GENERAL

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH CONTRACT SPECIFICATIONS.
2. THE METRIC SYSTEM OF MEASUREMENT IS USED ON ALL DRAWINGS. ELEVATIONS AND STATIONS ARE SHOWN IN METRES AND ALL OTHER DIMENSIONS ARE SHOWN IN MILLIMETRES.
3. CONTRACTOR SHALL VERIFY ALL EXISTING GEOMETRY AS WELL AS PROPOSED DIMENSIONS AND LAYOUT IN THE FIELD PRIOR TO FABRICATION AND CONSTRUCTION. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE CONTRACT ADMINISTRATOR PRIOR TO CONSTRUCTION.
4. ALL REFERENCES TO CODES, STANDARDS, SPECIFICATIONS, GUIDELINES, ETC., SHALL MEAN THE LATEST EDITION UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY IN AND ABOUT THE JOB SITE DURING CONSTRUCTION. EXCEPT WHERE INDICATED OTHERWISE, THESE DRAWINGS SHOW DETAILS FOR THE COMPLETED STRUCTURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND STABILITY OF ANY TEMPORARY WORKS DURING CONSTRUCTION. CONSTRUCTION METHODS REQUIRING THE TEMPORARY INSTALLATION OF COFFER DAMS, SHORING, SCAFFOLDING, BRACING, ETC. SHALL BE SUBMITTED TO THE CONTRACT ADMINISTRATOR FOR REVIEW AND ACCEPTANCE PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA TO PERFORM AND TAKE RESPONSIBILITY FOR ANY SUCH DESIGNS NECESSARY TO COMPLETE THE CONSTRUCTION AND AS REQUIRED BY THE CONTRACT DOCUMENTS.

STRUCTURAL DESIGN DATA

1. DESIGN SPECIFICATION:
   NATIONAL BUILDING CODE OF CANADA, 2020 EDITION

DESIGN CRITERIA

1. ALL WORK AND MATERIALS TO BE IN ACCORDANCE WITH THE LATEST REVISION OF THE CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATIONS.
2. DESIGN IS IN ACCORDANCE WITH THE CITY OF WINNIPEG – ACCESSIBILITY STANDARD, THIRD EDITION.

GEOTECHNICAL DESIGN DATA

1. THE CONTRACTOR SHALL SUBMIT AN EXCAVATION AND DEMOLITION PLAN WHICH INCLUDES A DESCRIPTION OF THE EXCAVATION METHODOLOGY AND EQUIPMENT, STOCKPILING LOCATIONS, AND THE PROCESS AND RATE OF REMOVALS OF EXCAVATED AND DEMOLISHED MATERIAL. THE SUBMITTAL SHALL INCLUDE AN ASSESSMENT OF THE IMPACT OF SURCHARGE LOADS INTRODUCED BY CONSTRUCTION ACTIVITIES ON THE STABILITY OF THE EXCAVATION, AND SHALL INCLUDE SLOPE STABILITY ANALYSIS SIGNED AND SEALED BY A GEOTECHNICAL ENGINEER LICENSED TO PRACTICE IN THE PROVINCE OF MANITOBA.
2. EARTH LOAD:
   ACTIVE EARTH PRESSURE COEFFICIENT, K_a = 0.673.
3. DESIGN BACKFILL SOIL DENSITY ASSUMED TO BE 18.0 kN/m^3.

EXISTING UTILITY PROTECTION

1. CONTRACTOR SHALL VERIFY ALL EXISTING ABOVE GROUND, BELOW GROUND AND EMBEDDED UTILITIES, AND SHALL REPORT ANY DISCREPANCIES OR CONFLICTS TO THE CONTRACT ADMINISTRATOR PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING STRUCTURES AND UTILITIES BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN COST.
2. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION METHOD STATEMENT DEMONSTRATING ADHERENCE TO THE OPERATING CONSTRAINTS FOR WORK IN CLOSE PROXIMITY TO ALL BURIED, OVERHEAD AND EMBEDDED UTILITIES.

