

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, INCLUDING THE 2002 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

PROPOSED WORK

STA-30-1878 (TRUMP AVE OVER US 30)
 - PATCH ALL UNSOUND AREAS OF EXISTING CONCRETE WEARING SURFACE, INCLUDING APPROACH SLABS.
 - SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN CONCRETE TREATMENT.
 - REPAIR EMBANKMENT EROSION AT REAR LEFT AND FORWARD RIGHT WINGWALLS.
 - REPLACE APPROACH GUARDRAIL AT FORWARD RIGHT AND REAR RIGHT OF STRUCTURE.
 - PROVIDE CLEARING AND GRUBBING 15' AROUND THE STRUCTURE.
 - PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.

STA-30-1636 (OVER WARNER AVE)
 - PATCH ALL UNSOUND AREAS OF EXISTING CONCRETE WEARING SURFACE, INCLUDING APPROACH SLABS.
 - SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN CONCRETE TREATMENT.
 - PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE AND SEAL WITH EPOXY-URETHANE.
 - SEAL ABUTMENTS, WINGWALLS, PIER COLUMNS AND PIER CAPS. WITH EPOXY-URETHANE.
 - PROVIDE CLEARING AND GRUBBING 15' AROUND THE STRUCTURE.
 - PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.

STA-30-1642 (OVER PRIVATE DRIVE)
 - PATCH ALL UNSOUND AREAS OF EXISTING CONCRETE WEARING SURFACE, INCLUDING APPROACH SLABS.
 - SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN CONCRETE TREATMENT.
 - PROVIDE CLEARING AND GRUBBING 15' AROUND THE STRUCTURE.
 - PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.

PROPOSED WORK (CONT...)

STA-30-1648 (OVER WHEELING & LAKE ERIE RR)
 - PATCH ALL UNSOUND AREAS OF EXISTING CONCRETE WEARING SURFACE, INCLUDING APPROACH SLABS.
 - SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN CONCRETE TREATMENT.
 - PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE AND SEAL WITH EPOXY-URETHANE.
 - CLEAN EXISTING SCUPPERS.

- REPAIR EROSION AT RIGHT REAR AT EXPOSED TOP OF FOOTER.
 - PROVIDE CLEARING AND GRUBBING 15' AROUND THE STRUCTURE.
 - PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.

STA-30-1751R (OVER MARIETTA AVE)
 - PATCH ALL UNSOUND AREAS OF EXISTING CONCRETE WEARING SURFACE, INCLUDING APPROACH SLABS.
 - SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN CONCRETE TREATMENT.
 - REPLACE DAMAGED GUARDRAIL AT FORWARD RIGHT END OF STRUCTURE.
 - PROVIDE CLEARING AND GRUBBING 15' AROUND THE STRUCTURE.
 - PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.

STA-30-1751L (OVER MARIETTA AVE)
 - PATCH ALL UNSOUND AREAS OF EXISTING CONCRETE WEARING SURFACE, INCLUDING APPROACH SLABS.
 - SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN CONCRETE TREATMENT.
 - REPLACE DAMAGED GUARDRAIL AT FORWARD RIGHT END OF STRUCTURE.
 - REPLACE BRIDGE TERMINAL ASSEMBLY AT FORWARD RIGHT END OF STRUCTURE.
 - PROVIDE CLEARING AND GRUBBING 15' AROUND THE STRUCTURE.
 - PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.

STA-30-1792R (OVER WHEELING & LAKE ERIE RR)
 - PATCH ALL UNSOUND AREAS OF EXISTING CONCRETE WEARING SURFACE, INCLUDING APPROACH SLABS.
 - SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN CONCRETE TREATMENT.
 - REPLACE DAMAGED GUARDRAIL AT RIGHT REAR APPROACH.
 - REMOVE GRAFFITI FROM MSE AND ABUTMENT WALLS.
 - PROVIDE CLEARING AND GRUBBING 15' AROUND THE STRUCTURE.
 - PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.

