

Stantec Consulting Ltd.
400 - 655 Tyee Road,
Victoria, BC
V9A 6X5

Addendum – No. 5

Project No.:	111720015	Owner:	District of Sooke
Addendum No.:	5	Contract No.:	WWTP-2020
Date:	August 13, 2020		

Addendum issued to active tenderers with documents on record **(19 pages)**. *This addendum is to be read with and constitutes part of the tender document.*

The following RFI responses to the Tender documents for District of Sooke Tender WWTP-2020 are

1. QUESTIONS AND ANSWERS

Q3.9 Is the Conveyor Control panel PNL-4 supplied with the Conveyor Package?

PNL-04 part of the scope of work. See revised Drawings attached.

Q4.7 Can the package supplied "shock sensors" go in an enclosure(s) beside the conveyor starters?

This would be an acceptable approach to accommodate the vendor equipment.

Q4.9 In looking at the existing MCC the space shown for the 3 pole 200 amp feeder break bucket does not exist. That particular section has 1 x 50 kVAR breaker, 1 x 30 kVAR breaker, and the EF-201 starter only with no spaces.

See revised Drawings attached.

Q4.10 In looking at Addendum 3 this morning with reference to Question 3.9 and the Conveyor Control Panel. There does not seem to be any reference to the conveyor control in the electrical shop drawings for the Centrifuge other than a conveyor running input. Can anybody confirm that the integrating control panel will be part of the Conveyor suppliers' package? The Atara shop drawings seem to only list the Motor, Shock Sensor, Rotation Sensor, and Safety Switch.

PNL-04 part of the scope of work. See revised Drawings attached.

Q5.1. I was wondering if we can get ABB/GE MCCs approved as equal or as an alternate for this job. As you know, ABB/GE is a world leader manufacturer for MCCs and VFDs. I would also like to ask if we can get ABB approved for this project for VFDs.

Design with community in mind

No new MCC structures are proposed, only components. No change to the technical specifications.

- Q5.2. Cement Type "GU" and "MS" is specified. We only have Type GUL Cement available on the island however have supplied many MoTI, DND and Municipal projects with GUL Cement. In addition, we can meet Medium Sulphate (MS) type applications with the combination of GUL and Type F Fly ash. Need clarification on if this will be acceptable.

Concrete requirements shown on drawing S101 shall govern over requirements shown in the concrete specs. Type "MS" concrete will not be required for this project. Type "GUL" is an acceptable alternate to Type "GU".

- Q5.3. The maximum aggregate size in the tables is 10mm and 20mm. We have 14mm nominal and 28mm nominal aggregate. Will this be acceptable? Again, we supply these aggregate sizes on all of our projects in this market and our aggregate sizes meet CSA A23.1-14, Table 11 for grading requirements for coarse aggregate. There is no pumpability, finish ability or consolidation issues with the larger gradations, in fact there is enhanced strength and volume stability (less shrinkage potential).

14mm aggregate will be acceptable for masonry core fill and 28mm aggregate will be acceptable for exterior slab-on-grade and centrifuge pedestal. All other concrete requirements shown on S101 will still need to be met

- Q5.4. The maximum water cement ratio for the Type C "Water Retaining Structures" states 0.40 which would require us to provide a 35 MPa, C-1 Exposure Class design, not the 30 MPa, F-1 Exposure class specified.

There are no "water retaining structures" included in this project. Concrete requirements shown on drawing S101 shall govern over requirements shown in the concrete specs.

- Q5.5. The maximum water/cement ratio for the Type E "Underside duct, enclosure/fill" states 0.55 which would require us to supply a 25 MPa design, not the 10 MPa specified.

There are no "underside duct, enclosure/ fill" concrete required for this project. Concrete requirements shown on drawing S101 shall govern over requirements shown in the concrete specs.

- Q5.6. On the process drawing P-604 BOM Items 27, 28 call for check valves. Please provide specification for these check valves. Is any unique material required for these check valves?

All piping and valves are Schedule 80 PVC. The attached cut sheets show an acceptable check valve for this application.

- Q5.7. I cannot find that the PST is included within the 'contract price' of the novation agreement, it is a supply only contract (now terminated with the owner) so it should not have been included in the remaining \$417,794.00

Design with community in mind

PST is included in all items of the supply contract. GST is extra. Do not include PST when adding the outstanding contract values in Appendix 1 of the Form of Tender. The remaining values should be added to Division 43 and 46 line items 9.1, 10.1 and 10.2, respectively.

2. MODIFICATIONS TO TENDER

1. Replace the following drawings with attached:
E101
E1650
2. Add the following drawings:
E1620
E1621
E1631
E1632
E1640

<p style="text-align: center;">Stantec Consulting Ltd.</p>  <p>Prepared by: Stan Spencer, P. Eng. Process Mechanical Lead Phone: (250) 589-4087 stan.spencer@stantec.com</p>	<p style="text-align: center;">Stantec Consulting Ltd.</p> <p>Prepared by: Sean Lockhart, P. Eng. EIC Lead Phone: (604) 375-7960 sean.lockhart@stantec.com</p>
<p style="text-align: center;">Stantec Consulting Ltd.</p>  <p>Prepared by: Bryan Gallagher, P. Eng. Structural Lead Phone: (250) 885-9361 bryan.gallagher@stantec.com</p>	

SXE Ball Check Valves

Submittal Data Sheet



Job or Customer: **PIERS ISLAND TANK REPLACEMENT**

Engineer: **STANTEC**

Contractor: **GREATARIO**

Submitted by: _____ Date _____

Approved by: _____ Date _____

Order No: _____ Date _____

Specification: _____

< STANDARDS >



ASTM D1784
ASTM F441
ASTM D2464
ASTM D2466
ASTM D2467
ASTM F439
ASTM F437
ASTM F1498



ANSI B1.20.1
ANSI B16.5



Certified to
NSF/ANSI 61-G

The IPEX EasyFit SXE Series Ball Check Valves represent the latest innovation in thermoplastic valve manufacturing technology. The SXE introduces an advanced method of installation, providing trouble free service for industrial, OEM and water service applications. This popular style of check valve features a true union design allowing for easy removal and maintenance of the valve without disturbing the rest of the pipe assembly. Positive shutoff of the valve in both vertical and horizontal installations is achieved with just 3 psi of back pressure. The innovative SXE EasyFit design features a custom labelling system, and the optional EasyFit multifunctional handle allows for union nut rotational control and safe blocked carrier tightening.

SXE Ball Check Valves are part of our complete system of IPEX pipe, valves and fittings, engineered and manufactured to our strict quality, performance and dimensional standards.

VALVE AVAILABILITY

Body Material	PVC, Corzan® CPVC
Size Range	1/2" through 4"
Pressure	232 psi
Seals	EPDM or Fluoropolymer (FPM)
End Connections	Socket (IPS), Threaded (FNPT)

SXE Ball Check Valves

Submittal Data Sheet

Valve Selection

Size (inches)	Body Material	O-ring Material	IPEX Part Number		Pressur Rating
			IPS Socket	FNPT Threaded	
1/2	PVC	EPDM	052013		232 psi
		FPM	052022		
	CPVC	EPDM	052121		
		FPM	052127		
3/4	PVC	EPDM	052014		
		FPM	052023		
	CPVC	EPDM	052122		
		FPM	052128		
1	PVC	EPDM	052015		
		FPM	052027		
	CPVC	EPDM	052123		
		FPM	052133		
1-1/4	PVC	EPDM	052016		
		FPM	052028		
	CPVC	EPDM	052124		
		FPM	052134		
1-1/2	PVC	EPDM	052017		
		FPM	052030		
	CPVC	EPDM	052125		
		FPM	052135		
2	PVC	EPDM	052018		
		FPM	052120		
	CPVC	EPDM	052126		
		FPM	052136		
2-1/2	PVC	EPDM	052478	—	
		FPM	052481	—	
	CPVC	EPDM	052484	—	
		FPM	052487	—	
3	PVC	EPDM	052479	—	
		FPM	052482	—	
	CPVC	EPDM	052485	—	
		FPM	052488	—	
4	PVC	EPDM	052480	—	
		FPM	052483	—	
	CPVC	EPDM	052486	—	
		FPM	052489	—	

Body Material:

- ☒ PVC
☐ CPVC

Size (inches):

- ☐ 1/2 ☐ 2
☐ 3/4 ☐ 2-1/2
☐ 1 ☒ 3
☐ 1-1/4 ☒ 4
☐ 1-1/2

Seals:

- ☒ EPDM
☐ Fluoropolymer® (FPM)

End Connections:

- ☒ Socket (IPS)
☐ Threaded (FNPT)

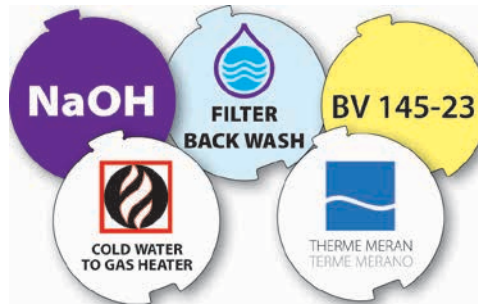
IPEX Part Number:

SXE Ball Check Valves

Submittal Data Sheet

Customize SXE EasyFit

It is often necessary to customize a valve by labelling or tagging it in order to mark, protect and identify it.



SXE EasyFit valves are therefore equipped with a plastic water-resistant module designed to meet this specific need. The module is composed of a transparent PVC service plug and a white circle tag holder, with IPEX branded on one side. The tag holder is embedded in the plug and can be easily removed to be used for self labelling on its blank side. Self labelling can be done in several ways, but we recommend designing and printing custom labels through the EasyFit Labelling System (LSE).



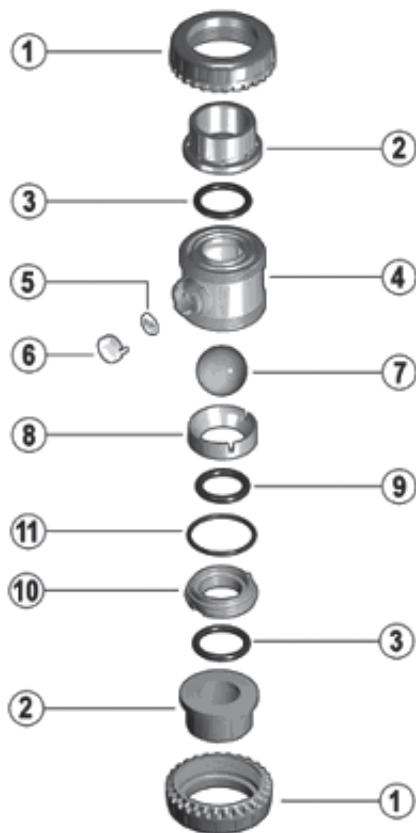
Please contact IPEX customer service for options and pricing on customization of SXE valves with LSE sets.

SXE Ball Check Valves

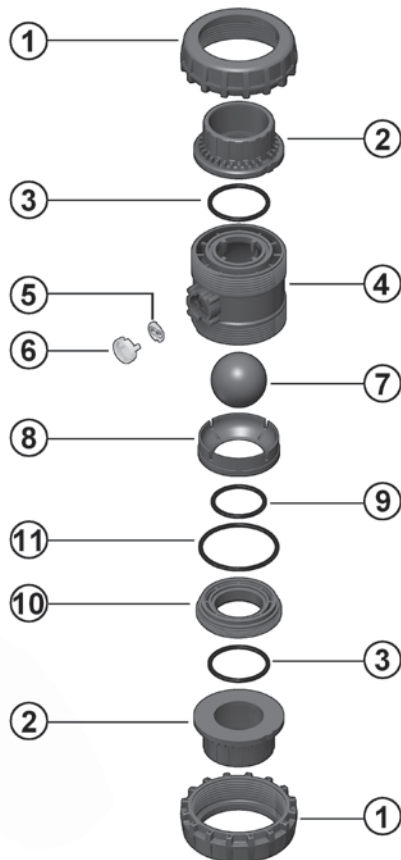
Submittal Data Sheet

Components

1/2" to 2"



2-1/2" to 4"

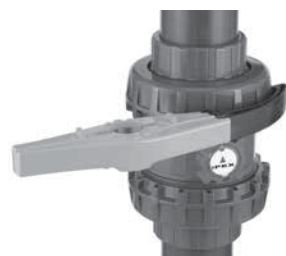


#	Component	Material	Qty
1	Union Nut	PVC	2
2	End Connector	PVC	2
3	Socket Seal (O-ring)	EPDM, FPM	2
4	Body	PVC	1
5	Tag Holder	PVC	1
6	Transparent Service Plug	PVC	1
7	Ball	PVC	1
8	Packing-presser Ring	PVC	1
9	Ball Seal (O-ring)	EPDM, FPM	1
10	Support for Ball Seat	PVC	1
11	Radial Seal (O-ring)	EPDM, FPM	1

SXE Ball Check Valves

Submittal Data Sheet

Installation Procedures



1. For socket and threaded style connections, remove the union nuts (part #1 on previous page) and slide them onto the pipe. **It is important to first check the pipe flow direction and corresponding valve orientation as installing the valve backward will prevent it from functioning as intended.**
2. Please refer to the appropriate connection style sub-section:
 - a. For socket style, solvent cement the end connectors (2) onto the pipe ends. For correct joining procedure, please refer to the section entitled, "Joining Methods – Solvent Cementing" in the IPEX Industrial Technical Manual Series, "Volume I: Vinyl Process Piping Systems". **Be sure to allow sufficient cure time before continuing with the valve installation.**
 - b. For threaded style, thread the end connectors (2) onto the pipe ends. For correct joining procedure, please refer to the section entitled, "Joining Methods – Threading" in the IPEX Industrial Technical Manual Series, "Volume I: Vinyl Process Piping Systems".
3. Ensure that the valve is in the correct orientation, and that the main seal safe blocked carrier and o-rings are properly fitted in the valve. A flow direction indicator is located on the side of the valve body. Carefully place the valve in the system between the two end connections.
4. Tighten both union nuts by hand. Hand tightening is typically sufficient to maintain a seal for the maximum working pressure. If additional tightening is required, use the EasyFit multifunctional handle tool to tighten the union nuts an additional 1/4 turn. The Easyfit torque wrench (available as an accessory for 1/2" – 2" valves) may also be used to complete the nut tightening in accordance to the torques indicated on instructions included; following this procedure will ensure the best installation.

Over-tightening may damage the threads on the valve body and/or the union nut, and may even cause the union nut to crack. It is recommended to use the EasyFit handle to prevent damage.

SXE Ball Check Valves

Submittal Data Sheet

Disassembly

1. If removing the valve from an operating system, isolate the valve from the rest of the system. Be sure to depressurize and drain the isolated branch and valve before continuing.
2. Loosen both union nuts (1) and drop the valve out of the line. If retaining the socket o-rings (3), take care that they are not lost when removing the valve from the line.
 - a. For 1/2" to 2" valves, remove the transparent service plug from the EasyFit multifunctional handle tool. Turn the handle over and seat on the top of the valve, ensuring the integrated gear teeth on the handle mesh with the union nut teeth. Turn clockwise to loosen.
 - b. For 2-1/2" to 4" valves, remove the EasyFit multifunctional tool from the bottom of the handle, turn it over and re-install it. Engage the tool with the outer ring profile of the union nut and loosen.
3. To disassemble, locate the main seal carrier adjustment tool on the multifunctional handle. This is found on the bottom of 1/2" to 2" handles and on the top of 2-1/2" to 4" handles.
4. Line up the moldings on the handle with the slots in the main seal carrier. Loosen and remove the main seal carrier (10) by turning it in a counter-clockwise direction.
5. Remove the Radial Seal (11), Ball Seal (9), Packing-presser Ring (8), and the Ball (7).
6. The valve components can now be checked for problems and/or replaced.

Assembly

Note: Before assembling the valve components, it is advisable to lubricate the o-rings with a water soluble lubricant. **Be sure to consult the "IPEX Chemical Resistance Guide" and/or other trusted resources to determine specific lubricant-rubber compatibilities.**

1. Insert the Remove the Ball (7), Packing-presser Ring (8), Ball Seal (9), and the Radial Seal (11) in the valve body.
2. Slightly hand tighten the main seal carrier (10) into the valve body. Line up the moldings on the handle with the slots in the main seal carrier then tighten by turning in a clockwise direction. The Easyfit torque wrench key can also be used to tighten the main seal carrier in accordance with the tightening torque values indicated on the included instructions.
3. Properly fit the socket o-rings (3) in their respective grooves.
4. Place the end connectors (2) into the union nuts (1), then thread onto the valve body taking care that the socket o-rings remain properly fitted in their grooves.
 - a. For 1/2" to 2" valves, remove the transparent service plug from the EasyFit multifunctional handle tool. Turn the handle over and seat on the top of the valve, ensuring the integrated gear teeth on the handle mesh with the union nut teeth. Turn counter-clockwise to tighten. The Easyfit torque wrench can also be used to tighten the union nuts in accordance with the tightening torque values indicated on the included instructions.
 - b. For 2-1/2" to 4" valves, remove the EasyFit multifunctional tool from the bottom of the handle, turn it over and re-install it. Engage the tool with the outer ring profile of the union nut and tighten.



Testing and Operating

The purpose of system testing is to assess the quality of all joints and fittings to ensure that they will withstand the design working pressure, plus a safety margin, without loss of pressure or fluid. Typically, the system will be tested and assessed in sub-sections as this allows for improved isolation and remediation of potential problems. With this in mind, the testing of a specific installed valve is achieved while carrying out a test of the overall system.

An onsite pressure test procedure is outlined in the IPEX Industrial Technical Manual Series, "Volume I: Vinyl Process Piping Systems" under the section entitled, "Testing". The use of this procedure should be sufficient to assess the quality of a valve installation. **In any test or operating condition, it is important to never exceed the pressure rating of the lowest rated appurtenance in the system.**

Important Points:

- Never test thermoplastic piping systems with compressed air or other gases including air-over-water boosters.
- When testing, do not exceed the rated maximum operating pressure of the valve.
- Avoid the rapid closure of valves to eliminate the possibility of water hammer which may cause damage to the pipeline or the valve.

Please contact IPEX customer service and technical support with regard to any concern not addressed in this data sheet or the technical manual.

About the IPEX Group of Companies

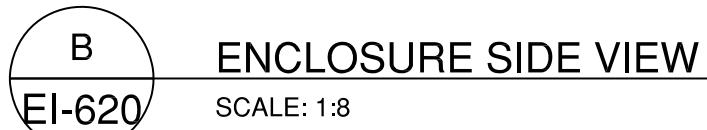
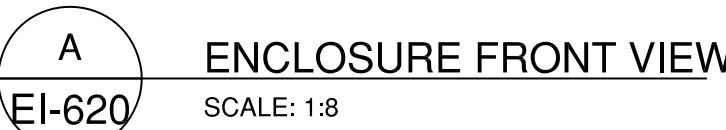
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- Electrical systems
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- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
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- Irrigation systems
- PVC, CPVC, PP, PVDF, PE, ABS, and PEX pipe and fittings

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A policy of ongoing product improvement is maintained. This may result in modifications of features and/or specifications without notice.



CONTROL CABINET BILL OF MATERIALS				
ITEM	DESCRIPTION	MANUFACTURER	PART NUMBER	QTY
1	36"H X 30"W X 16"D NEMA 4X ENCLOSURE	HOFFMAN	CSD363016SS	1
2	36" H X 30" W ENCLOSURE PANEL	HOFFMAN	CP3630	1
3	3 POSITION MAINTAINED SELECTOR SWITCH	AB	800H SERIES	3
4	3 POSITION MAINTAINED SPRING RETURN FROM RIGHT SELECTOR SWITCH	AB	800H SERIES	3
5	CONTROLLOGIX 4 SLOT CHASSIS	AB	1756-AA	1
6	CONTROLLOGIX 100W 120VAC POWER SUPPLY	AB	1756-PA75	1
7	CONTROLLOGIX 16 POINT RELAY CONTACT OUTPUT CARD	AB	1756-QW16I	1
8	CONTROLLOGIX 16 POINT ISOLATED AC INPUT CARD	AB	1756-IA16I	1
9	ETHERNET I/P BRIDGE CARD	AB	1756-EN2T	1
10	36 PIN REMOVABLE TERMINAL BLOCK	AB	1756-TBCH	2
11	CONTROLLOGIX RACK SLOT FILLER	AB	1756-N2	1
12	15A SINGLE POLE CIRCUIT BREAKER	AB	1489-M1C150	1
13	WSI 6/LD 60-150V DC/AC FUSED TERMINAL	WEIDMULLER	1012300000	AS REQ.
14	WDU 2.5 FEED-THROUGH TERMINAL BLOCK D. BEIGE	WEIDMULLER	1020000000	AS REQ.
15	WDU 2.5 FEED-THROUGH TERMINAL BLOCK WHITE	WEIDMULLER	1036800000	AS REQ.
16	WAP 16x35 WTW 2.5-10 END PLATE	WEIDMULLER	1050100000	AS REQ.
17	WPE 2.5 PROTECTIVE EARTH TERMINAL	WEIDMULLER	1010000000	AS REQ.
18	WQV 2.5/10 TERMINAL JUMPER BAR	WEIDMULLER	1054460000	AS REQ.
19	SCHT 5S GROUP LABEL CARRIER	WEIDMULLER	1631930000	AS REQ.
20	WEW 35/2 END BRACKET	WEIDMULLER	1061200000	AS REQ.
21	DIN RAIL	-	-	AS REQ.
22	2"W X 4"H WIREWAY	PANDUIT	-	AS REQ.
23	COPPER BUSS BAR	-	-	AS REQ.

CONTROL CABINET NAMEPLATE SCHEDULE			
PLATE #	DESCRIPTION	COLOUR	TEXT SIZE
A	PNL-04	WHT/BLK LETTERS	-
B	CONVEYOR #1	WHT/BLK LETTERS	-
C	CONVEYOR #2	WHT/BLK LETTERS	-
D	CONVEYOR #3	WHT/BLK LETTERS	-
E	LOC-OFF-REM	WHT/BLK LETTERS	-
F	LOC-OFF-REM	WHT/BLK LETTERS	-
G	LOC-OFF-REM	WHT/BLK LETTERS	-
H	FWD-OFF-REV	WHT/BLK LETTERS	-
I	FWD-OFF-REV	WHT/BLK LETTERS	-
J	FWD-OFF-REV	WHT/BLK LETTERS	-
K	TS-01 MAIN INCOMING	WHT/BLK LETTERS	-
L	TS-02 CONVEYOR #1 CONTROLS	WHT/BLK LETTERS	-
M	TS-03 CONVEYOR #2 CONTROLS	WHT/BLK LETTERS	-
N	TS-04 CONVEYOR #3 CONTROLS	WHT/BLK LETTERS	-
O	TS-05 RACK 01 SLOT 1	WHT/BLK LETTERS	-
P	TS-06 RACK 01 SLOT 03	WHT/BLK LETTERS	-

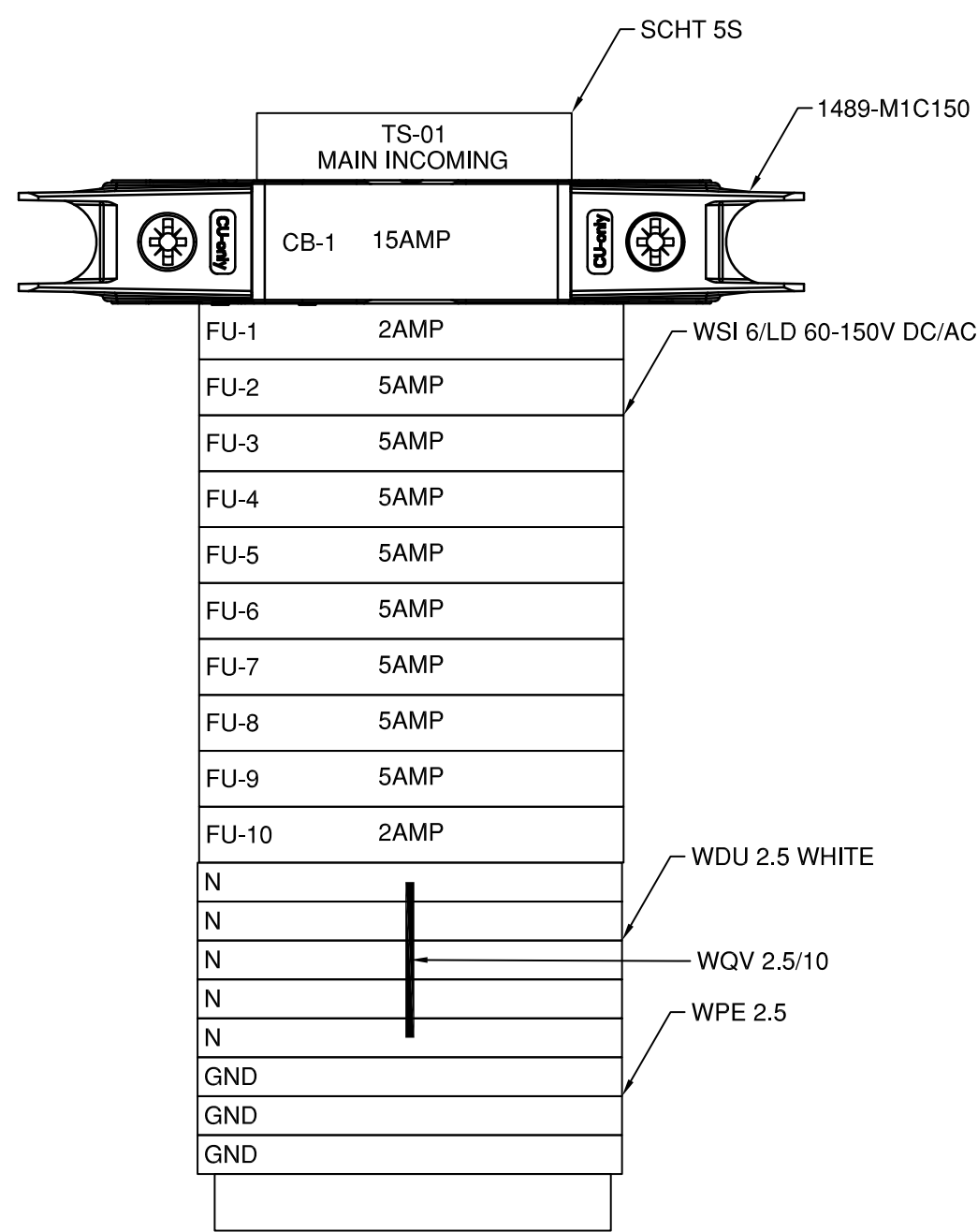
NOTES:

1)

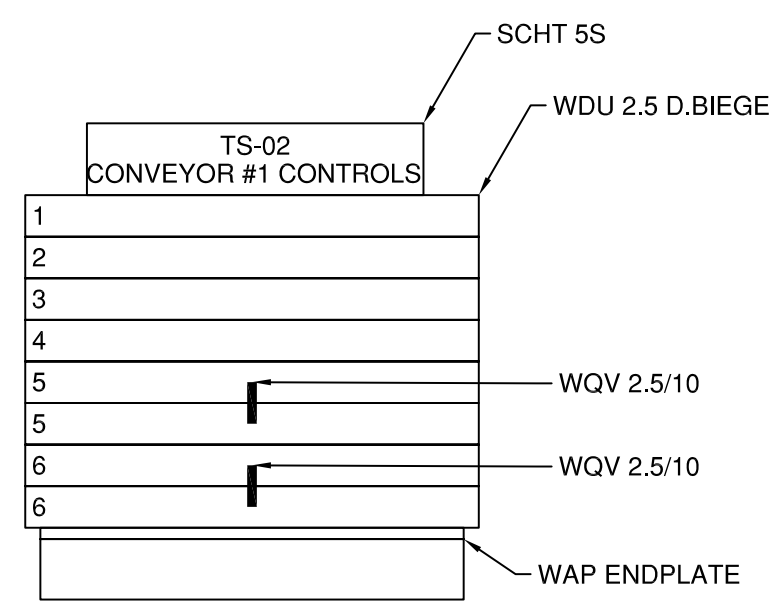
C

B

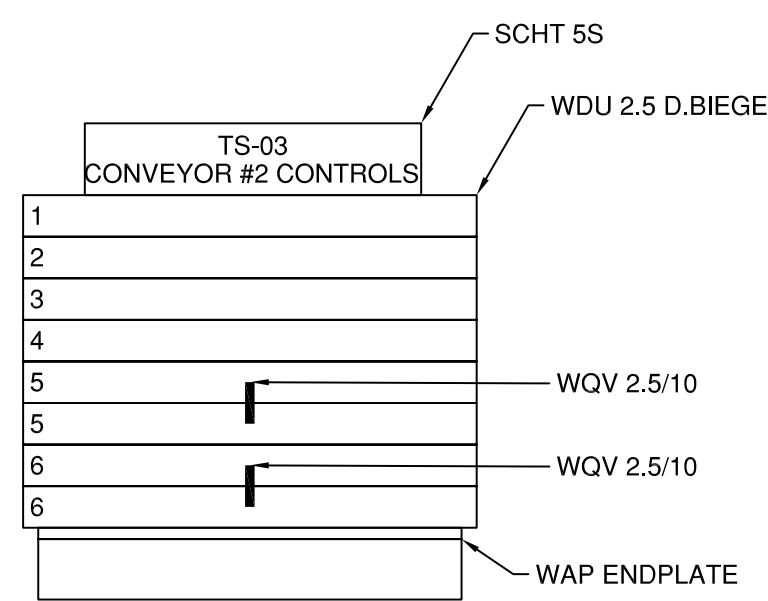
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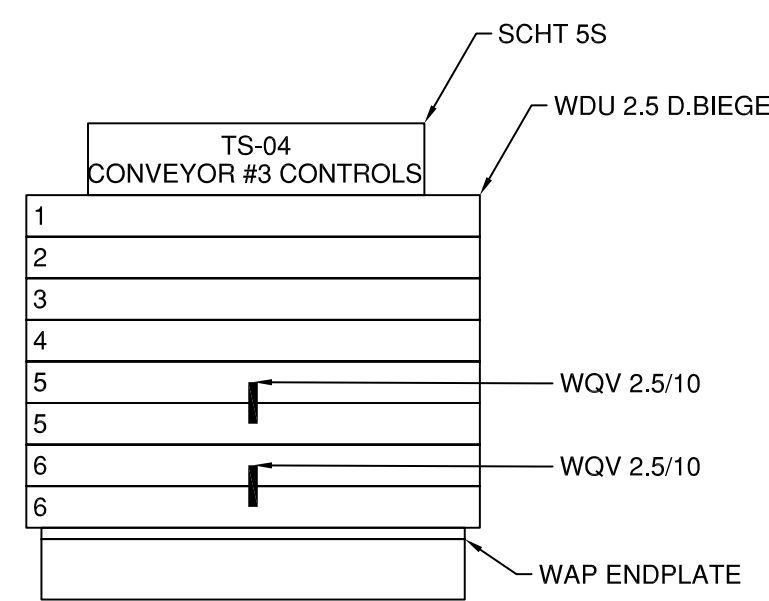
A TS-01 MAIN INCOMING
EI-621 NO SCALE



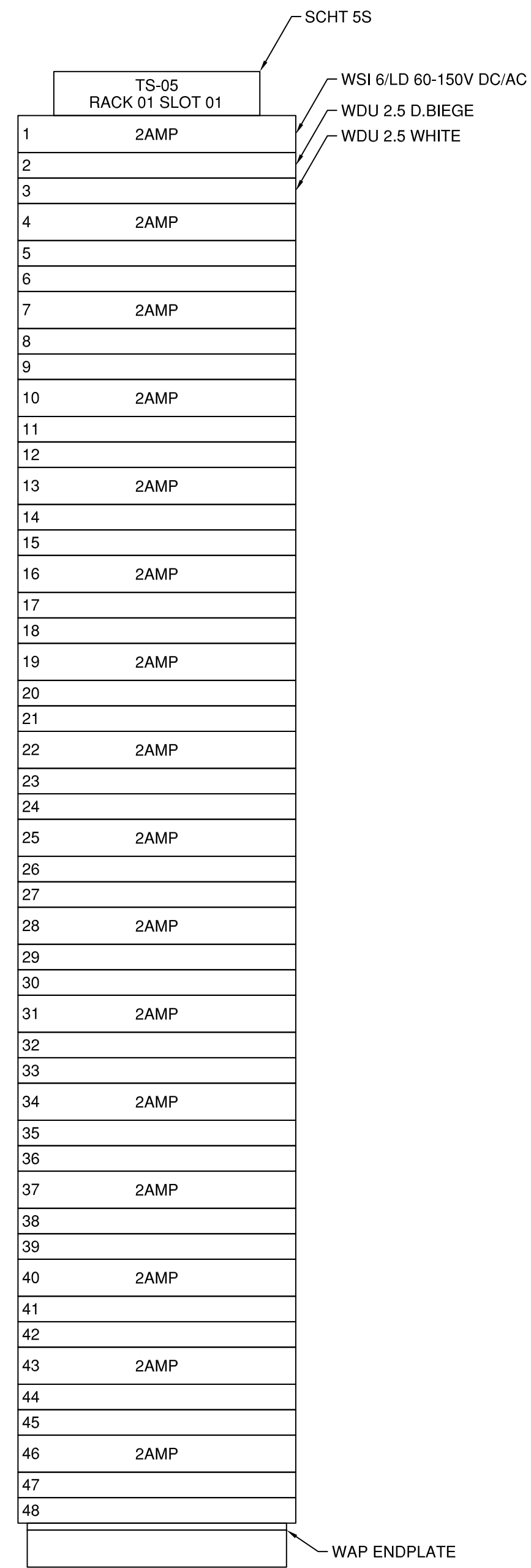
B TS-02 CONVEYOR #1 CONTROLS
EI-621 NO SCALE



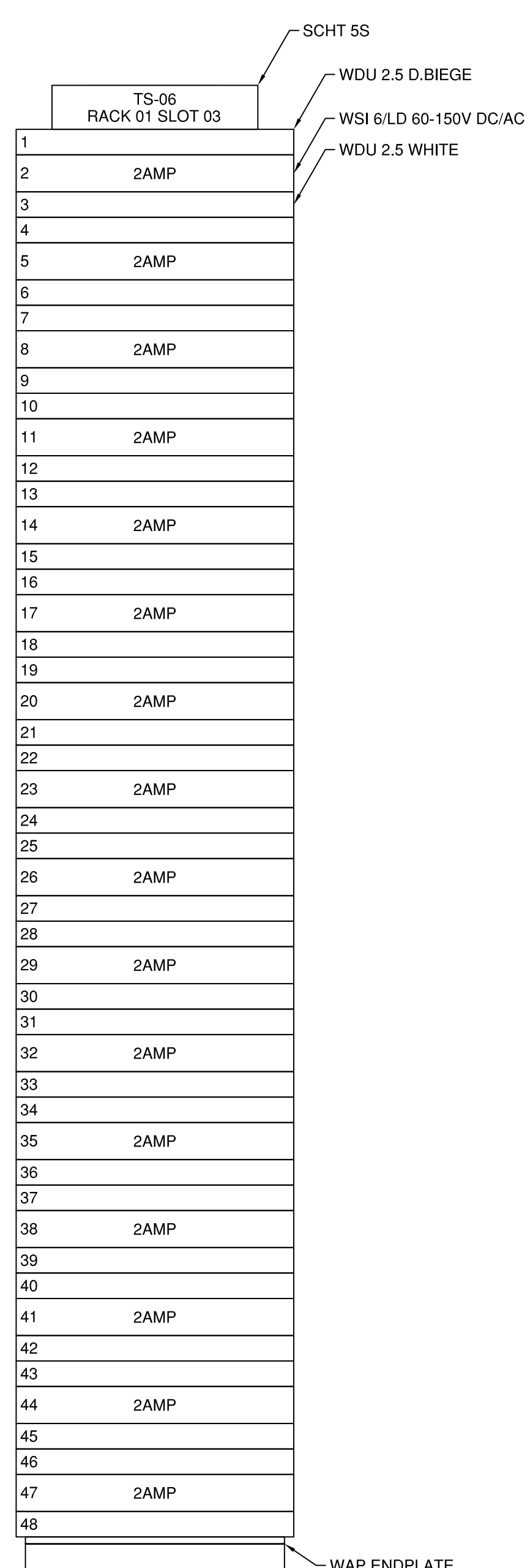
C TS-03 CONVEYOR #2 CONTROLS
EI-621 NO SCALE



D TS-04 CONVEYOR #3 CONTROLS
EI-621 NO SCALE



E TS-05 RACK 01 SLOT 01
EI-621 NO SCALE



F TS-06 RACK 01 SLOT 03
EI-621 NO SCALE

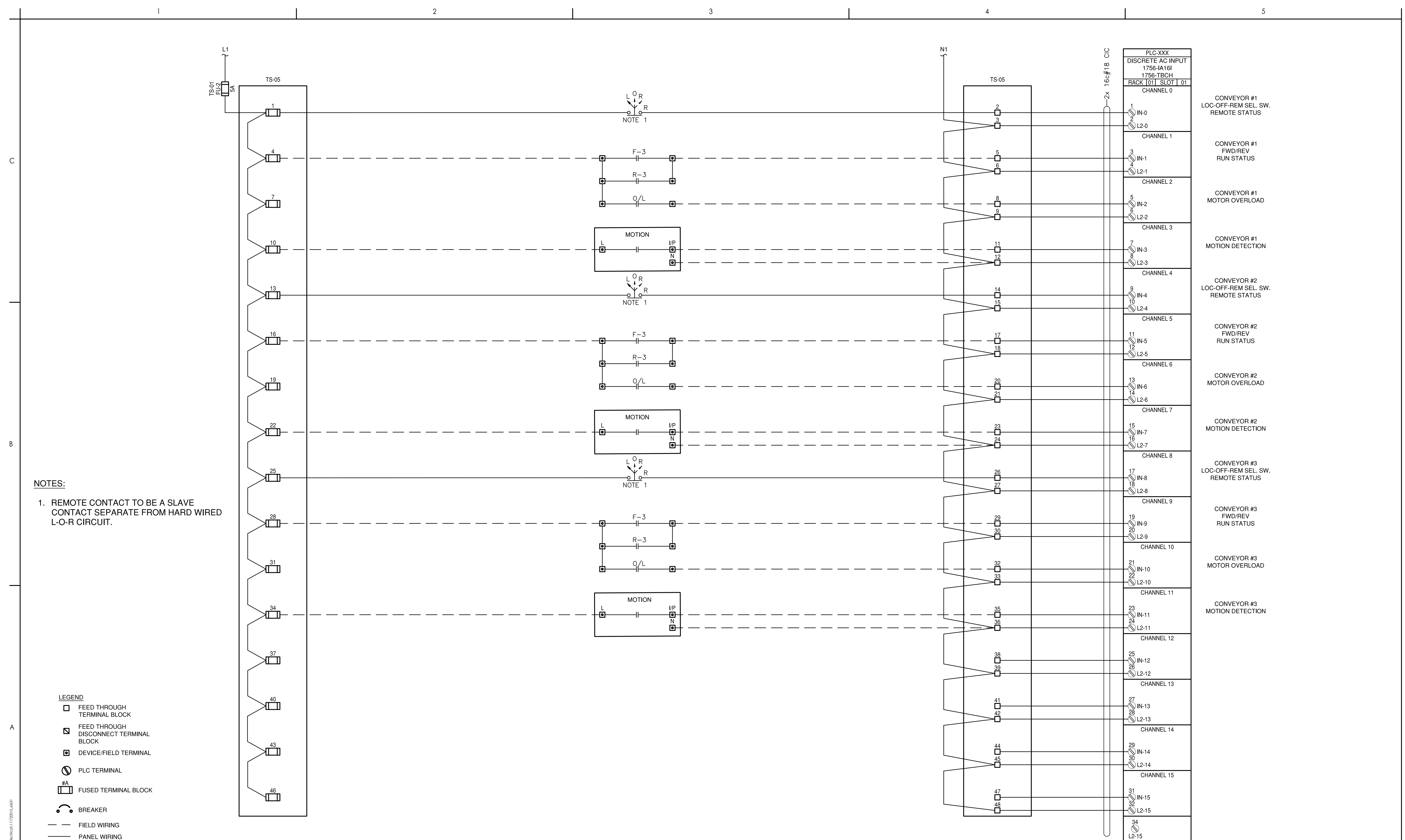
NOTES:

1)

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<div>Revision</div> <div>By</div> <div>Appd</div> <div>YYYY.MM.DD</div>		<div>Permit/Seal</div>	<div>Consultant</div>	<div> Stantec Consulting Ltd. 400-655 Tyee Road Victoria BC V9A 6X5 Tel: 250.388.9161 www.stantec.com Copyright Reserved <small>The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay. The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.</small></div>	<div>Client/Project Logo</div> <div></div>	<div>Client/Project</div> <div>District of Sooke</div> <div>WWTP UPGRADES 2020</div> <div>Sooke BC</div> <div>File Name: 111720015_E621</div> <div>RPH RPH SAL Dwn. Dign. Chkd. YYYY.MM.DD</div>	<div>Title</div> <div>RIO PNL-04 TERMINAL LAYOUTS</div> <div>Project No. 111720015</div> <div>Revision Sheet of</div> <div>Scale NO SCALE</div> <div>Drawing No. EI-621</div>
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ORIGINAL SHEET - ISO A1



C

B

A

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2020.08.13 11:38:15 AM
ORIGINAL SHEET - ISO A1

CONVEYOR #1
RUN FWD

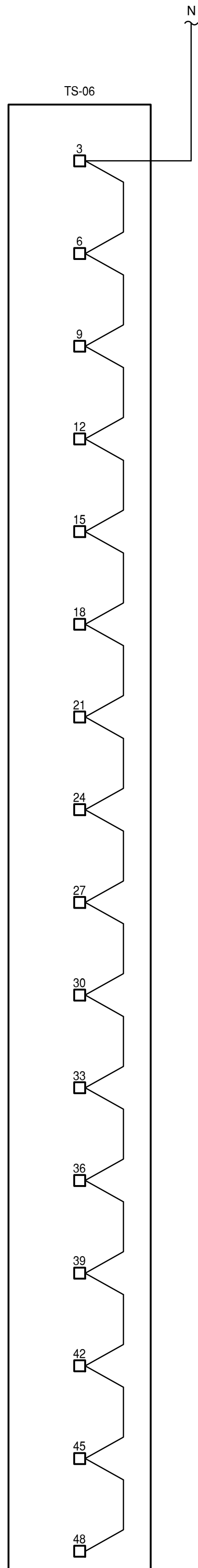
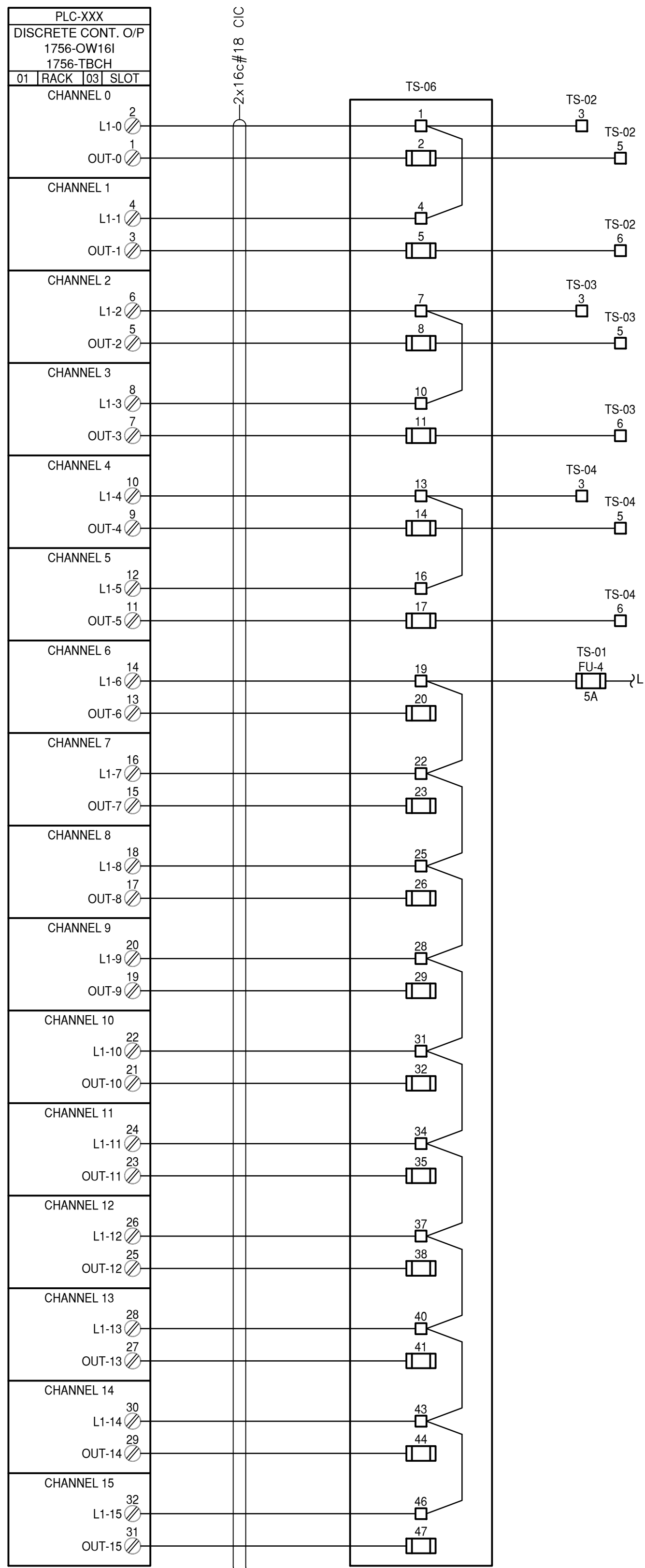
CONVEYOR #1
RUN REV

CONVEYOR #2
RUN FWD

CONVEYOR #2
RUN REV

CONVEYOR #3
RUN FWD

CONVEYOR #3
RUN REV



LEGEND

- FEED THROUGH
TERMINAL BLOCK
- ▣ FEED THROUGH
DISCONNECT TERMINAL
BLOCK
- ▣ DEVICE/FIELD TERMINAL
- ⊙ PLC TERMINAL
- #A FUSED TERMINAL BLOCK
- ⋈ BREAKER
- FIELD WIRING
- PANEL WIRING

Permit/Seal

Consultant



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Client/Project Logo



Client/Project

District of Sooke

WWTP UPGRADES 2020

Sooke BC

File Name: 111720015_E632

RPH

Dwn.

RPH

Dsgn.

SAL

Chkd.

YYYY.MM.DD

Title

RIO PNL-04
RACK 01 SLOT 03
IO DIAGRAM

Project No.
111720015

Revision Sheet

of

Scale
NO SCALE

Drawing No.

EI-632



ORIGINAL SHEET - ISO A1