CAST IN PLACE CONCRETE

1. TO BE READ IN CONJUNCTION WITH CW 2160 AND AS AMENDED IN ACCORDANCE WITH THESE NOTES.
2. CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF CSA A23.1.
3. ALL CEMENTITIOUS MATERIAL SHALL BE IN ACCORDANCE WITH CSA A3001.
4. ALL CAST–IN–PLACE CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:

SUBSTRUCTURE: (SLOPE PAVING, RETAINING WALLS, A.T. PATHWAYS)	35 MPa AT 28 DAYS CSA A23.1 EXPOSURE CLASS C–1 CEMENT TYPE GU CATEGORY 1 AIR ENTRAINMENT MAXIMUM AGGREGATE SIZE 20 mm

5. CONCRETE CLEAR COVER TO REINFORCING STEEL SHALL BE AS FOLLOWS:

CAST DIRECTLY AGAINST EARTH	100 mm
ALL OTHER UNLESS NOTED OTHERWISE	50 mm

6. ALL EXTERIOR CORNERS SHALL BE CHAMFERED 20 mm.

REINFORCING STEEL

1. TO BE READ IN CONJUNCTION WITH CW 2160 AND AS AMENDED IN ACCORDANCE WITH THESE NOTES.
2. ALL REINFORCING STEEL SHALL CONFORM TO CSA G30.18M, GRADE 400W, UNLESS NOTED OTHERWISE.
3. THE MINIMUM LAP LENGTH FOR ALL REINFORCING STEEL SHALL MEET CAN/CSA S6, CLASS B.

BAR SIZE	LAP LENGTH
15M	740

4. REINFORCING STEEL LAPS SHALL BE STAGGERED UNLESS NOTED OTHERWISE.

BACKFILL MATERIAL

1. BACKFILL SUPPLIED, PLACED, AND COMPACTED IN AN UNFROZEN CONDITION.
2. BACKFILL BELOW A.T. PATHWAY SLAB:
   a. TYPE 2 GRANULAR BACKFILL PER CW 2030.
   b. COMPACTED TO MAXIMUM 95% SPMDD USING LIGHT HAND–OPERATED VIBRATING PLATE COMPACTOR.
3. DRAINAGE BACKFILL BEHIND RETAINING WALLS:
   a. TYPE 3 GRANULAR BACKFILL FOR DRAINAGE PER CW 2030, WITH REQUIREMENTS AS MODIFIED IN THE SPECIFICATIONS.

