

ATTACHMENT 3-1 APPLICABLE STANDARDS

3-1.1 Introduction

Design-Build Contractor shall design and construct the Work in accordance with the relevant requirements of the Project Standards listed in Table 3-1 of this Attachment 3-1. In some instances, only specific sections of the referenced standard apply, as specified in these Technical Provisions. Section 1.3 of the PPA defines the order of precedence for the PPA documents. Section 1.3.4 and 1.3.5 of the PPA provides requirements regarding irreconcilable conflicts, ambiguities or inconsistencies among the Project Standards.

In accordance with Section 2.1.2.5 of the PPA, Design-Build Contractor shall use the most current version of each standard or reference listed in Table 3-1 as of the Setting Date, unless expressly stated otherwise in the PPA Documents.

Any standards, manuals and guidelines that are not included within the definition of Project Standards must be approved by IFA prior to use by Design-Build Contractor. Any manuals or documents other than those reflected herein or elsewhere in the PPA Documents require IFA's prior approval before use in the Work. Design-Build Contractor shall obtain advance prior written approval from IFA for any Deviation from the Project Standards, in addition to complying with any other requirements regarding requested Deviations set forth in the PPA Documents.

Design-Build Contractor shall be responsible to communicate with the applicable Utility Owner to determine the applicable Adjustment Standards for any Utility Adjustment Work.

All references related to measurement for payment, method of measurement, or basis of payment, that occur within Technical Provision Attachments shall be disregarded by Design-Build Contractor.

3-1.2 Modifications to INDOT Standards

The following notes apply to the INDOT standards used on the Project:

1. Certain standards have been created as internal guidance documents and not as mandatory requirements. However, for purposes of this Project, all provisions of standards, including the figures and tables, are mandatory, and guidelines are to be applied as requirements. All words such as “should,” “may,” “must,” “might,” “could,” and “can” shall mean “shall” unless the context requires otherwise, as determined in the sole discretion of INDOT. Design-Build Contractor shall disregard qualifying words such as “usually,” “normally,” and “generally.” References to INDOT practices and policies shall be construed to be mandatory requirements unless the context requires otherwise. It shall be in IFA's sole discretion to determine when the context does not require a provision to be mandatory.
2. In accordance with Sections 2.1.2.5 of the PPA, if the INDOT standard expires during the course of this Project, Design-Build Contractor shall contact IFA to determine whether the standard shall continue to be used or will be replaced.

3. When a reference to “Engineer” relates to design responsibilities or other technical issues, “Engineer” shall mean Design-Build Contractor’s Design Manager or Designer. When a reference to “Engineer” relates to administrative issues, “Engineer” shall mean IFA. It shall be in IFA’s sole discretion to determine whether the context refers to technical or administrative responsibilities. All references to INDOT offices and personnel shall mean Design-Build Contractor’s similar offices and personnel.
4. All references related to measurement for payment, method of measurement, basis of payment, extra work, contract adjustments, adjustment of unit prices, quality adjustments, or similar phrases shall be disregarded by Design-Build Contractor, with the exception of the following:
 - a. Smoothness and quality pay adjustment factors for pavement in accordance with Section 401 and 501 of the Standard Specifications
 - b. Quality adjustments for stormwater management as it pertains to erosion and sediment control in accordance with Section 205.08 of the Standard Specifications
 - c. Retro-reflectivity measurements for performance-based pavement markings in accordance with Section 808.07 of the Standard Specifications
5. References to “additional work,” “adjustment to compensation,” “extra work,” “pay extra,” “at the expenses to the Department,” or similar phrases shall be disregarded, with the exception of the above list under item 4. Payment, and adjustments thereto, as more fully described in Section 12 of the PPA, will be full compensation for all Work performed pursuant to the PPA Documents unless specific provisions for additional payments are contained in the PPA Documents.
6. No changes have been made to provisions in any standards that do not apply to this Project, but that provide general information (e.g., descriptions of INDOT divisions and their duties, descriptions of legal authority, or descriptions of internal INDOT procedures); however, in some cases it may not be clear whether rights or responsibilities are applicable to Design-Build Contractor. In accordance with Section 1.5 of the PPA, if it is unclear whether specific provisions in the standards are applicable to Design-Build Contractor, Design-Build Contractor shall notify IFA and IFA shall make that determination in its sole discretion.
7. Design-Build Contractor shall disregard the paragraphs within the standards relating to questions. All questions shall be taken to IFA.
8. When a standard refers to items that will be performed or provided by INDOT or by a division or employee of INDOT, Design-Build Contractor shall construe the requirements as applying to Design-Build Contractor unless otherwise specified in the PPA Documents, or unless the context requires otherwise. It shall be in IFA’s sole discretion to determine when the context requires otherwise.
9. When a standard refers to an action being necessary or needed, Design-Build Contractor shall construe the action as required, unless the context requires otherwise, as determined in the sole discretion of IFA.
10. Phrases relating to item(s) or activity(ies) that “will be” conducted, that are “most easily accomplished by,” that “are recommended,” that are “desired,” that are “usually necessary,” that “should preferably be” done, that “might require,” that are “necessary” or

“as necessary”, and that are “required” or “done” shall be construed to be mandatory requirements unless the context requires otherwise, as determined in the sole discretion of IFA. Phrases relating to activity(ies) that should not be conducted, such as “is not normally used,” “is not good practice,” “should never be done,” “cannot be used,” or “should be avoided,” shall be construed as prohibited. It shall be in IFA’s sole discretion to determine when the context either requires or does not require a provision to be mandatory.

11. Where the notes refer to items that are indicated in the Plans or special provisions or required in the Plans or special provisions, “plans or special provisions” shall mean Design-Build Contractor’s Plans or special provisions.
12. References to approved products or materials shall mean such products or materials approved by INDOT.
13. Design-Build Contractor shall use forms as required to report the same information and in the same format as INDOT forms shown in the standards.
14. If Design-Build Contractor believes that an item in the standards is unclear, Design-Build Contractor shall notify IFA. Regardless of whether Design-Build Contractor notifies IFA, IFA shall always have the right to notify Design-Build Contractor if Design-Build Contractor is interpreting a requirement incorrectly.
15. All references to “you” or “your” shall mean Design-Build Contractor unless otherwise directed by IFA.
16. When a standard refers to items that will be performed or provided by INDOT or by a division or employee of INDOT, Design-Build Contractor shall construe the requirements as applying to Design-Build Contractor unless otherwise specified in the PPA Documents, or unless the context requires otherwise. It shall be in IFA’s sole discretion to determine when the context requires otherwise.
17. The following sections of Standard Specifications Section 100 – General Provisions are deleted as they are superseded by the PPA: Sections 102, 103.04, 103.05, 104.01, 104.02, 104.03, 105.02, 105.05, 105.06, 105.15, 105.16, 107.06, 107.17, 107.19, 107.22, 107.23, 107.24, 107.25, 108.02, 108.03, 108.08, 108.09, 108.10, 108.11, 108.12, 109 (excepting language specific to pay factors as noted above in item 4), 110, 111, and 113.
18. Section 108.01 of the Standard Specifications is revised to read: “The subcontractor shall be in accordance with the requirements of 105 IAC 11-2-10, Subcontractors.”

3-1.3 List of Project Standards

Table 3-1: Standards and References

The Applicable Standards shall be, but not limited to, those listed below, with approval of other standards at IFA’s sole discretion.

IS: Industry standard, Design-Build Contractor’s responsibility to acquire.

W: Standard available online at Author/Agency’s website, Design-Build Contractor’s responsibility to acquire. (Web sites are listed for some of the standards listed below for information only. The Web sites listed are not guaranteed to be correct. It is ultimately Design-Build Contractor’s responsibility to locate the required standard and to determine if the standard has been modified pursuant to this RFP.)

Author/Agency	Title	Availability
INDOT	Standard Specifications http://www.in.gov/dot/div/contracts/standards/book/index.html	W
INDOT	Recurring Special Provisions & Plan Details http://www.in.gov/dot/div/contracts/standards/rsp/index.html	W
INDOT	INDOT Directives https://www.in.gov/indot/div/mt/directives/directives.htm	W
INDOT	INDOT Standard Drawings http://www.in.gov/dot/div/contracts/standards/drawings/index.html	W
INDOT	INDOT Design Memos https://www.in.gov/dot/div/contracts/standards/memos/memos.html	W
INDOT	Design Manual (IDM) including Design Memoranda http://www.in.gov/indot/design_manual/design_manual_2013.htm	W
INDOT	Approved Materials List http://www.in.gov/indot/div/mt/appmat/appmat.htm	W
INDOT	Indiana Manual on Uniform Traffic Control Devices (IMUTCD) http://www.in.gov/dot/div/contracts/design/mutcd/mutcd.html	W
INDOT	Traffic Management Strategic Deployment Plan http://www.in.gov/indot/3045.htm	W
INDOT	Work Zone Safety Mobility Policy http://www.in.gov/dot/div/contracts/standards/	W
INDOT	Professional Services Contract Administration Manual http://www.in.gov/indot/2733.htm	W
INDOT	Construction Memorandums http://www.in.gov/dot/div/contracts/conmemo/con_memo.htm	W
INDOT	Geotechnical Design Manual, Guidelines, Memoranda, Forms, and Approved Contractors, Consultants, & Materials http://www.in.gov/indot/2804.htm	W
INDOT	Public Involvement Policies and Procedures Manual http://www.in.gov/indot/2366.htm	W

Author/Agency	Title	Availability
INDOT	Total Storm Management Manual http://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=1000&context=jtrpdocs	W
INDOT	Storm Water Management Field Guide https://www.in.gov/indot/files/Indiana_Storm_Water_Field_Guide.pdf	W
INDOT	Utility Accommodation Policy http://www.in.gov/indot/3787.htm	W
INDOT	Utility Facility Relocations on Construction Contracts (105 IAC 13) http://www.in.gov/indot/3787.htm	W
INDOT	Bridge Inspection Manual http://www.in.gov/dot/div/contracts/standards/bridge/bridgeinspect.htm	W
INDOT	Manual for Frequency of Sampling and Testing and Basis for Use of Materials http://www.in.gov/indot/2736.htm	W
INDOT	Procedural Manual for Preparing Environmental Documents https://www.in.gov/indot/files/Procedural_Manual_for_Preparing_Environmental_Studies_2008.pdf	W
INDOT	Waters of the US Documentation https://www.in.gov/indot/files/Waters%20of%20the%20US%20Documentation.pdf	W
INDOT	Waterway Permitting Manual https://www.in.gov/indot/files/Waterway-Permit-Manual%20-%204%202019%20POSTING.pdf	W
INDOT	Cultural Resources Manual https://www.in.gov/indot/crm/	W
INDOT	Traffic Noise Analysis Procedure https://www.in.gov/indot/files/2017%20INDOT%20Noise%20Policy.pdf	W
INDOT	Real Estate Manuals http://www.in.gov/indot/2493.htm	W
INDOT	Right-of-Way Engineering Manual, and Revisions http://www.in.gov/indot/2731.htm	W
INDOT	Site Assessment & Management Manual https://www.in.gov/indot/files/Site%20Assessment%20%20Management%20Manual.pdf	W
INDOT	Cost Estimation System (CES) – Designer Instructions http://www.in.gov/dot/div/contracts/CES%20Designer%20Instructions.pdf	W
INDOT	Interstate Highways Congestion Policy https://www.in.gov/indot/3602.htm	W
INDOT	INDOT Bridge Aesthetics Policy https://www.in.gov/indot/files/Bridge%20Aesthetic%20Policy%2007-18-18.pdf	W

