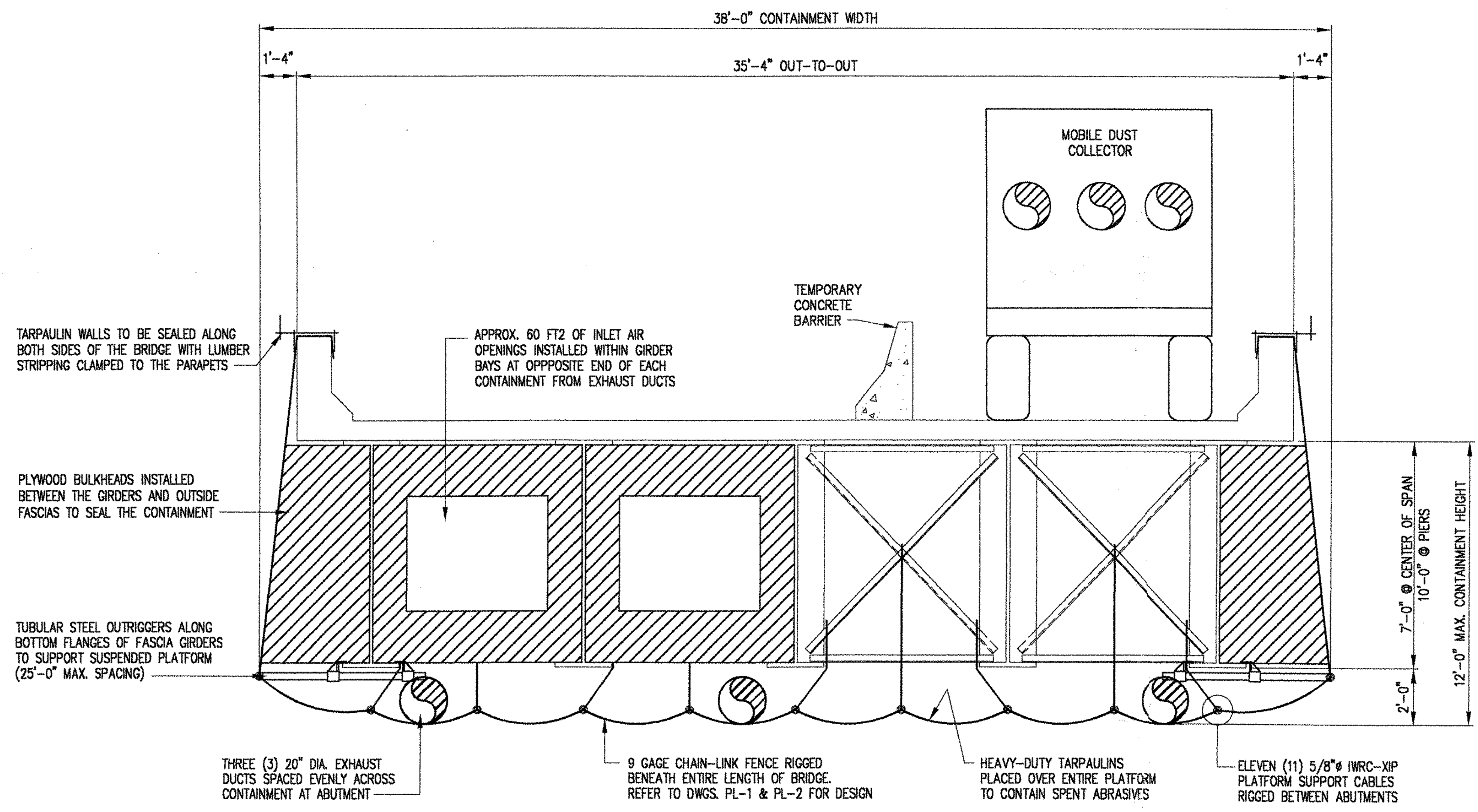


- SERIES OF 5/8" DIA. CABLES RIGGED BETWEEN THE ABUTMENTS AND/OR PIERS. THE PATENTED PLATFORM SYSTEM HAS BEEN LICENSED FOR USE ON THIS PROJECT BY TOTAL CONTAINMENT SYSTEMS, INC.
- THE PLATFORM SYSTEMS HAVE BEEN DESIGNED TO SUPPORT A MAXIMUM DEAD AND LIVE LOADING OF 16 PSF, WHICH INCLUDES A 3/4" UNIFORM LAYER OF SPENT STEEL ABRASIVES OVER THE ENTIRE AREA OF THE PLATFORM AND ONE (1) WORKER PER PLATFORM CABLE. REFER TO DWGS PL-1 AND PL-2 FOR DESIGN AND INSTALLATION OF THE PROPOSED PLATFORM SYSTEMS.
 - THE SUSPENDED PLATFORM SYSTEM SHALL BE INSTALLED BENEATH ALL OR PORTIONS OF EACH BRIDGE. THE PLATFORM CABLES SHALL BE RIGGED TO BOTH THE TOPS OF THE BEARINGS, DIRECTLY BENEATH THE GIRDER FLANGES, AND DIRECTLY TO THE BACKS OF THE BRIDGE GIRDERS, ELIMINATING ANY LOADING TO THE BEARINGS. REFER TO THE CABLE ATTACHMENT DETAILS ON DWG PL-2.
