

INSTITUTE OF OCEAN SCIENCES DEPOT LIGHTING UPGRADES

ISSUED FOR TENDER

DRAWING INDEX		
DRAWING No.	DESCRIPTION	REV
E000	COVER SHEET & DRAWING INDEX	PA
E001	SYMBOL LEGEND, KEY PLAN & GENERAL NOTES	PA
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Rev.	DATE	ISSUE / REVISION DESCRIPTION	DESN	QC	QA
0	18NOV30	ISSUED FOR TENDER	ABS	RA	RA
PA	18NOV23	ISSUED FOR REVIEW	ABS	RC	RC

CLIENT			
PROJECT		INSTITUTE OF OCEAN SCIENCES DEPOT LIGHTING UPGRADES	
TITLE			
COVER SHEET & DRAWING INDEX		SCALE AS SHOWN	REV. 0
PROJECT NUMBER	DRAWING NUMBER	PROJECT NUMBER	DRAWING NUMBER
18440	E000	18440	E000

SYMBOL LEGEND	
POWER	
	JUNCTION BOX (WALL, CEILING, IN GROUND)
	MOTOR
	PANEL - TYPE AS INDICATED
	SURFACE MOUNTED PANEL - TYPE AS INDICATED
	GROUND/BOND BUS BAR
	CONTROLLER CABINET
	CONDUIT STUB
	CONDUIT UP
	CONDUIT DOWN
EQUIPMENT IDENTIFIERS	
	INDICATES DEVICE IS ABOVE COUNTER
	EQUIPMENT IDENTIFIER
	LUMINAIRE TYPE TAG
	DIRECTIONAL LUMINAIRE INDICATOR
LIGHTING	
	WALL MOUNTED FIXTURE
	POLE MOUNTED FIXTURE
	EXISTING LUMINAIRE C/W DAVIT ARM
	PROPOSED LUMINAIRE C/W DAVIT ARM, POLE OR BUILDING MOUNTED AS INDICATED.

LINE TYPE LEGEND	
LINE	DESCRIPTION
	120/240V CONDUIT/CABLE
	347/600V CONDUIT/CABLE
	OVER 600V CONDUIT/CABLE
	COMMUNICATIONS CONDUIT/CABLE
	TECK CONDUIT/CABLE
	IN SLAB CONDUIT/CABLE

ELECTRICAL CIVIL NOTES:

1. ALL CONDUITS SHALL BE VERIFIED USING THE FOLLOWING PROCEDURE:
 1. TO VERIFY INTEGRITY OF CONDUIT PULL THROUGH EACH DUCT A HARD RUBBER MANDREL, NOT LESS THAN 300mm LONG AND OF A DIAMETER 6mm LESS THAN INTERNAL DIAMETER OF DUCT, PRECEDED BY A SWAB OF SUITABLE DIAMETER TO REMOVE SAND, EARTH, AND OTHER FOREIGN MATERIALS.
 2. CLEAN DUCTS BEFORE LAYING. CAP ENDS OF DUCTS DURING CONSTRUCTION AND AFTER INSTALLATION TO PREVENT ENTRANCE OF FOREIGN MATERIALS.
 3. INSTALL PULL LINE AND CAP ENDS OF DUCT USING RUBBER DUCT PLUGS.
2. ALL EMPTY CONDUITS SHALL HAVE A PULL STRING AND SHALL BE CAPPED. PULL STRING SHALL BE POLYPROPYLENE WITH A MINIMUM TENSILE STRENGTH OF 1.1KN.
3. CONDUIT LOCATIONS ARE APPROXIMATE. CONTRACTOR TO INSTALL EACH CONDUIT AS APPROPRIATE FOR EQUIPMENT LOCATIONS.

ELECTRICAL GENERAL NOTES:

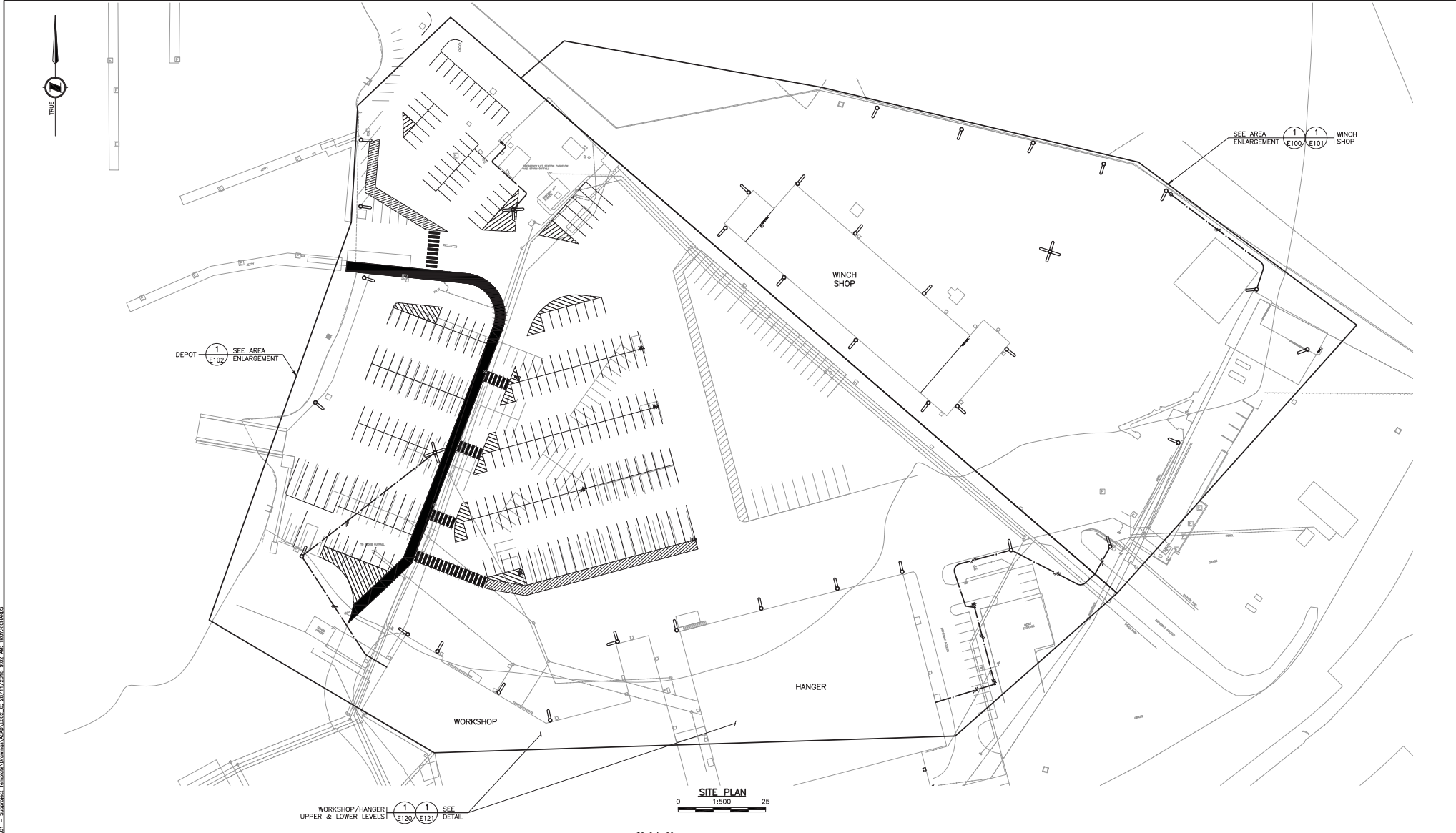
1. NOT ALL SYMBOLS MAY APPEAR ON ALL DRAWINGS.
2. ALL CONCRETE BASES, OUTDOOR LUMINAIRES, AND JB SYMBOLS ARE NOT TO SCALE.
3. COORDINATE ALL WORK WITH OWNER AND CIVIL CONTRACTOR.
4. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
5. CONTRACTOR SHALL READ THESE DRAWINGS AND SPECIFICATIONS IN CONJUNCTION WITH THE CANADIAN ELECTRICAL CODE (CURRENT EDITION) AND THE BC BUILDING CODE (CURRENT EDITION). ALL WORK SHALL BE IN COMPLIANCE WITH THESE CODES.
6. INFORMATION ON THESE DRAWINGS HAS BEEN RECEIVED FROM RECORD INFORMATION PROVIDED BY OTHERS. CONTRACTOR SHALL VISIT THE SITE AND CONFIRM EXACT LOCATIONS OF EQUIPMENT AND CONDUIT ON SITE. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IMMEDIATELY PRIOR TO PERFORMING ANY WORK.
7. ALL IN-GROUND CONDUITS SHALL DRAIN TO JUNCTION BOX.
8. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY BENDS, COUPLINGS, REDUCERS, BELL END FITTINGS, PLUGS, CAPS, AND ADAPTORS OF THE SAME PRODUCT MATERIAL AS THE CONDUIT TO ENSURE A COMPLETE INSTALLATION.
9. ALL MANUFACTURER AND EQUIPMENT LABELS SHALL BE VISIBLE ON COMPLETION OF INSTALLATION.
10. PROVIDE GROUNDING AND BONDING IN COMPLIANCE WITH THE CANADIAN ELECTRICAL CODE. SUPPLY COPIES OF ALL INSPECTION REPORTS TO ENGINEER WITHIN 24 HOURS OF INSPECTION.



						CLIENT					
								INSTITUTE OF OCEAN SCIENCES DEPOT LIGHTING UPGRADES		TITLE SYMBOL LEGEND, KEY PLAN, & GENERAL NOTES	
0	18NOV30	ISSUED FOR TENDER	ABS	RA	RA			SCALE AS SHOWN		PROJECT NUMBER 18440	
PA	18NOV23	ISSUED FOR REVIEW	ABS	RC	RC			DRAWING NUMBER E001		REV. 0	
Rev.	DATE	ISSUE / REVISION DESCRIPTION	DESN	QC	QA						

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PA 18440_02_Depot Lighting Upgrade.dwg - Submitted: Toronto/Downsview/CA/02/02_26.11.2018_8:02 AM TR07010402



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0	18NOV30	ISSUED FOR TENDER	ABS	RA	RA
PA	18NOV23	ISSUED FOR REVIEW	ABS	RC	RC