STA-30-1793L (OVER WHEELING & LAKE ERIE RR)
 - PATCH ALL UNSOUND AREAS OF EXISTING CONCRETE WEARING SURFACE, INCLUDING APPROACH SLABS.
 - SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN CONCRETE TREATMENT.
 - REPLACE DAMAGED GUARDRAIL AT LEFT REAR APPROACH.
 - REMOVE GRAFFITI FROM MSE AND ABUTMENT WALLS.
 - PROVIDE CLEARING AND GRUBBING 15' AROUND THE STRUCTURE.

OBJECT MARKERS AND STRUCTURE IDENTIFICATION SIGNS

OBJECT MARKERS WILL BE PLACED ON EACH APPROACH OFF THE LEFT AND RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. ONE OM-3L AND ONE OM-3R WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND SHALL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 10.5 FT IN LENGTH.

STRUCTURE IDENTIFICATION SIGNS (I-H25b) WILL BE INSTALLED ON THE SAME POST AND DIRECTLY BELOW THE OBJECT MARKER OFF THE RIGHT SHOULDER ON EACH APPROACH. A QUANTITY OF ONE SIGN WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:

- STA-30-1878 (2 APPROACHES)
- STA-30-1636 (2 APPROACHES)
- STA-30-1642 (2 APPROACHES)
- STA-30-1648 (2 APPROACHES)
- STA-30-1751R
- STA-30-1751L
- STA-30-1792R
- STA-30-1793L

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

- ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
- ITEM 630 - SIGN, FLAT SHEET, 6 SQ FT
- ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 21 FT
- ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 3 EACH
- ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 2 EACH

CORRECTING BRIDGE IDENTIFICATION SIGN NUMBERS:

THE EXISTING BRIDGE NUMBER SIGNS HAVE INCORRECT BRIDGE NUMBERS ON THEM. THE FOLLOWING BRIDGE NUMBERS ARE THE CORRECT ONES AND WILL BE USED ON THE NEW BRIDGE IDENTIFICATIONS SIGNS.

- STRUCTURE STA-30-1878 (SFN:7601077) THE EXISTING SIGN SHOWS 1842. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1878.
- STRUCTURE STA-30-1636 (SFN:7601018) THE EXISTING SIGN SHOWS 1634. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1636.
- STRUCTURE STA-30-1642 (SFN:7601026) THE EXISTING SIGN SHOWS 1640. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1642.
- STRUCTURE STA-30-1648 (SFN:7601042) THE EXISTING SIGN SHOWS 1646. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1648.
- STRUCTURE STA-30-1751R (SFN:7603746) THE EXISTING SIGN SHOWS 1751. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1751R.
- STRUCTURE STA-30-1751L (SFN:7603738) THE EXISTING SIGN SHOWS 1751. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1751L.
- STRUCTURE STA-30-1792R (SFN:7603681) THE EXISTING SIGN SHOWS 17.92. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1792R.
- STRUCTURE STA-30-1793L (SFN:7603673) THE EXISTING SIGN SHOWS 1792. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1793L.

SPECIAL - STRUCTURES: CONCRETE SPALL REMOVAL

THIS WORK WILL CONSIST OF REMOVING ALL VISIBLY SPALLED AREAS OF THE BOTTOM OF DECK OF STRUCTURE(S) STA-30-1636 & STA-30-1648 WITHOUT SOUNDING. AFTER SPALLED CONCRETE AREAS HAVE BEEN REMOVED, REMOVAL AREAS WILL BE SEALED WITH ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

CONCRETE SPALL REMOVAL WILL BE PAID FOR AT THE UNIT BID PRICE FOR SPECIAL – STRUCTURE MISC.: CONCRETE SPALL REMOVAL. THIS PRICE WILL INCLUDE THE COST OF LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

STA-30-1636:
 SPEC, STRUCTURES: CONCRETE SPALL REMOVAL, 20 SY
 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), 20 SY

STA-30-1648:
 SPEC, STRUCTURES: CONCRETE SPALL REMOVAL, 45 SY
 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), 45 SY

STRUCTURE PAINTING/CONCRETE SEALING OPERATIONS

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT OR OTHER MATERIALS USED TO REPAIR, CLEAN, PAINT, SEAL OR TREAT ANY STRUCTURE FROM ENTERING ANY STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF RELEASE.

