SUPPLEMENTAL SPECIFICATIONS
REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS

GSD-1-96	REVISED	7/19/02
RM-5.2	REVISED	7/18/14
SICD-1-96	REVISED	7/18/14

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS

SS800	REVISED	1/17/20

DESIGN SPECIFICATIONS
THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017, AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

DESIGN DATA
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50W, YIELD STRENGTH 50 KSI

SPECIAL - STRUCTURES (PRE-ENGINEERED DECK AND RAILING)
GENERAL
SCOPE: THE WORK INCLUDED UNDER THIS ITEM SHALL CONSIST OF FURNISHING, FULLY ENGINEERING, FABRICATING, TRANSPORTING, AND ERECTING BRIDGE DECK AND RAILING ON EXISTING STEEL BEAMS, AND ALL INCIDENTALS AS SHOWN IN THE PLANS AND DESCRIBED HEREIN. THE INTENDED USAGE IS PEDESTRIAN; EQUESTRIAN; BICYCLE AND OCCASIONAL SLOW MOVING MAINTENANCE OR EMERGENCY VEHICLES.

GENERAL FEATURES OF DESIGN
SPAN: BRIDGE SPAN SHALL BE AS SHOWN ON THE SITE PLAN.

WIDTH: BRIDGE WIDTH SHALL BE 12'-0" CLEAR AS MEASURED BETWEEN THE INSIDE FACE OF THE RAILING ELEMENTS.

ENGINEERING
STRUCTURAL DESIGN OF THE BRIDGE STRUCTURE SHALL BE PERFORMED BY OR UNDER THE DIRECT SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER AND DONE IN ACCORDANCE WITH RECOGNIZED ENGINEERING PRACTICES AND PRINCIPLES. THE ENGINEER SHALL BE LICENSED TO PRACTICE IN OHIO.

UNIFORM LIVE LOAD: DECKING SHALL BE DESIGNED FOR A PEDESTRIAN LIVE LOAD OF 90 POUNDS PER SQUARE FOOT OF BRIDGE WALKWAY AREA.

VEHICLE LIVE LOADS: DECKING SHALL BE DESIGNED FOR H15-44 VEHICLE LOADING.

EQUESTRIAN LOADS: DECKING SHALL BE DESIGNED PER LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES.

WIND LOAD:

HORIZONTAL FORCES: THE BRIDGE SHALL BE DESIGNED FOR A WIND LOAD OF 35 POUNDS PER SQUARE FOOT ON THE FULL VERTICAL PROJECTED AREA OF THE BRIDGE AS IF ENCLOSED. THE WIND LOAD SHALL BE APPLIED HORIZONTALLY AT RIGHT ANGLES TO THE LONGITUDINAL AXIS OF THE STRUCTURE.

ENGINEERING (CONTINUED)
THE WIND LOADING SHALL BE CONSIDERED BOTH IN THE DESIGN OF THE LATERAL LOAD BRACING SYSTEM AND IN THE DESIGN OF THE BRIDGE RAILING AND THEIR CONNECTIONS.

OVERTURNING FORCES: THE EFFECT OF FORCES TENDING TO OVERTURN THE STRUCTURE SHALL BE CALCULATED ASSUMING THAT THE WIND DIRECTION IS AT RIGHT ANGLES TO THE LONGITUDINAL AXIS OF THE STRUCTURE. IN ADDITION, AN UPWARD FORCE SHALL BE APPLIED AT THE WINDWARD QUARTER POINT OF THE TRANSVERSE SUPERSTRUCTURE WIDTH. THIS FORCE SHALL BE 20 POUNDS PER SQUARE FOOT OF DECK.

RAILING LOAD:

RAILING LOADS SHALL BE IN ACCORDANCE WITH SECTION 13.8.2 OF THE 2018 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

MATERIALS
WOOD:
TREAT ALL WOOD AS SPECIFIED IN CMS 712.06.

STEEL FASTENERS AND HARDWARE:
STEEL PLATES AND SHAPES SHALL COMPLY WITH THE REQUIREMENTS OF ASTM A36.

NAILS SHALL BE COMMON WIRE OR DEFORMED SHANK CONFORMING TO ASTM F1667.

BOLTS AND LAG SCREWS SHALL COMPLY WITH THE REQUIREMENTS OF ANSI/ASME STANDARD B18.2.1-1981, GRADE 2.

ALL STEEL COMPONENTS AND FASTENERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111 OR AASHTO M232 OR OTHERWISE PROTECTED FROM CORROSION.

CONCRETE:
CONCRETE MAY BE CAST-IN-PLACE OR PRECAST AND SHALL BE CLASS QC2 WITH A MINIMUM COMPRESSIVE STRENGTH OF 4.5 KSI.

GALVANIZED STAY-IN-PLACE FORMS WILL BE PERMITTED.

DETAILS DEPICT A TIMBER DECK, HOWEVER ALTERNATIVE DESIGNS WILL BE ACCEPTED AS LONG AS ALL REQUIREMENT FOR LOADING AND MATERIALS ARE MET.

