



EXPANSION JOINT NOTES:

- SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AT LEAST FOURTEEN (14) DAYS PRIOR TO FABRICATION. THE EXPANSION JOINT ASSEMBLIES SHALL BE DESIGNED TO CARRY COOPER E90 LIVE LOADING AND APPLICABLE IMPACT.
- STEEL SHALL BE IN ACCORDANCE WITH CSA STANDARD G40.21M GRADE 300W.
- WELDING SHALL BE OF LOW HYDROGEN CLASSIFICATION. MANUAL ELECTRODES SHALL BE E7016 OR E7018. ALL WELDING SHALL BE IN ACCORDANCE WITH CSA STANDARD W59.
- ALL STEEL COMPONENTS SURFACES, INCLUDING COVER PLATES SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE LATEST EDITION OF ASTM A123 TO A MINIMUM NET RETENTION OF 610 g/m² AFTER FABRICATION.
- ANCHOR STUDS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A108 GRADE DESIGNATION 1020.
- JOINT ASSEMBLY SHALL BE FABRICATED COMPLETELY AND PRESET TO DIMENSION "J" FOR 0°C PRIOR TO SHIPMENT.
- EXPANSION JOINT UNITS AND RELATED MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.
- THE CONTRACTOR IS REQUIRED TO PROVIDE SUPPORT FOR THE EXPANSION JOINT ASSEMBLIES DURING PLACEMENT OF CONCRETE. ALL SUPPORT SYSTEMS SHALL NOT INTERFERE WITH ANY CONCRETE FINISHING OPERATIONS.
- BLEEDER HOLES SHALL BE DRILLED INTO THE TOP OF THE STEEL EDGE MEMBERS OF THE EXPANSION JOINT, AND INTO THE TOP OF THE CURB COVER PLATES WHERE CONCRETE IS TO BE CAST DIRECTLY AGAINST. FOLLOWING CONCRETING OPERATIONS, THE CONTRACT ADMINISTRATOR SHALL INSPECT THESE AREAS BY METHOD OF SOUNDING. ALL VOIDS SHALL BE FILLED WITH AN APPROVED NON-SHRINK GROUT.
- SEALS SHALL BE PERFORMED NEOPRENE RUBBER AS SPECIFIED. EACH SEAL SHALL BE SUPPLIED & INSTALLED IN ONE CONTINUOUS PIECE. NO SPLICE IN THE RUBBER SEAL WILL BE PERMITTED.
- EXPANSION JOINT ASSEMBLY SHALL BE INSTALLED FLUSH TO ELEVATION AND GRADE OF ADJACENT BRIDGE DECK EXCEPT WHERE OTHERWISE NOTED.
- ALL COVER PLATES FOR THE TRAINMAN'S WALKWAY SHALL BE RECESSED TO CONCRETE FACE AS DETAILED.
- INSTALLATION TEMPERATURE SHALL BE TAKEN AS THE MEAN SHADE AIR TEMPERATURE UNDER THE BRIDGE 48 HOURS PRIOR TO CASTING THE JOINT INTO THE DECK.
- ALL AREAS OF DAMAGED GALVANIZING SHALL BE REPAIRED BY USING GALVALLOY PROCEDURE AS SPECIFIED.
- THE INSTALLATION SHALL BE APPROVED BY THE CONTRACT ADMINISTRATOR PRIOR TO PLACING REINFORCING BARS OR CONCRETE.
- IMMEDIATELY PRIOR TO PLACING REINFORCING BARS OR CONCRETE, ALL METAL SURFACES WHICH WILL BE IN CONTACT WITH CONCRETE SHALL BE COATED WITH EPOXY ADHESIVE. RATE OF PLACEMENT OF ADHESIVE SHALL BE SUCH THAT THE ADHESIVE DOES NOT DRY OR SET BEFORE CONCRETE IS PLACED AGAINST IT.
- LOOSEN ERECTION BOLTS WITHIN 24 HOURS OF CONCRETING TO ALLOW JOINT MOVEMENT DUE TO TEMPERATURE CHANGE.
- AFTER REMOVAL OF ERECTION ANGLES, BOLT AND BLEEDER HOLES TO BE FILLED WITH AN APPROVED EPOXY GROUT.
- SEAL WELDING OF THE TOP EDGE PLATE MEMBERS TO THE EXPANSION JOINT END PLATES AND ASSOCIATED FIELD GALVANIZING SHALL TAKE PLACE PRIOR TO INSTALLATION OF EXPANSION JOINT SEALS.
- ALL SURFACES IN CONTACT WITH JOINT SEALS SHALL BE CLEANED PRIOR TO INSTALLATIONS OF SEALS.