Author/Agency	Title	Availability
KYTC	KYTC Transmittal Memorandum https://transportation.ky.gov/StructuralDesign/Transmittal%20Memos/Forms/AllItems.aspx	W
KYTC	KYTC Structural Design Guidance Manual, Chapters https://transportation.ky.gov/StructuralDesign/Structure%20Guidance%20Manuals/Chapters.pdf	W
KYTC	KYTC Structural Design Guidance Manual, Exhibits https://transportation.ky.gov/StructuralDesign/Structure%20Guidance%20Manuals/Exhibits.pdf	W
KYTC	KYTC Standard Drawings https://transportation.ky.gov/Highway-Design/Pages/2016-Standard-Drawings.aspx	W
KYTC	KYTC Standard Specifications for Road and Bridge Construction https://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx	W
KYTC	KYTC Geotechnical Guidance Manual https://transportation.ky.gov/Organizational-Resources/Policy%20Manuals%20Library/Geotechnical.pdf	W
KYTC	KYTC Drainage Guidance Manual https://transportation.ky.gov/Highway-Design/Pages/Drainage.aspx	W
KYTC	KYTC Design Memos	W
KYTC	KYTC Special Notes https://transportation.ky.gov/Construction/Pages/Special-Notes-Special-Provisions.aspx	W
KYTC	KYTC Active Sepias https://transportation.ky.gov/Highway-Design/Pages/Sepias2017.aspx	W
KYTC	KYTC Traffic Operations Guidance Manual https://transportation.ky.gov/Organizational-Resources/Policy%20Manuals%20Library/Traffic%20Operations.pdf#search=Traffic%20Operations%20Guidance%20Manual	W
KYTC	Kentucky Bridge Inspection Procedures Manual https://transportation.ky.gov/Maintenance/Documents/2020%20Bridge%20Inspection%20Procedures%20Manual.pdf#search=Bridge%20Inspection%20Procedures%20Manual	W
KYTC	KYTC Utilities & Rails Guidance Manual https://transportation.ky.gov/Organizational-Resources/Policy%20Manuals%20Library/Utilities%20and%20Rails.pdf	W
KYTC	KYTC Right Of Way Guidance Manual https://transportation.ky.gov/Organizational-Resources/Policy%20Manuals%20Library/RightOfWay.pdf	W

Author/Agency	Title	Availability
AASHTO	T88, T194 and T289	IS
AASHTO	A Guide for Transportation Landscape and Environmental Design	IS
AASHTO	Guide for the Planning, Design, and Operation of Pedestrian Facilities	IS
AASHTO	Guide for the Development of Bicycle Facilities	IS
AASHTO	A Guide for Achieving Flexibility in Highway Design	IS
AASHTO	A Policy on Geometric Design of Highways and Streets	IS
AASHTO	Roadside Design Guide	IS
AASHTO	A Policy on Design Standards – Interstate System	IS
AASHTO	Highway Safety Design and Operations Guide	IS
AASHTO	Roadway Lighting Design Guide	IS
AASHTO	LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals	IS
AASHTO	An Informational Guide for Roadway Lighting	IS
AASHTO	Standard Specifications for Transportation Materials and Methods of Sampling and Testing	IS
AASHTO	LRFD Bridge Design Specifications	IS
AASHTO	Standard Specifications for Highway Bridges	IS
AASHTO	Manual for Bridge Evaluation	IS
AASHTO	Guide Design Specifications for Bridge Temporary Works	IS
AASHTO	LRFD Guide Specifications for Accelerated Bridge Construction	IS
AASHTO	LRFD Bridge Construction Specifications	IS
AASHTO	Bridge Security Guidelines	IS
AASHTO	Manual on Subsurface Investigations	IS
AASHTO	Manual for Assessing Safety (MASH)	IS
AASHTO/AWS	D1.5M/D1.5:2010 Bridge Welding Code	IS
AASHTOWare	Bridge Rating (BrR) Tool for Rating Bridge Superstructures	IS
AISC	American Institute of Steel Construction – Steel Construction Manual	IS
FAA	Notice of Proposed Construction or Alteration https://oeaaa.faa.gov/oeaaa/external/portal.jsp	W
FHWA	Flexibility in Highway Design http://www.fhwa.dot.gov/environment/publications/flexibility/	W
FHWA	Code of Federal Regulations, Title 23 (Highways), Chapter 1, Part 752 Landscape and Roadside Development http://www.fhwa.dot.gov/legregs/directives/cfr23toc.htm	W
FHWA	FHWA-RD-03-031: Distress Identification Manual for the Long-Term Pavement Performance Program https://www.fhwa.dot.gov/publications/research/infrastructure/pavements/ltp/reports/03031/03031.pdf	W
FHWA	FHWA-NHI-016-072 - Geotechnical Engineering Circular No. 5: Geotechnical Site Characterization	IS

Author/Agency	Title	Availability
FHWA	FHWA-NHI-16-009 & 010 - Geotechnical Engineering Circular No. 12: Design and Construction of Driven Pile Foundations, Volumes I & II https://www.fhwa.dot.gov/engineering/geotech/library_listing.cfm?TitleStart=G	W
FHWA	Manual on Uniform Traffic Control Devices (MUTCD) http://mutcd.fhwa.dot.gov/	W
FHWA	Indiana Manual of Uniform Traffic Control Devices (IMUTCD) https://www.in.gov/dot/div/contracts/design/mutcd/2011rev1MUTCD.htm	W
FHWA	Roadway Lighting Handbook http://safety.fhwa.dot.gov/roadway_dept/night_visib/lighting_handbook/	W
FHWA	FHWA-NHI-14-007 - Geotechnical Engineering Circular No. 7: Soil Nail Walls https://www.fhwa.dot.gov/engineering/geotech/library_listing.cfm?TitleStart=G	W
FHWA	FHWA-IF-99-015 - Geotechnical Engineering Circular No. 4: Ground Anchors and Anchored Systems https://www.fhwa.dot.gov/engineering/geotech/library_listing.cfm?TitleStart=G	W
FHWA	FHWA-IF-02-054 – Geotechnical Engineering Circular No. 6: Shallow Foundations https://www.fhwa.dot.gov/engineering/geotech/library_listing.cfm?TitleStart=G	W
FHWA	FHWA-IF-090919 - Connection Details for Prefabricated Bridge Elements and Systems https://www.fhwa.dot.gov/bridge/prefab/if09010/report.pdf	W
FHWA	FHWA-NHI-10-016 - Geotechnical Engineering Circular No. 10: Drilled Shafts: Construction Procedures and LRFD Design Methods Manual https://www.fhwa.dot.gov/engineering/geotech/library_listing.cfm?TitleStart=G	W
FHWA	FHWA-NHI-10-024 - GEC 11 Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes Volume 1 https://www.fhwa.dot.gov/engineering/geotech/library_listing.cfm?TitleStart=G	W
FHWA	FHWA-NHI-10-025 - GEC 11 Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes Volume II https://www.fhwa.dot.gov/engineering/geotech/library_listing.cfm?TitleStart=G	W
FHWA	FHWA-NHI-16-027 & 028 - Geotechnical Engineering Circular No. 13 Ground Modification Methods Reference Manual - Volumes I & II	W
FHWA	Technical Manual for Design and Construction of Road Tunnels – Civil Elements, Report No. FHWA – NHI-10-034 http://www.fhwa.dot.gov/bridge/tunnel/pubs/nhi09010/foreward.cfm	W

Author/Agency	Title	Availability
FHWA	Program Guide Utility Relocation and Accommodation http://www.fhwa.dot.gov/reports/utilguid/	W
FHWA	Highway Performance Monitoring System (HPMS) Field Manual http://www.fhwa.dot.gov/ohim/hpmsmanl/hpms.cfm	W
FHWA	Railroad-Highway Grade Crossing Handbook http://safety.fhwa.dot.gov/xings/com_roaduser/07010/	W
FHWA	Manual for Repair and Retrofit of Fatigue Cracks in Steel Bridges https://www.fhwa.dot.gov/bridge/steel/pubs/hif13020/hif13020.pdf	W
FHWA	Technical Advisory on Uncoated Weathering Steel in Structures, October 3, 1989. https://www.fhwa.dot.gov/bridge/t514022.cfm	W
FHWA	Hydraulic Engineering Circular No. 21 (HEC-21), Design of Bridge Deck Drainage https://www.fhwa.dot.gov/engineering/hydraulics/pubs/hec/hec21.pdf	W
FHWA	Hydraulic Engineering Circular No. 22 (HEC-22), Urban Drainage Design Manual https://www.fhwa.dot.gov/engineering/hydraulics/pubs/10009/10009.pdf	W
ADA	Americans with Disabilities Act Accessibility Guidelines	IS
ANSI A300 (Part 1)	Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices	IS
ANSI A300 (Part 2)	Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices – Part 2 – Fertilization	IS
ANSI A300 (Part 3)	Tree Care Operations – Tree, Shrub and Other Woody Plant – Standard Practices – Part 3 – Tree Support Systems	IS
ANSI Z60.1	American Standard for Nursery Stock	IS
ANSI Z133.1	Safety Requirements for Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and for Cutting Brush	IS
ANSI/IESNA RP-8-00	American National Standard Practice for Roadway Lighting	IS
ANSI/EIA/TIA	American National Standards Institute/Electronic Industries Alliance/Telecommunications Industry Association (ANSI/EIA/TIA) – 222-G Structural Standards for Antenna Supporting Structures and Antennas 568A 568B.3 Optical Fiber Cabling Components Standards 606 Administration Standard for Telecommunications Infrastructure	IS
TIA/EIA	The Telecommunications Industry Association & Electronic Industries Alliance Standards	IS
ASTM	Annual Books of Standards	IS
Hortus Third	A Concise Dictionary of Plants Cultivated in the United States and Canada (L. H. Bailey Hortorium, 1976)	IS

Author/Agency	Title	Availability
IDEM	Indiana Storm Water Quality Manual http://www.in.gov/idem/stormwater/2363.htm	W
IDEM	Rule 5 Permit https://www.in.gov/idem/stormwater/2331.htm	W
IDEM	Section 401 Water Quality Certification https://www.in.gov/idem/wetlands/2344.htm	W
IDEM	Isolated Wetlands Permit https://www.in.gov/idem/wetlands/2343.htm	W
IDNR	Indiana Drainage Handbook http://www.in.gov/dnr/water/4893.htm	W
IDNR	Guidelines for the Hydrologic-Hydraulic Assessment of Floodplains in Indiana http://www.in.gov/dnr/water/5710.htm	W
IEEE	National Electric Safety Code	IS
IES	Roadway Lighting Handbook, RP-8, Addendum: “Designing the Lighting System – Using Roadway Lighting”	IS
IES	DG-5-94, Recommended Lighting for Walkways and Class 1 Bikeways	IS
IES	RP-8-00, American National Standards for Roadway Lighting	IS
IHPC	Certificate of Appropriateness https://www.indy.gov/activity/historic-preservation-certificate-of-appropriateness	W
INDOT Aviation	Indiana Tall Structure Permit https://www.in.gov/indot/2808.htm	W
CIE	International Lighting Commission – CIE 127-2007, Technical Report: Measurement of LEDs	IS
Motorola	R56 Standards and Guidelines for Communication Sites	IS
NTCIP	National Transportation Communication for ITS Protocol Standards	IS
IGGA	Guide Specification - Next Generation Concrete Surface (NGCS) Construction on Newly Constructed Roadways http://igga.net/resources/specifications	W
ITE	Manual of Transportation Engineering Studies	IS
ITE	Traffic Engineering Handbook	IS
ITE	Preemption of Traffic Signals Near Railroad Crossings: An ITE Recommended Practice	IS
ITE	Equipment and Material Standards	IS
NCHRP	NCHRP Report 480, A Guide to Best Practices for Achieving Context Sensitive Solutions	IS
NEMA	National Electrical Manufacturer Association	IS
NFPA	NFPA 70 - National Electric Code	IS
NFPA	National Electric Safety Code	IS
NFPA	502-Standard for Road Tunnels, Bridges and Other Limited Access Highways	IS
NFPA	Standard for the Installation of Lightning Protection Systems, NFPA 780	IS

