NB TRUSS LADDER REPAIR TYPE 3)

1. PERFORM THIS REPAIR FOR NCB-NB SPAN 9 (TRUSS SPAN) PIER FENDER ACCESS LADDERS (LOCATED AT PIERS 9 AND 10, EAST PIER COLUMN ONLY) AS APPROVED BY THE DISTRICT.
2. AS-BUILT DRAWING DETAILS ARE PROVIDED ON THIS SHEET TO REFLECT THE EXISTING ACCESS LADDER STRUCTURE. REPLACE EXISTING ACCESS LADDER SECTION "A" IN KIND. MATCH EXISTING GEOMETRY, WELDING DETAILS, AND ASSEMBLY AS SHOWN, EXCEPT AS NOTED BELOW. AS-BUILT DRAWING DETAILS ARE NOT TO SCALE.
3. FIELD-VERIFY ALL DIMENSIONS AND ADJUST AS NECESSARY PRIOR TO FABRICATING REPLACEMENT ELEMENTS.
4. HOT-DIP GALVANIZE REPLACEMENT LADDER SECTION COMPONENTS.
5. REPLACEMENT LADDER SECTIONS SHALL BE OSHA-COMPLIANT.
6. SUBMIT WORKING DRAWINGS IN ACCORDANCE WITH VDOT SPECIFICATION 105.10(C) AND SIGNED AND SEALED BY A PROFESSIONAL ENGINEER HOLDING A VALID CURRENT LICENSE TO PRACTICE ENGINEERING IN THE COMMONWEALTH OF VIRGINIA.



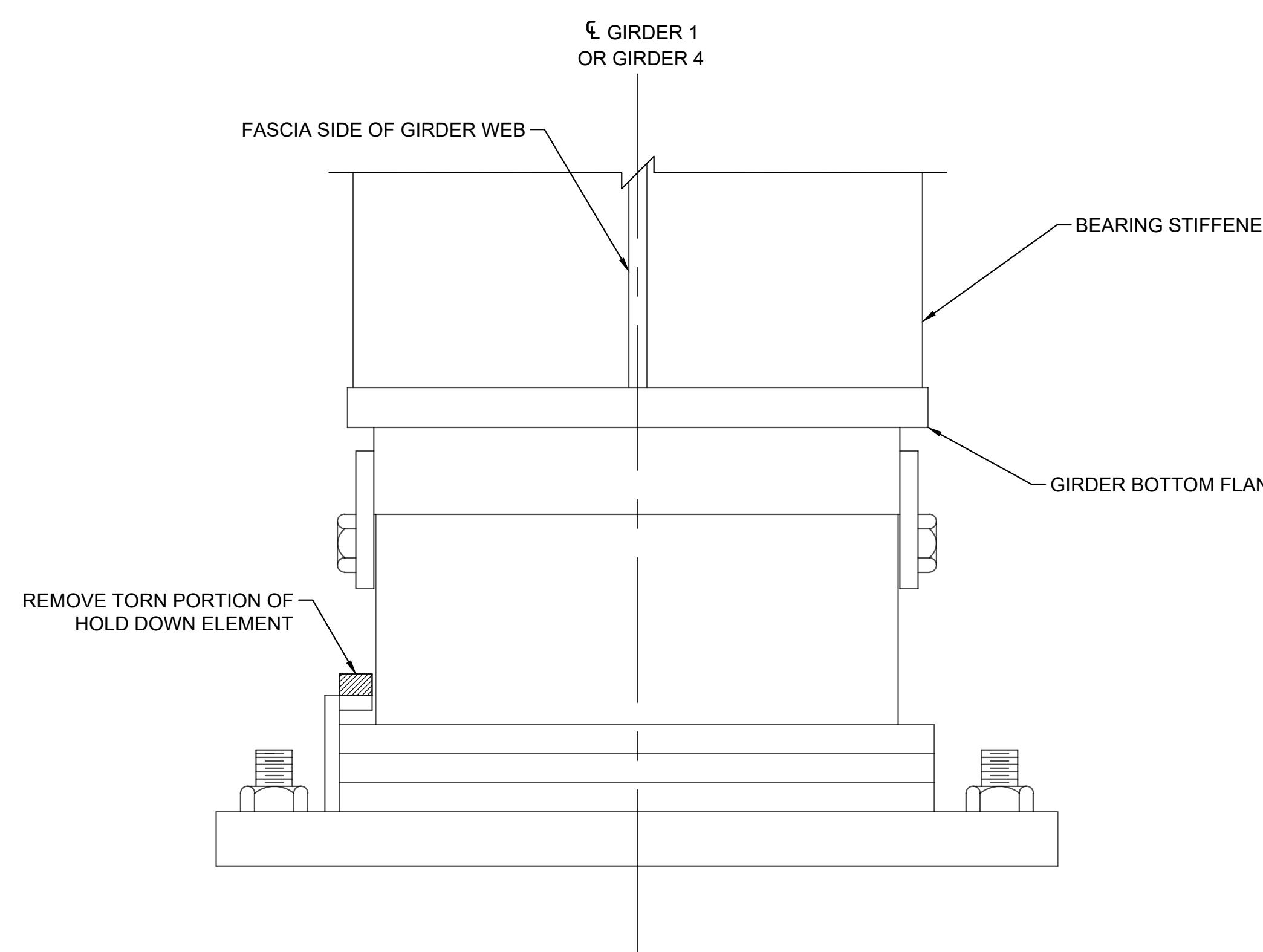
NCB-NB TRUSS LADDER REPAIR TYPE 3

| No. | Description | Date | Designed: JSE | Date | Plan No. | Sheet No. |
|-----|-------------|------|---------------|------------|----------|-----------|
| | | | Drawn: JSE | | | |
| | | | Checked: AHC | 12/18/2025 | | |
| | | | | | 35 OF 45 | |



EXPANSION BEARING SIDE VIEW

SCALE: 3" = 1'-0"



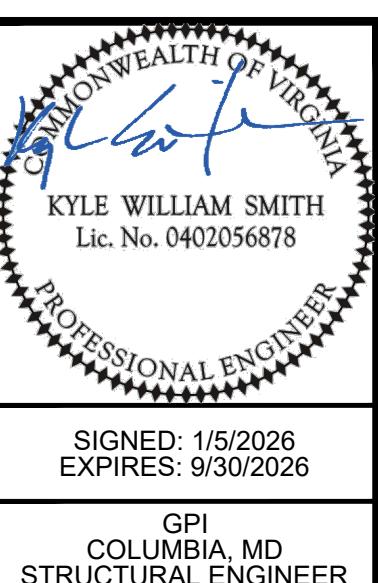
EXPANSION BEARING ELEVATION

SCALE: 3" = 1'-0"

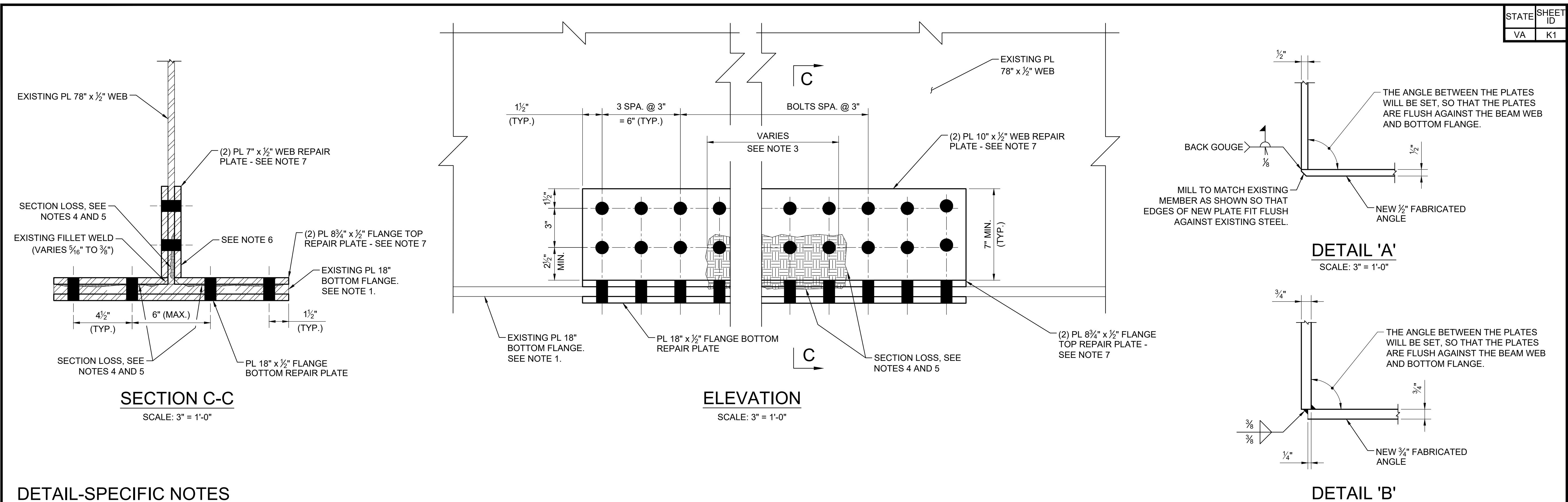
NCB-SB REPAIR TYPE 1

DETAIL-SPECIFIC NOTES

1. PERFORM THIS REPAIR FOR NCB-SB AND FIB-NB EXPANSION BEARINGS WITH A TORN AND BENT HOLD DOWN ELEMENT AS APPROVED BY THE DISTRICT. NOTE THAT HOLD DOWN ELEMENT IS ONLY PRESENT ON FASCIA GIRDER BEARINGS. KNOWN LOCATIONS WITH THIS DEFECT INCLUDE BUT ARE NOT LIMITED TO:
 - 1.1. NCB-SB SPAN 7 GIRDER 1 @ PIER 8
 - 1.2. NCB-SB SPAN 7 GIRDER 4 @ PIER 8
2. CUT OFF OR OTHERWISE REMOVE TORN AND BENT PORTION OF HOLD DOWN ELEMENT TO EXTENT OF TEAR AND SQUARE OFF TO INTACT PORTION OF HOLD DOWN ELEMENT AS SHOWN ON SIDE VIEW ON THIS SHEET.
3. USE CAUTION TO AVOID DAMAGE TO ALL OTHER ELEMENTS OF BEARING AND GIRDER. FLAME CUTTING IS PROHIBITED AS A METHOD FOR REMOVAL FOR THIS DETAIL. IF DAMAGE OCCURS, CONTRACTOR IS RESPONSIBLE FOR REPAIRING IT TO THE SATISFACTION OF THE DISTRICT AT NO COST TO THE DISTRICT.

