



Parks Canada
Parcs Canada



Canada

HORSESHOE LAKE DAM PUBLIC SAFETY IMPROVEMENTS CONSTRUCTION DRAWINGS

ISSUED FOR TENDER



INFORMATION ONLY

PROJECT NAME: PHASE 2 OF HORSESHOE LAKE
DAM REHABILITATION
PROJECT NO.: 30025849
SITE: HORSESHOE LAKE DAM LOCATED ON THE
GULL RIVER AT 1932 HORSESHOE LAKE ROAD,
MINDEN HILLS, ONTARIO WITHIN THE
HALIBURTON SECTOR OF THE TRENT SEVERN
WATERWAY

DATE OF ISSUE: SEPTEMBER 23, 2014

ISSUED BY: EXECUTIVE DIRECTOR'S OFFICE,
ONTARIO WATERWAYS (EDO)
PARKS CANADA AGENCY

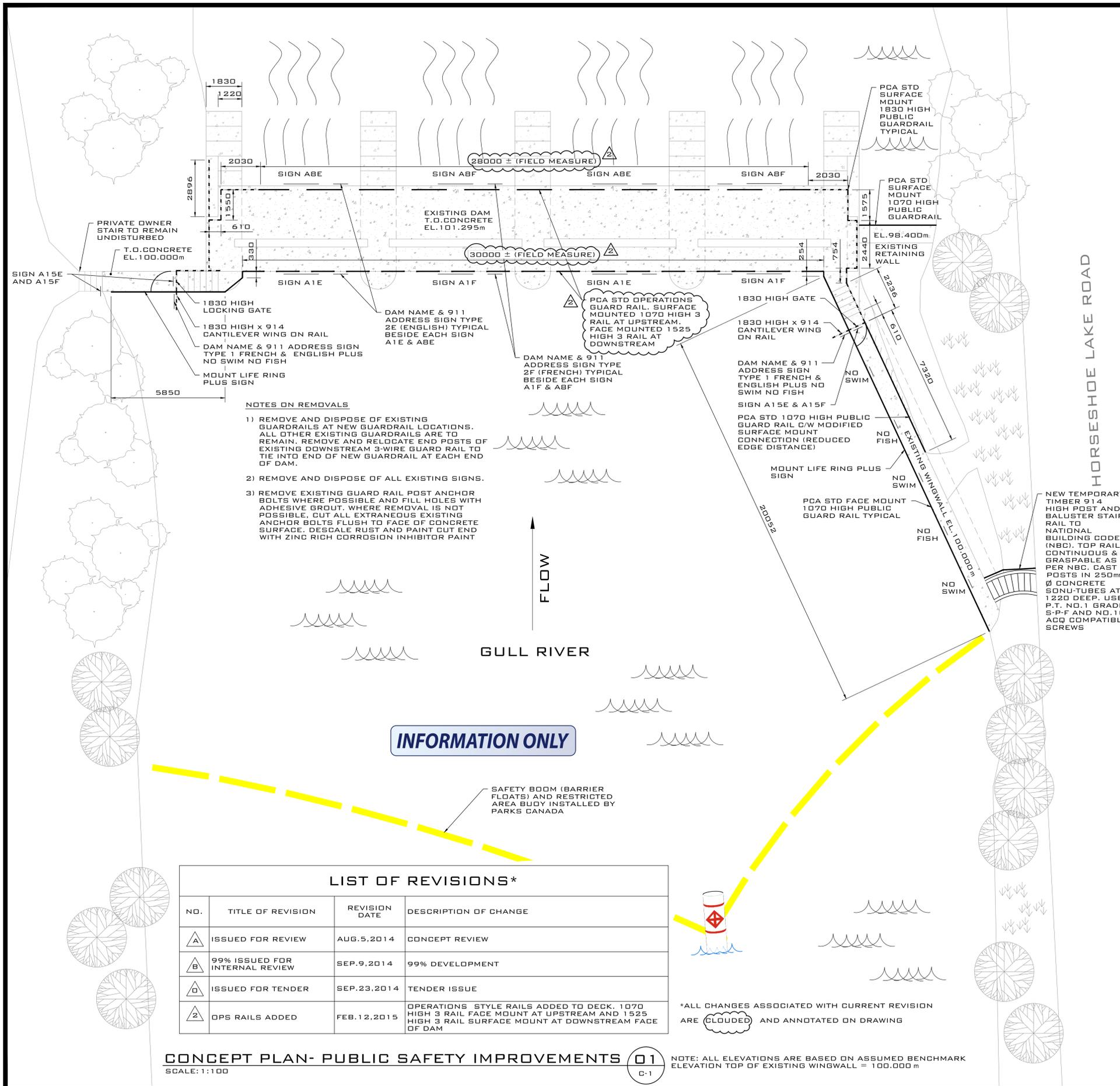
DESIGNED BY: S.GAUTHIER, C.E.T.
DRAWN BY: S.GAUTHIER, C.E.T.
APPROVED BY: M.McLAY, P.ENG.

LIST OF PROJECT DRAWINGS:

C-1: PLAN LAYOUT PUBLIC SAFETY IMPROVEMENTS
S-1: PARTIAL PLAN AND ELEVATIONS NEW GUARD RAILS-DAM WEST END
S-2: PARTIAL PLAN AND ELEVATIONS NEW GUARD RAILS-DAM EAST END
S-3: ELEVATIONS NEW GUARD RAILS AT EAST AND WEST ENDS OF DAM (CONT'D)
S-4: NEW GATE AND LIFE RING MOUNTING DETAILS
S-5: LARGE DAM SIGN TYPE A1 & A8 MOUNTING DETAILS

LIST OF APPLICABLE PARKS CANADA STANDARD DETAIL DRAWINGS:

P-1: STANDARD PUBLIC STYLE GUARD RAIL FABRICATION DETAILS - FIXED RAIL SECTION
P-2: STANDARD PUBLIC STYLE GUARD RAIL FABRICATION DETAILS - REMOVABLE SECTION
P-6: STANDARD PUBLIC STYLE GUARD RAIL TYPICAL SURFACE MOUNT CONNECTION DETAIL
P-7: STANDARD PUBLIC STYLE GUARD RAIL TYPICAL FACE MOUNT CONNECTION DETAIL
P-10 : TYPICAL LOCAL CONCRETE REPAIR DETAIL FOR GUARD RAILS INSTALLATIONS



DANGER
Keep Out
Access Beyond This Point May Result in Drowning

Horseshoe Lake Dam
DANGER Authorized personnel only
1932 Horseshoe Lake Rd, Minden Hills, ON
In an emergency call 9-1-1

DANGER
Accès interdit
Risque de noyade au-delà de cette zone

Barrage du Lac Horseshoe
DANGER Personnel Autorisé Seulement
1932 Chemin Horseshoe Lake, Minden Hills, ON
En cas d'urgence, composez le 9-1-1

SIGN A15E (ENGLISH)
SIGN A15F (FRENCH)

TYPE 1E (ENGLISH) NAME AND ADDRESS SIGN
TYPE 1F (FRENCH) NAME AND ADDRESS SIGN

DANGER
Dam Ahead
Keep Out

Horseshoe Lake Dam
In An Emergency Call 9-1-1

DANGER
Barrage devant
Accès interdit

Barrage du Lac Horseshoe
En cas d'urgence, composez le 9-1-1

DANGER
Dam Outflow
Keep Out

Horseshoe Lake Dam
In An Emergency Call 9-1-1

DANGER
Zone de décharge
du barrage
Accès interdit

Barrage du Lac Horseshoe
En cas d'urgence, composez le 9-1-1

Horseshoe Lake Dam
1932 Horseshoe Lake Road
Minden Hills, ON

Barrage du Lac Horseshoe
1932 Chemin Horseshoe Lake
Minden Hills, ON

TYPE 2E (ENGLISH) NAME AND ADDRESS SIGN

TYPE 2F (FRENCH) NAME AND ADDRESS SIGN

SAVE A LIFE.
Do not abuse

SAUVER UNE VIE.
N'en abusez pas.

