GENERAL NOTES

~~ITEM 511 - CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN~~

ITEM 511 - CLASS C CONCRETE, ABUTMENT ABOVE FOOTING, AS PER PLAN

IN LIEU OF THE PROPORTIONING SPECIFIED IN 499.03 AND 511.02, THE FOLLOWING TABLE SHALL BE USED TO ESTABLISH THE QUANTITIES PER CUBIC YARD FOR CONCRETE FOR THE SUPERSTRUCTURE AND IN THE ABUTMENT BACKWALLS ABOVE THE APPROACH SLAB SEATS. THE COARSE AGGREGATE SHALL BE LIMESTONE OR SLAG.

QUANTITIES PER CUBIC YARD - SPECIAL CONCRETE (USING NO. 57 LINESTONE)

	FINE AGGREGATE (LB.)	COARSE AGGREGATE (LBS)	TOTAL (LB.)
CLASS S	1270	1555	2825
CLASS C	1435	1595	3030

	CEMENT CONTENT (LB)	MAXIMUM WATER CEMENT RATIO
CLASS S	715	0.35
CLASS C	600	0.35

VOID

AIR CONTENT - 8±2%

HIGH RANGE WATER REDUCER SHALL BE USED. HIGH RANGE WATER REDUCER SHALL CONFORM TO 705.12, ASTM-C494 TYPE F AND SHALL NOT CONTAIN CALCIUM CHLORIDE. THE DOSAGE RATE WILL BE DETERMINED BY THE CONTRACTOR BASED ON MANUFACTURER'S RECOMMENDATION TO ACHIEVE THE DESIRED WORKABILITY LEVEL.

THE CEMENT CONTENT SHALL BE MAINTAINED AND A MAXIMUM WATER-CEMENT RATIO OF 0.35 SHALL NOT BE EXCEEDED. THE CONTRACTOR MAY ADD A PORTION OF THE SUPERPLASTICIZER AT THE PLANT TO ACHIEVE A MAXIMUM SLUMP OF 4 INCHES. THE REMAINING SUPERPLASTICIZING ADMIXTURE SHALL BE ADDED AT THE JOB SITE AND MIXED A MINIMUM OF FIVE (5) MINUTES AFTER THE SUPERPLASTICIZER HAS BEEN ADDED. THE SLUMP SHALL BE 6±1 INCHES. THE CONTRACTOR SHALL FURNISH A VOLUMETRIC DISPENSER FOR THE SUPERPLASTICIZER.

SAMPLING AND TESTING FOR ENTRAINED AIR CONTENT AND SLUMP SHOULD BE TAKEN FROM THE CONCRETE THAT HAS BEEN TREATED WITH A HIGH RANGE WATER REDUCER.

IN NO CASE SHALL TRANSPORTATION OF THE CONCRETE BE IN NON-AGITATING VEHICLES. IF SLUMP LOSS OCCURS BEFORE PLACEMENT OF THE CONCRETE THE CHARGE MAY BE "RETEMPERED" WITH SUPERPLASTICIZER TO RESTORE PLASTICITY. THE SLUMP RANGE AND AIR CONTENT SHALL BE RECHECKED TO INSURE CONFORMANCE WITHIN ALLOWANCE LIMITS. IF THE CONSISTENCY OF THE CHARGE AFTER RETEMPERING IS SUCH AS TO CAUSE SEGREGATION OF THE COMPONENTS, THIS WILL BE CAUSE FOR REJECTION OF THE LOAD.

CURING OF ALL AREAS SHALL BE AS PER 511.14, METHOD (A) USING CONTINUOUS APPLICATION OF WATER AND NO PLASTIC SHEETING.

ITEM 516 - MODULAR EXPANSION JOINTS INCLUDING ELASTOMERIC COMPRESSION SEALS AND STEEL EXTRUSIONS.

THIS WORK SHALL INCLUDE THE PREPARATION OF DESIGN SHOP DRAWINGS, FABRICATION, FURNISHING AND INSTALLATION OF A MODULAR ELASTOMERIC EXPANSION JOINT SYSTEM FOR SEALING MOVEMENT JOINTS IN THE BRIDGE DECK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE FINISHED JOINT SHALL BE IN CONFORMITY WITH THE LINES AND GRADES SHOWN ON THE PLANS. THE EXPANSION JOINT SHALL CONSIST OF AN INTEGRALLY MOLDED CONTINUOUS PREFORMED UNIT OF NEOPRENE CONTAINED IN AN INTEGRALLY EXTRUDED METAL FRAME.

PREFORMED ELASTOMERIC SEAL SHALL BE AN EXTRUDED POLYMERIZED CHLOROPRENE MATERIAL MEETING THE REQUIREMENTS OF ASTM D-2628. THE SEAL SHALL BE CONTINUOUS AND SHALL HAVE LOCKING LUGS AND/OR BE SUCH THAT IT WILL INTERLOCK WITH THE EXTRUDED METAL FRAME.

ALL MATERIAL UNDER THIS ITEM SHALL MEET THE FOLLOWING REQUIREMENTS:

1. STRUCTURAL STEEL EXTRUSIONS, PLATES AND SHAPES - ASTM A-36 OR A-588.
2. STAINLESS STEEL NUTS, BOLTS AND WASHERS - ASTM -276, TYPE 304.

ALL SHOP FABRICATION OF EXPANSION JOINTS SHALL BE MADE BY AN ESTABLISHED MANUFACTURER OF THESE PRODUCTS, WATSON BOWMAN AND ACME COMPANY, D.S. BOWN COMPANY, OR AN APPROVED ALTERNATE.

THE MANUFACTURER MUST PREPARE AND OBTAIN APPROVAL OF COMPLETE DESIGN DRAWINGS FOR INCLUSION INTO THIS SET OF PLANS FOR THE EAST END OF THE BRIDGE DECK BEFORE PREPARING AND SUBMITTING SHOP DRAWINGS FOR APPROVAL. ALL APPROVED DESIGN DRAWINGS OF JOINTS MUST BE FURNISHED IN ACCEPTABLE FORM FOR INCLUSION WITH THIS SET OF PLANS.

SYSTEM A FIELD PAINT ON EXPOSED STEEL SURFACES. FIELD PAINT SHALL CONSIST OF ONE PRIME COAT AND ONE FINISH COAT.

MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE ACTUAL SEALED LENGTH OF JOINT MEASURED HORIZONTALLY ALONG THE JOINT CENTERLINE.

PAYMENT PER LINEAR FEET FOR ITEM 516 - MODULAR EXPANSION JOINTS INCLUDING ELASTOMERIC COMPRESSION SEALS AND STEEL EXTRUSIONS INCLUDES THE FURNISHING OF DESIGN AND SHOP DRAWINGS, ALL LABOR, MATERIAL, JOINT ARMOR, REINFORCING, PLATES, ANCHORING DEVICES, AND EQUIPMENT NECESSARY TO FABRICATE, FURNISH AND INSTALL THE COMPLETE MODULAR ELASTOMERIC EXPANSION JOINT SYSTEM.

WOODRUFF, INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

GENERAL NOTES

U.S. ROUTE 20 OVER
THE GRAND RIVER

BR. NO. LAK-20-17.23 FROM STA. 18+91.00
TO STA. 22+89.56

LAKE COUNTY OHIO

MADE J.R.S.	TRACED	CHECKED J.S.	REVIEWED	REVISED 9-3-86
DATE 10-84	DATE	DATE 10-84	DATE	SHEET 4/22

U.S. 20 OVER GRAND RIVER