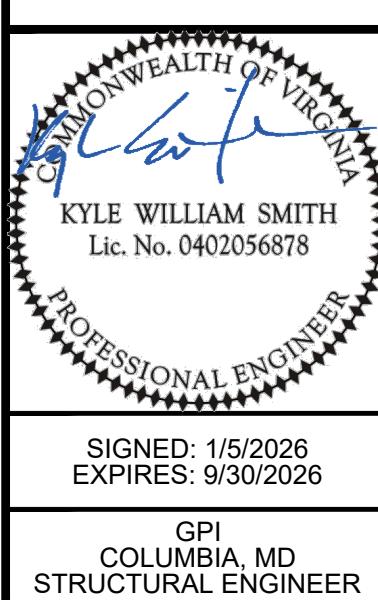


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|---|-------------|------|---|------------|----------|-----------|----------|
| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | |
| NORTH CHANNEL BRIDGE SB & FISHERMAN'S INLET BRIDGE NB MISCELLANEOUS REPAIRS | | | | | | | |
| No. | Description | Date | Designed: JSE | Date | Plan No. | Sheet No. | |
| | | | Drawn: BSB | | | | |
| | Revision | | Checked: AHC | 12/18/2025 | | | 36 OF 45 |

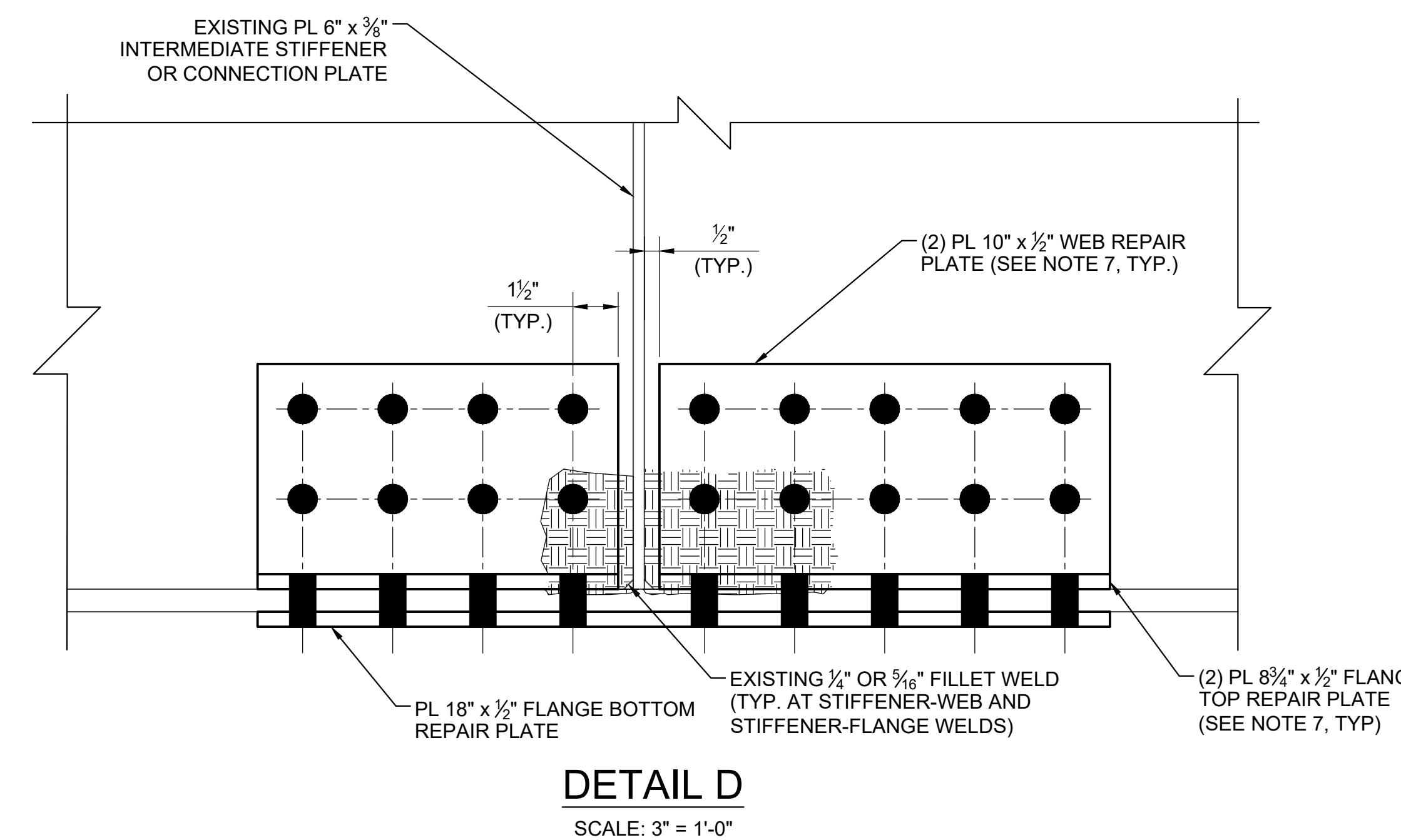


DETAIL-SPECIFIC NOTES

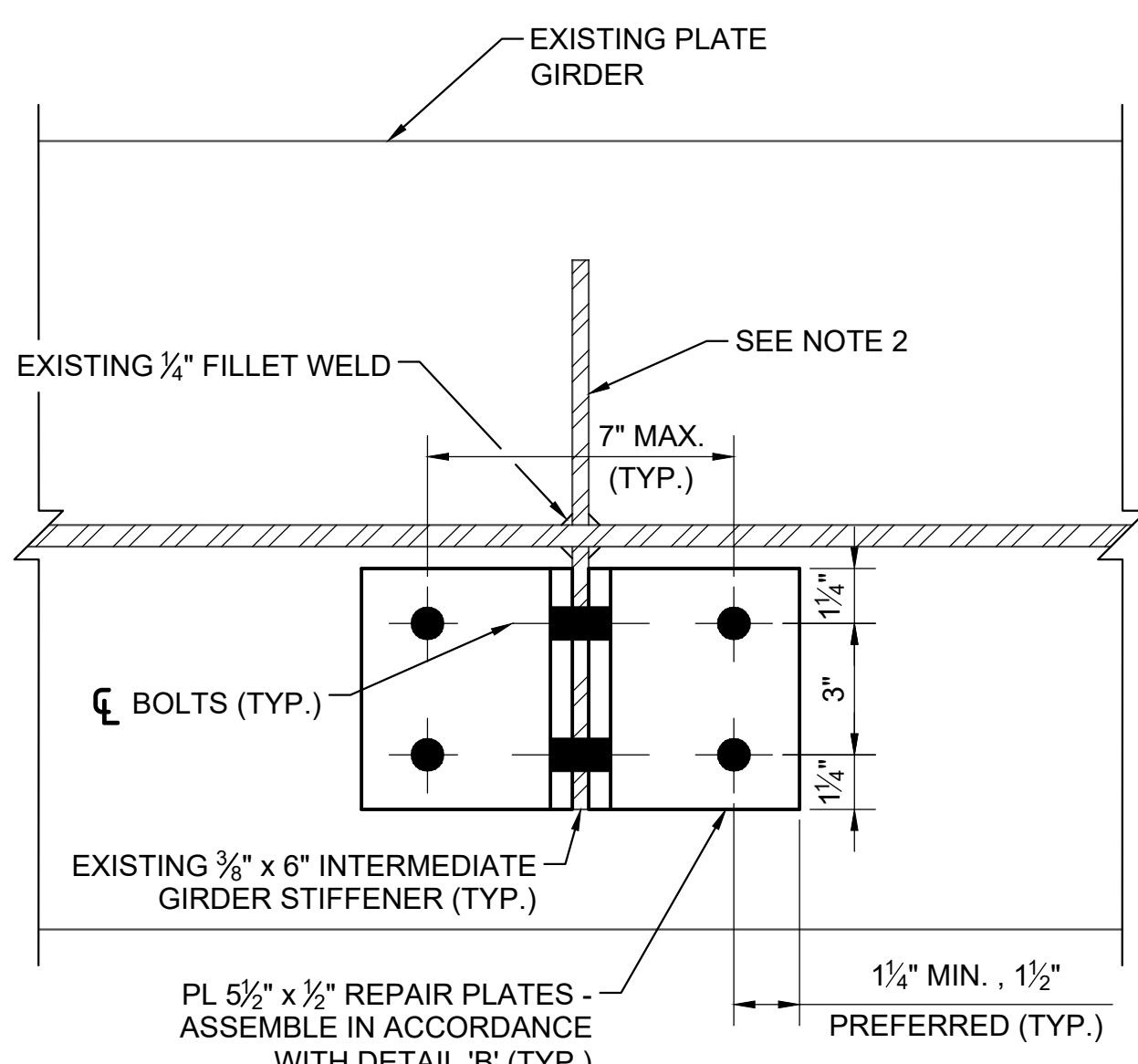
1. PERFORM THIS REPAIR IN FIB-SB SPANS FOR GIRDERS WITH BOTTOM FLANGE CORROSION TOTAL SECTION LOSS EXCEEDING 10% OF THE ORIGINAL CROSS-SECTIONAL AREA OF THE FLANGE (18" W x THICKNESS VARYING FROM $\frac{3}{4}$ " TO $2\frac{1}{2}$ ") AS APPROVED BY THE DISTRICT. PLACE BOTTOM FLANGE FILL PLATE (18" W x THICKNESS AS REQUIRED) IF REPAIR SPANS AN EXISTING BOTTOM FLANGE THICKNESS TRANSITION.
2. CONTACT THE DISTRICT FOR DIRECTION IF EITHER OF THE FOLLOWING OCCUR AT ANY CROSS-SECTION:
 - 2.1. TOTAL FLANGE SECTION LOSS EXCEEDS 9 IN² (EQUIVALENT TO $\frac{1}{2}$ " DEEP SECTION LOSS ACROSS FULL WIDTH OF FLANGE)
 - 2.2. WEB SECTION LOSS EXCEEDS $\frac{1}{4}$ " DEEP AND EXTENDS FURTHER THAN 4" HIGH FROM THE BOTTOM FLANGE
3. TOTAL LENGTH OF REPAIR FOR THIS DETAIL IS EXPECTED TO AVERAGE APPROXIMATELY 5'.
4. GRIND ALL CORROSION TO SMOOTH BARE METAL.
5. FILL ALL GAPS WITH STEEL-FILLED EPOXY PUTTY.
6. DETAILS ARE SHOWN AND ANNOTATED ASSUMING REPAIR PLATES ARE ASSEMBLED ACCORDING TO DETAIL 'A'. THE CONTRACTOR MAY SUBSTITUTE ASSEMBLY IN ACCORDANCE WITH DETAIL 'B' AT NO ADDITIONAL COST TO THE DISTRICT.
7. IF SECTION LOSS OCCURS AT OR NEAR A STIFFENER OR CONNECTION PLATE, ADJUST PLATING AS SHOWN IN DETAIL D. MAINTAIN A MINIMUM OF (12) FASTENERS THRU FLANGE AND (6) FASTENERS THRU WEB ON EACH SIDE OF EXISTING SECTION LOSS.