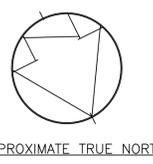
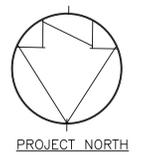
BILINGUAL LIFE RING SIGN



SUPPLY OF SIGNS

ALL SIGNS SUPPLIED BY PARKS CANADA. CONTRACTOR RESPONSIBLE FOR ALL MOUNTING HARDWARE. SIGNS A1 AND A5 ARE TO BE MOUNTED AS PER MOUNTING DETAILS DRAWING S-5. MOUNTING FOR ALL OTHER SIGNS SHALL BE PROPOSED BY CONTRACTOR. ALLOW FOR MINIMUM 2 FASTENERS IN EACH SIGN. ALL FASTENERS ST. STEEL. ALL HOLES TO BE DRILLED. TRANSPARENT POLYCARBONATE (LEXAN) INSULATOR BROMMETS PROVIDED. SUBMIT SHOP DRAWINGS FOR APPROVAL.

SIGNS KEY
SCALE: N.T.S.



DRAWING NO.	DRAWING NAME			
REFERENCE DRAWINGS				
2	FEB/12/15 OPS RAILS ADDED S.A.G. M.J.M.			
0	SEP/23/14 FOR TENDER S.A.G. M.J.M.			
B	SEP/09/14 99% FOR REVIEW S.A.G. M.J.M.			
A	AUG/05/14 FOR REVIEW S.A.G. S.A.G.			
NO.	DATE	DESCRIPTION	Drawn by	Approved
			Dessine par	Approuvé

REVISIONS			
A	A Detail number	A	Numero de detail
B	B Sheet number	B	Sur feuille numero

Linear dimensions in millimeters / Dimensions lineaires en millimetres



Canada

PARKS CANADA
EXECUTIVE DIRECTOR'S OFFICE, WATERWAYS

Type of Record / Type d'enregistrement

Project title / Titre du projet

HORSESHOE LAKE DAM REHAB

Drawing title / Titre du dessin

PLAN LAYOUT PUBLIC SAFETY IMPROVEMENTS

Plot Scale / Echelle
1:1 (Arch D 24x36 Plot Size)

Drawn by / Dessine par S.GAUTHIER Date FEB.12/15

Field Recording by / Releve-Temoin par S.GAUTHIER Date JUL.25/14

Approved by / Approuve par M.McLAY Date FEB.12/15

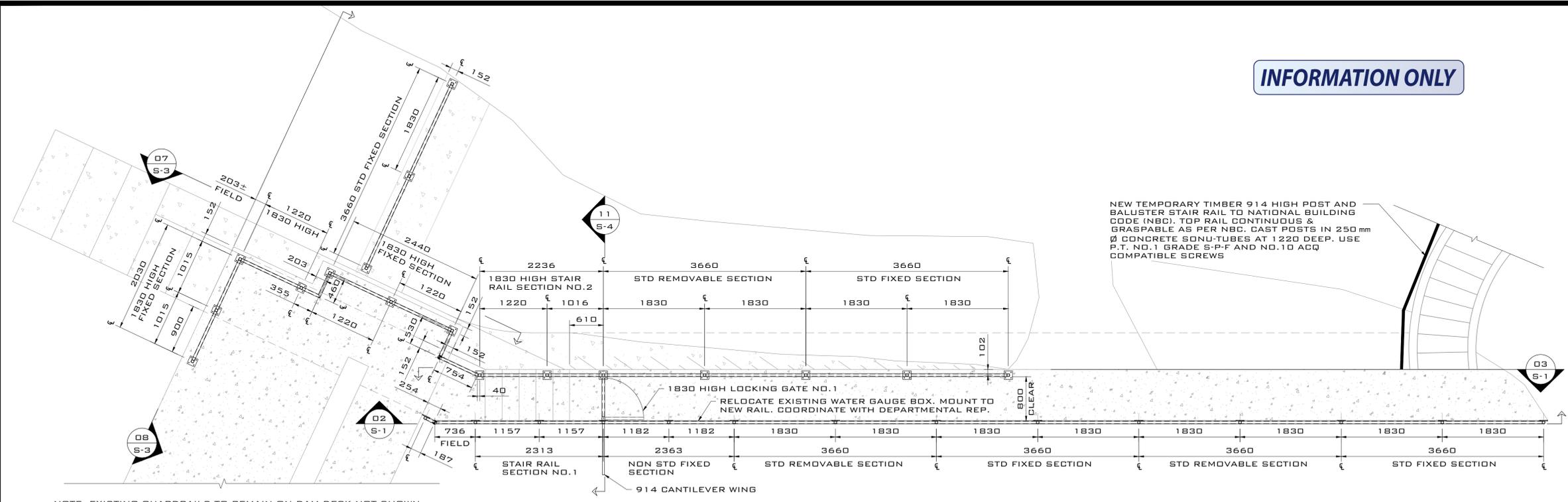
Checked by / Verifie par M.McLAY Date FEB.12/15

Project No./ No. du projet 30025849 Asset No. ?? Sheet No./ Feuille No.

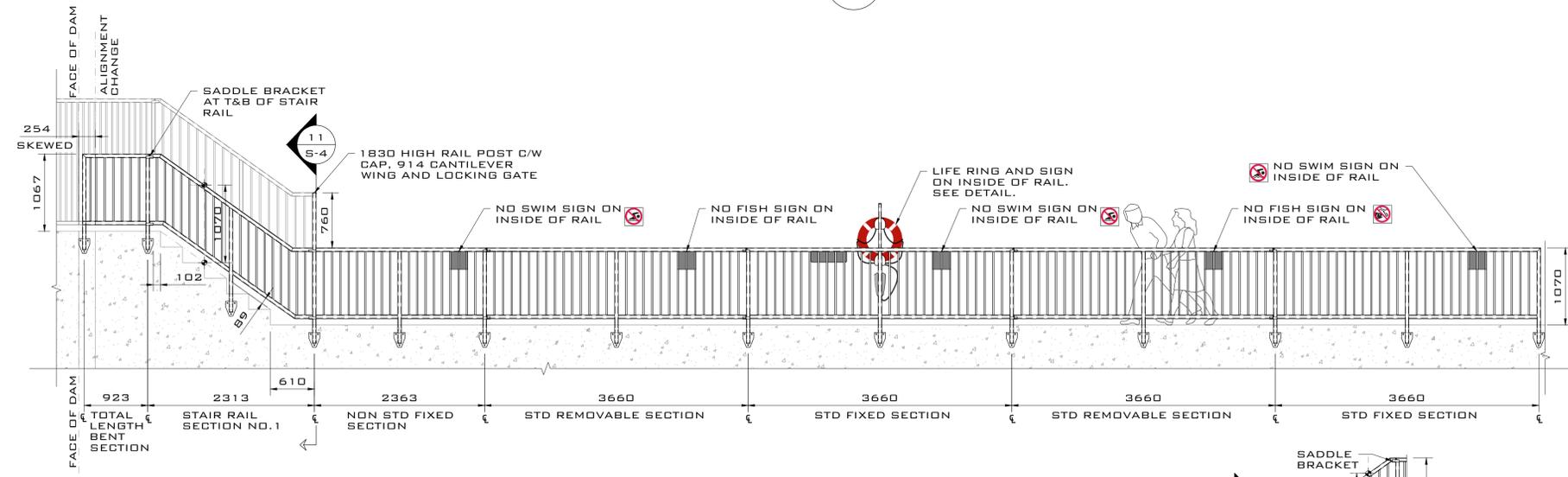
Drawing Re No./No. du Dessin 2 (OPS RAILS ADDED)