Author/Agency	Title	Availability
NECA	National Electrical Contractors Association Standard of Installation	IS
NETA	International Electrical Testing Association Standard ATS	IS
UL	Underwriters Laboratories, Inc., Lightning Protection Components, UL 96 and UL 96A	IS
USACE	Section 404 Permit https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Obtain-a-Permit/	W
Telcordia	GR 196 Core Issue 2, Generic Requirements for Optical Time Domain Reflectometer (OTDR)	IS
TRB	Highway Capacity Manual	IS
TRB	NCHRP Report 529, Guideline and Recommended Standard for Geofoam Application in Highway Embankments	IS
Bellcore	Technical Advisories and Technical Requirements	IS
AREMA	Manual for Railway Engineering	IS
CSX	Bridge and Track Design Criteria, Specifications, and Standard Drawings	IS
PCI	Bridge Design Manual Volume I & II	IS
PCI	Design Handbook	IS
PCI	Full Depth Deck Panel Guidelines, For Accelerated Bridge Deck Replacement or Construction http://www.pcine.org/cfcs/cmsIT/baseComponents/fileManagerProxy.cfc?method=GetFile&fileID=2D90746A-F1F6-B13E-82A745AB150E0E16	W
CRSI	Concrete Reinforcing Steel Institute Manual of Standard Practice	IS
Access Board	Public Rights-of-Way Accessibility Guidelines (PROWAG) https://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way	W
CEB-FIB	CEB-FIB “Model Code 1990,” the latest edition with Revisions as of the issue date of this RFP, Chapter 2: Material Properties, for time dependent properties of concrete only.	IS
PTI	PTI Guide Specification, “Recommendations for Stay Cable Design, Testing and Installation”, the latest edition with Revisions as of the issue date of this RFP, (“soft” conversion of the Document’s metric units is required).	IS
PTI	PTI Guide Specification, “Grouting of Post-Tensioned Structures,” the latest edition with Revisions as of the issue date of this RFP.	IS
ACI	ACI 207.1 R-96, “Mass Concrete.”	IS
ACI	ACI 305 R-99, “Hot Weather Concreting.”	IS
ACI	ACI 306 R-02, “Cold Weather Concreting.”	IS

TECHNICAL PROVISIONS – Attachment 3-1
Applicable Standards

Author/Agency	Title	Availability
FIB	Bulletin 34, Model Code for Service Life Design” (<i>International Federation for Structural Concrete (fib)</i> , February 2006)	IS

ATTACHMENT 7-1: Environmental Commitments Summary

COMMITMENT NUMBER	COMMITMENT TEXT	RESPONSIBLE PARTY
1	INDOT shall notify school corporations, hospitals and emergency services at least two weeks prior to any construction that would block or limit access.	IFA
2	Workers who are working in or near water with E. coli shall wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure.	Design-Build Contractor
3	Additional investigation may be necessary if construction generates sediment and/or disturbs soils in the Ohio River. Coordination with INDOT ES and KYTC will be required.	Design-Build Contractor
4	Any excavation which occurs in or near 44 W. 5th Street, New Albany, IN, will require analysis for lead prior to removal and disposal of soil and/or groundwater.	Design-Build Contractor
5	Accommodations shall be provided for the following special events and festivals. Full bridge closures shall not occur on: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day, Thunder over Louisville, Kentucky Derby, and Harvest Homecoming Festival.	Design-Build Contractor
6	Temporary access or use of any Section 4(f) or 6(f) resource during construction, shall require the Design-Build Contractor to coordinate with necessary agencies including but not limited to INDOT, KYTC, FHWA, the City of New Albany, the City of Louisville, the Louisville Parks and Recreation, and the Ohio River Greenway Commission, as Section 4(f) or Section 6(f) analysis may be required.	Design-Build Contractor
7	Early coordination response information received from Indiana Geological Survey is to be reviewed by the Design-Build Contractor.	Design-Build Contractor
8	United States Coast Guard will require Design-Build Contractor to submit a work plan for review. A work conditions letter will be issued from the USCG before any work can commence.	IFA
9	No impacts will occur to the Ohio River due to construction. Should impacts be unavoidable Design-Build Contractor will be required to coordinate with Kentucky Division of Environmental Analysis to obtain clearance.	Design-Build Contractor
10	Design-Build Contractor shall coordinate the final design with KYTC. KYTC shall provide Kentucky SHPO with the final design and the final archeological effects recommendation.	Design-Build Contractor
11	KYTC shall determine the Area of Potential Effect for the final design prepared by Design-Build Contractor and coordinate with the appropriate consulting parties.	IFA
12	Work outside of the existing ROW Limits or MOT Limits will require coordination with INDOT and KYTC.	Design-Build Contractor
13	Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of the riprap.	Design-Build Contractor
14	Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat.	Design-Build Contractor
15	Implement pollution prevention and control measures during all construction activities to reduce the potential for hazardous spills or other materials entering the Ohio River. This will include the placement of refueling staging areas, fuel storage, and hazardous materials away from the river, and may also require specific containment measures for painting, sanding, etc.	Design-Build Contractor
16	If a causeway must be used, then locate the causeway primarily outside of the cobble/gravel substrate area, which is the most suitable habitat for many mussel species.	Design-Build Contractor
17	Install culverts/pipes within the causeway to allow continued flow of water through the area to prevent pooling and stagnation.	Design-Build Contractor
18	The height of the causeway should be kept to a minimum to allow over-topping during heavy rain events to prevent upstream flooding.	Design-Build Contractor
19	Use clean fill material and remove immediately once project is completed.	Design-Build Contractor
20	The causeway structure should not be in the stream longer than a year in order to minimize disruption of the mussel and host fish reproductive cycles.	Design-Build Contractor
21	All equipment to be used in the river should be inspected using accepted protocols and determined free of zebra mussel adults and veligers.	Design-Build Contractor
22	In the event a barge is used, all barge equipment maintenance will be conducted away from the river, whenever possible. Fuel storage shall be contained/maintained in an area where leakage and spilling into the river will be avoided.	Design-Build Contractor
23	Excavation for deadman anchors and steel cables shall be performed in a manner to minimize the amount of surface disturbance, and appropriate measures would be implemented to prevent the discharge of material into the river channel. During excavation, temporary silt fence shall be installed around each deadman anchor site during excavation and installation. Extreme caution will be exercised during excavation/installation activities to prevent sediment from being washed into the Ohio River.	Design-Build Contractor
24	Minimize impacts to shoreline and substrate via barge grounding.	Design-Build Contractor
25	Align the road along or through previously disturbed and degraded areas and disturb as narrow an area as possible to minimize negative impacts. Avoid tree removal to the greatest extent possible. Plant native hardwood trees to replace the vegetation destroyed during construction.	Design-Build Contractor
26	All plant material, mud, and debris should be removed, and all water drained from equipment before entering or leaving the waterway to prevent the spread of aquatic and terrestrial invasive species.	Design-Build Contractor
27	Avoid staging and construction access within or wooded areas to the extent possible.	Design-Build Contractor
28	Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10 inches dbh or greater (5:1 mitigation based on the number of large trees).	Design-Build Contractor
29	The proposed project would require two applications to be submitted for authorization under Section 404 of the Clean Water	IFA

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	Act and Section 10 of the Rivers and Harbors act - one application for impacts to waters of the U.S. in Kentucky and one application for impacts in Indiana.	
30	If barges are to be moored on the Ohio River or doing any work on the river, a Section 10 permit would be required. A map showing the location of barges would be required, along with drawings stamped by a professional engineer showing the locations and mooring configurations (including locations of deadmen that would be installed). A narrative/description of the mooring configuration and work to be performed shall be provided.	IFA
31	Work within the river would require coordination with the Navigation Branch of the Louisville District US Army Corps, which may necessitate a permit. Permittees should anticipate a requirement to notify the Navigation Branch 30 days prior to the commencement of work/mooring on the river, resulting in a Notice to Navigation Interests.	IFA
32	The US Army Corps permit application must include the location, size and work for any staging, borrow and/or waste sites, with a description of work at those locations' areas; temporary work to be performed, including the installation of temporary mats, cofferdams, etc. All future correspondence with the US Army Corps shall reference US Army Corps ID number LRL-2018-1114.	IFA
33	The US Army Corps permit issued for this project will require the Design-Build Contractor to notify the Corps if potential endangered species or historic/archeological resources are encountered during the course of work.	IFA
34	The US Army Corps must be notified of any modifications to the authorized work.	IFA
35	The US Army Corps will require either a U.S. Coast Guard (USCG) permit or correspondence from the USCG stating a permit is not required prior to issuance of any Corps permits.	IFA
36	Design-Build Contractor shall notify IFA in writing within 24 hours of inadvertent impacts to wetlands or waterways for which activities are not permitted. Inadvertent impacted areas shall be immediately restored to the full satisfaction of IFA and the appropriate Governmental Entities. Except as specifically provided otherwise in the PPA, the cost incurred for, and the delay to the Project Schedule resulting from, restoration and, as applicable, mitigation of any inadvertent impacted areas shall be the sole responsibility of the Design-Build Contractor.	Design-Build Contractor
37	Design-Build Contractor shall coordinate with the INDOT Environmental Services Division and KYTC Division of Environmental Analysis regarding temporary impacts to waterway, wetland and other water resources.	Design-Build Contractor
38	Coordination with the Louisville Parks and Recreation is to be maintained by the Design-Build Contractor with project updates to ensure the safety of trail users.	Design-Build Contractor
39	Should accidental discovery occur in Indiana during construction the Design Build Contractor shall stop work within 100 feet of the discovery area shall but may continue in other areas. The Design-Build Contractor shall notify IFA and INDOT- Cultural Resource Office (CRO) of the discovery by calling 317-234-5168. The INDOT Archaeology Team Lead can be reached at 317-233-6795 for additional assistance	Design-Build Contractor
40	Should accidental discovery occur in Indiana during construction the Design Build Contractor shall provide a description of the discovery, along with digital photographs if possible, to CRO at the time of the discovery. A set of scaled photographs will allow CRO staff to evaluate the discovery and determine whether work may resume or whether additional documentation will be necessary without the time required for a site visit.	Design-Build Contractor
41	Should accidental discovery occur in Indiana during construction the Design Build Contractor shall provide an on-site evaluation is conducted and a treatment plan(s) is developed, as needed.	Design-Build Contractor
42	Should the Design-Build Contractor change the scope of work within the existing APE (deep trenching, etc.) then, additional coordination and archaeological investigation would be required. If the Design-Build Contractor proposes work activities that lie outside of the existing APE, additional coordination would be required and, potentially, a new APE would be established and additional investigation/analysis would most likely be required given the nature and extent of cultural resources within the vicinity of the bridge	Design-Build Contractor
43	Should accidental discovery occur in Kentucky during construction the Design Build Contractor shall stop work within 100 feet of the discovery area, but work can continue in other areas. The Design Build Contractor shall immediately notify IFA and KYTC DEA archaeologists at (502) 564-7250.	Design-Build Contractor
44	Should accidental discovery occur in Kentucky during construction the Design Build Contractor shall notify Kentucky Heritage Council (KHC/SHPO) archaeologists at (502) 892-3614.	Design-Build Contractor
45	Should accidental discovery occur in Kentucky during construction the Design Build Contractor shall have a qualified professional archaeologist on-call, approved by KYTC Division of Environmental Analysis, who can respond and report to the Site within four hours in case of discovery of any Differing Site Conditions. The qualified professional archaeologist shall have experience with documentation, excavation, and mitigation of historic urban archaeological sites.	Design-Build Contractor
46	If human remains are encountered during project activities in Kentucky, all work within 100 feet shall be immediately stopped. The area shall be cordoned off, and, in accordance with KRS 72.020, the county coroner and local law enforcement shall be contacted immediately. Upon confirmation that the human remains are not of forensic interest, the unanticipated discovery shall be reported to Nicolas Laracuenta at the Kentucky Heritage Council at (502) 892-3614, George Crothers at the Office of State Archaeology at (859) 257-1944, and KYTC Division of Environmental Analysis archaeologists at (502) 564-7250.	Design-Build Contractor
47	Should accidental discovery occur in Kentucky during construction the Design Build Contractor shall ensure identified archeological sites will not be disturbed unless the site is cleared by established procedures and written authorization to enter the site has been obtained by the Design-Build Contractor.	Design-Build Contractor
48	Design-Build Contractor shall be responsible for any archaeology surveys and any associated additional mitigation for Construction Work outside the previously surveyed area and Planned ROW Limits.	Design-Build Contractor
49	Following rehabilitation of the Kentucky Approach Bridge, the Design Build Contractor shall re-seed grass and restore landscaped elements of the affected parcels to pre-existing condition.	Design-Build Contractor
50	Design-Build Contractor shall coordinate with the Louisville Parks and Recreation to ensure the safety of trail users.	Design-Build Contractor
51	If a towboat is used, operation shall be restricted to the lowest practicable speed when approaching and departing the work zone to minimize river bottom scouring and downstream siltation.	Design-Build Contractor
52	Design-Build Contractor shall coordinate with IFA regarding any potential deviation from the approved environmental	Design-Build Contractor