FIB-SB GIRDER REPAIR TYPE 1

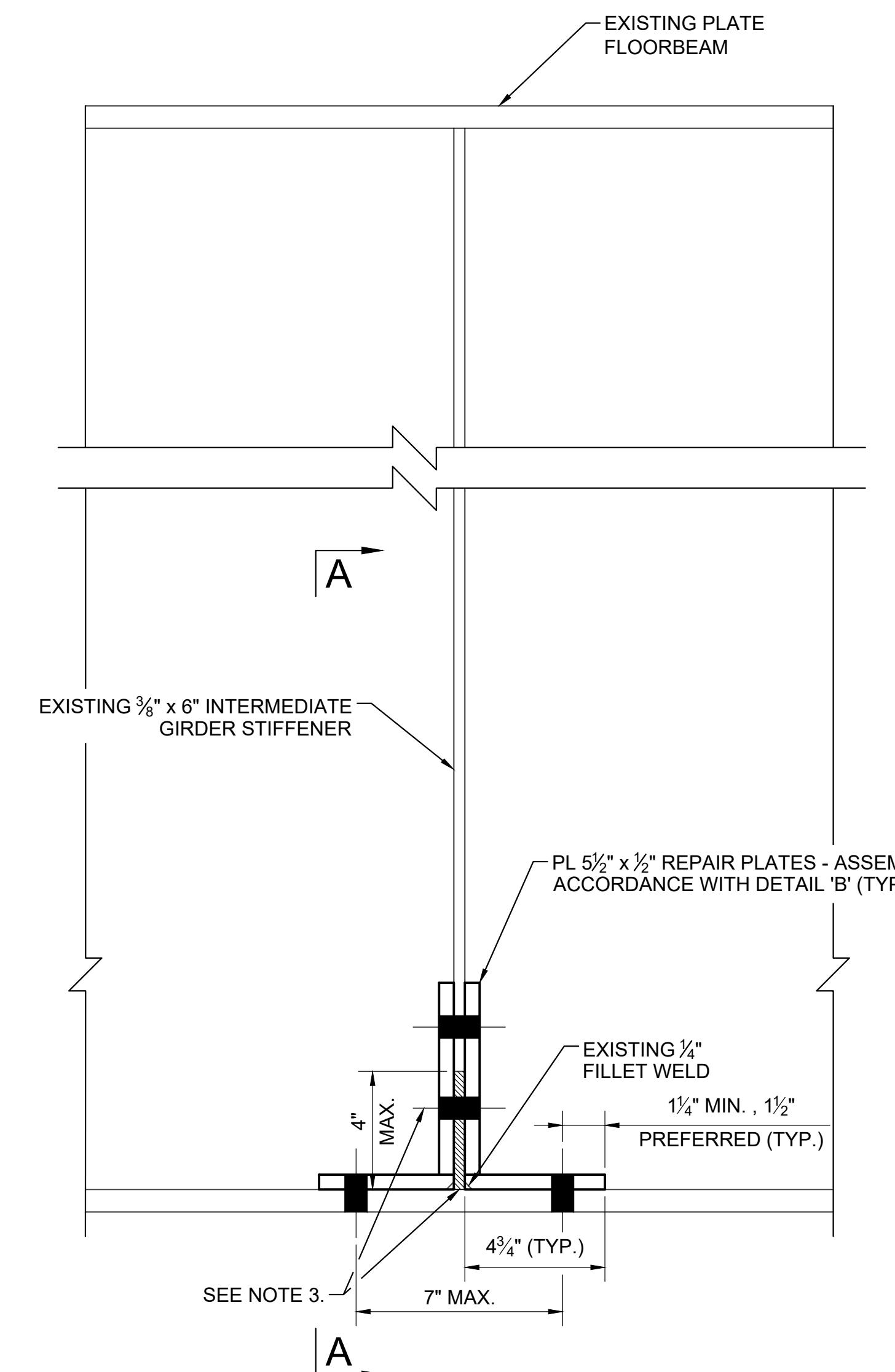


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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | |
| FISHERMAN'S INLET BRIDGE SB GIRDER PLATING REPAIRS | | | | | |
| No. | Description | Date | Designed: JSE | Date | Plan No. |
| | | | Drawn: JSE | | Sheet No. |
| | Revision | | Checked: AHC | 12/18/2025 | 37 OF 45 |



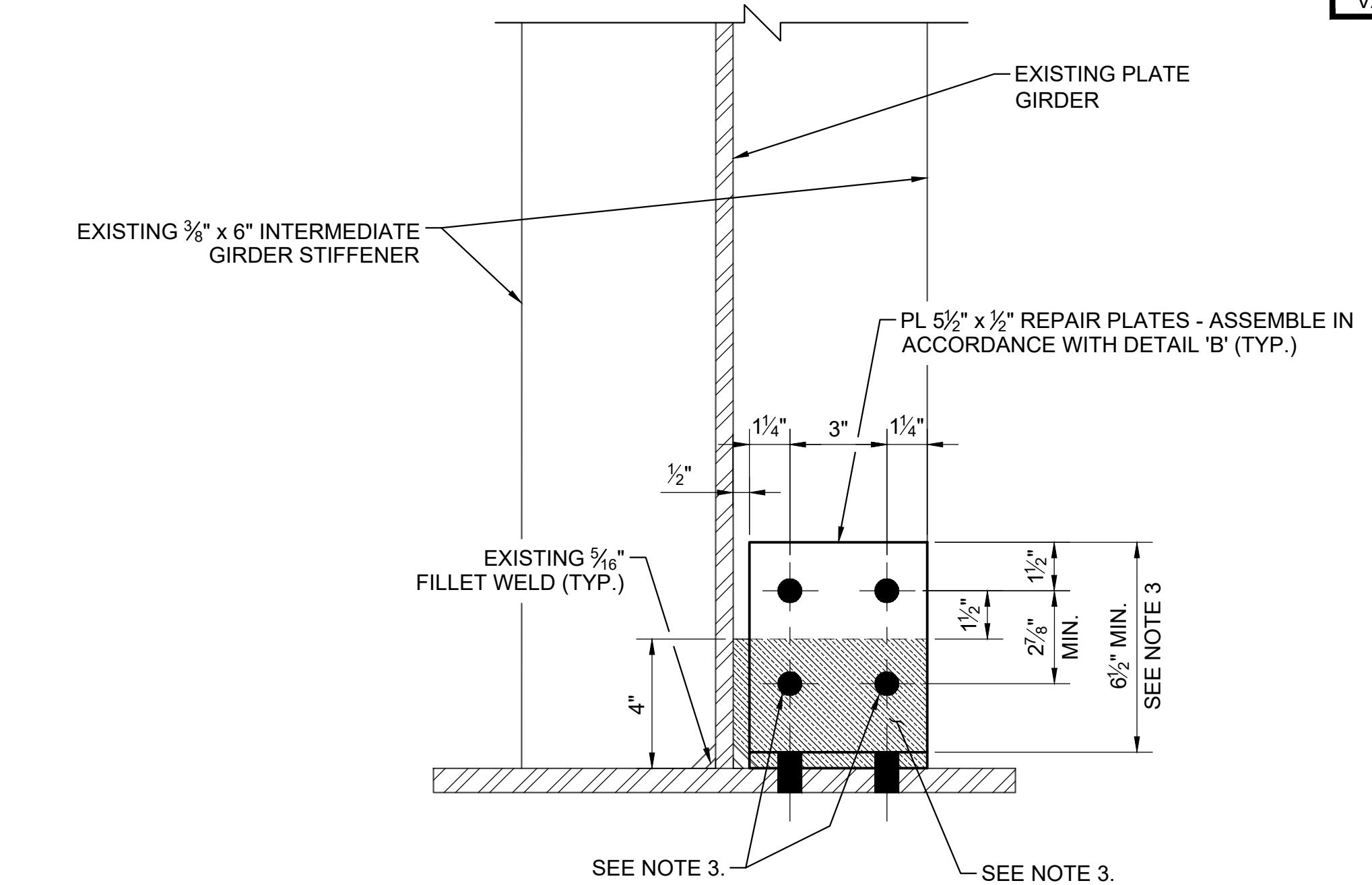
PLAN VIEW

SCALE: 3" = 1'-0"



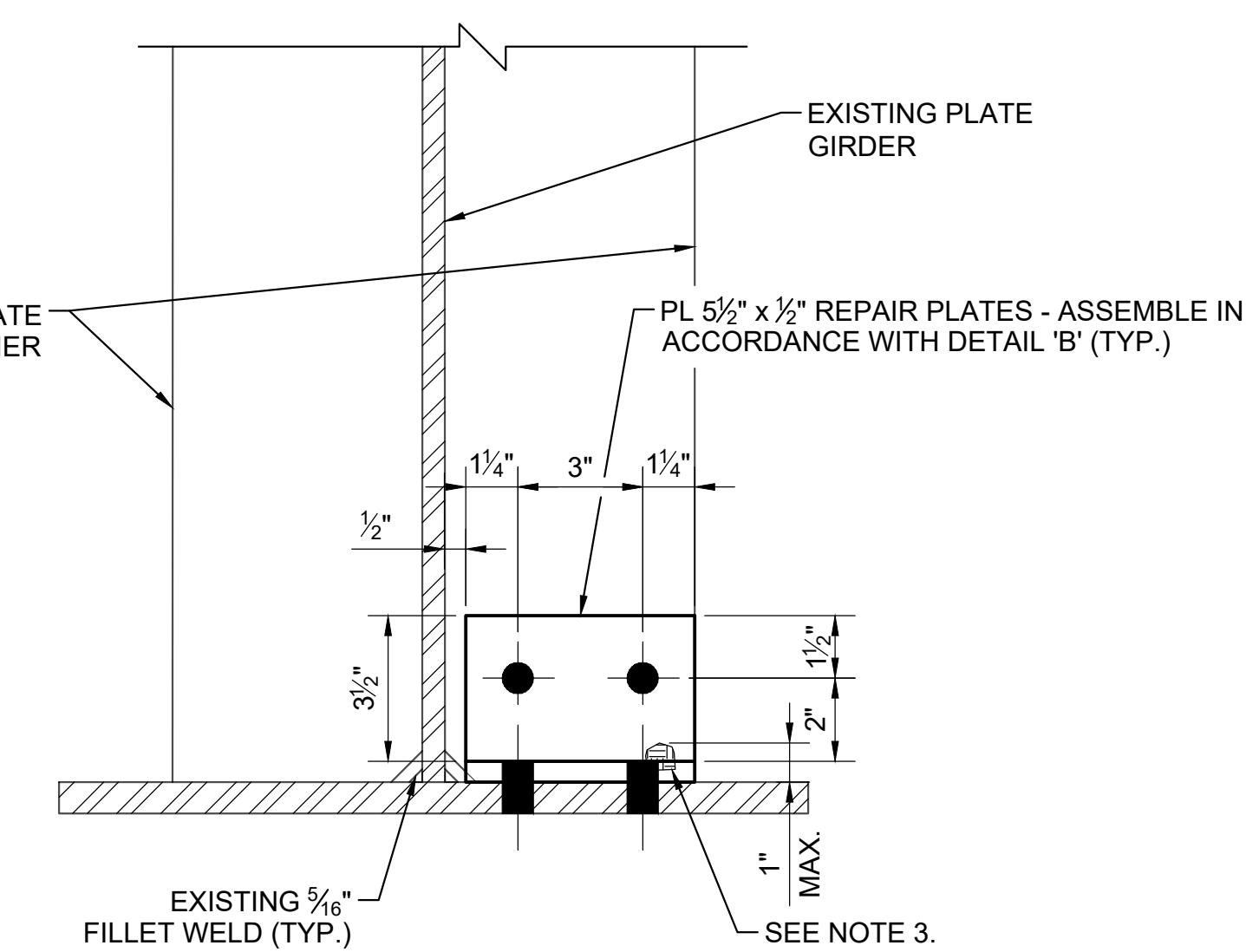
ELEVATION

SCALE: 3" = 1'-0"



