

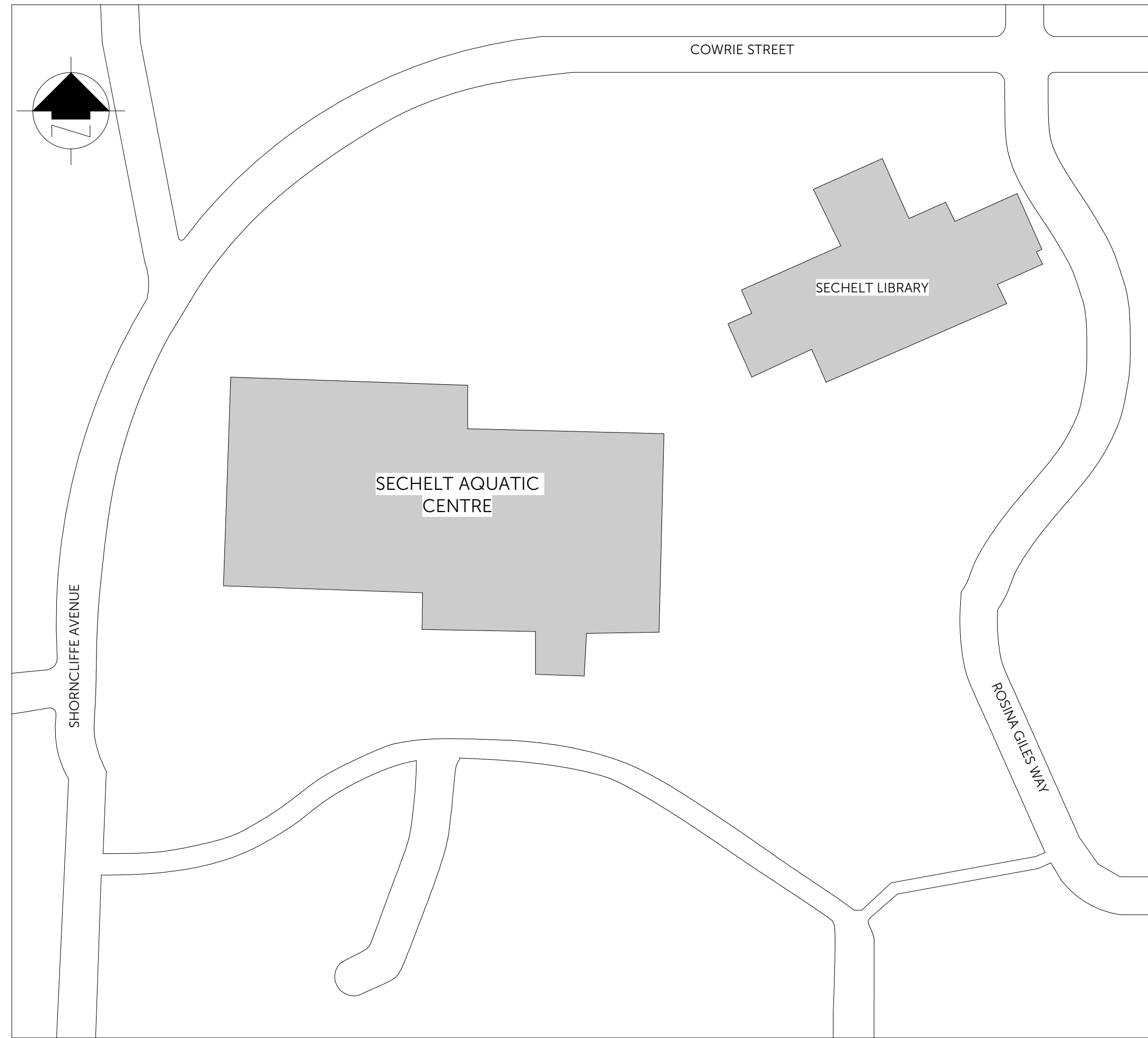
LIGHTING UPGRADE

SECHELT AQUATIC CENTRE

5500 SHORNCLIFFE AVENUE, SECHELT, BC



#200 - 3999 HENNING DRIVE, BURNABY, BC, V5C 6P9
PHONE: 604-255-0992 / FAX: 604-255-1054



1 SITE PLAN
E-001 SCALE: 1: 600

DRAWING LIST	
SHEET NO.	SHEET TITLE
E-001	COVER SHEET
E-101	FLOOR PLAN WEST
E-102	FLOOR PLAN EAST
E-201	LIGHTING AND PANEL SCHEDULE
E-301	NATATORIUM ELEVATION AND ANCHORAGE DETAILS
E-501	NATATORIUM ILLUMINANCE SIMULATION

PROJECT DATA GENERAL PROPERTY INFORMATION:	
CIVIC ADDRESS:	5500 SHORNCLIFFE AVENUE, SECHELT, BC
PID:	008-246-009
PLAN:	BLOCK 7, PLAN VAP6457, DISTRICT LOT 303, GROUP 1
AHJ:	DISTRICT OF SECHELT
APPLICABLE CODE:	BRITISH COLUMBIA BUILDING CODE (BCBC 2024)
STANDARDS:	CSA C22.1:24 CANADIAN ELECTRICAL CODE (CEC 26TH EDITION) ILLUMINATING ENGINEERING SOCIETY - THE LIGHTING HANDBOOK (10TH EDITION)

SCOPE OF WORK	
1.	REPLACEMENT OF TWENTY-EIGHT (28) LUMINAIRES WITH TWENTY-TWO (22) NEW LUMINAIRES IN THE AQUATIC CENTRE NATATORIUM (POOL ROOM).
2.	REPLACEMENT OF EXISTING NATATORIUM CABLES WITH NEW STAINLESS STEEL, CORROSION RESISTANT CABLES.
3.	REPLACEMENT OF LIGHTING THROUGHOUT BUILDING INCLUDING LOCKER ROOM, OFFICES, COMMUNITY ROOM AND MECHANICAL ROOMS. REPLACEMENT OF WALL SWITCHES WITH DIMMER SWITCHES, OCCUPANCY SWITCHES, AND/OR COLOUR TUNABLE SWITCHES.
4.	RETAIN ALL EXISTING BRANCH WIRING, CIRCUIT BREAKERS, SURFACE MOUNT EMT CONDUIT, JUMPER CABLES, AND CEILING MOUNTED JUNCTION BOXES. REPLACE ANY WIRING OR CONDUIT DAMAGED DURING CONSTRUCTION. INSTALL ADDITIONAL WIRING FOR DIMMING, OCCUPANCY AND COLOUR TUNABLE CONTROL AS NECESSARY.
5.	COORDINATION WITH PROPERTY MANAGERS FOR CONSTRUCTION TIMING, TO COINCIDE WITH ANNUAL MAINTENANCE PERIOD WHEN THE NATATORIUM IS SHUT DOWN