C1

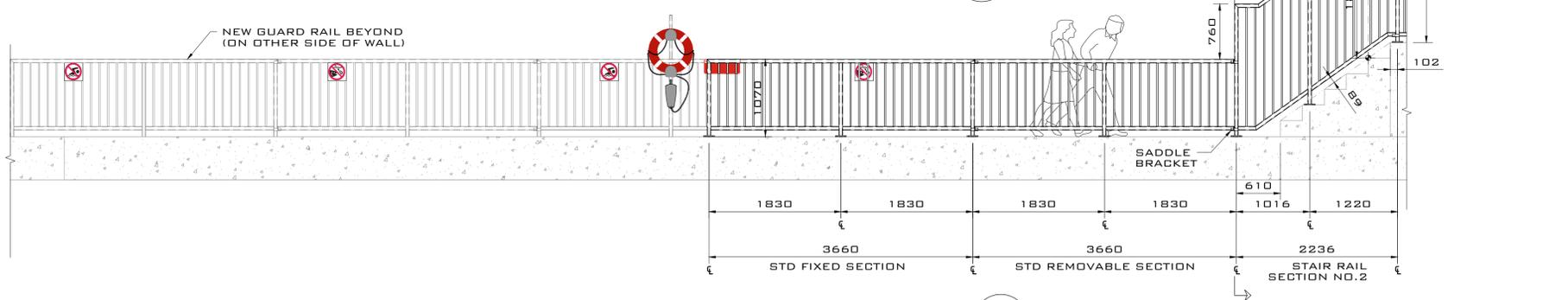
INFORMATION ONLY



NOTE: EXISTING GUARDRAILS TO REMAIN ON DAM DECK NOT SHOWN
PARTIAL PLAN - NEW GUARD RAILS AT WEST END OF DAM 01
 SCALE: 1:40



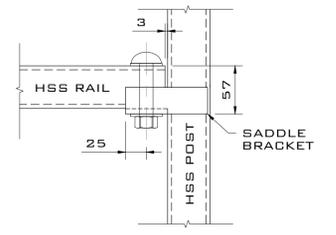
ELEVATION - NEW GUARD RAILS AT EAST FACE OF WEST WING WALL 02
 SCALE: 1:40



ELEVATION - NEW GUARD RAILS AT WEST FACE OF WEST WING WALL 03
 SCALE: 1:40

NEW TEMPORARY TIMBER 914 HIGH POST AND BALUSTER STAIR RAIL TO NATIONAL BUILDING CODE (NBC). TOP RAIL CONTINUOUS & GRASPABLE AS PER NBC. CAST POSTS IN 250mm Ø CONCRETE SONU-TUBES AT 1220 DEEP. USE P.T. NO.1 GRADE S-P-F AND NO.10 ACG COMPATIBLE SCREWS

GUARD RAIL FABRICATION AND MOUNTING DETAILS
 REFER TO STANDARD PARKS CANADA FIXED AND REMOVABLE GUARD RAIL SECTION DRAWINGS FOR NEW GUARD RAIL FABRICATION AND MOUNTING DETAILS.
 EXTEND STANDARD GUARD RAIL HEIGHT TO 1830mm WHERE SPECIFIED ON THESE DRAWINGS.
 MODIFY SADDLE BRACKET LOCATION AND ORIENTATION, ADD OR OMIT SADDLE BRACKETS AS REQUIRED TO SUIT THE ASSEMBLY ARRANGEMENTS PROVIDED ON THESE DRAWINGS.
 PROVIDE A PIN CONNECTION AT SADDLE BRACKET SUPPORTS WHERE RAIL SECTIONS ARE 'DROP-IN' TYPE AND DO NOT INCLUDE AT LEAST ONE POST ANCHORED TO CONCRETE SURFACE.
 ACCEPTABLE RAIL TO SADDLE PIN CONNECTION TO CONSIST OF 1 - 16Ø ST. STEEL VERTICAL PAN HEAD SCREW BOLT THROUGH RAIL AND SADDLE C/W WASHERS AND LOCK NUT AT UNDERSIDE OF SADDLE. HOLES FOR PIN CONNECTIONS ARE TO BE 19mmØ AND DRILLED PRIOR TO HOT DIP GALVANIZING. DO NOT DRILL HOLES POST GALVANIZING.



S4	GATE AND LIFE RING DETAILS		
S3	ELEVATIONS NEW GUARD RAILS CONTD		
C1	PLAN PUBLIC SAFETY IMPROVEMENTS		
DRAWING NO.	DRAWING NAME		
REFERENCE DRAWINGS			
NO.	DATE	DESCRIPTION	Drawn by / Dessine par / Approved / Approuvé
0	SEP/23/14	FOR TENDER	S.A.G. M.J.M.
B	SEP/09/14	99% FOR REVIEW	S.A.G. M.J.M.

REVISIONS			
A	A Detail number	A Numero de detail	
B	B Sheet number	B Sur feuille numero	

Linear dimensions in millimeters / Dimensions lineaires en millimetres



Canada

PARKS CANADA EXECUTIVE DIRECTOR'S OFFICE, WATERWAYS

Type of Record / Type d'enregistrement

Project title / Titre du projet

HORSESHOE LAKE DAM REHAB

Drawing title / Titre du dessin

PARTIAL PLAN AND ELEVATIONS NEW GUARD RAILS-DAM WEST END

Plot Scale / Echelle
 1:1 (Arch D 24x36 Plot Size)

Drawn by / Dessine par S.GAUTHIER Date SEP.23/14

Field Recording by / Releve-Temoin par S.GAUTHIER Date JUL.25/14

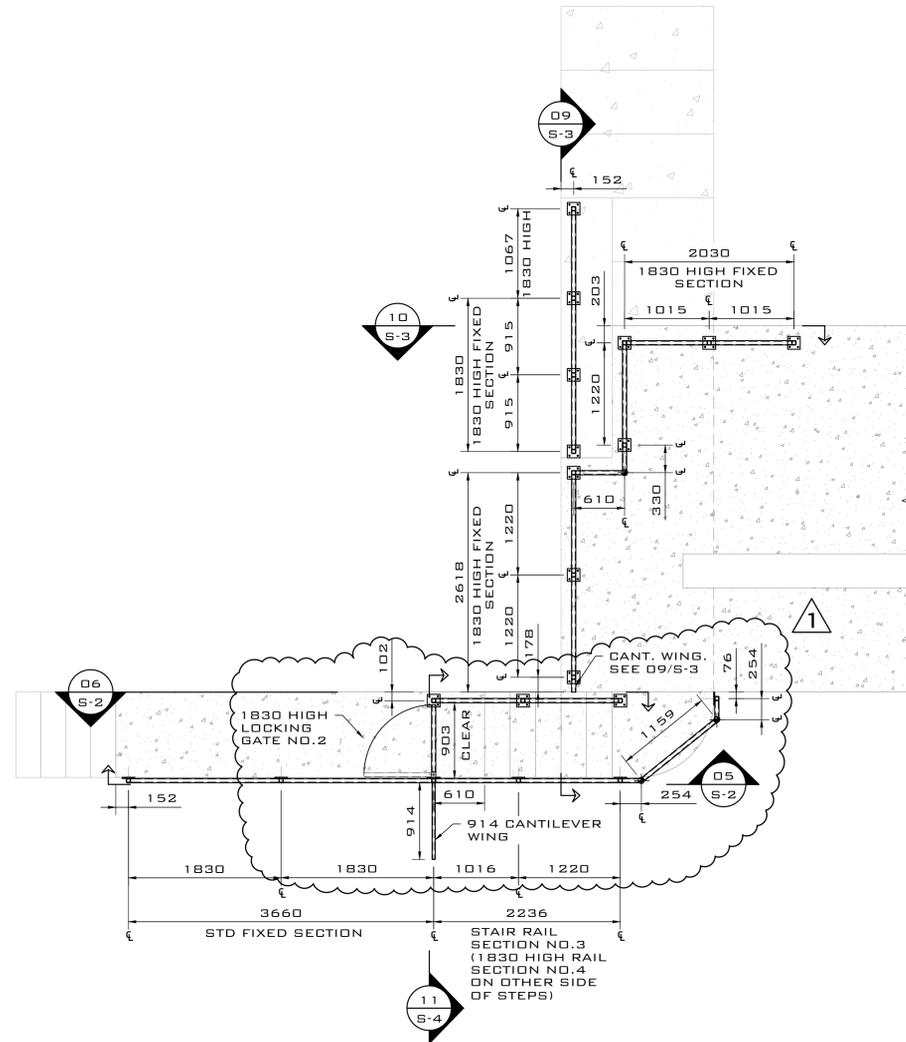
Approved by / Approuve par M.McLAY Date SEP.23/14

Checked by / Verifie par M.McLAY Date SEP.23/14

Project No./ No. du projet 30025849 Asset No. ?? Sheet No./ Feuille No.