SUBMITTALS
SUBMITTAL DRAWINGS SHALL BE UNIQUE DRAWINGS, PREPARED TO ILLUSTRATE THE SPECIFIC PORTION OF THE WORK TO BE DONE. ALL RELATIVE DESIGN INFORMATION SUCH AS MEMBER SIZES, BRIDGE REACTIONS, AND GENERAL NOTES SHALL BE CLEARLY SPECIFIED ON THE DRAWINGS. DRAWINGS SHALL HAVE CROSS REFERENCED DETAILS AND SHEET NUMBERS. ALL DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER WHO IS LICENSED IN THE STATE OF OHIO.

PAYMENT
PAYMENT SHALL BE MADE AT A LUMP SUM PRICE FOR ITEM "SPECIAL - STRUCTURES (PRE-ENGINEERED DECK AND RAILING)" INSTALLED IN-PLACE COMPLETE PER THIS ITEM AND ACCEPTED BY THE ENGINEER.

ITEM 513 - STRUCTURAL STEEL, MISC.: FABRICATION AND SETTING OF EXISTING BEAMS
THE CONTRACTOR SHALL REMOVE EXISTING ATTACHMENTS TO THE BEAMS. ALL HOLES SHALL BE FILLED WITH BOLTS. BOLTS SHALL BE NO MORE THAN 1/8" SMALLER THAN THE HOLE. COST SHALL INCLUDE ALL NECESSARY FABRICATION OF THE EXISTING BEAMS, TRANSPORTATION TO PROPOSED BRIDGE LOCATION, AND SETTING OF EXISTING BEAMS.

ITEM 519, PATCHING CONCRETE STRUCTURE
THE FOLLOWING QUANTITY SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER:
ITEM 519 - PATCHING CONCRETE STRUCTURE 250 SF

STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN
IF WOOD MATERIAL FOR THE DECK IS SELECTED, ALL STEEL SHALL BE ASTM A709 GRADE 50 GALVANIZED WITH A YIELD STRENGTH OF 50 KSI. GALVANIZING SHALL BE PER 711.02 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS. ALL BOLTS SHALL BE TYPE 1.

STRUCTURE (OVER 20 FOOT SPAN) GENERAL SUMMARY										
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENT		PIER		SUPER	SEE SHEET NO.
					REAR	FWD.	1	2		
202	11200		LUMP	PORTIONS OF STRUCTURE REMOVED						
503	21300		LUMP	UNCLASSIFIED EXCAVATION	LS	LS				
509	10000	4018	POUND	EPOXY COATED REINFORCING STEEL	490	651	835	733	1309	
510	10000	228	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	40	54	66	68		
511	34410	16	CUBIC YARD	CLASS QC2 CONCRETE, SUPERSTRUCTURE					16	
511	43260	20	CUBIC YARD	CLASS QC2 CONCRETE, PIER CAP			11	9		
511	50210	10	CUBIC YARD	CLASS QC1 CONCRETE, SUBSTRUCTURE	4	6				
512	33010	17	SQUARE YARD	TYPE 3 WATERPROOFING	8	9				
513	10221	5,300	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 1, AS PER PLAN					5,300	2
513	95020		LUMP	STRUCTURAL STEEL, MISC.: FABRICATION AND SETTING OF EXISTING BEAMS					LS	2
516	13900	53	SQUARE FOOT	2" PREFORMED EXPANSION JOINT FILLER	21	32				
516	44101	6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES, LOAD PLATE, AND MASONRY PLATE (NEOPRENE) (10" x 11" x 3" WITH 11" X 12" X $1\frac{1}{2}$" LOAD PLATE AND 11" X 19" MASONRY PLATE), AS PER PLAN	3	3				11
516	44400	3	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) ($15\frac{1}{4}$" x 15" x 5" WITH $16\frac{1}{4}$" X 16" X $1\frac{1}{2}$" LOAD PLATE)			3			
516	44400	3	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (18" x 17" x 5" WITH 19" X 18" X $1\frac{1}{2}$" LOAD PLATE)				3		
518	21200	18	CUBIC YARD	POROUS BACKFILL WITH GEOTEXTILE FABRIC	9	9				
518	40000	36	FOOT	6" PERFORATED CORRUGATED PLASTIC PIPE	18	18				
518	40012	48	FOOT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE	24	24				
519	11100	250	SQUARE FEET	PATCHING CONCRETE STRUCTURE	50	50	75	75		
SPECIAL	530E00200		LUMP	SPECIAL - STRUCTURES (PRE-ENGINEERED DECK AND RAILING)					LS	2

DESIGN AGENCY ADR

REVIEWED RBK DATE 11/19/19
STRUCTURE FILE NUMBER NONE
DRAWN BCK REVISED —
DESIGNED BCK CHECKED JTH

ESTIMATED QUANTITIES
BRIDGE NO. VIN-MRT-144/31
OVER RACCOON CREEK

VIN-MRT-144/31
PID No. 106684