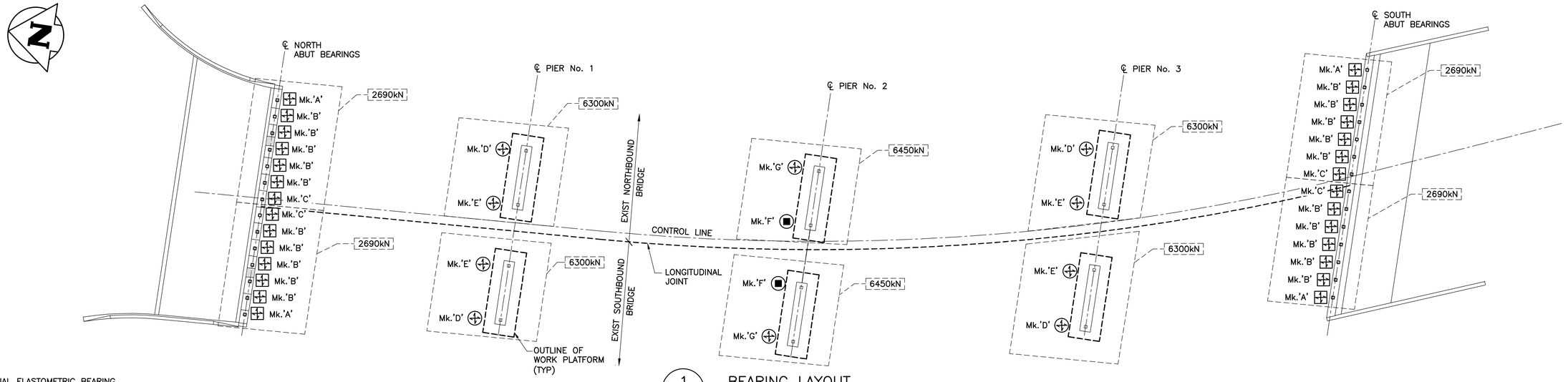


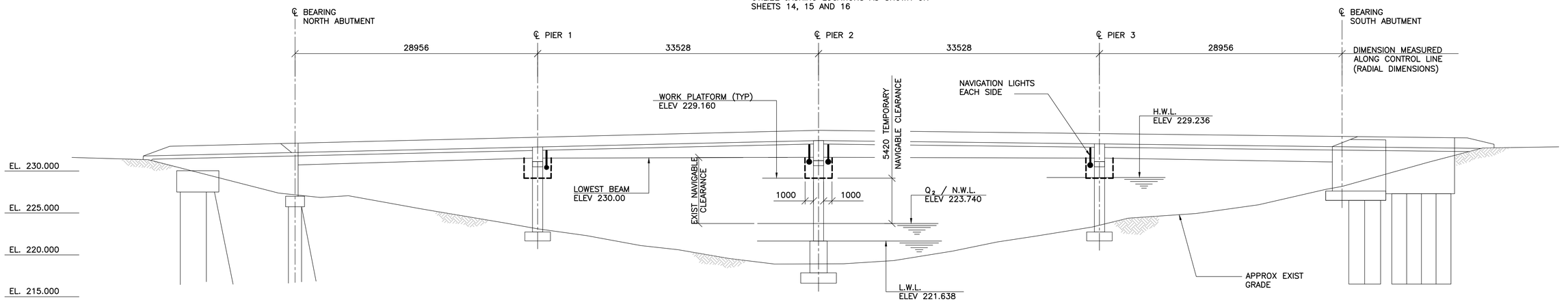
LEGEND:

- MULTI DIRECTIONAL ELASTOMETRIC BEARING
- FIXED DISC BEARING
- MULTI DIRECTIONAL DISC BEARING

1 BEARING LAYOUT

1 : 250

- TOTAL JACKING FORCE REQUIRED TO RAISE BRIDGE CROSS-SECTION AT THE PIERS AND ABUTMENTS
- UTILIZE JACKING LOCATIONS AS SHOWN ON SHEETS 14, 15 AND 16