PROJECT TEAM

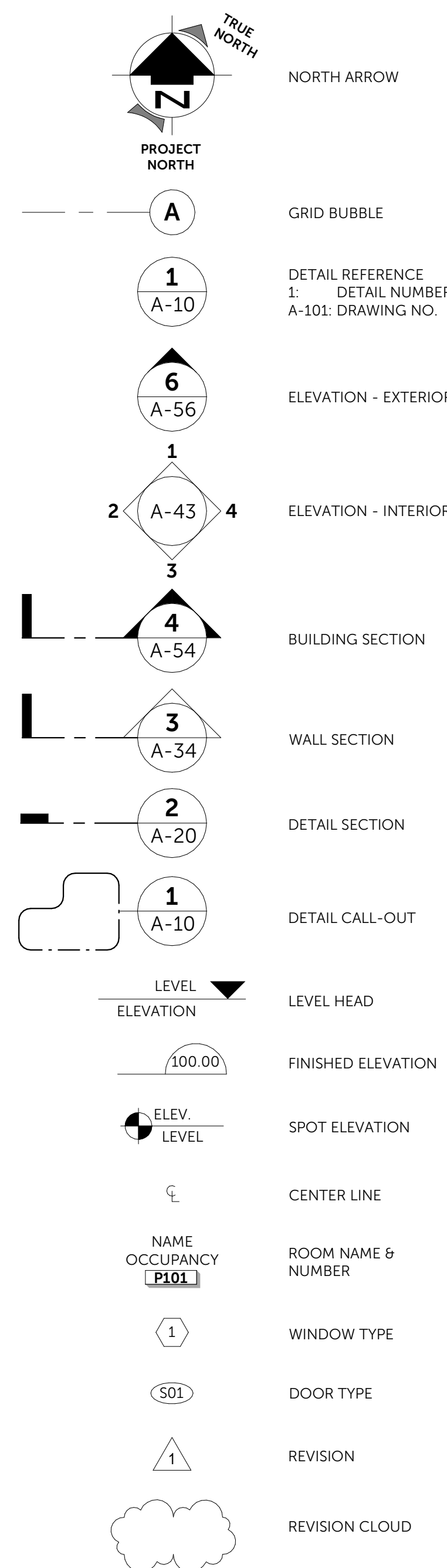
CLIENT
SUNSHINE COAST REGIONAL DISTRICT
1975 FIELD ROAD, SECHELT, BC

CONSULTANT
MCCUAIG & ASSOCIATES ENGINEERING LTD.
200-3999 HENNING DRIVE, BURNABY, BC V5C 6P9

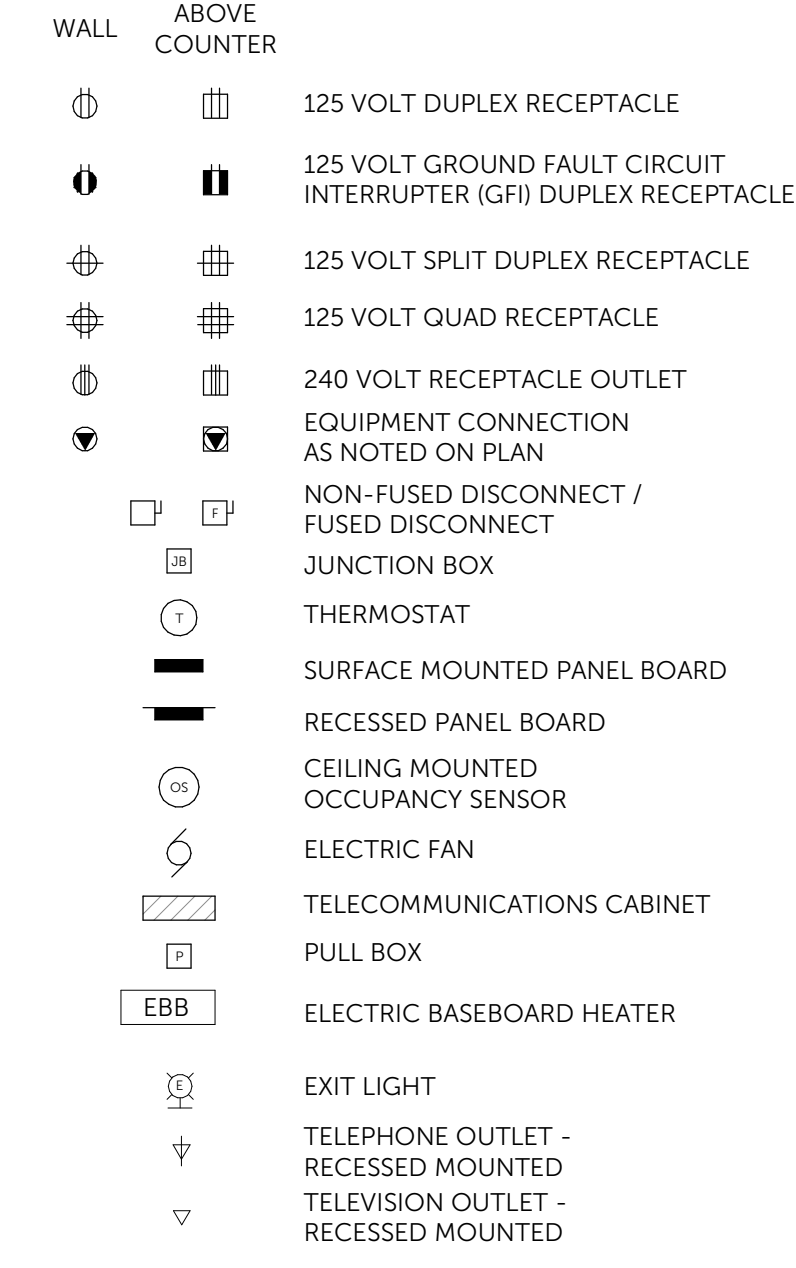
ABBREVIATION

A	AMPERE
AFF	ABOVE FINISHED FLOOR
AT	AMPERE TRIP
AF	AMPERE FRAME
AF	ABOVE FINISHED FLOOR
AL	ALUMINIUM
AWG	AMERICAN WIRE GUIDE
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CONC.	CONCRETE
CONT.	CONTINUOUS
CU	COPPER
C/W	COMPLETE WITH
DIA.	DIAMETER
DRY	DRYER
DW	DISHWASHER
EC	EMPTY CONDUIT
EL	ELEVATION
EQ	EQUAL
ER	EXISTING TO REMAIN
EXT	EXTERIOR
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FSS	FUSED SAFETY SWITCH
GALV	GALVANISED
GFI, GFCI	GROUND FAULT INTERRUPTER
GND	GROUND
HP	HORSEPOWER
IG	ISOLATED GROUND
KW	KILOWATT
KVA	KILO VOLT AMPERES
MCA	MINIMUM CIRCUIT AMPACITY
MIN	MINIMUM
MAX	MAXIMUM
MW	MICROWAVE
REF	REFRIGERATOR
RH	RANGEHOOD
MCB	MAIN CIRCUIT BREAKER
MH	MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTG	MOUNTING
N	NEUTRAL
P	POLE OR PHASE
PL	PROPERTY LINE
PNL	PANELBOARD
PP	POWER POLE
QTY	QUANTITY
REC	RECESSED
RL	RELOCATE EXISTING DEVICE
RM	REMOVE EXISTING DEVICE
RR	REMOVE AND REPLACE WITH NEW DEVICE
T.B.C.	TO BE CONFIRMED
T/O	TOP OF
T.B.D.	TO BE DETERMINED
TEMP	TEMPERATURE
U/G	UNDERGROUND
V	VOLTAGE / VOLTS
W	WATTS
W	WITH
WM	WASHING MACHINE
WP	WATERPROOF
XFMR	TRANSFORMER