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	document.	
53	Notice of any closure which extends 24 hours or more, shall be given to Louisville Metro Public Works, emergency management organizations, and the Transit City Authority of River City (TARC) prior to the closure.	IFA
54	Shawnee Park including the Shawnee Golf Course and trail, outside of the Planned ROW Limits are not anticipated to be impacted by the project. The Project will not use this resource by taking permanent ROW and will not alter the environment in such a way as to constitute constructive use of this resource. If the Design-Build Contractor pursues temporary use of the trail or park during construction, it shall be the Design-Build Contractor's responsibility to coordinate with IFA to secure approvals through KYTC, FHWA, the City of Louisville, and the Louisville Parks and Recreation. Coordination may also be required with other resource agencies, including but not limited to National Parks Service.	Design-Build Contractor

ATTACHMENT 14-8

UNIQUE SPECIAL PROVISION

PROVISIONS FOR PAINTING BRIDGE STEEL

SECTION 619, BEGIN LINE 3, DELETE AND INSERT AS FOLLOWS:

619.01 Description

This work shall consist of preparing surfaces, disposing of waste residue, and applying paint or another coating to steel bridges, steel piling, bearing assemblies, or other steel items in accordance with 105.03.

MATERIALS

619.02 Materials

Materials shall be in accordance with the following:

Epoxy Intermediate Paint	909.02(b)
Finish Coat for Weathering Steel	909.02(e)
Multi-Component Inorganic Zinc Silicate Primer	909.02(a)1
Organic Zinc Primer.....	909.02(a)2
Polyurethane Finish Coat	909.02(c)
Structural Steel Coating Systems	909.03
Waterborne Finish Paint.....	909.02(d)

Materials Safety data sheets shall be provided in the QCP for all materials to be delivered to the project site.

SECTION 619, BEGIN LINE 32, DELETE AND INSERT AS FOLLOWS:

619.03 Quality Control and Quality Assurance

The Design-Build Contractor shall be responsible for the quality of work on the contract and shall ensure that all work has been performed by accepted quality control methods. A QCP shall be prepared and submitted by the Design-Build Contractor in accordance with ITM 803. No work may begin until written notice has been received that the QCP was accepted by the Engineer. The QC manager shall furnish the current referenced SSPC Standards at the project site.

Cleaning and painting shall be done by a Design-Build Contractor certified as SSPC-QP 2 for cleaning and painting existing bridge steel on steel bridges constructed structures shown in the contract documents as being built before 1995, regardless of whether the existing coating is advertised as non-hazardous based or hazardous based. Cleaning and painting shall be done by a Design-Build Contractor that at a minimum is certified as SSPC-QP 1 for cleaning and painting new bridge steel or for cleaning and painting existing bridge steel on steel bridges constructed structures shown in the contract documents as being built after 1994.

SECTION 619, BEGIN LINE 87, DELETE AND INSERT AS FOLLOWS:

619.04 Prosecution of Work

Prosecution of work shall be in accordance with the applicable requirements of 108.03/108.04.

SECTION 619, BEGIN LINE 128, DELETE AND INSERT AS FOLLOWS:

619.07 ~~Environmental and Safety and Environmental Requirements~~

~~PSafety requirements, pollution control, and waste-disposal~~ of existing paint residue and debris shall be in accordance with the following requirements.

(a) Safety Requirements

The containment system shall be in accordance with 619.07(b)1a or 619.07(b)1b, as applicable, based on the year the structure was built as shown in the contract.

~~Workers shall be protected in accordance with IOSHA requirements~~*The Design-Build Contractor shall follow OSHA rules and regulations and be responsible for determining the level of hazards that are present in the containment during the removal of the existing bridge coating operation. Once the Design-Build Contractor establishes the level of hazard present, the Design-Build Contractor shall be responsible for furnishing personal protective equipment to provide the degree of protection necessary for the established level of hazard. All Design-Build Contractor and Department personnel on the project site shall wear personal protective equipment to the level of hazard as determined by the sampling and monitoring requirements performed by the Design-Build Contractor. The protective equipment shall be furnished by the Design-Build Contractor, including to Department personnel. Training shall be given to all personnel who are provided with the personal protective equipment. Personal protective equipment shall include, but not be limited to, clean air supplied respirators, air purifying respirators, conventional hoods as applicable, eye protection, and protective clothing. Two rooms for changing and washing shall be provided on bridges containing hazardous based coatings.*

(ab) Pollution Control

Pollution control shall consist of two different operations. One shall be controlling and containing the atmosphere generated during the coating removal operation. The other shall be controlling and containing the solid waste stream generated as a result of the coating removal operation.

1. ~~Containment for Advertised Non-Hazardous Sites~~ Pollution Control During Existing Coating Removal Operations

~~Blasting materials, scrapings, wire brushings, and paint particles shall be contained in accordance with SSPC Guide 6, Class 2A with method A, level 2 emissions, specifically for non-hazardous primed bridges~~*During existing coating removal operations, the Design-Build Contractor shall recognize that the environment created by removal of the existing coating from the structure may create an atmosphere in which hazards to personnel on the jobsite are likely to be generated, and thus the Design-Build Contractor shall be responsible for controlling and protecting the exposure of all workers and the surrounding environment from the hazards.*

The characterization of the level of hazard of the existing coating that the Department considers to be present on the structure will be dictated by the year the structure was built as indicated in a. or b. below. The characterization of the level of hazard of the existing coating is not related to the results of the TCLP.

a. Containment for Structures Built Before 1995

For structures shown in the contract documents as being built before 1995, the Design-Build Contractor shall provide a containment system in order to contain all blasting materials, scrapings, wire brushings, and paint particles in accordance with SSPC-Guide 6, Class 2A or greater with method A, level 1 emission control capability. The Design-Build Contractor shall take samples and monitor the work environment in accordance with IOSHA requirements and shall

provide personal protective equipment appropriate to the conditions present within the work environment.

b. Containment for Structures Built After 1994

For structures shown in the contract documents as being built after 1994, the Design-Build Contractor shall provide a containment system in order to contain all blasting materials, scrapings, wire brushings, and paint particles in accordance with SSPC-Guide 6, Class 2A or greater with method A, level 3 emission control capability. The Design-Build Contractor shall take samples and monitor the work environment in accordance with IOSHA requirements and shall provide personal protective equipment appropriate to the conditions present within the work environment.

~~2. Containment for Advertised Hazardous Sites~~

~~Blasting materials, scrapings, wire brushings, and paint particles shall be contained in accordance with SSPC Guide 6, Class 2A or better with method A, level 0 emissions, for hazardous primed bridges.~~

Regardless of the level of containment as listed above, if a spill, as defined in IDEM Regulation 327 IAC 2-6.1 does occur, all work shall stop and immediate action shall be taken to clean up the site. Spills of material, that enter or threaten to enter the water, shall be handled in accordance with IDEM Regulation 327 IAC 2-6.1. The IDEM Emergency Response Branch, the local health department, and all water intake users within 500 ft of the bridge shall be immediately contacted and advised of the spill. Written documentation of all such contacts and actions shall be kept. All applicable Federal, State, and local rules and regulations described in ~~619.07(b)~~619.07(b)2b(1) shall be observed.

2. Pollution Control of the Generated Waste Stream

3a. Waste Stream Sampling

Each bridge shall generate a separate waste stream and shall not be commingled with other materials. The sample of waste residue from the bridge shall be obtained at the conclusion of the first day of the *coating* removal operation for that bridge. The sample will be shipped to be tested within 24 h in a manner agreed to by the Department and as described in the QCP. The Engineer will witness the extraction of the waste residue sample. The *Design-Build Contractor shall* ~~Department will~~ maintain custody of the waste residue sample until it is shipped. The waste residue sample shall be taken by random method as described in the QCP which reflects representation of the entire bridge. The samples shall be analyzed for all contaminants listed in ITM 803 by the TCLP. All remaining waste residue shall be placed in an approved container. Such containers shall be labeled and maintained to comply with 40 CFR 264.

No waste shall remain on the booms or on any water surface overnight. All blasting debris shall be cleaned up after each day's work. All waste material shall be properly stored at the project site to prevent loss or pollution.

If the waste stream sample analysis is returned with one or more of the contaminants meeting or exceeding the regulatory level for the respective contaminant, the entire waste stream for that bridge shall be considered to exhibit the characteristic of toxicity and thus shall be characterized as and considered to be hazardous.

If the waste stream sample characterization is returned with none of the contaminants meeting or exceeding the regulatory level for the respective contaminant, the entire waste stream

for that bridge shall be considered to not exhibit the characteristic of toxicity and thus shall be characterized as and considered to be non-hazardous.

The characterization of the waste stream as either hazardous or non-hazardous for disposal shall be based only on the results of the TCLP. The results of the TCLP do not dictate the level of the containment system required in accordance with 619.07(b)1.

If hazardous materials are found *to be present* in the waste residue sample of ~~an advertised, non-hazardous site, the Contractor shall immediately stop all cleaning and painting operations on that bridge~~ *a bridge structure shown on the plans in the contract documents as being built after 1994 as having non-hazardous coatings*, ~~the Design-Build Contractor shall immediately notify the Engineer that hazardous materials have been found and, if not addressed in the QCP, the Design-Build Contractor shall submit revisions to the QCP that detail the necessary changes due to the presence of hazardous materials. The Design-Build Contractor shall not return to work until the revised QCP is approved in writing.~~

~~(b)~~b. Waste Disposal

Regardless of the waste characterization obtained from the waste sample, disposal of existing paint and debris shall be in accordance with SSPC-Guide 7 and the following requirements.