 - ON SPAN #5, A MINIMUM CLEARANCE OF 16'-0" SHALL BE MAINTAINED ABOVE THE ROADWAY (VT RTE 14). ON SPAN #6, AN ABSOLUTE MINIMUM CLEARANCE OF 18'-0" SHALL BE MAINTAINED ABOVE THE RAILROAD, AS MEASURED FROM THE TOP OF RAILS TO THE LOWEST PORTION OF THE PLATFORM DURING MAXIMUM LOADING. NORTH STAR PAINTING SHALL MONITOR THE OVERHEAD CLEARANCE ON A CONTINUOUS BASIS TO ENSURE THE PLATFORM DOES NOT DROP BELOW THE MINIMUM REQUIRED CLEARANCES.
 - A TOTAL OF SIX (6) CONTAINMENTS WILL BE REQUIRED TO COMPLETE WORK ON EACH BRIDGE. EACH CONTAINMENT WILL BE INSTALLED TO ENCLOSE AN ENTIRE SPAN AT A TIME, OR MULTIPLE SPANS AT A TIME TO ALLOW FOR BLASTING AND PAINTING TO BE PERFORMED SIMULTANEOUSLY ON SEVERAL SPANS. REFER TO THE PLAN & ELEVATION VIEWS ON DWG C-1 FOR TYPICAL CONTAINMENT SCENARIO.
 - ON MAIN SPANS #1 thru #4, THE SUSPENDED PLATFORM SHALL BE RIGGED APPROX. 2'-0" BELOW THW BOTTOM FLANGES OF THE GIRDERS, RESULTING IN A TOTAL CONTAINMENT HEIGHT OF 10'-0" (UNDERSIDE OF GIRDER DECK TO THE PLATFORM. REFER TO THE CONTAINMENT SCHEDULE ON THIS DWG FOR DIMENSIONS OF THE TYPICAL CONTAINMENT.

