

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS, 1992 AND THE OHIO SUPPLEMENT TO THESE SPECIFICATIONS WITH THE FOLLOWING EXCEPTION: THE PROPOSED WORK WILL RESULT IN A SLIGHT OVERSTRESS OF THE FASCIA STRINGERS.

THE DESIGN DATA IS AS FOLLOWS:

- DESIGN LOADING - HS20-44 CASE II AND THE ALTERNATE MILITARY LOADING.
- HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4500 PSI SUPERSTRUCTURE.
- HIGH PERFORMANCE CONCRETE - COMPRESSIVE STRENGTH 4000 PSI SUBSTRUCTURE.
- STRUCTURAL STEEL (ASTM A36 UNLESS NOTED) - YIELD STRENGTH 36,000 PSI
- REINFORCING STEEL - ASTM A615, A616, OR A617
GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI

REFERENCE SHALL BE MADE TO:

STANDARD DRAWINGS:		
AS-1-81	DATED	9-15-94
EXJ-4-87	DATED	2-14-97
GSD-1-96	DATED	2-12-97
VPF-1-90M	DATED	3-20-95
PCB-91	DATED	4-24-92
SUPPLEMENTAL SPECIFICATIONS:		
842	1-6-99	
843	5-5-98	
844	1-6-99	
899	10-21-98	

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL, TOP AND BOTTOM MAT. SEALING OF CONCRETE SURFACES.

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND/OR FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURES BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

PLANS OF EXISTING STRUCTURE ARE AVAILABLE FOR EXAMINATION AT THE OHIO DEPARTMENT OF TRANSPORTATION; DISTRICT 12 OFFICE; 5500 TRANSPORTATION BOULEVARD, GARFIELD HEIGHTS, OHIO 44125.

PROPOSED WORK

THE WORK PROPOSED FOR THIS STRUCTURE SHALL BE ACCOMPLISHED IN A SINGLE CONSTRUCTION PHASE AND IS COMPRISED OF, BUT NOT LIMITED TO:

1. REMOVE THE EXISTING DECK.
2. REMOVE ABUTMENT CONCRETE TO THE LIMITS SHOWN ON SHEETS 7/20 AND 8/20.
3. REMOVE AND REPLACE END CROSSFRAMES.
4. PLACE NEW DECK CONCRETE.
5. RECONSTRUCT THE ABUTMENTS.
6. COMPLETE THE REMAINING REHABILITATION ITEMS.

UTILITY LINES

ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) ANY AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNER(S). THE CONTRACTOR AND OWNER(S) ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM. NO UTILITY RELOCATIONS ARE ANTICIPATED FOR THIS PROJECT. EXTREME CARE SHALL BE TAKEN BY THE CONTRACTOR TO AVOID DAMAGING EXISTING UTILITY LINES THAT ARE TO REMAIN IN SERVICE THROUGH THE DURATION OF THE PROJECT.

REPLACEMENT OF EXISTING REINFORCING STEEL

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT THEIR COST. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. AN ALLOWANCE OF 5 CU. YDS. IS INCLUDED IN ITEM 844 FOR THIS PURPOSE, LISTED IN THE "GENERAL" COLUMN OF THE ESTIMATED QUANTITIES TABLE.

HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE

THIS ITEM SHALL BE IN ACCORDANCE WITH SS 844 EXCEPT THAT THE CONCRETE SHALL CONSIST OF MIX 4.