~~1.~~(1) Laws to be Observed

Federal and State laws and regulations regulate the disposal of bridge painting debris. Bridge paint debris shall be manifested or certified and shall be disposed of at an appropriate disposal facility.

The *Design-Build Contractor* shall have direct knowledge regarding compliance with laws pertaining to pollution control and waste management such as, *but not limited to*, the following.

- a. subtitle C of the RCRA, 40 CFR 261, 262, 263, 265, and 268;
- b. the Solid Waste Rule, 329 IAC 10;
- c. the Hazardous Waste Rule, 329 IAC 3.1;
- d. the Air Pollution Rule 329 IAC 6-4;
- e. the Water Pollution Rule, 327 IAC 2-6.1;
- f. the United States Department of Transportation regulations 49 CFR 172.300; and
- g. OSHA worker safety regulations 29 CFR 1926.

~~2.~~(2) Time Limitations

The maximum time limit from the date the generated waste is placed in a container and the date the material is transported to a permitted treatment, storage, and disposal facility shall be 90 calendar days.

3.(3) Marking of Spent Material Containers

Spent material containers shall be marked with the date that waste residue is first placed in the container. Until laboratory results *described in 619.07(b)2a* are received concerning the category of the waste residue, the containers shall be labeled “LEAD PAINT WASTE DEBRIS” or “ZINC PAINT WASTE DEBRIS”, as appropriate. The labeling shall include the contract number, bridge number, sample number, and sample date. Labeling of containers as hazardous waste will not be required until the appropriate laboratory analysis determines the waste residue to be hazardous in accordance with the current RCRA hazardous waste definitions. Immediately upon notice that the waste residue is hazardous, the containers shall be marked in accordance with 49 CFR 172, Subpart D.

4.(4) Instruction for Disposal of Paint Waste Residue

~~Sampling and analysis of the paint waste residue shall be performed to determine if the wastes are hazardous. If the waste residue is not found to be hazardous in accordance with current RCRA hazardous waste definitions, the waste residue material shall be disposed of at an appropriate disposal facility. If the waste residue is found to be hazardous, IDEM will be notified and the Engineer will obtain an EPA identification number will be obtained from IDEM. This number will be provided to the Design-Build Contractor within 30 days of the start of waste generation for bridges having hazardous waste paint debris. The waste residue from different bridges shall not be commingled. The Design-Build Contractor shall have the following responsibilities:~~

- a. determining the location for disposal, treatment, or recycling of the waste residue, obtaining the Engineer’s approval of the site, and arranging with the approved site for acceptance of the materials;
- b. preparing a hazardous waste manifest, as required by Federal and State requirements, for signature;
- c. scheduling the shipment of waste residue to the permitted disposal site;
- d. ensuring that the hazardous waste manifest is carried in the transportation vehicle;
- e. ensuring that all required hazardous materials placards are properly displayed on the vehicle;
- f. ensuring prompt movement of the vehicle to the disposal site; and
- g. returning one copy of signed manifest documents to the Engineer. A copy of the chemical and physical analysis of the waste, all deposit receipts, manifests, and required paperwork for disposal shall be given to the Engineer, and all waste residues disposed of before the ~~contract~~ waste disposal item will be ~~accepted~~ paid.

If the waste residue is found to be non-hazardous in accordance with current RCRA hazardous waste definitions, the waste residue material shall be disposed of at an appropriate disposal facility.

5.(5) Instructions for Disposal of Other Project Generated Waste

~~The o~~Other wastes that may be generated on the project include, but are not limited to, spent solvents from cleaning of equipment and empty or partially empty containers of paint, paint thinners, spent abrasives, and solvents. The *Design-Build* Contractor shall recycle or dispose of all project generated waste materials.

If the waste is defined as a hazardous waste in accordance with the current RCRA definitions, the waste shall be recycled or disposed of in accordance with ~~619.07(b)~~4619.07(b)2b(4). All project generated waste and the method of recycling or disposal shall be identified in the QCP.

619.08 Surface Preparation of Concrete and Steel

The tops of all concrete and steel pier caps, concrete abutment caps, and 2 ft down all sides of concrete pier and abutment caps shall be washed. The washing shall be accomplished by means of a pressure washer with potable water. The pressure shall be between 800 and 1,500 psi. If detergents or other additives are added to the water, the surface shall be rinsed with potable water before the detergents dry.

Cleaning of steel surfaces shall be performed by an SSPC certified contractor. This requirement will not apply to the following:

- (a) shop cleaning; *or*
- (b) sections of beams or other structural members less than 180 sq ft of total area to be painted for the contract where heat-straightening or similar repairs have taken place.

Surfaces to be painted shall be cleaned in accordance with the SSPC classification, unless otherwise specified. Compressed air shall pass through an oil and water extractor before entering another apparatus.

~~Pressure washing in accordance with 619.08(a) and s~~Solvent cleaning in accordance with 619.08(ba) shall be performed to remove all oils, soluble salts, visible grease, and any other surface contaminants before all other cleaning methods are started.

SECTION 619, BEGIN LINE 327, DELETE AND INSERT AS FOLLOWS:

For ~~bridges~~ structures shown on the contract documents as being built before 1995, the Design-Build Contractor shall assume that mill scale is present on the existing steel. All mill scale shall be removed as a part of the cleaning operations.

~~(a) Pressure Washing~~

~~All surfaces to be painted and the tops of pier and abutment caps shall be washed. The washing shall be accomplished by means of a low pressure power water washer with potable water. The pressure shall be between 800 and 1,500 psi. If detergents or other additives are added to the water, the surface shall be rinsed with potable water before the detergents dry. All washed surfaces shall be completely free of all oils and soluble salts. The Contractor shall obtain the hold point release for pressure washing prior to beginning other surface preparation activities.~~

~~(ba) Solvent Cleaning~~

~~After the hold point for pressure washing cleaning has been released, s~~Solvent cleaning shall be performed in accordance with SSPC-SP1.

After the hold point for solvent cleaning has been released, one or more of the following cleaning methods shall be performed.

(eb) Hand Tool Cleaning

Hand tool cleaning shall be in accordance with SSPC-SP2.

(ec) Brush-Off Blast Cleaning

Brush-off blast cleaning shall be in accordance with SSPC-SP7/NACE No. 4.

(ed) Commercial Blast Cleaning

Commercial blast cleaning shall be in accordance with SSPC-SP 6/NACE No. 3.

(ee) Near-White Blast Cleaning

Near-white blast cleaning shall be in accordance with SSPC-SP 10/NACE No. 2. All steel within the cross-sectional area measuring 5 ft longitudinally, on both sides of a bridge deck joint, as well as all areas of visible corrosion pitting, as determined by the Engineer, shall be abrasive blast-cleaned twice. After the initial cleaning, all dust shall be removed from the cleaned surfaces and the surfaces shall be wetted with potable water either by hand wiping or atomized low volume spray. The volume of water used shall be low enough to preclude runoff. The surfaces shall be left undisturbed for at least 24 hours then cleaned a second time to the specified standard. The quality control and quality assurance inspection will determine and document that the specified cleanliness has been accomplished and the dust removed prior to wetting and after the second cleaning.

(ef) White Metal Blast Cleaning

White metal blast cleaning shall be in accordance with SSPC-SP 5/NACE No. 1.

(eg) Power Tool Cleaning

Power tool cleaning shall be in accordance with SSPC-SP 3.

(eh) Commercial Grade Power Tool Cleaning

Commercial grade power tool cleaning shall be in accordance with SSPC-SP 15.

(ei) Power Tool Cleaning to Bare Metal

Power tool cleaning to bare metal shall be in accordance with SSPC-SP 11.

SECTION 619, SECTION 545, DELETE AND INSERT AS FOLLOWS:

(a) Non-Weathering Steel

All structural steel shall be cleaned in accordance with 619.08(~~ee~~).

All structural steel shall receive an inorganic zinc primer, including faying surfaces of high strength bolted connections and areas in contact with concrete. Surfaces, other than the contact surfaces described above, which are inaccessible after erection shall be painted in the shop with the full paint system required on the completed bridge.

(b) Weathering Steel

All structural steel shall be left unpainted, except as shown on the plans. All diaphragms, stiffeners, and other appurtenances located within the limits shown on the plans shall be included

in the painting area. Surfaces to be painted shall be cleaned in accordance with 619.08(~~fe~~). Surfaces shall be painted in accordance with 619.09(a), except the finish coat shall be in accordance with 909.02(e).

619.12 Field Painting New Steel Bridge

All structural steel surfaces which are accessible after final erection shall be painted with the remaining coatings specified for structural steel paint system in accordance with 619.09(a) in the field after final erection.

If application of inorganic zinc primer on a steel surface is not performed in the shop before erection of the bridge, the surfaces which are exposed shall be cleaned in accordance with 619.08(a), ~~619.08(b)~~, and 619.08(~~fe~~). These surfaces shall then be painted with the structural steel paint system after final erection.

Surface areas where the inorganic zinc primer was damaged during shipping, handling, and erection shall be cleaned in accordance with 619.08(a), ~~619.08(b)~~, and either 619.08(~~ed~~) or 619.08(ji). Likewise, all bolt and field connections shall be cleaned in the same manner. All the damaged areas, and bolt and field connections shall then be painted with the inorganic zinc primer applied in the shop. This requirement will not apply to temporary steel bridges.

Where steel surfaces have been painted with the full paint system and the paint coatings have been damaged, the affected steel surface areas shall be cleaned in accordance with 619.08(ji). Structural steel paint system shall then be re-applied.

For weathering steel girders, caulk shall be applied to act as a drip bead as shown in the plans.

619.13 Painting Existing Steel Bridges

The surfaces to be cleaned and painted shall include the surfaces of all steel members of the superstructure, substructure, floor beams, stringers, plates, castings, bearing assemblies, ornamental handrails, lattice work, and other steel appurtenances. When shear connectors have been specified, the top of the top flange shall not be painted.

If the contract specifies clean steel bridge, the bridge steel shall be cleaned in accordance with 619.08(a), ~~619.08(b)~~, and either 619.08(~~ee~~) or 619.08(ji). The structural steel paint system in accordance with 619.09(a) shall be used for painting.

If the contract specifies clean steel bridge, partial, the bridge steel shall be cleaned in accordance with 619.08(a), ~~619.08(b)~~, and either 619.08(~~ee~~), or 619.08(h), ~~or 619.08(j)~~. The partial paint system in accordance with 619.09(b) shall be then used for painting.

619.14 Handling of Steel Bridge Superstructure to be Removed

If the Design-Build Contractor elects to take ownership of the steel in accordance with 202.03, a QCP shall be submitted in accordance with 619.03. The entire surface area of the steel shall be cleaned in accordance with 619.08(d) prior to the steel leaving the construction limits and becoming the property of the Design-Build Contractor. Mill scale shall be assumed to be present on the existing steel. Cleaning in accordance with 619.08(a) shall not be performed. A level of containment in accordance with 619.07(a) shall be used.

Testing and disposal of the waste stream produced by this cleaning shall be in accordance with 619.07.

619.145 Drain Castings Treatment

Roadway drain castings located in a bridge deck shall be satisfactorily cleaned in accordance with 619.08(~~d~~c) or 619.08(~~h~~g). The castings shall not be shot-blasted.

The roadway drain castings shall be painted with a black finish coat in accordance with 909.02(c).

If a roadway drain casting extension pipe is damaged or missing, it shall be replaced. The extension pipe shall be in accordance with 715.

619.16 Clean and Paint Bearing Assemblies

When shown on the plans or a pay item is included in the schedule of pay items, all bearing assemblies including top and bottom plates of each assembly shall be cleaned in accordance with 619.08(a) and 619.08(d). Pollution control shall be in accordance with 619.07.

