TELECOM SYMBOLS

SYMBOL	DESCRIPTION	CABLE QUANTITY & TYPE	BOX TYPE (BY ELEC.)	CONDUIT STUB (BY ELEC.)
▼	WALL MTD. 2-PORT VOICE/DATA OUTLET	(2) CAT 6 UTP	2-GANG BOX W/ 1-GANG COLLAR	1-1/4" E.C.
⊕	CEILING MTD. 2-PORT OUTLET FOR WIRELESS ACCESS POINT	(2) CAT 6A	SURFACE MOUNT BOX	1-1/4" E.C.
⊕ L-HUB	CEILING MTD. 1-PORT OUTLET FOR LIGHTING HUB	(1) CAT 6 UTP	SURFACE MOUNT BOX	1-1/4" E.C.
EV ▼	1-PORT FIELD TERMINATED DATA PLUG FOR ELECTRIC VEHICLE CHARGING STATIONS	(1) CAT 6 UTP	2-GANG BOX W/ 1-GANG COLLAR	1-1/4" E.C.
▽	WALL MTD. 1-PORT VOICE OUTLET	(1) CAT 6 UTP	2-GANG BOX W/ 1-GANG COLLAR	1-1/4" E.C.

ELECTRICAL SYMBOLS (FOR INFORMATION ONLY)

⊕	QUAD ELECTRICAL OUTLET	▼ L5-20R	20A/120V TWIST LOCK RECEPTACLE
Φ	DUPLEX ELECTRICAL OUTLET	▼ L6-30R	30A/208V TWIST LOCK RECEPTACLE
▨	CONDUIT BANK	ALL CONDUITS, SLEEVES, PULL BOXES, AND JUNCTION BOXES SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.	
▨	CONDUIT BANK TERMINATED		
▨	SLEEVE THROUGH WALL WITH REAMED AND BUSHED ENDS		
⊠	TELECOMMUNICATIONS PULL BOX OR JUNCTION BOX		

TAG SYMBOLS

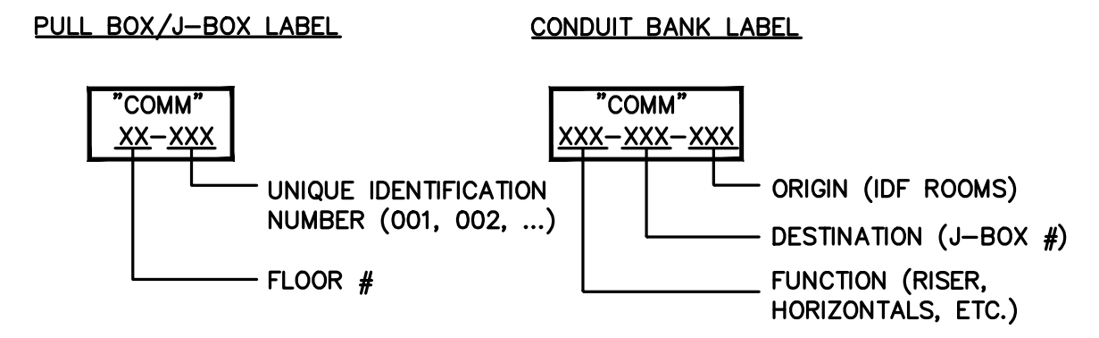
XX / TC-XXX	STANDARD DETAIL No. DESIGNATION	1 / TC-201 — DETAIL No. — DRAWING No.
△ X	STANDARD REVISION TAG	△ 1 — REVISION No.
	STANDARD REVISION BUBBLE	
⬡ X	INDEXING SYMBOL	⬡ 1 — HEXAGONAL SYMBOLS CONTAINING ARABIC NUMERALS ONLY INDICATE REFERENCE TO AN EXPLANATION OF TELECOM WORK REQUIREMENTS.
X / TC-XXX	ELEVATION TAG	X / TC-XXX — DETAIL No. — DRAWING No.
XX-XXX.Ry.?.zz	TELECOMMUNICATIONS OUTLET IDENTIFICATION TAG	XX-XXX.Ry.?.zz JACK NUMBER ON PATCH PANEL PATCH PANEL LETTER DESIGNATION IDF RACK NUMBER THAT PATCH PANEL RESIDES (I.E. R2) IDF CLOSET ROOM NUMBER