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS

ALTHOUGH NO TREES OR STUMPS ARE SPECIFICALLY MARKED FOR REMOVAL WITHIN THE PLANS, A LUMP SUM QUANTITY IS INCLUDED IN THE STRUCTURE GENERAL SUMMARY FOR ITEM 201 – CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS. SCALPING IS NOT REQUIRED FOR THIS ITEM OF WORK. ALL VEGETATION SHALL BE REMOVED WITHIN 15 FEET (OR TO THE R/W LIMITS, WHICHEVER IS CLOSER) OF THE HEADWALLS, ABUTMENTS AND/OR PIERS.

ALL OTHER PROVISIONS AS SET FORTH IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 201 – CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN C&MS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPT-ABLE METHODS INCLUDE: HIGH-PRESSURE WATER BLAST-ING WITH, OR WITHOUT, ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT OR VACUUM ABRASIVE BLASTING.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE ESTIMATED QUANTITIES SHEET:

- STA-30-1636
 ITEM 519, PATCING CONCRETE STRUCTURES, AS PER PLAN
 150 SF
- STA-30-1648
 ITEM 519, PATCING CONCRETE STRUCTURES, AS PER PLAN
 400 SF

STRUCTURE GENERAL NOTES
BRIDGE NO.: STA-30-1878, STA-30-1636, STA-30-1642, STA-30-1648, STA-30-1751R, STA-30-1751L, STA-30-1792R, STA-30-1793L

DESIGN AGENCY	
DESIGNER	SJD
REVIEWER	RAS 04-21-21
PROJECT ID	110615
SUBSET	TOTAL
1	5
SHEET	TOTAL
P.30	34

ITEM 518 - SCUPPER MISC.: CLEANOUT

THIS WORK WILL CONSIST OF REMOVING ALL DEBRIS FROM ON TOP AND INSIDE OF THE SCUPPERS. SCUPPER CLEANOUT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 518, SCUPPER MISC.: CLEANOUT. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

CLEAN SCUPPERS FOR THE FOLLOWING STRUCTURE:

STA-30-1648

GUARDRAIL

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE ESTIMATED QUANTITIES SHEET:

STA-30-1878

- ITEM 202, GUARDRAIL REMOVED, 50 FT
- ITEM 202, ANCHOR ASSEMBLY REMOVED, TYPE E, 1 EACH
- ITEM 606, ANCHOR ASSEMBLY, TYPE E, 1 EACH
- ITEM 606, GUARDRAIL, TYPE 5, 50 FT

STA-30-1751R

- ITEM 202, GUARDRAIL REMOVED, 37.5 FT
- ITEM 606, GUARDRAIL, TYPE 5, 37.5 FT

STA-30-1751L

- ITEM 202, GUARDRAIL REMOVED, 31.25 FT
- ITEM 202, BRIDGE TERMINAL ASSEMBLY REMOVED, 1 EACH
- ITEM 606, BRIDGE TERMINAL ASSEMBLY, TYPE 1, 1 EACH
- ITEM 606, GUARDRAIL, TYPE 5, 31.25 FT

STA-30-1792R

- ITEM 202, GUARDRAIL REMOVED, 25.0 FT
- ITEM 606, GUARDRAIL, TYPE 5, 25.0 FT

STA-30-1793L

- ITEM 202, GUARDRAIL REMOVED, 25.0 FT
- ITEM 606, GUARDRAIL, TYPE 5, 25.0 FT

EROSION REPAIR

THIS WORK WILL CONSIST OF REPAIRING THE EROSION OR SLOPE PROTECTION AT THE LOCATIONS DETAILED IN THE PROPOSED WORK NOTES FOR STRUCTURES STA-30-1878 AND STA-30-1648. REPAIR WORK WILL BE PAID FOR BY THE FOLLOWING ITEMS:

STA-30-1878

- ITEM 203, BORROW, 2 CY
- ITEM 601, DUMPED ROCK FILL, TYPE B, 5 CY
- ITEM 613, LOW STRENGTH MORTAR BACKFILL, 3 CY

STA-30-1648

- ITEM 203, BORROW, 5 CY

ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION)

APPLY A PERMANENT GRAFFITI COATING QUALIFIED ACCORDING TO SUPPLEMENT 1083 THAT IS COMPATIBLE WITH THE CONCRETE SEALER OVER WHICH IT IS APPLIED. APPLY THE GRAFFITI COATING IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE ESTIMATED QUANTITIES SHEET:

STA-30-1792R

- ITEM 512, SEALING OF CONCRETE SURFACES, AS PER PLAN, 200 SY
- ITEM 512, REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, 200 SY

STA-30-1793L

- ITEM 512, SEALING OF CONCRETE SURFACES, AS PER PLAN, 200 SY
- ITEM 512, REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, 200 SY

STRUCTURE GENERAL NOTES

BRIDGE NO.: STA-30-1878, STA-30-1636, STA-30-1642, STA-30-1648,
 STA-30-1751R, STA-30-1751L, STA-30-1792R, STA-30-1793L

DESIGN AGENCY



DESIGNER

SJD

REVIEWER

RAS 04-21-21

PROJECT ID

110615

SUBSET	TOTAL
2	5

SHEET	TOTAL
P.31	34

P.31

34

CALC:	SJD	DATE:	1/27/2021
CHECKED:	RAS	DATE:	4/21/2021

ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
STA-30-1878 7601077 06/NHS/BR	STA-30-1636 7601018 06/NHS/BR	STA-30-1642 7601026 06/NHS/BR	STA-30-1648 7601042 06/NHS/BR	STA-30-1751R 7603746 06/NHS/BR	STA-30-1751L 7603738 06/NHS/BR	STA-30-1792R 7603681 06/NHS/BR	STA-30-1793L 7603673 06/NHS/BR					
LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	201	11001	LS	CLEARING AND GRUBBING, AS PER PLAN	1/5
50				37.5	31.25	25	25	202	38000	FT	GUARDRAIL REMOVED	
1								202	42010	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
					1			202	47000	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
2			5					203	40000	CY	BORROW	
						200	200	512	10001	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN ,(PERMANENT GRAFFITI PROTECTION)	2/5
	541		45					512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
2767	1937	2442	3874	925	925	466	466	512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
	495					200	200	512	74000	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
2188	936	1267	2225	604	604	304	304	512	74500	FT	REMOVAL OF EXISTING PAVEMENT MARKING	
1								512	74520	EACH	REMOVAL OF EXISTING PAVEMENT MARKING	
			8					518	12500	EACH	SCUPPER, MISC.: CLEANOUT	
15	20	25	39	6	6	4	6	519	12304	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C	
	20		45					SPECIAL	53000800	SY	STRUCTURES: CONCRETE SPALL REMOVAL	
5								601	26000	CY	DUMPED ROCK FILL, TYPE B	
50				37.5	31.25	25	25	606	13000	FT	GUARDRAIL, TYPE 5	
1								606	26100	EACH	ANCHOR ASSEMBLY, TYPE E	
					1			606	35000	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
3								613	41200	CY	LOW STRENGTH MORTAR BACKFILL	
2	2	2	2	1	1	1	1				SIGN, FLAT SHEET, 730.20	
12	12	12	12	6	6	6	6	630	80100	SF	SIGN, FLAT SHEET	
42	42	42	42	21	21	21	21	630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
6	6	6	6	3	3	3	3	630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
4	4	4	4	2	2	2	2	630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
	150		400					519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	

STRUCTURE ESTIMATED QUANTITIES
 BRIDGE NO.: STA-30-1878, STA-30-1636, STA-30-1642, STA-30-1648,
 STA-30-1751R, STA-30-1751L, STA-30-1792R, STA-30-1793L

DESIGN AGENCY



DESIGNER

SJD

REVIEWER

RAS 04-21-21

PROJECT ID

110615

SUBSET TOTAL

3 5

SHEET TOTAL

P.32 34