SPECIFICATIONS:

VERMONT DEPARTMENT OF TRANSPORTATION (VTDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2012 EDITION, AND SUPPLEMENTS THERETO.

DESIGN CRITERIA:

	3 PSF
DEAD LOAD (PLATFORM):	220 LBS. (32'x28" MAX. 500 LBS. RATED)
DEAD LOAD (SCAFFOLD):	12 PSF (WEIGHT OF ½" STEEL SHOT)
LIVE LOAD (UNIFORM PLATFORM):	6 PSF (WEIGHT OF ¼" STEEL SHOT)
LIVE LOAD (UNIFORM SCAFFOLD):	500 LBS. (TWO WORKERS MAX.)
LIVE LOAD (CONCENTRATED):	

MATERIAL PROPERTIES:

	ASTM A36, Fy = 36,000 PSI
STRUCTURAL SHAPES, PLATES & BARS:	ASTM A500, GRADE B, Fy = 46,000 PSI
STRUCTURAL TUBING:	ASTM A325
STRUCTURAL BOLTS:	SOUTHERN PINE NO. 2 (OR BETTER)
TIMBER:	6x19 IWRC EIP
CABLES:	9-GAUGE GALVANIZED
CHAIN LINK:	

REQUIRED PLATFORM CABLE SIZES
(⅜" Ø MIN. SUPPORT HANGER SPACING = 25'-0" MAX.)

OPTION #	PLATFORM CABLE	PLATFORM CABLE SPACING
1	½" Ø	3'-9" (MAX.)
2	9/16" Ø	5'-3" (MAX.)

USE ½" Ø MIN. SCAFFOLD CABLE WITH ⅜" Ø MIN. SUPPORT HANGERS SPACED AT 25'-0" MAXIMUM.

NO MORE THAN 2 WORKERS SHALL BE ALLOWED PER PLATFORM CABLE OR SCAFFOLD CABLE. LIMIT 500 LB TOTAL WEIGHT OF WORKERS AND ABRASIVE BLASTING ON 500 LB RATED SCAFFOLD.

STRUCTURAL IMPACT:

THE PLATFORM CONTAINMENT STRUCTURE HAS BEEN ANALYZED FOR AN AVERAGE LIVE LOAD ALLOWANCE OF 16 PSF (APPROXIMATELY ½" DEPTH OF STEEL SHOT, 1.5" MINERAL SLAG ABRASIVE OR 1.5" SAND ABRASIVE, PLUS THE UNIFORM WORKER LOADING) WITH A MAXIMUM OF 1" DEPTH OF STEEL SHOT (3" MINERAL SLAG ABRASIVE OR 3" SAND ABRASIVE) FOR THE CHAIN LINK. WHEN THE DEPTH OF SPENT ABRASIVES NEARS THE DEPTHS SPECIFIED, THE CONTRACTOR WILL CEASE ABRASIVE BLASTING OPERATIONS AND VACUUM THE SPENT ABRASIVES.

DEAD, LIVE AND WIND LOADS IMPOSED ON THE BRIDGE DUE TO INSTALLATION OF THE PROPOSED PLATFORM & CONTAINMENT SYSTEMS WILL HAVE NO ADVERSE EFFECT ON THE BRIDGE STRUCTURE, AS DEFINED IN (A) AASTHO STANDARDS SPECIFICATIONS FOR HIGHWAY BRIDGES (SIXTEEN EDITION), FIGURE 3.7.6B AND (B) AASHTO MANUAL FOR CONDITION EVALUATION OF BRIDGES (SECOND EDITION), CHAPTER 6.6. THE BRIDGE HAS NOT BEEN ANALYZED FOR LOADS IMPOSED BY THE GRIT RECYCLING MACHINE (IF APPLICABLE). AS RESULT, THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE OWNER FOR PLACEMENT OF ALL EQUIPMENT ALONG THE BRIDGE. THE GRIT RECYCLING MACHINE REAR AXLES SHALL BE CENTERED OVER THE PIERS.

THE CONTAINMENT STRUCTURE HAS BEEN ANALYZED FOR A MAXIMUM WIND VELOCITY OF 40 MPH. IF WINDS NEARING OR EXCEEDING 40 MPH (OR A LESSER WIND IS SPECIFIED IN THE CONTRACT SPECIFICATIONS) ARE PREDICTED, BLASTING AND PAINTING OPERATIONS SHALL CEASE, THE CONTRACTOR SHALL THOROUGHLY COLLECT AND REMOVE ALL SPENT ABRASIVE MATERIAL AND DEBRIS GENERATED FROM THE BLASTING AND PAINTING ACTIVITIES USING A VACUUM TRUCK AND/OR PUMP, AND THE PAINT CONTAINMENT TARPAULINS SHALL BE ROLLED AND SECURED IN PLACE.

