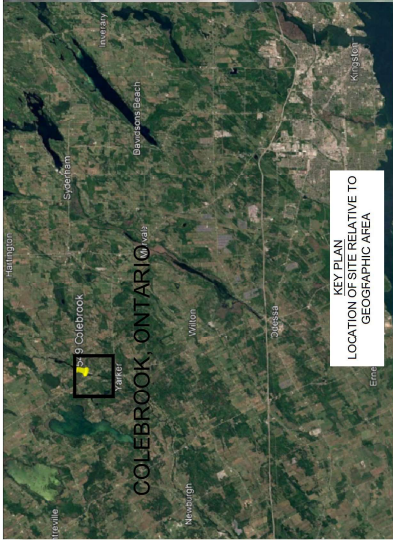




ANCHOR POSITIONS			
ANCHOR	COORDINATES (UTM ZONE 18T)		ANCHOR TYPE
	EAST [m]	NORTH [m]	
A	359 014	4 916 469	CONCRETE BLOCK
B	359 059	4 916 464	CONCRETE BLOCK

NOTES:

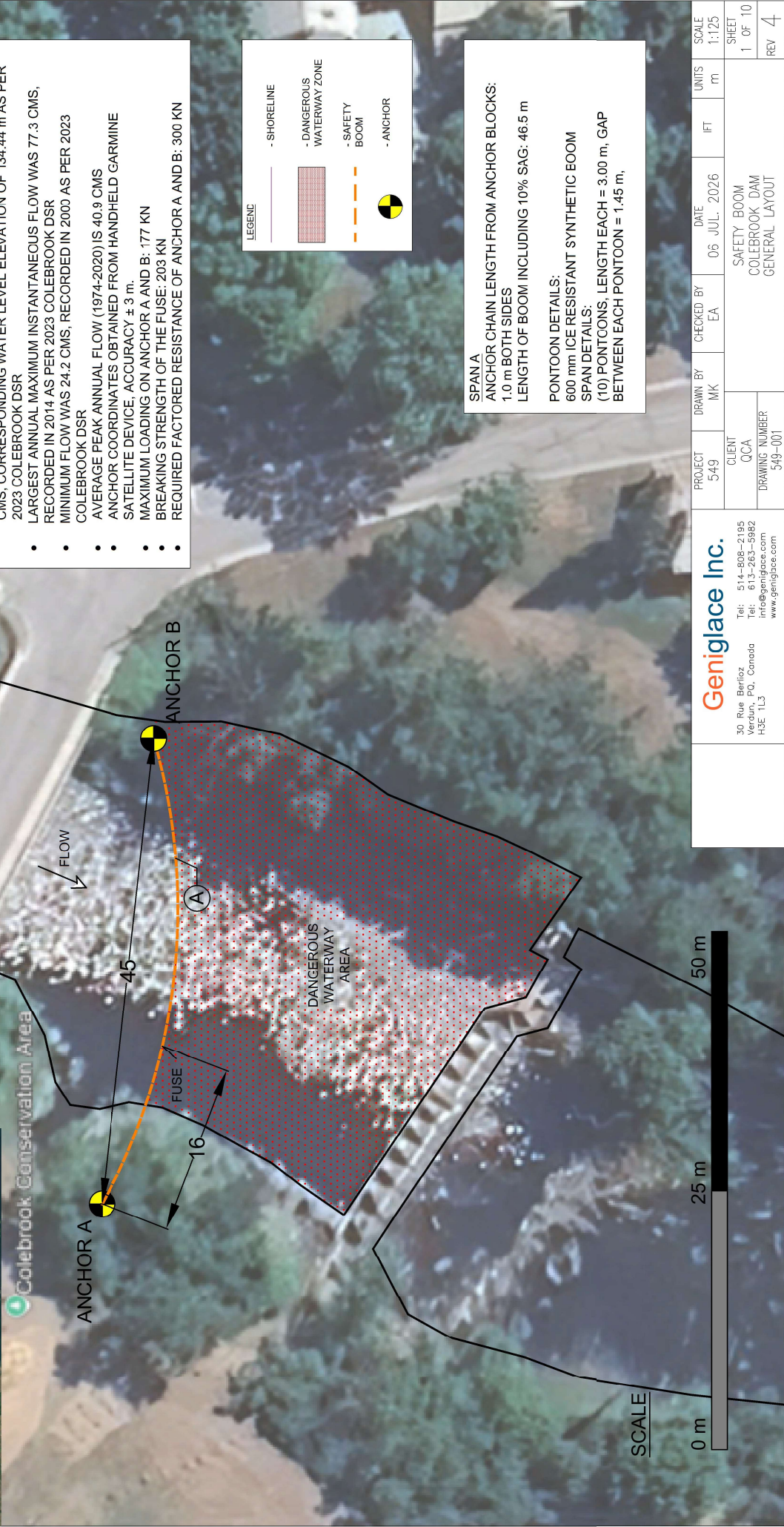
- UNITS ARE IN METRES.
- INFLOW DESIGN FLOOD (IDF) IS 1:100 YEAR FLOOD INFLOW PEAK OF 83.3 CMS, CORRESPONDING WATER LEVEL ELEVATION OF 134.44 m AS PER 2023 COLEBROOK DSR
- LARGEST ANNUAL MAXIMUM INSTANTANEOUS FLOW WAS 77.3 CMS, RECORDED IN 2014 AS PER 2023 COLEBROOK DSR
- MINIMUM FLOW WAS 24.2 CMS, RECORDED IN 2003 AS PER 2023 COLEBROOK DSR
- AVERAGE PEAK ANNUAL FLOW (1974-2020) IS 40.9 CMS
- ANCHOR COORDINATES OBTAINED FROM HANDHELD GARMIN SATELLITE DEVICE, ACCURACY ± 3 m.
- MAXIMUM LOADING ON ANCHOR A AND B: 177 KN
- BREAKING STRENGTH OF THE FUSE: 203 KN
- REQUIRED FACTORED RESISTANCE OF ANCHOR A AND B: 300 KN