SECTION A-A

SCALE: 3" = 1'-0"



DETAIL C

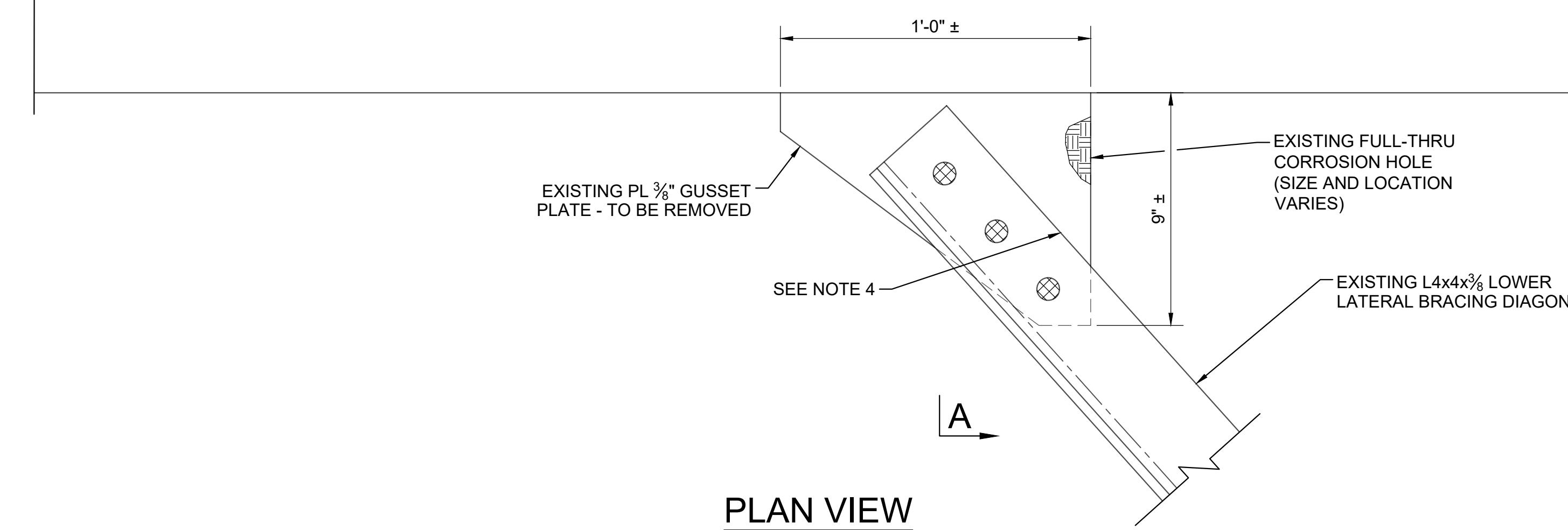
SCALE: 3" = 1'-0"

DETAIL-SPECIFIC NOTES

1. PERFORM THIS REPAIR IN FIB-SB SPANS FOR INTERMEDIATE GIRDER STIFFENERS EXHIBITING CORROSION AT BOTTOM END WITH LESS THAN 1/4" REMAINING OVER 3" OR MORE OF THE STIFFENER WIDTH AS APPROVED BY THE DISTRICT.
2. BACK TO BACK REPAIR CONDITIONS (EITHER SIDE OF GIRDER) MAY EXIST.
3. CORROSION ANTICIPATED AT THE BOTTOM END OF THE BEARING STIFFENER IS UP TO 4" HIGH x UP TO FULL WIDTH x UP TO 3/16" TOTAL DEPTH.
 - 3.1. IF CORROSION IS LESS THAN 1" WIDE OR 1" HIGH, GRIND CORROSION SMOOTH, FILL GAP WITH EPOXY PUTTY, AND ADJUST REPAIR AS SHOWN IN DETAIL C.
 - 3.2. IF CORROSION IS > 1/2" AND < 4" HIGH, CUT-OUT BOTTOM OF STIFFENER 4" ABOVE BOTTOM FLANGE ACROSS FULL WIDTH, GRIND WELDS ON BOTTOM FLANGE AND AFFECTED PORTION OF WEB FLUSH, AND PLACE 3/8" x 6" FILL PLATE AS SHOWN IN SECTION A-A.
 - 3.3. IF CORROSION EXCEEDS 4" HIGH, CONTACT THE DISTRICT FOR DIRECTION.
4. MATCH DRILL OPPOSING REPAIR PLATE ASSEMBLIES IN THE SHOP.
5. IT IS ACCEPTABLE TO SUBSTITUTE ROLLED ANGLE SECTIONS WITH EQUIVALENT FLANGE LENGTH AND THICKNESS IN PLACE OF THE WELDED REPAIR PLATE ASSEMBLIES DEPICTED AT NO ADDITIONAL COST TO THE DISTRICT.
6. GRIND ALL CORROSION TO SMOOTH BARE METAL.
7. FILL ALL GAPS WITH STEEL-FILLED EPOXY PUTTY.

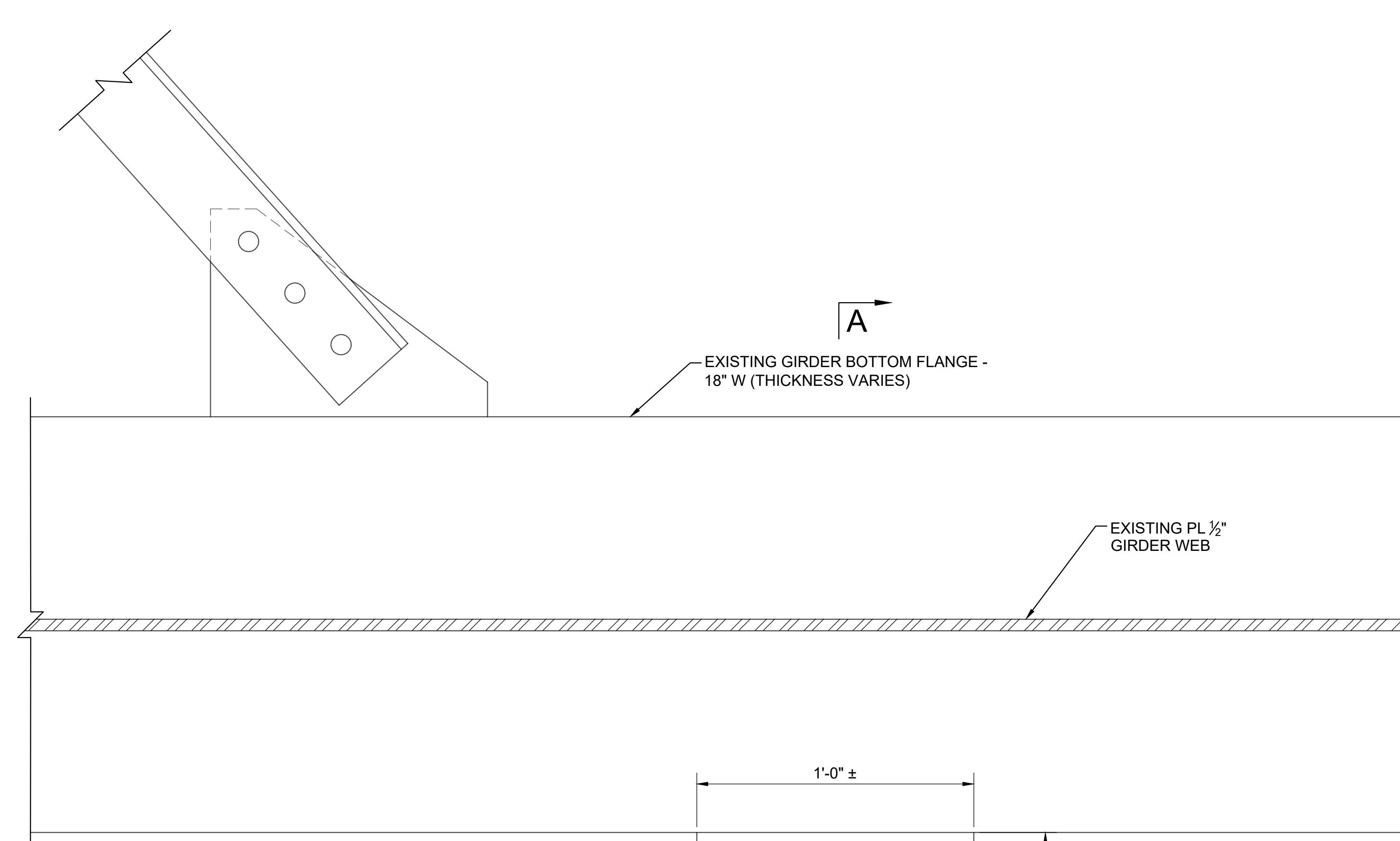


KYLE WILLIAM SMITH
Lic. No. 0402056878
PROFESSIONAL ENGINEER
SIGNED: 1/5/2026
EXPIRES: 9/30/2026
GPI
COLUMBIA, MD
STRUCTURAL ENGINEER