BASED ON THE MAXIMUM WIND VELOCITY OF 40 MPH (8 PSF WIND LOAD PER AASHTO), THE RESULTING LOAD TRANSFERRED TO A BRIDGE STRUCTURE IS 244 PLF, BASED ON A CONTAINMENT HEIGHT OF 70'-0" FROM THE TOP OF THE BRIDGE PARAPETS TO GRADE (ONE-HALF OF THE CONTAINMENT HEIGHT APPLIED TO THE BRIDGE). SINCE AASHTO SPECIFIES A LATERAL LOADING OF 300 PLF FOR DESIGN OF GIRDER BRIDGES, THE MAXIMUM ANTICIPATED WIND LOAD OF 244 PLF IS ACCEPTABLE. WIND LOADING ON GIRDER BRIDGES DOES NOT GOVERN.

FOR PROJECTS INVOLVING THE INSTALLATION OF SUSPENDED PLATFORM, AASHTO ALLOWS A 36% INCREASE IN STRESS FOR TEMPORARY LOADS (18 KSI INVENTORY RATING VERSUS 24.5 KSI OPERATING RATING). THE UNIFORM DESIGN FOR LOAD GIRDERS BRIDGES IS 64 PSF, AND THUS, THE ANTICIPATED WEIGHT OF THE PLATFORM CONTAINMENT (APPROX. 19 PSF) ADDED TO THIS ORIGINAL DESIGN LOADING RESULTS IN A MAXIMUM D+L LOADING OF 83 PSF ON THE GIRDERS (19 PSF + 64 PSF EQUIVALENT LIVE LOADING). TEMPORARY LOADING APPLIED TO THE BRIDGE MEMBERS RESULT IN A MAXIMUM 30% INCREASE, WHICH IS BELOW THE 36% INCREASED ALLOWED BY AASHTO. SINCE THE METHOD ASSUMES THAT THE EXISTING BRIDGE MEMBERS ARE 100% STRESSED PRIOR TO LOADING, THIS GENERAL COMPARISON IS CONSIDERED VERY CONSERVATIVE.

GENERAL:

THESE DRAWINGS DEPICT THE PAINT CONTAINMENT DESIGNS TO BE UTILIZED BY MONOKO, LLC., FOR ORANGE COUNTY, VERMONT FOR THE FOLLOWING BRIDGES:

BRIDGE NO. 58N (ORANGE) I-91 OVER VT 25 (BRADFORD)
BRIDGE NO. 58S (ORANGE) I-91 OVER VT 25 (BRADFORD)

BRIDGE NO. 59N (ORANGE) I-91 OVER WAITS RIVER (BRADFORD)
BRIDGE NO. 59S (ORANGE) I-91 OVER WAITS RIVER (BRADFORD)

BRIDGE NO. D62N (ORANGE) TH NO. 3 OVER I-91 (BRADFORD)
BRIDGE NO. D62S (ORANGE) TH NO. 3 OVER I-91 (BRADFORD)

BRIDGE NO. 63N (ORANGE) I-91 OVER TH NO. 1 (NEWBURY)
BRIDGE NO. 63S (ORANGE) I-91 OVER TH NO. 1 (NEWBURY)

BRIDGE NO. 67N (ORANGE) I-91 OVER WELLS RIVER (NEWBURY)
BRIDGE NO. 67S (ORANGE) I-91 OVER WELLS RIVER (NEWBURY)

WORKERS WILL ACCESS THE BELOW-DECK CONTAINMENTS AT THE ABUTMENTS, FROM THE BRIDGE DECK ABOVE USING OSHA-APPROVED LADDERS. THE LADDERS WILL BE SECURED TO THE BRIDGE RAILINGS AND/OR TRUSS STEEL AT THE TOP AND TO THE PLATFORM SYSTEMS AT THE BOTTOM.

FOR WORK PERFORMED FROM 500 LBS RATED ALUMINUM SCAFFOLDS SUPPORTED BY ½" Ø CABLES RIGGED ALONG THE ENTIRE LENGTH OF THE BRIDGE, WORKER SAFETY TIE-OFF CABLES AND WORKER HARNESSES WILL BE UTILIZED DURING ALL WORK, INCLUDING INSTALLATION & REMOVAL OF THE PLATFORM SYSTEMS & DURING TRAVEL UP & DOWN THE LADDERS, IN ACCORDANCE WITH OSHA GUIDELINES.

THE ABRASIVE BLASTING CONTAINMENT AND/OR SUSPENDED PLATFORM DESIGNS, DETAILS AND INSTALLATION SPECIFICATIONS INCLUDED IN THIS PACKAGE WERE PREPARED UNDER THE DIRECTION OF THE CONTRACTOR. BY ACCEPTING THESE PLANS FOR SUBMITTAL, THE CONTRACTOR CONFIRMS THAT THE PLANS HAVE BEEN REVIEWED FOR CORRECTNESS, AND THAT THE SYSTEMS WILL BE INSTALLED IN ACCORDANCE WITH THE PLANS.