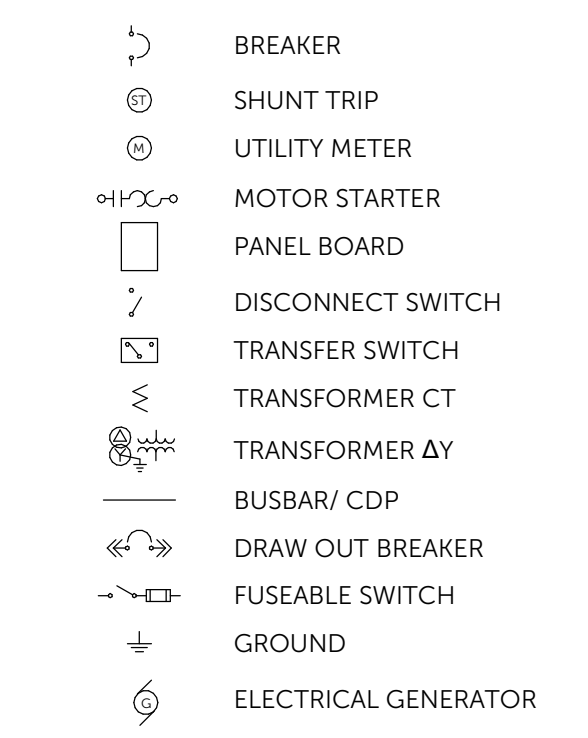
GENERAL DRAFTING SYMBOLS



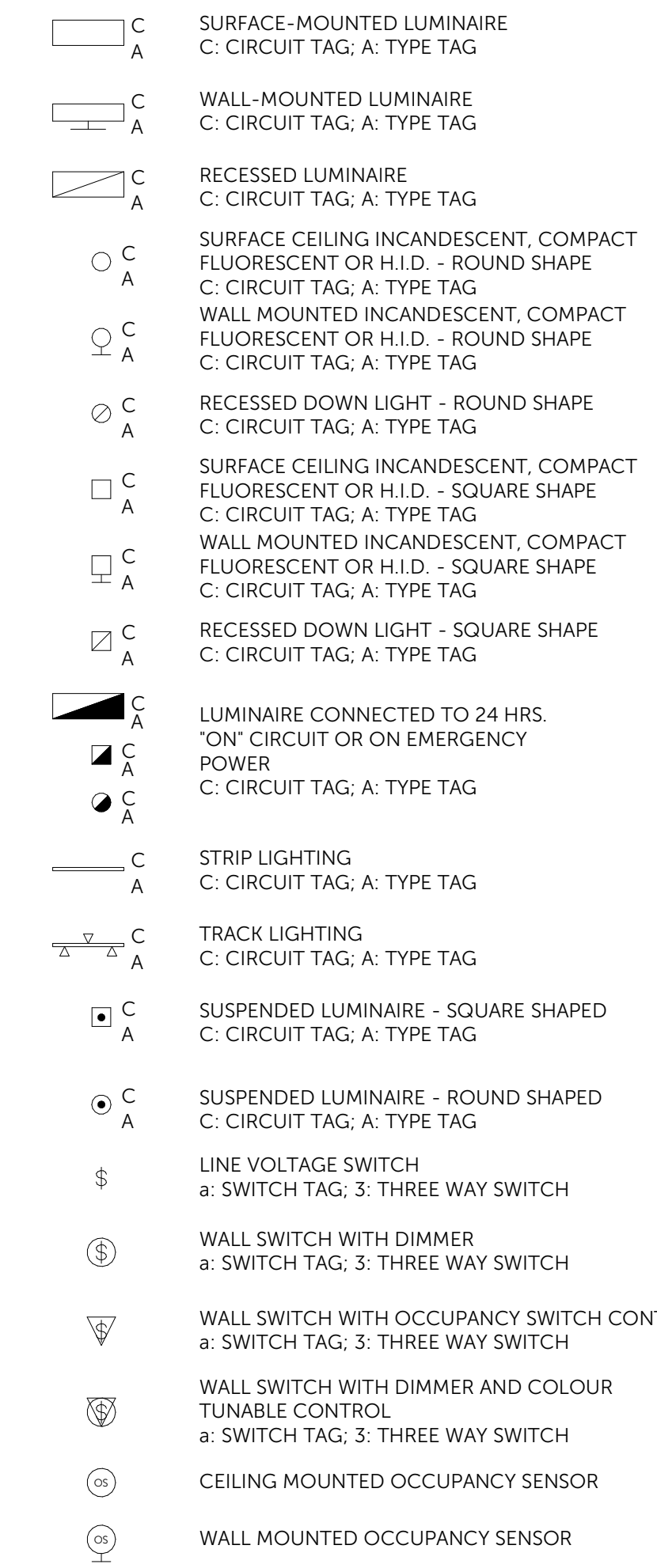
ELECTRICAL LEGEND



SINGLE LINE SYMBOL LEGEND



LUMINAIRE LEGEND



ONLY VALID FOR TENDER WHEN SEALED AND SIGNED.

PERMIT TO PRACTICE NO. (BC): 1002833

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6	ISSUED FOR TENDER ADDENDUM #2	2026/03/09
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4	ISSUED FOR PERMIT	2025/11/17
3	ISSUED FOR 100% CLIENT REVIEW #2	2025/10/28
2	ISSUED FOR 100% CLIENT REVIEW	2025/09/12
1	ISSUED FOR 75% CLIENT REVIEW	2025/02/24

SUNSHINE COAST REGIONAL DISTRICT
1975 FIELD ROAD,
SECHELT, BC

PROJECT TITLE
LIGHTING UPGRADE
SECHELT AQUATIC CENTRE
5500 SHORNCLIFFE AVENUE, SECHELT, BC

CHECKED BY	CS	DRAWN BY	MJM
SCALE	As indicated	DATE	2025/02/24

DRAWING TITLE
COVER SHEET

SHEET NO.	PROJECT NUMBER
E-001	2411.013
	REVISION NO.
	6



#200 - 3999 HENNING DRIVE, BURNABY, BC, V5C 6P9
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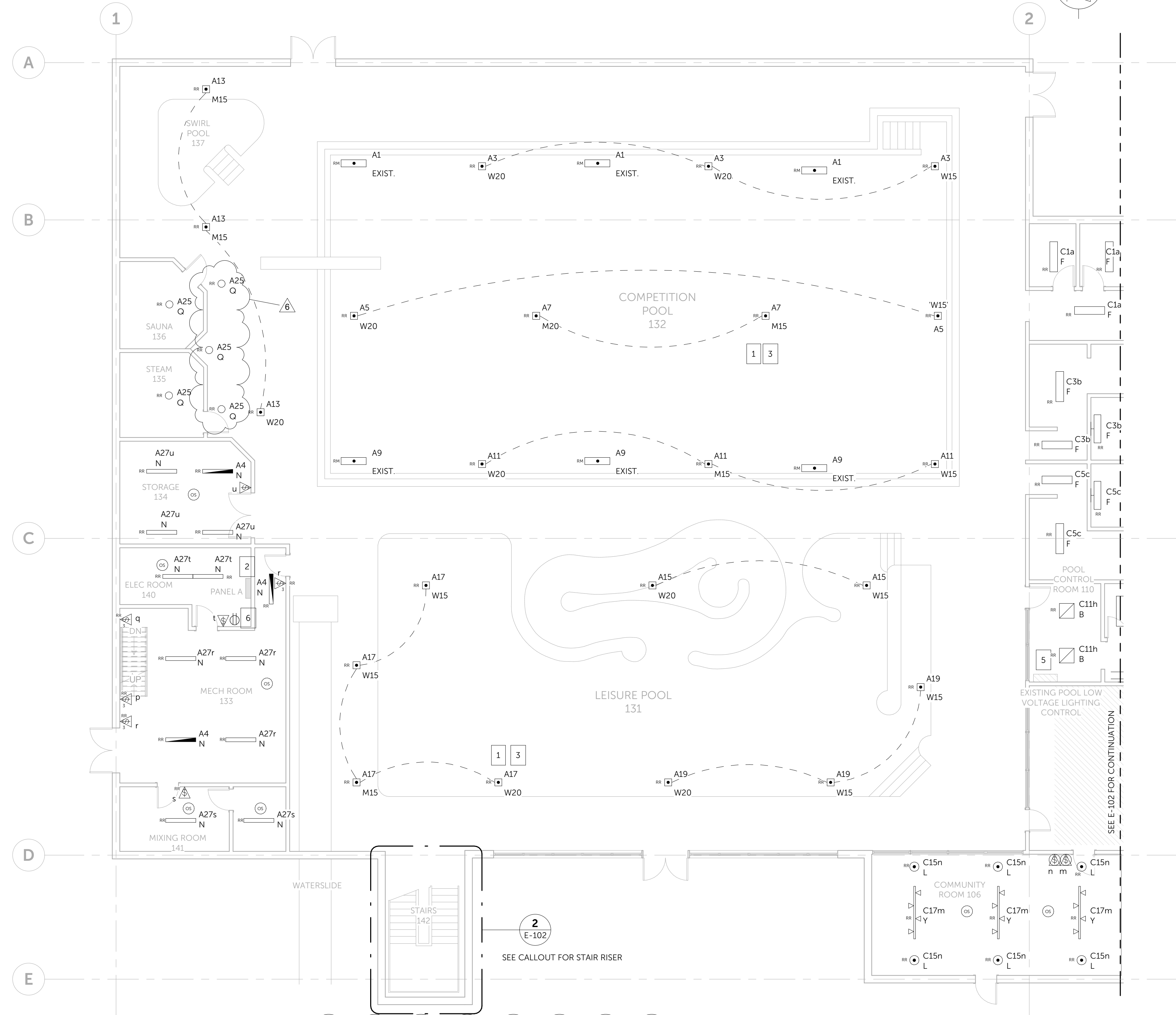
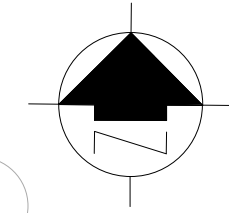
CLIENT
SUNSHINE COAST REGIONAL DISTRICT
1975 FIELD ROAD,
SECHLT, BC