Drawing Re No./No. du Dessin 0 (FOR TENDER)

S1

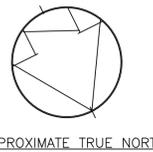
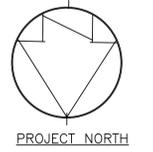


PARTIAL PLAN - NEW GUARD RAILS AT EAST END OF DAM 04
SCALE: 1:40 S-2

LIST OF REVISIONS*			
NO.	TITLE OF REVISION	REVISION DATE	DESCRIPTION OF CHANGE
B	99% ISSUED FOR INTERNAL REVIEW	SEP.9,2014	99% DEVELOPMENT
D	ISSUED FOR TENDER	SEP.23,2014	TENDER ISSUE
A	EAST STAIR RAIL ADJUSTED	NOV.24,2014	SOUTH RAIL AT EAST WING WALL STAIR IS MOVED NORTH INTO STAIR AND POSTS CHANGED FROM FACE MOUNT TO SURFACE MOUNT. EAST GATE WIDTH ADJUSTED FOR CHANGE. RAIL AT EAST END OF DECK LENGTHENED WITH CANT. FOR CHANGE.

*ALL CHANGES ASSOCIATED WITH CURRENT REVISION ARE CLOUDED AND ANNOTATED ON DRAWING

INFORMATION ONLY



DRAWING NO. DRAWING NAME				
REFERENCE DRAWINGS				
S4	GATE AND LIFE RING DETAILS			
S3	ELEVATIONS NEW GUARD RAILS CONTD			
C1	PLAN PUBLIC SAFETY IMPROVEMENTS			
NO.	DATE	DESCRIPTION	Drawn by / Dessine par	Approved / Approuve
1	NOV/24/14	EAST STAIR RAIL	S.A.G.	S.A.G.
0	SEP/23/14	FOR TENDER	S.A.G.	M.J.M.
B	SEP/09/14	99% FOR REVIEW	S.A.G.	M.J.M.

REVISIONS			
A	A Detail number	A Numero de detail	
B	B Sheet number	B Sur feuille numero	

Linear dimensions in millimeters / Dimensions lineaires en millimetres



Canada

PARKS CANADA
EXECUTIVE DIRECTOR'S OFFICE, WATERWAYS

Type of Record / Type d'enregistrement

Project title / Titre du projet

HORSESHOE LAKE DAM REHAB

Drawing title / Titre du dessin

PARTIAL PLAN AND ELEVATIONS NEW GUARD RAILS-DAM EAST END

Plot Scale / Echelle
1:1 (Arch D 24x36 Plot Size)

Drawn by / Dessine par S.GAUTHIER Date SEP.23/14

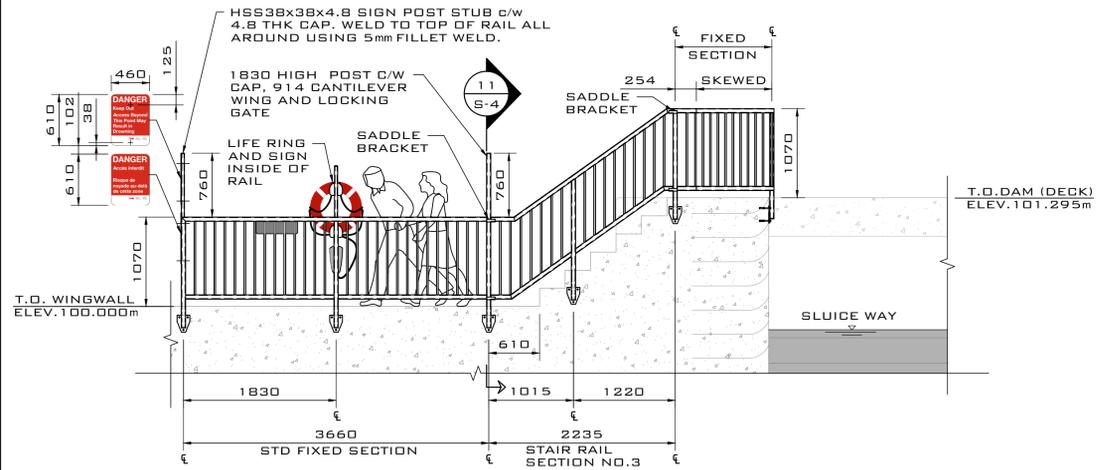
Field Recording by / Releve-Temoin par S.GAUTHIER Date JUL.25/14

Approved by / Approuve par S.GAUTHIER Date NOV.24/14

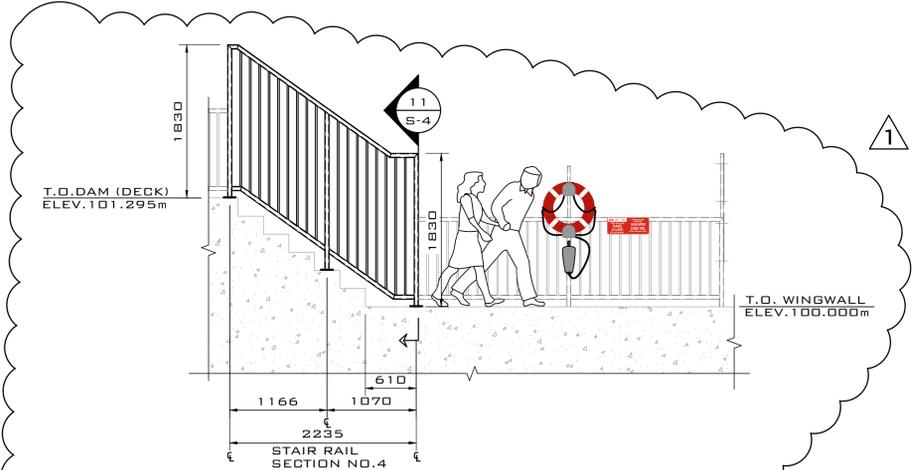
Checked by / Verifie par Date

Project No./ No. du projet 30025849 Asset No. ?? Sheet No./ Feuille No.