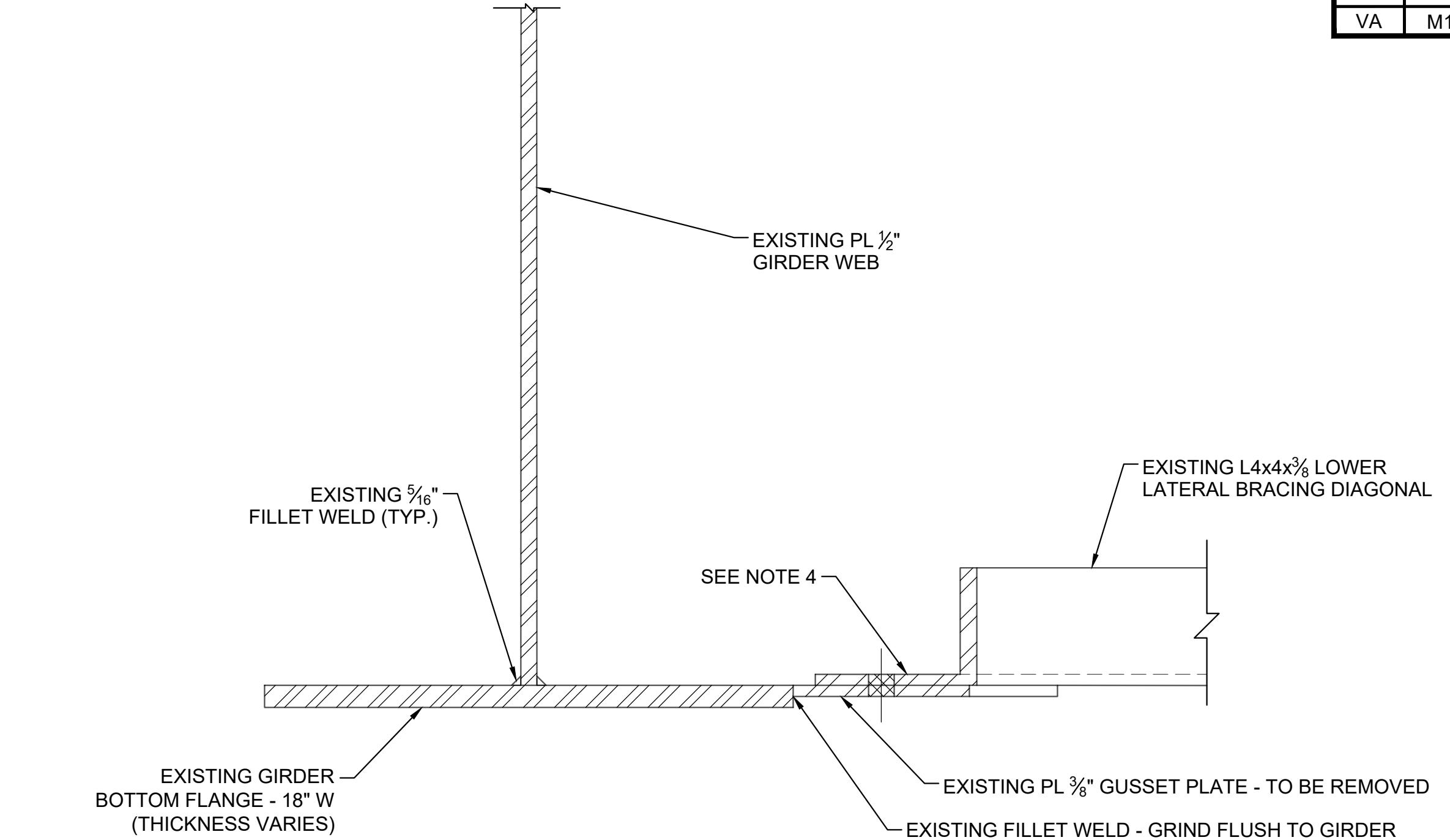


PLAN VIEW
SCALE: 3" = 1'-0"

**FIB-SB BRACING REPAIR TYPE 1
EXISTING CONDITION**



A



SECTION A-A

SCALE: 3" = 1'-0"

DETAIL-SPECIFIC NOTES

1. PERFORM THIS REPAIR FOR FIB-SB LOWER LATERAL BRACING GUSSET PLATES AT INTERIOR GIRDERS WITH FULL-THRU EDGE CORROSION HOLES EXTENDING FURTHER THAN 1" FROM THE GUSSET EDGE AS APPROVED BY THE DISTRICT. FOR CORROSION HOLES EXTENDING LESS THAN 1" FROM THE GUSSET EDGE, GRIND CORRODED EDGES SMOOTH PRIOR TO PAINTING.
2. SUPPORT ANY LATERAL BRACING MEMBERS DISCONNECTED WHILE PERFORMING REPAIR PER THIS DETAIL.
3. PROPOSED REPAIR ELEMENTS ARE SHOWN SHADED FOR CLARITY.
4. CONTACT THE DISTRICT FOR DIRECTION IF THE LOWER LATERAL BRACING DIAGONAL HORIZONTAL FLANGE EXHIBITS SECTION LOSS GREATER THAN 20% AT ANY CROSS-SECTION.

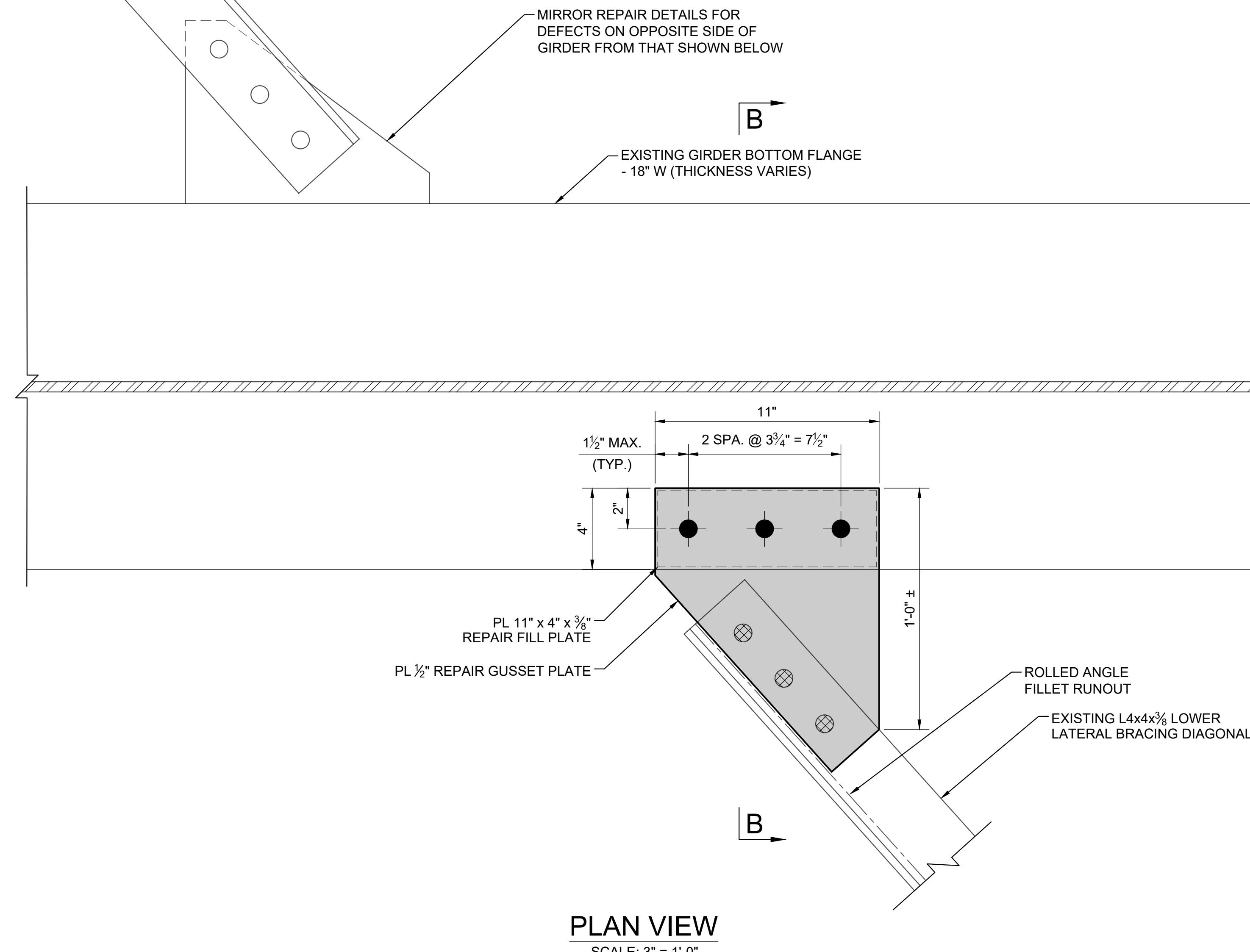
| CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | | | |
|---|-------------|------|---------------|------------|----------|-----------|
| RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | | | |
| FISHERMAN'S INLET BRIDGE SB MISCELLANEOUS REPAIRS | | | | | | |
| No. | Description | Date | Designed: JSE | Date | Plan No. | Sheet No. |
| | | | Drawn: JSE | | | |
| | Revision | | Checked: AHC | 12/18/2025 | | 39 OF 45 |



KYLE WILLIAM SMITH
Lic. No. 0402056878

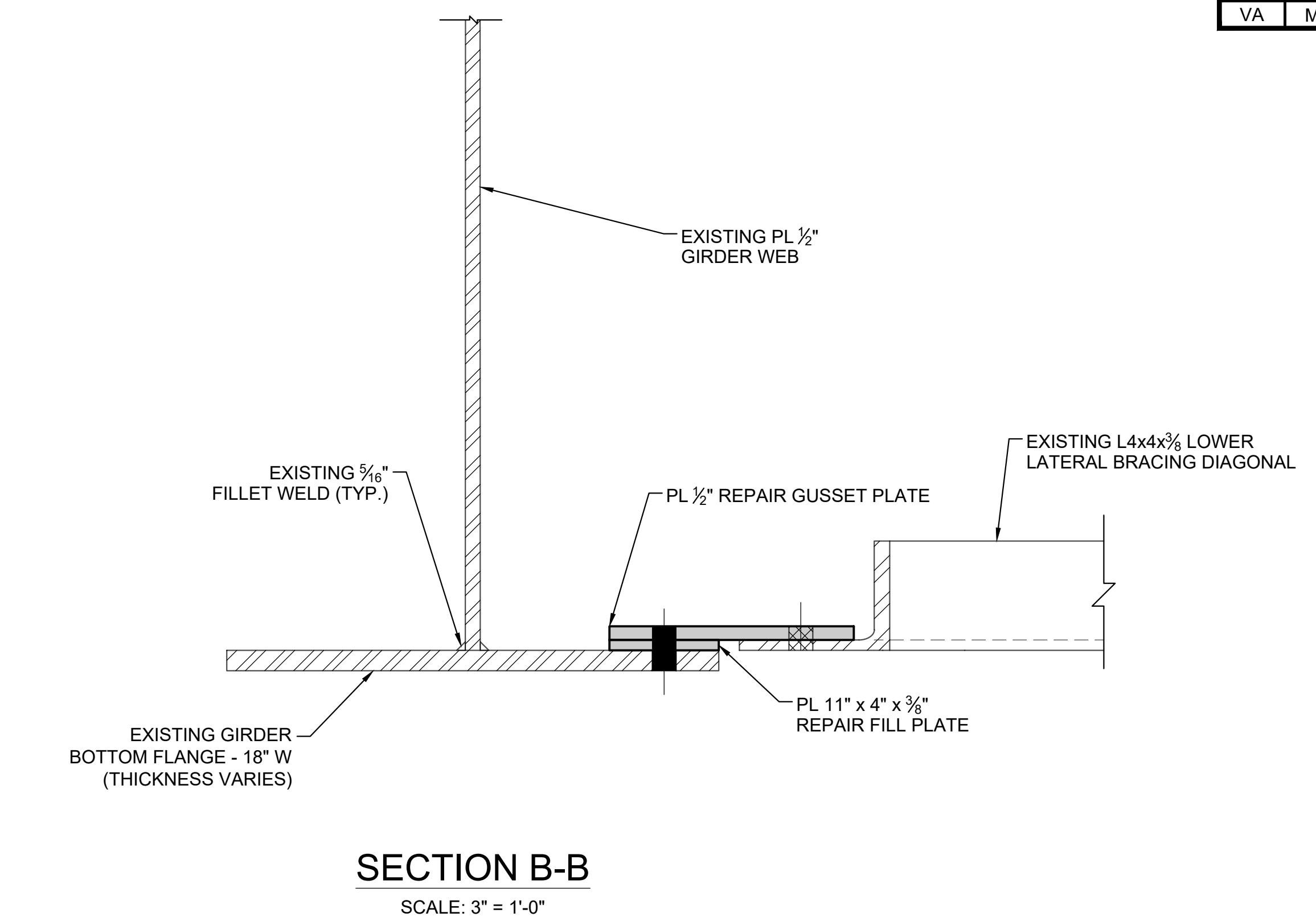
PROFESSIONAL ENGINEER
SIGNED: 1/5/2026
EXPIRES: 9/30/2026