SPAN A
ANCHOR CHAIN LENGTH FROM ANCHOR BLOCKS:
1.0 m BOTH SIDES
LENGTH OF BOOM INCLUDING 10% SAG: 46.5 m

PONTOON DETAILS:
600 mm ICE RESISTANT SYNTHETIC BOOM

SPAN DETAILS:
(10) PONTOONS, LENGTH EACH = 3.00 m, GAP BETWEEN EACH PONTOON = 1.45 m,



Geniglace Inc. 30 Rue Berlioz Verdun, PQ, Canada H3E 1L3 Tel: 514-808-2195 Tel: 613-263-5982 info@geniglace.com www.geniglace.com	PROJECT 549	DRAWN BY MK	CHECKED BY EA	DATE 06 JUL. 2026	UNITS m	SCALE 1:125
	CLIENT QCA		SAFETY BOOM COLEBROOK DAM GENERAL LAYOUT			
	DRAWING NUMBER 549-001		SHEET 1 OF 10			
			REV 4			

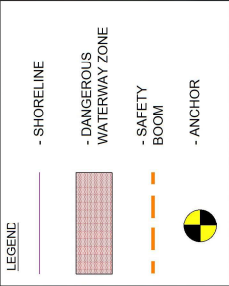


KEY PLAN
LOCATION OF SITE RELATIVE TO
GEOGRAPHIC AREA

ANCHOR POSITIONS			
ANCHOR	COORDINATES (UTM ZONE 18T)		ANCHOR TYPE
	EAST [m]	NORTH [m]	
C	332 233	4 866 859	CONCRETE BLOCK
D	332 204	4 866 842	CONCRETE BLOCK