GENERAL NOTES FOR NEW CONSTRUCTION

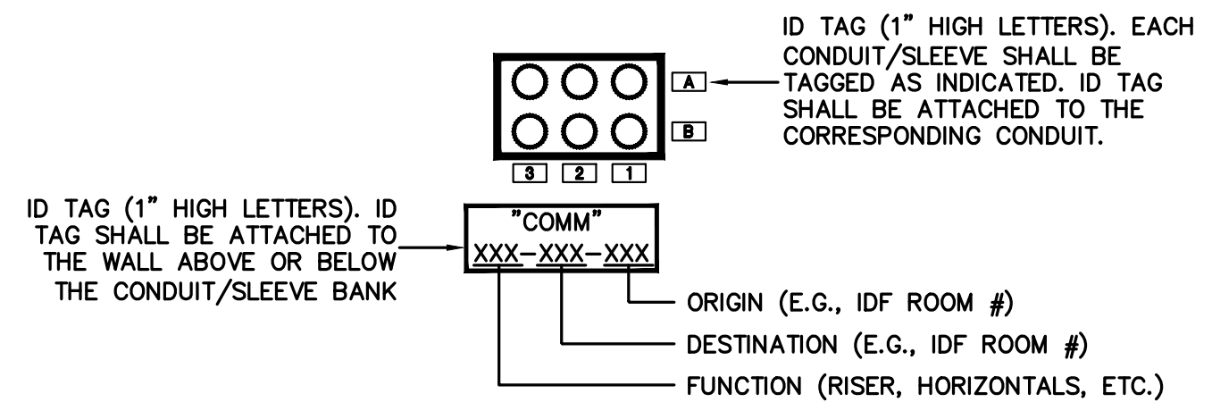
1. THE CONTRACTOR SHALL VISIT THE JOB SITE TO DETERMINE EXISTING CONDITIONS AND COMPARE SAME WITH DRAWINGS AND SPECIFICATIONS TO SATISFY HIMSELF OF ALL CONDITIONS PRIOR TO SUBMISSION OF A BID PROPOSAL. SUBMISSION OF A BID WILL BE JUDGED AS EVIDENCE THAT SUCH SITE EXAMINATION HAS BEEN MADE. CLAIMS FOR EXTRA COST FOR LABOR, EQUIPMENT, OR MATERIALS REQUIRED, OR FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH EXAMINATION BEEN MADE WILL NOT BE RECOGNIZED.
2. THE CONTRACTOR SHALL INFORM THE ENGINEER OF ANY DISCREPANCIES THAT ARISE DURING THE SITE VISIT AND SHALL REQUEST CLARIFICATION, IF NECESSARY.
3. ANY WORK REQUIRED DUE TO DIFFICULTIES RESULTING FROM EXISTING CONDITIONS SHALL BE INCLUDED AND DESCRIBED IN THE BASE BID.
4. ALL WORK SHOWN IN THE DRAWINGS AND SPECIFICATIONS SHALL BE INCLUDED UNDER THE BASE BID, EXCEPT WHERE THERE IS SPECIFIC REFERENCE TO EXCLUSION OR INCORPORATION IN OTHER QUOTATIONS.
5. IT SHALL BE UNDERSTOOD THAT THE SPECIFICATIONS AND DRAWINGS ARE COMPLEMENTARY AND ARE TO BE TAKEN TOGETHER FOR A COMPLETE INTERPRETATION OF THE TELECOMMUNICATIONS WORK. WHERE THERE ARE CONFLICTS BETWEEN THE DRAWINGS AND THE SPECIFICATIONS OR WITHIN THE SPECIFICATIONS OR DRAWINGS THEMSELVES, THE ITEM OF HIGHER STANDARD SHALL GOVERN.
6. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS TO PROVIDE A COMPLETE OPERATING TELECOMMUNICATIONS CABLING INFRASTRUCTURE SYSTEM. ALL WORK NECESSARY TO PROVIDE SUCH A SYSTEM SHALL BE PERFORMED. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION.
7. THE DRAWINGS FOR COMMUNICATIONS WORK ARE DIAGRAMMATIC AND GENERALLY INDICATIVE OF THE WORK TO BE INSTALLED. CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISH CONDITION AFFECTING THE WORK AND ARRANGE SAME ACCORDINGLY.
7. THE DRAWINGS FOR COMMUNICATIONS WORK ARE DIAGRAMMATIC AND GENERALLY INDICATIVE OF THE WORK TO BE INSTALLED. CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISH CONDITION AFFECTING THE WORK AND ARRANGE SAME ACCORDINGLY.
8. THE DRAWINGS FOR COMMUNICATIONS WORK UTILIZE SYMBOLS AND SCHEMATIC DIAGRAMS WHICH HAVE NO DIMENSIONAL SIGNIFICANCE. THE WORK SHALL, THEREFORE, BE INSTALLED TO FULFILL THE DIAGRAMMATIC INTENT EXPRESSED ON THE COMMUNICATIONS DRAWINGS, BUT IN CONFORMITY WITH THE DIMENSIONS INDICATED ON THE FINAL WORKING DRAWINGS, FIELD LAYOUTS, AND SHOP DRAWINGS OF ALL TRADES.