PROJECT TITLE
LIGHTING UPGRADE
SECHLT AQUATIC CENTRE
5500 SHORNCLEFFE AVENUE, SECHLT, BC

CHECKED BY: **CS** DRAWN BY: **MJM**
SCALE: **As indicated** DATE: **2026/03/09**

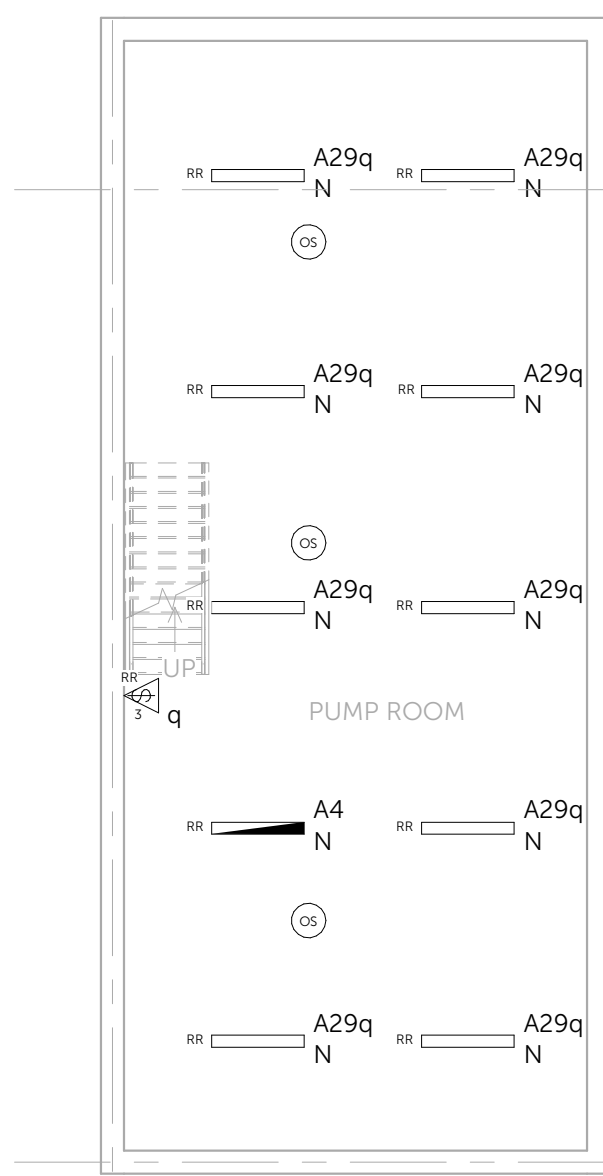
DRAWING TITLE
FLOOR PLAN WEST

SHEET NO: **E-101** PROJECT NUMBER: **2411.013**
REVISION NO: **6**



1 GROUND FLOOR WEST
E-101 SCALE: 1:100

3 MECHANICAL MEZZANINE
E-101 SCALE: 1:100



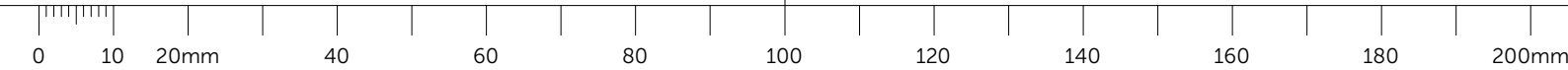
2 BASEMENT PUMP ROOM
E-101 SCALE: 1:100

- GENERAL NOTES:**
- ELECTRICAL DRAWINGS DO NOT INDICATE ALL CONDUITS, PULL BOXES, JUNCTION BOXES AND OTHER MATERIALS.
 - PROVIDE CONCEALED INSTALLATION OF CONDUIT, EQUIPMENT, AND DEVICES IN ALL SPACES UNLESS OTHERWISE INDICATED.
 - ALL CIRCUITING IS DIAGRAMMATIC.
 - CONTRACTOR TO VERIFY FLOOR PLAN DIMENSIONS ON SITE.
 - ALL NEW CABLES, JUNCTION BOXES, KNOCKOUT FILLERS, COVER PLATES AND OTHER MATERIALS WILL BE PAINTED TO MATCH EXISTING IN NATATORIUM.
 - PATCH AND MAKE GOOD DRYWALL AND AREA SURROUNDING LIGHTS AFFECTED BY REMOVAL AND INSTALLATION.

KEY NOTES

- CONTRACTOR TO REMOVE EXISTING NATATORIUM LINEAR FLUORESCENT LUMINAIRES. CONTRACTOR TO INSTALL NEW HIGH BAY LED LUMINAIRES PER LIGHTING SCHEDULE AND PLAN LAYOUT. LIGHTING SWITCHES AND LIGHTING RELAYS TO REMAIN.
- CONTRACTOR TO USE EXISTING 120V BRANCH CIRCUITS. TO REUSE AND RETAIN ALL BRANCH WIRING AND JUNCTION BOXES. NOTE: PANEL AND WIRING SCHEDULE PRESENTED BASED ON AS BUILT RECORDS. CONTRACTOR TO VERIFY CIRCUIT SCHEDULE AND INFORM CONSULTANT OF ANY DISCREPANCIES.
- CONTRACTOR TO REMOVE EXISTING NATATORIUM SUPPORT CABLES FROM ROOF ANCHORAGE. TO INSTALL STAINLESS STEEL AIRCRAFT CABLES AND SEISMIC RESTRAINT AS PER E-301. TO REUSE EYEBOLT ROOF ANCHORS.
- CONTRACTOR TO REPLACE EXISTING TOGGLE SWITCHES WITH DIMMER SWITCHES, OCCUPANCY SWITCHES AND COLOUR TUNABLE DIMMER SWITCHES PER LIGHTING SCHEDULE. PULL ADDITIONAL CONTROL WIRE FROM SWITCH TO LIGHT AS NECESSARY. REFER TO PROJECT SPECIFICATIONS FOR MORE DETAILS ON LIGHTING CONTROL.
- ALL LOW VOLTAGE POOL LIGHTING CONTROL TO REMAIN - INCLUDES NATATORIUM LIGHTS, SAUNA LIGHT, STEAM ROOM LIGHT AND STAIR 142 LIGHTS.
- CONTRACTOR TO PROVIDE 120V OUTLET FOR LIGHTING CONTROL NETWORK ACCESS MODULE.

