GENERAL NOTES

REFERENCE: SHALL BE MADE TO STANDARD DRAWING(S):

ICD – 1 – 82M	DATED	3–20–95
AS – 1 – 81M	DATED	10–25–94
BR – 1M	DATED	12–15–94
PSID – 95M	DATED	9–18–95
PCB – 91M	DATED	3–20–95
PCB – DDM	DATED	3–20–95

AND TO SUPPLEMENTAL SPECIFICATION:
944 DATED 3–23–95

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING: MS–18 AND THE ALTERNATE MILITARY LOADING. FUTURE WEARING SURFACE 2.87 kN/m^2

DESIGN STRESSES:

HIGH PERFORMANCE CONCRETE (MIX 3), SUPERSTRUCTURE – COMPRESSIVE STRENGTH 31.0 MPa (28–DAY)
HIGH PERFORMANCE CONCRETE (MIX 3), SUBSTRUCTURE – COMPRESSIVE STRENGTH 27.5 MPa (28–DAY)
REINFORCING STEEL – ASTM A615M, A616M OR A617M, GRADE 400 MINIMUM YIELD STRENGTH 400 MPa.

MILD REINFORCING FOR THE CONCRETE PRESTRESSED BEAMS GRADE 400, MINIMUM YIELD STRENGTH 400 MPa

CONCRETE FOR PRESTRESSED BEAMS – COMPRESSIVE STRENGTH 38 MPa (28–DAY), UNIT STRESS 15.2 MPa COMPRESSION AND 3.1 MPa TENSION

PRESTRESSING STRAND ASTM A416M, 12.7 mm DIAMETER, SEVEN WIRE, UNCOATED
LOW RELAXATION STRANDS, f's – 1860 MPa
INITIAL STRESS 0.75 f's

DECK PROTECTION METHOD: EPOXY COATED REINFORCING STEEL, SEALING OF CONCRETE SURFACES, AND 65 mm CONCRETE COVER.

MONOLITHIC WEARING SURFACE: IS ASSUMED, FOR DESIGN PURPOSES, TO BE 25 mm THICK.

REINFORCING STEEL CLEARANCE: UNLESS OTHERWISE NOTED, MINIMUM REINFORCING STEEL CLEARANCE TO FACE OF CONCRETE IS 50 mm.

REINFORCING BAR SPLICES: REINFORCING BAR SPLICE LENGTHS SHALL CONFORM TO THE MINIMUM LENGTHS SPECIFIED BY 509.08 OF THE C.M.S. UNLESS OTHERWISE NOTED ON THE PLANS.

ITEM 518, 150 mm PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN: CORRUGATED PIPE USED IN ABUTMENT DRAINAGE SHALL BE 150 mm DIAMETER PLASTIC CORRUGATED AS PER SUPPLEMENTAL SPECIFICATION 944, AASHTO M294, TYPE SP.

ITEM 518, 150 mm NON–PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN: CORRUGATED PIPE USED IN ABUTMENT DRAINAGE SHALL BE 150 mm DIAMETER PLASTIC CORRUGATED AS PER SUPPLEMENTAL SPECIFICATION 944, AASHTO M294, TYPE S. THIS ITEM SHALL INCLUDE ALL ELBOWS, TEES AND END CAPS REQUIRED TO COMPLETE THE ABUTMENT DRAINAGE SYSTEM.

ITEM 611 REINFORCED CONCRETE APPROACH SLAB (T–305 mm), AS PER PLAN:
HIGH PERFORMANCE CONCRETE (MIX 3)–COMPRESSIVE STRENGTH 27.5 MPa (28–DAY)
THE REINFORCING STEEL FOR THE APPROACH SLABS OF THIS STRUCTURE SHALL BE EPOXY COATED IN CONFORMANCE WITH 509.
TWO SEPARATE THICKNESSES OF CLEAR OR OPAQUE POLYETHYLENE FILM, 705.06, SHALL BE PLACED ON THE PREPARED SUBBASE AND WHERE THE APPROACH SLAB IS TO BE CONSTRUCTED. THE POLYETHYLENE FILMS SHALL COMPLETELY COVER THE FULL LENGTH AND WIDTH OF THE SUBBASE BETWEEN THE SIDEWALL FORMS FOR THE APPROACH SLAB.

ITEM 511 HP MIX 3 CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN:
INSTALL A 900 mm WIDE STRIP, 2.5 mm THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE 900 mm WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 32 x 3 mm (LENGTH x SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 25 mm OUTSIDE DIAMETER, 3 mm GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 225 mm. OTHER SIMILAR GALVANIZED DEVISES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 150 mm (+/–) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 150 mm (+/–) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 150 mm CENTER TO CENTER ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS DUE TO MATERIAL MANUFACTURING SHALL BE AT LEAST 300 mm IN LENGTH, IF NOT VULCANIZED OR ADHESIVE BONDED, OR 150 mm IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 2.5 mm THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN–0003", BY E.I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, mm	D751	2.5+/–.25
BREAK STRENGTH, GRAB WXF, N MIN	D751	3130 X 3130
ADHESIVE 25 mm STRIP, 50 mm MIN, N MIN	D751	27
BURST STRENGTH(MULLEN) MPa, MIN	D751	9.65
HEAT AGING 70 HOURS T 100° C 180° BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMP BRITTLENESS 1 HOUR AT –40° C, BEND AROUND 6 mm MANDREL	D2136	NO CRACKING OF COATING

ITEM SPECIAL – TREATING CONCRETE DECK WITH HMWM RESIN:
SEAL THE CONCRETE WEARING SURFACES OF THE BRIDGE DECK AS SHOWN ON SHEET 10/13. SEE PROPOSAL NOTE FOR SURFACE PREPARATION AND RATE OF APPLICATIONS.

