Michael Baker
INTERNATIONAL

We Make a Difference

February 10, 2023

ASHE Northeast Region

Attention: Scott Eshenaur, P.E. (NE Region NPAC Chairperson)

Subject: ASHE National Project of the Year Application and Commitment Statement
Scudder Falls Bridge Replacement Project

Dear Scott,

Michael Baker International on behalf of Delaware Valley Section; North Central New Jersey Section; and Southern New Jersey Section of ASHE, we are pleased to submit the Scudder Falls Bridge Replacement Project for your committee's review and consideration for the over $20M category for the ASHE 2023 National Project of the Year.

Enclosed herein in a single PDF are the following:

- Project Entry Form
- Project Narrative
- Five Construction Drawings (w/highlighted text to emphasize specific items of work)
- Five Photos (please note a separate PDF is also included with high resolution photos)
- Verification of Substantial Completion

The submittal has been formatted in accordance with the application guidelines. With this application the undersign is committed, if chosen for this award, to attend and represent the project at the awards luncheon at the 2023 National Conference in Atlanta, Georgia.

Please note that this project encompasses work in both New Jersey and Pennsylvania and had been recognized as the Project of the Year by the three ASHE sections (Del-Val; NC-NJ, and SNJ) that have joint together and support this submission. I would also like to thank you and your committee in advance for contributing their time and efforts in support of this competition. Thanks again, and please don't hesitate to contact me with questions.

Sincerely,

Joseph A. Danyo, P.E., P.P

Chief Engineer

Michael Baker International, Inc.

AMERICAN SOCIETY OF HIGHWAY ENGINEERS

National Project of the Year Award

OFFICIAL ENTRY FORM

AWARD CATEGORY (Check One): ☐ Under $20 Million ☒ Over $20 Million

SPONSORING REGION (Check One):

☒ Northeast	☐ Great Lakes	☐ Northwest
☐ Mid-Atlantic	☐ North Central	☐ Rocky Mountain
☐ Southeast	☐ South Central	☐ Southwest

CONTACT INFORMATION FOR SUBMITTING REGION:

Contact Name: Scott R. Eshenaur ASHE Region Position: Judging Committee Chairperson
Phone (Office): 717-790-9565 ext. 10422 Phone (Mobile): 717-580-8426 E-Mail Address: sreshenaur@modjeski.com

PROJECT INFORMATION:

ENTERING AGENCY/COMPANY'S NAME: Michael Baker International, Inc.
PROJECT NAME: Scudder Falls Bridge Replacement Project TYPE: Design
PROJECT LOCATION: Bucks County, Pennsylvania to Mercer County, New Jersey
CITY: Lower Makefield Twp (PA) Ewing Twp (NJ) COUNTY: Bucks/Mercer STATE: PA/NJ
FINAL CONSTRUCTION COST: $436,200,000 BUDGETED CONSTRUCTION COST: $396,000,000
PROJECT COMPLETION DATE: June 2022 (Substantial Completion: December 31, 2021)
PROJECT ASHE SECTION: Delaware Valley; Southern NJ; North Central NJ ASHE SECTION CONTACT NAME: Joe Danyo (Southern NJ)
PHONE (OFFICE): 609-807-9595 PHONE (MOBILE): 856-906-5920 E-MAIL: jdanyo@mbakerintl.com

PROJECT TEAM:

PROJECT OWNER: Delaware River Joint Toll Bridge Commission
STREET ADDRESS: 1199 Woodside Road
CITY: Yardley STATE: PA ZIP: 19067
CONTACT PERSON: Kevin Skeels PHONE: 215-266-4894 (C)
E-MAIL ADDRESS: kskeels@drjtbc.org

PROJECT DESIGN FIRM: Michael Baker International, Inc.
STREET ADDRESS: 300 American Metro Blvd., Suite 154
CITY: Hamilton STATE: NJ ZIP: 08619
CONTACT PERSON: Joe Danyo PHONE: 609-807-9595
E-MAIL ADDRESS: jdanyo@mbakerintl.com

PRIME CONTRACTOR: Trumbull Corporation
STREET ADDRESS: P.O. Box 6774, 225 North Shore Drive
CITY: Pittsburgh STATE: PA ZIP: 15212
CONTACT PERSON: Jason Maffeo PHONE: 412-807-2195
E-MAIL ADDRESS: jason.maffeo@trumbullcorp.com

Entry Form Completed By: Joe Danyo, Michael Baker International, Inc. **Date:** 2-9-2023

* Joe Danyo will attend and represent the project at the awards luncheon.

2023 ASHE Project of the Year
Entering ASHE Sections: Delaware Valley; Southern NJ; North Central NJ
Client: Delaware River Joint Toll Bridge Commission (DRJTBC)
Project Name: Scudder Falls Bridge Replacement Project

Michael Baker INTERNATIONAL

Project Description

The new Scudder Falls Toll Bridge carries I-295 over the Delaware River between Bucks County, Pennsylvania and Mercer County, New Jersey. The new bridge was the marquee element of the five-year-long, $570 million Scudder Falls Bridge Replacement Project completed in June 2022. The multi-faceted undertaking was spread across a 4.4-mile-long interstate highway corridor in Lower Makefield, PA. and Ewing, NJ. In addition to the high-capacity river bridge, the project yielded widened approach roadways, safer flanking highway interchanges, a shared-use path for pedestrians and bicyclists, drainage and wetlands upgrades, and an all-electronic tolling facility that keeps traffic moving. The bridge now carries an annual average of 40,000 vehicles per day.

Complexity

The Scudder Falls Bridge Replacement Project broke ground in April 2017. The centerpiece objective was the replacement of a deteriorating, congestion-prone, functionally obsolete bridge that became an increasingly hazardous commuter bottleneck several decades after its June 1961 opening. The outdated four-lane bridge was a non-redundant plate-girder structure with fracture-critical pin-and-hanger connections. The DRJTBC was committed to replacing the bridge with dual structures having increased redundancy and greater capacity to handle current and future traffic demands.

Michael Baker International completed the preliminary/final design of the project within a 16-month period, which was then executed in three major construction stages. The project involved replacement of the existing four-lane bridge with twin structure carrying six lanes of through traffic (three in each direction), with additional acceleration/deceleration lanes. The project also included complete reconstruction of the deficient Route 29 interchange on the New Jersey side and reconfiguration of the Taylorsville Road interchange in Lower Makefield, Pennsylvania, to improve the safety and efficiency of the interchanges. The bridge design evaluated precast concrete segmental, spliced precast concrete I Girder, and multi-girder steel superstructure types. Steel superstructures were selected for the two 1,850-ft six span main river bridges and 7 ramp/approach bridges: with 2 structures utilizing precast concrete I-beams. The design also included extensive use of tall retaining walls and noise walls. In an effort to reduce the amont of inwater work, Michael Baker increased the bridge span lengths to 279-ft., which allowed for the elimination of a pier line, from the conceptual design that was developed and permited. The foundation design utilized 5-ft. diameter drilled shafts with the fixed pier (Pier 4) located at mid-span (i.e., in the center of the river), which then only required expansion joints at the two

abutments. Proposed piers were offset from the existing bridge piers in order to avoid potential conflicts during construction.