CLIENT
Canada Fisheries and Oceans

PROJECT
INSTITUTE OF OCEAN SCIENCES DEPOT LIGHTING UPGRADES

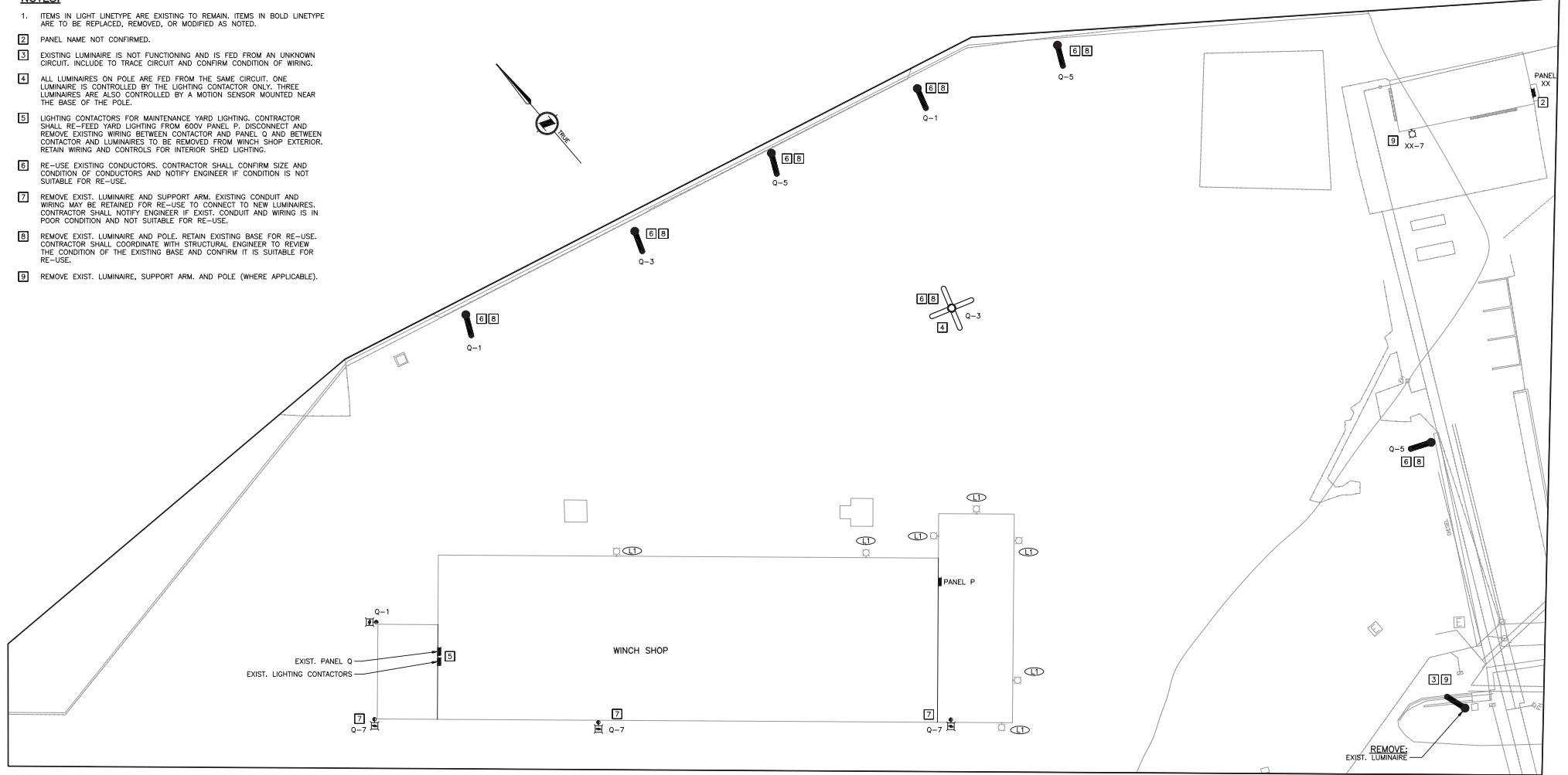
FBX ENGINEERING

TITLE
SITE PLAN

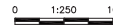
SCALE AS SHOWN	PROJECT NUMBER 18440	DRAWING NUMBER E002	REV. 0
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NOTES:

1. ITEMS IN LIGHT LINETYPE ARE EXISTING TO REMAIN. ITEMS IN BOLD LINETYPE ARE TO BE REPLACED, REMOVED, OR MODIFIED AS NOTED.
2. PANEL NAME NOT CONFIRMED.
3. EXISTING LUMINAIRE IS NOT FUNCTIONING AND IS FED FROM AN UNKNOWN CIRCUIT. INCLUDE TO TRACE CIRCUIT AND CONFIRM CONDITION OF WIRING.
4. ALL LUMINAIRES ON POLE ARE FED FROM THE SAME CIRCUIT. ONE LUMINAIRE IS CONTROLLED BY THE LIGHTING CONTACTOR ONLY. THREE LUMINAIRES ARE ALSO CONTROLLED BY A MOTION SENSOR MOUNTED NEAR THE BASE OF THE POLE.
5. LIGHTING CONTACTORS FOR MAINTENANCE YARD LIGHTING. CONTRACTOR SHALL RE-FEED YARD LIGHTING FROM 600V PANEL P. DISCONNECT AND REMOVE EXISTING WIRING BETWEEN CONTACTOR AND PANEL Q AND BETWEEN CONTACTOR AND LUMINAIRES TO BE REMOVED FROM WINCH SHOP EXTERIOR. RETAIN WIRING AND CONTROLS FOR INTERIOR SHED LIGHTING.
6. RE-USE EXISTING CONDUCTORS. CONTRACTOR SHALL CONFIRM SIZE AND CONDITION OF CONDUCTORS AND NOTIFY ENGINEER IF CONDITION IS NOT SUITABLE FOR RE-USE.
7. REMOVE EXIST. LUMINAIRE AND SUPPORT ARM. EXISTING CONDUIT AND WIRING MAY BE RETAINED FOR RE-USE TO CONNECT TO NEW LUMINAIRES. CONTRACTOR SHALL NOTIFY ENGINEER IF EXIST. CONDUIT AND WIRING IS IN POOR CONDITION AND NOT SUITABLE FOR RE-USE.
8. REMOVE EXIST. LUMINAIRE AND POLE. RETAIN EXISTING BASE FOR RE-USE. CONTRACTOR SHALL COORDINATE WITH STRUCTURAL ENGINEER TO REVIEW THE CONDITION OF THE EXISTING BASE AND CONFIRM IT IS SUITABLE FOR RE-USE.
9. REMOVE EXIST. LUMINAIRE, SUPPORT ARM, AND POLE (WHERE APPLICABLE).



AREA ENLARGEMENT (1) WINCH SHOP
1:250 E002 DEMOLITION



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0	18NOV30	ISSUED FOR TENDER	ABS	RA	RA
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CLIENT
 Fisheries and Oceans Canada
 PROJECT
**INSTITUTE OF OCEAN SCIENCES
 DEPOT LIGHTING UPGRADES**

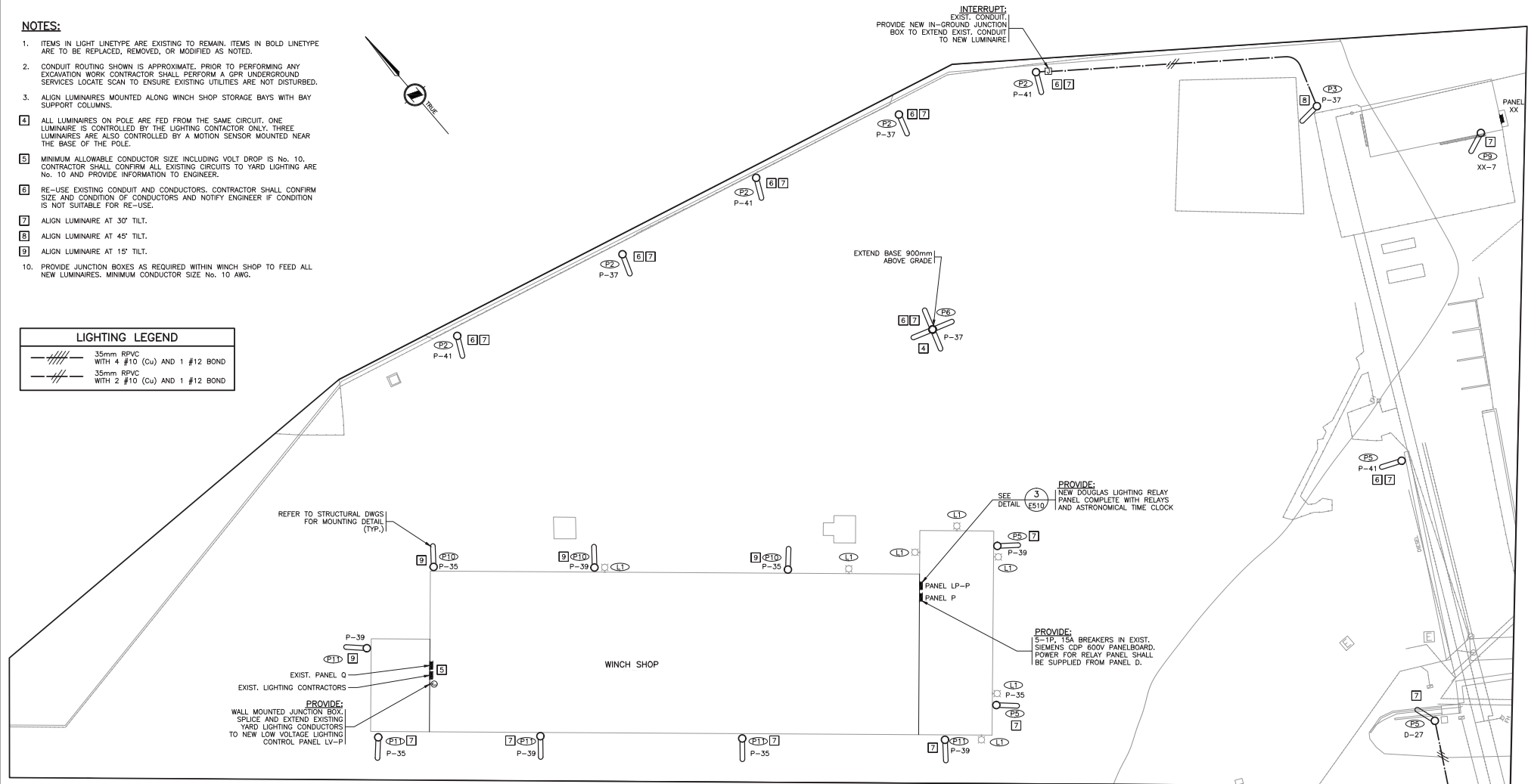
TITLE
**AREA ENLARGEMENT - WINCH SHOP
 DEMOLITION**
 SCALE AS SHOWN PROJECT NUMBER **18440** DRAWING NUMBER **E100** REV. **0**

PA18440_002_Demolition_Lighting_Upgrade.dwg - 26/11/2018 8:02 AM TR070104005

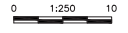
NOTES:

1. ITEMS IN LIGHT LINETYPE ARE EXISTING TO REMAIN. ITEMS IN BOLD LINETYPE ARE TO BE REPLACED, REMOVED, OR MODIFIED AS NOTED.
2. CONDUIT ROUTING SHOWN IS APPROXIMATE. PRIOR TO PERFORMING ANY EXCAVATION WORK CONTRACTOR SHALL PERFORM A GPR UNDERGROUND SERVICES LOCATE SCAN TO ENSURE EXISTING UTILITIES ARE NOT DISTURBED.
3. ALIGN LUMINAIRES MOUNTED ALONG WINCH SHOP STORAGE BAYS WITH BAY SUPPORT COLUMNS.
4. ALL LUMINAIRES ON POLE ARE FED FROM THE SAME CIRCUIT. ONE LUMINAIRE IS CONTROLLED BY THE LIGHTING CONTACTOR ONLY. THREE LUMINAIRES ARE ALSO CONTROLLED BY A MOTION SENSOR MOUNTED NEAR THE BASE OF THE POLE.
5. MINIMUM ALLOWABLE CONDUCTOR SIZE INCLUDING VOLT DROP IS No. 10. CONTRACTOR SHALL CONFIRM ALL EXISTING CIRCUITS TO YARD LIGHTING ARE No. 10 AND PROVIDE INFORMATION TO ENGINEER.
6. RE-USE EXISTING CONDUIT AND CONDUCTORS. CONTRACTOR SHALL CONFIRM SIZE AND CONDITION OF CONDUCTORS AND NOTIFY ENGINEER IF CONDITION IS NOT SUITABLE FOR RE-USE.
7. ALIGN LUMINAIRE AT 30° TILT.
8. ALIGN LUMINAIRE AT 45° TILT.
9. ALIGN LUMINAIRE AT 15° TILT.
10. PROVIDE JUNCTION BOXES AS REQUIRED WITHIN WINCH SHOP TO FEED ALL NEW LUMINAIRES. MINIMUM CONDUCTOR SIZE No. 10 AWG.