- SHALL BE SECURED IN-PLACE AND SEALED BY CLAMPING WITH LUMBER STRIPPING TO THE TOPS OF THE CONCRETE PARAPETS AND/OR BY CLIPPING THE SIDEWALL TARPULINS TO A CABLE RIGGED ALONG THE BASE OF THE PARAPETS. REFER TO THE ENCLOSURE DETAILS PROVIDED ON DWG D-2.
- THE ENTIRE PLAN VIEW AREA OF THE CHAIN-LINK PLATFORM SHALL BE COVERED WITH 100% IMPERMEABLE TARPULINS TO CONTAIN THE SPENT ABRASIVES AND ALLOW FOR VACUUMING. THE BASE OF THE TARPULIN WALLS AROUND THE ENTIRE PERIMETER OF THE CONTAINMENT WILL BE SEALED BY ROLLING AND CLAMPING THE FLOOR AND WALL TARPULINS TO EACH OTHER AND TO THE CHAIN-LINK FENCE FLOOR. SNAP CLIPS OR ROPE TIES WILL BE USED ALONG EVERY PLATFORM CABLE, AS REQ'D, TO SECURE THE FLOOR TARPULINS AND KEEP THE WIND FROM LIFTING THE FLOOR TARPS DURING WORK.
 - THE TARPULIN WALLS WILL BE PULLED TIGHT AT THE ABUTMENTS AND SEALED WITH SPRAY FOAM. IF REQUIRED TO IMPROVE THE SEAL AT THE ABUTMENTS, THE TARPULIN WALLS SHALL BE SEALED USING LUMBER STRIPPING AND NAILERS ANCHORED WITH CONCRETE STUDS. UPON COMPLETION OF WORK, ALL HOLES IN THE ABUTMENT WALLS SHALL BE PATCHED IN-KIND TO THE SATISFACTION OF THE RESIDENT ENGINEER.
 - CROSS-DRAFT (HORIZONTAL) VENTILATION PARALLEL TO THE BRIDGE GIRDERS SHALL BE PROVIDED THROUGH EACH ACTIVE ENCLOSURE. A MINIMUM AIRFLOW VELOCITY OF 100 FT/MIN WILL BE PROVIDED DURING ABRASIVE BLASTING OPERATIONS. REFER TO THE CONTAINMENT SCHEDULE ON DWG C-2 FOR VENTILATION REQUIREMENTS, INCLUDING EXHAUST VOLUME, INLET AIR OPENINGS AND NUMBER OF DUCTS.
 - MAKE-UP AIR WILL BE DRAWN INTO EACH CONTAINMENT THROUGH PASSIVE INLET AIR OPENINGS LOCATED BETWEEN THE BRIDGE GIRDERS AT THE OPPOSITE END OF THE ENCLOSURE FROM THE EXHAUST DUCTS. A TARGET VELOCITY OF 700-1000 FT/MIN WILL BE USED TO SIZE THE INLET OPENINGS. THE SIZE, QUANTITY AND LOCATION OF THE INLETS MAY BE VARIED TO IMPROVE VENTILATION.