If the pay item clean and paint bearing assemblies is listed in the schedule of pay items for a particular structure, the entire bearing assembly shall be painted with the structural steel paint system in accordance with 619.09(a).

If the pay item, paint steel bridge, or paint steel bridge, partial, is listed in the schedule of pay items for a particular structure, the entire bearing assembly shall be painted with the structural steel paint system that is being used on the rest of the bridge.

619.16.1 Clean and Paint Steel Piling

All exposed steel piling shall be cleaned in accordance with 619.08(a) and either 619.08(d) or 619.08(i). The structural steel paint system in accordance with 619.09(a) shall be applied. The color of the top coat shall be SAE-AMS-STD-595, color no. 13711, buff.

619.1517 Responsibility for Damage

Unless otherwise specified by the Engineer in writing, full containment shall be provided when performing the surface preparation operation and when applying all coats of paint, except primer coats, with spray equipment. All persons and property shall be protected from damage or injury from the surface preparation operations and painting operations by providing containment as described in the QCP. Persons and property shall include, but not be limited to, pedestrians, vehicles, and other traffic upon or underneath a bridge, all portions of the bridge superstructure and substructure, and all adjacent property. The *Design-Build* Contractor shall be responsible for damages in accordance with 107.17.

619.1618 BlankTop of Top Flange of Steel Structural Members

When shown on the plans or a pay item is included in the schedule of pay items, the top of the top flange of steel structural members shall be cleaned in accordance with 619.08 by a contractor certified as SSPC-QP 2. The Design-Build Contractor shall assume the existing coating on the top of the top flange contains hazardous materials and mill scale, and shall use pollution control and containment in accordance with 619.07(b)1. A QCP shall be prepared and submitted in accordance with 619.03. The steel shall be cleaned to a level of cleanliness in accordance with 619.08(d) or 619.08(h), however solvent cleaning in accordance with 619.08(a) shall not be performed.

Each bridge shall generate a separate waste stream and shall not be commingled with other materials. The waste stream shall be sampled in accordance with 619.07 and all other

requirements of 619.07 shall be followed. Once the result from the waste stream sampling is known and the waste stream is appropriately characterized as hazardous or non-hazardous, all waste shall be disposed of in accordance with 619.07(b).

619.1719 Method of Measurement

~~———— Cleaning and painting will not be measured for payment of steel structural members, cleaning the top of the top flange of steel structural members, cleaning and painting of bearing assemblies, and cleaning and painting of steel piling will not be measured for payment. Cleaning areas around bridge joints and other areas with significant pitting a second time will not be measured for payment. Disposal of the waste stream generated by the cleaning operation will not be measured for payment.~~

~~———— Cleaning roadway drain castings, caulking joints of lapping members, and caulking on weathering steel will not be measured for payment.~~

~~———— For steel that will become the property of the Design-Build Contractor, cleaning existing steel, removal of mill scale, testing, disposal of the waste stream, containment, and all other items involved with removing and properly disposing of the existing coating will not be measured as per 202.13.~~

~~———— If a bridge is advertised structure is shown in the contract documents as being built before 1995 having existing hazardous materials, no measurement will be made of the area covered by mill scale. For bridges advertised as having existing non-hazardous materials Otherwise, the area of structural steel covered by mill scale will be measured for payment after a proper cleaning of the entire containment area or an agreed large portion thereof and removing all other existing materials, including all paint and rust. The percentage of the area of structural steel covered by existing mill scale will be representative of this entire area. The pre-established remedies for this changed condition apply in accordance with 104.02(d) and 619.18619.20.~~

~~———— Roadway drain casting extension pipe will be measured in accordance with 715.13.~~

~~———— The estimated weight, length, number of steel spans, surface area of steel, and type of primer shown on the plans or in the Proposal book is incidental information. Such information is approximate only. The Department will not guarantee its accuracy.~~

619.1820 Basis of Payment

~~———— Existing steel bridges to be cleaned, or partially cleaned, whichever is specified, will be paid for at the contract lump sum price for clean steel bridge or clean steel bridge, partial, at the bridge number specified. Cleaning the top of the top flange of existing steel bridges will be paid for at the contract lump sum price for clean steel bridge, top flange, at the bridge number specified. Existing steel bridges to be painted, or partially painted, whichever is specified, will be paid for at the contract lump sum price for paint steel bridge or paint steel bridge, partial, at the bridge number specified.~~

~~———— When specified as a separate pay item in the contract, cleaning and painting bearing assemblies will be paid for at the contract lump sum price for clean and paint bearing assemblies, at the bridge number specified.~~

~~———— When specified as a separate pay item in the contract, cleaning and painting steel piling will be paid for at the contract lump sum price for clean and paint steel piling, at the bridge number specified.~~

~~—————(a) Pre-Established Remedies for Changed Conditions~~

~~—————1. Discovery of Hazardous Materials but No Mill Scale on a Site Advertised as Non-Hazardous Structure Shown in the Contract Documents as Being Built After 1994~~

~~—————The payment will be an additional 25% of the clean steel bridge item as computed in 619.1820(b)1 in accordance with 109.05 as payment for all additional costs incurred.~~

~~—————2. Discovery of Mill Scale but No Hazardous Materials on a Site Advertised as Non-Hazardous Structure Shown in the Contract Documents as Being Built After 1994~~

~~—————If, on a bridge advertised as having existing non-hazardous materials structure shown in the contract documents as being built after 1994 and the presence of hazardous materials has not been confirmed by laboratory analysis, the area of structural steel covered by mill scale comprises greater than 1525% of the area of structural steel in accordance with 619.17619.19, additional compensation for the removal of the mill scale will be made as an adjustment to the clean steel bridge item in accordance with the following: The adjustment will be an additional payment of 30% of the clean steel bridge item as computed in accordance with 619.20(b)1 will be made.~~

~~—————a. For areas of structural steel greater than 15% and up to and including 25% of the area covered by mill scale, an additional payment of 15% of the clean steel bridge item as computed in accordance with 619.18 (b) 1 will be made.~~

~~—————b. For areas of structural steel greater than 25% and up to and including 50% of the area covered by mill scale, an additional payment of 30% of the clean steel bridge item as computed in accordance with 619.18 (a) 1 will be made.~~

~~—————c. For areas of structural steel greater than 50% and up to and including 75% of the area covered by mill scale, an additional payment of 45% of the clean steel bridge item as computed in accordance with 619.18 (b) 1 will be made.~~

~~—————d. For areas of structural steel greater than 75% of the area covered by mill scale, an additional payment of 60% of the clean steel bridge item as computed in accordance with 619.18 (b) 1 will be made.~~

~~—————3. Discovery of Hazardous Materials and Mill Scale on a Site Advertised as Non-Hazardous Structure Shown in the Contract Documents as Being Built After 1994~~

~~—————If the laboratory analysis of a waste residue sample on a bridge advertised as having non-hazardous materials structure shown in the contract documents as being built after 1994 yields results indicating the presence of hazardous materials, the entire bridge shall be considered as having mill scale and the following pre-established remedy for this changed condition in accordance with 104.02(d) shall apply. If agreed to in writing between the Contractor and the Department, the work shall proceed with the Contractor assuming all risks for removal of mill scale. An additional 55% of the clean steel bridge item as computed in 619.1820(b)1 in accordance with 109.05 will be paid as additional compensation for the removal and disposal of the hazardous materials, the removal of the mill scale, the additional containment required, and all other incidental items associated with the removal of the hazardous materials and mill scale.~~

~~_____~~ **(b) Prices used in Pre-Established Remedies to Changed Conditions**

~~_____~~ The following prices will be computed and used as the price for the pay item identified below in all pre-established remedies to changed conditions referenced in this section.

~~_____~~ The price for the clean steel bridge item, per bridge, used in all pre-established remedies to changed conditions referenced in this section will be limited to the lesser of the following:

- ~~_____~~ 1. 70% of the sum of the clean steel bridge item and paint steel bridge item for that bridge; or
- ~~_____~~ 2. the actual amount for the clean steel bridge item for that bridge shown in the Schedule of Pay Items.

~~_____~~ Roadway drain casting extension pipe will be paid for in accordance with 715.14.

~~_____~~ *For steel that will become the property of the Contractor, payment for cleaning existing steel, removal of mill scale, testing, disposal of the waste stream, containment, and all other costs involved with removing and properly disposing of the existing coating will be in accordance with 202.14.*

~~_____~~ The cost of transportation and disposal of waste materials, waste residues, waste residue containers, and all other debris generated from environmental ~~pollution~~ control and cleaning that is disposed of will be paid for at the contract lump sum price for disposal of cleaning waste, hazardous or non-hazardous, at the bridge number specified.

~~_____~~ Payment will be made under:

_____ Pay Item	_____ Pay Unit Symbol
_____ Clean and Paint Bearing Assemblies, Br. No. _____	_____ LS
_____ Clean and Paint Steel Piling, Br. No. _____	_____ LS
_____ Clean Steel Bridge, Partial, QP _____, Br. No. _____	_____ LS
_____ Clean Steel Bridge, QP _____, Br. No. _____	_____ LS
_____ Clean Steel Bridge, Top Flanges, QP 2, Br. No. _____	_____ LS
_____ Disposal of Cleaning Waste, _____, Br. No. _____	_____ LS
_____ _____ waste type	
_____ Paint Steel Bridge, Br. No. _____	_____ LS
_____ Paint Steel Bridge, Partial, Br. No. _____	_____ LS

~~_____~~ The cost to prepare a QCP shall be included in the cost of the pay items of this section. The cost of providing the Department with access to the bridge and seasonal or weather limitations shall be included in the cost of the pay items of this section.

~~_____~~ If a bridge is advertised as having existing hazardous materials *structure is shown in the contract documents as being built before 1995*, no additional payment will be made for the removal of mill scale. The cost of the removal of mill scale shall be included in the cost of clean steel bridge or, clean steel bridge, partial, *clean and paint bearing assemblies, clean and paint steel piling, or clean steel bridge, top flanges*.

