



CITY OF WINNIPEG

WORKS AND OPERATIONS DIVISION

STREETS AND TRANSPORTATION DEPARTMENT

STURGEON CREEK BRIDGE ON PORTAGE AVENUE

DESIGN DATA

SPECIFICATIONS	- AASHTO 1977
LIVE LOADING	- MS 27 (HS30-44)
STRUCTURAL CONCRETE	- $f_c = 12 \text{ MPa (1740 psi)}$ $f_c' = 30 \text{ MPa (4350 psi)}$
REINFORCING STEEL	- $f_y = 400 \text{ MPa (58,000 psi)}$ HARD GRADE
PILE LOADINGS	
ABUTMENTS	- MAX. DESIGN LOAD = 39.8 TONNES - MAX. SAFE SUPPORTING CAPACITY = 49.2 TONNES
PIERS	- MAX. DESIGN LOAD = 40.2 TONNES - MAX. SAFE SUPPORTING CAPACITY = 49.2 TONNES
PRECAST PRESTRESSED CONCRETE	- REINFORCING STEEL $f_y = 300 \text{ MPa (43,000 psi)}$ - PRESTRESSING STEEL $f_s = 1860 \text{ MPa (270,000 psi)}$ - CONCRETE $f'_{ci} = 30 \text{ MPa (4,350 psi)}$ $f'_{cs} = 35 \text{ MPa (5,075 psi)}$
STRUCTURAL STEEL	
PEDESTRIAN HANDRAIL	- $f_y = 300 \text{ MPa (43,500 psi)}$
HYDRAULIC DATA	- $Q = 113.267 \text{ CMS (4,000 cfs)}$ - $V = 1.585 \text{ MPS (5.2 fps)}$ - $\text{HWL} = 233.020 (764.50)$ - DESIGN FREQUENCY 1 IN 50 YEARS
EPOXY COATED REINFORCING STEEL	- ALL DECK, MEDIAN, SIDEWALK, CONC. TRAFFIC BARRIER & TOP MAT OF APPROACH SLABS
HIGH DENSITY CONCRETE	- TOP 50 mm OF ENTIRE DECK

DRAWING LIST

GENERAL

B178-80-01	COVER SHEET
B178-80-02	DESIGN DATA AND DRAWING LIST
B178-80-03	EXISTING SITE PLAN AND SUBSOIL PROFILE
B178-80-04	GENERAL ARRANGEMENT-PLAN
B178-80-05	GENERAL ARRANGEMENT-SECTION AND ELEVATION
B178-80-06	CHANNEL WORK
B178-80-07	APPROACH ROADS-PLAN AND PROFILE
B178-80-08	TRAFFIC PHASING
B178-80-09	PORTABLE PRECAST CONCRETE TRAFFIC BARRIER (SUPPLIED BY OTHERS)

SOUTH STRUCTURE

B178-80-10	FOUNDATION LAYOUT EXCAVATION AND BACKFILL DETAILS
B178-80-11	WEST ABUTMENT SU-1 CONCRETE
B178-80-12	WEST ABUTMENT SU-1 REINFORCING
B178-80-13	WEST ABUTMENT SU-1 WING WALL CONCRETE AND REINFORCING
B178-80-14	EAST ABUTMENT SU-4 CONCRETE
B178-80-15	EAST ABUTMENT SU-4 REINFORCING
B178-80-16	EAST ABUTMENT SU-4 WING WALL CONCRETE AND REINFORCING
B178-80-17	PIERS SU-2 AND SU-3 CONCRETE
B178-80-18	PIERS SU-2 AND SU-3 REINFORCING
B178-80-19	PRECAST BOX BEAM END SPANS 9.616 m.
B178-80-20	PRECAST BOX BEAM CENTRE SPAN 17.825 m.
B178-80-21	BEARING PAD LAYOUT AND DETAILS
B178-80-22	DECK PLAN CONCRETE AND REINFORCING
B178-80-23	DECK DETAILS
B178-80-24	EXPANSION JOINT LAYOUT AND DETAILS
B178-80-25	APPROACH SLABS
B178-80-26	CONCRETE BARRIER DETAILS
B178-80-27	PEDESTRIAN HANDRAIL DETAILS
B178-80-28	BALANCED SHOULDER BARRIER AND TRAFFIC RAIL SHEET 1 OF 2
B178-80-29	BALANCED SHOULDER BARRIER AND TRAFFIC RAIL SHEET 2 OF 2

NORTH STRUCTURE

B178-80-30	FOUNDATION LAYOUT EXCAVATION AND BACKFILL DETAILS
B178-80-31	WEST ABUTMENT SU-5 CONCRETE
B178-80-32	WEST ABUTMENT SU-5 REINFORCING
B178-80-33	WEST ABUTMENT SU-5 WING WALL CONCRETE AND REINFORCING
B178-80-34	EAST ABUTMENT SU-8 CONCRETE
B178-80-35	EAST ABUTMENT SU-8 REINFORCING
B178-80-36	EAST ABUTMENT SU-8 WING WALL CONCRETE AND REINFORCING
B178-80-37	PIERS SU-6 AND SU-7 CONCRETE
B178-80-38	PIERS SU-6 AND SU-7 REINFORCING
B178-80-39	PRECAST BOX BEAM END SPANS 9.616 m.
B178-80-40	PRECAST BOX BEAM CENTRE SPAN 17.825 m.
B178-80-41	BEARING PAD LAYOUT AND DETAILS
B178-80-42	DECK PLAN CONCRETE AND REINFORCING
B178-80-43	DECK DETAILS
B178-80-44	EXPANSION JOINT LAYOUT AND DETAILS
B178-80-45	APPROACH SLABS
B178-80-46	CONCRETE BARRIER DETAILS
B178-80-47	PEDESTRIAN HANDRAIL DETAILS
B178-80-48	BALANCED SHOULDER BARRIER AND TRAFFIC RAIL SHEET 1 OF 2
B178-80-49	BALANCED SHOULDER BARRIER AND TRAFFIC RAIL SHEET 2 OF 2

REINFORCING SCHEDULE

B178-80-50	ABUTMENT SU-1 SHEET 1 OF 2
B178-80-51	ABUTMENT SU-1 SHEET 2 OF 2
B178-80-52	ABUTMENT SU-4 SHEET 1 OF 2
B178-80-53	ABUTMENT SU-4 SHEET 2 OF 2
B178-80-54	ABUTMENT SU-5 SHEET 1 OF 1
B178-80-55	ABUTMENT SU-8 SHEET 1 OF 2
B178-80-56	ABUTMENT SU-8 SHEET 2 OF 2
B178-80-57	PIERS SU-2 AND SU-3
B178-80-58	PIERS SU-6 AND SU-7
B178-80-59	PRECAST CONCRETE BOX BEAMS AND CONCRETE BARRIERS
B178-80-60	DECK, CURBS AND MEDIANS
B178-80-61	SOUTH STRUCTURE APPROACH SLABS
B178-80-62	NORTH STRUCTURE APPROACH SLABS
B178-80-63	HISTORICAL PANEL
B178-80-64	STANDARD LETTERING DETAILS
B178-80-65	WATERMAIN RELOCATION

AS BUILT
APPROVED BY: *[Signature]*

B-5388

RELEASED FOR CONSTRUCTION BY:
[Signature]
MANAGER OF STREETS AND TRAFFIC
DATE: 1980-10-24

DESIGN DATA AND DRAWING LIST

DRAWING NO. B178-80-02