BILL OF PREFORMED JOINT SEALS FOR EXPANSION JOINTS

QTY.	DESCRIPTION	LOCATION	TOTAL LENGTH
3	WABO MODULAR D300 NEOPRENE BOX SEAL	SU. 2, 3 & 4	25.950m
6	EMSEAL BEJS SYSTEM (NOMINAL MATERIAL SIZE = 100mm)	SU. 2, 3 & 4	10.950m

NOTE:
SEE EXPANSION JOINT NOTES FOR INSTALLATION REQUIREMENTS.

TEMPERATURE WIDTH ADJUSTMENT TABLE FOR EXPANSION JOINTS

DESCRIPTION	LOCATION	DIM.	TEMPERATURE (°C) / INSTALLATION GAP (mm)																
			40°C	35°C	30°C	25°C	20°C	15°C	10°C	5°C	0°C	-5°C	-10°C	-15°C	-20°C	-25°C	-30°C	-35°C	-40°C
WABO MODULAR D300 NEOPRENE BOX SEAL	SU.2 & 4	"J1"	41	42	43	44	45	46	47	48	49	50	51	53	54	55	56	57	58
WABO MODULAR D300 NEOPRENE BOX SEAL	SU.3	"J2"	35	38	40	43	45	47	50	52	55	57	60	62	64	67	69	72	74
EMSEAL BEJS SYSTEM	SU.2 & 4	"J1"+64	105	106	107	108	109	110	111	112	113	114	115	117	118	119	120	121	122
EMSEAL BEJS SYSTEM	SU.3	"J2"+64	99	102	104	107	109	111	114	116	119	121	124	126	128	131	133	136	138

NOTE:
1. ADJUST EXPANSION JOINTS ACCORDING TO TABLE ABOVE. SEE EXPANSION JOINT NOTES FOR INSTALLATION REQUIREMENTS.
2. DIMENSION "J" MEASURED PERPENDICULAR TO CENTRELINE OF EXPANSION JOINT.

NOTE: SEALS CAN ONLY BE INSTALLED AT 20°C AND BELOW.



DESIGNED BY	RE	CHECKED BY	SSR
DRAWN BY	NBG	APPROVED BY	DBW
HOR. SCALE	AS SHOWN	RELEASED FOR CONSTRUCTION	
VERTICAL	AS SHOWN		
ISSUED FOR TENDER	17/01/09	RE	
NO. REVISIONS	DATE	BY	DATE

DILLON CONSULTING

ENGINEER'S SEAL
PROVINCE OF MANITOBA
R.B. ERIC
Member 22665
REGISTERED PROFESSIONAL ENGINEER

THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT

WAVERLEY STREET UNDERPASS AT CN MILE 3.89 RIVERS SUB
CONTRACT 2: UNDERPASS STRUCTURE, RAILWORKS,
ROADWORKS, LAND DRAINAGE SEWER, PUMPING STATION
AND LANDSCAPING WORKS

CITY DRAWING NUMBER
U-239-2016-C2-CS-045
SHEET 045 OF 085
CONSULTANT DRAWING NUMBER
C2-CS-045

CONSULTANT PROJECT NUMBER
16-3353

EXPANSION JOINT LAYOUT

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