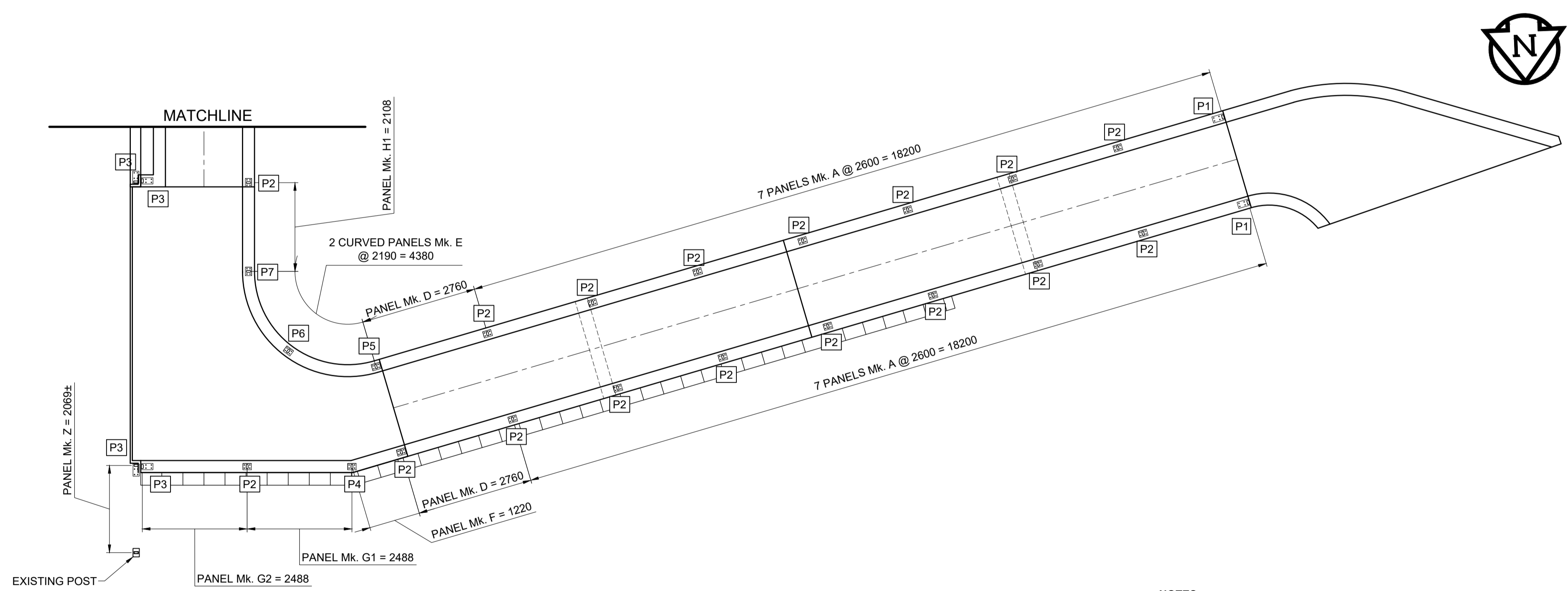


HANDRAIL PLAN
SCALE: 1:75

| ALUMINUM PEDESTRIAN HANDRAIL QUANTITIES | |
|---|-----|
| PANEL Mk. | QTY |
| A | 12 |
| END A | 2 |
| B | 21 |
| END B1 | 1 |
| C | 1 |
| END C | 1 |
| D | 2 |
| E | 2 |
| F | 1 |
| G1 | 1 |
| END G2 | 1 |
| H1 | 1 |
| END H2 | 1 |
| J | 1 |
| K | 1 |
| L | 1 |
| M | 1 |
| N | 2 |
| O | 2 |
| P | 2 |
| Q | 2 |
| R1 | 1 |
| R2 | 1 |
| S | 2 |
| T | 1 |
| U | 1 |
| V | 2 |
| Y | 1 |
| Z | 1 |
| TOTAL NUMBER OF PANELS = 69 | |

| ALUMINUM POST QUANTITIES | | |
|-----------------------------------|-----|-------------------|
| POST Mk. | QTY | REMARK |
| P1 | 4 | END POST |
| P2 | 41 | INTERMEDIATE POST |
| P3 | 4 | END POST |
| P4 | 1 | INTERMEDIATE POST |
| P5 | 1 | INTERMEDIATE POST |
| P6 | 1 | INTERMEDIATE POST |
| P7 | 1 | INTERMEDIATE POST |
| P8 | 1 | INTERMEDIATE POST |
| P9 | 1 | INTERMEDIATE POST |
| P10 | 1 | INTERMEDIATE POST |
| P11 | 1 | INTERMEDIATE POST |
| P12 | 1 | INTERMEDIATE POST |
| P13 | 1 | INTERMEDIATE POST |
| P14 | 1 | INTERMEDIATE POST |
| P15 | 1 | INTERMEDIATE POST |
| P16 | 1 | INTERMEDIATE POST |
| P17 | 1 | INTERMEDIATE POST |
| P18 | 1 | INTERMEDIATE POST |
| P19 | 1 | INTERMEDIATE POST |
| P20 | 2 | CORNER POST |
| P21 | 2 | CORNER POST |
| P22 | 1 | INTERMEDIATE POST |
| P23 | 1 | INTERMEDIATE POST |
| P24 | 1 | INTERMEDIATE POST |
| TOTAL NUMBER OF POSTS = 72 | | |



HANDRAIL PLAN
SCALE: 1:75

- 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 BALLUSTERS 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 RAMPS 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.



METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

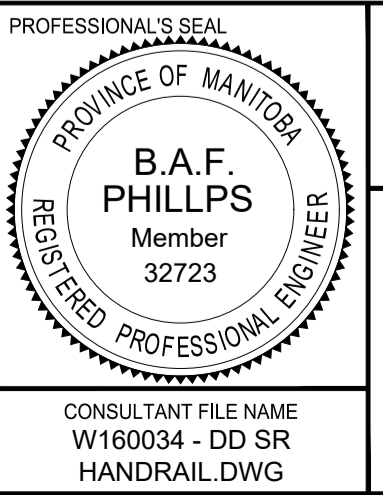
LOCATION APPROVED
UNDERGROUND STRUCTURES

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.

| No. | REVISIONS | DATE | 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 | N/A |
| DATE: | DATE: |



THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

EMPRESS STREET PROJECT
PEDESTRIAN ACCESSIBILITY RAMPS
SOUTH RAMP
PEDESTRIAN HANDRAIL PLAN

CITY DRAWING NUMBER: P-3494-128
SHEET 128 OF 169
DRAWING No. 128 REV C

CONSULTANT FILE NAME: W160034 - DD SR HANDRAIL.DWG