ITEM SPECIAL – BRIDGE DECK GROOVING
PLACE TRANSVERSE GROOVES IN THE SURFACE OF THE NEW BRIDGE DECK AS SHOWN ON SHEET 10/13. SEE PROPOSAL NOTE FOR ADDITIONAL INFORMATION.

PILE DESIGN LOADS (SAFE BEARING CAPACITY): THE DESIGN LOAD FOR THE ABUTMENT PILES IS 540 kN PER PILE.

ITEM 507 350 mm DIA. C.I.P. PILES, AS PER PLAN
PILE HAMMER: THE PILE HAMMER USED TO INSTALL THE 350 mm DIA. PILES SHALL HAVE A STATE'S ENERGY RATING OF NOT LESS THAN 22500 JOULES. THIS REQUIREMENT DOES NOT RELIEVE THE CONTRACTOR FROM 108.05 WHICH STATES THAT THE CONTRACTOR IS TO PROVIDE SUFFICIENT EQUIPMENT FOR PROSECUTING THE REQUIRED WORK. REFER TO "ODOT'S MANUAL OF PROCEDURES FOR STRUCTURES" TO OBTAIN THE STATE'S ENERGY RATING.

ITEM 507 350 mm DIA. C.I.P. PILES, AS PER PLAN
PILE WALL THICKNESS: THE RESPONSIBILITY OF CHOOSING AND PROVIDING A SATISFACTORY PILE WALL THICKNESS FOR THIS PROJECT SHALL BE BORNE BY THE CONTRACTOR EXCEPT THAT THE PILE WALL THICKNESS SHALL NOT BE LESS THAN 5.5 mm. IF A PILE WALL THICKNESS GREATER THAN 5.5 mm IS NECESSARY TO RESIST THE PILE INSTALLATION DRIVING STRESS, THE CONTRACTOR SHALL MAKE THIS DETERMINATION AND SHALL FURNISH A PILE WITH AN ACCEPTABLE WALL THICKNESS. IF MONOTUBE PILES ARE USED, THE MINIMUM WALL THICKNESS SHALL BE 4.5 mm.

CONCRETE PARAPETS:
AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 25 mm DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE PARAPET. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. THE SAWCUTS SHALL BE PLACED AT A MINIMUM OF 2000 mm AND A MAXIMUM OF 3000 mm CENTERS. THE USE OF AN EDGE GUIDE FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL SURFACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 6 mm. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT–S–00227E TO A MINIMUM DEPTH OF 25mm.

ITEM SPECIAL – HIGH PERFORMANCE CONCRETE:
SUPPLY AND PLACE HIGH PERFORMANCE CONCRETE THAT IS WORKABLE, FINISHABLE, AND WHEN NECESSARY PUMPABLE. ALL PROVISION OF ITEM 511 WILL REMAIN INTACT, EXCEPT AS MODIFIED BY THE PROPOSAL NOTE.

ITEM 203 EMBANKMENT, AS PER PLAN:
ALL FILL MATERIAL FOR CONSTRUCTION OF THE APPROACH EMBANKMENT AND FOR FILLING THE VOID CREATED BY REMOVAL OF THE EXISTING FORWARD AND REAR ABUTMENT, SHALL BE PLACED IN 150 mm LIFTS AND COMPACTED IN ACCORDANCE WITH 304.04.

REMOVAL OF EXISTING STRUCTURE: WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC THE EXISTING STRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE PROJECT ENGINEER. ABUTMENTS SHALL BE REMOVED TO ELEV. 192.00. PIERS SHALL BE REMOVED TO ELEV. 189.75.

INDEX OF DRAWINGS :

* INCLUDE AS–BUILT REVISIONS

AS–BUILT DRAWINGS 11/97

FILE: s:\projects\31329\600\lk2gns2.dgn
DATE: 05–Mar–98 07:48

DESIGN AGENCY
Gannett Fleming Corddry & Carpenter
ENGINEERS AND PLANNERS
BLENDONVIEW OFFICE PARK
5015 PINE CREEK DR., COLUMBUS, OHIO 43081

DESIGNED JR | DRAWN WSM | CHECKED JR | REVIEWED | REVISED | DATE

STRUCTURE FILE NUMBER
4300912(L) 4300920(R)

GENERAL NOTES
BRIDGE NO. LAK – 2 – 12.231
S.R. 2 OVER NEWELL CREEK

LAK–2–12.231
L. AND R.

2/13

32/43