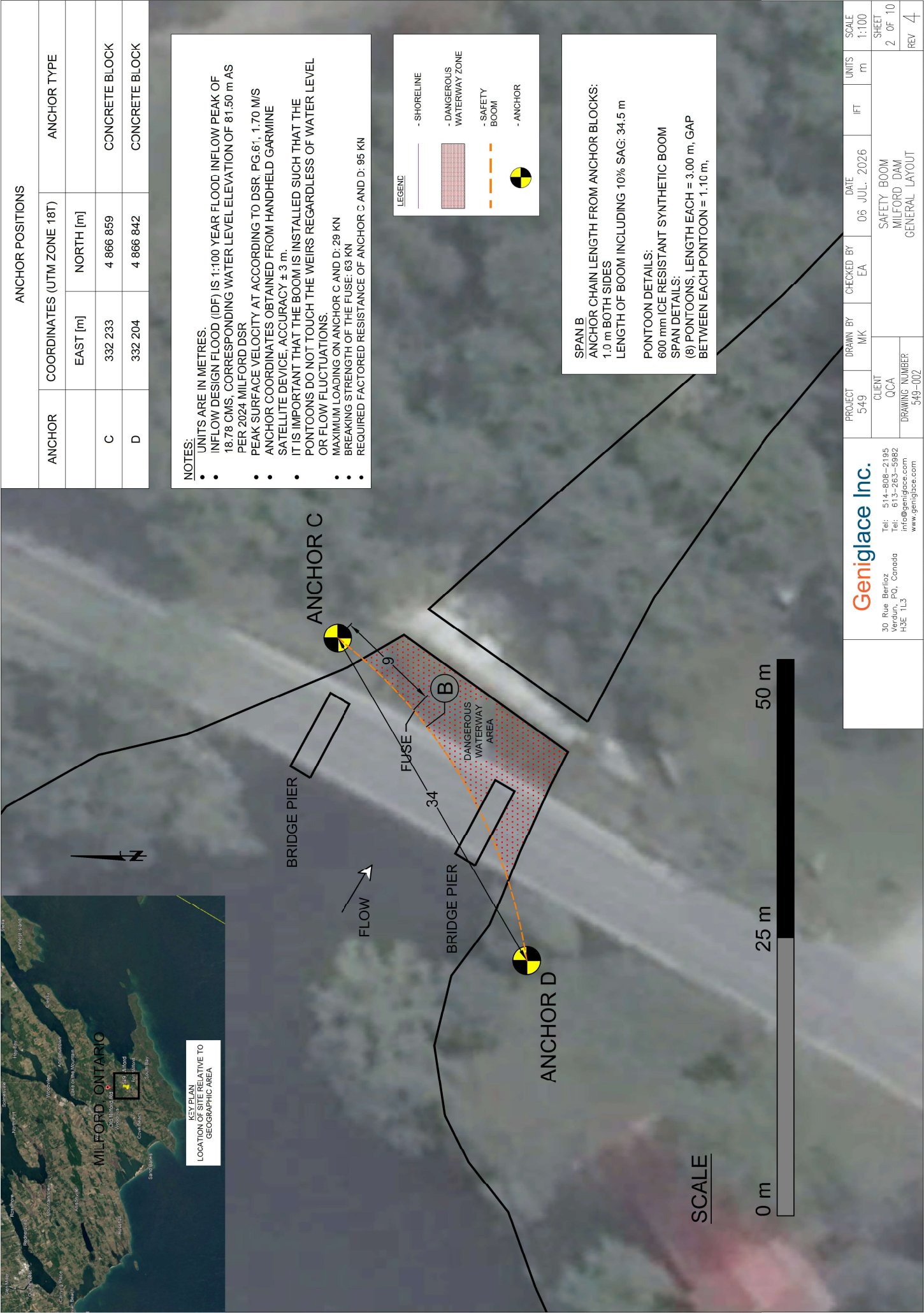
NOTES:

- UNITS ARE IN METRES.
- INFLOW DESIGN FLOOD (IDF) IS 1:100 YEAR FLOOD INFLOW PEAK OF 18.78 CMS, CORRESPONDING WATER LEVEL ELEVATION OF 81.50 m AS PER 2024 MILFORD DSR
- PEAK SURFACE VELOCITY AT ACCORDING TO DSR PG.61, 1.70 M/S
- ANCHOR COORDINATES OBTAINED FROM HANDHELD GARMIN SATELLITE DEVICE, ACCURACY ± 3 m.
- IT IS IMPORTANT THAT THE BOOM IS INSTALLED SUCH THAT THE PONTOONS DO NOT TOUCH THE WEIRS REGARDLESS OF WATER LEVEL OR FLOW FLUCTUATIONS.
- MAXIMUM LOADING ON ANCHOR C AND D: 29 KN
- BREAKING STRENGTH OF THE FUSE: 63 KN
- REQUIRED FACTORED RESISTANCE OF ANCHOR C AND D: 95 KN



SPAN B
ANCHOR CHAIN LENGTH FROM ANCHOR BLOCKS:
1.0 m BOTH SIDES
LENGTH OF BOOM INCLUDING 10% SAC: 34.5 m

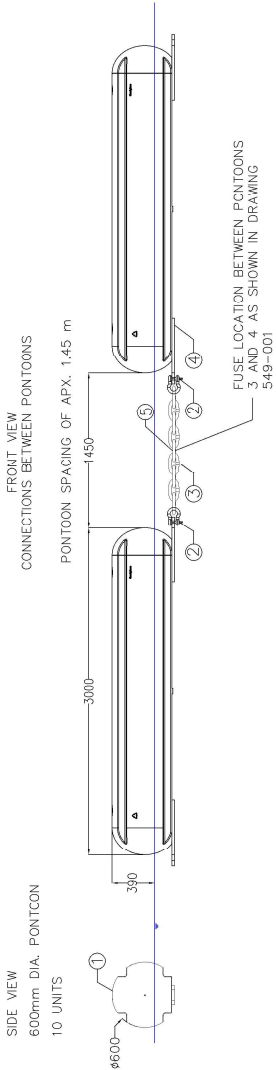
PONTOON DETAILS:
600 mm ICE RESISTANT SYNTHETIC BOOM
SPAN DETAILS:
(8) PONTOONS, LENGTH EACH = 3.00 m, GAP BETWEEN EACH PONTOON = 1.10 m,