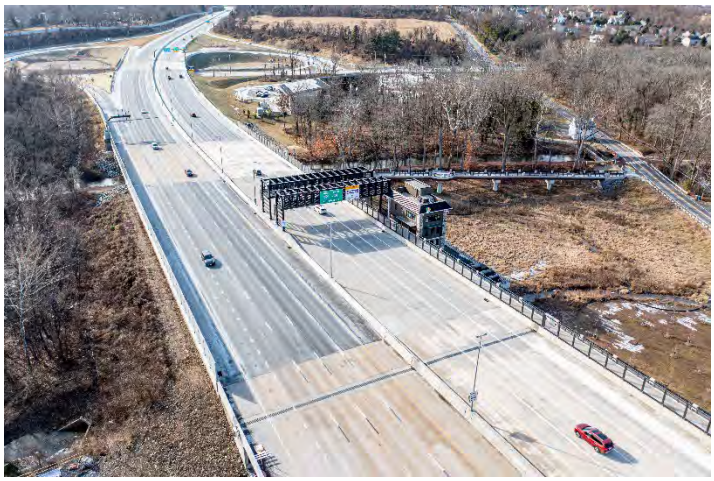
Two roundabouts were constructed on the New Jersey side to improve the efficiency and safety of the interchange by replacing the existing intersection "scissor" ramps with yield conditions. Roadway work also included the widening of approximately 2.2 miles of I-295 (formerly I-95) on both approaches of the Main River Bridge. The design included SWM basins and mechanical treatment devices with a complete overhaul of the drainage system; as well as new highway lighting; ITS facilities; OHSS's; complex MPT; and a stream relocation, which involved a jack and bore of a 84" culvert pipe under 30-ft of I-295 roadway fill.

Drainage upgrades included the use of bio-retention basins in NJ and pre-treatment forebays and infiltration basins in PA to control runoff and treat the increased impervious pavement area. Throughout construction, existing rock elevations varied, and boulders were encounter from the original highway construction, which presented challenges for the varies elements/components on the project that needed to be constructed.

New Application of Existing Techniques/Originality/Innovation

The new bridge was to include toll collection and to mitigate public resistance, the DRJTBC needed a problem-free all-electronic-tolling (AET) system that would enhance the bridge project's free-flowing traffic objectives. Michael Baker designed a partially enclosed steel-supported gantry from which toll-collection cameras and equipment are suspended on the Pennsylvania approach side of the bridge's upstream span. The gantry is walkable, allowing for maintenance and repairs of tolling equipment without roadway closures. This was the DRJTBC's first AET facility and the 90-percent-plus rate of E-ZPass usage attests to the facility's early success and public acceptance. Tolling commenced at the completion of Stage 1.

A four-story support building was constructed to house intelligent transportation system (ITS) equipment; the AET equipment; and to provide a command center for the DRJTBC bridge monitors/security staff. The toll gantry is adjacent to the building, which provides easy access from a



roof top walkway. The building was sized to handle possible additional future equipment needs. A nearby stand-by generator can power the AET equipment and associated building systems in the event of electrical service disruptions.

To further enhance the service life of the bridge decks and approach slabs, all High-Performance Concrete (HPC) bridge decks received an approximate 1-inch thick Polyester Polymer Concrete overlay. All substructure elements were also constructed with HPC. Noise-abatement walls were designed along the approach roadways leading to and from the bridge. Advanced contracts were issued for some of the proposed noise walls in Pennsylvania, which provided an immediate benefit of noise mitigation from the construction activities to the neighboring communities. Other advanced contracts involved an extensive tree clearing effort within a limited time frame due to environmental timing restrictions associated with the Indiana Bat roosting period and encapsulating the existing main river bridge's superstructure with netting to prevent peregrine falcons from nesting on the girders or piers, which would have impacted the construction schedule of the new bridge.

Social/Economic Considerations

This project was designed to meet future transportation needs by alleviating traffic congestion and upgrading safety and operational conditions on the bridge and adjoining highway segments. An advanced contract for noise-abatement walls as noted above and completed in June 2017 provided immediate benefit to the communities along the project limits as did improvements that were made to the drainage and stormwater quality systems in both states.

An exhaustive decade-long environmental documentation process preceded design and construction, culminating with federal regulatory approval in June 2012. Extensive environmental permits and coordination were required from NJ, PA, and Federal Agencies and included FHWA NEPA Re-Evaluation, NJDEP Freshwater Wetlands Protection Act Individual Permit, Flood Hazard Area Control Act Individual Permit, Delaware and Raritan Canal Commission Approval, Reforestation Plan per NJ No Net Loss Reforestation Act, peregrine falcon nesting mitigation to eliminate construction timing restrictions, freshwater mussels surveys and relocation, short-nose sturgeon monitoring plans and NMFS Endangered Species Act coordination, fulfillment of NJSHPO and PASHPO Memorandum of Agreement conditions, close coordination with PADCNR for activities in the Delaware Canal, USACE Philadelphia District Nationwide Permits, and SESC Certifications.

Passive transportation also was a project consideration. The Michael Baker team designed a 10-foot-wide shared-use pedestrian/bicycle path on the new bridge's upstream span. Ramps and pathways

provide connectivity with recreational canal towpaths on the Pennsylvania and NJ sides and includes a comfort station within the support building and four scenic overlooks. This is the only bridge in the DRJTBC system where bicyclists can pedal across. Bicyclists must dismount and walk across the other 15 DRJTBC bridges that are outfitted with walkways.

Safety

The interchange of I-295 and NJ Route 29 in Ewing, NJ was modified to improve safety and reduce the complexity of the local road network. The previous interchange configuration (scissor ramps) involved a complex series of intersection ramps at acute angles with yield conditions. Intersecting traffic would meet at high speeds, often with sight distance issues due to the acute intersecting angles of ramps, which posed a safety hazard for the potential of right-angle crashes. To mitigate this, two roundabouts were designed and constructed to improve the efficiency and safety of the interchange. The acceleration lanes were increased to provide more time for traffic to merge. The reconfiguration of Taylorsville Road Interchange eradicated a weave condition by relocating one movement from I-295 to Taylorsville Road that now utilizes the signalized intersection. A temporary trestle was utilized for the Main River Bridge construction and demolition of the existing structure to reduce the impacts to the traveling public.

Aesthetics and Sustainable Features

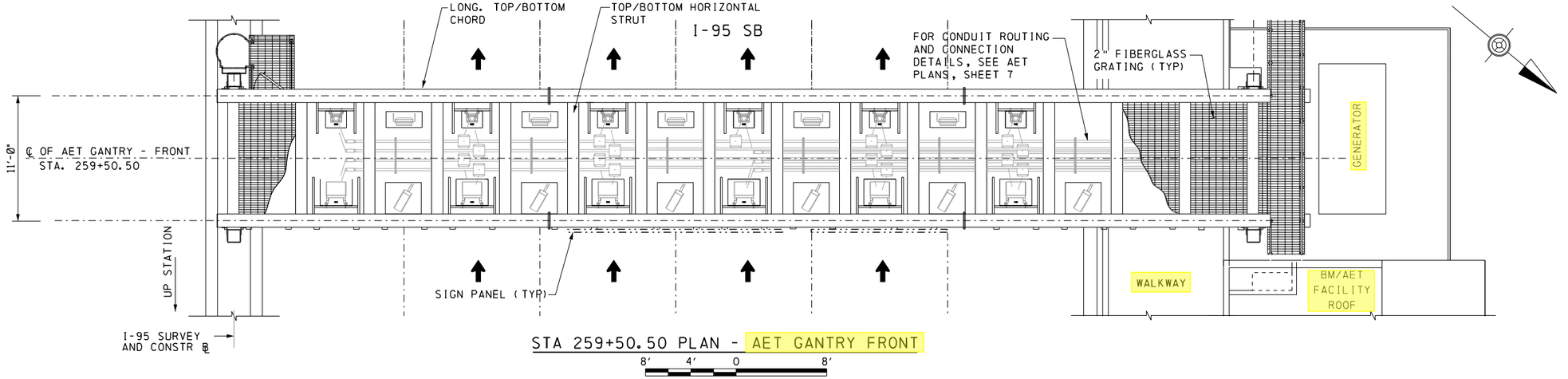
The project was designed based on future transportation needs in the area and to alleviate the increasing traffic congestion and deficiencies associated with the physical configuration of the bridge and its two adjacent interchanges. The I-295 inside shoulders are 14-ft wide to accommodate potential future bus rapid-transit service. The piers of the Main River Bridge as well as the retaining walls were completed using an architectural finish. The support building finishes were designed to reflect the historic colonial nature of the area. Noise wall panels along the bicycle/pedestrian shared use walkway are clear acrylic as to not obstruct the view to the south.

