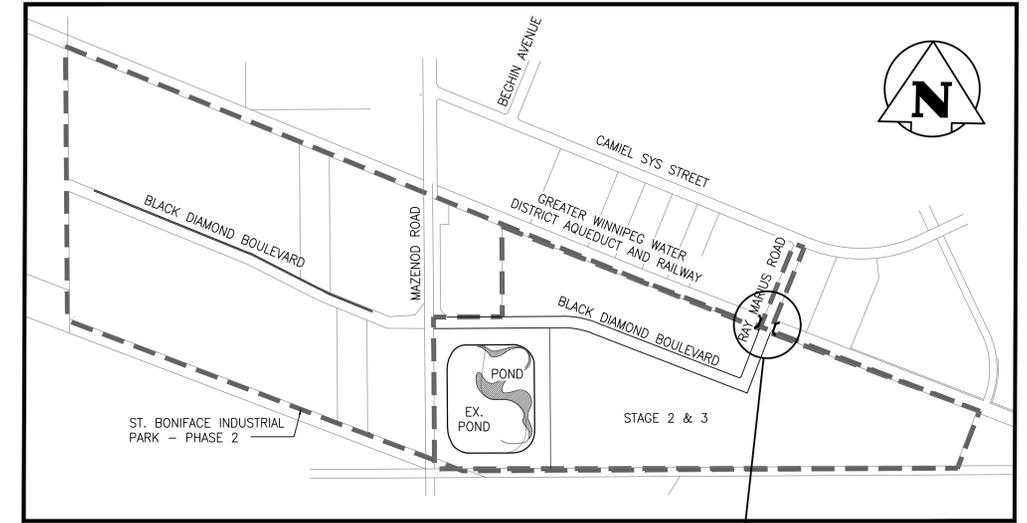




THE CITY OF WINNIPEG

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

ST. BONIFACE INDUSTRIAL PARK - PHASE 2 RAY MARIUS ROAD AQUEDUCT BRIDGE



BRIDGE SITE
WINNIPEG, MANITOBA

LOCATION PLAN

DESIGN DATA

DESIGN SPECIFICATION	- CAN/CSA-S6-19
LIVE LOAD	- CL625 - DESIGN LANE LOAD
FUTURE ASPHALT	- 50mm
REINFORCING STEEL	- CSA G30.18 - 09 (R2014) GRADE 400W
CONCRETE STRENGTH AT 28 DAYS	- 35 MPa
PILES:	- TOTAL LOAD: 332kN (ULS) - TOTAL CAPACITY: 341kN (ULS)
MISCELLANEOUS METAL:	- CAN./CSA G40.21 GRADE 300W

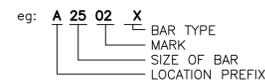
DRAWING INDEX

CITY DWG. No.	CONSULTANT DWG. No.	SHEET No.	SHEET TITLE
B-254-20-01	C-001	1 of 5	COVER SHEET & DRAWING INDEX
B-254-20-02	S-101	2 of 5	GENERAL ARRANGEMENT
B-254-20-03	S-102	3 of 5	FOUNDATION PLAN & CONCRETE DETAILS
B-254-20-04	S-103	4 of 5	REINFORCING DETAILS
B-254-20-05	S-104	5 of 5	RAIL DETAILS

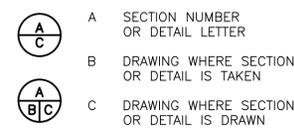
LOCATION PREFIX

A - APPROACH SLAB
D - DECK
C - CAP
P - PILE

REINFORCING MARK NUMBERING SYSTEM



SECTION AND DETAILS



LIST OF ABBREVIATIONS

©	AT
ALT.	ALTERNATING
ALUM.	ALUMINUM
APPROX.	APPROXIMATE
AVE.	AVENUE
B.C.	BEGINNING OF CURB
BOT.	BOTTOM
B/W	BOTH WAYS
C.I.P.	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT
CL	CENTRE LINE
C/W	COMPLETE WITH
CONC.	CONCRETE
CONT.	CONTINUOUS
CL.	CLEAR
CRES.	CRESCENT
DBL.	DOUBLE
DIA.	DIAMETER
DTL.	DETAIL
DWG.	DRAWING
E.C.	END OF CURB
E.E.	EACH END
E.F.	EACH FACE
E.W.	EACH WAY
EQ.	EQUAL
EQ. SP.	EQUAL SPACE
EL.	ELEVATION
EXIST	EXISTING
CJ.	GALVANIZING
GRAN.	GRANULAR
HORIZ.	HORIZONTAL
IB	IRON BAR
I.F.	INSIDE FACE
LG.	LONG

GENERAL NOTES

THESE DRAWINGS TO BE READ IN CONJUNCTION WITH THE TECHNICAL SPECIFICATIONS.
EXISTING DIMENSIONS ARE APPROXIMATE ONLY. CONTRACTOR SHALL SITE VERIFY ALL DIMENSIONS.
CARE SHALL BE TAKEN WHEN WORKING NEAR GWWD INFRASTRUCTURE, INCLUDING RAIL LINES, RAIL EQUIPMENT AND CRITICAL WATER INFRASTRUCTURE. REFER TO THE SPECIFICATIONS FOR COMPLETE INFORMATION.