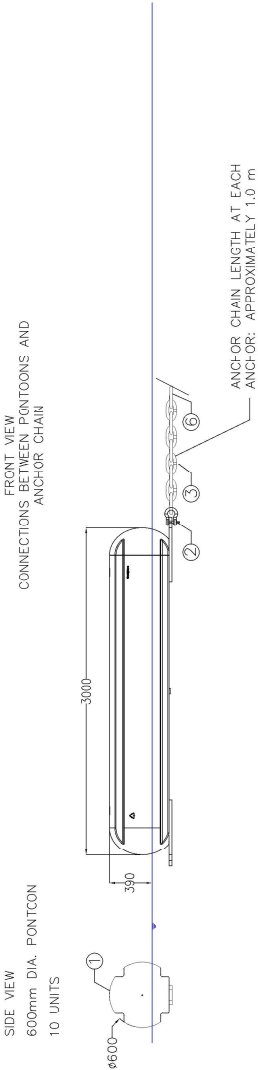
Geniglace Inc.				30 Rue Berlioz Verdun, PQ, Canada H3E 1L3		Tel: 514-808-2195 Tel: 613-263-5982 info@geniglace.com www.geniglace.com					
PROJECT 549		DRAWN BY MK		CHECKED BY EA		DATE 05 JUL. 2026		UNITS m		SCALE 1:100	
CLIENT QCA				SAFETY BOOM MILFORD DAM GENERAL LAYOUT							
DRAWING NUMBER 549-002											
								SHEET 2 OF 10		REV 4	

PONTOON CONNECTION DETAILS

PONTOON DETAILS



PONTOON DETAILS



TOP VIEW



LIST OF MATERIAL					
DRAWING REFERENCE	ITEM NO.	DESCRIPTION	TYPE	QUANTITY	TOTAL QUANTITY
549-007, 549-008	1	600 mm DIAMETER SYNTHETIC ROTOMOLDED PONTOON OR APPROVED EQUIVALENT	CUSTOM	COLEBROOK: 10 MILFORD: 18 TOTAL: 28	COLEBROOK: 10 MILFORD: 8 TOTAL: 18
549-007, 549-008, 549-010	2	25 mm VAN BEEST BOLT TYPE GREEN PIN SHACKLE G-4165 OR APPROVED EQUIVALENT	OFF THE SHELF	COLEBROOK: 22 MILFORD: 18 TOTAL: 40	COLEBROOK: 28 MILFORD: 22 TOTAL: 50
549-007, 549-008, 549-010	3	22 mm GRADE 80 MID-LINK CHAIN, PAINTED BLACK, OR APPROVED EQUIVALENT	OFF THE SHELF	COLEBROOK: 11 SECTIONS @ 1.3 m, 2 SECTIONS @ 1 m MILFORD: 9 SECTIONS @ 1.0 m, 2 SECTIONS @ 1 m	COLEBROOK: 11 SECTIONS @ 1.3 m, 2 SECTIONS @ 1 m MILFORD: 9 SECTIONS @ 1.0 m, 2 SECTIONS @ 1 m
549-007, 549-008	4	PONTOON EXTERNAL PLATE	CUSTOM	COLEBROOK: 20 MILFORD: 16 TOTAL: 36	COLEBROOK: 20 MILFORD: 16 TOTAL: 36
549-007	5	14 mm F3125 GRADE A325 TYPE 1 FUSE LINK WITH A RATED CAPACITY OF 203 KN	CUSTOM	COLEBROOK 1	COLEBROOK: 2
549-008	6	8 mm F3125 GRADE A325 TYPE 1 FUSE LINK WITH A RATED CAPACITY OF 63 KN	CUSTOM	MILFORD: 1	MILFORD: 2
549-007, 549-008, 549-010	7	25 mm GRADE 80 OCEAN BRAND HAMMERLOCK OR APPROVED EQUIVALENT	OFF THE SHELF	COLEBROOK: 2 MILFORD: 2 TOTAL: 4	COLEBROOK: 4 MILFORD: 4 TOTAL: 8
549-009	8	TIDAL TDL-0.89M-BE PILLAR BUOY	OFF THE SHELF	CATON: 1 DOWNEY: 1 UPPER ARDEN: 1	CATON: 1 DOWNEY: 1 UPPER ARDEN: 1
549-009, 549-010	9	16 mm GRADE 80 MID-LINK CHAIN, PAINTED BLACK, OR APPROVED EQUIVALENT	OFF THE SHELF	CATON: 4.0 m DOWNEY: 4.0 m UPPER ARDEN: 5.0 m	CATON: 4.0 m DOWNEY: 4.0 m UPPER ARDEN: 5.0 m
549-009, 549-010	10	25 mm DIA. 300 mm LENGTH GRADE 80 OCEAN BRAND EYE-BOLT, EPOXIED INTO GRAVITY ANCHOR	OFF THE SHELF	COLEBROOK: 2 MILFORD: 2 CATON: 1 DOWNEY: 1 UPPER ARDEN: 1	COLEBROOK: 2 MILFORD: 2 CATON: 1 DOWNEY: 1 UPPER ARDEN: 1
549-010	11	GRAVITY ANCHOR, SIZE: 30,800 KG DRY (SUGGESTED DIMENSIONS: 4.00 m X 2.00 m X 2.75 m)	CUSTOM	COLEBROOK: 2	COLEBROOK: 2
549-010	12	GRAVITY ANCHOR, SIZE: 9,800 KG DRY (SUGGESTED DIMENSIONS: 2.00 m X 2.00 m X 1.75 m)	CUSTOM	MILFORD: 2	MILFORD: 2
549-009, 549-010	13	GRAVITY ANCHOR, SIZE: 1,370 KG DRY, 800 KG WET (SUGGESTED DIMENSIONS: 0.50 m X 0.85 m X 1.00 m)	CUSTOM	CATON: 1 DOWNEY: 1 UPPER ARDEN: 1	CATON: 1 DOWNEY: 1 UPPER ARDEN: 1

