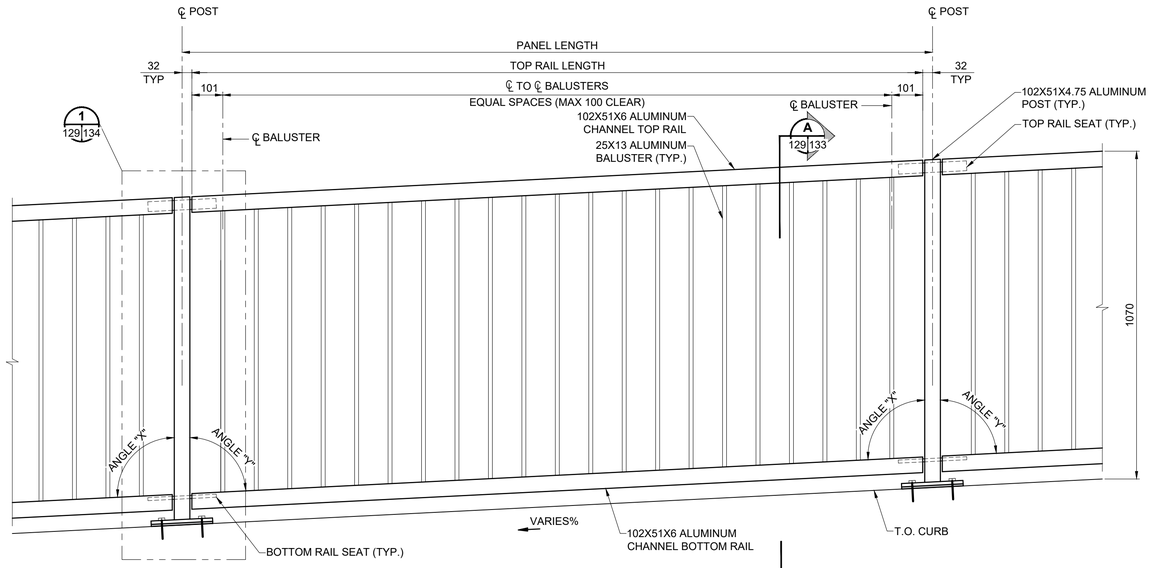
ISO A1 - 594mm x 841mm



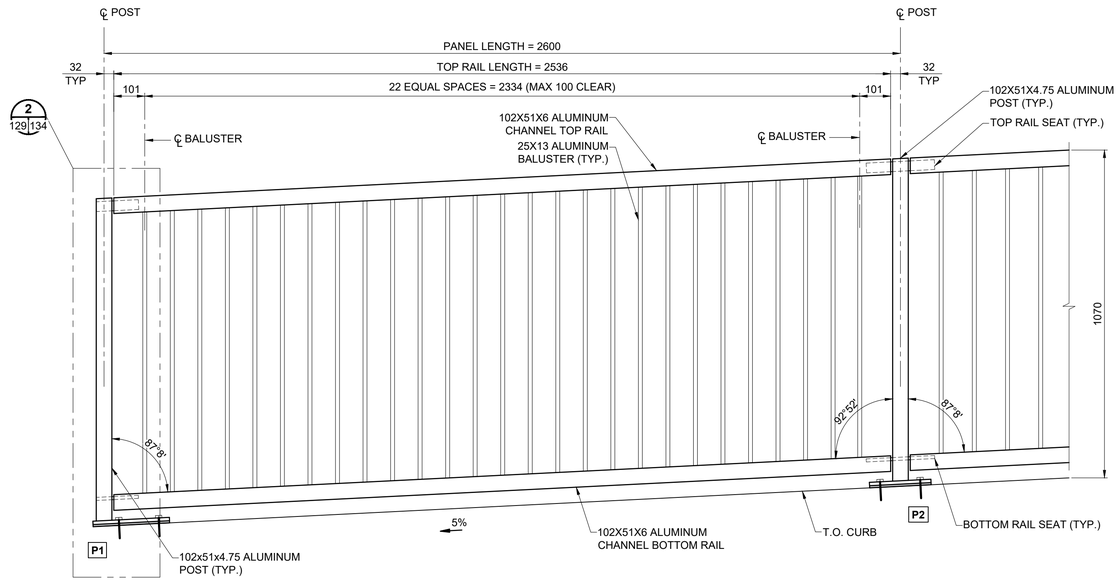
INTERMEDIATE PANEL ELEVATION

SCALE: 1:10

NOTES:
1.ANGLE "X" AND "Y" VARY ACCORDING TO GRADIENT OF CURB TOP AT LOCATION OF INDIVIDUAL RAIL POSTS. SEE DRAWING 120 FOR GRADING PLAN.
2. GRADE BREAKS DEFINED ON DRAWING 120 SHALL BE ACCOMMODATED FOR ALONG THE LENGTH OF EACH RAIL PANEL IN ORDER TO HAVE A CONSTANT HEIGHT RAILING OFFSET FROM THE CURB ALONG EACH RAIL PANEL
3. SEE TABLE FOR PANEL DETAILS