Meeting and Exceeding Owner's/Client's Needs

The completed $436,200,000 Scudder Falls Bridge Replacement Project provides a wide array of improvements promise to serve generations of motorists from New Jersey, Pennsylvania and beyond. The related passive-transportation facilities, environmental-protection measures, and wildlife habitat considerations will further enhance the Delaware River watershed as a natural and recreational resource for decades to come.

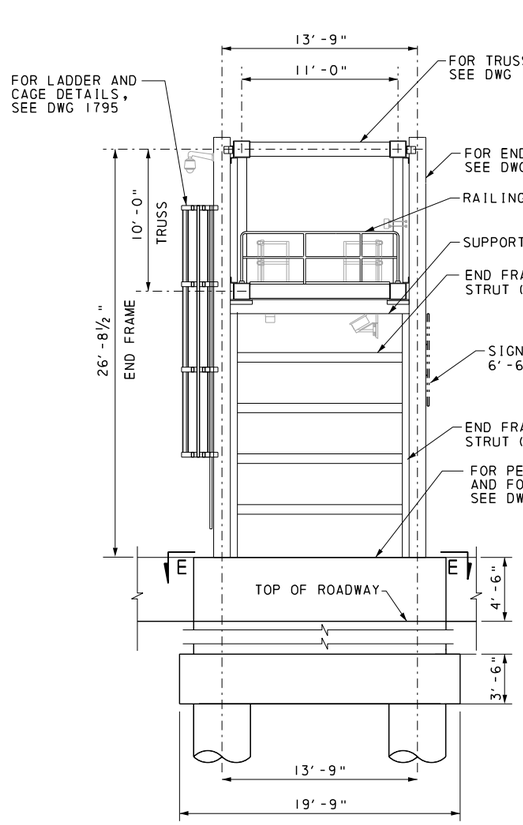
This project signifies ASHE's mission statement of promoting "a safe and efficient transportation system for mobility now and in the future".

REVISION NUMBER	REVISIONS	CKD.	BY	DATE



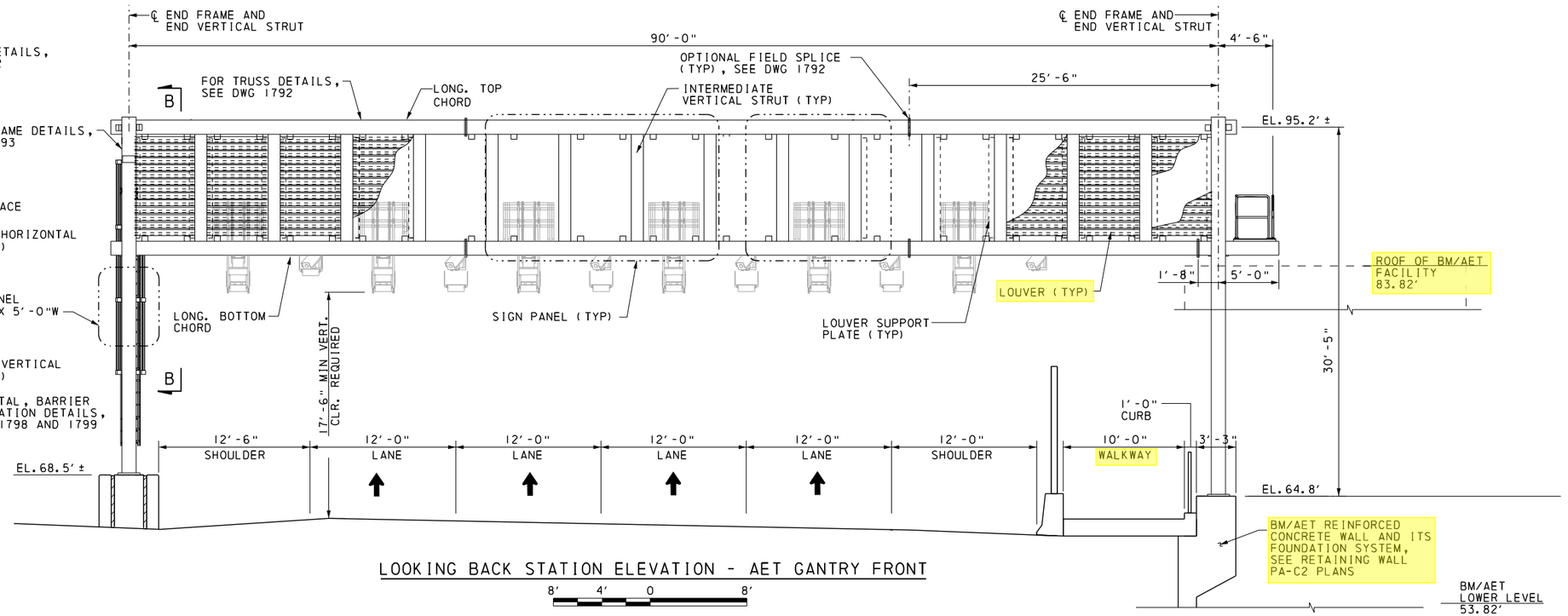
STA 259+50.50 PLAN - AET GANTRY FRONT

8′ 4′ 0 8′



END FRAME ELEVATION

8′ 4′ 0 8′



LOOKING BACK STATION ELEVATION - AET GANTRY FRONT

8′ 4′ 0 8′

CONFORMED

STV Inc. 220 Baer Tavern Rd. Suite 200 Trenton, NJ 08628-1021

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL WILLIAM C. BROOKS ENGINEER PE039765E

REG. PROF. ENGINEER

DATE

Michael Baker International 300 American Metro Blvd. Ste. 154 Hamilton, NJ 08619

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MAHER A. SIDANI ENGINEER PE082891

REG. PROF. ENGINEER

DATE

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

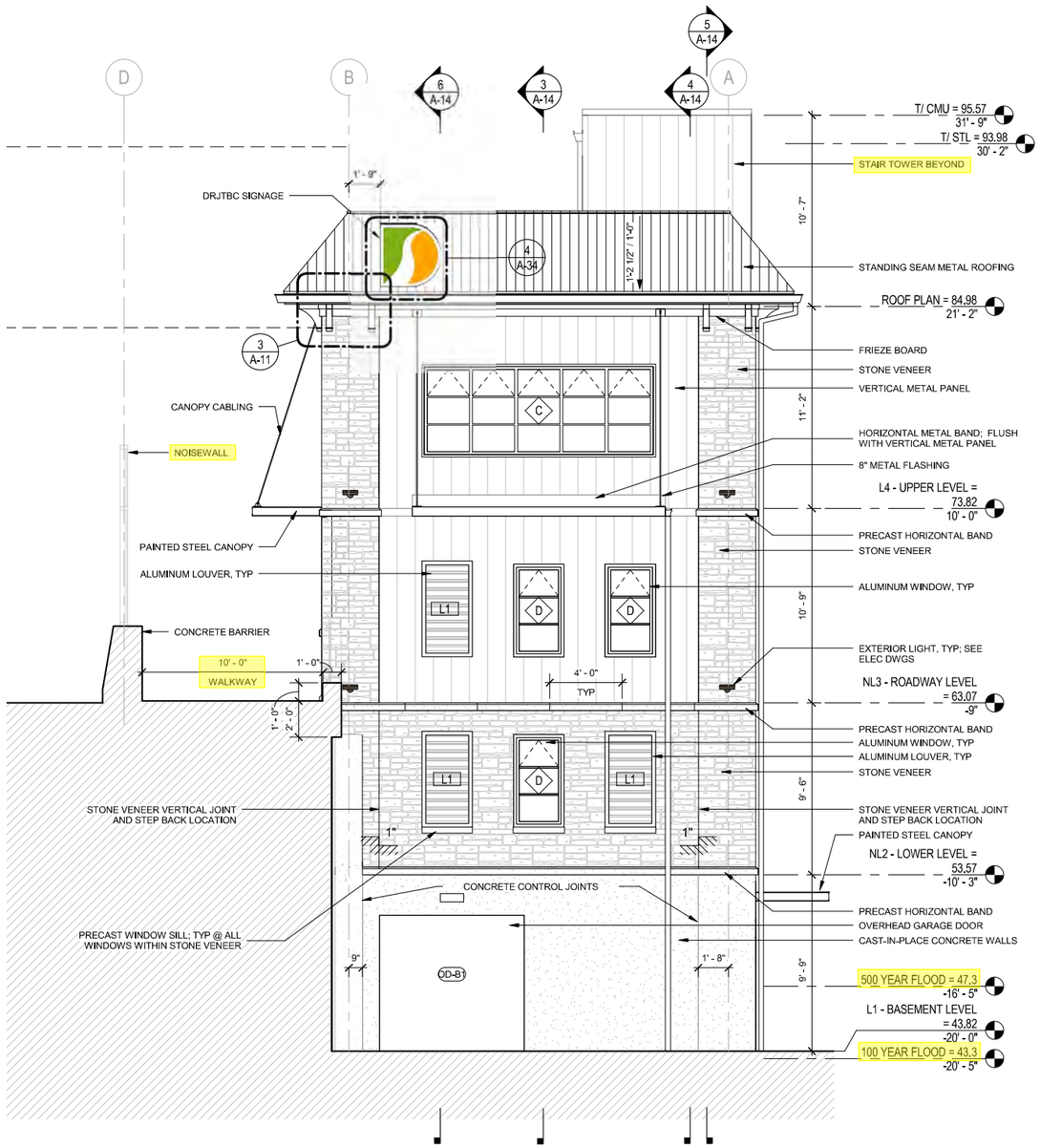
SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
CONTRACT NO. T - 668A