NOTES FOR PONTOONS:

- PIPE AND ROUNDED END CAPS ARE TO BE MADE FROM MDPE. NOVAPOL TRx0338-U(UG) RESIN OR AN APPROVED EQUIVALENT.
- WEIGHT OF EACH PONTOON, INCLUDING INTERNAL AND EXTERNAL STEEL PLATES, IS APX. 200 KG.
- DIAMETER OF EACH PONTOON IS TO BE 600 mm (24").
- THICKNESS OF PLASTIC PONTOON SHELL TO BE 6.35 mm (1/4").
- INTERNAL AND EXTERNAL STEEL ARE TO BE ASTM GRADE 50 OR APPROVED EQUIVALENT.
- INTERNAL STEEL IS HOT DIPPED GALVANIZED.
- EXTERNAL STEEL IS HOT DIPPED GALVANIZED.
- BOLTS ARE A325, GALVANIZED, 12 BOLTS PER PONTOON, OR APPROVED EQUIVALENT.
- PONTOONS ARE TO BE FOAM FILLED, MINIMUM 95%.
- AN ECO FRIENDLY FOAM IS REQUIRED.
- "DANGER - KEEP OUT" AND "DANGER - DEFENCE D'ENTRER" PRINTED IN BLACK ON ALL PONTOONS, ALTERNATING ONE IN ENGLISH, THEN ONE IN FRENCH.

GENERAL NOTES:

- PONTOONS ARE CONNECTED TO THE ANCHOR CHAIN VIA A CUSTOM FABRICATED JUNCTION PLATES.
- HAMMERLOCK ASSEMBLY USED TO CONNECT THE SPAN CABLE TO THE SHORELINE ANCHORS.
- FUSES ARE TO BE CUSTOM FABRICATED. PULL TESTS OF THREE (3) FUSES OF EACH SIZE TO BE PROVIDED WITH HARDWARE PRIOR TO INSTALLATION.

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PROJECT
549

DRAWN BY
MK

CHECKED BY
EA

DATE
06 JUL. 2026

UNITS
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SCALE
1:16

CLIENT
OCA
DRAWING NUMBER
549-007

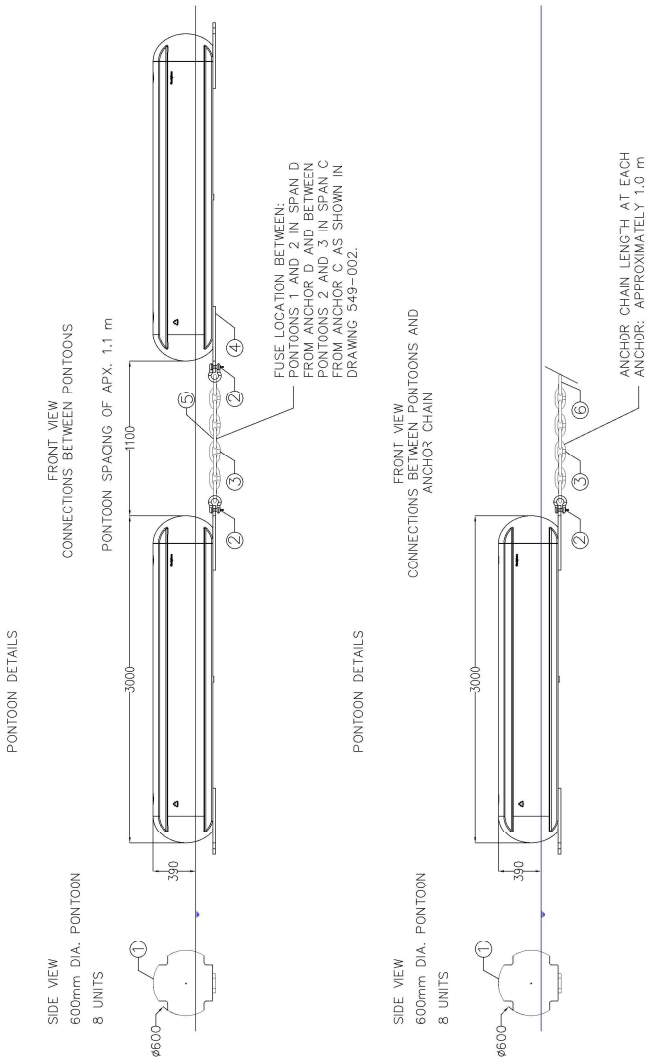
SAFETY BOOM
COLEBROOK DAM
PONTOON DETAILS