NOTE: FIELD VERIFY ALL MEASUREMENTS; DO NOT SCALE OFF DRAWINGS

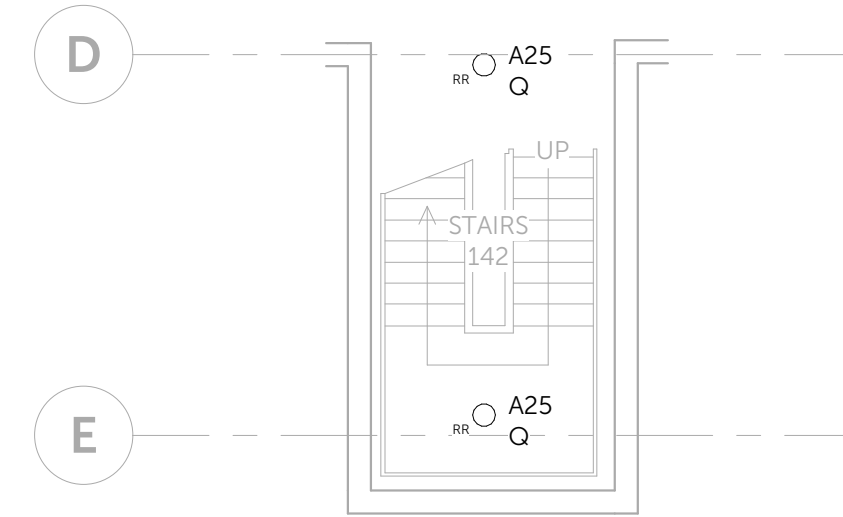




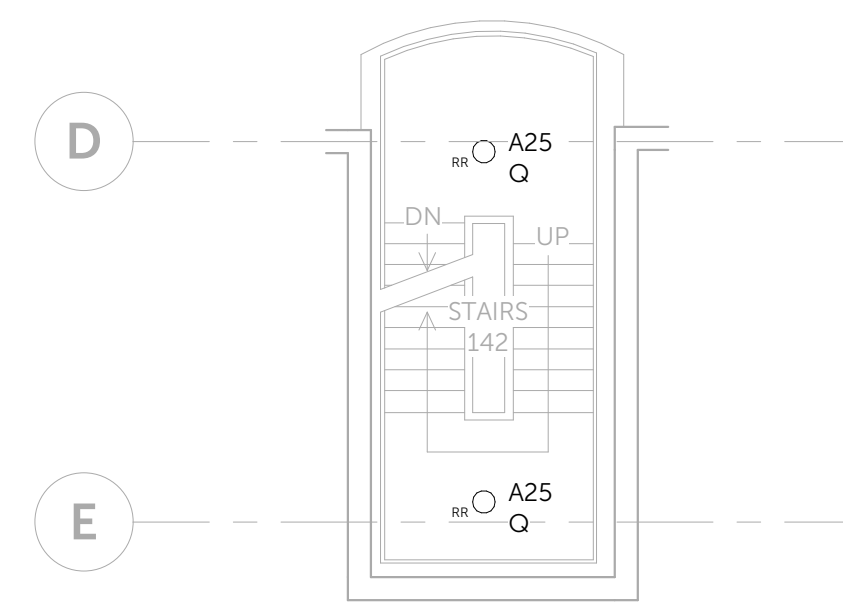
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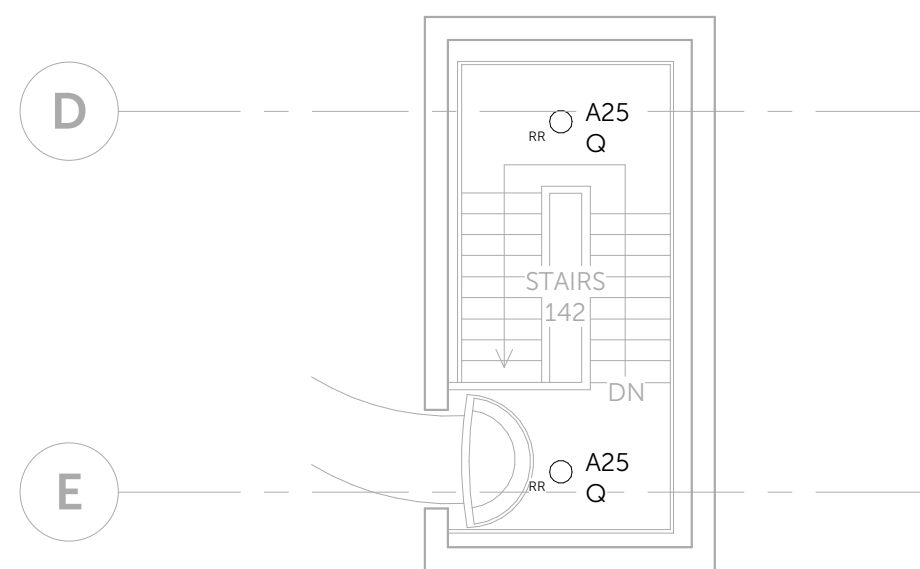
PERMIT TO PRACTICE NO. (BC):
1002833



2 STAIR 142 - LANDING 1
E-102 SCALE: 1:100



3 STAIR 142 - LANDINGS 2 AND 3
E-102 SCALE: 1:100



4 STAIR 142 - LANDING 4 AND SLIDE LEVEL
E-102 SCALE: 1:100



1 GROUND FLOOR EAST
E-102 SCALE: 1:100

GENERAL NOTES:

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LEGEND	
	NOT IN CONTRACT

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CLIENT
SUNSHINE COAST REGIONAL DISTRICT
1975 FIELD ROAD,
SECHLT, BC

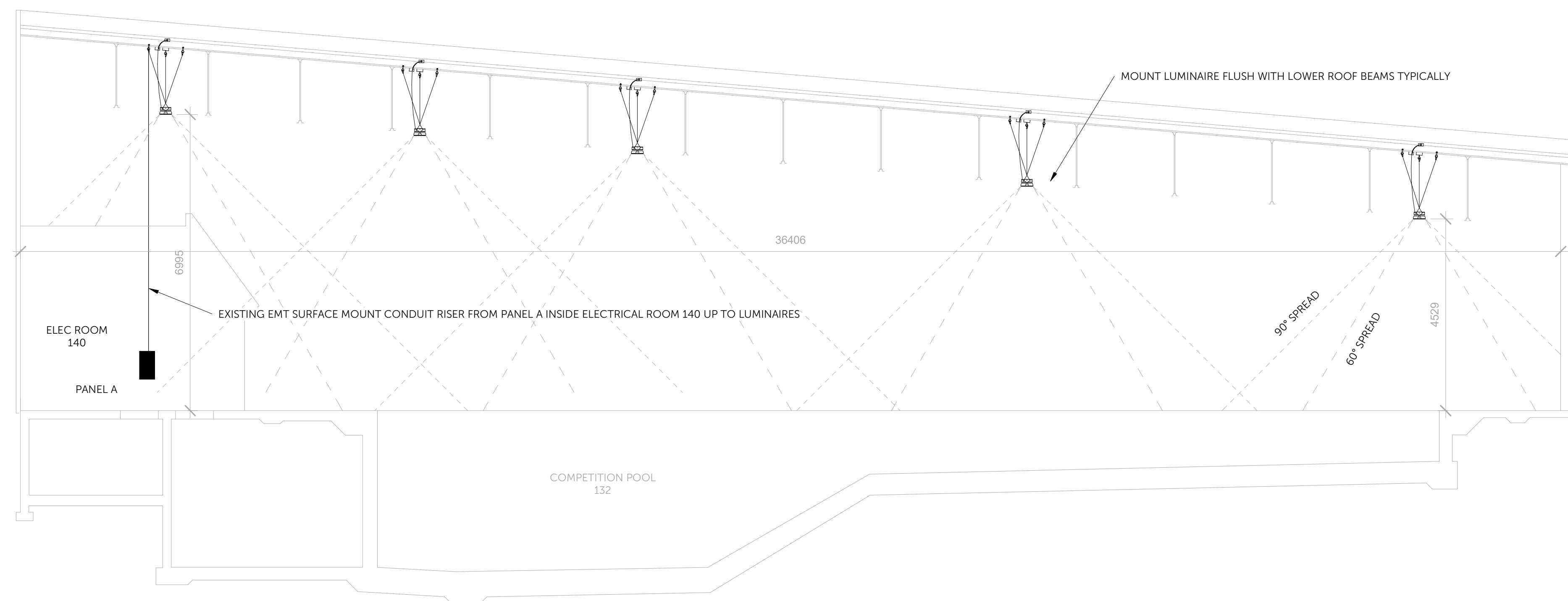
PROJECT TITLE
LIGHTING UPGRADE
SECHLT AQUATIC CENTRE
5500 SHORNCLEIFFE AVENUE, SECHLT, BC