AET GANTRY FRONT - PLAN AND ELEVATION

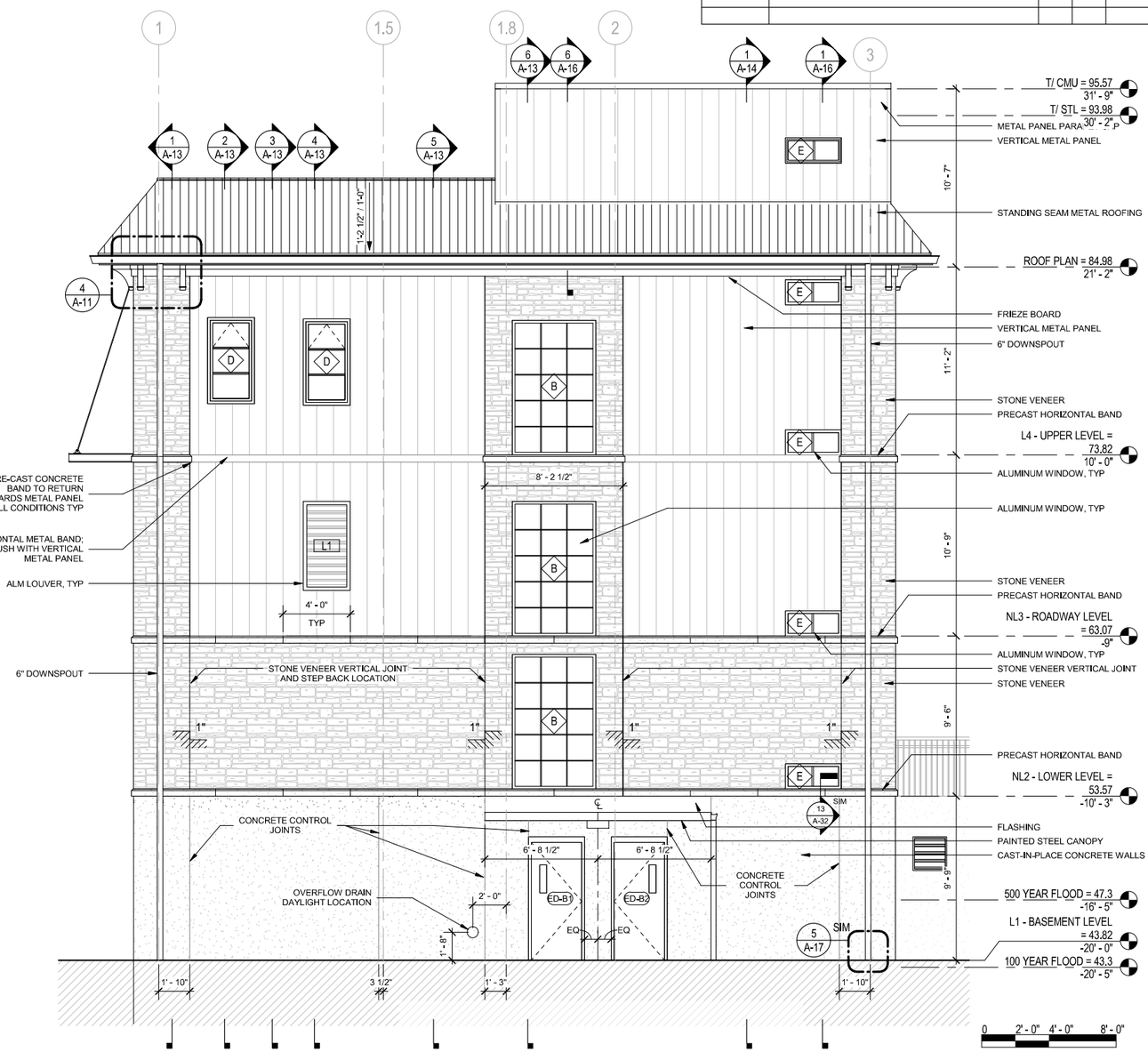
DRAWN BY	D. GRIFFITH	ENGINEER	K. PHU	STRUCTURE NO.	92803 & 92804
IN CHARGE		FILE		DRAWING NO.	1789
DATE	AUGUST, 2016	SCALE	AS SHOWN	SHEET NO.	4 OF 19

I:\Projects\4017399\4017399_000\90_CAD Models and Sheets\Drawings\Structures\AET Gantry\plan & AET Gantry.dgn
8/12/2016 4:12:00 PM phuk

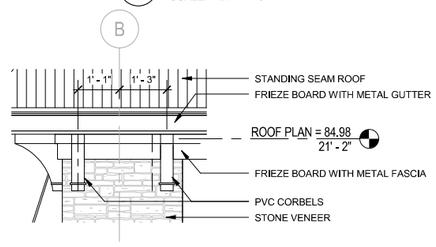
REVISION NUMBER	REVISIONS	CKD	BY	DATE



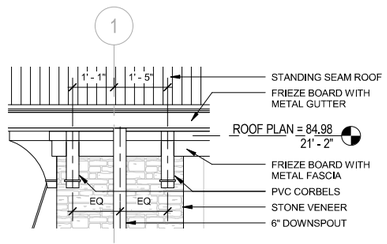
1 EAST ELEVATION
SCALE: 1/4" = 1'-0"



2 NORTH ELEVATION
SCALE: 1/4" = 1'-0"



3 ENLARGED ELEVATION @ CORBELS I
SCALE: 1/2" = 1'-0"



4 ENLARGED ELEVATION @ CORBELS II
SCALE: 1/2" = 1'-0"

NOTES - ELEVATIONS

1. REFER TO SHEET A-31 FOR DOOR SCHEDULE AND ELEVATIONS.
2. REFER TO SHEET A-32 FOR WINDOW ELEVATIONS
3. REFER TO MATERIAL FINISH KEY ON SHEET A-35 FOR EXTERIOR FINISHES.
4. REFER TO THE ROOF PLAN ON SHEET AA-08 FOR ALL TYPICAL ROOF DETAIL REFERENCES AND ROOF SLOPES.
5. REFER TO THE STRUCTURAL DRAWINGS FOR MORE INFORMATION.
6. FOR ALL INTERIOR AND EXTERIOR FINISHES INDICATED FOR THE BM/AET FACILITY THE CONTRACTOR SHALL DEVELOP PRESENTATION BOARDS FOR REVIEW AND FINAL SELECTION MATERIALS, COLORS, AND TEXTURES BY THE COMMISSION