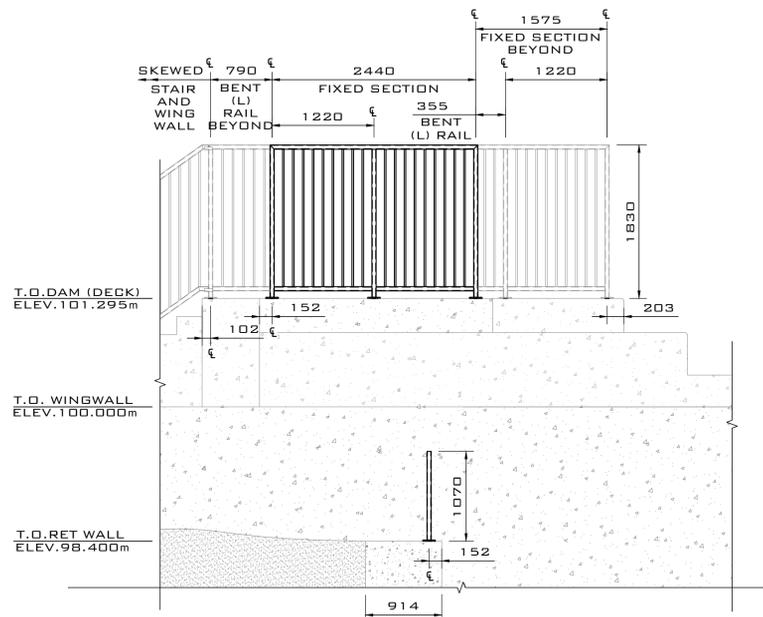
Drawing Re No./No. du Dessin 1(EAST STAIR RAIL ADJUSTED) **S2**



ELEVATION - NEW GUARD RAILS - NORTH FACE EAST WING WALL 05
SCALE: 1:40 S-2



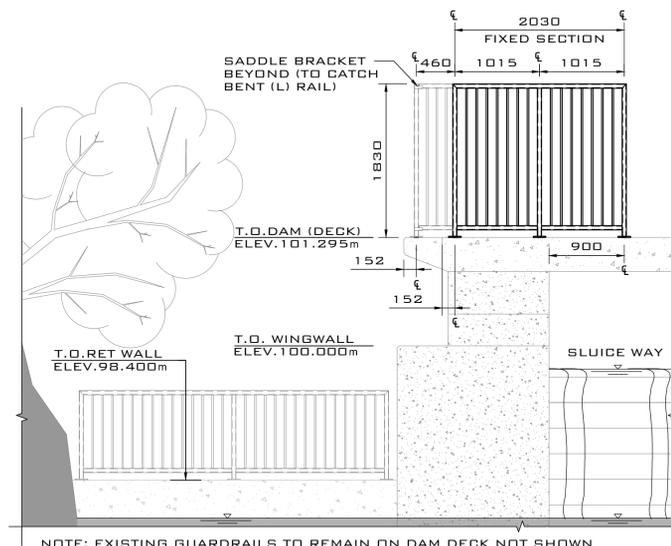
ELEVATION - NEW GUARD RAILS SOUTH FACE EAST WING WALL 06
SCALE: 1:40 S-2



ELEVATION - NEW GUARD RAILS AT DAM WEST END 07

SCALE: 1:40

S-1

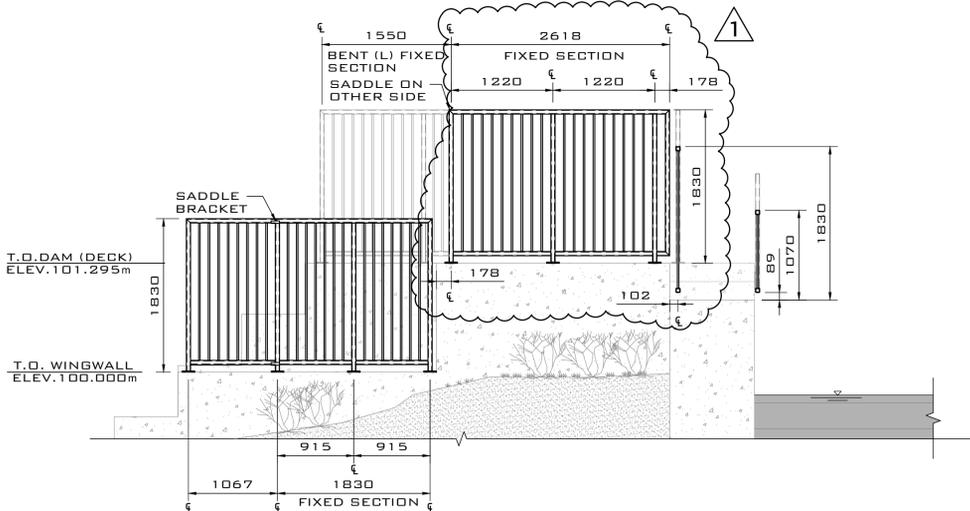


ELEVATION - NEW GUARD RAILS DAM SOUTH FACE/SW CORNER 08

SCALE: 1:40

S-1

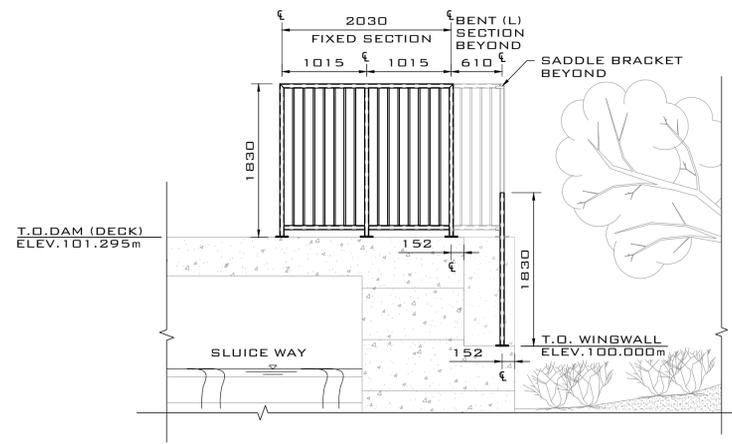
INFORMATION ONLY



SECTION - NEW GUARD RAILS - EAST END OF DAM 09

SCALE: 1:40

S-2



ELEVATION - NEW GUARD RAILS DAM SOUTH FACE/SE CORNER 10

SCALE: 1:40

S-2

LIST OF REVISIONS*			
NO.	TITLE OF REVISION	REVISION DATE	DESCRIPTION OF CHANGE
B	99% ISSUED FOR INTERNAL REVIEW	SEP.9.2014	99% DEVELOPMENT
D	ISSUED FOR TENDER	SEP.23.2014	TENDER ISSUE
1	EAST STAIR RAIL ADJUSTED	NOV.24.2014	SOUTH RAIL AT EAST WING WALL STAIR IS MOVED NORTH INTO STAIR AND POSTS CHANGED FROM FACE MOUNT TO SURFACE MOUNT. EAST GATE WIDTH ADJUSTED FOR CHANGE. RAIL AT EAST END OF DECK LENGTHENED WITH CANT. FOR CHANGE.

*ALL CHANGES ASSOCIATED WITH CURRENT REVISION ARE CLOUDED AND ANNOTATED ON DRAWING

PROJECT NORTH

APPROXIMATE TRUE NORTH

S2	PARTIAL PLAN, ELEVS EAST DAM END
S1	PARTIAL PLAN, ELEVS WEST DAM END

DRAWING NO. DRAWING NAME

REFERENCE DRAWINGS

NO.	DATE	DESCRIPTION	Drawn by Dessine par	Approved Approuve
1	NOV.24/14	EAST STAIR RAIL	S.A.G.	S.A.G.
0	SEP.23/14	FOR TENDER	S.A.G.	M.J.M.
B	SEP.09/14	99% FOR REVIEW	S.A.G.	M.J.M.