2 BRIDGE – WEST ELEVATION

1 : 250

BEARING DESIGN TABLE

	MK.	DESCRIPTION	TYPE	QUANTITY	LIMIT STATE	VERTICAL PERMANENT [KN]	VERTICAL TOTAL [KN]	LONGITUDINAL TOTAL [KN]	TRANSVERSE TOTAL [KN]	LONGITUDINAL MOVEMENT [MM]	TRANSVERSE MOVEMENT [MM]	ROTATION [RADIANS]
ABUTMENTS	A	STEEL REINFORCED ELASTOMERIC	MULTI DIRECTIONAL	4	SLS	700	845	85	-	100	10	0.002
					ULS	840	1125	115	-			
	B	STEEL REINFORCED ELASTOMERIC	MULTI DIRECTIONAL	20	SLS	310	615	65	-	100	10	0.002
					ULS	375	950	95	-			
	C	STEEL REINFORCED ELASTOMERIC	MULTI DIRECTIONAL	4	SLS	440	660	65	-	100	10	0.002
					ULS	530	790	80	-			
PIER 1 AND PIER 3	D	DISC	MULTI DIRECTIONAL	4	SLS	3470	4860	485	-	80	10	0.02
					ULS	4165	6800	680	-			
	E	DISC	MULTI DIRECTIONAL	4	SLS	2830	3870	390	-	80	10	0.02
					ULS	3395	5565	560	-			
PIER 2	F	DISC	FIXED	2	SLS	2980	4020	405	920	0	0	0.02
					ULS	3575	5740	575	1480			
	G	DISC	MULTI DIRECTIONAL	2	SLS	3470	4860	485	-	0	10	0.02
					ULS	4165	6800	680	-			

BEARING INSTALLATION NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. BEARINGS TO BE INSTALLED IN THIS CONTRACT ARE BEING SUPPLIED BY THE SUCCESSFUL BIDDER OF CITY OF WINNIPEG BID OPPORTUNITY 957–2010 SUPPLY, FABRICATION, AND DELIVERY OF BEARINGS – OSBORNE STREET BRIDGE.
3. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORKS, MATERIAL, LABOUR, SUPERINTENDENCE, AND ALL OTHER ITEMS INCIDENTAL TO PERFORM THE REPLACEMENT OF THE BEARINGS.
4. THE CONTRACTOR SHALL NOT TEMPORARILY RESTRICT NAVIGATION ALONG THE RIVER THAN THAT SHOWN.
5. CONTRACTOR TO SUBMIT DETAILED CALCULATIONS AND SHOP DRAWINGS OF THE JACKING PROCEDURES AND ANY TEMPORARY WORKS REQUIRED TO RAISE THE BRIDGES.
6. RAISE WHOLE CROSS SECTION OF THE BRIDGES AT EACH SUBSTRUCTURE UNIT (ABUTMENT OR PIER), BY PHASE. THE JACKING SYSTEM MUST BE CAPABLE TO RAISE THE BRIDGE UP TO 15mm ABOVE THE FINAL HEIGHT OF THE BEARING AS INDICATED ON THE DRAWINGS TO PERMIT NEW BEARING INSTALLATION. CONTRACTOR TO LIMIT THE AMOUNT OF THE BRIDGE RAISING TO THE MINIMUM REQUIRED TO INSTALL THE BEARING AND TO A MAXIMUM OF 40MM FROM ORIGINAL HEIGHT OR AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
7. SET BEARINGS FOR THE TEMPERATURE AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
8. PROTECT THE BEARINGS FROM DAMAGE DURING SHIPPING, HANDLING, AND INSTALLATION.
9. FIELD WELDING TO CONFORM TO THE LATEST EDITION OF CSA W59.

APEGM Certificate of Authorization Wardrop Engineering Inc. No. 195 Date: April 30, 2011

B.M. ELEV. F.B.

NO.	REVISIONS	DATE	BY
00	ISSUED FOR TENDER	11.02.18	RHW

WARDROP A TETRA TECH COMPANY

DESIGNED BY R.H.W. | CHECKED BY E.F.S.
DRAWN BY B.M./G.I. | APPROVED BY R.H.W.
HOR. SCALE: AS NOTED | VERTICAL:
RELEASED FOR CONSTRUCTION DATE ORIGINAL SIGNED 11.02.16
MATT CHISLETT, P.ENG BRIDGE PROJECTS ENGINEER

PROVINCE OF MANITOBA ORIGINAL SIGNED 11.02.16 W.R. HALDANE-WILSONE REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO. 0900070502-DWG-S0013

Winnipeg

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

OSBORNE STREET BRIDGE
REHABILITATION & RELATED WORKS

CITY DRAWING NUMBER B109-11-018
SHEET 13 OF 131

OVERALL LAYOUT AND BEARING DATA

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