GPI
COLUMBIA, MD
STRUCTURAL ENGINEER



PLAN VIEW
SCALE: 3" = 1'-0"

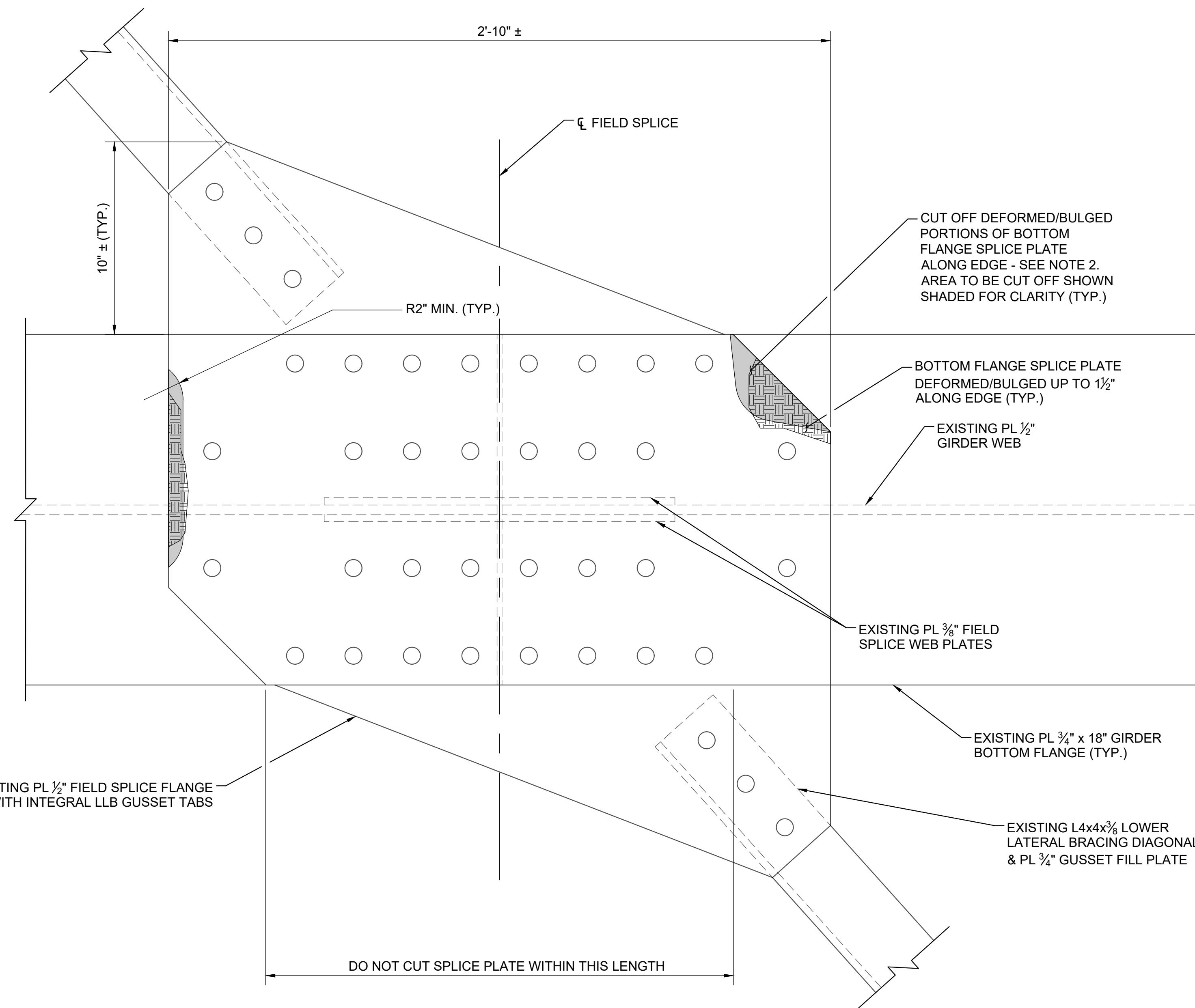
FIB-SB BRACING REPAIR TYPE 1
REPAIRED CONDITION



SECTION B-B

SCALE: 3" = 1'-0"

| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | |
|--|-------------|------|---|------------|----------|-----------|
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | |
| FISHERMAN'S INLET BRIDGE SB MISCELLANEOUS REPAIRS | | | | | | |
| No. | Description | Date | Designed: JSE | Date | Plan No. | Sheet No. |
| | | | Drawn: JSE | | | |
| | Revision | | Checked: AHC | 12/18/2025 | | 40 OF 45 |



VIEW LOOKING UP

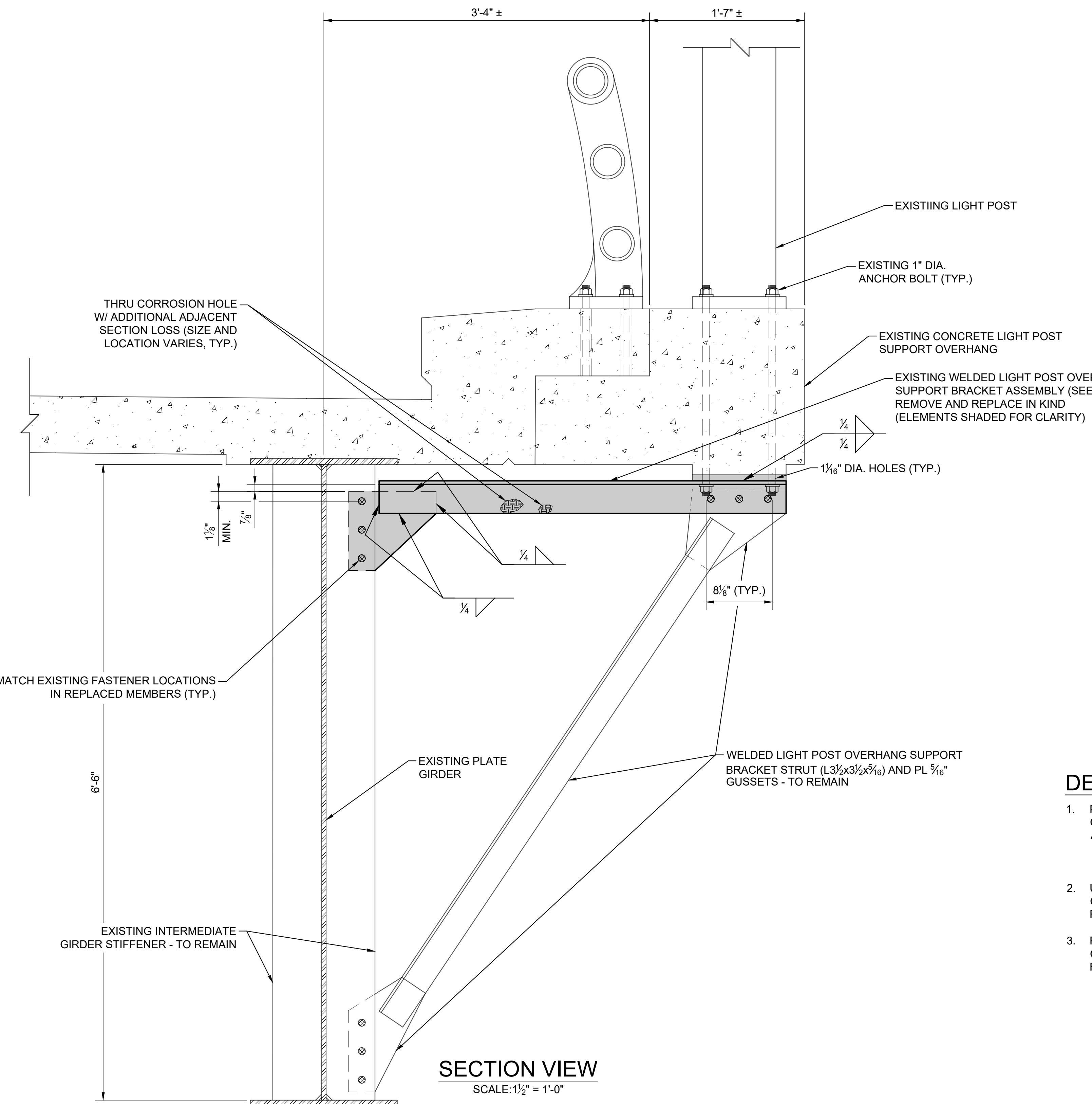
SCALE: 3" = 1'-0"

FIB-SB BRACING REPAIR TYPE 2

DETAIL-SPECIFIC NOTES

1. PERFORM THIS REPAIR FOR FIB-SB SPAN 2 FIELD SPICE BOTTOM FLANGE PLATES WITH INTEGRAL LOWER LATERAL BRACING GUSSET TABS DEFORMED AND/OR BULGED AROUND THEIR PERIPHERY AT LEAST $\frac{1}{2}$ " THICKER THAN ORIGINAL THICKNESS OF $\frac{1}{2}$ " AS APPROVED BY THE DISTRICT.
2. CUT OFF OR OTHERWISE REMOVE DEFORMED AND/OR BULGED PORTION OF BOTTOM FLANGE SPICE PLATE LONGITUDINAL ENDS (EDGES TRANSVERSE TO THE GIRDER) TO EXTENT OF DEFORMATION EXCEPT DO NOT CUT CLOSER THAN $\frac{1}{2}$ " FROM CENTER OF ANY FASTENER. APPLY MINIMUM 2" RADIUS TO ALL CUT OUT INSIDE CORNERS.
3. USE CAUTION TO AVOID DAMAGE TO GIRDER BOTTOM FLANGE, LOWER LATERAL BRACING MEMBERS, AND ALL OTHER STRUCTURE. FLAME CUTTING IS PROHIBITED AS A METHOD FOR REMOVAL FOR THIS DETAIL. IF DAMAGE OCCURS, CONTRACTOR IS RESPONSIBLE FOR REPAIRING IT TO THE SATISFACTION OF THE DISTRICT AT NO COST TO THE DISTRICT.
4. SHAPE AND DIMENSIONS OF EXISTING BOTTOM FLANGE SPICE PLATE WITH INTEGRAL GUSSET TABS ARE APPROXIMATE.