LIGHTING LEGEND	
	35mm RPVC WITH 4 #10 (Cu) AND 1 #12 BOND
	35mm RPVC WITH 2 #10 (Cu) AND 1 #12 BOND



AREA ENLARGEMENT **1** WINCH SHOP & LAYDOWN AREA
 1:250
 E002 / PROPOSED



CONTINUED ON E102



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0	18NOV30	ISSUED FOR TENDER	ABS	RA	RA
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CLIENT

 Fisheries and Oceans Canada

PROJECT
INSTITUTE OF OCEAN SCIENCES DEPOT LIGHTING UPGRADES

CLIENT

 FBX ENGINEERING

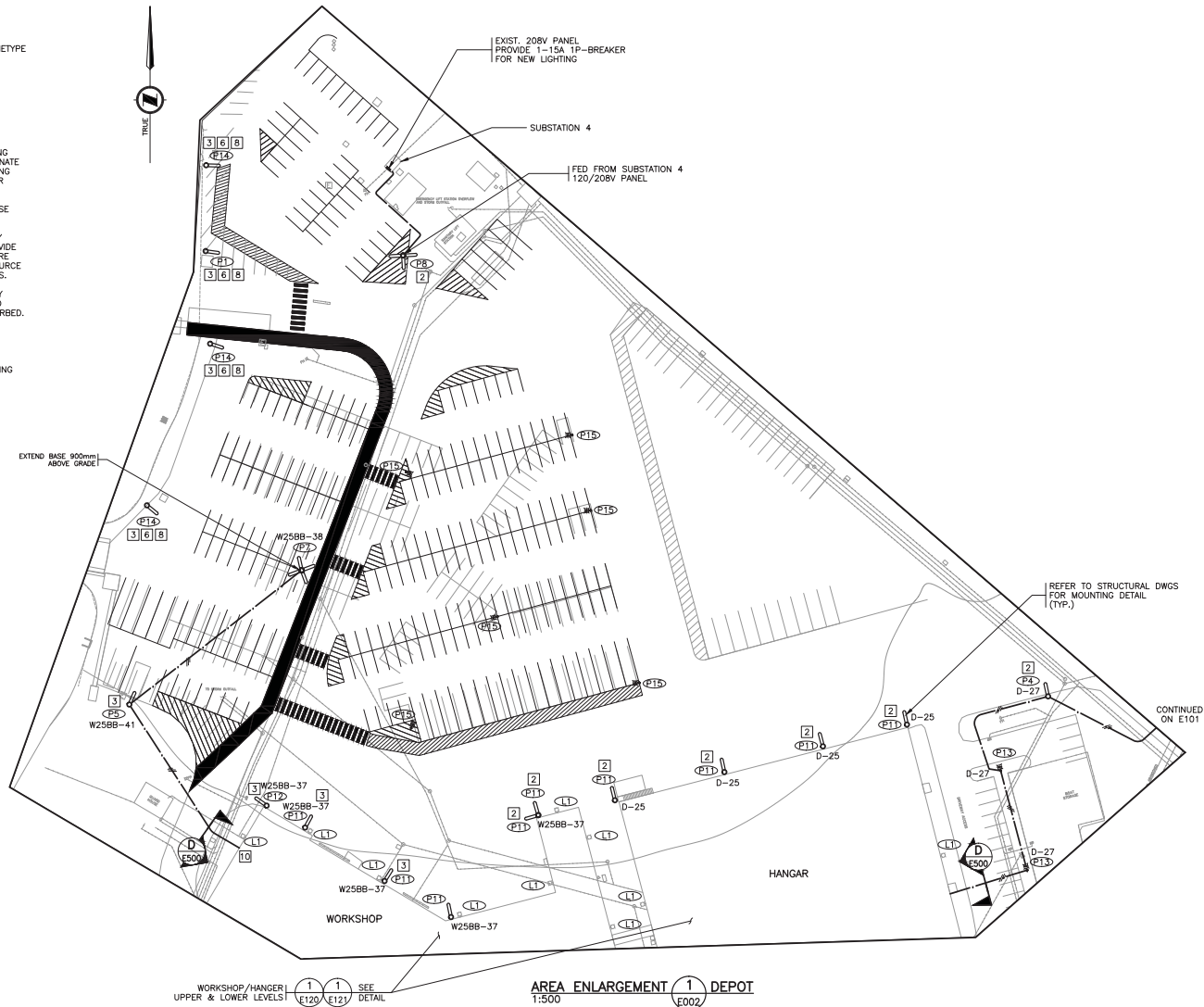
TITLE
AREA ENLARGEMENT - WINCH SHOP PROPOSED

SCALE AS SHOWN	PROJECT NUMBER 18440	DRAWING NUMBER E101	REV. 0
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NOTES:

1. ITEMS IN LIGHT LINETYPE ARE EXISTING TO REMAIN, ITEMS IN BOLD LINETYPE ARE TO BE PROVIDED NEW UNLESS NOTED OTHERWISE.
2. ALIGN LUMINAIRE AT 30° TILT.
3. ALIGN LUMINAIRE AT 45° TILT.
4. ALIGN LUMINAIRE AT 15° TILT.
5. ALIGN LUMINAIRE AT 35° TILT.
6. REMOVE EXIST. LUMINAIRE AND POLE. RETAIN EXISTING BASE AND WIRING FOR RE-USE. RE-USE EXISTING CIRCUITS. CONTRACTOR SHALL COORDINATE WITH STRUCTURAL ENGINEER TO REVIEW THE CONDITION OF THE EXISTING BASE AND CONFIRM IT IS SUITABLE FOR RE-USE. CONFIRM CONDUCTOR SIZES AND PROVIDE INFORMATION TO ENGINEER.
7. CONTRACTOR SHALL PROVIDE LUMINAIRE AND POLE COMPLETE WITH BASE EXCEPT WHERE EXISTING BASES ARE NOTED FOR RE-USE.
8. CONTRACTOR SHALL CONFIRM IF EXISTING LUMINAIRES ARE INDIVIDUALLY CONTROLLED BY PHOTOCELLS. WHERE PHOTOCELLS ARE EXISTING, PROVIDE NEW LUMINAIRES WITH PHOTOCELLS TO MATCH EXISTING. LUMINAIRES ARE BELIEVED TO BE 120V. CONTRACTOR SHALL CONFIRM VOLTAGE AND SOURCE PANEL AND NOTIFY ENGINEER PRIOR TO PURCHASE OF NEW LUMINAIRES.
9. CONDUIT ROUTING SHOWN IS APPROXIMATE. PRIOR TO PERFORMING ANY EXCAVATION WORK CONTRACTOR SHALL PERFORM A GPR UNDERGROUND SERVICES LOCATE SCAN TO ENSURE EXISTING UTILITIES ARE NOT DISTURBED.
10. COORDINATE EXIT LOCATION FROM BUILDING WITH SITE CONDITIONS. CONTRACTOR MAY UTILIZE EXISTING DISTRIBUTION PULL PITS OUTSIDE BUILDING IF PRACTICABLE.
11. PAINT ALL CONDUIT MOUNTED ON BUILDING EXTERIOR TO MATCH BUILDING COLOUR.

LIGHTING LEGEND	
	35mm RPVC WITH 4 #10 (Cu) AND 1 #12 BOND
	21mm RPVC WITH 2 #10 (Cu) AND 1 #12 BOND



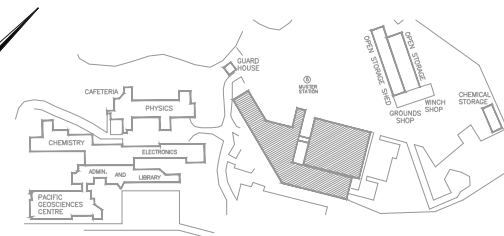
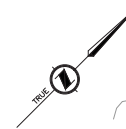
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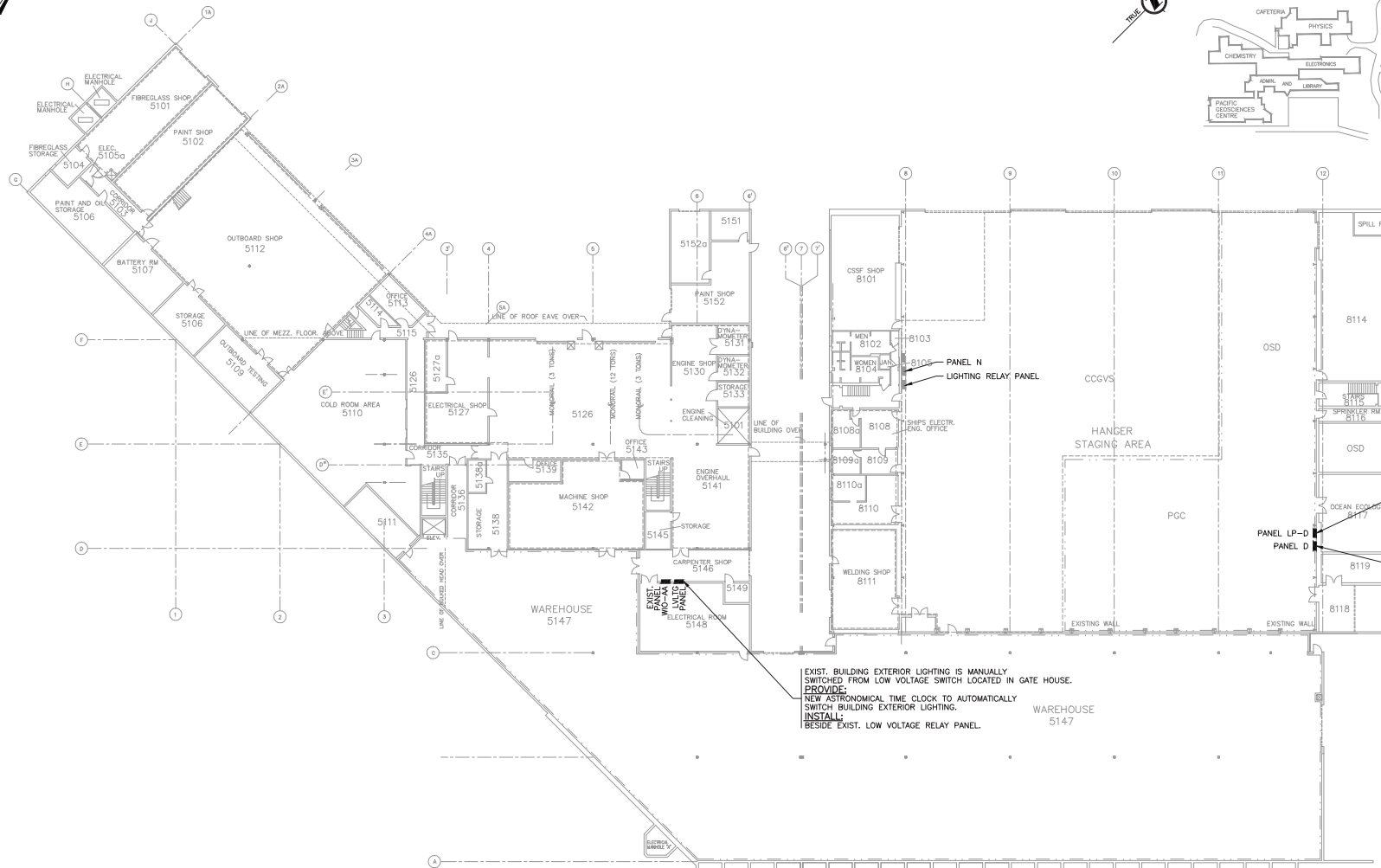
Rev.	DATE	ISSUE / REVISION DESCRIPTION	DESN	QC	QA
0	18NOV30	ISSUED FOR TENDER	ABS	RA	RA
PA	18NOV23	ISSUED FOR REVIEW	ABS	RC	RC

CLIENT
 Fisheries and Oceans Canada
 PROJECT
INSTITUTE OF OCEAN SCIENCES DEPOT LIGHTING UPGRADES

FBX ENGINEERING
 TITLE
AREA ENLARGEMENT -- DEPOT
 SCALE AS SHOWN PROJECT NUMBER **18440** DRAWING NUMBER **E102** REV. **0**



KEY PLAN
N.T.S.



PROVIDE:
NEW DOUGLAS LIGHTING RELAY
PANEL COMPLETE WITH RELAYS
AND ASTRONOMICAL TIME CLOCK
POWER FOR RELAY PANEL SHALL
BE SUPPLIED FROM PANEL D

SEE DETAIL (2)

EXIST. 600V PANEL D
PROVIDE:
3-15A 1P MOULDED CASE CIRCUIT
BREAKERS IN EXIST. SQUARE D
I-LINE PANELBOARD

EXIST. BUILDING EXTERIOR LIGHTING IS MANUALLY
SWITCHED FROM LOW VOLTAGE SWITCH LOCATED IN GATE HOUSE.
PROVIDE:
NEW ASTRONOMICAL TIME CLOCK TO AUTOMATICALLY
SWITCH BUILDING EXTERIOR LIGHTING.
INSTALL:
BESIDE EXIST. LOW VOLTAGE RELAY PANEL.

DETAIL (1) WORKSHOP/HANGAR
N.T.S.

NOTES:
1. ITEMS IN LIGHT LINETYPE ARE EXISTING TO REMAIN. ITEMS IN BOLD LINETYPE ARE TO BE PROVIDED NEW UNLESS NOTED OTHERWISE.