CHECKED BY CS	DRAWN BY MJM
SCALE As indicated	DATE 2026/03/09

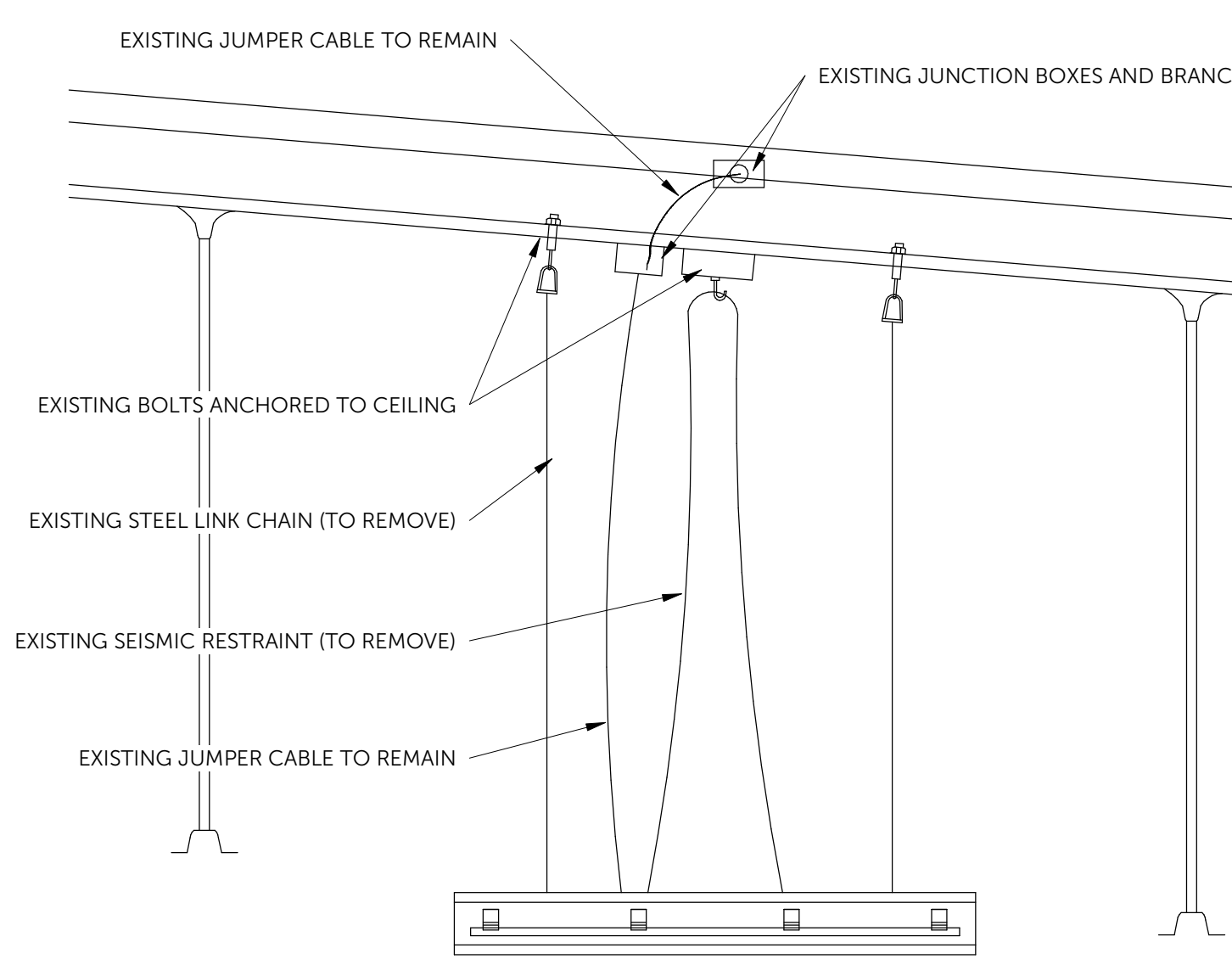
DRAWING TITLE
FLOOR PLAN EAST

SHEET NO. E-102	PROJECT NUMBER 2411.013
	REVISION NO. 6

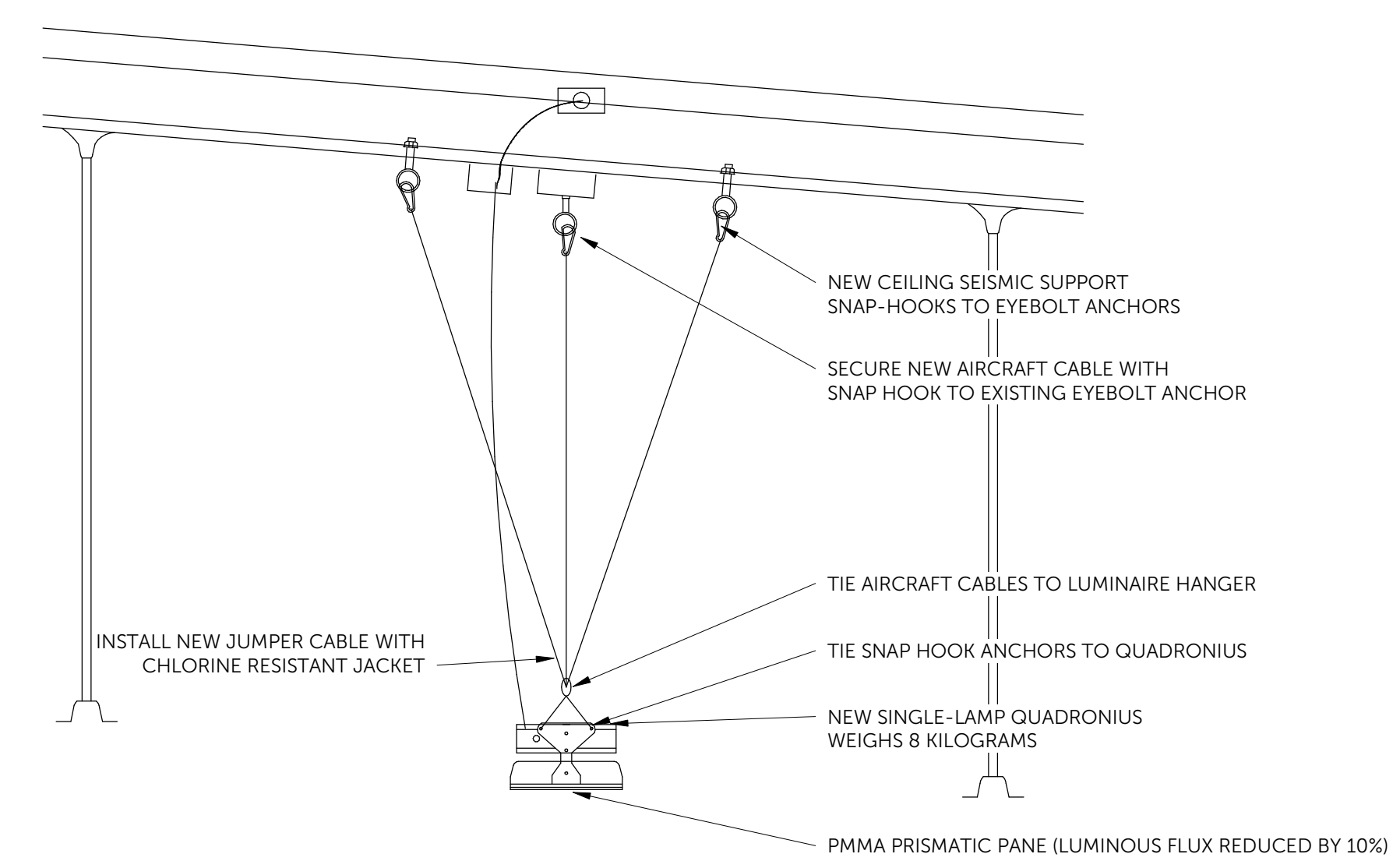
NOTE: FIELD VERIFY ALL MEASUREMENTS. DO NOT SCALE OFF DRAWINGS



1 NATATORIUM ELEVATION
E-301 SCALE: N.T.S.



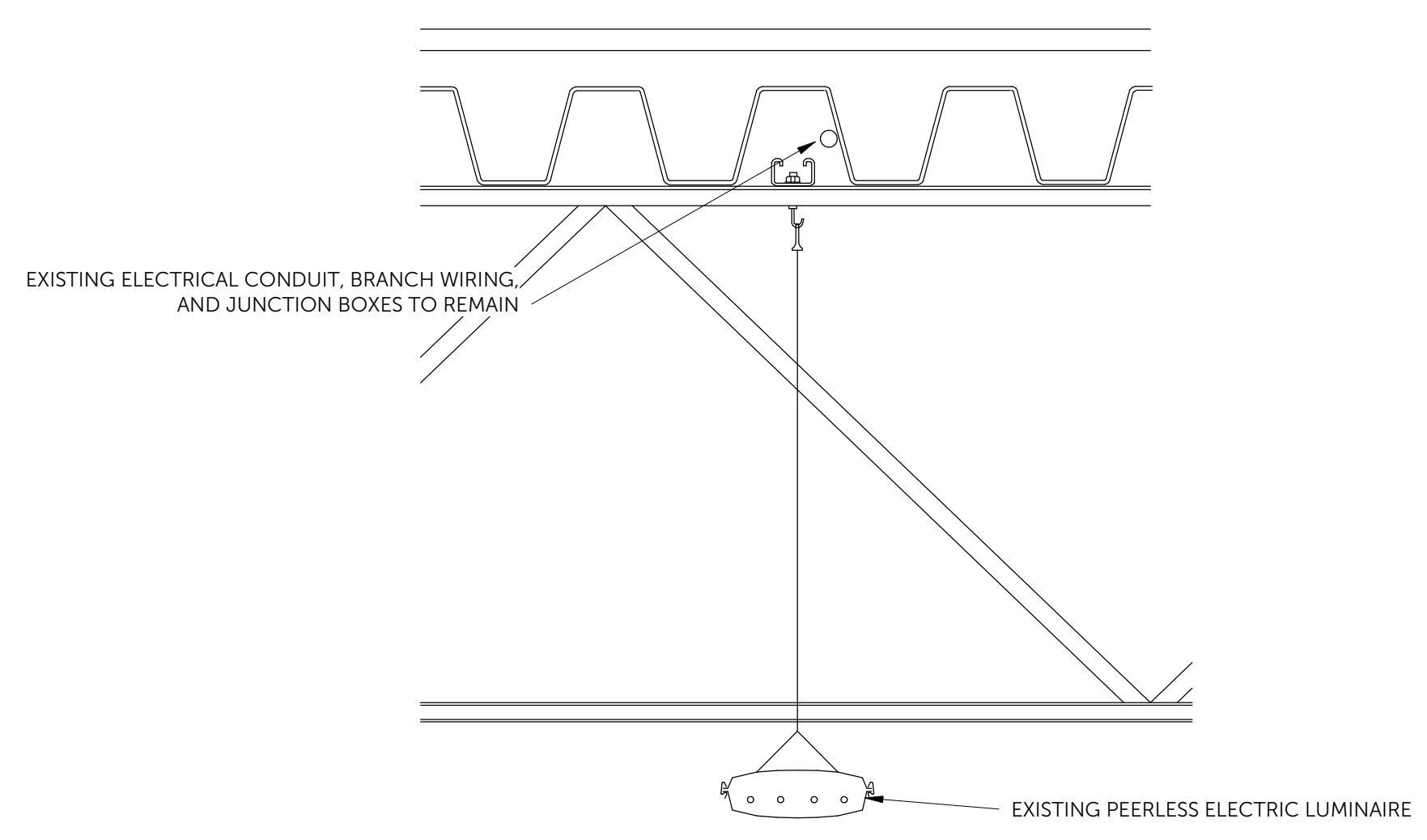
EXISTING PEERLESS ELECTRIC
AQUAPROTECT 4 FLUORESCENT LUMINAIRE
EXISTING
EAST - WEST CUTTHROUGH



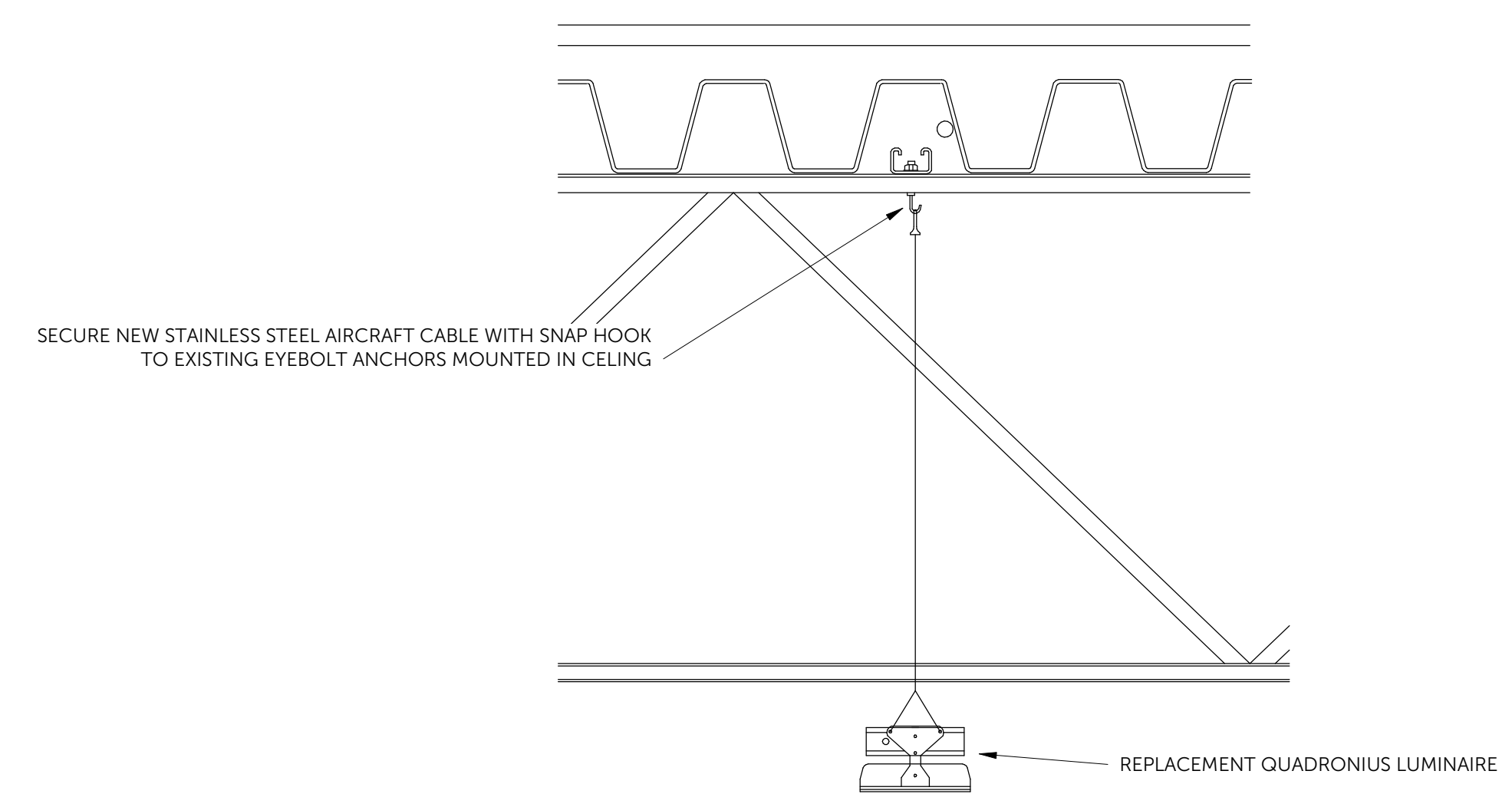
REPLACEMENT PRACT
QUADRONIUS LED LUMINAIRE
PROPOSED
EAST - WEST CUTTHROUGH

- NOTES**
- AIRCRAFT CABLE TO BE UTILITY GRADE STAINLESS STEEL, 1/8", 4X19 STRAND CORE CONSTRUCTION
 - AIRCRAFT CABLE MINIMUM BREAKING STRENGTH = 1760LBS, WORK LOAD LIMIT = 300LBS
 - SECURE AIRCRAFT CABLES WITH STAINLESS STEEL CRIMPING SLEEVES
 - ALL CABLES AND ANCHORS TO BE STAINLESS STEEL UNLESS OTHERWISE NOTED

2 ANCHORAGE DETAIL
E-301 SCALE: N.T.S.



EXISTING
NORTH - SOUTH CUTTHROUGH



PROPOSED
NORTH - SOUTH CUTTHROUGH



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CLIENT
**SUNSHINE COAST
REGIONAL DISTRICT**
1975 FIELD ROAD,
SECHLT, BC