9. NO EXCLUSION OF, OR LIMITATION IN, THE SYMBOLISM USED ON THE DRAWINGS FOR COMMUNICATIONS WORK, OR THE LANGUAGE USED IN THE SPECIFICATIONS FOR COMMUNICATIONS WORK, SHALL BE INTERPRETED AS A REASON FOR OMITTING THE APPURTENANCES OR ACCESSORIES NECESSARY TO COMPLETE ANY REQUIRED SYSTEM OR ITEM OF EQUIPMENT.
10. CERTAIN DETAILS APPEAR ON THE DRAWINGS FOR COMMUNICATIONS WORK WHICH ARE SPECIFIC WITH REGARD TO THE DIMENSIONING AND POSITIONING OF THE WORK. THESE ARE INTENDED ONLY FOR GENERAL INFORMATION PURPOSES. THEY DO NOT OBVIATE FIELD COORDINATION FOR INDIVIDUAL ITEMS OF THE INDICATED WORK.
11. ALL TELECOMMUNICATIONS WORK SHALL BE GUARANTEED TO BE FREE FROM DEFECTS. ANY DEFECTIVE MATERIALS OR WORKMANSHIP, AS WELL AS DAMAGE TO THE WORK OF OTHER TRADES RESULTING FROM SAME, SHALL BE REPLACED OR REPAIRED AS DIRECTED FOR THE DURATION OF STIPULATED GUARANTEE PERIODS.
12. THE CONTRACTOR SHALL PROVIDE LABOR, MATERIALS, AND DOCUMENTATION ACCORDING TO THE MANUFACTURER'S REQUIREMENTS NECESSARY TO ENSURE THAT THE FORBES WILL BE FURNISHED WITH A FULL WARRANTY COVERING PRODUCTS AND APPLICATIONS FOR A DURATION OF FIFTEEN (15) YEARS MINIMUM. ALL NECESSARY DOCUMENTATION THAT MUST BE PROVIDED TO THE MANUFACTURER SHALL BE FURNISHED BY THE TELECOM CONTRACTOR IMMEDIATELY FOLLOWING 100% TESTING OF ALL CABLING. CONTRACTOR SHALL ENSURE THAT THE MANUFACTURER PROVIDES FORBES WITH THE APPROPRIATE WARRANTY CERTIFICATION WITHIN 90 CALENDAR DAYS OF THE FINAL PROJECT COMPLETION.
13. ALL WORK SHALL MEET OR EXCEED THE LATEST REQUIREMENTS OF ALL NATIONAL, STATE, COUNTY, MUNICIPAL, AND OTHER AUTHORITIES EXERCISING JURISDICTION OVER THE COMMUNICATIONS WORK AND THE PROJECT.
14. EXCEPT WHERE MODIFIED BY A SPECIFIC NOTATION TO THE CONTRARY, IT SHALL BE UNDERSTOOD THAT THE INDICATION AND/OR DESCRIPTION OF ANY COMMUNICATIONS ITEM IN THE DRAWINGS AND SPECIFICATIONS FOR COMMUNICATIONS WORK CARRIES WITH IT THE INSTRUCTION TO FURNISH, INSTALL AND CONNECT THE ITEM AS PART OF THE COMMUNICATIONS WORK, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION IS EXPLICITLY STATED.