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CLIENT
Canada Fisheries and Oceans
Canada

PROJECT
**INSTITUTE OF OCEAN SCIENCES
DEPOT LIGHTING UPGRADES**

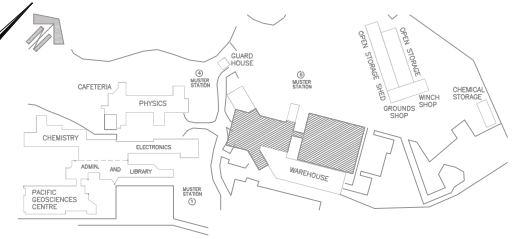
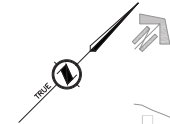
TITLE
**WORKSHOP/HANGAR -
LOWER LEVEL**

SCALE AS SHOWN
PROJECT NUMBER
18440

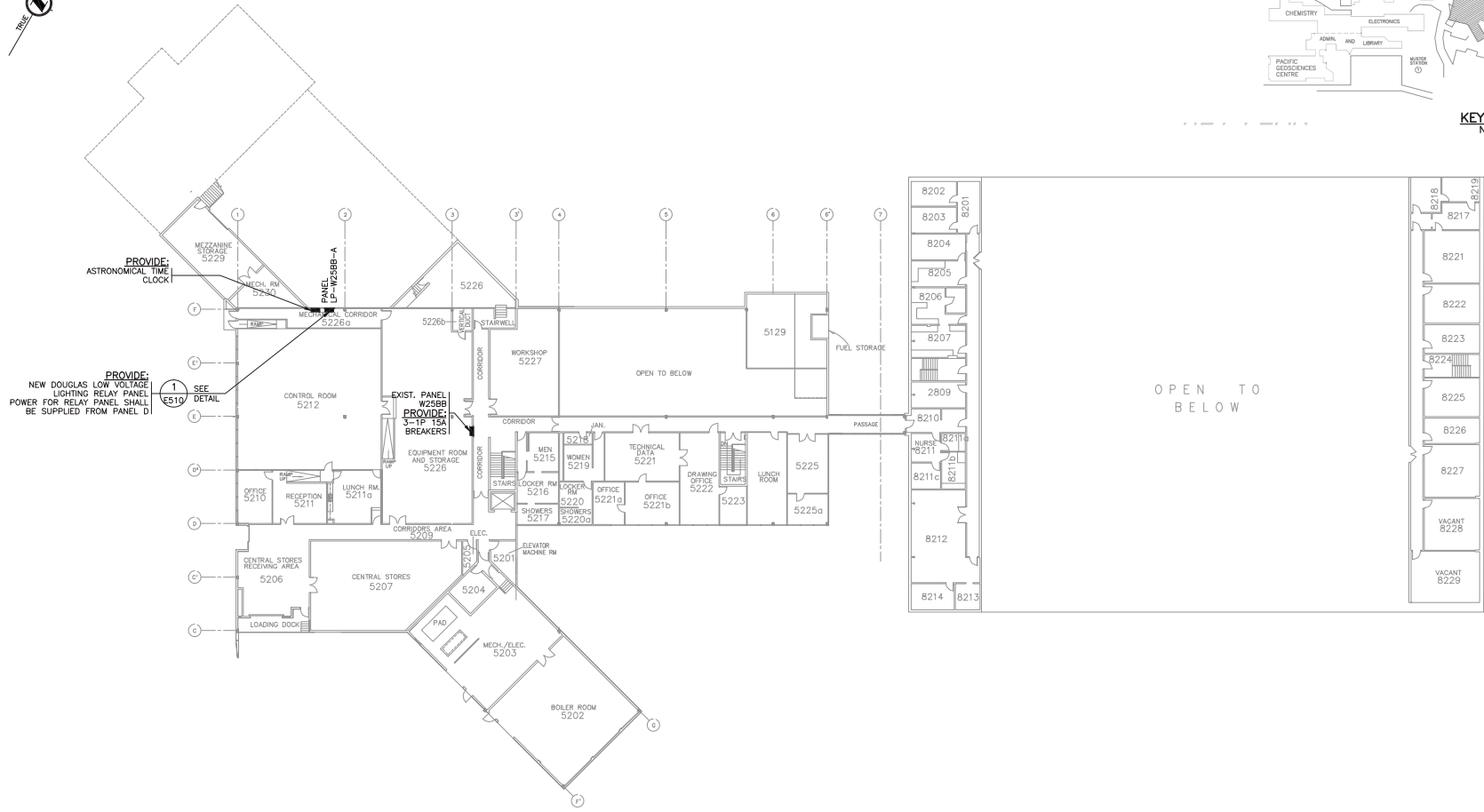
DRAWING NUMBER
E120

REV.
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KEY PLAN
N.T.S.



PROVIDE ASTRONOMICAL TIME CLOCK

PROVIDE NEW DOUGLAS LOW VOLTAGE LIGHTING RELAY PANEL POWER FOR RELAY PANEL SHALL BE SUPPLIED FROM PANEL D

PROVIDE EXIST. PANEL W258B PROVIDE 3-1P 15A BREAKERS

SEE DETAIL E510

DETAIL 1 WORKSHOP/HANGAR
N.T.S. UPPER LEVEL

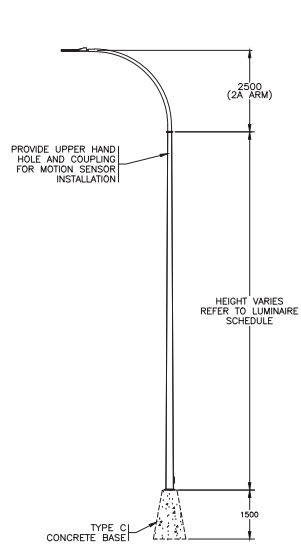
NOTES:

1. ITEMS IN LIGHT LINETYPE ARE EXISTING TO REMAIN. ITEMS IN BOLD LINETYPE ARE TO BE PROVIDED NEW UNLESS NOTES OTHERWISE.



Rev.		DATE	ISSUE / REVISION DESCRIPTION	DESN	QC	QA	CLIENT 		PROJECT INSTITUTE OF OCEAN SCIENCES DEPOT LIGHTING UPGRADES		CLIENT 		TITLE WORKSHOP/HANGAR - UPPER LEVEL	
0	18NOV30		ISSUED FOR TENDER	ABS	RA	RA					SCALE AS SHOWN		PROJECT NUMBER 18440	
PA	18NOV23		ISSUED FOR REVIEW	ABS	RC	RC					DRAWING NUMBER E121		REV. 0	

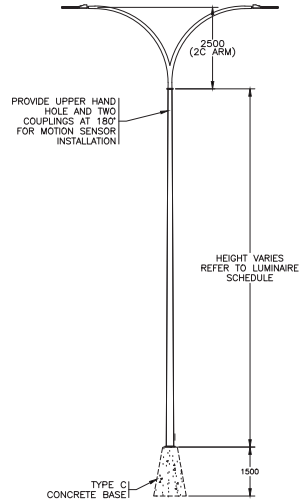
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NOTES:

- RE-USE EXISTING CONCRETE BASE WHERE NOTED ON DRAWINGS.

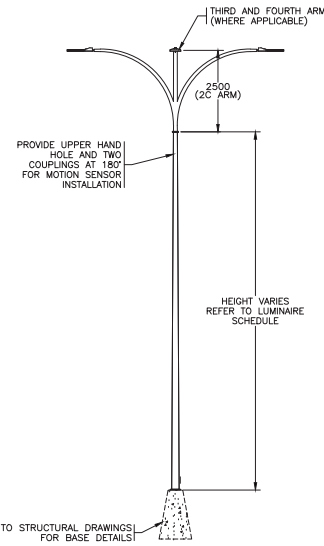
ELEVATION (A) SINGLE DAVIT LUMINAIRE STANDARD
1:75



NOTES:

- PROVIDE TWO (2) MOTION SENSORS ON POLE, MOUNTED 180° APART.

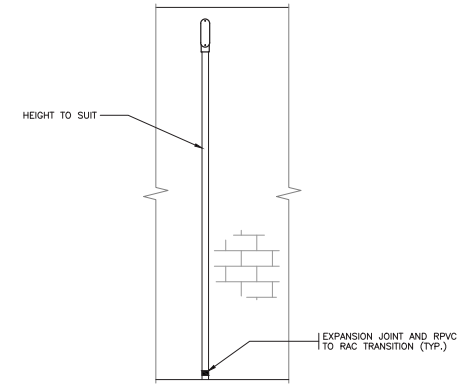
ELEVATION (B) DOUBLE DAVIT LUMINAIRE STANDARD
1:75



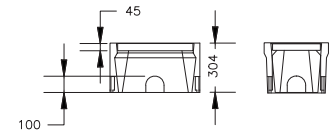
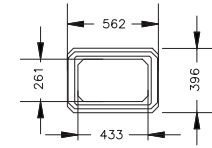
NOTES:

- POLE WITH BOLT-ON DAVIT ARMS IS ACCEPTABLE AS AN ALTERNATIVE TO CUSTOM MULTI-WAY TYPE C ARM.
- PROVIDE POLE AND ARM ASSEMBLY STAMPED BY MANUFACTURER'S STRUCTURAL ENGINEER.
- PROVIDE TWO (2) MOTION SENSORS ON POLE, MOUNTED 180° APART.

ELEVATION (C) CUSTOM 3 OR 4 DAVIT LUMINAIRE STANDARD
1:75

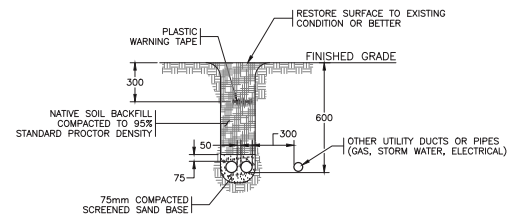


ELEVATION (D) BUILDING CONDUIT ENTRANCE
N.T.S.



- ARMETEC BOX B937 OR EQUAL C/W STEEL CHECKERPLATE COVER SUITABLE TO PARKING LOTS.
- PROVIDE MARKING "LIC" ON COVER.
- PROVIDE 150mm BASE OF MINIMUM 300MM DRAIN ROCK (25mm GAP GRADED WASHED STONE).
- PROVIDE #20 RATED BOXES IN VEHICULAR AREAS.

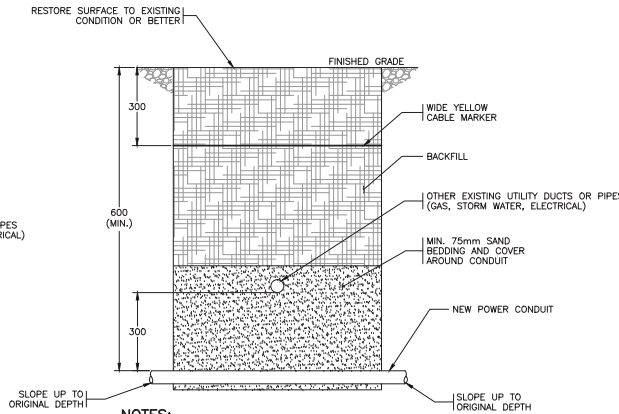
DETAIL (1) IN-GROUND CONCRETE JUNCTION BOX INSTALLATION DETAIL
N.T.S.



NOTES:

- ALL CLEARANCES SHOWN ARE MINIMUMS.
- REFER TO SITE PLAN FOR EXACT CONDUIT SIZES AND QUANTITIES.

SECTION (A) UNDERGROUND CONDUIT INSTALLATION
N.T.S.



NOTES:

- ALL CLEARANCES SHOWN ARE MINIMUMS.
- REFER TO SITE PLAN FOR EXACT CONDUIT QL
- NEW ELECTRICAL CONDUIT SHALL CROSS BELLS AS CLOSE TO 90° AS POSSIBLE.

SECTION (B) TYPICAL DUCTBANK UT OTHER UTILITY AT A S
N.T.S.