REVISIONS

A	A Detail number	A Numero de detail
B	B Sheet number	B Sur feuille numero

Linear dimensions in millimeters / Dimensions lineaires en millimetres



Canada

PARKS CANADA
EXECUTIVE DIRECTOR'S OFFICE, WATERWAYS

Type of Record / Type d'enregistrement

Project title / Titre du projet

HORSESHOE LAKE DAM REHAB

Drawing title / Titre du dessin

ELEVATIONS NEW GUARD RAILS AT EAST & WEST ENDS OF DAM (CONT'D)

Plot Scale / Echelle

1:1 (Arch D 24x36 Plot Size)

Drawn by/ Dessine par S.GAUTHIER Date NOV.24/14

Field Recording by / Releve-Temoin par S.GAUTHIER Date JUL.25/14

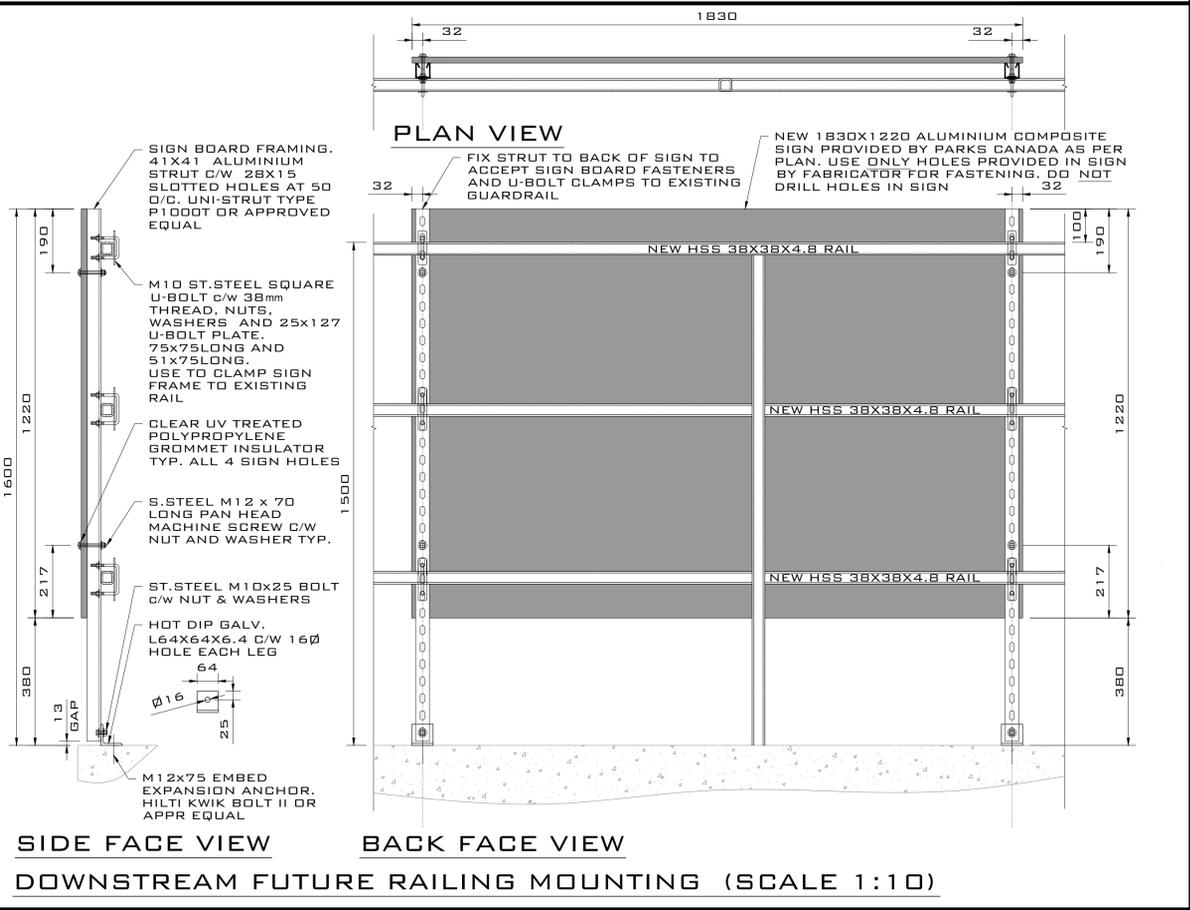
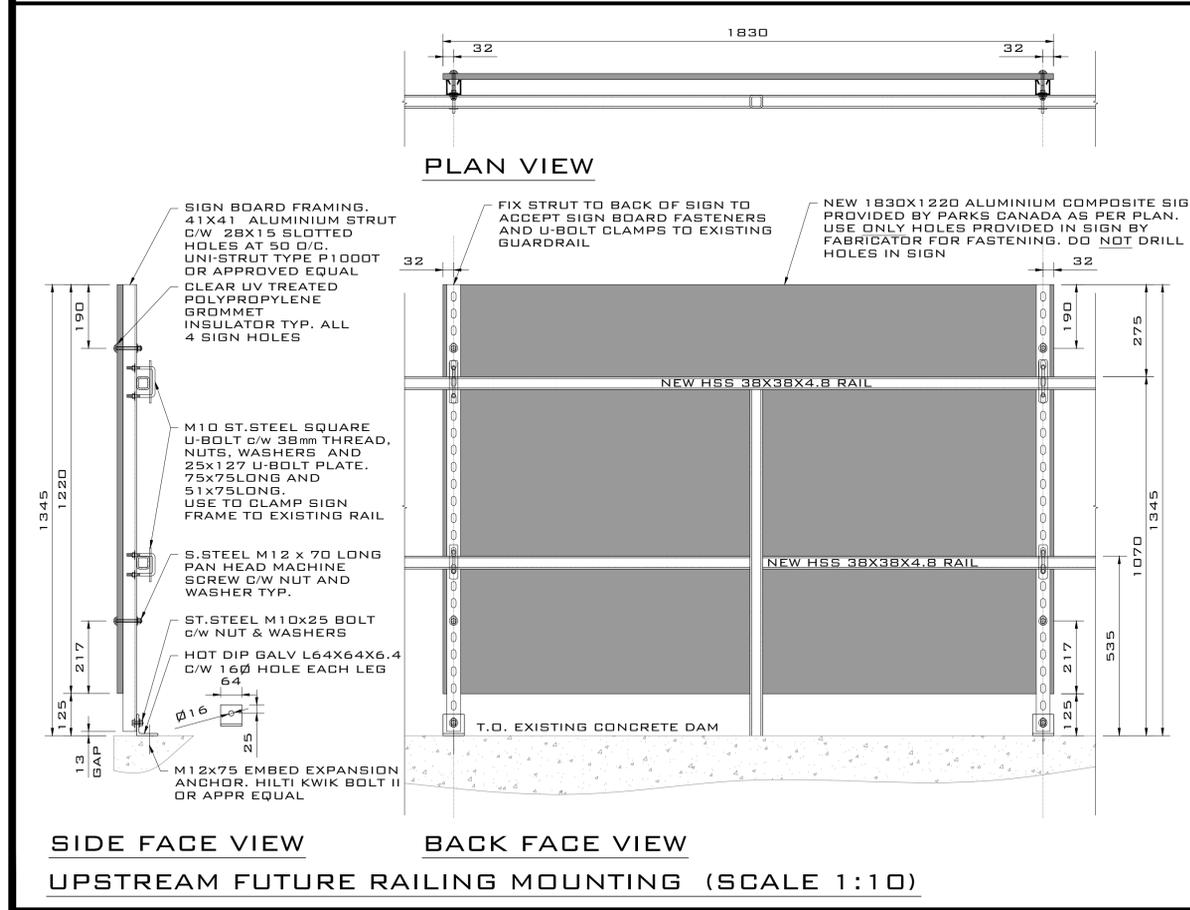
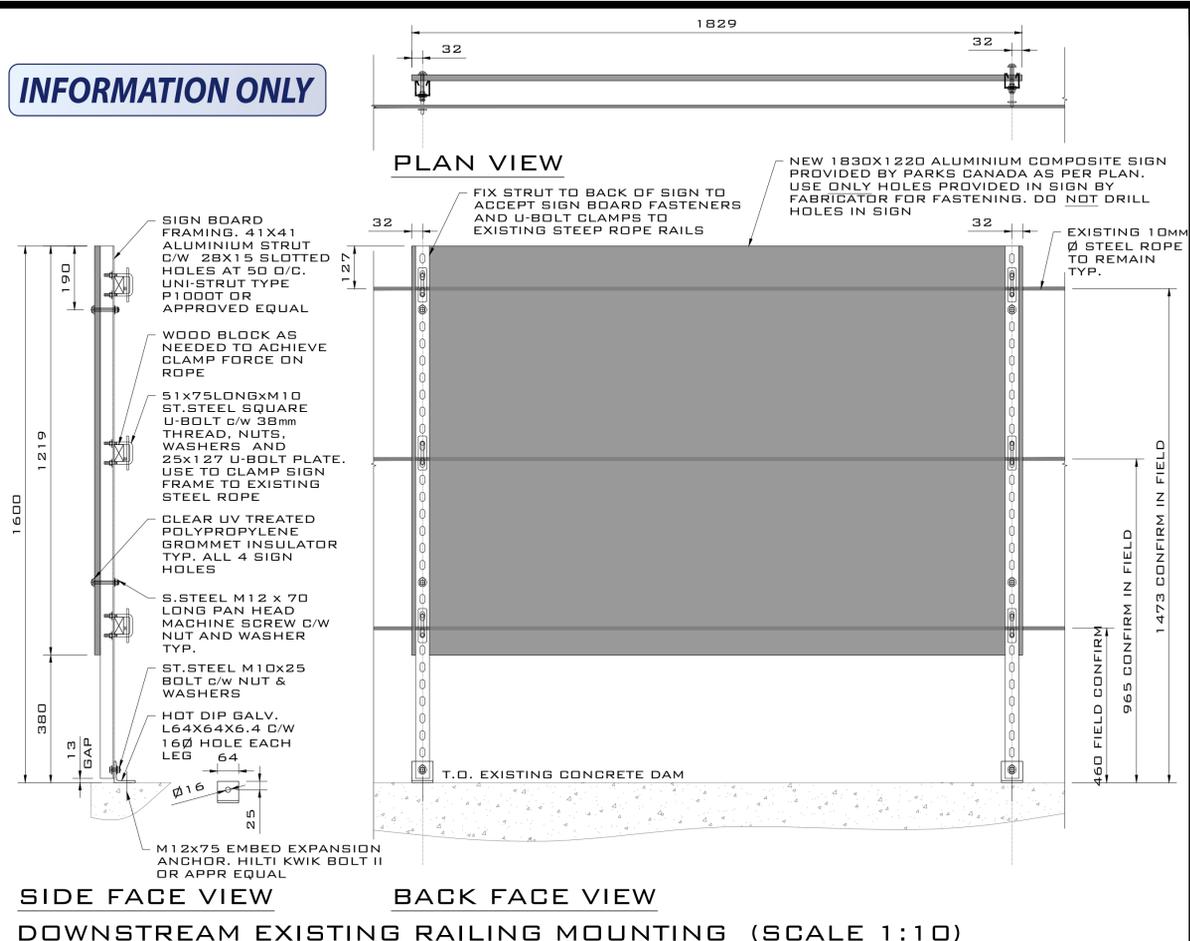
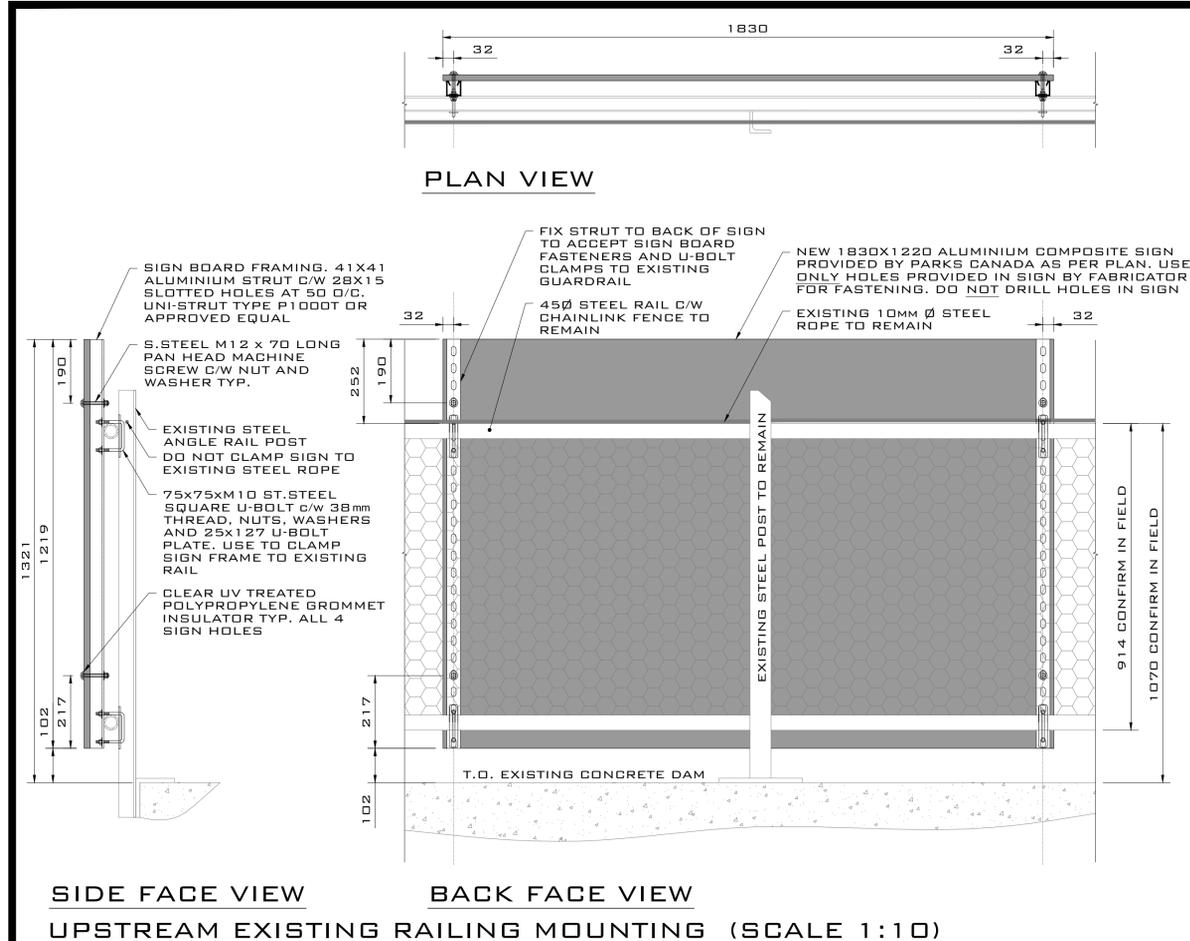
Approved by / Approuve par S.GAUTHIER Date NOV.24/14