CONDUIT AND PULL BOX NOTES

1. CONDUIT ROUTES AND PULL BOX SIZING, QUANTITY, AND PLACEMENT ARE TO BE COORDINATED IN THE FIELD. THE CONTRACTOR SHALL PROVIDE ALL LENGTHS OF CONDUITS, PULL BOXES AND REQUIRED COMPONENTS NECESSARY TO ACHIEVE A COMPLETE CABLING INSTALLATION. IT IS NOT THE INTENT OF THESE DOCUMENTS TO SHOW BRANCH CONDUIT RUNS OF TRADE SIZE 2" OR LESS, NOR ARE THE MAIN CONDUIT ROUTES SHOWN TO BE ASSUMED AS THE INSTALLED CONDITION. RATHER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL CONDUIT ROUTES WITH THE STRUCTURE AND ALL OTHER BUILDING SYSTEMS AND SHALL THEREFORE ASSUME FOR PRICING THAT MATERIAL QUANTITIES ARE NOT DEPENDENT UPON THOSE ROUTES SHOWN.
2. THE CONTRACTOR MAY CONSOLIDATE INDIVIDUAL CONDUIT PATHWAYS DIRECTLY SERVING TELECOMMUNICATIONS OUTLETS INTO FEWER AND LARGER CONDUIT. ALL CONDUIT FILL CALCULATIONS SHALL INCLUDE AN ALLOWANCE FOR 25% GROWTH. ALL CONDUIT CONSOLIDATIONS SHALL COMPLY WITH TIA STANDARDS AND BICSI GUIDELINES IN GENERAL AND SPECIFICALLY FOR CAPACITY AND DERATING FOR CONDUIT BENDS.
3. ALL CONDUITS SHALL BE DEBURRED, CLEANED, CAPPED, TAGGED AND FURNISHED WITH PULL CORDS. THE CONTRACTOR SHALL ALSO PROVIDE PLASTIC BUSHINGS AT ALL SLEEVE AND OPEN CONDUIT ENDS.
4. CONDUIT PATHWAYS SHOWN ON THE FLOOR PLANS ARE DIAGRAMMATIC AND NOT INTENDED TO SHOW EXACT BEND RADIUS.
5. RE-ESTABLISH THE FIRE RATING OF ALL CONDUIT AND CABLING PENETRATIONS MADE THROUGH FIRE RATED FLOORS OR WALLS.
6. ALL PULL BOXES, JUNCTION BOXES, AND CONDUITS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
7. A PULL BOX SHALL BE PROVIDED WHERE AN AGGREGATE OF CONDUIT RUN BENDS IS EQUAL TO 180° (MAXIMUM). PULL BOXES SHALL NOT BE USED AS A MEANS OF CHANGING DIRECTIONS. ALL BENDS/TURNS SHALL OCCUR OUTSIDE THE PULL BOX.
8. A PULL BOX SHALL BE PROVIDED EVERY 100 FT (MAXIMUM) FOR CONTINUOUS CONDUIT RUNS.
9. ALL CONDUIT RUNS SHOULD ACHIEVE THE BEST POSSIBLE DIRECT ROUTE BETWEEN END POINTS WITH NO BEND GREATER THAN 90°.
10. THE BEND RADIUS FOR TELECOMMUNICATIONS CONDUITS OF 2" OR LESS IN DIAMETER SHALL BE 6 TIMES (MINIMUM) THE OUTSIDE DIAMETER OF THE CONDUIT.
11. THE BEND RADIUS FOR TELECOMMUNICATIONS CONDUITS IN EXCESS OF 2" IN DIAMETER SHALL BE 10 TIMES (MINIMUM) THE OUTSIDE DIAMETER OF THE CONDUIT.
12. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A MINIMUM OF (2) PULL CORDS WITH A MINIMUM TEST RATING OF 200LB AND FITTED WITH BUSHED ENDS.
13. EACH PULL BOX/JUNCTION BOX USED FOR TELECOMMUNICATIONS WIRING SHALL BE CLEARLY IDENTIFIED ON THE OUTSIDE AS PER EIA/TIA-606 STANDARDS USING PULL BOX PLATES WITH 1" HIGH LETTERS. IN ADDITION EACH PULL BOX SHALL HAVE A P-TOUCH LABEL USING 1" HIGH LETTERS DESIGNATING THE CONDUIT BANK FUNCTION, END POINT, AND START POINT. THE FOLLOWING NOMENCLATURE SHALL BE USED:



14. THE CONTRACTOR SHALL SIZE ALL PULL BOXES AND JUNCTION BOXES IN ACCORDANCE WITH FIELD CONDITIONS AND APPROVED STANDARDS (SEE ANSI/EIA/TIA-569B SECTION 8.8.2.5 GUIDELINES).
15. EACH CONDUIT OR SLEEVE BANK EXITING OR ENTERING A TELECOM ROOM SHALL BE LABELLED. THE LABEL SHALL BE ATTACHED TO THE WALL ABOVE OR BELOW THE CONDUIT/SLEEVE BANK IN A GRID METHOD – ROWS AND COLUMNS – AND SHALL USE 1" HIGH LETTERS. THE NOMENCLATURE USED TO IDENTIFY THE CONDUITS/SLEEVES SHALL INCLUDE THE FUNCTION DESIGNATION, START POINT, AND END POINT DESCRIBED BELOW:



16. ALL UNUSED CONDUITS SHALL BE CAPPED FOR FUTURE USE.
17. ALL RACEWAY AND CONDUIT WORK IS GOVERNED BY THE ELECTRICAL SPECIFICATIONS. REFER TO THE ELECTRICAL CONSULTANT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

GENERAL WORK NOTES FOR TELECOM SPACES (IDF ROOMS)

1. ALL NEW ELECTRICAL RECEPTACLES, GROUND BARS, LIGHTING FIXTURES, KINDORF FRAMING, CONDUITS AND SLEEVES WITHIN TELECOM SPACES ARE TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
2. ALL NEW RACKS AND CABINETS WITHIN THE TELECOM SPACES SHALL BE FURNISHED AND INSTALLED BY THE TELECOM CONTRACTOR.
3. USE LADDER RACK FOR ANY OVERHEAD TELECOM CABLE ROUTING WITHIN THE TELECOM SPACES. SEE PART PLANS FOR LADDER RACK PLACEMENT, SIZE, QUANTITY, AND ORIENTATION.
4. CONTRACTOR SHALL PROVIDE CABLE SPILL-OUTS ("WATERFALLS") ON OVERHEAD LADDER RACK SYSTEMS WITHIN THE TELECOM SPACES WHEREVER CABLING IS ROUTED FROM THE LADDER RACK TO THE EQUIPMENT RACKS/CABINETS BELOW.
5. FIRESTOP SYSTEMS SHALL BE PROVIDED FOR ALL NEW AND EXISTING THROUGH PENETRATIONS OF CABLING, CONDUIT, SLEEVES, CABLE TRAYS, ETC., THROUGH FIRE-RATED WALLS AND FLOORS AND OTHER FIRE-RATED PARTITIONS WITHIN THE TELECOM SPACES. FIRESTOP SYSTEMS SHALL CONSIST OF A MATERIAL, OR COMBINATION OF MATERIALS, INSTALLED TO RETAIN THE INTEGRITY OF FIRE RESISTANCE RATED CONSTRUCTION WITHIN THE TELECOM SPACES.
6. ONE WALL PHONE SHALL BE PROVIDED WITHIN EACH TELECOM SPACE, MOUNTED AT 54" A.F.F.
7. ALL COORDINATION IN THE CEILING AND RAISED FLOOR OF TELECOM SPACES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
8. THE CONTRACTOR SHALL PROVIDE, OR UTILIZE EXISTING, KINDORF FRAMING OR VERTICAL LADDER RACK FOR CABLE SUPPORT BEHIND FLOOR-PENETRATING CONDUITS AND SLEEVES IN ALL TELECOM SPACES.
9. TELECOM CONTRACTOR TO COORDINATE LADDER RACK AND/OR KINDORF FRAMING SUPPORT SYSTEM LOCATIONS.
10. ALL ELECTRICAL RECEPTACLES DEDICATED TO ACTIVE EQUIPMENT WITHIN THE TELECOM SPACES SHALL BE WIRED TO EMERGENCY POWER, IF AVAILABLE.
11. ALL TELECOM SPACES SHALL BE PROVIDED WITH A MINIMUM EQUIVALENT OF 500 lux (500 FOOT-CANDLES) MEASURED AT 1'-0" A.F.F.
12. REGARDLESS OF THE INDICATION OF THE TELECOM ROOM DETAILS AND PART PLANS, THE CONTRACTOR SHALL PROVIDE ALL PATCH PANELS AND/OR 110 TYPE BLOCKS AND ALL MISCELLANEOUS TERMINATION HARDWARE REQUIRED TO TERMINATE ALL RISER AND HORIZONTAL CABLING. A MINIMUM 10% SPARE CAPACITY FOR THE AFOREMENTIONED HARDWARE SHALL BE INCLUDED.
13. ALL FIBER STRANDS WITHIN TELECOM SPACES SHALL BE TERMINATED WITH LC CONNECTORS AND SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION REQUIREMENTS AND THE PERFORMANCE OF THE CABLE.
14. PATCH PANELS FOR COPPER CABLING SHALL BE FORTY-EIGHT (48) PORT AND SHALL HAVE 8-POSITION, 8-CONTACT (8P8C) MODULAR JACKS ON THE FRONT OF THE PANEL AND 110 TYPE TERMINATIONS ON THE BACK. THE PATCH PANELS SHALL FOLLOW THE EIA/TIA T568B WIRING STANDARD. STRAIN RELIEF BRACKETS SHALL BE PROVIDED FOR THE BACK OF EACH PATCH PANEL.