THE CONTRACTOR FULLY UNDERSTANDS & AGREES THAT A2B ENGINEERING, LLC. AND THEIR CERTIFYING ENGINEER(S) ARE NOT RESPONSIBLE FOR THE ULTIMATE TECHNIQUES AND/OR METHODS OF CONSTRUCTION USED ON THIS PROJECT, OR THE SAFETY PRECAUTIONS & PROGRAMS INCIDENT THERETO, OR FOR ANY LOSS OR DAMAGES RESULTING FROM THE CONTRACTOR'S FAILURE TO COMPLY WITH LAWS AND REGULATIONS (PRIMARILY OSHA) APPLICABLE TO THE FURNISHING, INSTALLING AND/OR PERFORMANCE OF WORK.

THE CONTRACTOR FULLY UNDERSTANDS & AGREES THAT A2B ENGINEERING, LLC. HAS PREPARED THESE SUBMITTALS WITH THE UNDERSTANDING THAT THE CONTRACTOR AND THEIR EMPLOYEES HAVE THE KNOWLEDGE & EXPERTISE IN THE PROPER RIGGING OF THE CATENARY CONTAINMENT & WORKER ACCESS SYSTEMS PRESENTED ON THESE DRAWINGS, INCLUDING ALL OSHA REQUIREMENTS, AND IS NOT IN NEED OF DETAILED INSTALLATION AND/OR DISMANTLING PROCEDURES FOR SUCH INSTALLATIONS.

THE CONTRACTOR FULLY UNDERSTANDS & AGREES THAT BY ACCEPTING THESE DRAWINGS FOR SUBMITTAL, THEY ARE FULLY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE & LOCAL CODES & REGULATIONS (PRIMARILY OSHA) AND HERE-BY HOLDS A2B ENGINEERING, LLC. AND THEIR CERTIFYING ENGINEER(S) HARMLESS, AND INDEMNIFIES THEM FOR ANY LOSS OR DAMAGES RESULTING FROM THE CONTRACTOR'S FAILURE TO COMPLY WITH ANY/ALL APPLICABLE CODES, REGULATIONS AND/OR ANY MANUFACTURER'S INSTALLATION REQUIREMENTS, REGARDLESS OF WHETHER SAID INFORMATION IS OR IS NOT INCLUDED AS PART OF THESE SUBMITTALS.

THESE DRAWINGS & CALCULATIONS (IF APPLICABLE) HAVE BEEN PREPARED FOR THIS PROJECT ONLY. A2B ENGINEERING, LLC. AND THEIR CERTIFYING ENGINEER(S) HAVE NO LIABILITY SHOULD ANY PORTIONS OF THESE DRAWINGS AND/OR CALCULATIONS BE USED FOR DIFFERENT PROJECT.

THESE PLANS WERE PREPARED WITHOUT THE BENEFIT OF AS-BUILT BRIDGE PLANS. DUE TO UNCERTAINTIES OF THE EXISTING STRUCTURE, THE CONTRACTOR MAY MAKE MINOR MODIFICATIONS TO THE PAINT CONTAINMENT STRUCTURE DETAILED IN THESE PLANS. A2B ENGINEERING, LLC. SHALL BE NOTIFIED OF ANY MODIFICATIONS TO ENSURE THAT THE STRUCTURAL INTEGRITY OF THE PAINT CONTAINMENT STRUCTURE IS NOT COMPROMISED.

STATE OF VERMONT
PAUL R. STEIJLEN
NO. 107795
CIVIL
3-31-15
LICENSED
PROFESSIONAL ENGINEER

Bridge Nos. ALL

REVISIONS

DATE	BY	DESCRIPTION

PAUL STEIJLEN P.E.
P.E. LICENSE NUMBER 107795
A2B ENGINEERING, LLC.
5406 N. HOOVER BLVD., SUITE 12
TAMPA, FL 33634

MONOKO, LLC.
1037 PENINSULA AVENUE
TARPON SPRINGS, FL 34689
PHONE (727) 940-3244
FAX (727) 279-8795

DRAWN BY: BDN 02/15
CHECKED BY: PDB 02/15
DESIGNED BY: MAT 02/15
CHECKED BY: PRS 02/15

VERMONT
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	PROJECT ID
I-91	ORANGE	IM BPNT (14)

SHEET TITLE: GENERAL NOTES (1 OF 2)
REF. DWG. NO.:
PROJECT NAME: TEN BRIDGES ON OR OVER I-91 IMPROVEMENT PLANS
SHEET NO.: C-2

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