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0	18NOV30	ISSUED FOR TENDER	ABS	RA	RA
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CLIENT: Fisheries and Oceans Canada		TITLE: DETAILS	
PROJECT: INSTITUTE OF OCEAN SCIENCES DEPOT LIGHTING UPGRADES		SCALE AS SHOWN	PROJECT NUMBER: 18440 DRAWING NUMBER: E500
		REV: 0	REV: 0

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WORKSHOP LIGHTING CONTROL PANEL		
NOTE	DESCRIPTION	RELAY
	PARKING	1
	PARKING	2
	WORKSHOP PERIMETER LTG	3
	SPARE	4
	SPARE	5
	SPARE	6
	SPARE	7
	SPARE	8
	SPARE	9
	SPARE	10
	SPARE	11
	SPARE	12
NOTE DESCRIPTION		
1		
2		
3		
4		

DETAIL **1** LIGHTING RELAY PANEL LP-W25BB-A
N.T.S. **E121** RELAY SCHEDULE

WORKSHOP LIGHTING CONTROL PANEL		
NOTE	DESCRIPTION	RELAY
	HANGAR PERIMETER LIGHTING	1
	HANGAR EAST PARKING & BINS	2
	SPARE	3
	SPARE	4
	SPARE	5
	SPARE	6
	SPARE	7
	SPARE	8
	SPARE	9
	SPARE	10
	SPARE	11
	SPARE	12
NOTE DESCRIPTION		
1		
2		
3		
4		

DETAIL **2** LIGHTING RELAY PANEL LP-D
N.T.S. **E120** RELAY SCHEDULE

MAINTENANCE LIGHTING CONTROL PANEL		
NOTE	DESCRIPTION	RELAY
	LAYDOWN AREA LTG	1
	LAYDOWN AREA LTG	2
	WINCH SHOP PERIMETER LTG	3
	WINCH SHOP PERIMETER LTG	4
	SPARE	5
	SPARE	6
	SPARE	7
	SPARE	8
	SPARE	9
	SPARE	10
	SPARE	11
	SPARE	12
NOTE DESCRIPTION		
1		
2		
3		
4		

DETAIL **3** LIGHTING RELAY PANEL LP-P
N.T.S. **E101** RELAY SCHEDULE



						CLIENT	
						PROJECT	
						INSTITUTE OF OCEAN SCIENCES DEPOT LIGHTING UPGRADES	
0	18NOV30	ISSUED FOR TENDER	ABS	RA	RA		
PA	18NOV23	ISSUED FOR REVIEW	ABS	RC	RC		
Rev.	DATE	ISSUE / REVISION DESCRIPTION	DESN	QC	QA		
						SCALE AS SHOWN	PROJECT NUMBER 18440
						DRAWING NUMBER E510	REV. 0



TITLE
LIGHTING RELAY SCHEDULES

LUMINAIRE SCHEDULE

LUMINAIRE SCHEDULE											
TYPE	LUMINAIRE DETAILS										
	DESCRIPTION	LUMINAIRE	DISTRIBUTION	DRIVER/BALLAST	VOLTAGE	ACCESSORIES	POLE	MOUNTING HEIGHT (m)	BASE	MOUNTING	NOTES
P1	Single Davit Pole Mount Luminaire c/w pole and mounting	Philips Road Focus RFL-180W80LED-3K-G2-R3M-UNV-DMG-PH9-RC07-BR FINISH: BRONZE NO SUBSTITUTIONS	Type III Medium (ASYM)	LED	120V	Acuity Sensor Switch Outdoor Pole/Fixture Mount Motion Sensor SBOR 6 ODP D HVOLT WH BZ 5V Contractor to provide white Nixalite Model S Bird Spikes or equivalent.	101-30-A2008A-F1 NSD 20x8 Single Davit, Galv, OR APPROVED EQUAL c/w 2.5m Davit Arm Galvanized Steel Finish	6	MMCD TYPE C	Pole Mounted C/W 2.5M DAVIT ARM	PROVIDE PHOTOCELLS WHERE PRESENT ON EXISTING LUMINAIRES TO BE REPLACED. OTHERWISE PROVIDE SHORTING CAP.
P2	Single Davit Pole Mount Luminaire c/w pole and mounting	Philips Road Focus RFL-180W80LED-3K-G2-R3M-HVU-DMG-PH9-RC07-BR FINISH: BRONZE NO SUBSTITUTIONS	Type III Medium (ASYM)	LED	347V			6	MMCD TYPE C	Pole Mounted C/W 2.5M DAVIT ARM	
P3	Single Davit Pole Mount Luminaire c/w pole and mounting	Philips Road Focus RFL-241W112LED3K-G2-R3M-HVU-DMG-PH9-RC07-BR FINISH: BRONZE NO SUBSTITUTIONS	Type III Medium (ASYM)	LED	347V			6	MMCD TYPE C	Pole Mounted C/W 2.5M DAVIT ARM	
P4	Single Davit Pole Mount Luminaire c/w pole and mounting	Philips Road Focus RFL-241W112LED3K-G2-R3M-HVU-DMG-PH9-RC07-BR FINISH: BRONZE NO SUBSTITUTIONS	Type III Medium (ASYM)	LED	347V	Acuity Sensor Switch Outdoor Pole/Fixture Mount Motion Sensor SBOR 6 OEX D HVOLT WH BZ 5V		8	MMCD TYPE C	Pole Mounted C/W 2.5M DAVIT ARM	
P5	Single Davit Pole Mount Luminaire c/w pole and mounting	Philips Road Focus RFL-260W76LED3K-G2-R3M-HVU-DMG-PH9-RC07-BR FINISH: BRONZE NO SUBSTITUTIONS	Type III Medium (ASYM)	LED	347V	Contractor to provide white Nixalite Model S Bird Spikes or equivalent.		6	MMCD TYPE C	Pole Mounted C/W 2.5M DAVIT ARM	
P6	4-Way Custom Davit Pole Mount Luminaire c/w pole and mounting	Philips Road Focus RFL-180W80LED-3K-G2-R3M-HVU-DMG-PH9-RC07-BR FINISH: BRONZE NO SUBSTITUTIONS	Type III Medium (ASYM)	LED	347V		CUSTOM - PROVIDE SHOP DRAWINGS STAMPED BY STRUCTURAL ENGINEER c/w 2.5m Davit Arm Galvanized Steel Finish	10	CUSTOM REFER TO STRUCTURAL DWGS	Pole Mounted C/W 2.5M DAVIT ARM	
P7	4-Way Custom Davit Pole Mount Luminaire c/w pole and mounting	METEOR Lighting - ILOS Corporation Bolt Series BT5-220-308-HVT-STV-80-BLK-BRK-GSV-RTC-OUT FINISH: BRONZE NO SUBSTITUTIONS	80 deg.	LED	347V		CUSTOM - PROVIDE SHOP DRAWINGS STAMPED BY STRUCTURAL ENGINEER c/w 2.5m Davit Arm Galvanized Steel Finish	12		Pole Mounted C/W 2.5M DAVIT ARM	
P8	3-Way Custom Davit Pole Mount Luminaire c/w pole and mounting	Philips Road Focus RFL-241W112LED3K-G2-R3M-UNV-DMG-PH8-RC07-BR FINISH: BRONZE NO SUBSTITUTIONS	Type III Medium (ASYM)	LED	120V	Acuity Sensor Switch Outdoor Pole/Fixture Mount Motion Sensor SBOR 6 ODP D HVOLT WH BZ 5V		10		Pole Mounted C/W 2.5M DAVIT ARM	MOTION SENSOR C/W INTEGRATED PHOTOCCELL
P9	Custom Davit arm affixed to building.	Philips Road Focus RFL-145W64LED3K-G2-4-UNV-DMG-PH8-RC07 -BR FINISH: BRONZE NO SUBSTITUTIONS	TYPE IV (ASYM)	LED	120V	Contractor to provide white Nixalite Model S Bird Spikes or equivalent.	101-30-A2008A-F1 NSD 20x8 Single Davit, Galv, OR APPROVED EQUAL c/w 2.5m Davit Arm Galvanized Steel Finish	6	N/A	Building mounted 2.5M davit arm	MOTION SENSOR C/W INTEGRATED PHOTOCCELL
P10	Custom Davit arm affixed to building.	Philips Road Focus RFL-180W80LED3K-G2-R3M-HVU-DMG-PH9-RC07 -BR FINISH: BRONZE NO SUBSTITUTIONS	Type III Medium (ASYM)	LED	347V		Pole extension c/w slipfit tenon top Galvanized Steel Finish	10	N/A	Building mount (30cm Arm)	
P11	Custom Davit arm affixed to building.	Philips Road Focus RFL-241W112LED3K-G2-R3M-HVU-DMG-PH9-RC07-BR FINISH: BRONZE NO SUBSTITUTIONS	Type III Medium (ASYM)	LED	347V	Acuity Sensor Switch Outdoor Pole/Fixture Mount Motion Sensor SBOR 6 OEX D HVOLT WH BZ 5V	c/w 2.5m Davit Arm Galvanized Steel Finish	10	N/A	Building mounted 2.5m davit arm	
P12	Custom Davit arm affixed to building.	Philips Road Focus RFL-260W76LED3K-G2-R3M-HVU-DMG-PH9-RC07 -BR FINISH: BRONZE NO SUBSTITUTIONS	Type III Medium (ASYM)	LED	347V	Contractor to provide white Nixalite Model S Bird Spikes or equivalent.	101-30-A3208A-F1 NSD 32x8 Single Davit, Galv, OR APPROVED EQUAL c/w 2.5m Davit Arm Galvanized Steel Finish	10	N/A	Building mounted 2.5m davit arm	
P13	Pole Mount Luminaire	Philips Road Focus RFL-220W64LED3K-G2-5-HVU-DMG-PH9-RC07 -BR FINISH: BRONZE NO SUBSTITUTIONS	Type V	LED	347V		101-70-1NST20-F1 NST 20 Straight Taper 2 3/8" tenon, Galv, NOVA OR APPROVED EQUAL Pole c/w slipfit tenon Galvanized Steel Finish	6	MMCD TYPE B	Poletop c/w slipfit tenon	
P14	Single Davit Pole Mount Luminaire c/w pole and mounting	Philips Road Focus RFL-260W76LED3K-G2-R3M-UNV-DMG-PH9-RC07-BR FINISH: BRONZE NO SUBSTITUTIONS	Type III Medium (ASYM)	LED	120V	Acuity Sensor Switch Outdoor Pole/Fixture Mount Motion Sensor SBOR 6 ODP D HVOLT WH BZ 5V Contractor to provide white Nixalite Model S Bird Spikes or equivalent.	101-30-A2008A-F1 NSD 20x8 Single Davit, Galv, OR APPROVED EQUAL c/w 2.5m Davit Arm Galvanized Steel Finish	6	MMCD TYPE C	Pole Mounted C/W 2.5M DAVIT ARM	PROVIDE PHOTOCELLS WHERE PRESENT ON EXISTING LUMINAIRES TO BE REPLACED.
P15	Solar Luminaire complete with solar panel, battery, photocell and motion sensor dimming control.	Solar Path HIGHLIGHT ALPHA-WAVE-D-150W-SLA-90W-T4M1-30K-D-150AH-BZ-1-01		LED	SOLAR	Motion sensor profile to dim luminaire to 50%. Increase Level to 100% when motion detected. Contractor to provide white Nixalite Model S Bird Spikes or equivalent.	Supplied with luminaire	6	CUSTOM REFER TO STRUCTURAL DWGS EXTEND BASE 900mm ABOVE GRADE BASE TO BE WIDENED TO MOUNT BATTERY CABINET ON TOP OF BASE	Pole Mount	PROVIDE LUMINAIRES COMPLETE WITH INTEGRATED PHOTOCCELL.
L1	Wall pack	Cooper Cressour	-	LED	-	-	-	-	-	-	-

Notes:
1. REFER TO DRAWINGS FOR AIMING ANGLES



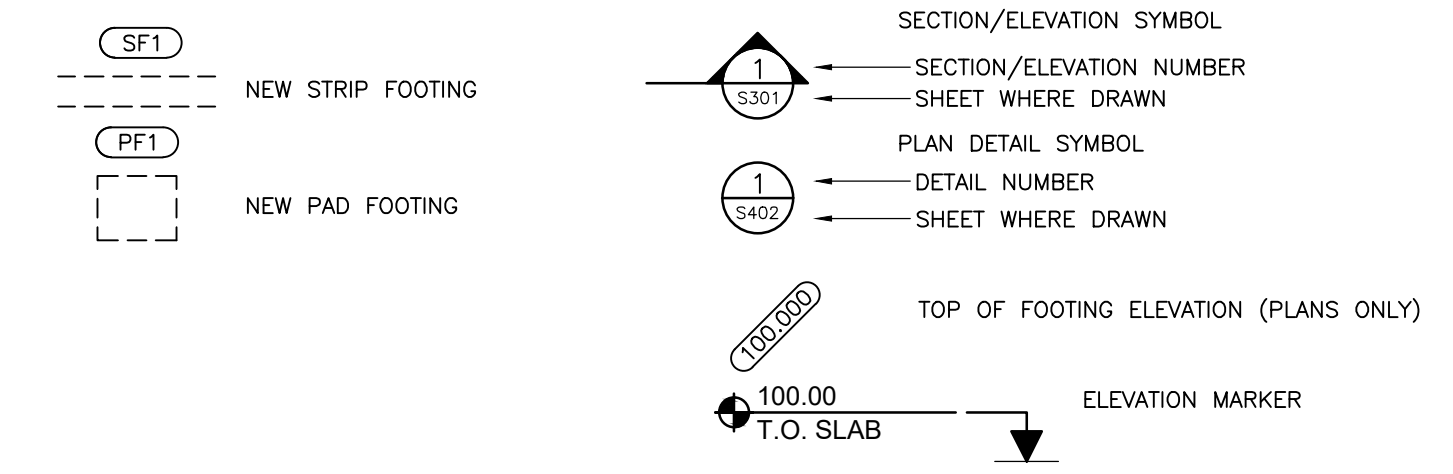
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				PROJECT				INSTITUTE OF OCEAN SCIENCES DEPOT LIGHTING UPGRADES		TITLE LUMINAIRE SCHEDULE		
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PA	18NOV23	ISSUED FOR REVIEW		ABS	RC	RC			AS SHOWN	18440	E600	0
Rev.	DATE	ISSUE / REVISION DESCRIPTION	DESN	QC	QA							

