Control Panel 5.0 Quick Start Guide

Purpose

The purpose of this Quick Start Guide is to provide explanations and procedures for installing and operating the View Control Panel 5.0 (CP).

Scope

This Guide provides safety guidelines, detailed planning installation instructions and setup information for installing the View Control Panel 5.0.
- Determining the location and placement
- Mounting the Control Panel
- Adding Power to the Control Panel

Package Includes

- Control Panel 5.0 assembly
- Telco Rack (shipped separately)

CAUTION: HEAVY EQUIPMENT When moving and locating the Control Panel use proper lifting equipment and certified rigging personnel.

Work Performed by

Low Voltage and Line Voltage Contractor
- Line voltage contractor: Line voltage for AC power
- Low voltage contractor: All other low voltage connections

Location of Control Panel Installation

Refer to View Interconnect Drawings for exact location and ensure the place of installation is safe and secured.

Contractor Responsibility

- Mount Control Panel to floor and wall
- Provide AC power
- Install iNode server in telco rack
- Install telco rack assembly

Phase of Project

Prewire / Rough-in

Parts of the Control Panel

The main components in the Control Panel are:

- GAM
- CPHE
- Power Supplies
- PDU
- 3-Phase power block
- Green indicator light on the front door
- Telco Rack (Including Fiber and Ethernet switches and fiber cassette drawers)

CAUTION: Serial numbers are assigned to the Control Panel and the Telco rack. These items are shipped separately and during assembly the serial number must match, otherwise the system will not work properly.

Power Requirements

- Dedicated 30 amp circuit
- 208 V 3 phase 5-wire power
- Critical Power preferred
- Output power is Class 2 48VDC

**NOTE:** For India, Neutral is required

General Notes

NOTE: Do not remove dust caps from BNC connections on top of Control Panel. These should remain installed until trunk cables are terminated and ready to be connected.

- For all fiber, coaxial cabling, and terminations, refer to View Interconnect Drawing
- Prior to mounting Control Panel, ensure 4" sleeves have been installed in the concrete slab between floors. The sleeves will accommodate vertical fiber cabling between multiple control panels.
- Functional Hardware Testing (FHT) will be completed one control panel at a time.
- Networking of control panels will be completed by View Field Service Engineer (FSE)
- DO NOT connect fiber patch cables to the network switches until the View FSE arrives onsite

Supplied by Installer

- Material handling equipment
- Concrete anchors, wall anchors (per local building codes)
- Torpedo level
- Tape measure
- Power tools
- Other miscellaneous tools as needed

⅛"

1⅞"

28¼"

¼"

73⅞"

40¾"

2¾"

31⅜"

10⁹⁄₁₆"

73⅞"
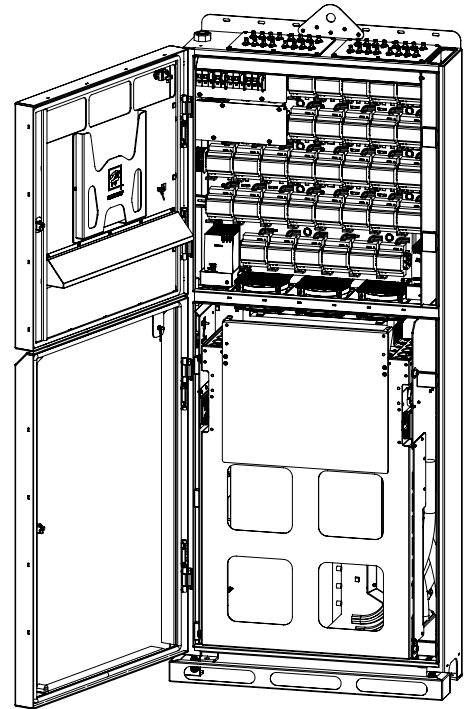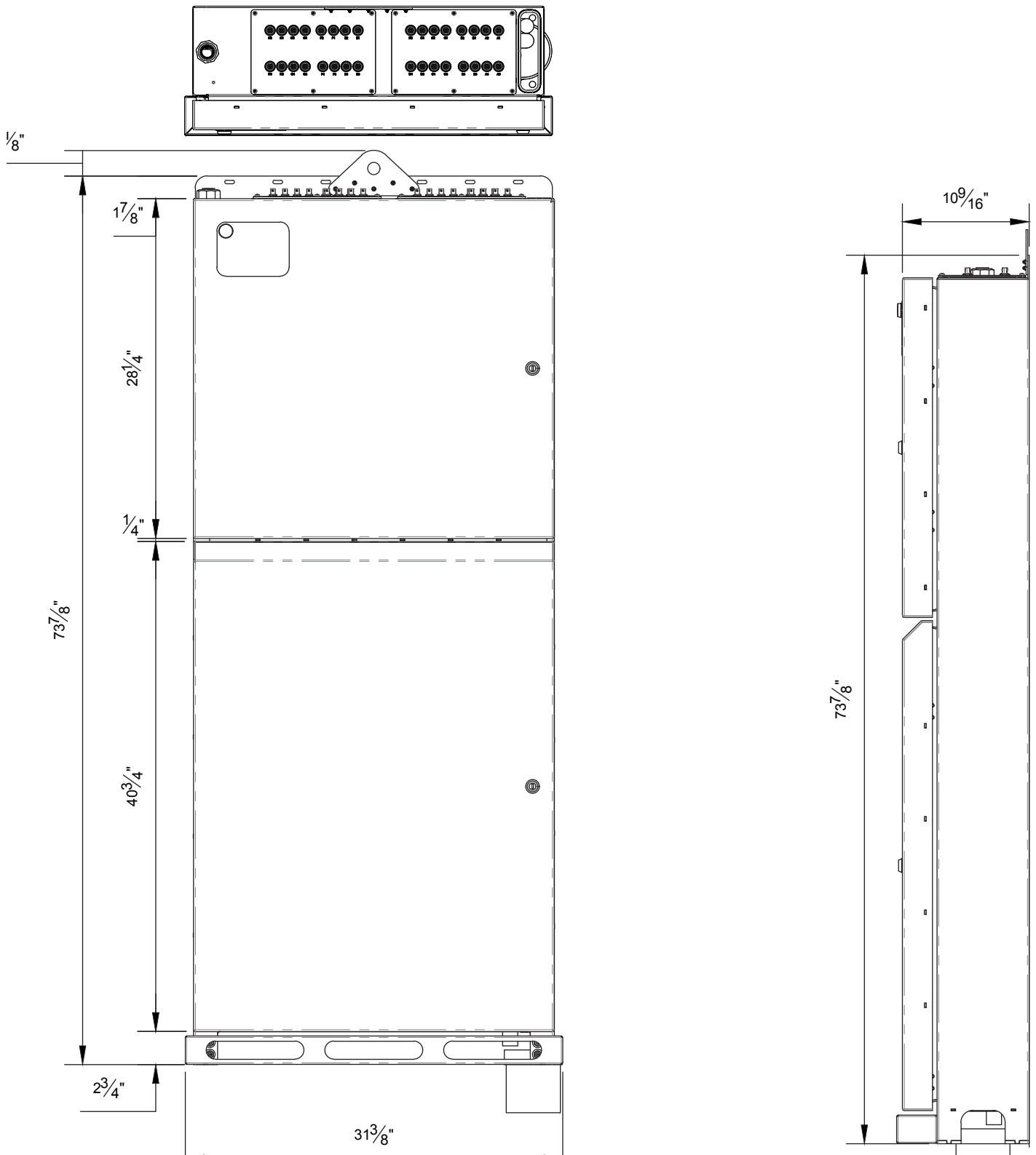
RECEIVING AND HANDLING

Control Panel 5.0

CP 5.0 In the Box

CP 5.0 Unboxed

Telco Rack

Telco Rack in Wood Crates

Telco Rack Uncrated

Telco Rack Ready for Install in
Control Panel*

*Prior to installing Telco rack in Control Panel,
- iNode server must be installed (Refer to View
  Interconnect Drawings). When applicable,
  iNode server ships separately in cardboard
  box.
- The serial number on the Telco rack and the
  Control Panel MUST match

iNode Server(s)

iNode Server In the Box

iNode Server ready to be mounted in Telco rack*

*Low-Voltage contractor is required to install each iNode server into the Telco racks as shown on View interconnect drawings. iNode server(s) must be populated inTelco rack prior to installed in Control Panel.

iNode Server mounted in Telco rack

CONTROL PANEL INSTALLATION

1. The conduit sleeve location must be in-line with the Control Panel's raceway. Refer to Interconnect Drawings for Control Panel location(s).

The conduit sleeve between floors is directly below the Control Panel raceway.

CP n.##

1
XG-5.2.0

CONDUIT SLEEVE

F/O sm   F/O sm   F/O sm   F/O sm
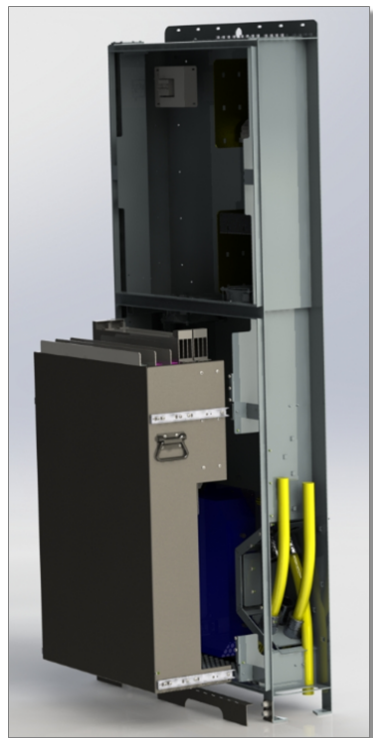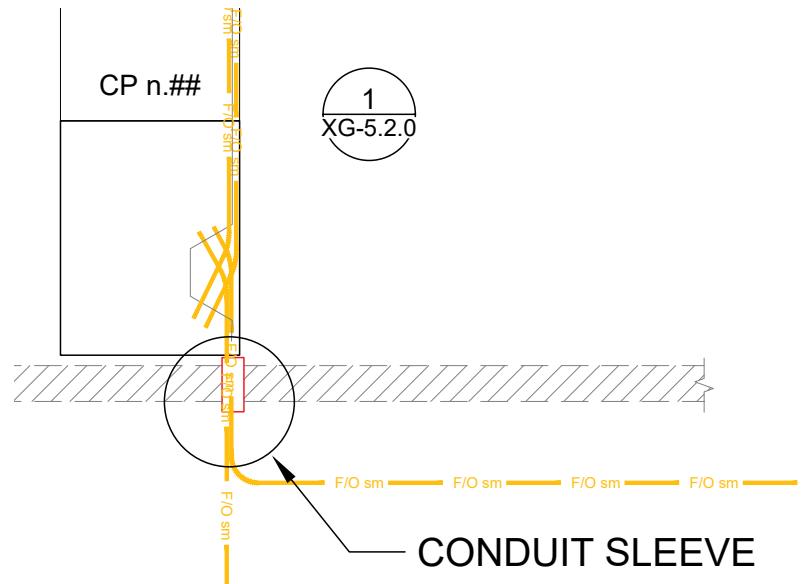
The armored fiber cable is routed through the conduit sleeve and into the Control Panel raceway.

2. Confirm 4" conduit sleeves are installed in the concrete slab between floors. The conduit sleeves will accommodate vertical fiber cable routing between multiple Control panels.

Conduit sleeve diameter must be 4" or more.

When installing floor penetrations in sleeves, stub-out size cannot be more than 2" high.

3. Mobilize the Control Panel to location per the View Interconnect Drawings.
   • Use top mounted hook when using a crane otherwise, use material handling equipment or equivalent

4. Using the conduit sleeve as a reference, place the Control Panel directly above the conduit sleeve and mark the floor for the mounting locations at each corner of the Control Panel.

5. Move Control Panel and drill four (4) holes at the marked locations using a concrete bit and hammer drill.

Drill marked locations.

Clean debris before installing the Control Panel.
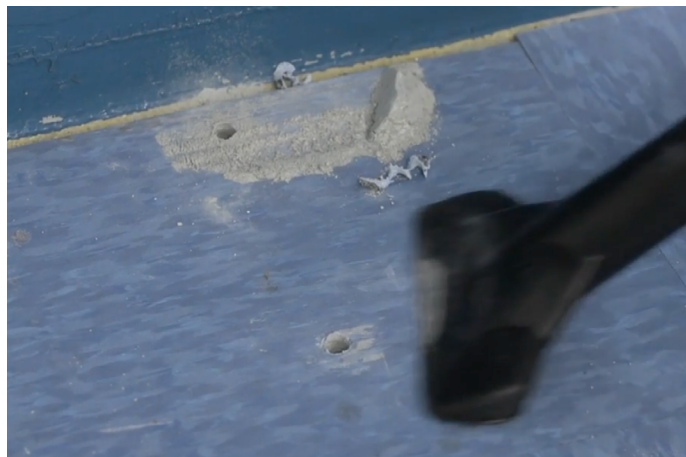
6. Return Control Panel to installation location so that floor and wall penetratations lineup with mounting points. Ensure that Control Panel is plum and level.

7. Hold the top part of the Control Panel while fastening the bottom to the floor to ensure it does not tip over

8. Insert and drill floor anchor bolts to mounting locations
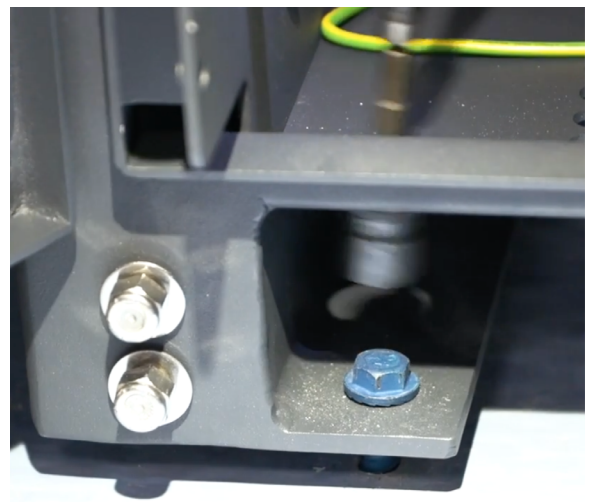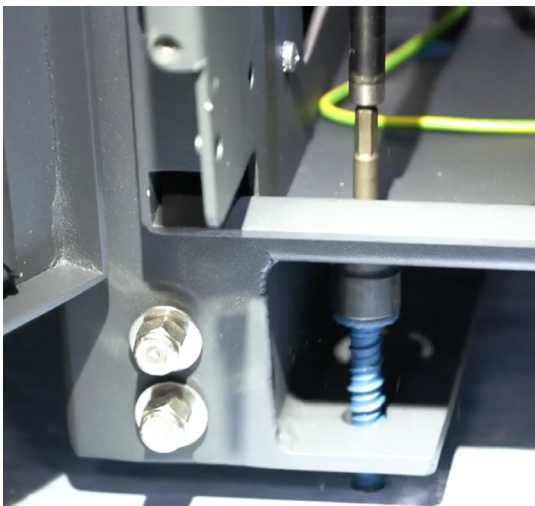
9. Insert and drill wall anchor bolts to mounting locations

10. Install bottom kickplate to the base of the Control Panel

11. Rough-In / Prewire Fiber into CP 5.0

- Run Backbone fiber into race-way through the top of the CP 5.0
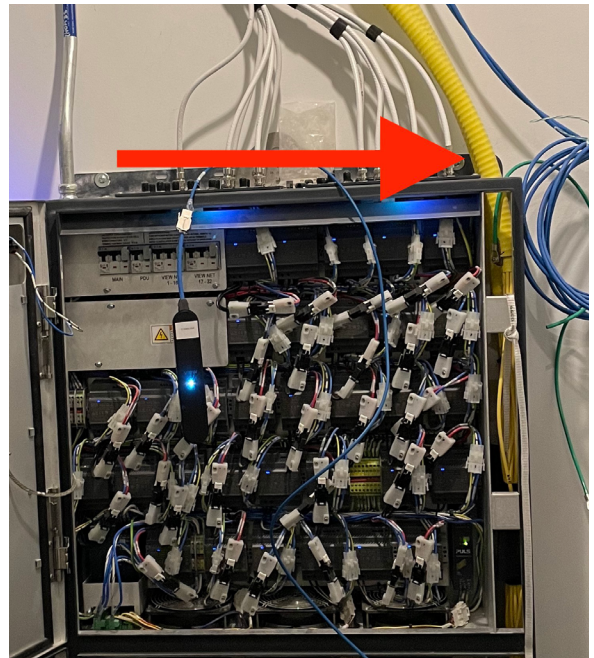
- Run fiber from top raceway into lower gland port. Strip away outer armor jacket (10 feet) and secure for later termination.

- Run fiber from lower gland port into upper gland port. Strip away outer armor jacket (10 feet) and secure for later termination.
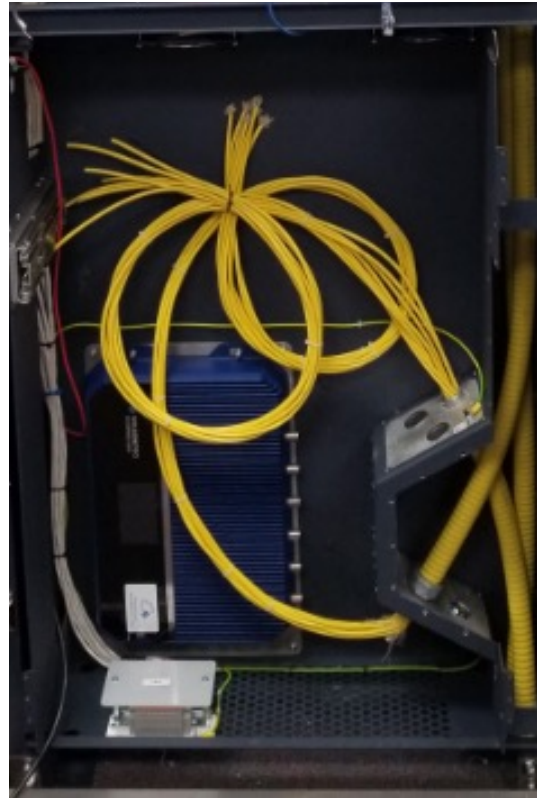
- Final rough-in configuration

12. Lock Out Tag Out (LOTO) procedure before power to CP5.0

   • LOTO: Main power breaker from the building supplying power to View Control Panel. NOTE: Follow OSHA LOTO procedures before installing power to Control Panel.

   • LOTO: **VIEW NET 1-16 & VIEW NET 17-32:** Zip tie a LOTO tag to each of the levers shown in Image #2. The LOTO tag can be installed by the low-voltage contractor or a View technician. Be sure to fill out the tag with technician name and phone number.

   CAUTION: Only a View technician is authorized to remove LOTO tags.
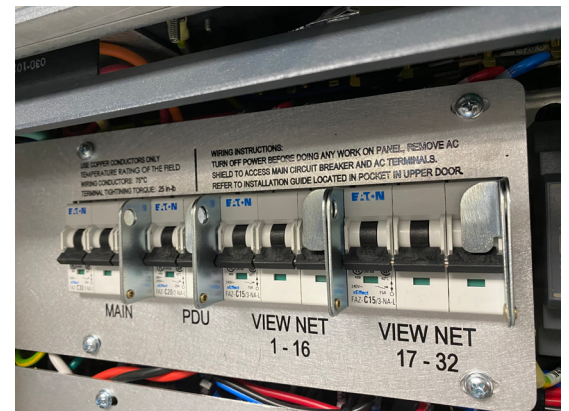
   • **When to Energize VIEW NET 1-16 and VIEW NET 17-32 circuits:** Once the Control Panel and associated iNode is fully provisioned, the low-voltage contractor will contact View PM/FSE about removing tags and energizing the circuits.

13. Connect line voltage 3-phase power to the Control Panel, critical power preferred (Wiring to be completed by a Licensed Electrician)
    - Remove circuit breaker cover panel
    - Install conduit at top of CP 5.0, 3/4" fitting is top left
    - Terminate 3-phase power into the terminal blocks starting with ground, then neutral, then the 3-phase power lines
    - Punch out a 3/4" EMT knock out at the top of Control Panel

3/4" EMT knockout
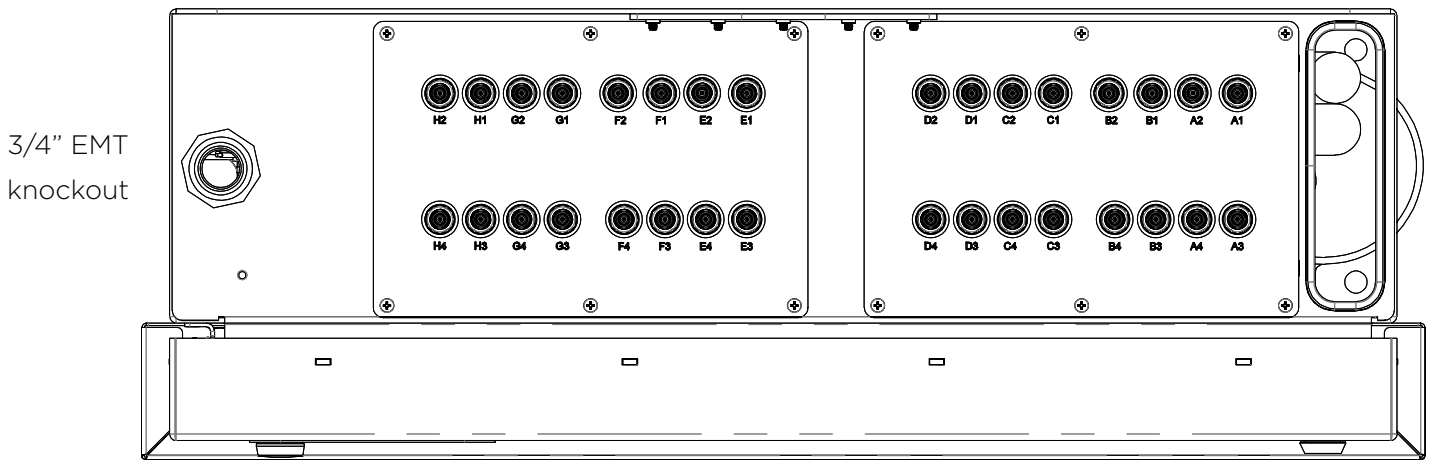
Breaker cover panel
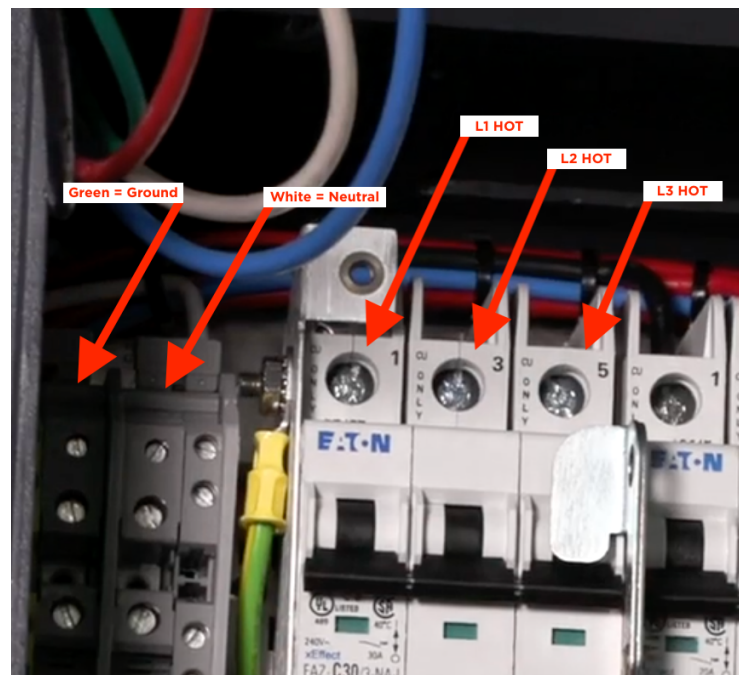
Ground, Neutral, L1 Hot, L2 Hot, L3 Hot

14. Energize power to Control Panel using LOTO procedures

- Using a Volt/Ohm meter, check proper voltages between Ground, Neutral, L1, L2, and L3
- Verify all internal CP connections: power and data connections. Refer to below procedure and addendum.
- Re-install breaker panel cover after ALL power has been terminated
- On the breaker panel, flip the main 3 phase power breaker to the ON position
- Verify the power indicator light is green on the front of the control panel
- Install LOTO on the Control Panel's main circuit breaker. NOTE: Power should be turned OFF for the remainder of work

Power OFF
DO NOT TOUCH
PDU BREAKER SWITCH
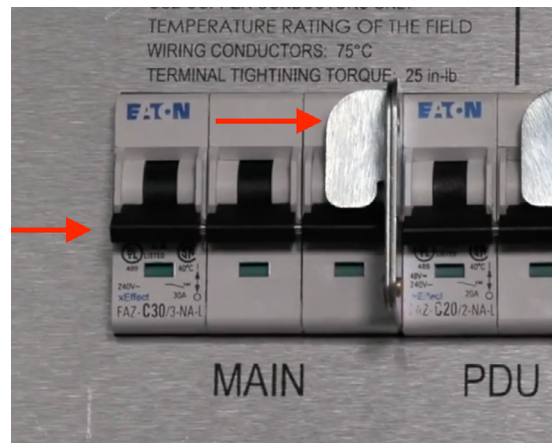
Power ON
DO NOT TOUCH
PDU BREAKER SWITCH
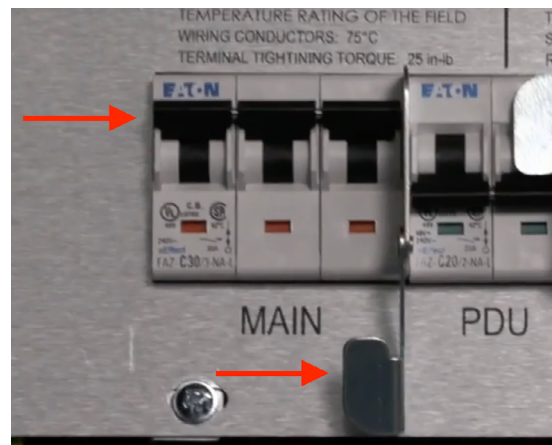
Power Indicator Light = Green
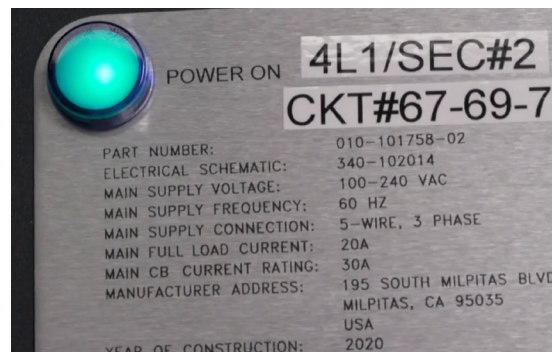
15. Connect all AC power cables from the devices in the Control Panel to the PDU (Power Distribution Unit). Ensure that power lights are illuminated on all the devices
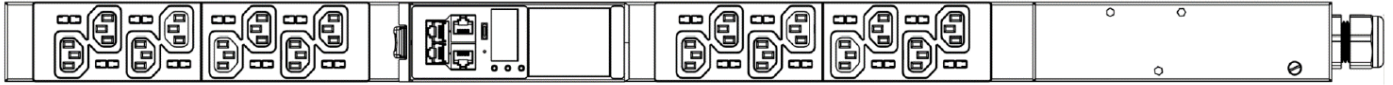
16. Populate and Install the Telco Rack

- Unbox Telco rack and verify the serial number matches the serial number on the Control Panel

CAUTION: Serial numbers are assigned to the Control Panel and the Telco rack. These items are shipped separately and during assembly the serial number must match otherwise, the system will not work properly.
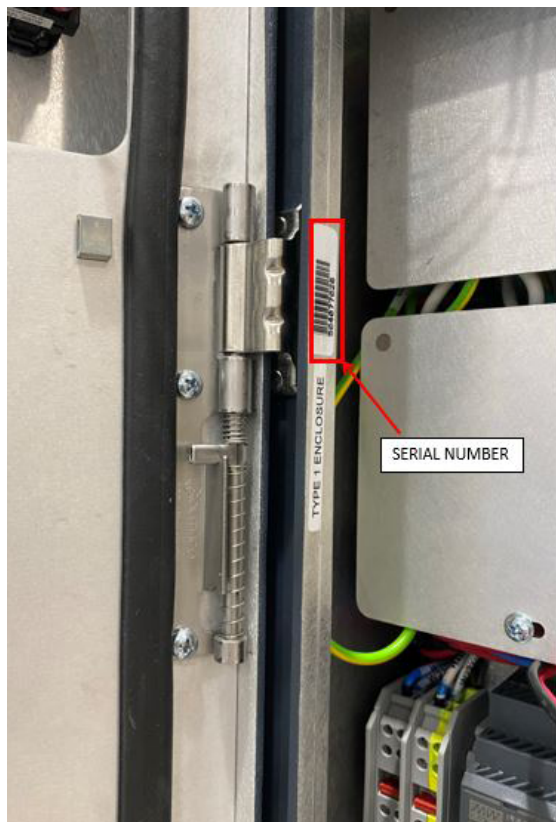
- Unbox iNode

- Install iNode server in open slot of Telco rack under network switches

- Install assembled mating guide rails into Telco rack
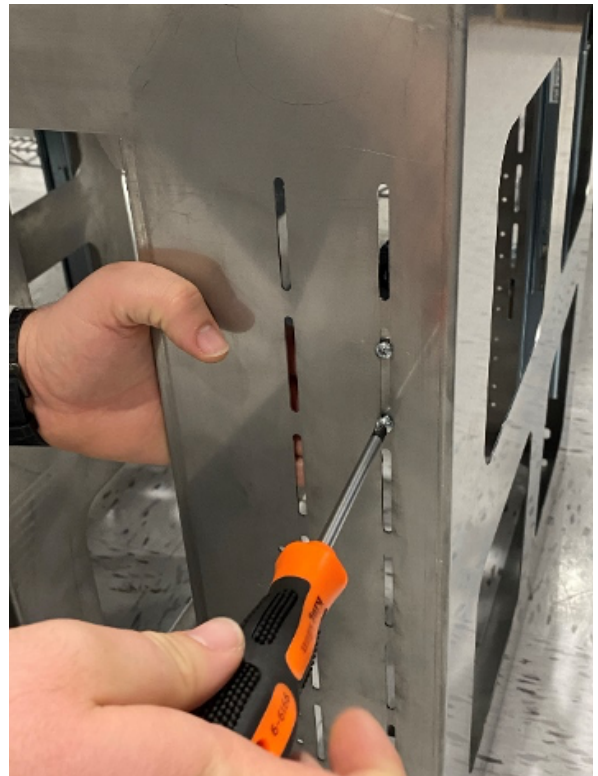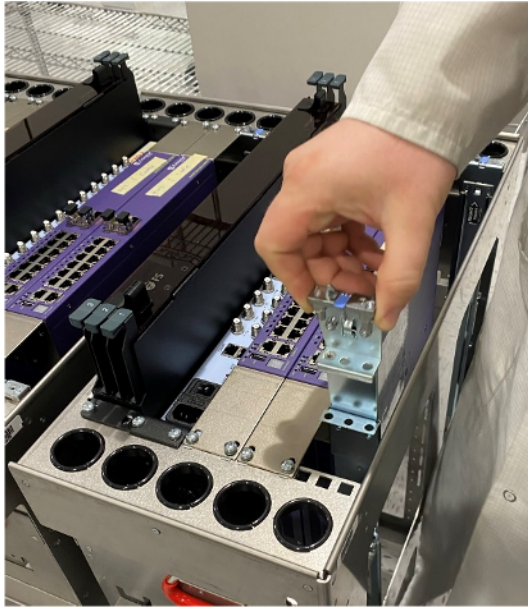
- Install guide rails onto left and right side of iNode server

- Assemble brackets for installation
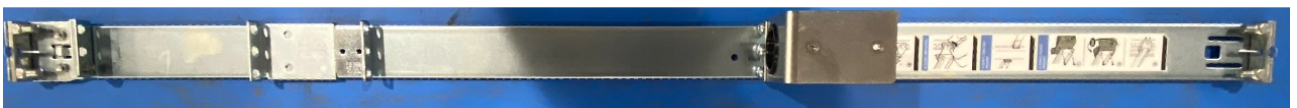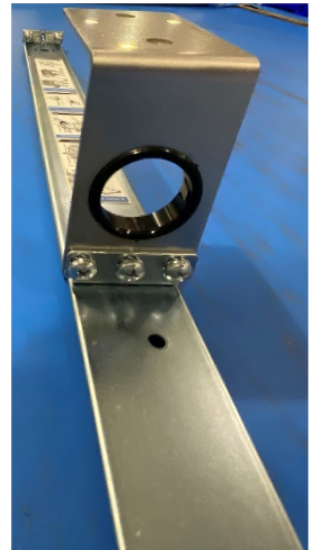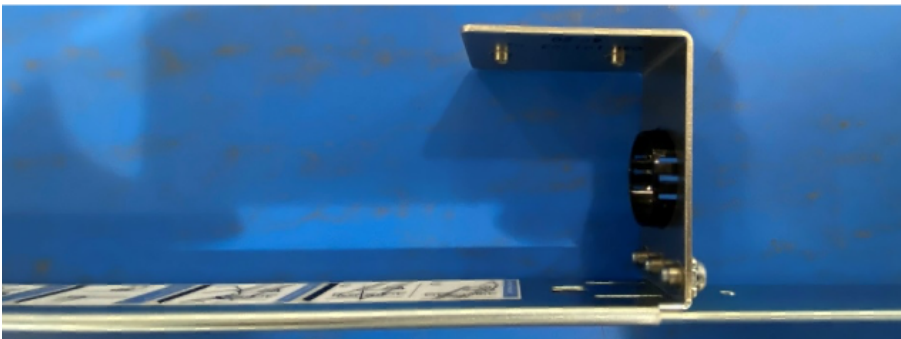
- Once guide rails are mated, gently push iNode toward the telco base until the iNode is seated on telco base
- Expose embedded screws at both ends of iNode server and secure

CAUTION:
DO NOT PUT YOUR FINGERS UNDER iNode HEADER
WHILE PUSHING IT TOWARD THE TELCO BASE.
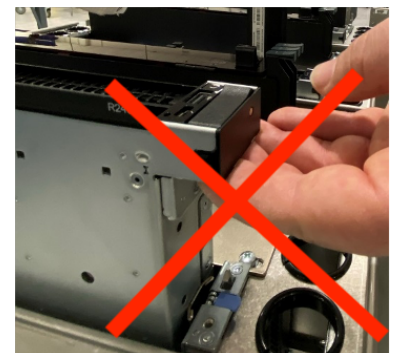
- Telco rack is now completed and is ready to install in Control Panel

- Connect network cabling from iNode server to network switch. Contact View PM for latest Reference Document:
  View Net CP5 Schematic (ECO-340-102014)

- Install Telco rack into the sliding rails using red lifting handles in the Control Panel

17. Power ON Control Panel: Ready for Commissioning
   - Confirm completion of CP installation with View Project Manager or Project Engineer before proceeding
   - Remove LOTO from Building Main Breaker
   - Remove LOTO from CP Main circuit breaker
   - Power On Control Panel for Functional Hardware Testing (FHT) and provisioning by:
     1) Power ON Main Breaker; 2) Power ON PDU breaker
   - When multiple CPs are installed on a site only one iNode can be powered on at a time during provisioning process
   - Refer to Interconnect drawings for iNode server locations
   - For CPs with iNodes installed: Upon installation, all iNodes must have the 3-prong power cable removed from the back of the server unit. When provisioning a specific CP, the iNode connected to the CP should be powered ON for the duration of provisioning. Once provisioning is complete, disconnect the iNode power cable before moving to the next CP/iNode.
   - Confirm LOTO tag removal of VIEW NET 1-16 AND VIEW NET 17-32 circuit breakers.
   - Power ON View Net circuit breakers
   - Begin commissioning process with View Project Engineer

For more information:
Contact your View Project Manager
or
View Project Engineer

APPENDIX

1. Sample Installation

CP 5.0 Chassis Only

CP 5.0 Lower Section for
TELCO Rack

CP 5.0 Telco Rack

2. Fusion Splicing

Vertical Fiber Connections for Control Panel – Top Floor
(Simplified drawing, minimal configuration not showing optional horizontal fiber)

FUSION SPLICE

12-strand fiber cassette

2 strands used for 10G Ethernet

2 strands used for 10G Ethernet

Control Panel

Secondary armored fiber cable (towards floor N+1) with 8 sub-units of 12 strands each

1 sub-unit is routed to a fiber cassette

7 (out of 8) sub-units of 12 strands each remain available (as dark fiber)

8 (out of 12) strands remain available (as dark fiber)

P13 P14 P15 P16

10G-capable SFP ports

Ethernet Switch

P1 P2 P3 ... P10 P11 P12

1G-capable RJ-45 ports

12-strand fiber cassette

2 strands used for 10G Ethernet

7 (out of 8) groups of 12 strands each remain available (as dark fiber)

2 strands used for 10G Ethernet

1 group is routed to a fiber cassette

8 (out of 12) strands remain available (as dark fiber)

P13 P14 P15 P16

10G-capable SFP ports

Ethernet Switch

P1 P2 P3 ... P10 P11 P12

1G-capable RJ-45 ports

Secondary armored fiber cable (towards floor N-1)

Primary armored fiber cable (towards floor N-1)

MPO Connector

Confidential

1

Vertical Fiber Connections for Control Panel – Top Floor
(Simplified drawing, minimal configuration not showing optional horizontal fiber)

FUSION SPLICE

12-strand fiber cassette

2 strands used for 10G Ethernet

2 strands used for 10G Ethernet

Control Panel

Secondary armored fiber cable (towards floor N+1) with 8 sub-units of 12 strands each

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10G-capable SFP ports

Ethernet Switch

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1G-capable RJ-45 ports

12-strand fiber cassette

2 strands used for 10G Ethernet

7 (out of 8) groups of 12 strands each remain available (as dark fiber)

2 strands used for 10G Ethernet

1 group is routed to a fiber cassette

P13 P14 P15 P16

10G-capable SFP ports

Ethernet Switch

P1 P2 P3 ... P10 P11 P12

1G-capable RJ-45 ports

8 (out of 12) strands remain available (as dark fiber)

Secondary armored fiber cable (towards floor N-1)

Primary armored fiber cable (towards floor N-1)

MPO Connector

Confidential

1

Vertical Fiber Connections for Control Panel – Bottom Floor
(Simplified drawing, minimal configuration not showing optional horizontal fiber)

Primary armored fiber cable (towards floor N+1) with 8 sub-units of 12 strands each

FUSION SPLICE

12-strand fiber cassette

2 strands used for 10G Ethernet

2 strands used for 10G Ethernet

Control Panel

Secondary armored fiber cable (towards floor N+1) with 8 sub-units of 12 strands each

1 sub-unit is routed to a fiber cassette

7 (out of 8) sub-units of 12 strands each remain available (as dark fiber)

8 (out of 12) strands remain available (as dark fiber)

P13 P14 P15 P16

10G-capable SFP ports

Ethernet Switch

P1 P2 P3 ... P10 P11 P12

1G-capable RJ-45 ports

12-strand fiber cassette

2 strands used for 10G Ethernet

7 (out of 8) groups of 12 strands each remain available (as dark fiber)

2 strands used for 10G Ethernet

1 group is routed to a fiber cassette

P13 P14 P15 P16

10G-capable SFP ports

Ethernet Switch

P1 P2 P3 ... P10 P11 P12

1G-capable RJ-45 ports

8 (out of 12) strands remain available (as dark fiber)

Fiber Patch Cable

Fiber Cassette

Fusion Splicing

- 96-strand fiber: Individual subunit bundles are numbered 1 thru 8 from MFG
- Use BICSI industry standards for fusion splicing cassettes, see color mapping table on this page

NOTE:
TYPICAL DETAILS - NOT ALL SHOWN MAY APPLY TO THIS PROJECT

VIEW, INC. ®
745 SOUTH MILPITAS BLVD.
MILPITAS, CA 95035
PH: 408-263-9200
WWW.VIEW.COM

Fiber Number / Bundle ID Chart

TUBE	1	2	3	4	5	6	7	8
	blue	orange	green	brown	slate	white	red	black
1 blue	1	13	25	37	49	61	73	85
2 orange	2	14	26	38	50	62	74	86
3 green	3	15	27	39	51	63	75	87
4 brown	4	16	28	40	52	64	76	88
5 slate	5	17	29	41	53	65	77	89
6 white	6	18	30	42	54	66	78	90
7 red	7	19	31	43	55	67	79	91
8 black	8	20	32	44	56	68	80	92
9 yellow	9	21	33	45	57	69	81	93
10 violet	10	22	34	46	58	70	82	94
11 rose	11	23	35	47	59	71	83	95
12 aqua	12	24	36	48	60	72	84	96

KEY NOTES

1. A.C. TO PROVIDE 208VAC, 60Hz, 30 AMP, 5 WIRE UNSWITCHED CIRCUIT & EARTH GROUND.

2. A.C. TO INTERCONNECT CONTROL PANELS WITH ### FIBER OPTIC CABLE FURNISHED BY VIEW. LOCATION - SEE NETWORK DIAGRAM.

3. (1) ETHERNET DROP AT WINDOW CONTROL PANEL TO CONNECT TO SKY SENSOR LOCATION.

- VIEW UTILIZES OPTICAL FIBER FOR INTERCONNECTING VIEW NET CABINETS.
- NEVER LOOK INTO AN END OF A FIBER, THE LIGHT TRANSMITTED IS IN THE INFRARED SPECTRUM (1310NM) AND NOT VISIBLE TO YOUR EYE.
- ALWAYS KEEP CAPS ON UNUSED PORTS OR FIBER PATCH CORDS.
- THE TIPS OF THE FIBER CONNECTOR ARE FINELY POLISHED AND NEED TO BE PROTECTED FROM DUST AND DIRT. IF YOU NEED TO UNPLUG A FIBER, BE SURE TO CAP IT, BOTH FOR SAFETY AND THE HEALTH OF THE FIBER CONNECTION.
- IF YOU WANT TO TROUBLESHOOT AN OPTICAL NETWORK, USE THE PROPER TOOLS LIKE A VISUAL FAULT INDICATOR OR OPTICAL POWER METER.

CASSETTES ARE ORGANIZED BY COLUMN (A,B,C,D) AND ROW (1,2,3) AND

LC PATCH CABLES ARE USED BETWEEN THE CASSETTES AND THE ETHERNET SWITCHES AND WOULD BE CALLED OUT AS: "FS1-3-A-1 TO ES1-14"

e.g. STORAGE DRAWER 1, ROW 3, COLUMN A, POSITION 1 TO SWITCH 1 PORT 14

Position (POS) 2   Position (POS) 6
Position (POS) 1

3 FIBER ENCLOSURE ELEVATION - 96 PORT LANDING

TO FLOOR ABOVE

FS2

FROM FLOOR BELOW

FS1

ES2

ES1

- TERMINATING ALL 96 STRANDS OF A FIBER BUNDLE REQUIRES 8 CASSETTES PER BUNDLE.
- VIEW SUPPLIES TWO CASSETTES PER CP, ONE TO TERMINATE 12 STANDS COMING FROM THE FIBER BUNDLE TO THE FLOOR BELOW AND ONE FOR TERMINATING 12 STRANDS TO THE FLOOR ABOVE. ADDITIONAL CASSETTES MUST BE SPECIFIED IN A SALES ORDER

FIBER STORAGE	DRAWER	ROW	COLUMN	POSITION	ETHERNET SWITCH	PORT
FS	1	3	A	1	ES1	14
FS	1	3	A	2	ES2	14
FS	2	3	A	1	ES1	13
FS	2	3	A	2	ES2	13

2 FIBER ROUTING - TWO STORAGE ENCLOSURES

5 ULTRA HIGH DENSITY CASSETTE W/ MTP CONNECTION

TO FLOOR ABOVE
FROM FLOOR BELOW

FS1

ES2

ES1

FIBER STORAGE	DRAWER	ROW	COLUMN	POSITION	ETHERNET SWITCH	PORT
FS	1	1	A	1	ES1	14
FS	1	1	A	2	ES2	14
FS	1	3	A	1	ES1	13
FS	1	3	A	2	ES2	13

ULTRA HIGH DENSITY FIBER ENCLOSURE   1RU
ULTRA HIGH DENSITY MTP CASSETTES (UP TO 6)

- WHEN FUSION SPLICING BULK FIBER THE STANDS MUST BE CONNECTED IN THE PATTERN SHOWN ABOVE.
- THIS PATTERN IS NECESSARY TO ENSURE TRANSMITTING FIBERS ARE CONNECTED TO RECEIVING FIBERS AND THE POSITIONAL ORDER OF THE FIBER IN THE CASSETTE IS MAINTAINED (E.G. POS1 FROM ONE END TERMINATES ON POS1 ON THE OPPOSITE END, AND WITH THE CORRECT RECEIVE AND TRANSMIT CONNECTIONS

1 FIBER ROUTING - SINGLE STORAGE ENCLOSURE

4 ULTRA HIGH DENSITY FIBER ENCLOSURE

SITE NAME
BUILDING
STREET ADDRESS
CITY, STATE 00000

FIBER ENCLOSURE DETAILS

340-101###
01

SHEET NUMBER
XG-9.3.1