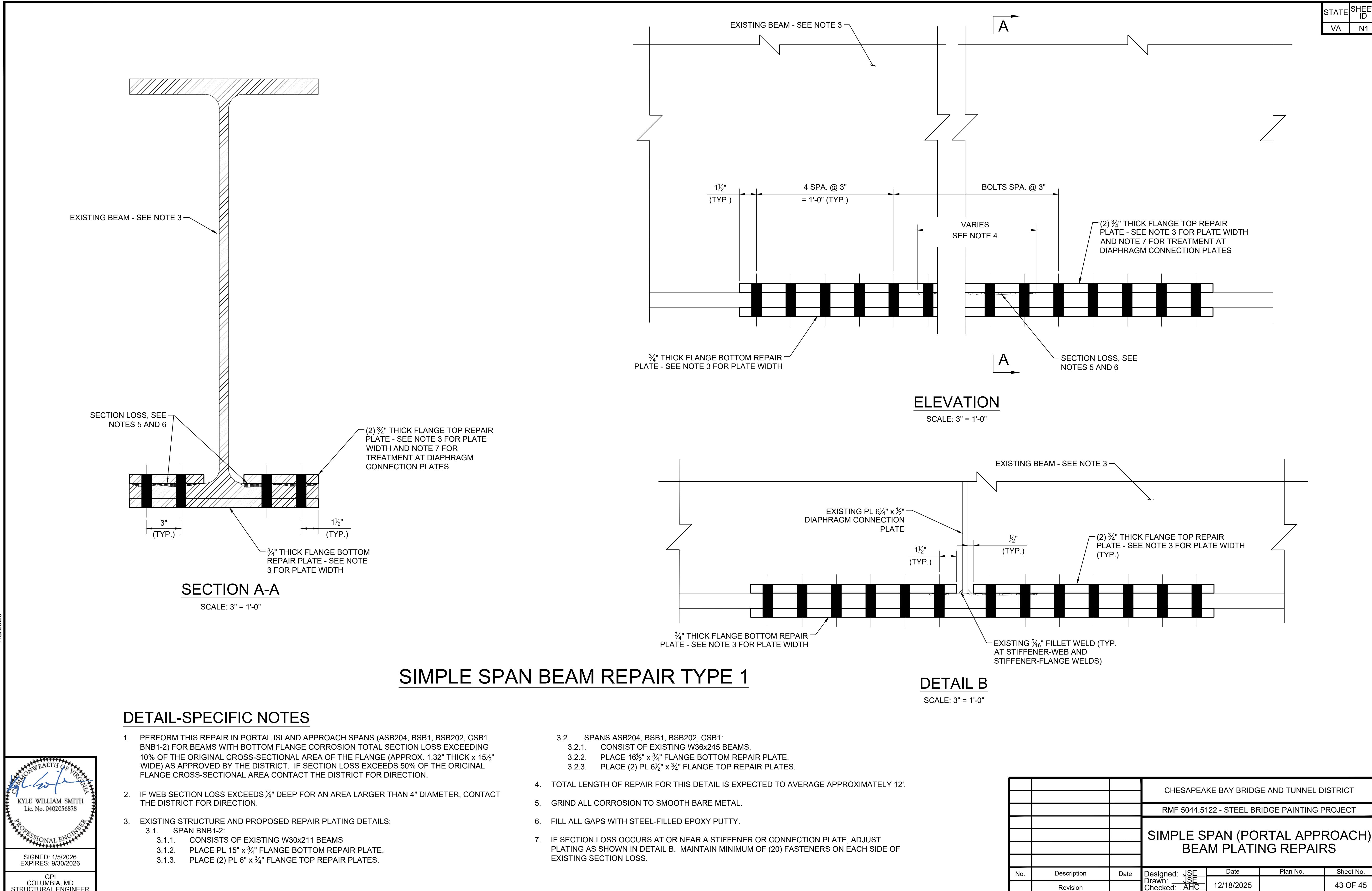
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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | | |
| FISHERMAN'S INLET BRIDGE SB MISCELLANEOUS REPAIRS | | | | | | | |
| No. | Description | Date | Designed: <u>JSE</u> | Date | Drawn: <u>JSE</u> | Date | Plan No. |
| | Revision | | Checked: <u>AHC</u> | 12/18/2025 | | | Sheet No. |
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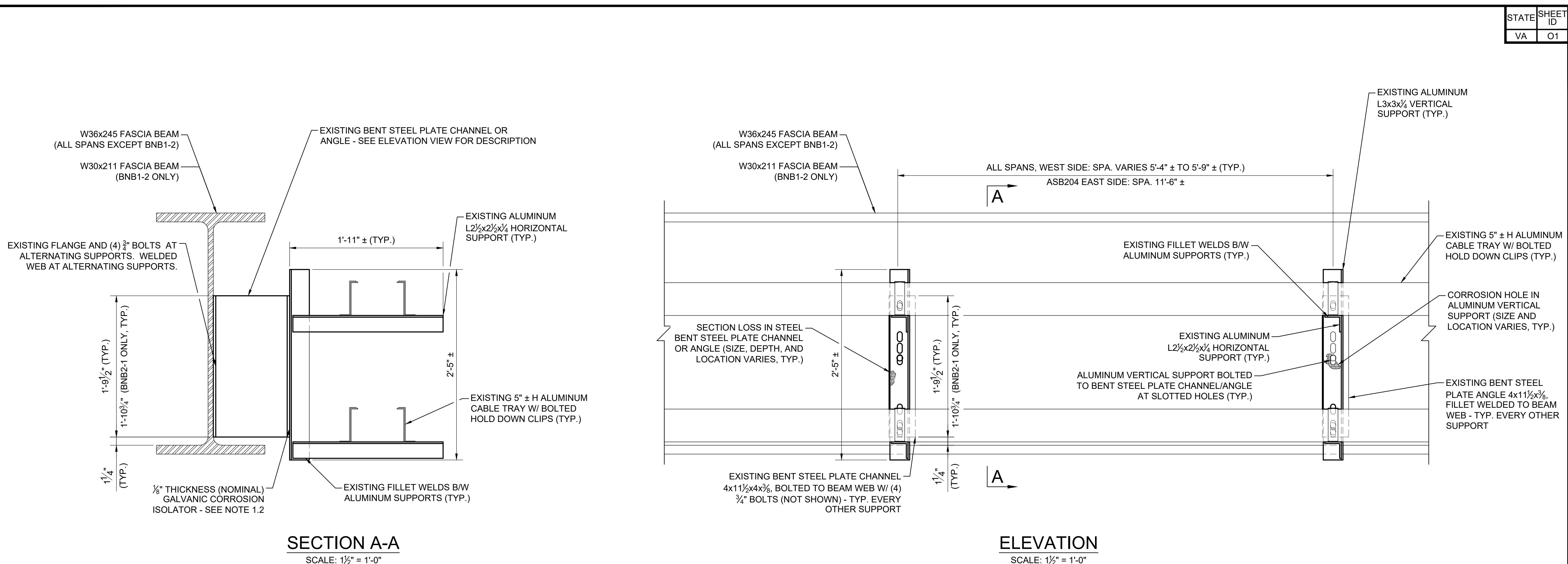


DETAIL-SPECIFIC NOTES

1. PERFORM THIS REPAIR FOR FIB-SB EXISTING LIGHT POST OVERHANG SUPPORT BRACKETS WITH FULL-THRU CORROSION HOLES AS APPROVED BY THE DISTRICT. THE LIGHT POST OVERHANG SUPPORT BRACKETS ARE LOCATED AS FOLLOWS:
 - SPAN 1 EAST FASCIA ADJACENT TO PIER 2
 - SPAN 3 WEST FASCIA ADJACENT TO PIER 3
2. USE CAUTION TO ENSURE THAT CONCRETE LIGHT POST SUPPORT OVERHANG, SUPPORT BRACKETS TO REMAIN, GIRDER, AND ALL OTHER COMPONENTS ARE NOT DAMAGED IN ANY WAY. IF DAMAGE OCCURS, CONTRACTOR IS RESPONSIBLE FOR REPAIRING IT TO THE SATISFACTION OF THE DISTRICT AT NO COST TO THE DISTRICT.
3. REMOVE AND REPLACE EXISTING WELDED LIGHT POST OVERHANG SUPPORT BRACKET ASSEMBLY, WHICH CONSISTS OF THE FOLLOWING, IN KIND. FIELD-VERIFY ALL DIMENSIONS AND ADJUST AS NECESSARY PRIOR TO FABRICATING REPLACEMENT ELEMENTS.
 - 3.1. (1) SUPPORT BRACKET TOP CHORD (ST4x11.5)
 - 3.2. (1) PL 5/16" GUSSET
 - 3.3. (1) PL 11 1/2" x 11 1/2" x 3/4" ADAPTER PLATE

| | | | | | |
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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | |
| FISHERMAN'S INLET BRIDGE SB MISCELLANEOUS REPAIRS | | | | | |
| No. | Description | Date | Designed: JSE | Date | Plan No. |
| | | | Drawn: JSE | | Sheet No. |
| | Revision | | Checked: AHC | 12/18/2025 | 42 OF 45 |