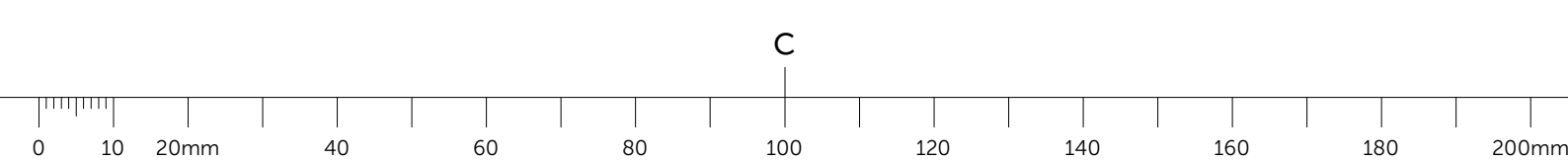
PROJECT TITLE
LIGHTING UPGRADE
SECHLT AQUATIC CENTRE
5500 SHORNCLIFFE AVENUE, SECHLT,
BC

CHECKED BY CS	DRAWN BY MJM
SCALE As indicated	DATE 2025/03/05

DRAWING TITLE
**NATATORIUM ELEVATION
AND ANCHORAGE DETAILS**

SHEET NO. E-301	PROJECT NUMBER 2411.013
	REVISION NO. 6

NOTE: FIELD VERIFY ALL MEASUREMENTS. DO NOT SCALE OFF DRAWINGS



LIGHTING DESIGN CRITERIA	
BUILDING TYPE	SPORTS AND RECREATION (INDOOR)
APPLICATION TASK	SWIMMING WITH FEW SPECTATORS
VIEWING SPECIFIC	WATER SURFACE
BEAM SPREAD	< 45° FROM NADIR - TO REMOVE DIRECT GLARE < 30° FROM NADIR - TO REDUCE WATER REFLECTANCE
COLOR TEMPERATURE	4000 KELVINS (COOL WHITE)
COLOR RENDERING INDEX (CRI)	80
INGRESS PROTECTION	IP66 - DUST TIGHT AND STRONG WATER JET TIGHT
ADDITIONAL PROTECTION	CHLORINE RESISTANT AND VAPOR TIGHT
ILLUMINANCE RECOMMENDATION	
LOWER LIMIT	200 LUX (18 FC) - PRIMARILY DECK AREAS AND PERIMETER
UPPER LIMIT	700 LUX (65 FC) - OVER COMPETITION POOL 500 LUX (45 FC) - OVER LEISURE AND WHIRL POOLS
UNIFORMITY	3:1

FOR POOL RATED LUMINAIRE WITH PRISMATIC PANES - LUMINOUS FLUX REDUCED BY 10% FROM STANDARD

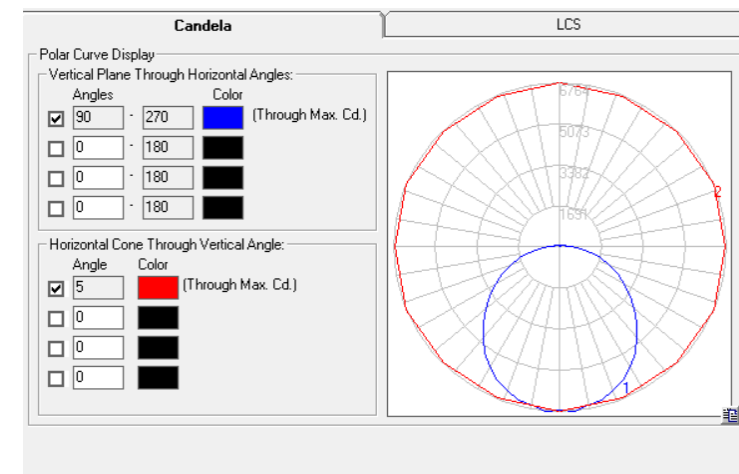
EXISTING LIGHTING SIMULATION IN NATATORIUM

- PEERLESS ELECTRIC AP4 WIDE 20,000 LUMENS
- ILLUMINANCE
AVERAGE = 77 FC, MAX = 99 FC, MIN = 34 FC, MAX/MIN = 2.92

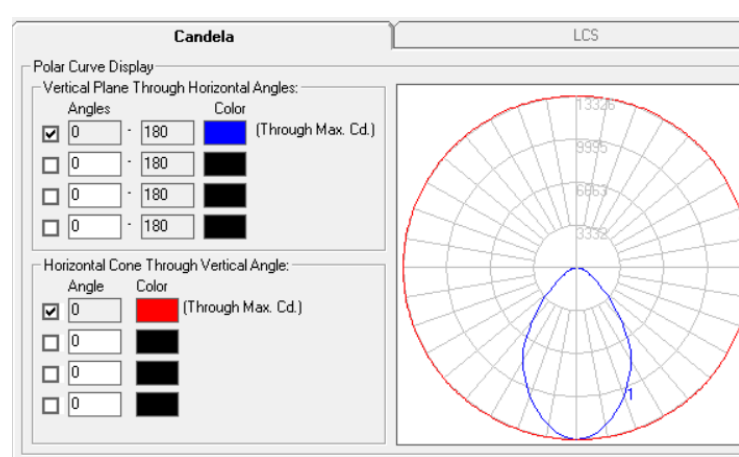
PROPOSED LIGHTING SIMULATION IN NATATORIUM

- REDESIGN EXISTING USING 60 AND 90 BEAM SPREADS AND 15,000LM AND 20,000 LUMEN HIGH BAY LUMINAIRES
- REMOVE 6 LUMINAIRES
- ILLUMINANCE
AVERAGE = 56 FC, MAX = 80 FC, MIN = 21 FC, MAX/MIN = 3.92

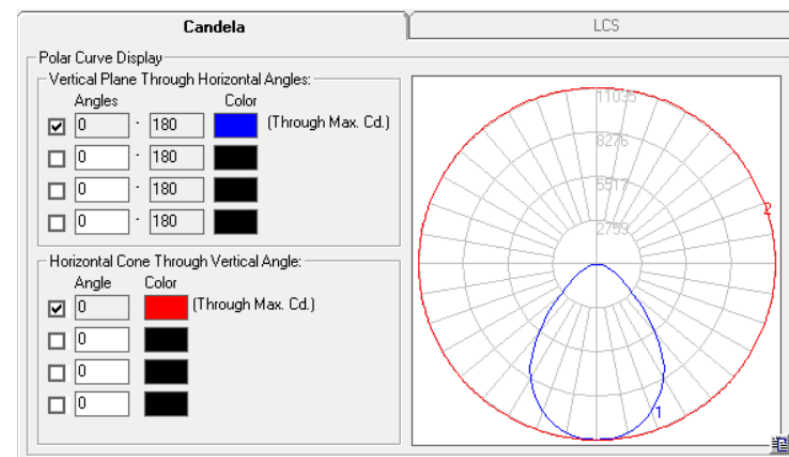
PEERLESS ELECTRIC AP4 POLAR PLOT



PRACHT QUADRONIUS 60° LAMP POLAR PLOT



PRACHT QUADRONIUS 90° LAMP POLAR PLOT



ISOLINE ILLUMINANCE COLOR LEGEND

Isolines For **Illuminance** Enabled

Isolines Properties
Line Width 0.2 ft (0 = Pixel)

Label Isolines: Increment 1 ft Text Size 1 ft Include Units For Labels

Value	Color	Value	Color	Value	Color
100	Red	65	Blue	45	Green
90	Orange	60	Cyan	40	Yellow
80	Red-Orange	55	Cyan	30	Yellow
70	Red	50	Green		

Includes: Illum, Mesopic, Surround-Illum, Vert-Illum, Semi-Illum, and Hemi-Illum



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SUNSHINE COAST REGIONAL DISTRICT
1975 FIELD ROAD,
SECHLT, BC

PROJECT TITLE
LIGHTING UPGRADE

SECHLT AQUATIC CENTRE
5500 SHORNLIFFE AVENUE, SECHLT, BC

CHECKED BY CS	DRAWN BY MJM
SCALE 1:1	DATE 2025/03/05

DRAWING TITLE
NATATORIUM ILLUMINANCE SIMULATION

SHEET NO. E-501	PROJECT NUMBER 2411.013
	REVISION NO. 6

1 ILLUMINANCE SIMULATION
E-501 SCALE: N.T.S.