CONFORMED

0 2' - 0" 4' - 0" 8' - 0"
SCALE: 1/4" = 1' - 0"

0 1' - 0" 2' - 0" 4' - 0"
SCALE: 1/2" = 1' - 0"

Michael Baker INTERNATIONAL
Michael Baker International, Inc.
300 American Metro Blvd. Ste. 154
Hamilton, NJ 08619

REGISTERED ARCHITECT PENNSYLVANIA RONALD JOSEPH CHAFFIN

REG. PROF. ENGINEER

DATE

Michael Baker INTERNATIONAL
Michael Baker International, Inc.
300 American Metro Blvd. Ste. 154
Hamilton, NJ 08619

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MAHER A. SIDANI ENGINEER PE080291 PENNSYLVANIA

REG. PROF. ENGINEER

DATE

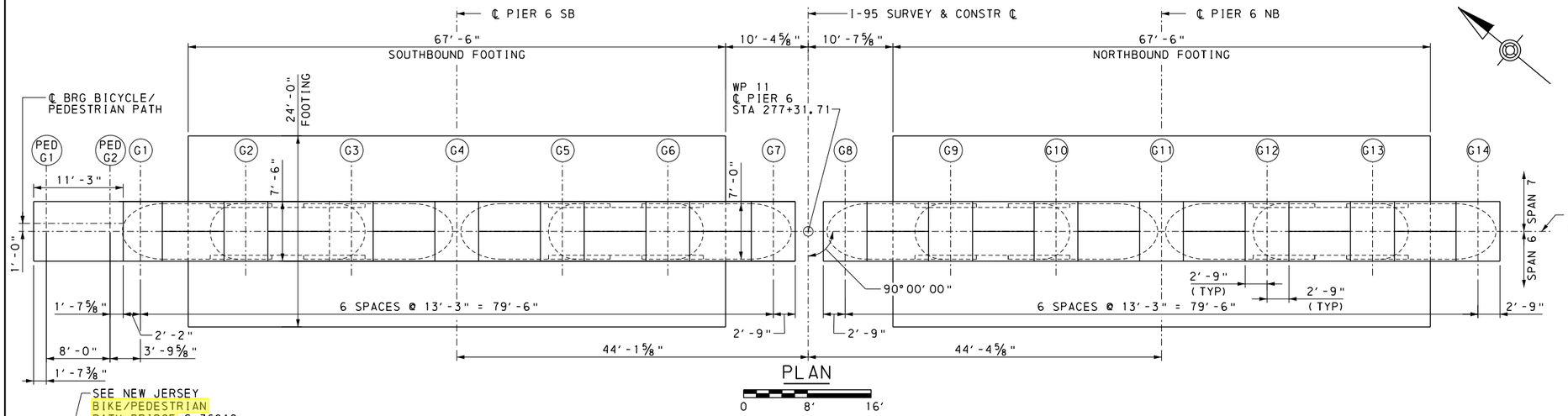
DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION
MORRISVILLE, PENNSYLVANIA

BM/AET FACILITY FOR
THE SCUDDER FALLS BRIDGE REPLACEMENT PROJECT

BUILDING ELEVATIONS I

SCALE: AS NOTED	CONTRACT NO.	DWG NO. **A-11** OF **A-38**
DATE: **AUGUST 2016**	T-668A	SHEET NO. **35** OF **119**

REVISION NUMBER	REVISIONS	CKD.	BY	DATE

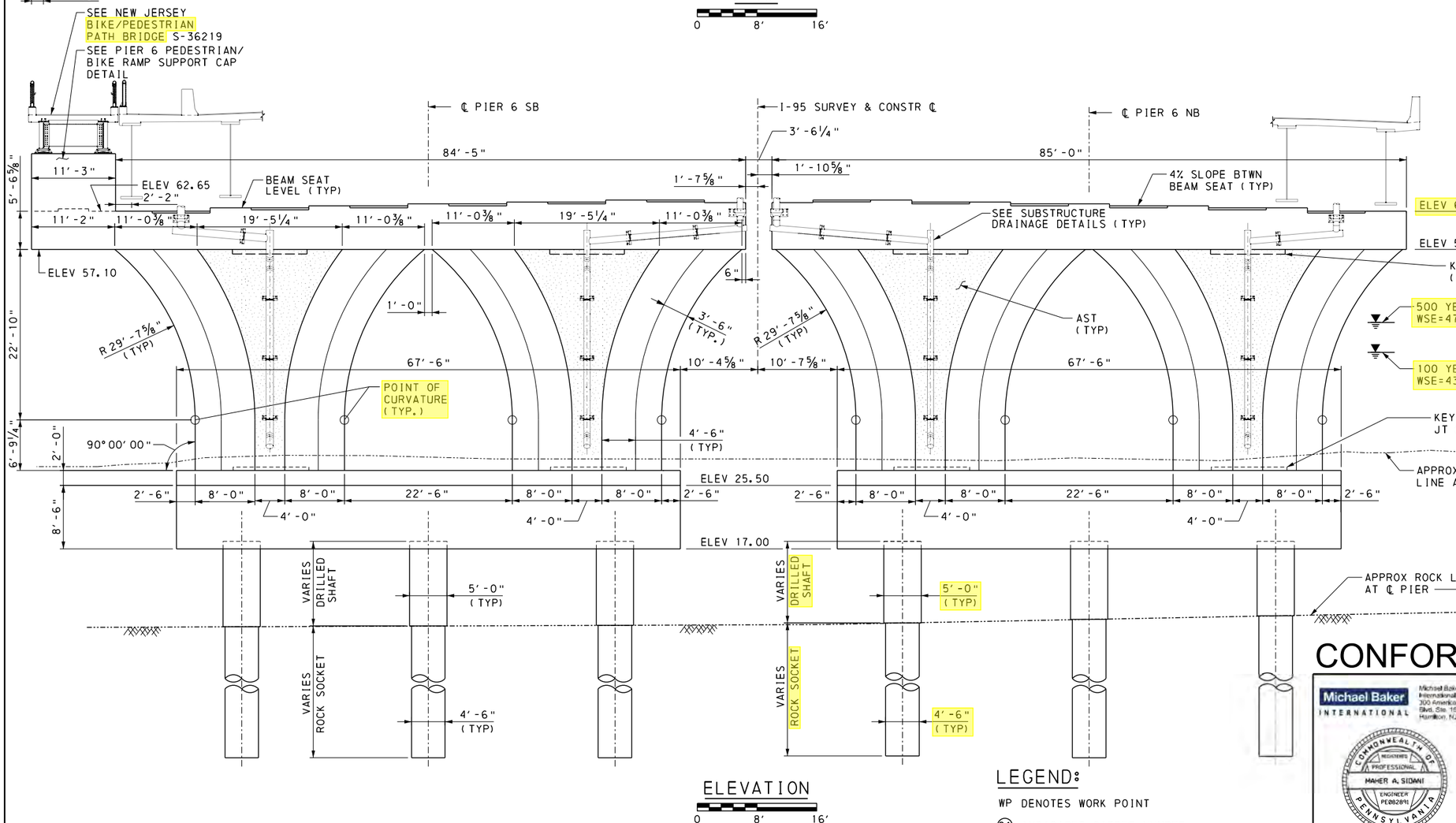


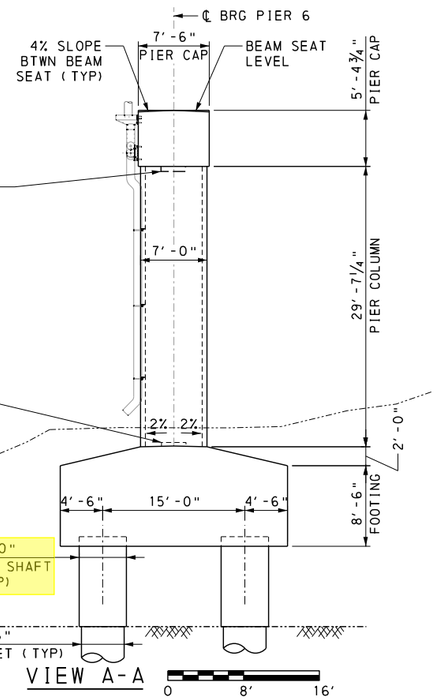
NOTES:

1. ALTERNATE 1 SHOWN, ALTERNATE 2 SIMILAR. SEE PIER CAP PLAN AND GRILLAGE DETAILS FOR ALTERNATE 2 BEAM LOCATIONS AND SEAT ELEVATIONS.
2. ALL PIER DIMENSIONS SHOWN ARE TYPICAL FOR N.B. AND S.B. UNLESS OTHERWISE NOTED.