IFT

SHEET
7 of 10

REV
4

PONTON CONNECTION DETAILS



TOP VIEW



LIST OF MATERIAL					
DRAWING REFERENCE	ITEM NO.	DESCRIPTION	TYPE	QUANTITY	TOTAL QUANTITY
549-007, 549-008	1	600 mm DIAMETER SYNTHETIC ROTOMOLDED PONTON OR APPROVED EQUIVALENT	CUSTOM	COLEBROOK: 10 MILFORD: 8 TOTAL: 18	COLEBROOK: 10 MILFORD: 8 TOTAL: 18
549-007, 549-008, 549-009, 549-010	2	25 mm VAN BEEST BOLT TYPE GREEN PIN SHACKLE G-4163 OR APPROVED EQUIVALENT	OFF THE SHELF	COLEBROOK: 22 MILFORD: 18 TOTAL: 40	COLEBROOK: 28 MILFORD: 22 TOTAL: 50
549-007, 549-008, 549-010	3	22 mm GRADE 80 MID-LINK CHAIN, PAINTED BLACK, OR APPROVED EQUIVALENT	OFF THE SHELF	COLEBROOK: 11 2 SECTIONS @ 1 m MILFORD: 9 2 SECTIONS @ 1 m TOTAL: 20	COLEBROOK: 11 2 SECTIONS @ 1 m MILFORD: 9 2 SECTIONS @ 1 m TOTAL: 20
549-007, 549-008	4	PONTON EXTERNAL PLATE	CUSTOM	COLEBROOK: 20 MILFORD: 16 TOTAL: 36	COLEBROOK: 20 MILFORD: 16 TOTAL: 36
549-007	5	14 mm F3125 GRADE A325 TYPE 1 FUSE LINK WITH A RATED CAPACITY OF 203 KN	CUSTOM	COLEBROOK: 1	COLEBROOK: 2
549-008	6	8 mm F3125 GRADE A325 TYPE 1 FUSE LINK WITH A RATED CAPACITY OF 63 KN	CUSTOM	MILFORD: 1	MILFORD: 2
549-007, 549-008, 549-010	7	22 mm GRADE 80 OCEAN BRAND HAMMERLOCK OR APPROVED EQUIVALENT	OFF THE SHELF	COLEBROOK: 2 MILFORD: 2 TOTAL: 4	COLEBROOK: 4 MILFORD: 4 TOTAL: 8
549-009	8	TIDAL TDL-0.68M-BE PILLAR BUOY	OFF THE SHELF	CATON: 1 DOWNEY: 1 UPWARD: 1 UPPER ARDEN: 1	CATON: 1 DOWNEY: 1 UPWARD: 1 UPPER ARDEN: 1
549-009, 549-010	9	16 mm GRADE 80 MID-LINK CHAIN, PAINTED BLACK, OR APPROVED EQUIVALENT	OFF THE SHELF	CATON: 4.0 m DOWNEY: 4.0 m LARABY: 5.0 m UPPER ARDEN: 5.0 m TOTAL: 18.0 m	CATON: 4.0 m DOWNEY: 4.0 m LARABY: 5.0 m UPPER ARDEN: 5.0 m TOTAL: 18.0 m
549-009, 549-010	10	25 mm DIA. 300 mm LENGTH GRADE 80 OCEAN BRAND EYE-BOLT, FORGED INTO GRAVITY ANCHOR	OFF THE SHELF	COLEBROOK: 2 MILFORD: 1 CATON: 1 DOWNEY: 1 UPWARD: 1 UPPER ARDEN: 1	COLEBROOK: 2 MILFORD: 1 CATON: 1 DOWNEY: 1 UPWARD: 1 UPPER ARDEN: 1
549-010	11	GRAVITY ANCHOR, SIZE: 30,800 KG DRY (SUGGESTED DIMENSIONS: 4.00 m X 2.00 m X 2.75 m)	CUSTOM	COLEBROOK: 2	COLEBROOK: 2
549-010	12	GRAVITY ANCHOR, SIZE: 8,900 KG DRY (SUGGESTED DIMENSIONS: 2.00 m X 2.00 m X 1.75 m)	CUSTOM	MILFORD: 2	MILFORD: 2
549-009, 549-010	13	GRAVITY ANCHOR, SIZE: 1,370 KG DRY, 800 KG WET (SUGGESTED DIMENSIONS: 0.50 m X 0.85 m X 1.00 m)	CUSTOM	CATON: 1 DOWNEY: 1 UPWARD: 1 UPPER ARDEN: 1	CATON: 1 DOWNEY: 1 UPWARD: 1 UPPER ARDEN: 1

NOTES FOR PONTONS:

- PIPE AND ROUNDED END CAPS ARE TO BE MADE FROM MDPE. NOVAPOL TRA0338-U(UG) RESIN OR AN APPROVED EQUIVALENT.
- WEIGHT OF EACH PONTON, INCLUDING INTERNAL AND EXTERNAL STEEL PLATES, IS APX. 200 KG.
- DIAMETER OF PONTON IS TO BE 600 mm (24").
- THICKNESS OF PLASTIC PONTON SHELL TO BE 6.35 mm (1/4").
- INTERNAL AND EXTERNAL STEEL ARE TO BE ASTM GRADE 50 OR APPROVED EQUIVALENT.
- EXTERNAL STEEL IS HOT DIPPED GALVANIZED.
- BOLTS ARE A325, GALVANIZED, 12 BOLTS PER PONTON, OR APPROVED EQUIVALENT.
- PONTONS ARE TO BE FOAM FILLED, MINIMUM 95%.
- PONTONS ARE TO BE ECO FRIENDLY FOAM IS REQUIRED.
- "DANGER - KEEP OUT" AND "DANGER - DEFENCE D'ENTRER" PRINTED IN BLACK ON ALL PONTONS, ALTERNATING ONE IN ENGLISH, THEN ONE IN FRENCH.

GENERAL NOTES:

- PONTONS ARE CONNECTED TO THE ANCHOR CHAIN VIA A CUSTOM FABRICATED JUNCTION PLATES.
- HAMMERLOCK ASSEMBLY USED TO CONNECT THE SPAN CABLE TO THE SHORELINE ANCHORS.
- FUSES ARE TO BE CUSTOM FABRICATED. PULL TESTS OF THREE (3) FUSES OF EACH SIZE TO BE PROVIDED WITH HARDWARE PRIOR TO INSTALLATION.