FOUNDATIONS

FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL INVESTIGATION PERFORMED BY STANTEC CONSULTING WITH CORRESPONDING REPORT DATED FEBRUARY 11, 2020. ENSURE THAT THE REQUIREMENTS OUTLINED IN THIS REPORT ARE READ AND UNDERSTOOD PRIOR TO COMMENCING WITH FOUNDATION WORK. FOR TEST HOLE LOCATION, REFERENCE THE REPORT.

PROTECT EXCAVATIONS FROM RAIN, SNOW, FREEZING TEMPERATURES AND STANDING WATER.

REMOVE GROUND WATER ENTERING EXCAVATIONS BY AN APPROVED DEWATERING METHOD.

CAST IN PLACE CONCRETE

CONCRETE MATERIALS, QUALITY, MIXING, PLACING, FORMWORK AND OTHER CONSTRUCTION PRACTICES TO CONFORM TO CSA-A23.1-2019.

CONCRETE STRENGTH AT 28 DAYS SHALL BE 35MPa FOR ALL CONCRETE ELEMENTS.

DO NOT USE CALCIUM CHLORIDE IN CONCRETE MIX.

FLY ASH MAY BE USED IN MIX TO A MAXIMUM OF 15% OF THE CEMENT MATERIALS.

WELDING

WELDING SHALL CONFORM TO CSA-W59. ALL WORK IS TO BE PERFORMED BY A FIRM CERTIFIED, AND POSSESSING VALID CERTIFICATION WITHIN TWO YEARS FROM THE START OF THE WORK, BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF DIVISION 2 (MINIMUM) OF CSA-W47.1.

THE WELDING ELECTRODE SHALL BE E480XX.

REINFORCING

STAINLESS REINFORCING STEEL TO CONFORM TO ASTM A955M, 300 SERIES, MINIMUM GRADE 420

PLAIN REINFORCING STEEL TO CONFORM TO CSA G30.18, GRADE 400.

CONCRETE CLEAR COVER SHALL BE AS NOTED ON THE DRAWINGS.

LAP SPLICE SCHEDULE IS FOR CLASS B SPLICES UNLESS NOTED OTHERWISE.

LOCATE REINFORCING SPLICES NOT INDICATED ON THE DRAWINGS AT POINTS OF MINIMUM STRESS. LOCATIONS OF SPLICES TO BE APPROVED BY THE ENGINEER.

BEFORE PLACING REBAR, ENSURE IT IS CLEAN, FREE OF LOOSE SCALE, DIRT, OR OTHER FOREIGN COATING WHICH WOULD REDUCE THE BOND TO CONCRETE.

CONTRACTOR TO SUPPLY SHOP DRAWINGS FOR ENGINEER REVIEW.

LAP SPLICE SCHEDULE

BAR SIZE	EMBEDMENT	TENSION LAP
10M	300	400
15M	400	550
20M	500	700
25M	800	1100
30M	950	1200
35M	1100	1500

UNDERGROUND STRUCTURES

LOCATIONS OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BY THE CONTRACTOR BEFORE PROCEEDING WITH CONSTRUCTION

NO EXCAVATION IS TO TAKE PLACE UNTIL THE APPROPRIATE PERMITS ARE OBTAINED PRIOR TO CONSTRUCTION.

NOTIFICATION & CHECK-IN REQUIREMENTS

NO WORK TO COMMENCE PRIOR TO A SITE MEETING WITH A WATER & WASTE DEPARTMENT INSPECTOR. CONTACT THE CONSTRUCTION SERVICES COORDINATOR AT 204-986-4289 TO MAKE ARRANGEMENTS.

THE CONTRACTOR SHALL NOTIFY GWWD DISPATCH AT 204-986-4175 FOR DAILY CHECK-IN AND CHECK-OUTS UPON ENTERING CITY OF WINNIPEG PROPERTY ALONG THE GWWD RAILWAY.

RECORD DRAWINGS

THE WATER AND WASTE DEPARTMENT REQUIRES THE SUBMISSION OF RECORD DRAWINGS UPON COMPLETION OF THE WORK, THE PROCESS FOR SUBMISSION IS AS FOLLOWS.

- ONE SET OF PRELIMINARY PRINTS WILL BE SUBMITTED FOR REVIEW AND COMMENT.
- UPON RECEIPT OF THE PRELIMINARY REVIEW PRINTS THE SUBMITTOR WILL PREPARE FINAL MYLARS AS PER DEPARTMENT COMMENTS. THE PRELIMINARY PRINTS AND THE FINAL MYLARS WILL BE SUBMITTED CARE OF THE FOLLOWING:

THE SUPERVISOR OF DRAFTING & GRAPHIC SERVICES BRANCH,
ENGINEERING DIVISION
THE CITY OF WINNIPEG
#110-1199 PACIFIC AVENUE
WINNIPEG, MANITOBA, R3E 3S8



RELEASED FOR CONSTRUCTION BY:

DATE



CITY DRAWING No. B-254-20-01
CONSULTANT DRAWING No. G-001
SHEET 1 OF 5

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES