Appendix N
Evaluation of Alternative Designs & Preferred Design

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N.2 Preferred Design

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FOR INFORMATION
NOT FOR CONSTRUCTION

HATCH

SCALE

5m 0 10m
Horizontal

1m 0 2m
Vertical

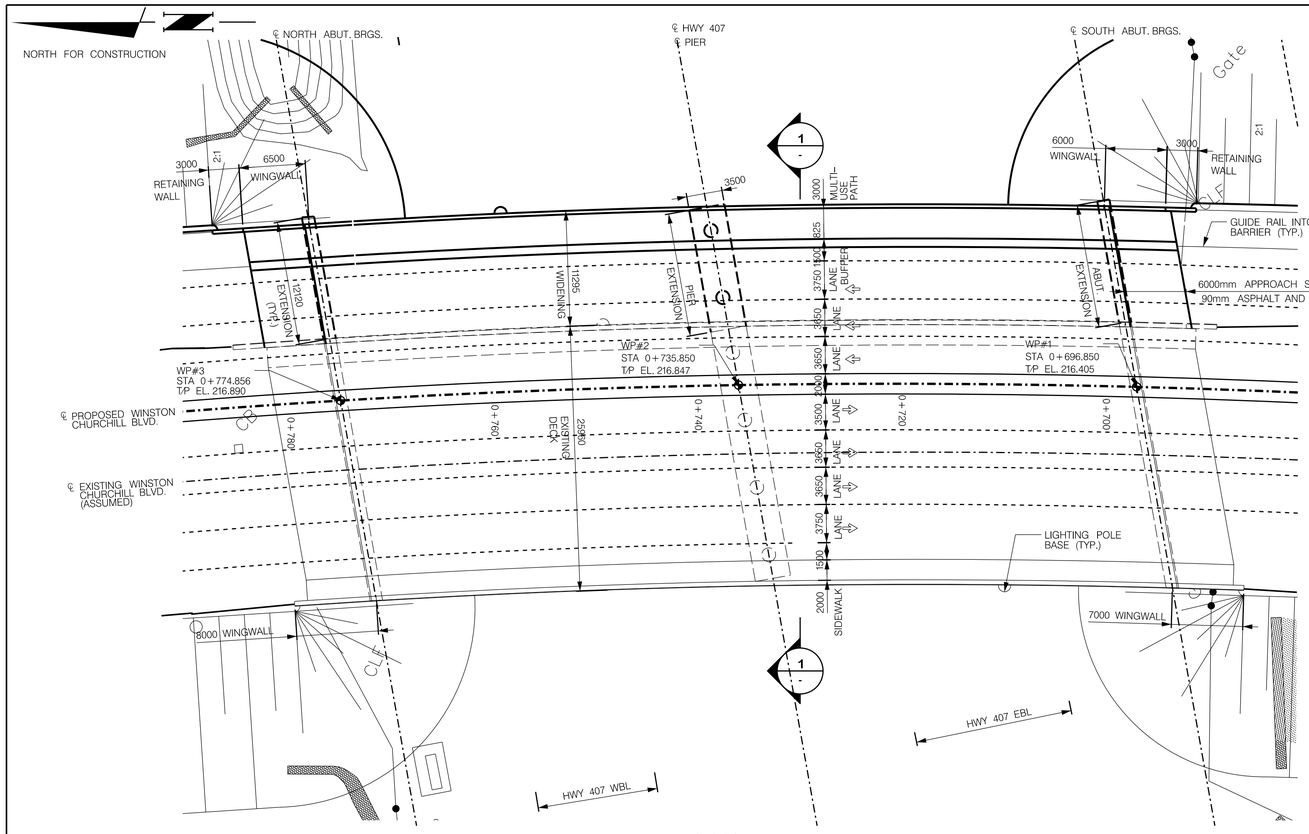
WINSTON CHURCHILL BLVD.

Class Environmental Assesment

6 LANE ROAD WIDENING

FROM STA. 0+000 TO STA. 4+420

APRIL, 2023



PLAN

SCALE 1:300

METRIC DIMENSIONS ARE IN METERS AND/OR MILLIMETERS UNLESS OTHERWISE SHOWN

CROSS–FALL AT WINSTON CHURCHILL BLVD.		
STATION CL WINSTON CHURCHAILL BOULEVARD	NORTH BOUND LANE	SOUTH BOUND LANE
0+679.370	+2%	–2.4%
0+701.945	+3.4%	–3.4%
0+870.000	+3.4%	–3.4%

LIST OF ABBREVIATIONS:

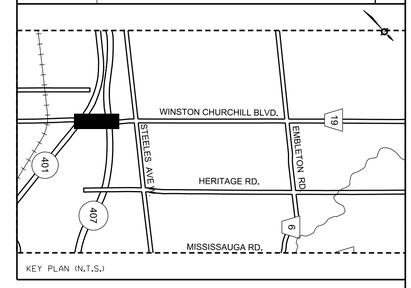
ABUT. –	DENOTES ABUTMENT
BRGS –	DENOTES BEARINGS
BVC –	DENOTES BEGINNING VERTICAL CURVE
CONC.	DENOTES CONCRETE
CONST.	DENOTES CONSTRUCTION
DIA –	DENOTES DIAMETER
EL. –	DENOTES ELEVATION
ELEV –	DENOTES ELEVATION
EVC. –	DENOTES END VERTICAL CURVE
FIX. –	DENOTES FIXED
HWY –	DENOTES HIGHWAY
N.T.S. –	DENOTES NOT TO SCALE
P.C.L. –	DENOTES PROFILE CONTROL LINE
PVI/VPI	DENOTES POINT OF VERTICAL INTERSECTION
SHLD –	DENOTES SHOULDER
STA. –	DENOTES STATION
S/W –	DENOTES SIDEWALK
T/F –	DENOTES TOP OF FOOTING
T/P –	DENOTES TOP OF PAVEMENT
TYP. –	DENOTES TYPICAL
U/S –	DENOTES UNDERSIDE
WP –	DENOTES WORKING POINT

APPLICABLE STANDARD DRAWINGS:

OPSD 3101.150	– WALLS ABUTMENT BACKFILL MINIMUM GRANULAR REQUIREMENT
OPSD 3370.100	– DECK, WATERPROOFING HOT APPLIED ASPHALT MEMBRANE WITH PROTECTION BOARD
OPSD 3419.100	– BARRICADES AND RAILINGS–STEEL GUIDE RAIL AND CHANNEL ANCHORAGE
SS116–1	– 6000mm APPROACH SLAB
SS116–21	– ROCK SLOPE PROTECTION WITHOUT BEAM

SERVICE DATA					
SERVICE	DATE	INIT.	SERVICE	DATE	INIT.
SAN SEWERS			GAS MAINS		
STORM SEWERS			BELL U/G CABLE		
WATERMAINS			HYDRO U/G CABLE		
TRANSIT			HYDRO ONE		
PARKS & REC.			CTV		
ONT. CLEAN WATER			COMMUNIC. CABLES		

REVISIONS		
DATE	DETAILS	INIT.



KEY PLAN (N.T.S.)

GENERAL NOTES:

LOCATION OF EXISTING CENTERLINES OF WINSTON CHURCHILL BLVD. AND HWY 407 DRAWN ARE ESTIMATED FROM RECORD DRAWINGS. LOCATION OF HWY 407 LANES ESTIMATED FROM RECORD DRAWINGS

CLASS OF CONCRETE:

PRESTRESSED GIRDERS ——— 45MPa
REMAINDER ——— 30MPa

CLEAR COVER TO REINFORCING STEEL:

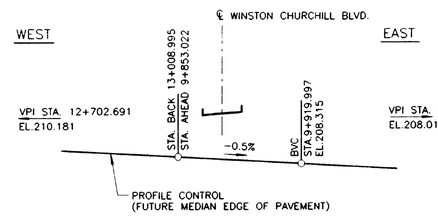
FOOTINGS ——— 100±25mm
DECK ——— TOP ——— 70±20mm
BOTTOM ——— 40±10mm
REMAINDER UNLESS OTHERWISE NOTED ——— 70±20mm

REINFORCING STEEL:

1. REINFORCING STEEL SHALL BE GRADE 400 UNLESS OTHERWISE SPECIFIED.
2. BAR MARKS WITH PREFIX 'C' DENOTE COATED BARS.

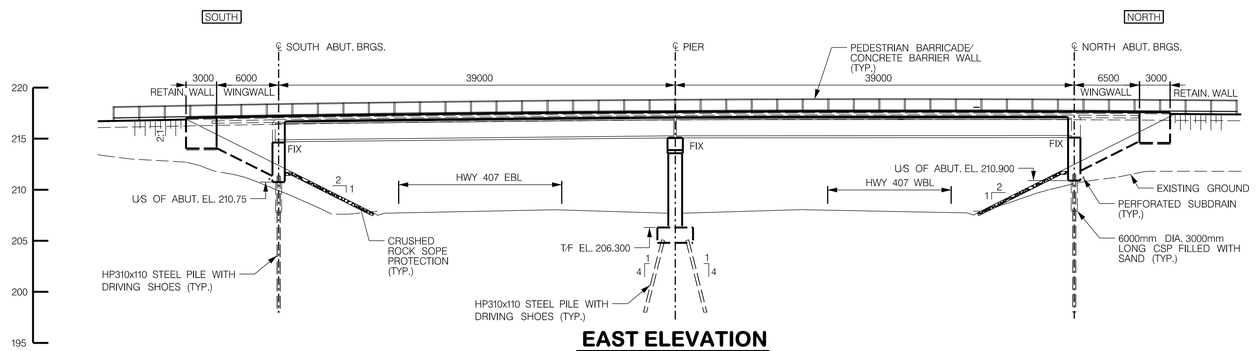
CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL ESTABLISH THE BEARING SEAT ELEVATIONS BY DEDUCTING THE ACTUAL BEARING THICKNESS FROM THE TOP OF BEARING ELEVATIONS. IF THE ACTUAL BEARING THICKNESS ARE DIFFERENT FROM THOSE GIVEN WITH THE BEARING DESIGN DATA, THE CONTRACTOR SHALL ADJUST THE REINFORCING STEEL TO SUIT.
2. CONSTRUCT ABUTMENT AND WINGWALL TO THE BEARING SEAT ELEVATIONS. THE CONTRACTOR SHALL SUPPLY TEMPORARY LATERAL BEARING FOR THE ABUTMENTS, FORMWORK AND LATERAL BRACING SHALL NOT BE REMOVED UNTILL THE CONCRETE DECK HAS REACHED 70% OF ITS SPECIFIED 28–DAY STRENGTH.
3. COMPACTED FILL MAXIMUM GRAIN SIZE 75mm SHALL BE PLACED UP TO THE BOTTOM OF FOOTING ELEVATION PRIOR TO DRIVING PILES.
4. NO BACKFILL SHALL BE PLACED BEHIND ABUTMENTS UNTIL DECK CONCRETE HAS REACHED 70% OF ITS SPECIFIED 28–DAY STRENGTH.
5. BACKFILL SHALL BE PLACED SIMULTANEOUSLY BEHIND BOTH ABUTMENTS KEEPING THE HEIGHT OF THE BACKFILL APPROXIMATELY THE SAME. AT NO TIME SHALL THE DIFFERENCE IN ELEVATION BE GREATER THAN 0.5m.



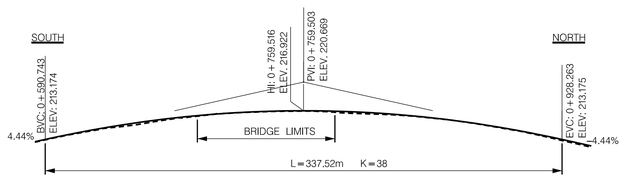
EXISTING PROFILE OF HWY 407

N.T.S



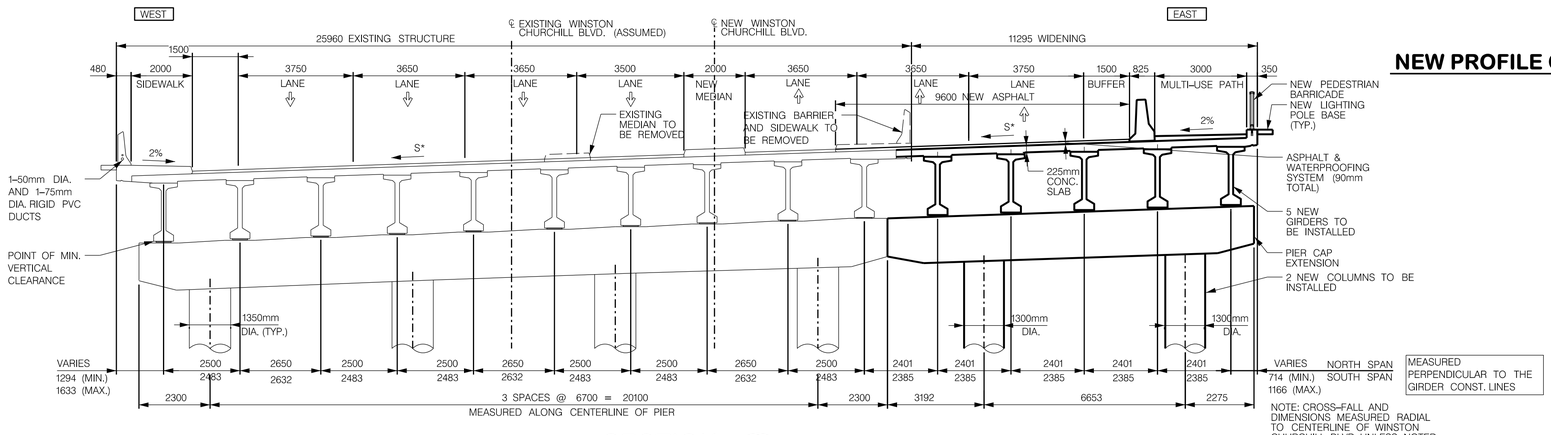
EAST ELEVATION

SCALE 1:300



NEW PROFILE OF WINSTON CHURCHILL BLVD.

N.T.S



SECTION

SCALE 1:100

1

* FOR CROSS FALL SEE TABLE.

MEASURED PERPENDICULAR TO THE GIRDER CONST. LINES

NOTE: CROSS–FALL AND DIMENSIONS MEASURED RADIAL TO CENTERLINE OF WINSTON CHURCHILL BLVD. UNLESS NOTED OTHERWISE.

10m 0 10 20 30m
HORIZONTAL SCALE

HATCH

Designed by ____ Chkd. ____

Approved by ____

Region of Peel
Working for you

WINSTON CHURCHILL BLVD.

(FROM HIGHWAY 401 TO EMBLETON ROAD)

STRUCTURE No. B10

GENERAL ARRANGEMENT

CAD Area -	Area -	Project No.	XX-XXXX
Checked by	Drawn by	Plan No.	14-4380
Date	Sheet of		