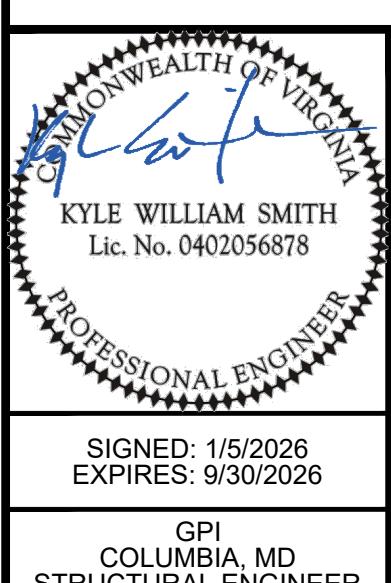


SIMPLE SPAN UTILITY REPAIR TYPES 1 & 1A

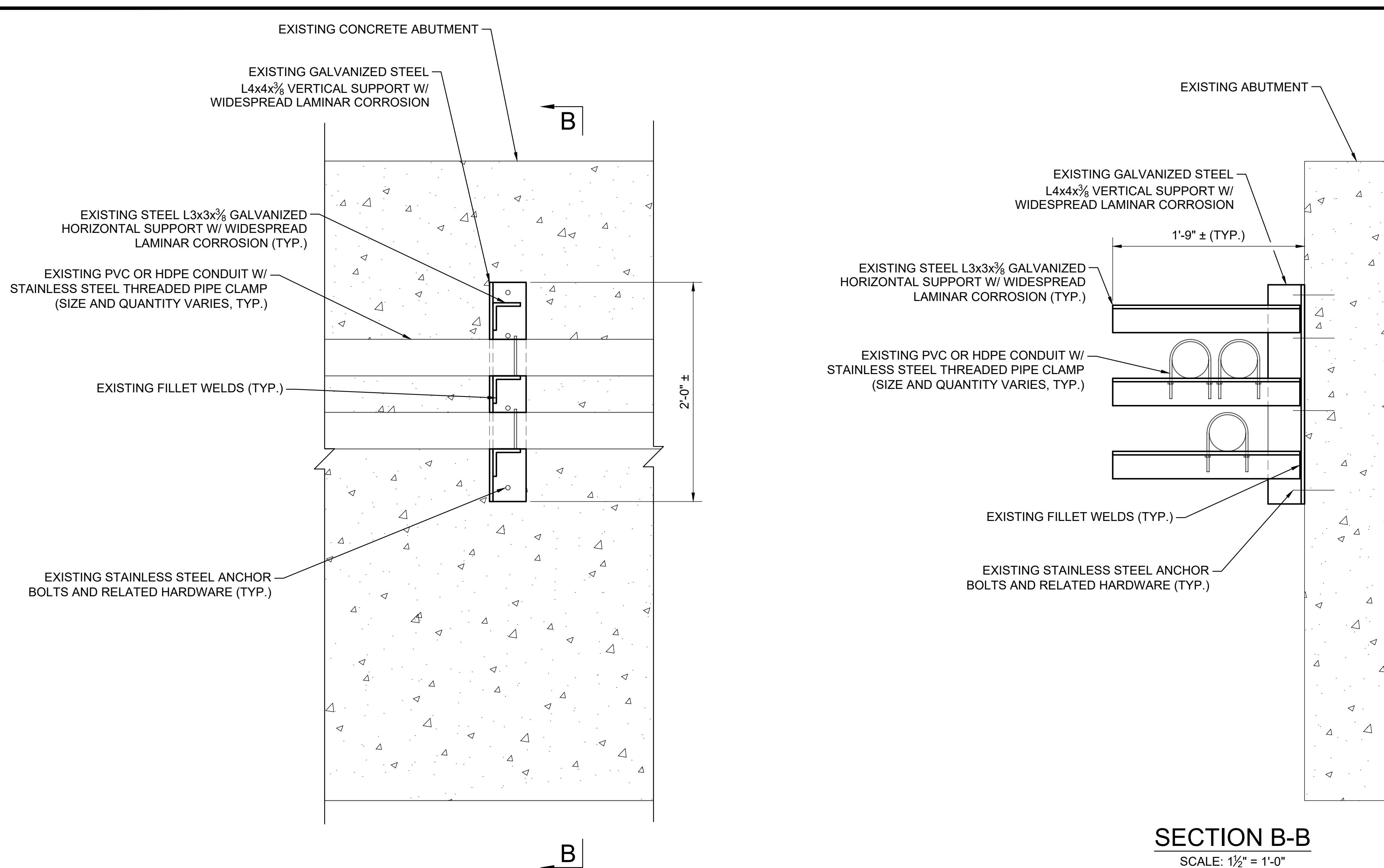
DETAIL-SPECIFIC NOTES (SIMPLE SPAN UTILITY REPAIR TYPES 1 & 1A)

1. PERFORM SIMPLE SPAN UTILITY REPAIR TYPE 1 ON PORTAL ISLAND APPROACH SPANS (ASB204, BSB1, BSB202, CSB1, BNB1-2) FOR ALUMINUM UTILITY SUPPORT BRACKET ASSEMBLIES EXHIBITING AT LEAST ONE FULL-THROUGH CORROSION HOLE 1" DIA. OR LARGER. REPAIR CONSISTS OF:
 - 1.1. IN-KIND REPLACEMENT OF WELDED ALUMINUM BRACKET ASSEMBLY, EACH OF WHICH CONSISTS OF:
 - 1.1.1. (1) $L3x3\frac{1}{4}$ VERTICAL SUPPORT, AND
 - 1.1.2. (2) $L2\frac{1}{2}x2\frac{1}{2}\frac{1}{4}$ HORIZONTAL SUPPORTS
 - 1.1.3. USE ALUMINUM GRADE 5086 OR ALTERNATE APPROVED BY THE DISTRICT.
 - 1.1.4. WELD SIZE AND LOCATIONS TO MATCH EXISTING. WELD IN ACCORDANCE WITH PROJECT NOTES.
 - 1.2. PLACEMENT OF AN $\frac{1}{8}$ " NOMINAL THICKNESS GALVANIC CORROSION ISOLATOR BETWEEN ALUMINUM AND STEEL MATING SURFACES. THE DISTRICT WILL VISUALLY VERIFY GALVANIC ISOLATOR INSTALLATION.
 - 1.3. INSTALLATION WITH STAINLESS STEEL GRADE 316 BOLTS. USE INSULATING BOLT SLEEVES AND WASHERS TO GALVANICALLY ISOLATE THE FASTENERS USED FOR ATTACHMENT OF ALUMINUM SUPPORTS TO BRIDGE-MOUNTED STEEL SUPPORTS. THE DISTRICT WILL VERIFY ELECTRICAL ISOLATION OF INSTALLED FASTENERS.
 - 1.4. CLEAN AND PAINT ALL Affected CARBON STEEL WITH THE ZINC - 2 COAT PAINT SYSTEM.
2. ADDITIONALLY, PERFORM SIMPLE SPAN UTILITY REPAIR TYPE 1A ON PORTAL ISLAND APPROACH SPANS (ASB204, BSB1, BSB202, CSB1, BNB1-2) FOR BENT STEEL PLATE UTILITY SUPPORT ANGLES OR CHANNELS (BRACKETS) EXHIBITING AT LEAST ONE FULL-THROUGH CORROSION HOLE 1" DIA. OR LARGER. REPAIR CONSISTS OF:
 - 2.1. REPLACEMENT USING A BENT STEEL $\frac{3}{8}$ " PLATE CHANNEL WITH 4" W FLANGES AND AN $1\frac{1}{2}$ " W WEB (TO MATCH EXISTING CHANNEL LOCATED AT ALTERNATING LOCATIONS).
 - 2.2. ATTACHMENT USING (4) $\frac{3}{4}$ " BOLTS.
 - 2.2.1. AT EXISTING BOLTED CHANNEL LOCATIONS, MATCH EXISTING HOLES IN REPLACEMENT BRACKET.
 - 2.2.2. AT EXISTING WELDED ANGLE LOCATIONS, GRIND WELD FLUSH TO BEAM WEB.
3. USE CAUTION TO ENSURE THAT EXISTING BEAM IS NOT DAMAGED IN ANY WAY WHEN REMOVING EXISTING UTILITY SUPPORTS. IF DAMAGE OCCURS, CONTRACTOR IS RESPONSIBLE FOR REPAIRING IT TO THE SATISFACTION OF THE DISTRICT AT NO COST TO THE DISTRICT.
4. ALL UTILITY SUPPORT SECTION SIZES AND DIMENSIONS ARE APPROXIMATE. FIELD VERIFY PRIOR TO FABRICATING ELEMENTS.

FOR ALUMINUM SUPPORT BRACKET ASSEMBLIES TO REMAIN, GRIND ALL REMAINING CORROSION SMOOTH.



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| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | |
| SIMPLE SPAN (PORTAL APPROACH) UTILITY SUPPORT REPAIRS | | | | |
| No. | Description | Date | Designed: JSE | Date |
| | | | Drawn: JSE | Plan No. |
| | Revision | | Checked: AHC | Sheet No. |
| | | | 12/18/2025 | 44 OF 45 |



SECTION B-B

SCALE: $1\frac{1}{2}'' = 1'-0''$

ELEVATION

SCALE: $1\frac{1}{2}'' = 1'-0''$

SIMPLE SPAN UTILITY REPAIR TYPE 2

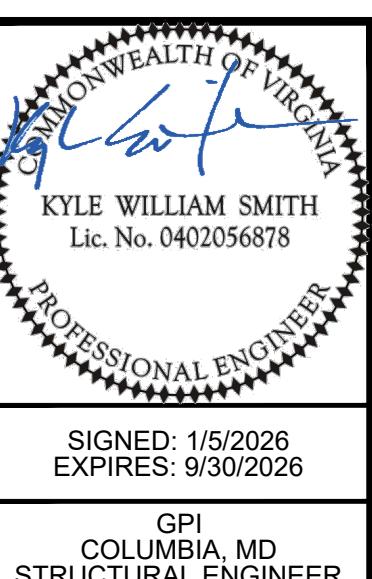
**DETAIL-SPECIFIC NOTES
(SIMPLE SPAN UTILITY REPAIR TYPE 2)**

1. PERFORM SIMPLE SPAN UTILITY REPAIR TYPE 2 ON PORTAL ISLAND APPROACH SPAN (ASB204, BSB1, BSB202, CSB1, BNB1-2) ABUTMENTS FOR GALVANIZED STEEL UTILITY SUPPORT BRACKET ASSEMBLIES WITH TOTAL SECTION LOSS DUE TO CORROSION EXCEEDING 25% OF THE ORIGINAL CROSS-SECTIONAL AREA AT ANY CROSS-SECTION AS APPROVED BY THE DISTRICT. REPAIR CONSISTS OF:
 - 1.1. REPLACEMENT OF WELDED GALVANIZED BRACKET ASSEMBLY, EACH OF WHICH CONSISTS OF:
 - 1.1.1. (1) L4x4x3/8 VERTICAL SUPPORT, AND
 - 1.1.2. (3) L3x3x3/8 HORIZONTAL SUPPORTS
 - 1.1.3. DIMENSIONS OF REPLACEMENT ASSEMBLY TO MATCH THOSE OF EXISTING COMPONENTS.
 - 1.1.4. USE STAINLESS STEEL GRADE 316 IN PLACE OF GALVANIZED STEEL FOR ALL ELEMENTS
 - 1.1.4. WELD SIZE AND LOCATIONS TO MATCH EXISTING. WELD IN ACCORDANCE WITH PROJECT NOTES.
 - 1.2. RE-USE EXISTING STAINLESS STEEL ANCHOR BOLTS. REPLACE RELATED HARDWARE (USE STAINLESS STEEL GRADE 316). IF EXISTING ANCHORS BOLTS ARE NOT STAINLESS STEEL AT ANY LOCATION, CONTACT THE DISTRICT FOR DIRECTION.
 - 1.3. REPLACE PIPE CLAMPS (USE STAINLESS STEEL GRADE 316).

FOR WELDED GALVANIZED BRACKET ASSEMBLIES TO REMAIN, GRIND ALL REMAINING CORROSION SMOOTH.

2. ALL UTILITY SUPPORT SECTION SIZES AND DIMENSIONS ARE APPROXIMATE. FIELD VERIFY PRIOR TO FABRICATING ELEMENTS.

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|--|-------------|------|---|------------|----------|-----------|
| | | | CHESAPEAKE BAY BRIDGE AND TUNNEL DISTRICT | | | |
| | | | RMF 5044.5122 - STEEL BRIDGE PAINTING PROJECT | | | |
| SIMPLE SPAN (PORTAL APPROACH) UTILITY SUPPORT REPAIRS | | | | | | |
| No. | Description | Date | Designed: <u>JSE</u> | Date | Plan No. | Sheet No. |
| | Revision | | Drawn: <u>JSE</u> | | | |
| | | | Checked: <u>AHC</u> | 12/18/2025 | | 45 OF 45 |



KYLE WILLIAM SMITH
Lic. No. 0402056878

SIGNED: 1/5/2026
EXPIRES: 9/30/2026

GPI
COLUMBIA, MD
STRUCTURAL ENGINEER