REFERENCES:

		SHEET:
1.	GENERAL NOTES	7-10
2.	LIST OF PENNDOT STANDARD DRAWINGS	1
3.	STAKE-OUT PLAN	25,26
4.	PIER DRILLED SHAFT DETAILS	48
5.	PIER 6 FOOTING PLANS	62
6.	PIERS 2,3,5 AND 6 COLUMN/CAP ELEVATION	56
7.	PIER CAP PLAN AND GRILLAGE DETAILS	65
8.	PIER COLUMN/CAP REINF INTERFACE DETAIL	61
9.	PIER 6 BIKE RAMP SUPPORT DETAILS	64
10.	PIER CAP HANDRAIL DETAILS	66
11.	PIER CAP DETAILS 1 & 2	67,68
12.	PIER 6 REINFORCEMENT BAR SCHEDULES	74,75
13.	SUBSTRUCTURE DRAINAGE DETAILS	76-79





CONFORMED

LEGEND:

WP DENOTES WORK POINT

(G1) INDICATES GIRDER NUMBER (ALTERNATE 1)

AST ARCHITECTURAL SURFACE TREATMENT, ZONE 1 SHADED (SEE SPECIAL PROVISIONS)

Michael Baker INTERNATIONAL
Michael Baker International 300 American Metro Blvd. Ste. 154 Hamilton, NJ 08619

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER MAHER A. SIDANI PE082891

REG. PROF. ENGINEER

DATE

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
CONTRACT NO. T - 668A

MAIN RIVER BRIDGE
ALTERNATES 1 AND 2
PIER 6 PLAN AND ELEVATION

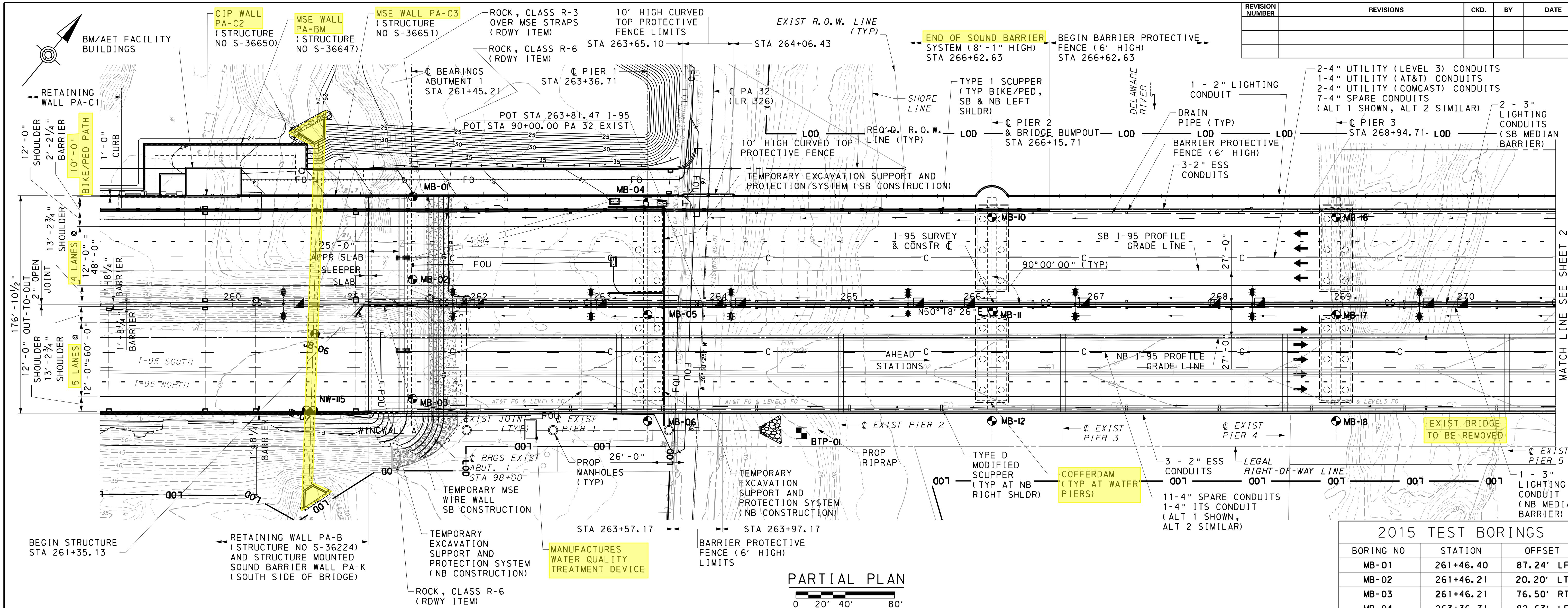
DRAWN BY	JHJ	ENGINEER	SOI
IN CHARGE	JJR	FILE	MR P6 PE.dgn
DATE	AUGUST 2016	SCALE	AS NOTED

STRUCTURE NO. S-36220

SHEET NO. 63 OF 336

71545-52 AN
9/8/2016
pw:\\DCPWAPP1.bkr.mbakercorp.com:Documents\Projects\Hamilton\Office\a145445.Scudder.Falls.Project\CADD\Pennsylvania\CADD\Structure\PS&E\A11 and 2\Substructure\PIER 6 PE.dgn

REVISION NUMBER	REVISIONS	CKD.	BY	DATE



PARTIAL PLAN

0 20' 40' 80'

2015 TEST BORINGS

BORING NO	STATION	OFFSET
MB-01	261+46.40	87.24' LF
MB-02	261+46.21	20.20' LT
MB-03	261+46.21	76.50' RT
MB-04	263+36.71	82.63' LF
MB-05	263+36.71	8.50' RT
MB-06	263+36.71	94.50' RT
MB-10	266+15.71	70.50' LF
MB-11	266+15.71	5.60' RT
MB-12	266+15.71	94.50' RT
MB-16	268+94.71	70.50' LF
MB-17	268+94.71	8.50' RT
MB-18	268+94.71	94.50' RT
NW-115	260+65.76	86.20' RT
BTP-1	264+11.37	104.40' RT

EXISTING STRUCTURE DATA:

YEAR BUILT - 1958

SUPERSTRUCTURE - STEEL GIRDER / FLOORBEAM AND STRINGERS

SUBSTRUCTURE - ABUTMENT 1 REINFORCED CONCRETE CANTILEVER ON CONCRETE PILES

PIER 1 REINFORCED CONCRETE PIER ON CONCRETE PILES

PIERS 2 THRU 9 REINFORCED CONCRETE ON ROCK

ABUTMENT 2 REINFORCED CONCRETE ON STEEL H-PILES

LEGEND:

- INDICATES TRAFFIC DIRECTION
- EXISTING CONTOURS (1'-0" INTERVAL)
- PROPOSED CONTOURS (1'-0" INTERVAL)
- LEGAL RIGHT-OF-WAY
- SOUND BARRIER SYSTEM
- CORE BORING LOCATIONS
- TEST PIT
- PROPOSED LIGHT POLE