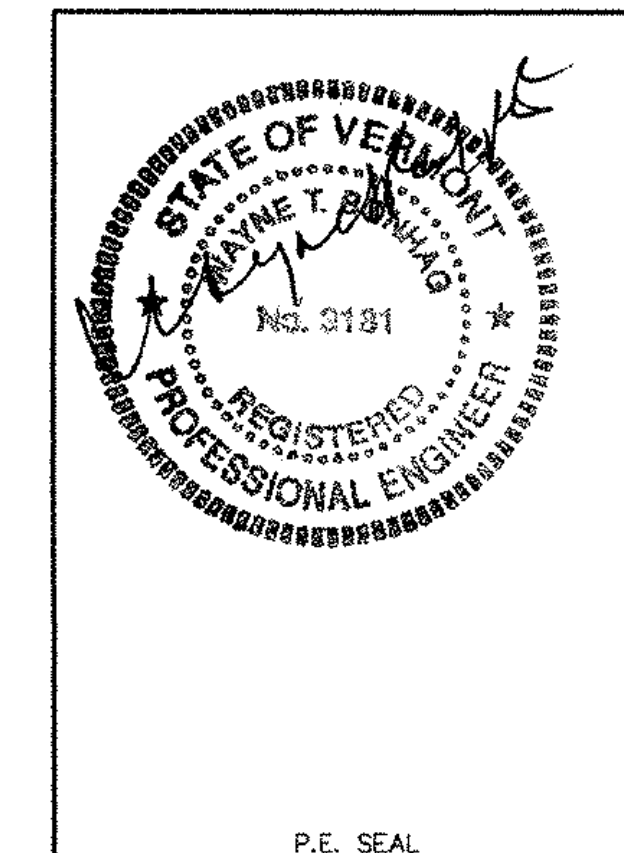
- NORTH STAR SHALL UTILIZE ONE OR MORE WORKERS, AS REQUIRED, TO CONTINUOUSLY VACUUM THE SPENT ABRASIVES FROM THE PLATFORM DECK TO MINIMIZE BUILD-UP AND REDUCE SAG OF THE SUPPORT CABLES AND FENCING.
- LOADS IMPOSED ON THE ROUTE I-89 BRIDGES DUE TO INSTALLATION OF THE PROPOSED PLATFORM AND CONTAINMENT SYSTEMS WILL HAVE NO ADVERSE EFFECT ON THE BRIDGE STRUCTURE, AS DEFINED IN THE LATEST AASHTO SPECIFICATIONS.
- AASHTO ALLOWS A 36% INCREASE IN STRESS FOR TEMPORARY LOADINGS (18,000 PSI INVENTORY RATING VERSUS 24,500 PSI OPERATING RATING). THE MAXIMUM ANTICIPATED WEIGHT OF THE PLATFORM CONTAINMENT ADDED TO THE DESIGN LOADING OF THE BRIDGE RESULTS IN A TOTAL ANTICIPATED DEAD AND LIVE LOADING OF 80 PSF (16 PSF + 64 PSF DESIGN). THIS TEMPORARY LOADING APPLIED TO THE GIRDERS ON THE PORTIONS OF THE BRIDGE OPENED TO TRAFFIC RESULTS IN A 23% INCREASE, WHICH IS BELOW THE 36% ALLOWABLE INCREASE PER AASHTO. THEREFORE, THE BRIDGE GIRDERS ARE DEEMED SUFFICIENT FOR SUPPORTING THE PLATFORM AND CONTAINMENT, EVEN IF THE BRIDGES ARE FULLY LOADED TO 100% OF ITS INVENTORY RATING.
- BASED ON THE MAXIMUM ALLOWABLE WIND VELOCITY OF 40 MPH (5.28 PSF WIND LOAD), THE RESULTING LOADS TRANSFERRED TO THE BRIDGE STRUCTURE SHALL NOT EXCEED 95 PLF, BASED ON A MAXIMUM CONTAINMENT HEIGHT OF 18'-0" (AT THE PIERS) FROM THE TOP OF BRIDGE PARAPET TO THE PLATFORM. SINCE AASHTO SPECIFIES A LATERAL LOADING OF 300 PLF FOR DESIGN OF GIRDER BRIDGES, THE MAXIMUM ANTICIPATED WIND LOAD OF 95 PLF IS ACCEPTABLE. WIND LOADING FOR GIRDER BRIDGES DOES NOT GOVERN.
- FLOATING WATER BOOMS WILL BE AVAILABLE FOR INSTALLATION ACROSS THE WHITE RIVER IN THE EVENT OF AN ACCIDENTAL DISCHARGE. IF REQUIRED, THE BOOMS WILL BE INSTALLED ACROSS THE ENTIRE WIDTH OF THE WATERWAY, DIRECTLY DOWN-STREAM OF THE BRIDGE, TO CONTAIN ANY WASTE DEBRIS LOST. BOOMS SHALL BE INSTALLED PER THE RESIDENT ENGINEER-IN-CHARGE. THE BOOMS SHALL BE EMPTIED OR CLEANED AT THE END OF EACH WORKING DAY, OR MORE FREQUENTLY IF NECESSARY, TO PREVENT THE LOSS OF COLLECTED RESIDUE.
- REFER TO DWGS D-1 AND D-2 FOR TYPICAL CONTAINMENT DETAILS AND GENERAL INSTALLATION NOTES TO BE USED ON THIS PROJECT.



TYPICAL CROSS-SECTION
SCALE: 3/8" = 1'-0"

Containment Design Schedule RTE I-89 N/B & S/B BRIDGES		
Design Parameters		SUSPENDED PLATFORMS
Dimensions, feet	Length, L	VARIES
	Width, W	38.00
	Height, H	12.00 Max.
Area, A = W x H		456 ft ²
Ventilation	System	Cross-Draft
	Volume 'Q' (cfm)	46,000
	V = Q/A (ft/min)	101
Inlets	Min. Area 'A' (ft ²)	60
	V = Q/A (ft/min)	767
No. of Exhaust Ducts		3

REDUCED SIZE DRAWING
THIS DRAWING IS TO SCALE BUT HAS BEEN REPRODUCED AT 70% OF ORIGINAL SIZE.



CD Containment Design, Inc.
1260 Prospect Road • Pittsburgh, PA 15227 • Phone: (412) 882-9048 • Fax: (412) 884-8091

NORTH STAR PAINTING COMPANY

STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACT IR 089-1(13) WINDSOR COUNTY
RTE I-89 over THE WHITE RIVER, VT. 14 & NECR
ABRASIVE BLASTING CONTAINMENT PROPOSAL
TYPICAL CROSS-SECTION

CDI JOB NO. 21-11 DATE 1-22-00 DWG. NO. C-2 118 0