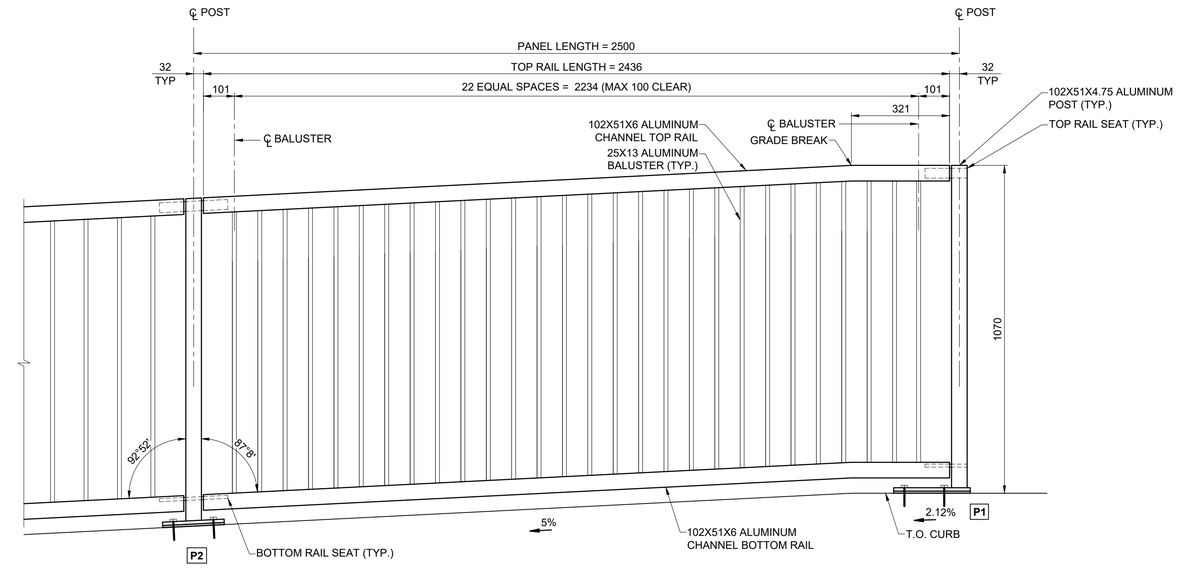
ALUMINUM PEDESTRIAN HANDRAIL INTERMEDIATE PANEL DIMENSIONS

PANEL Mk.	PANEL LENGTH	TOP RAIL LENGTH	℄ TO ℄ BALUSTERS	EQUAL SPACES BETWEEN BALUSTERS
A	2600	2536	2334	22
B	2500	2436	2234	22
C	2700	2636	2434	24
D	2760	2696	2494	24
E	2190	2126	1924	19
F	1220	1156	954	9
G1	2488	2424	2222	22
H1	2108	2044	1842	18
H2	2942	2878	2676	22
J	1370	1306	1104	11
K	874	810	608	6
L	1706	1642	1440	14
M	1209	1145	943	9
N	2250	2186	1984	19
O	1454	1390	1188	11
P	1030	966	764	7
Q	2096	2032	1830	18
R1 & R2	2685	2621	2419	23
S	800	736	534	5
T	2588	2524	2322	23
U	3000	2936	2734	27
V	1442	1378	1176	11
Y	2753±	2689±	2487±	24±



END PANEL Mk. A ELEVATION

SCALE: 1:10



END PANEL Mk. B1 ELEVATION

SCALE: 1:10

NOTES:
1. ALUMINUM EXTRUSIONS SHALL CONFORM TO ASTM B221 ALLOY 6351-T6.
2. THE M.I.G. PROCESS OF WELDING SHALL BE USED.
3. RAIL POSTS AND BALUSTERS SHALL BE SET PLUMB.
4. EXCEPT WHERE INDICATED, HANDRAIL TOP AND BOTTOM RAILS SHALL BE AT A CONSTANT OFFSET FROM THE TOP OF CURB TAKING INTO ACCOUNT ALL GRADE BREAKS ALONG THE RAMP LENGTH. SEE DRAWING 120 FOR GRADING PLAN.
5. PLACE NEOPRENE PAD UNDER EACH POST BETWEEN BASE PLATE OR SHIM AND CONCRETE SURFACE. ALUMINUM SHIMS MAY BE REQUIRED FOR VERTICAL ALIGNMENT.
6. HANDRAIL ANCHOR INSERTS SHALL BE ACROW-RICHMOND TYPE DGRS-1.

C

ENGINEERS GEOSCIENTISTS MANITOBA
Certificate of Authorization
MORRISON HERSHFIELD
No. 1736

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

LOCATION APPROVED
UNDERGROUND STRUCTURES

SUPR. U/G STRUCTURES COMMITTEE — DATE

NOTE:
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 EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

BM ELEV

No.	REVISIONS	YY/MM/DD	BY
C	ISSUED FOR ADDENDUM 1	18/10/05	BAP
B	ISSUED FOR TENDER	18/09/04	BAP
A	ISSUED FOR 95% DESIGN REVIEW	18/08/07	BAP

MORRISON HERSHFIELD

DESIGNED BY	YM	CHECKED BY	BAP
DRAWN BY	ALP	APPROVED BY	BE
HOR SCALE	AS SHOWN	RELEASED FOR CONSTRUCTION	
VERT SCALE	AS SHOWN		
DATE		DATE	N/A

PROFESSIONAL'S SEAL
PROVINCE OF MANITOBA
B.A.F. PHILLPS
Member
32723
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT FILE NAME
W160034 - DD SR HANDRAIL.DWG

BID OPPORTUNITY No. 602-2018

Winnipeg

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

EMPRESS STREET PROJECT
PEDESTRIAN ACCESSIBILITY RAMPS
SOUTH RAMP
PEDESTRIAN HANDRAIL DETAILS 1

CITY DRAWING NUMBER: P-3494-129
SHEET: 129 OF 169
DRAWING No.: 129
REV: C

O:\Winnipeg\Proj\W1600344 Design\1 Drawings\06 Sheets\Detailed Design\Structural\W160034 - DD SR HANDRAIL.dwg Last Saved: 10/5/2018 3:25 PM by AHepponer Plotted: 10/5/2018 3:55 PM by Alex Hepponer