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PROJECT
549

DRAWN BY
MK

CHECKED BY
EA

DATE
06 JUL. 2026

UNITS
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SCALE
1:16

CLIENT
QCA

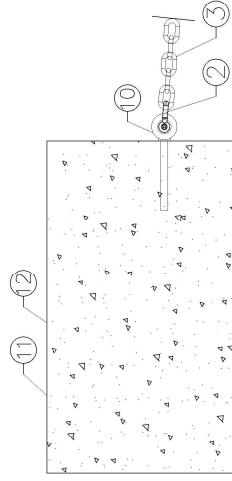
DRAWING NUMBER
549-008

SHEET
8 of 10

REV
4

SAFETY BOOM
MILFORD DAM
PONTON AND BUOY DETAILS

COLEBROOK AND MILFORD ANCHOR DETAILS



NOT TO SCALE

LIST OF MATERIAL

			LIST OF MATERIAL					
DRAWING REFERENCE	ITEM NO.	DESCRIPTION	TYPE	QUANTITY	RECOMMENDED SPARE	TOTAL QUANTITY		
549-007 549-008 549-009	1	600 mm DIAMETER SYNTHETIC ROTOMOLDED PONTON OR APPROVED EQUIVALENT	CUSTOM	COLEBROOK: 10 MILFORD: 8 TOTAL: 18	0	COLEBROOK: 10 MILFORD: 8 TOTAL: 18		
549-007 549-008 549-009 549-010	2	25 mm VAN BIEEST BOLT TYPE GREEN PHN SHACKLE #4163 OR APPROVED EQUIVALENT	OFF THE SHELF	COLEBROOK: 22 MILFORD: 16 TOTAL: 38	0	COLEBROOK: 28 MILFORD: 22 TOTAL: 50		
549-007 549-008 549-010	3	22 mm GRADE 80 MID-LINK CHAIN, PAINTED BLACK, OR APPROVED EQUIVALENT	OFF THE SHELF	COLEBROOK: 11 SECTIONS @ 1 m, 2 MILFORD: 9 SECTIONS @ 1.0 m, 2 SECTIONS @ 1 m	SPARE INCLUDED	COLEBROOK: 11 m, 2 SECTIONS @ 1 m, 2 MILFORD: 9 SECTIONS @ 1.0 m, 2 SECTIONS @ 1 m		
549-007 549-008	4	PONTON EXTERNAL PLATE	CUSTOM	COLEBROOK: 20 MILFORD: 16 TOTAL: 36	0	COLEBROOK: 20 MILFORD: 16 TOTAL: 36		
549-007	5	14 mm F3125 GRADE A325 TYPE 1 FUSE LINK WITH A RATED CAPACITY OF 203 KN	CUSTOM	COLEBROOK: 1	1	COLEBROOK: 2		
549-008	6	8 mm F3125 GRADE A325 TYPE 1 FUSE LINK WITH A RATED CAPACITY OF 63 KN	CUSTOM	MILFORD: 1	1	MILFORD: 2		
549-007 549-008 549-010	7	22 mm GRADE 80 OCEAN BRAND HAMMERLOCK OR APPROVED EQUIVALENT	OFF THE SHELF	COLEBROOK: 2 MILFORD: 2 TOTAL: 4	4	COLEBROOK: 4 MILFORD: 2 TOTAL: 6		
549-009	8	TIDAL TDL-0.89M-BE PILLAR BUOY	OFF THE SHELF	CATON: 1 DOWNEY: 1 LARABY: 1 UPPER ARDEN: 1	0	CATON: 1 DOWNEY: 1 LARABY: 1 UPPER ARDEN: 1		
549-009 549-010	9	16 mm GRADE 80 MID-LINK CHAIN, PAINTED BLACK, OR APPROVED EQUIVALENT	OFF THE SHELF	CATON: 4.0 m DOWNEY: 4.0 m LARABY: 5.0 m UPPER ARDEN: 5.0 m	0	CATON: 4.0 m DOWNEY: 4.0 m LARABY: 5.0 m UPPER ARDEN: 5.0 m		
549-009 549-010	10	25 mm DIA. 300 mm LENGTH GRADE 80 OCEAN BRAND EYE-BOLT, EPOXIED INTO GRAVITY ANCHOR	OFF THE SHELF	COLEBROOK: 2 MILFORD: 2 CATON: 1 DOWNEY: 1 LARABY: 1 UPPER ARDEN: 1	0	COLEBROOK: 2 MILFORD: 2 CATON: 1 DOWNEY: 1 LARABY: 1 UPPER ARDEN: 1		
549-010	11	GRAVITY ANCHOR, SIZE: 30,800 KG DRY (SUGGESTED DIMENSIONS: 4.00 m x 2.00 m x 2.75 m)	CUSTOM	COLEBROOK: 2	0	COLEBROOK: 2		
549-010	12	GRAVITY ANCHOR, SIZE: 9,800 KG DRY (SUGGESTED DIMENSIONS: 2.00 m x 2.00 m x 1.75 m)	CUSTOM	MILFORD: 2	0	MILFORD: 2		
549-009 549-010	13	GRAVITY ANCHOR, SIZE: 1,370 KG DRY, 800 KG WET (SUGGESTED DIMENSIONS: 0.50 m x 0.85 m x 1.00 m)	CUSTOM	CATON: 1 DOWNEY: 1 LARABY: 1 UPPER ARDEN: 1	0	CATON: 1 DOWNEY: 1 LARABY: 1 UPPER ARDEN: 1		

ANCHOR NOTES:

ELEVATION OF ANCHORS TBD DURING CONSTRUCTION WITH GENIPLACE REPRESENTATIVE PRESENT AT SITE. TO BE RECORDED IN THE AS-BUILT DRAWINGS.

TWO WEEKS PRIOR TO CONSTRUCTION, CONTRACTOR TO SUBMIT DRILLING AND INSTALLATION WORK PLAN FOR ENGINEER / OWNER'S APPROVAL. CONTRACTOR IS REQUIRED TO SUBMIT ENVIRONMENTAL MITIGATION MEASURES AS PART OF THEIR WORK PLAN. CONTRACTOR TO ALSO SUBMIT SHOP DRAWINGS DETAILING STRUCTURAL STEEL AND INTERIOR REBAR PLANS FOR CONCRETE BLOCK FABRICATION FOR OWNER APPROVAL PRIOR TO FABRICATION.

 30 Rue Berlioz Verdun, PQ, Canada H3E 1L3 Tel: 514-808-2195 Tel: 613-263-5882 info@geniglace.com www.geniglace.com	PROJECT 549	DRAWN BY MK	CHECKED BY EA	DATE 06 JUL. 2026	UNITS mm	SCALE 1:10
	CLIENT QCA		ANCHOR DETAILS COLEBROOK AND MILFORD DAMS		SHEET 10 OF 10	
	DRAWING NUMBER 549-010		SAFETY BOOMS		REV 4	