

		ESTIMATED QUANTITIES					
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	PIERS	ABUT.	GEN'L
503	LUMP SUM	LUMP SUM	COFFERDAMS, CRIBS AND SHEETING.				
503	909	CU. YDS.	UNCLASSIFIED EXCAVATION.		386	523	
503	538	CU. YDS.	SHALE EXCAVATION.		538		
505	LUMP SUM	LUMP SUM	TEST PILE				LUMP SUM
506	LUMP SUM	LUMP SUM	PILE TEST LOAD.				LUMP SUM
506	1	EACH	1 SUBSEQUENT PILE TEST LOAD.				1
507	1,320	LIN. FT.	STEEL PILES, HP 10*42			1,320	
509	228,370	LBS.	REINFORCING STEEL.	10,440	190,971	26,959	
511	133	CU. YDS.	CLASS C CONCRETE, DIAPHRAGMS	133			
511	850	CU. YDS.	CLASS "C" CONCRETE, PIERS ABOVE FOOTINGS.		850		
511	225	CU. YDS.	CLASS "C" CONCRETE, ABUTMENTS ABOVE FOOTINGS.			225	
511	411	CU. YDS.	CLASS "C" CONCRETE, FOOTINGS.		262	149	
515	48	EACH	PRESTRESSED CONCRETE BRIDGE MEMBER, I-54		48		
515	2,544	SQ. YDS.	PRE-CAST PRESTRESSED CONCRETE PANELS.		2,544		
516	754	SQ. FT.	1/2" PREFORMED EXPANSION JOINT FILLER.			25	
516	24	EACH	ABUTMENT BEARINGS		24		
516	72	EACH	10*3*24" LAMINATED ELASTOMERIC BEARINGS		72		
516	164.04	LIN. FT.	END DAM			164.04	
517	899.89	LIN. FT.	RAILING (CONCRETE PARAPET WITH DOUBLE PIPE RAIL)		823.72	76.17	
518	127	CU. YDS.	POROUS BACKFILL.			127	
518	152	LIN. FT.	6" PERFORATED, HELICAL CORRUGATED STEEL PIPE, 707.01			152	
518	96	LIN. FT.	6" NON-PERFORATED, HELICAL CORRUGATED STEEL PIPE INCLUDING SPECIALS, 707.01			96	
518	40	EACH	SCUPPERS INCLUDING SUPPORTS.		40		
601	1,585	SQ. YDS.	CRUSHED AGGREGATE SLOPE PROTECTION.				1,585
808	537	UNITS	CHEMICAL ADMIXTURE FOR CONCRETE, TYPE A, B OR D.		537		
838	3	HOURS	SPECIAL TEST PILE				
SPECIAL	155,617	LBS.	EPOXY COATED REINFORCING STEEL. (SEE PROPOSAL NOTE)		155,617		
(1) 845	2380	SQ. YDS.	LATEX MODIFIED CONCRETE OVERLAY (1/4 INCHES THICK)		2380		
(2) 511	691	CU. YDS.	CLASS "C" CONCRETE, SUPERSTRUCTURE (SEE PROPOSAL NOTE)		691		
THE FOLLOWING ITEMS 1A AND 2A ARE ALTERNATES TO 1 AND 2. THE CONTRACTOR SHALL BID ON ONE SET OF ITEMS ONLY; 1 AND 2 OR 1A AND 2A							
(1A) 850	2380	SQ. YDS.	DENSE CONCRETE OVERLAY (1/4 INCHES THICK)		2380		
(2A) 511	658	CU. YDS.	CLASS "C" CONCRETE, SUPERSTRUCTURE (SEE PROPOSAL NOTE)		658		
FOR LIGHTING QUANTITIES SEE SHEET NO. 57							

GENERAL NOTES

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS: AS-1-72, SHEET No. 1 OF 2 DATED 6-30-72, FSB-1-62 REVISED 1-15-63, SD-1-69 SHEET 3 OF 4 DATED 6-12-69.

AND TO SUPPLEMENTAL SPECIFICATIONS 808, DATED 1-1-71, 836, DATED 3-12-75, 845 DATED 6-27-77, 850 DATED 6-27-77 AND 927 DATED 1-1-71.

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS, 1973, INCLUDING THE 1974, 1975 AND 1976 INTERIM SPECIFICATIONS AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA:

DESIGN LOADING - HS 20-44 AND THE ALTERNATE MILITARY LOADING
CONCRETE CLASS "C" UNIT STRESS 1200 PSI FOR SUPERSTRUCTURE
UNIT STRESS 1333 PSI FOR SUBSTRUCTURE

STRUCTURAL STEEL - ASTM A36 - UNIT STRESS 20,000 PSI
REINFORCING STEEL - ASTM A615, A616, OR A617 - GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI
CONCRETE FOR PRESTRESSED BEAMS - 2,200 PSI COMPRESSION, 444 TENSION (UNIT STRESS)

PRESTRESSING STRANDA - ASTM A416

$F_{ps} = 270,000$ PSI

INITIAL STRESS = 0.70 F_{ps}

DECK PROTECTIVE METHOD - LATEX MODIFIED COLCRETE OR DENSE CONCRETE OVERLAY. - EPOXY COATED REINFORCING STEEL.

EMBANKMENT CONSTRUCTION: AFTER THE EXCAVATION OF THE MANMADE FILL AROUND THE REAR ABUTMENT AND THE WET, LOOSE SOILS AROUND THE FORWARD ABUTMENT; THE EMBANKMENT SHALL BE CONSTRUCTED TO THE LEVEL OF THE SUBGRADE FOR A MINIMUM DISTANCE OF 200 FEET BACK OF THE ABUTMENTS. THERE SHALL BE A SIXTY (60) DAY WAITING PERIOD AFTER THE EMBANKMENT HAS BEEN PLACED BEFORE EXCAVATION IS MADE FOR THE ABUTMENTS AND THE PILES DRIVEN.

THE FOOTINGS FOR PIERS 1 AND 3 SHALL EXTEND A MINIMUM OF 3 INCHES INTO BEDROCK OR TO THE ELEVATION SHOWN, WHICHEVER IS LOWER.

THE FOOTING FOR PIER 2 SHALL BE FOUNDED AT ELEVATION 582.0. THE DIRECTOR SHALL BE CONTACTED IF THE FOOTING WILL NOT BE A MINIMUM OF TWO FEET IN THE SHALE BEDROCK.

CAREFUL CONSTRUCTION IS REQUIRED SO THAT NO DETERIORATION OCCURS DUE TO AIR AND WATER EXPOSURE.

UTILITY LINES: ALL EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNERS. THE CONTRACTOR AND OWNERS ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

PILES SHALL BE DRIVEN TO BEDROCK. THE BEARING CAPACITY SHALL BE CONSIDERED OBTAINED BY REFUSAL ON HARD BEDROCK OR BY PENETRATING SOFT BEDROCK FOR SEVERAL INCHES WITH A MINIMUM RESISTANCE OF 20 BLOWS PER INCH. THE DESIGN LOAD IS 45 TONS PER PILE FOR THE ABUTMENTS.

FRANKLIN CONSULTANTS INC. 3/14
Consulting Engineers
COLUMBUS, OHIO

ESTIMATED QUANTITIES &
GENERAL NOTES

CITY OF WILLOUGHBY
CHAGRIN RIVER BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
HM	B.B.	B.B.	PCB	Jf	5/19-77	5-15-78