CONSTRUCTION OF BRIDGE RAILING ON ANY STRUCTURE OVER 20 FEET IN SPAN

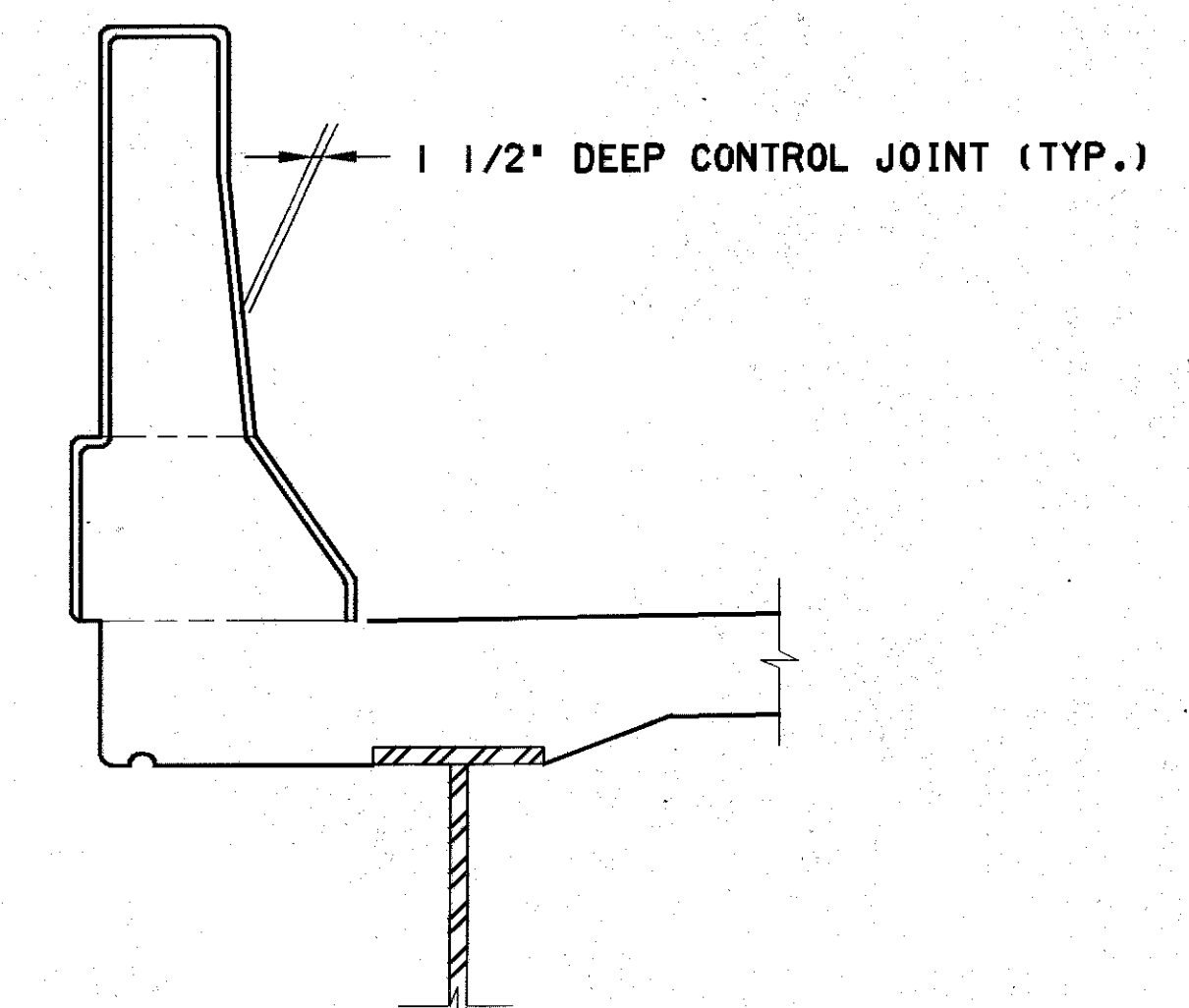
ALL CONCRETE PARAPETS SHALL NOT BE SLIP FORMED

THE MINIMUM CONCRETE SLUMP DURING PLACEMENT OF ALL CONCRETE PARAPETS SHALL BE 6 INCHES. THE MAXIMUM SLUMP ALLOWED DURING PLACEMENT IS 8 INCHES.

FORMS SHALL NOT BE REMOVED UNTIL AT LEAST 2 HOURS AFTER THE FINAL SET. DETERMINATION OF THE FINAL SET SHALL BE AS PER ASTM C266 (GILLMORE NEEDLE). TESTING SHALL BE PERFORMED BY THE CONTRACTOR AT NO COST TO THE STATE.

ANCHOR BOLTS FOR FENCE POSTS SHALL BE CAST IN PLACE.

THE CONTRACTOR SHALL CONSTRUCT 1" DEEP AND 1/4" WIDE CONTROL JOINTS SPACED AT A MINIMUM OF 6 FT AND A MAXIMUM OF 8 FT ON CENTER. THE CONTROL JOINTS SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE TOP OF THE CONCRETE DECK. THE CONTRACTOR MAY EITHER FORM THE CONTROL JOINTS IN WITH FORM LINERS, OR, WITHIN 24 HOURS OF PLACEMENT, SAW CUT THE CONTROL JOINTS IN WITH THE USE OF AN EDGE GUIDE, FENCE, OR JIG WHICH IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE ENTIRE LENGTH OF EACH CONTROL JOINT SHALL BE SEALED TO A MINIMUM DEPTH OF 1/2" WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-0022TE.



TYPICAL CONTROL JOINT DETAIL

CT Consultants, Inc. Engineers • Architects • Planners Wilmington • Mentor • Columbus • North Canton • Youngstown					
3/20					
GENERAL NOTES					
BRIDGE NO. LAK-2-0451					
S.R. 2 UNDER STEVENS BLVD.					
LAKE COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
I.A.S.	I.A.S.	I.A.S.	J.P.R.	J.E.A. 2-25-94	