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LIST OF ABBREVIATIONS

ALT	---	ALTERNATE	LV	---	LENGTH VARIES
ARCH	---	ARCHITECTURAL	MAX	---	MAXIMUM
B/S	---	BOTH SIDES	MECH	---	MECHANICAL
C/W	---	COMPLETE WITH	MIN	---	MINIMUM
C	---	CENTRE LINE	No	---	NUMBER
CLR	---	CLEAR	NTS	---	NOT TO SCALE
CONC	---	CONCRETE	o/s	---	ON CENTRE
COL	---	COLUMN	O/F	---	OUTSIDE FACE
CONT	---	CONTINUOUS	OPP	---	OPPOSITE
DP	---	DEEP	PL	---	PLATE
DL	---	DEAD LOAD	PT	---	PRESSURE TREATED (LUMBER)
DWG	---	DRAWING	REINF	---	REINFORCE(MENT)
E/E	---	EACH END	R/W	---	REINFORCE WITH
E/F	---	EACH FACE	SDL	---	SUPERIMPOSED DEAD LOAD
E/S	---	EACH SIDE	STIR	---	STIRRUP
ELEV	---	ELEVATION	STL	---	STEEL
E/W	---	EACH WAY	SIM	---	SIMILAR
EXT	---	EXTERIOR	S/W	---	SHORT WAY
(E)	---	EXISTING	THK	---	THICK
GALV	---	GALVANIZED	THK	---	THICK
A.I.A.	---	HOOKED ONE END	T.O.	---	TOP OF
H.Z.E.	---	HOOKED TWO ENDS	TYP	---	TYPICAL
HORIZ	---	HORIZONTAL	U/S	---	UNDERSIDE
INT	---	INTERIOR	UNO	---	UNLESS NOTED OTHERWISE
LG	---	LONG	VERT	---	VERTICAL
LL	---	LIVE LOAD	VIF	---	VERIFY IN FIELD
L/W	---	LONG WAY	W/	---	WITH

SYMBOLS LEGEND



STRUCTURAL DRAWING LIST

S101	ABBREVIATIONS, LEGEND, DRAWINGS LIST AND DRAWING ISSUE RECORD
S102	SITE PLAN
S103	ELEVATIONS, SECTIONS & DETAILS

STRUCTURAL DRAWING ISSUE RECORD

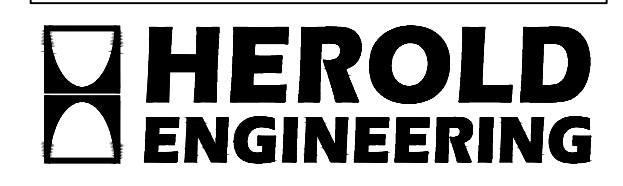
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1	2018.11.30	TENDER	●	●	●												

ISSUES		
No.	DATE	ISSUED FOR
1	2018.11.30	TENDER

SUB CONSULTANT

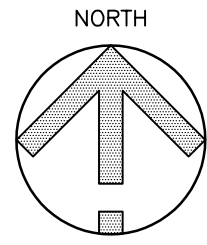
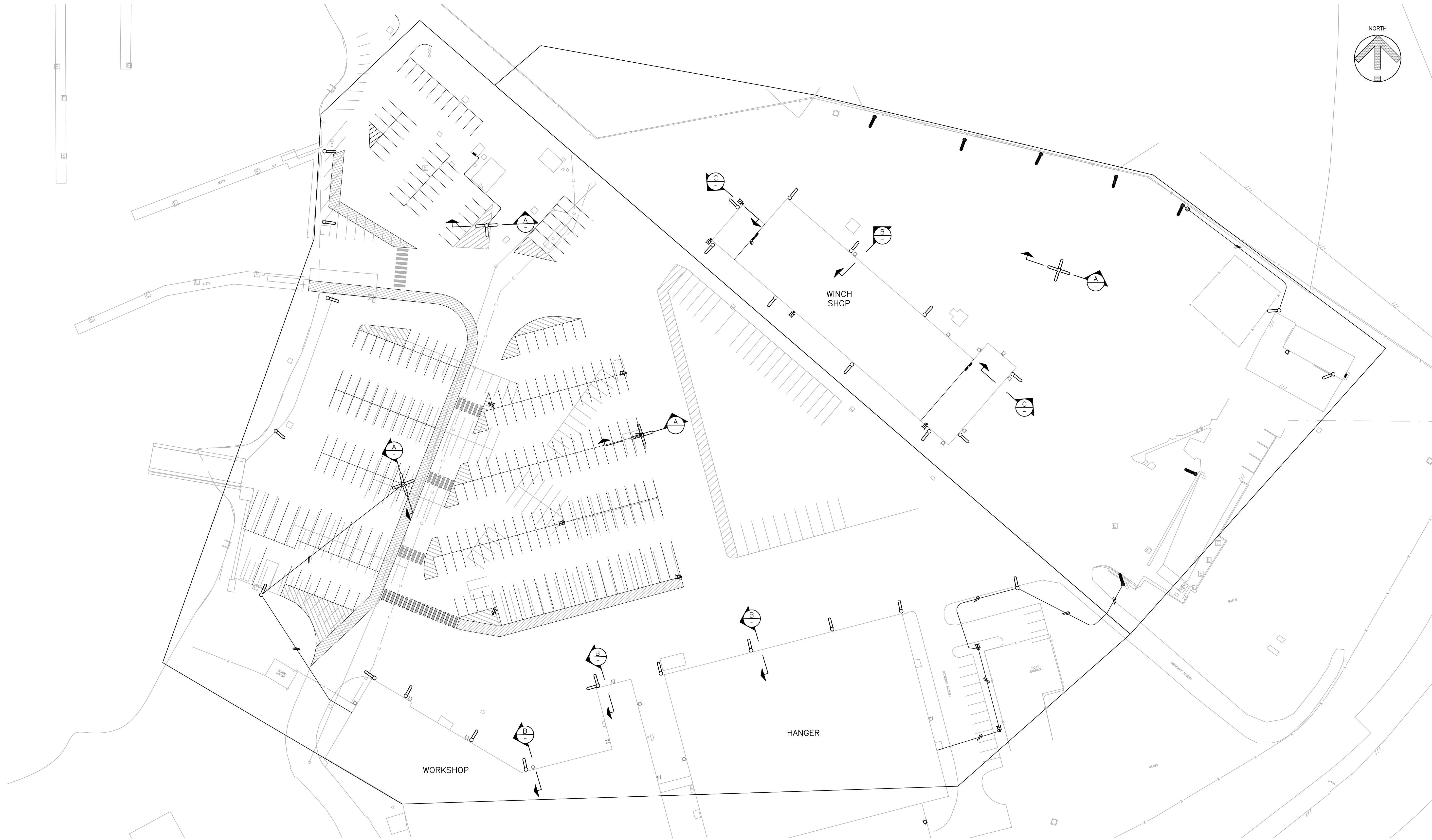
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ABBREVIATIONS, LEGEND, DRAWING LIST AND DRAWING ISSUE RECORD	
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DESIGN REVIEW DRB	
DRAFTED ADS	
DRAFTING REVIEW DRB	
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SCALE AS SHOWN	PERMIT No. n/a
HEL DRAWING No. S101	REVISION 1

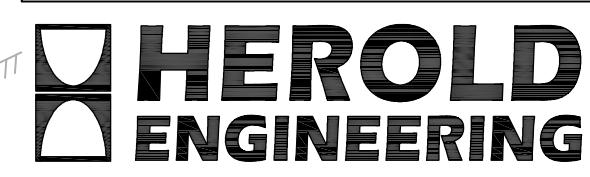


ISSUES		
No.	DATE	ISSUED FOR
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SUB CONSULTANT

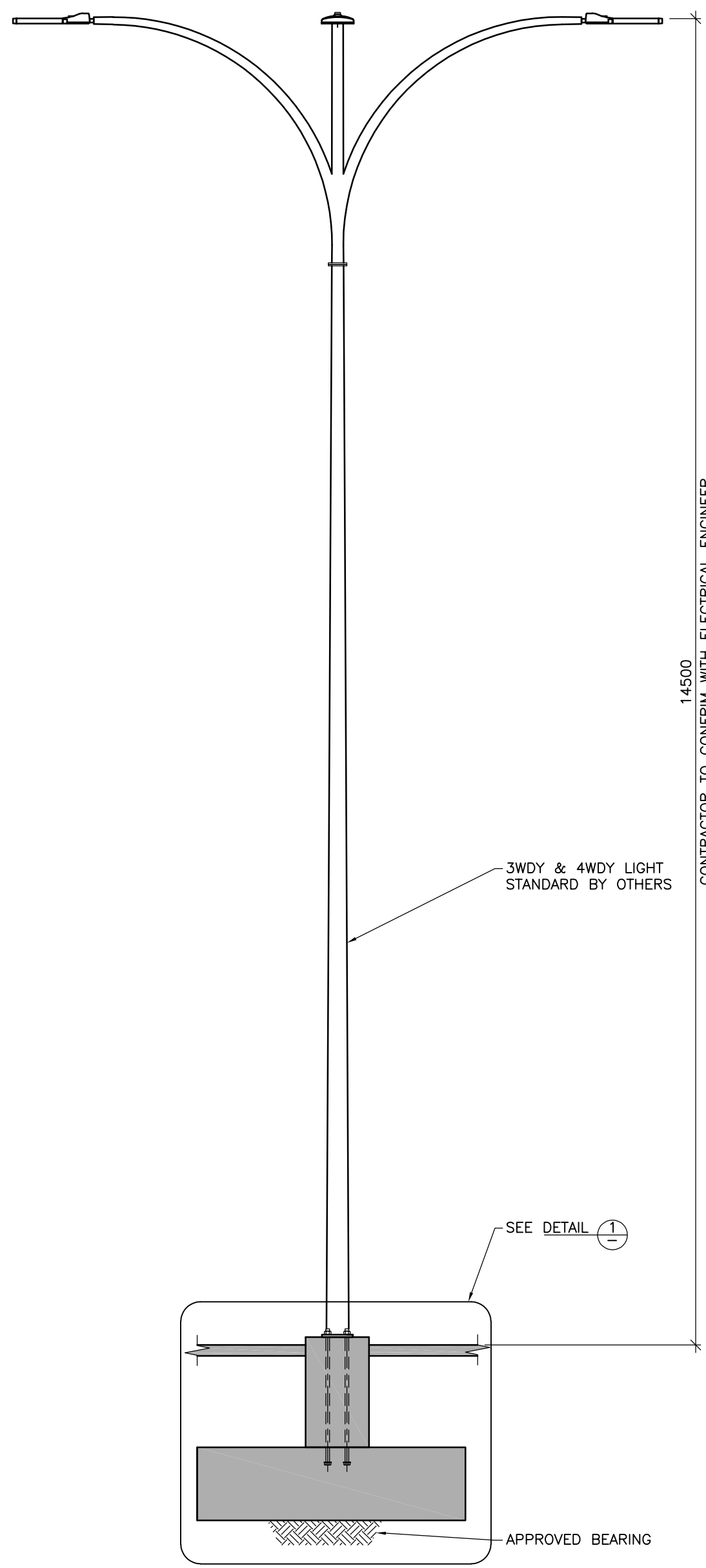
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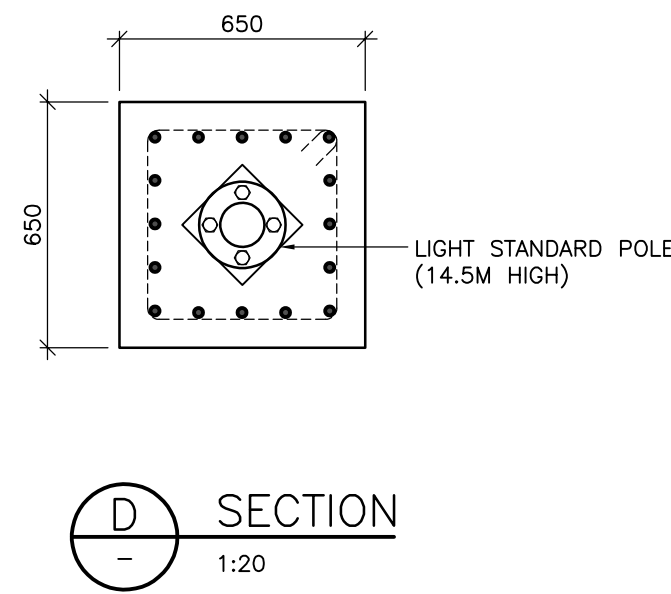


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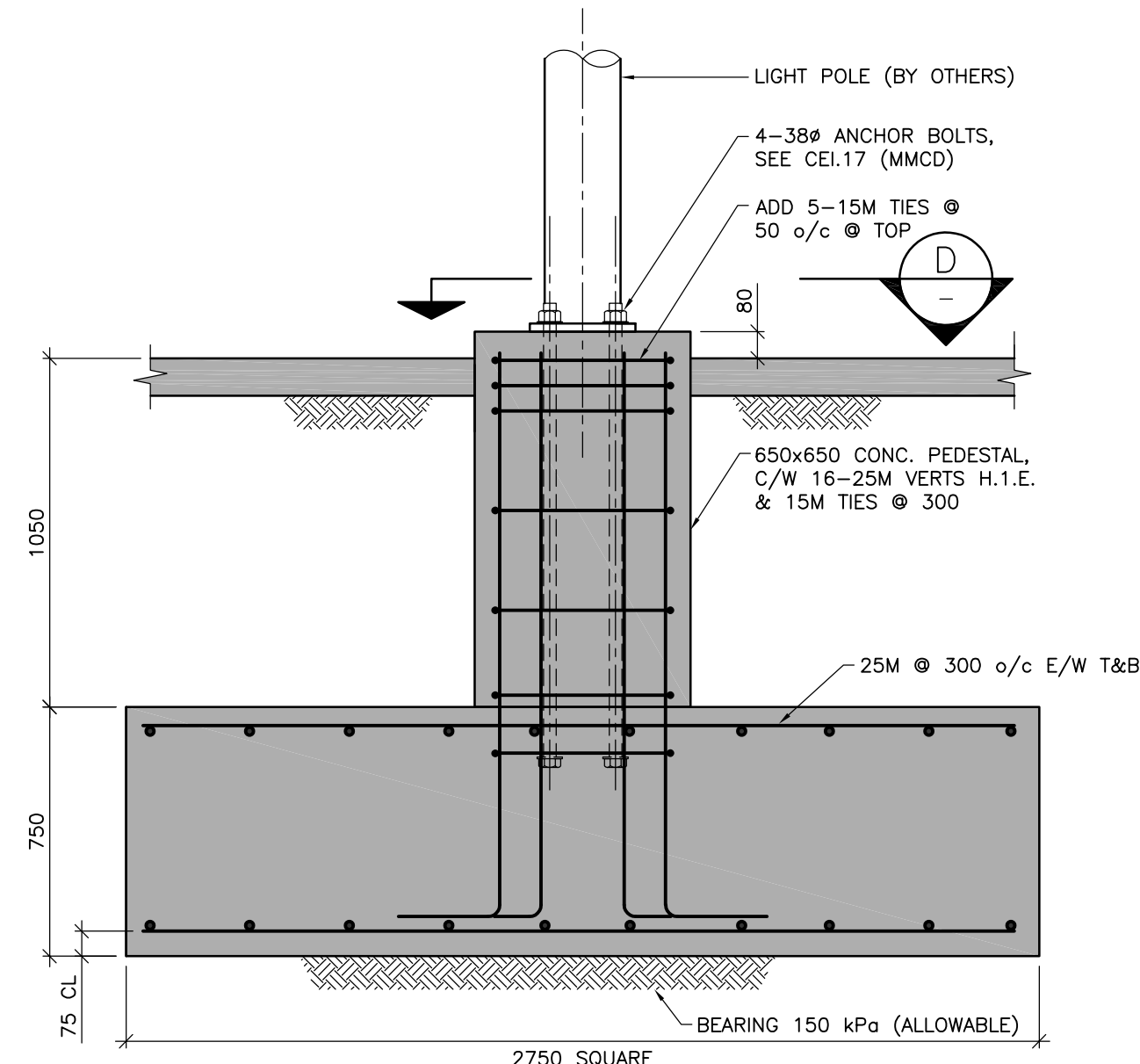
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DESIGN REVIEW DRB	
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SCALE AS SHOWN	PERMIT No. n/a
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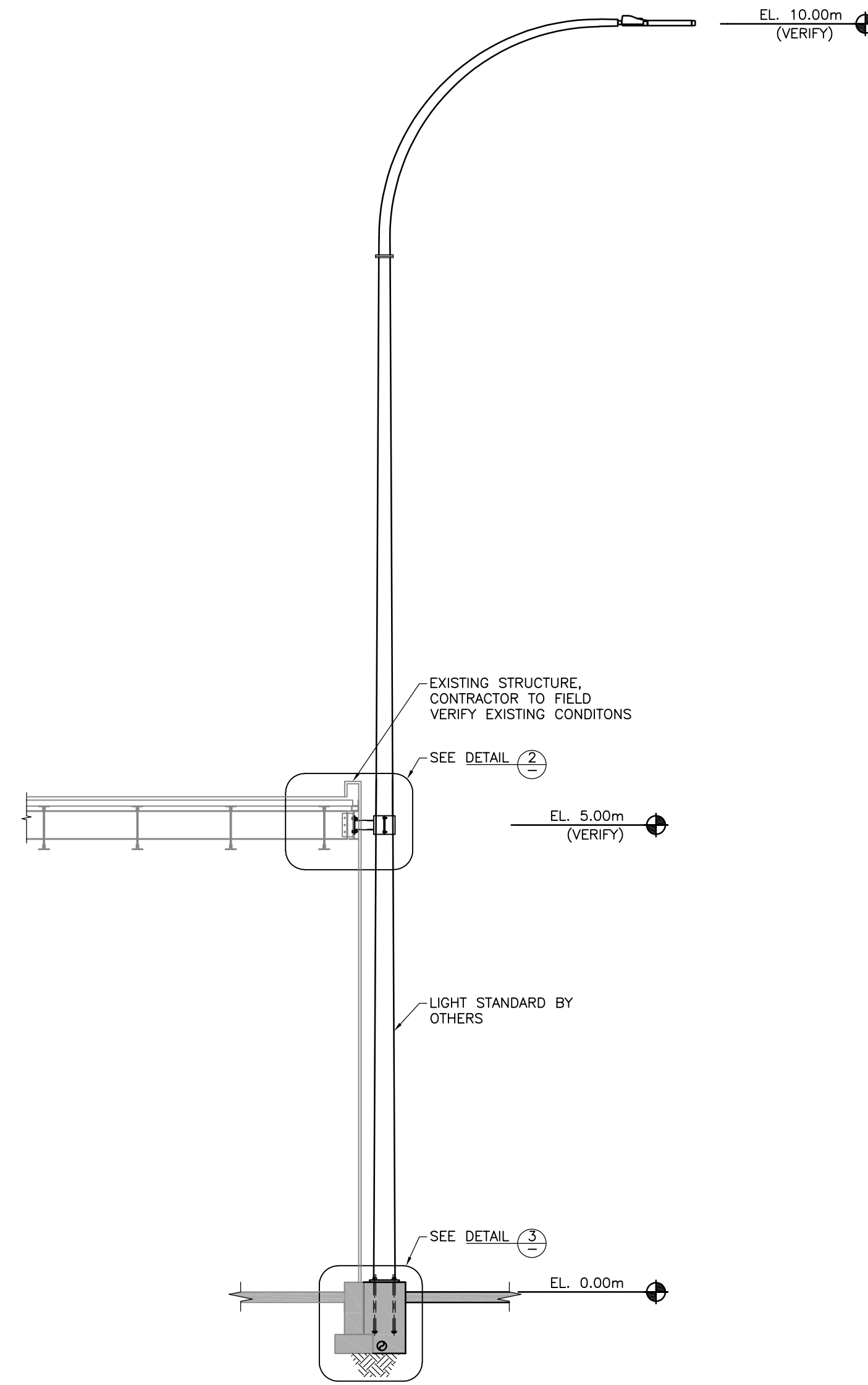
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S02 1:50



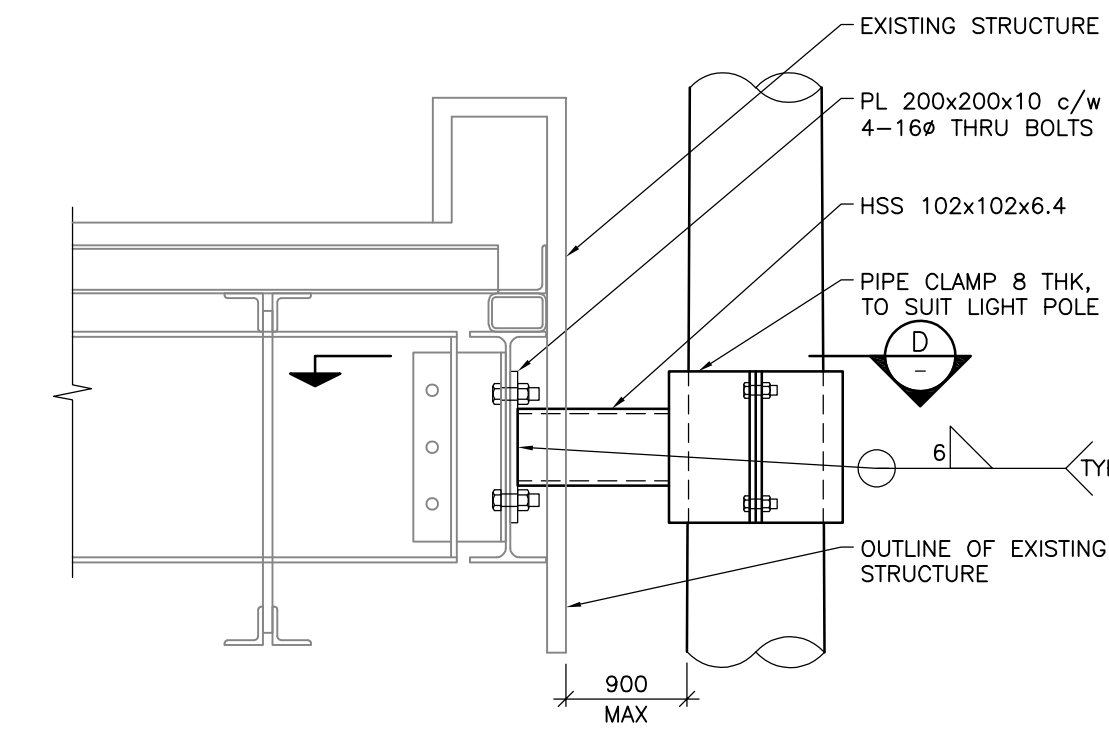
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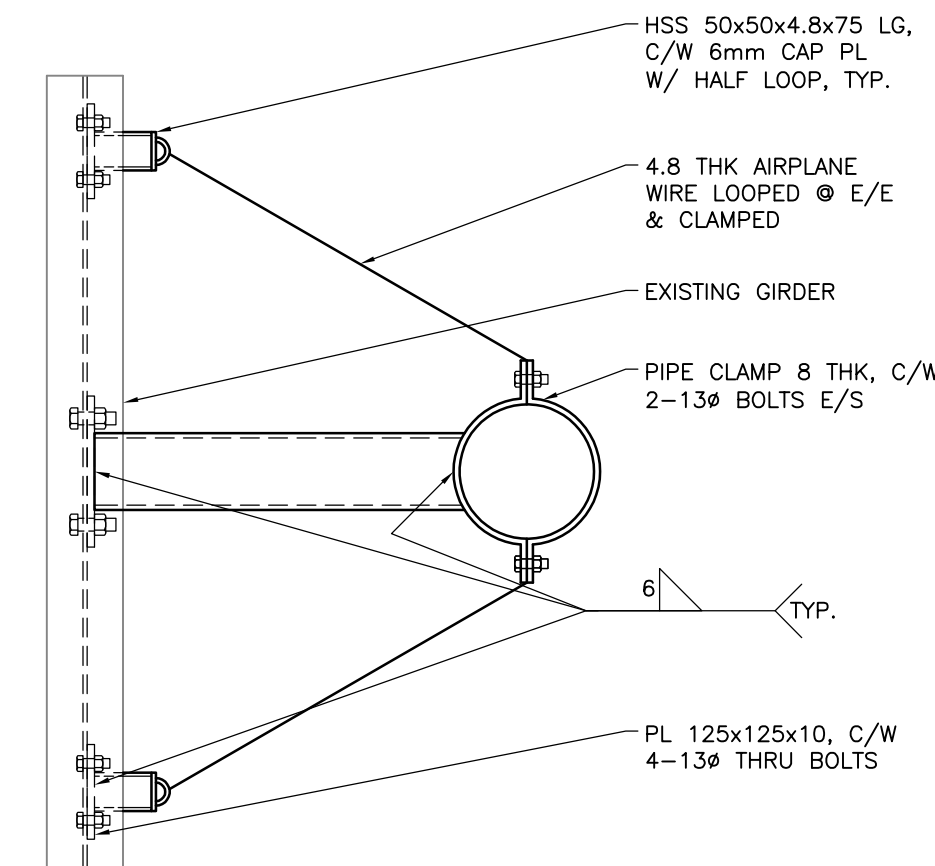
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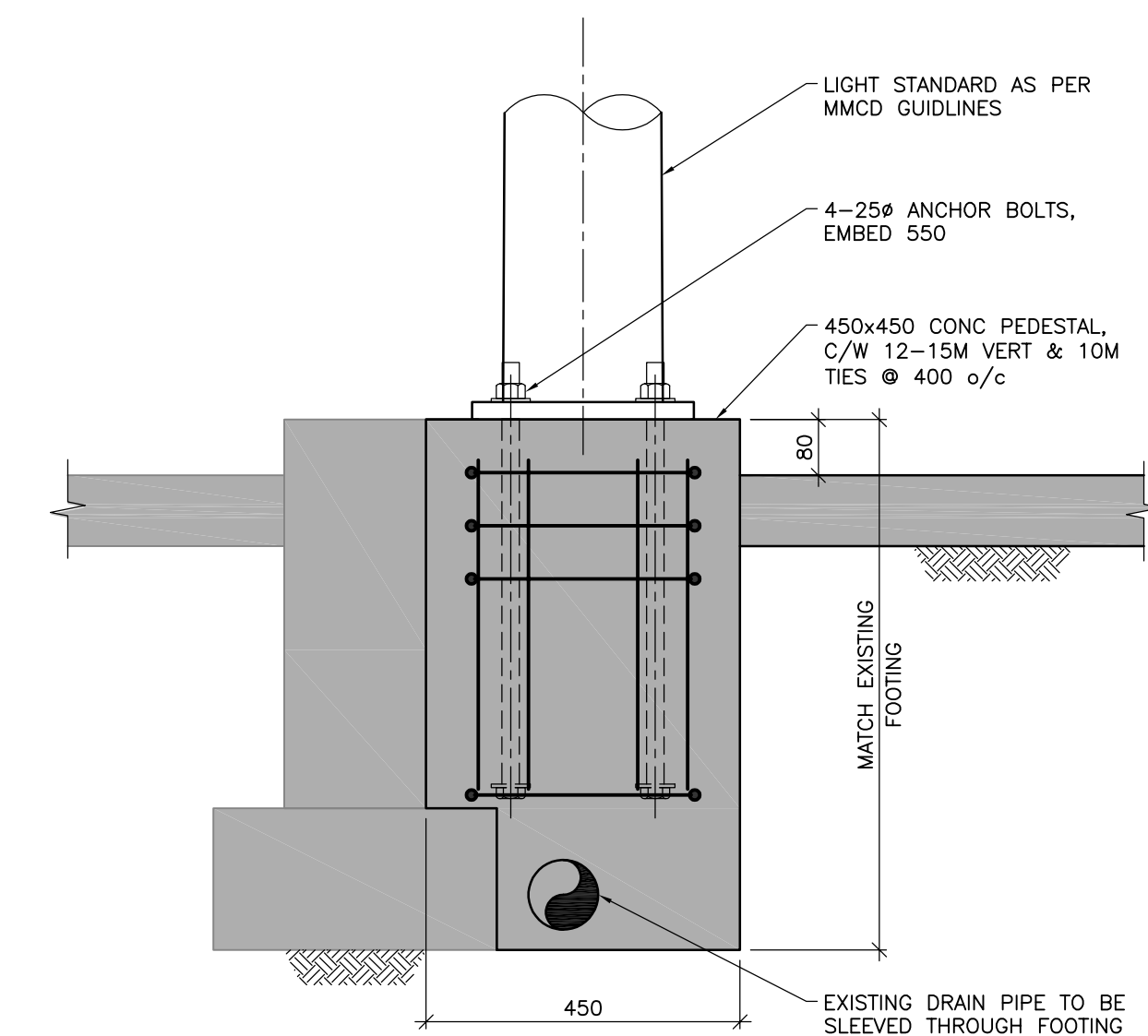
B ELEVATION
S02 1:50



2 DETAIL
1:10

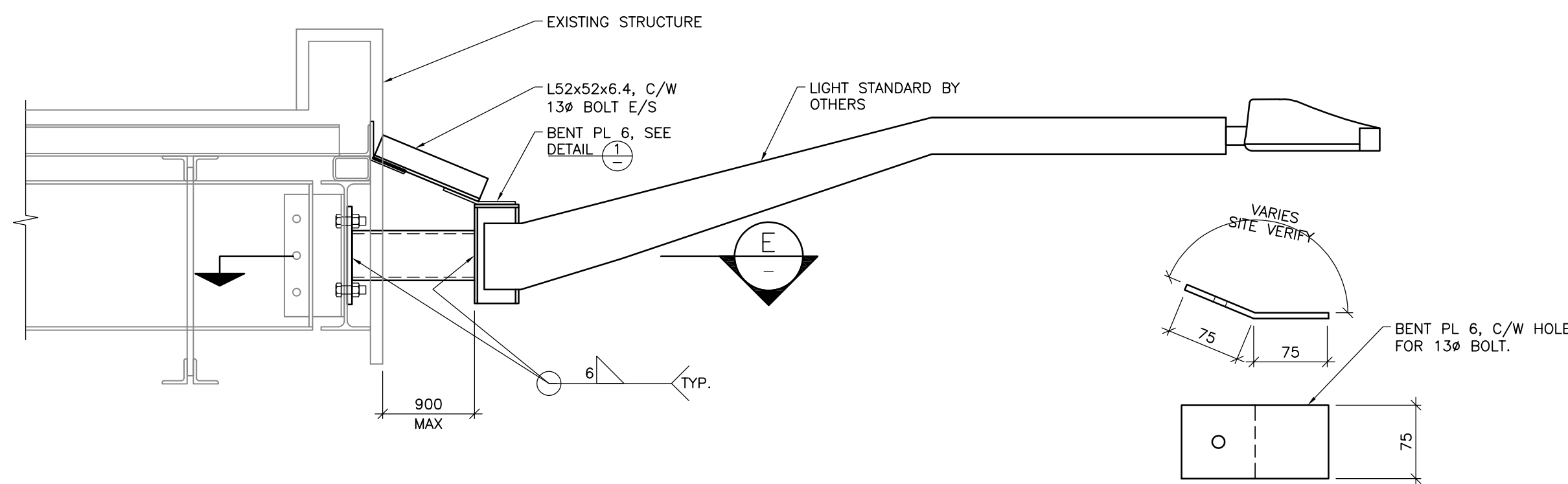


E SECTION
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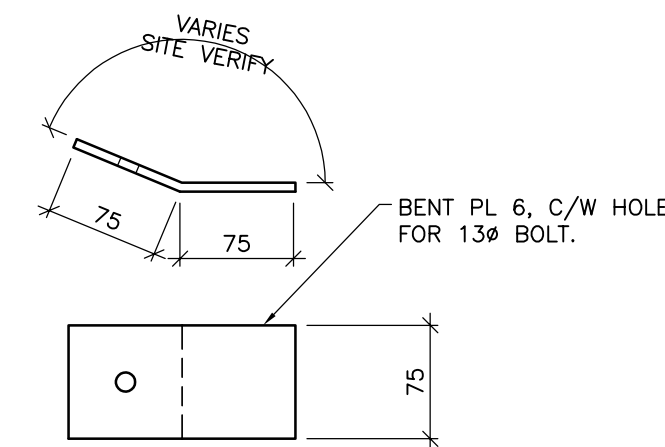


3 DETAIL
1:10

NOTE: CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS

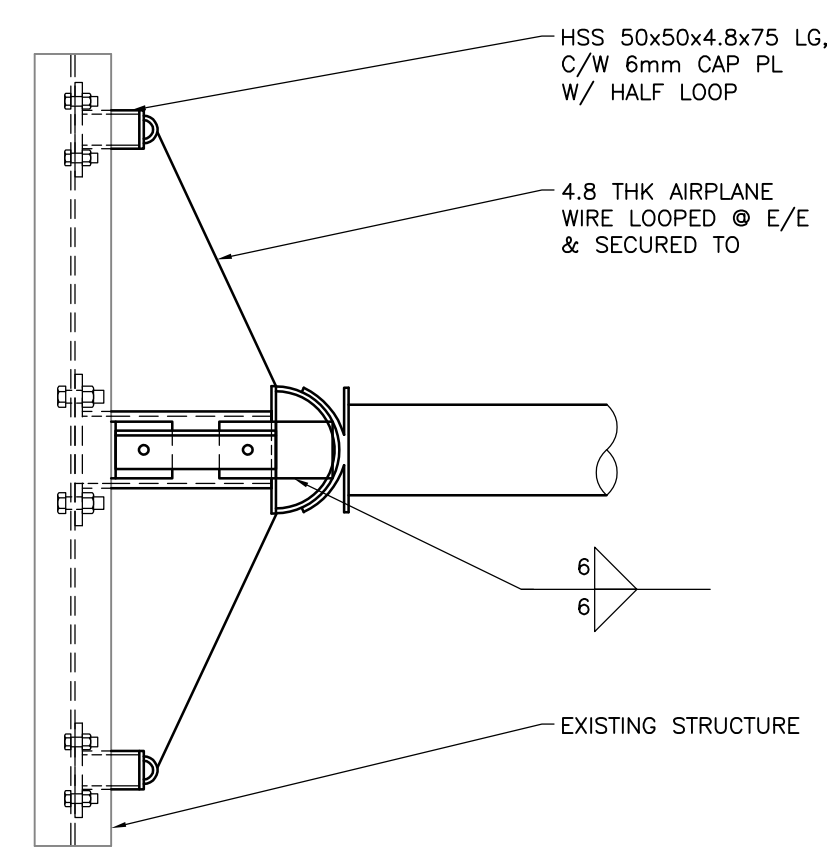


C ELEVATION
S02 1:10



4 DETAIL
1:5

NOTE: 2-REQUIRED



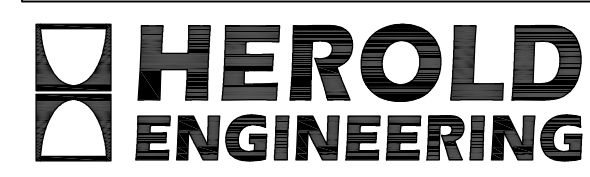
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1	2018.11.30	TENDER

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**ELEVATIONS,
SECTIONS & DETAILS**

DESIGNED DRB	ENGINEER'S SEAL
DESIGN REVIEW DRB	
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DRAFTING REVIEW DRB	
PROJECT No. 1184-114	CLIENT DRAWING No. n/a
SCALE AS SHOWN	PERMIT No. n/a
HEL DRAWING No. S103	REVISION 1