GEOTEXTILE

1. GEOTEXTILE IS NON–WOVEN GEOTEXTILE IN ACCORDANCE WITH CW 3120 AND CW 3130.

ABBREVIATIONS

@	AT
ABUT.	ABUTMENT
ALT.	ALTERNATING
APPROX.	APPROXIMATELY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
B.C.	BEGIN CURVE
BLL	BOTTOM LOWER LAYER
BLVD.	BOULEVARD
B.O.	BOTTOM OF
BRG.	BEARING
B.S.	BOTH SIDES
BTM.	BOTTOM
BUL	BOTTOM UPPER LAYER
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
CB	CATCH BASIN
C/C	CENTER TO CENTER
℄	CENTER LINE
CONC.	CONCRETE
CONT.	CONTINUOUS
CMP	CORRUGATED METAL PIPE
CS	COMBINED SEWER
CSA	CANADIAN STANDARDS ASSOCIATION
C/W	COMPLETE WITH
DIA.	DIAMETER
ø	DIAMETER
D.L.	DEAD LOAD
DWL.	DOWEL
EB	EASTBOUND
E.C.	END CURVE
E.F.	EACH FACE
ELEV.	ELEVATION
EL.	ELEVATION
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EXP.	EXPANSION
EXIST.	EXISTING
EXT.	EXTERIOR
F.F.	FAR FACE
FM	FEEDERMAIN
FTG.	FOOTING
GALV.	GALVANIZED
G.B.M.	GEODETIC BENCH MARK
HORIZ.	HORIZONTAL
H.W.L.	HEAD WATER LEVEL
I.F.	INSIDE FACE
INT.	INTERIOR
INV.	INVERT
K	K VALUE
LDS	LAND DRAINAGE SYSTEM
LVC	LENGTH OF VERTICAL CURVE
MAX.	MAXIMUM
MIN.	MINIMUM
MK.	MARK
N.F.	NEAR FACE
NB	NORTHBOUND
No.	NUMBER
N.S.W.L.	NORMAL SUMMER WATER LEVEL
N.T.S.	NOT TO SCALE
PCS.	PIECES
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
O/H	OVERHEAD
O/O	OUT TO OUT
OPP.	OPPOSITE
ℙ	PLATE
PNT.	POINT
PVI	POINT OF VERTICAL INTERSECTION
REINF.	REINFORCING
R.C.	REINFORCED CONCRETE
REQ'D	REQUIRED
R.O.W.	RIGHT OF WAY
SB	SOUTHBOUND
SD	STANDARD DRAWING (CITY OF WINNIPEG STANDARD SPECIFICATION)
SHLD.	SHOULDER
SL	STREET LIGHT
SP.	SPACES
SPDD	STANDARD PROCTOR DRY DENSITY
S.S.	STAINLESS STEEL
STA.	STATION
TC	TANGENT TO CURVE
TEMP.	TEMPORARY
THK.	THICK
TLL	TOP LOWER LAYER
T.O.	TOP OF
TUL	TOP UPPER LAYER
TYP.	TYPICAL
VERT.	VERTICAL
U/G	UNDERGROUND
U.N.O.	UNLESS NOTED OTHERWISE
U/S	UNDERSIDE
WB	WESTBOUND
W.O.	WORKING POINT
WM	WATER MAIN
W.W.S.	WASTE WATER SEWER

REINFORCING STEEL CODE LEGEND

8 – A2012S (1)

- SUBSET No.
- SUFFIX (G = GALVANIZED, S = STAINLESS STEEL, NONE = BLACK STEEL)
- IDENTIFICATION No.
- SIZE OF BAR
- LOCATION CODE
- No. OF BARS

SECTION AND DETAIL SYMBOLS LEGEND

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

NOTE:
These design documents are prepared solely for the use by the party with whom the design professional has entered into a contract and there are no representations of any kind made by the design professional to any party with whom the design professional has not entered into a contract.

ENGINEERS GEOSCIENTISTS MANITOBA
Certificate of Authorization
WSP Canada Inc.
No. 5750

LOCATIONS APPROVED UNDERGROUND STRUCTURES
SIGNED BY: _____ SUPV U/G STRUCTURES _____ DATE

LOCATION 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 EXISTANCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING

No.	REVISIONS	DATE	BY
2	GENERAL REVISIONS	24.04.11	EH
1	ISSUED FOR TENDER	24.03.22	EH
0	90% SUBMISSION	23.05.05	EH

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DESIGNED BY	DV	CHECKED BY	EH
DRAWN BY	FD	APPROVED BY	SS
HOR. SCALE	AS NOTED	RELEASED FOR CONSTRUCTION	
VERTICAL	AS NOTED		
DATE	24.04.11	DATE	24.04.11

ENGINEER'S SEAL
PROVINCE OF MANITOBA
2024-04-12
E. HO
Member
22317
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT PROJECT No.
20M-01243-00

Winnipeg
THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

KEEWATIN STREET PATHWAY
GALLAGHER AVE W TO BURROWS AVE

NEW PATHWAY
ACTIVE TRANSPORTATION PATH
DESIGN DATA AND GENERAL NOTES

CITY DRAWING NUMBER
P-3571-16
SHEET 16 OF 20
TENDER NO.
376-2023

A1 SIZE (594 mm x 841 mm)
Plotted: April 11, 2024 at 12:46:19 PM | Last saved by: CAK0065688
File: P:\2020\20M-01243-00 – 2020-2021 Keewatin_Ivy Eaward_Pembina_Leg\10 Drawings\99 Structures\03-Working Drawings\20M-01243-00 FD Keewatin Underpass AT Path – general notes.dwg | Layout: 1 Design Data and General Notes