DESCRIPTION	DWG. NO.	RECM'D DATE
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	6/1/2010
BACKFILL AT STRUCTURES	RC-12M	6/1/2010
CONCRETE PAVEMENT JOINTS	RC-20M	6/1/2010
SUBSURFACE DRAINS	RC-30M	6/1/2010
GUIDE RAIL TRANSITION AT END OF STRUCTURE	RC-50M	6/1/2010
TYPE 2 STRONG POST GUIDE RAIL	RC-52M	6/1/2010
PROTECTIVE FENCE	BC-701M	11/21/2014
ALUMINUM PEDESTRIAN RAILING	BC-716M	5/18/2012
ELECTRICAL DETAILS	BC-721M	10/26/2010
LIGHTING POLE ANCHORAGE	BC-722M	11/21/2014
PERMANENT METAL DECK FORMS	BC-732M	10/26/2010
ANCHOR SYSTEMS	BC-734M	10/26/2010
WALL CONSTR. & EXP. JOINT DETAILS	BC-735M	10/26/2010
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	5/18/2012
MONOPIPE SIGN STRUCTURES	BC-747M	11/26/2013
BRIDGE DRAINAGE	BC-751M	11/21/2014
CONCRETE DECK SLAB DETAILS	BC-752M	11/21/2014
STEEL GIRDER DETAILS	BC-753M	11/26/2013
STEEL DIAPHRAGMS FOR STEEL BEAM/GIRDER STRUCTURES (STRAIGHT GIRDERS ONLY)	BC-754M	10/26/2010
HIGH LOAD MULTI ROTATIONAL POT BEARINGS	BC-756M	11/26/2013
STEEL PILE TIP REINFORCEMENTS & SPLICES	BC-757M	11/26/2013
PREFORMED NEOPRENE COMPRESSION SEAL JOINT FOR APPROACH SLABS	BC-766M	10/26/2010
NEOPRENE STRIP SEAL DAM FOR PRESTRESSED CONCRETE & STEEL I-BEAM BRIDGES	BC-767M	11/26/2013
PRECAST CONCRETE BEAM BRACING	BC-772M	10/26/2010
STRUCTURE MOUNTED SOUND BARRIER WALLS	BC-779M	11/26/2013
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	11/21/2014
MECHANICALLY STABILIZED EARTH RETAINING WALLS	BC-799M	11/21/2014

SUPPLEMENTAL DRAWINGS

CONFORMED

NOTE:

1. NOTATION ALTERNATE 1, ALTERNATE 2 AND ALTERNATE 1 & 2 IN THE TITLE BLOCK INDICATES THAT THE SHEET APPLIES TO STEEL GIRDER SUPERSTRUCTURE ALTERNATE, CONCRETE SPLICE BEAM SUPERSTRUCTURE ALTERNATE AND BOTH STEEL AND CONCRETE ALTERNATES RESPECTIVELY.
2. PROFILE GRADE ELEVATIONS GIVEN ON PLANS ARE AT THE TOP OF THE 1" PPC OVERLAY.
3. PIER LIGHTING, ESS POLES, ESS JUNCTION BOXES NOT SHOWN, REFER TO RESPECTIVE PLANS.

Michael Baker INTERNATIONAL
Michael Baker International 300 American Metro Blvd, Ste. 154 Hamilton, NJ 08619

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER MAHER A. SIDANI PE080209

REG. PROF. ENGINEER

DATE

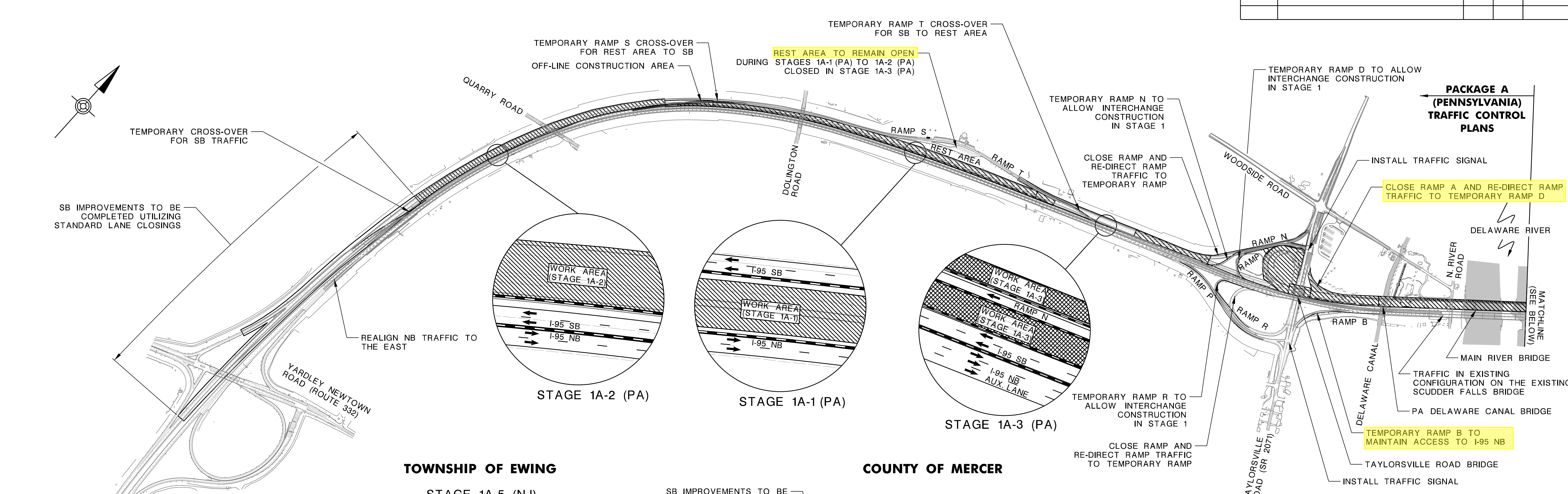
DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

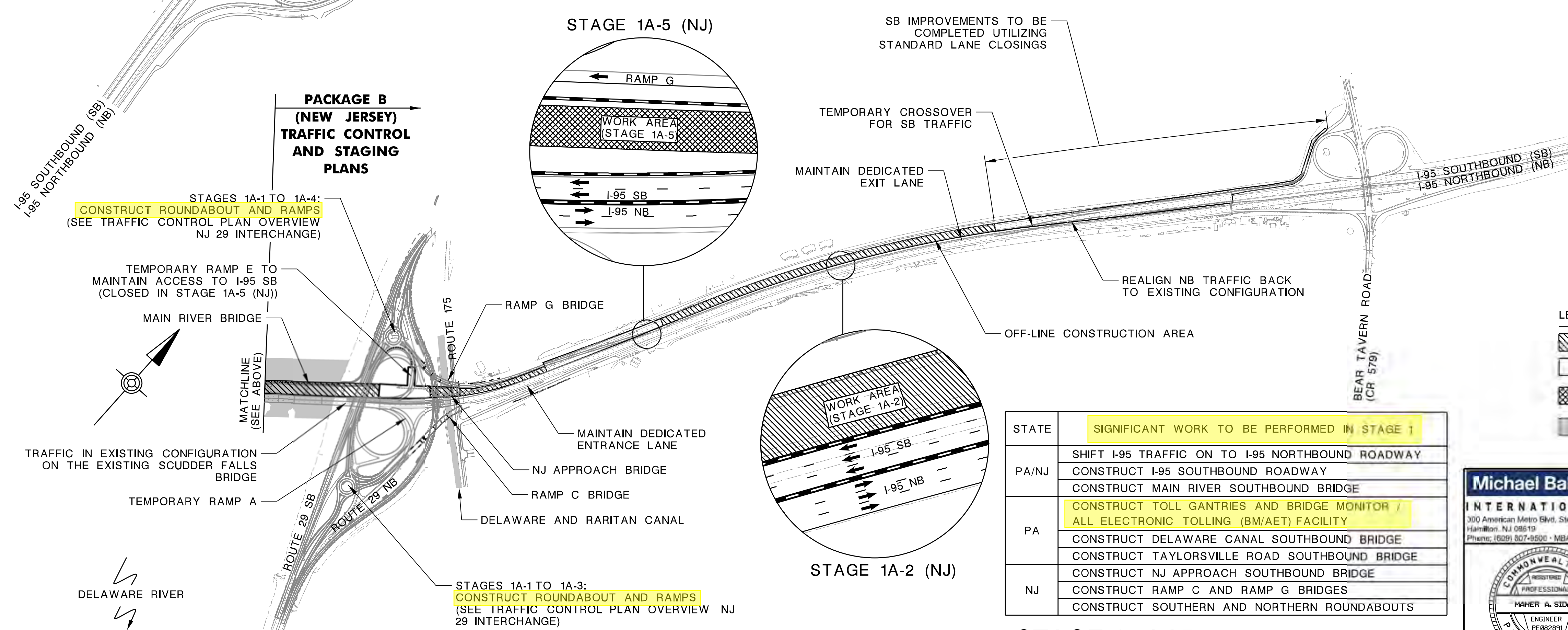
SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
CONTRACT NO. T - 668A

MAIN RIVER BRIDGE
ALTERNATES 1 AND 2
GENERAL PLAN - 1

DRAWN BY IG | ENGINEER YC | STRUCTURE NO. S-36220
IN CHARGE JJR | FILE MR_GP_1.dgn
DATE AUGUST 2016 | SCALE AS NOTED | SHEET NO. 1 OF 336

REVISION NUMBER	REVISIONS	CKD.	BY	DATE





NOTES:

1. TRAFFIC SIGNAL INSTALLED AT TAYLORSVILLE ROAD AND RAMPS D AND R PRIOR TO TRAFFIC BEING SHIFTED ONTO TEMPORARY RAMPS.
2. NJ ROUTE 29 ROUNDABOUTS CONSTRUCTED IN STAGES 1A-1 THROUGH 1A-4.
3. RAMPS C & G STRUCTURES CONSTRUCTED IN STAGE 1A-1.
4. 2 - 11' LANES IN EACH DIRECTION MAINTAINED AT ALL PEAK TIMES SOUTH OF ROUTE 175.
5. 3 - 11' LANES IN EACH DIRECTION MAINTAINED AT ALL PEAK TIMES NORTH OF ROUTE 175.
6. 1' MINIMUM LEFT AND RIGHT SHOULDERS.
7. THIS SHEET IS PROVIDED FOR GENERAL INFORMATION ONLY. REFER TO PACKAGE 'A' AND PACKAGE 'B' FOR DETAILED STAGING PLANS.

LEGEND:

- WORK AREA (STAGE 1A-2)
- OR WORK AREA (STAGE 1A-3 (PA) OR STAGE 1A-5 (NJ))
- WATERWAY (RIVER OR CANAL)
- TEMPORARY RAMPS & CONNECTIONS (STAGE 1A)
- PREVIOUSLY CONSTRUCTED UNDER SEPARATE STAGES

STATE	SIGNIFICANT WORK TO BE PERFORMED IN STAGE 1
PA/NJ	SHIFT I-95 TRAFFIC ON TO I-95 NORTHBOUND ROADWAY
	CONSTRUCT I-95 SOUTHBOUND ROADWAY
	CONSTRUCT MAIN RIVER SOUTHBOUND BRIDGE
PA	CONSTRUCT TOLL GANTRIES AND BRIDGE MONITOR / ALL ELECTRONIC TOLLING (BM/AET) FACILITY
	CONSTRUCT DELAWARE CANAL SOUTHBOUND BRIDGE
	CONSTRUCT TAYLORSVILLE ROAD SOUTHBOUND BRIDGE
NJ	CONSTRUCT NJ APPROACH SOUTHBOUND BRIDGE
	CONSTRUCT RAMP C AND RAMP G BRIDGES
	CONSTRUCT SOUTHERN AND NORTHERN ROUNDABOUTS

STAGE 1 - I-95

(I-95 SOUTHBOUND CONSTRUCTION)

CONFORMED

Michael Baker INTERNATIONAL
300 American Metro Blvd. Ste. 154
Hamilton, NJ 08619
Phone: (609) 807-9500 - MBAKERINTL.COM

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL MAHER A. SIDANI ENGINEER PE082896

REG. PROF. ENGINEER

DATE

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION
NEW HOPE, PENNSYLVANIA

THE SCUDDER FALLS BRIDGE REPLACEMENT PROJECT

STAGE 1 - OVERVIEW

SCALE: N.T.S.	CONTRACT NO.	DWG NO. 1 OF 4
DATE: AUGUST 2016	T-668A	SHEET NO. 3 OF 21

12-SEP-2016 10:25


DOOSAN

Jump to: Overview Project Elements Project Map Construction Schedule Distribution Materials

PROJECT OVERVIEW

Increasing traffic congestion and deficiencies associated with the physical configuration of the bridge and its two adjacent interchanges led to the decision to replace the existing Scudder Falls Bridge with a modern structure featuring the latest design standards. Overall, the project will build 4.4 miles of highway and bridge improvements between the Newtown-Yardley Road/Route 332 Interchange in Pennsylvania and the Bear Tavern Road/County Route 579 Interchange in New Jersey.

PROJECT INFORMATION

Construction Milestones

Main Project Construction Start	**April 2017**
Completed – First span of new bridge opened to traffic	Night of July 9, 2019
Completed – Started All-Electronic Tolling (PA-bound only)	July 14, 2019
Completed – Bridge's second span opened NJ-bound traffic only	On or about Aug. 16, 2021
Opening of shared-use pedestrian/bicycle facility	Fall 2021
All long-duration project-related travel restrictions end	Late December 2021
Punch-list Work Ends/Estimated Project Completion	**Spring 2022**

Total Project Cost

Construction Update

Tolling on the New Bridge

PROJECT ELEMENTS

New Scudder Falls Bridge

Replace the current congestion-prone, functionally obsolete Scudder Falls Bridge with a dual-span structure carrying six thru-traffic lanes (three in each direction) and three auxiliary lanes (two Pennsylvania to New Jersey bound, one New Jersey to Pennsylvania bound) for traffic merging onto and off the bridge and shoulders for breakdown/emergency access.

I-95/I-295 Roadway Improvements

Widen the bridge's Pennsylvania I-295 approach, increasing the roadway to three lanes in each direction. Improve drainage and approach-roadway exit/entry transitions in New Jersey; both project components to be completed in 2021.

Interchange Improvements

Reconstruct the entire I-295/Route 29 Interchange (Exit 76) and its associated ramps and structures in Ewing, New Jersey; to be completed summer 2021. Reconfigure the I-295/Taylorsville Road Interchange (Exit 10) in Lower Makefield, PA; to be completed in 2021.

Noise-Abatement Walls

Erect noise-abatement walls where warranted in Pennsylvania and New Jersey as part of the main construction contract beginning in 2017 until project completion in 2021. Advance noise wall construction along I-295 west of the Taylorsville Road interchange (Exit 10) in Pennsylvania was completed in June 2017.

Bicycle and Pedestrian Path

Construct a shared-use bike/ped path on the new bridge's upstream span with ramps and pathways to recreational canal towpaths in Pennsylvania and New Jersey; complete PA access ramp connections with Delaware Canal towpath fall 2021; full completion of shared-use pedestrian-bicycle facility and NJ and PA connections in fall 2021.

All-Electronic Tolling System

Install an all-electronic tolling (AET) gantry and related infrastructure for highway-speed toll collection using E-ZPass tag readers and high-speed cameras for license-plate billing; tolls collected in the Pennsylvania bound direction only. This work was completed in summer 2019. Tolls began July 14, 2019.

NEW SCUDDER FALLS TOLL BRIDGE & INTERCHANGES MAP