Checked by/ Verifie par Date

Project No./ No. du projet 30025849 Asset No. ?? Sheet No./ Feuille No.

Drawing Re No./No. du Dessin 1(EAST STAIR RAIL ADJUSTED) **S3**

INFORMATION ONLY



PROJECT NORTH

APPROXIMATE TRUE NORTH

C1	PLAN PUBLIC SAFETY IMPROVEMENTS
DRAWING NO.	DRAWING NAME
REFERENCE DRAWINGS	
0	SEP/23/14 FOR TENDER S.A.G. M.J.M.
B	SEP/09/14 99% FOR REVIEW S.A.G. M.J.M.
NO.	DATE DESCRIPTION Drawn by Approved
REVISIONS	
A	A Detail number A Numero de detail
B	B Sheet number B Sur feuille numero

Linear dimensions in millimeters / Dimensions lineaires en millimetres

Parcs Canada / Parks Canada

Canada

PARKS CANADA EXECUTIVE DIRECTOR'S OFFICE, WATERWAYS

Type of Record / Type d'enregistrement

Project title / Titre du projet: **HORSESHOE LAKE DAM REHAB**

Drawing title / Titre du dessin: **LARGE DAM SIGN TYPE A1 & A8 MOUNTING DETAILS**

Plot Scale / Echelle: 1:1 (Arch D 24x36 Plot Size)

Drawn by / Dessine par: S. GAUTHIER Date: SEP.5/14

Field Recording by / Releve-Temoin par: S. GAUTHIER Date: JUL.25/14

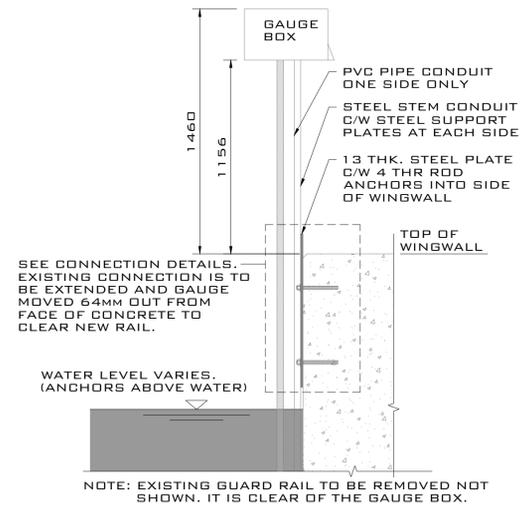
Approved by / Approuve par: M. McLAY Date: SEP.9/14

Checked by / Verifie par: M. McLAY Date: SEP.9/14

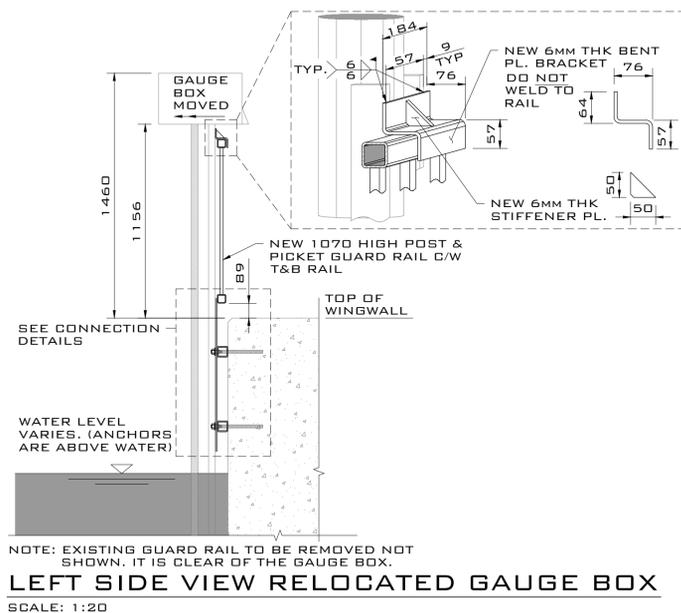
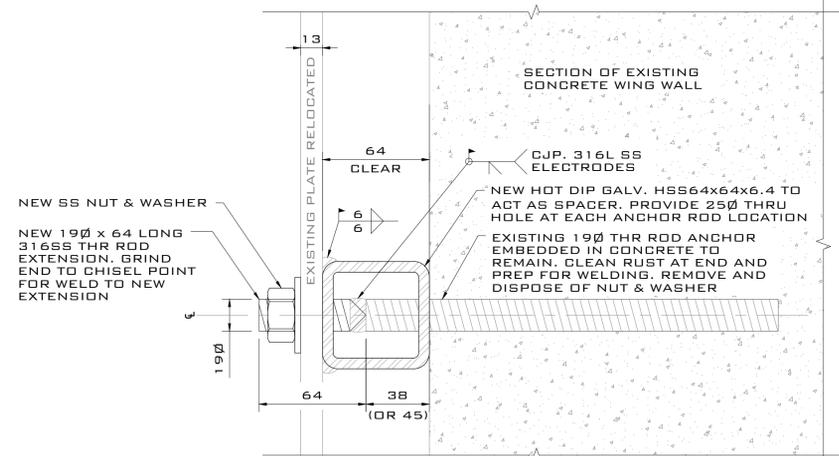
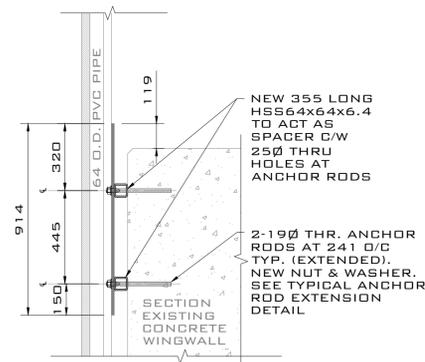
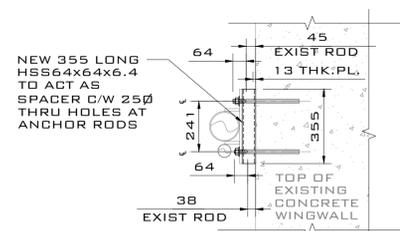
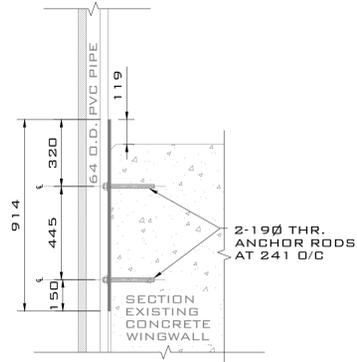
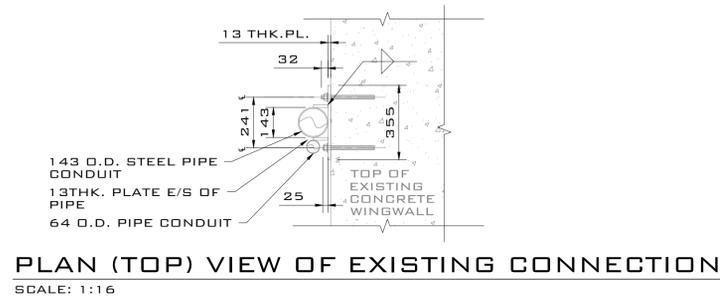
Project No./ No. du projet: 30025849 Asset No.: ?? Sheet No./ Feuille No.: S5

Drawing Re No./No. du Dessin: 0 (FOR TENDER)

INFORMATION ONLY



LEFT SIDE VIEW EXISTING GAUGE BOX
SCALE: 1:20



PROJECT NORTH

APPROXIMATE TRUE NORTH

C1 PLAN PUBLIC SAFETY IMPROVEMENTS

DRAWING NO. DRAWING NAME

REFERENCE DRAWINGS

NO.	DATE	DESCRIPTION	Drawn by Dessine par	Approved Approuve
0	OCT/10/14	FOR TENDER	S.A.G.	S.A.G.

REVISIONS

A	A Detail number	A Numero de detail
B	B Sheet number	B Sur feuille numero

Linear dimensions in millimeters / Dimensions lineaires en millimetres



Canada

PARKS CANADA
EXECUTIVE DIRECTOR'S OFFICE, WATERWAYS

Type of Record /
Type d'enregistrement

Project title / Titre du projet

**HORSESHOE LAKE DAM
REHAB**

Drawing title / Titre du dessin

**WEST WING WALL
WATER GAUGE
RELOCATION DETAILS**

Plot Scale / Echelle
1:1 (Arch D 24x36 Plot Size)

Drawn by / Dessine par S.GAUTHIER Date OCT.10/14

Field Recording by /
Releve-Termin par G.COOPER Date OCT.10/14

Approved by / Approuve par S.GAUTHIER Date OCT.10/14

Checked by / Verifie par Date

Project No./ No. du projet 30025849 Asset No. ?? Sheet No./ Feuille No.

Drawing Re No./No. du Dessin 0 (FOR TENDER)

S6