~~_____~~ If a bridge is advertised as having existing non-hazardous materials *structure is shown in the contract documents as being built after 1994* and the percentage of the area covered by mill

~~scale is less than or equal to 1525% of the total structural steel surface area of a bridge measured in accordance with 619.17619.19 no additional payment will be made for the removal of mill scale. The cost of the removal of mill scale shall be included in the cost of clean steel bridge or clean steel bridge, partial.~~

~~———— The cost of furnishing all materials, equipment, and labor required for washing, solvent cleaning, scraping, steel brushing, or other acceptable methods for removing paint in the locations directed shall be included in the cost of clean steel bridge or, clean steel bridge, partial, *clean and paint bearing assemblies, clean and paint steel piling, or clean steel bridge, top flange.* The cost of cleaning roadway drain castings shall be included in the cost of clean steel bridge or clean steel bridge, partial.~~

~~———— The cost of providing containment in accordance with 619.15619.07 and 619.17 and personal protective equipment shall be included in the cost of the pay items of this section.~~

~~———— The cost of furnishing all materials, equipment, and labor required to perform the quality control tasks outlined in 619.03 shall be included in the cost of clean steel bridge or, clean steel bridge, partial, *clean and paint bearing assemblies, clean and paint steel piling, or clean steel bridge, top flange.*~~

~~———— The cost of furnishing all materials including caulk, equipment, and labor to perform caulking and painting, including the stripe coats, with the structural steel paint system or the partial paint system shall be included in the cost of paint steel bridge or paint steel bridge, partial. The cost of switching stripe coat application methods shall be included in the cost of paint steel bridge or paint steel bridge, partial. The cost of furnishing all materials, equipment, and labor to perform painting of the roadway drain castings shall be included in the cost of paint steel bridge or paint steel bridge, partial.~~

~~———— The cost of all equipment, material, labor, testing, use of special cleaning methods, and shipping of waste residue samples shall be included in the cost of the clean steel bridge or, clean steel bridge, partial, *clean and paint bearing assemblies, clean and paint steel piling, or clean steel bridge, top flange, pay item.*~~

~~———— *The cost of cleaning areas around bridge joints and other areas with significant pitting a second time shall be included in the clean steel bridge, clean steel bridge, partial, clean and paint bearing assemblies, or clean steel bridge, top flange pay item.*~~

~~———— *When a pay item is included in the schedule of pay items for clean and paint bearing assemblies, all costs associated with cleaning and painting bearing assemblies, except disposal of cleaning waste, shall be included in the cost of the pay item. If clean steel bridge, clean steel bridge, partial, paint steel bridge, or paint steel bridge, partial are included as pay items in the schedule of pay items, no separate payment will be made for cleaning and painting bearing assemblies on that bridge no. The cost of cleaning and painting bearing assemblies shall be included in the cost of the respective clean steel bridge, clean steel bridge, partial, paint steel bridge, or paint steel bridge, partial pay items for that bridge no.*~~

~~———— *When a pay item is included in the schedule of pay items for clean and paint steel piling, all costs associated with cleaning and painting steel piling except disposal of cleaning waste shall be included in the cost of the pay item.*~~

ATTACHMENT 14-10

UNIQUE SPECIAL PROVISION

PAINT NAVIGATION CLEARANCE GAUGE

Description

This work shall consist of cleaning bridge pier surfaces to be painted of all contaminants and old clearance gauge coatings, painting clearance gauges to indicate the vertical clearance available beneath the navigation span, and providing all necessary incidentals required to complete the work in accordance with 105 and the Public-Private Agreement (PPA) submittal requirements. All existing clearance gauge coatings and markings shall be removed, including those on the surfaces not to be painted.

(A) Submittals

The Design-Build Contractor shall submit the following written items to IFA:

1. An Environmental Compliance Plan, a Waste Management Plan, a Ground Water Surface Water Protection Plan, and a Catch Basin Plan for the Paint Navigation Clearance Gauge work.
2. Manufacturer product data, and film thickness, surface preparation, mixing, and application instruction for the coating system to be used.
3. Manufacturer samples of clearance gauge paint colors.
4. Manufacturer certification that materials comply with specified requirements and are suitable for intended application.
5. Rigging Plan design.

All items shall be submitted to IFA for review and approval prior to beginning work.

Materials

A clearance gauge consisting of painted marks and numerals shall be painted on the upstream side of right descending channel pier 3, and the downstream side of left descending channel pier 2. Marks and numerals shall be accurately located as shown in the Appendix.

The painted areas shall receive two coats of non-reflective white for background after which gauge numbers and markings shall be painted thereon in two coats of black. The two coats of white background and black gauge markings shall have a flat finish. Each coat shall be applied with a minimum of 24 hours drying time per coat. The surfaces to be painted shall be thoroughly dry before application.

All materials used shall be guaranteed by the manufacturer to be suitable for use on concrete under severe exposure and submerged in water conditions.

All materials the Design-Build Contractor proposes to use shall be submitted for IFA review and approval.

All paint application shall be executed in accordance with the manufacturer recommendations. Perform surface preparation and apply paint only when weather conditions meet the manufacturer recommendations. Paint shall be applied only to surfaces clean, dry, and free of bond-inhibiting contaminants.

All paint application shall be executed using brushes, rollers, etc. Spray application is not permitted. Painting shall start when the clearance gauge can be reasonably expected to be completed with all paint coats plus at least seven days before any portion of the clearance gauge may become submerged.

Clearance gauge paint shall be supplied by the following partial list of manufacturers believed to be capable of supplying a water repellent finish paint suitable for severe exterior exposure:

PPG Industries, Devoe Deflex

Tnemec Company, Inc., EnviroCrete Series 156

Sherwin Williams, Acrolon 218 HS

Construction Requirements

(A) Surface Preparation. Surface preparation shall include total removal of all old clearance gauge paint on surfaces not to be painted as well as surfaces to be painted. This work shall be completed in accordance with SSPC-SP 13/NACE No. 6 Surface Preparation of Concrete, and requirements of the coating manufacturer.

All surface contamination such as oil, grease, dirt, foreign matter, laitance, efflorescence, and sealers shall be removed. The steel nose shall be cleaned to bare metal and primed prior to clearance gauge coating application. Primer and gauge materials shall be compatible from a single manufacturer.

An acceptable prepared surface shall be free of contaminants, laitance, loosely adhering concrete, existing coatings, and dust, and shall provide a sound, uniform substrate suitable to promote adhesion for the application of the clearance gauge coating system.

(B) Catch Basin System. The Design-Build Contractor shall construct a catch basin system to contain waste wash water for filtering during pressure washing procedures and contain all coating that may be spilled during the coating application.

(C) Residual Lead Paint. Residual lead paint may still be on the bridge and could be encountered when cleaning the steel nose on the bridge pier columns. The Design-Build Contractor is advised to take all necessary protective measures including worker safety and environmental regulations when performing surface

preparation and other work. The IFA will not consider any claims based on residual lead paint.

(D) Workmanship. All specified surfaces shall be properly cleaned and painted to the satisfaction of IFA. There shall be no provision for missed areas or substandard work regardless of size of the area in question. All improperly prepared or painted surfaces shall be repaired to meet the provisions of this specification.

The Design-Build Contractor shall be solely responsible for any damages arising from the painting operations. All defects in the new paint shall be repaired.

(E) Inspection. IFA will provide inspection for all items required in this contract.

1. Power Washing: Visual Inspection.

2. Clearance Gauge Paint

(a) First Coat Application: Check for wet film thickness, and defects in the paint.

(b) Finish Coat Application: Check for wet film thickness, paint appearance, color and quality of application.

(F) Paint Storage, Handling, Sampling, Mixing and Thinning

A paint storage site for receiving and storing paint delivered for use on the project shall be established. The paint storage site shall be located separate from the job site.

All new paint accepted by certification shall be received at the storage site for inventory. At that time, the Design-Build Contractor and the IFA shall independently inventory the supplied paint by batch number and quantities delivered. Tallies shall be compared, and all differences resolved.

The IFA inspector will examine all paint containers delivered and those with 1) broken seals, 2) rust, 3) and altered, missing or illegible batch numbers or labels will be rejected. The IFA inspector will number and initial each container with an indelible marker. Rejected paint containers shall be labeled "REJECTED" and disposed of promptly. The containers of paint unapproved or rejected shall be stored separately from those that have been approved. No paint shall be permitted at the actual job site until approved by IFA.

The Design-Build Contractor shall conduct a daily start-up inventory for IFA review of containers of approved paint brought to the job site noting batch numbers and the IFA inspector container numbers. At the end of the workday, the Design-Build Contractor shall conduct another inventory noting the number of paint containers expended, the IFA

inspector inventory numbers, and types of paint and provide the inventory for IFA review. Paint containers brought on the job site and not used shall be inventoried and inventoried again if those paint containers are taken back to the job site to be used.

The addition of solvents to paint will be permitted only by written approval from IFA. Only new solvents supplied by the paint manufacturer shall be used. Solvents shall only be used at the job site in the presence of the IFA inspector. Solvents from new, unopened containers with the solvent manufacturer labeling intact shall be used. The Design-Build Contractor shall record locations where solvent-thinned paint was used.

Solvents used for cleaning at the job site shall be kept in sealed containers away from mixing operations. Solvents used to clean brushes or rollers shall be collected in sealed containers and stored and disposed of as a hazardous waste.

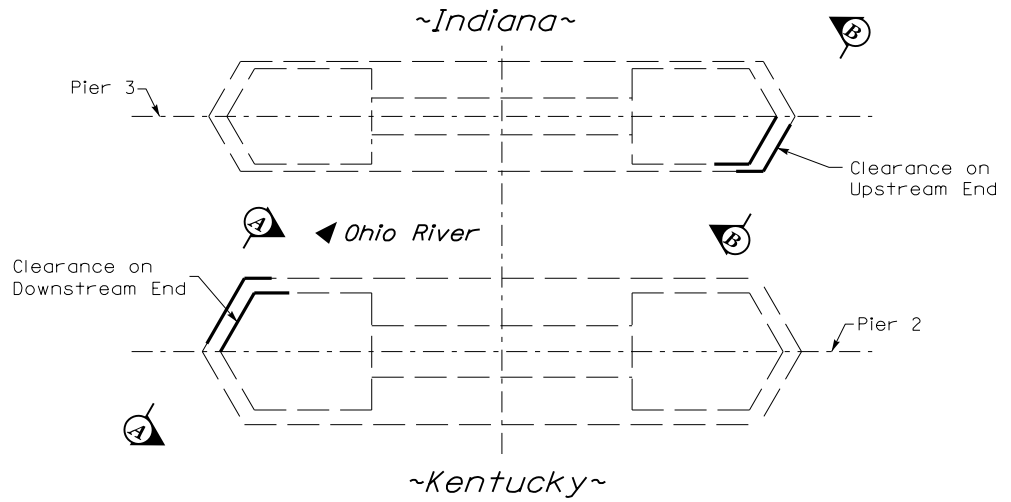
The Design-Build Contractor shall provide for a paint manufacturer to provide a technical representative at the job site when requested by the IFA.

(G) Environmental and Safety Requirements

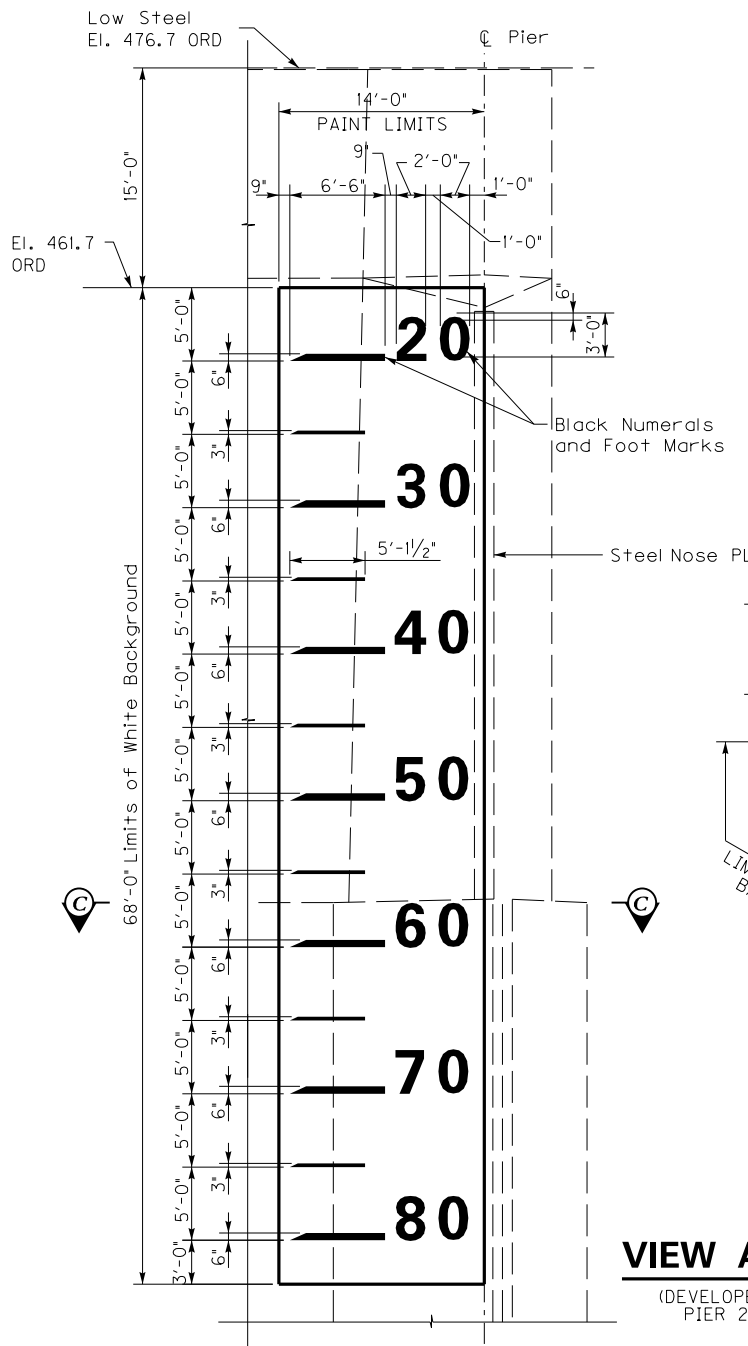
The Design-Build Contractor shall conform to INDOT Standard Specification 619, and follow 619.07 for pollution control and waste disposal of existing paint residue and debris.

APPENDIX

PAGE 1 OF 3	Pier 2 Navigational Clearance Gauge Details
PAGE 2 OF 3	Pier 3 Navigational Clearance Gauge Details
PAGE 3 OF 3	Navigational Clearance Gauge Details

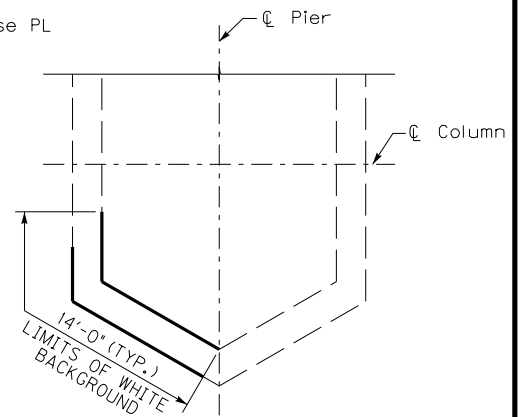


PLAN ~ MAIN RIVER PIERS



Notes:

1. For Notes, see page 2 of 3.
2. For Pier 3 Clearance Gauge, see page 2 of 3.



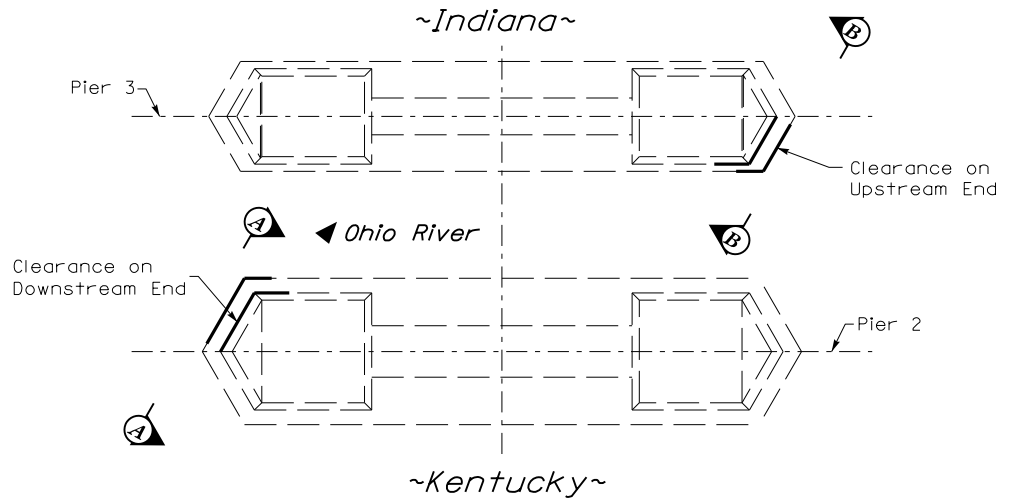
SECTION C-C

PIER 2

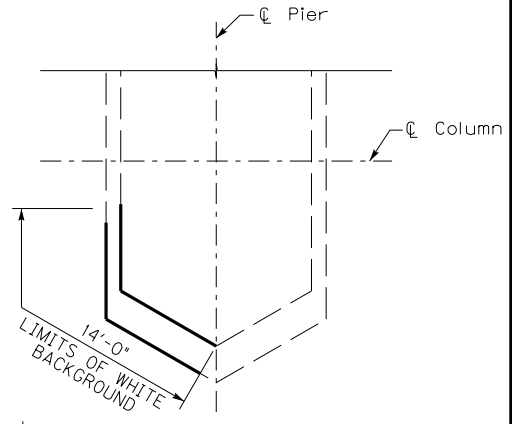
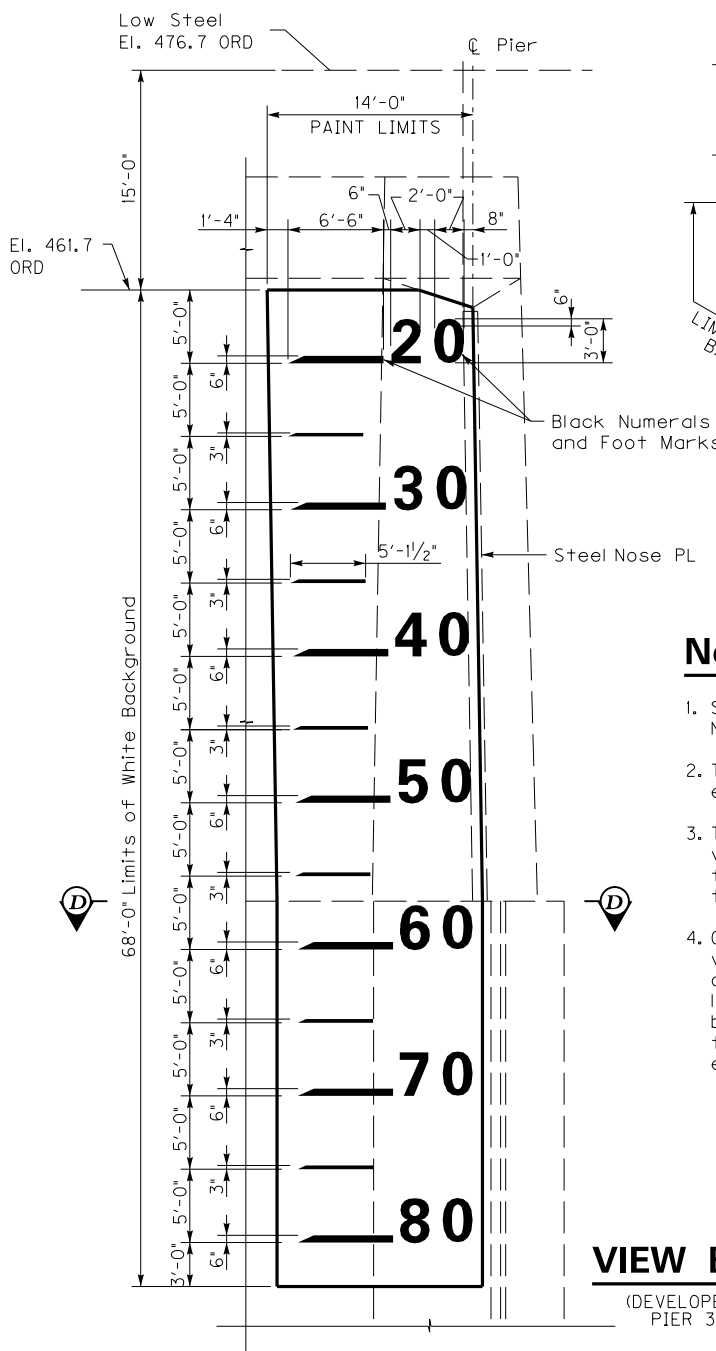
**NAVIGATIONAL
CLEARANCE
GAUGE DETAILS
PAGE 1 OF 3**

VIEW A-A

(DEVELOPED)
PIER 2



PLAN ~ MAIN RIVER PIERS



SECTION D-D

Notes:

1. See Attachment 14-10 for USP Paint Navigation Clearance Gauge.
2. The Contractor shall field verify all elevations.
3. The Contractor shall remeasure the vertical distance of the numerals and foot marks below low steel to ensure the accuracy of the gauge.
4. Clearance gauges must indicate the vertical distance between "low steel" of the bridge channel span and the level of the water, measured to the bottom of the foot marks, read top to bottom. The required markings shall extend down to at least 80 feet.

PIER 3

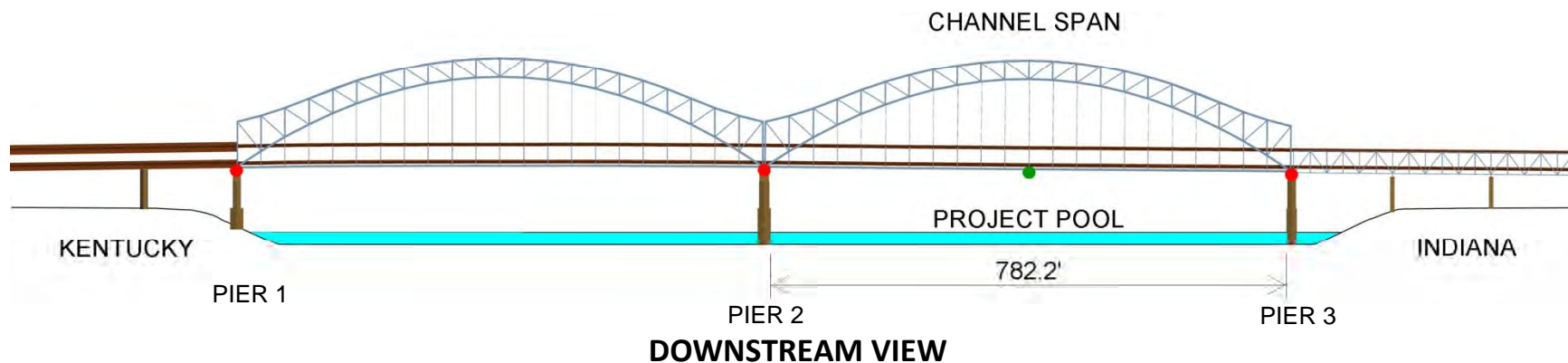
**NAVIGATIONAL
CLEARANCE
GAUGE DETAILS
PAGE 2 OF 3**

VIEW B-B

(DEVELOPED)
PIER 3

Sherman Minton Hwy (I-64) Bridge

RIVER MILE 608.6



PROJECT POOL STAGE	
DATUM	ELEV.
OHIO RIVER DATUM	383.00
NGVD 29	382.18
NAVD 88	381.71

CHANNEL SPAN									
VERTICAL DATUM	OHIO RIVER DATUM (ORD)			NGVD 29			NAVD 88		
LOCATION	PIER 1	PIER 2	PIER 3	PIER 1	PIER 2	PIER 3	PIER 1	PIER 2	PIER 3
ELEVATION OF LOW STEEL	483.3	479.8	476.7	482.5	479.0	475.9	482.0	478.5	475.4
VERT. CLEARANCE AT PROJECT POOL STAGE	100.3	96.8	93.7	100.3	96.8	93.7	100.3	96.8	93.7

NOTE: ALL UNITS ARE IN FEET