WORK NOTES FOR TELECOMMUNICATIONS WALLFIELDS

1. PLYWOOD BACKBOARDS (BY THE GENERAL CONTRACTOR) SHALL BE PROVIDED ON ALL IDF ROOM PERIMETER WALLS, UNLESS OTHERWISE NOTED. REFER TO THE TELECOM PART PLANS FOR THESE ROOMS FOR ADDITIONAL INFORMATION.
2. PLYWOOD BACKBOARDS WITHIN THE TELECOM SPACES SHALL BE 4'(W) X 8'(H) X 3/4"(D) AND GRADED A-C WITH "A" SIDE FACING OUT. PLYWOOD BACKBOARDS SHALL BE FIRE-RATED AND PAINTED WITH FIRE RETARDANT PAINT. THE FIRE RATING STAMP MUST BE LEFT VISIBLE.
3. TELECOM OUTLETS AND ELECTRICAL RECEPTACLES WITHIN THE TELECOM SPACES SHALL BE FLUSH/SURFACE MOUNTED TO THE PLYWOOD BACKBOARDS AND INSTALLED USING THE APPROPRIATE BACK BOXES.

GROUNDING AND BONDING

THE TELECOMMUNICATIONS GROUNDING/EARTHING SYSTEM SHALL MEET FOLLOWING CRITERIA:

1. LOCAL ELECTRICAL CODES SHALL BE ADHERED TO.
2. THE GROUNDING/EARTHING SYSTEM SHALL COMPLY WITH J-STD-607-A AND ANSI/TIA-942.
3. ALL GROUNDING/EARTHING CONDUCTORS SHALL BE COPPER.
4. LUGS, HTAPS, GROUNDING STRIPS, AND BUSBARS SHALL BE UL LISTED AND MADE OF PREMIUM QUALITY TIN-PLATED ELECTROLYTIC COPPER THAT PROVIDES LOW ELECTRICAL RESISTANCE WHILE INHIBITING CORROSION. ANTIOXIDANT SHALL BE USED WHEN MAKING BONDING CONNECTIONS.
5. WHEREVER POSSIBLE, TWO-HOLE LUGS SHALL BE USED TO RESIST LOOSENING WHEN TWISTED, BUMPED, OR EXPOSED TO VIBRATION. ALL LUGS SHALL BE OF AN IRREVERSIBLE COMPRESSION TYPE AND MEET NEBS LEVEL 3 AS TESTED BY TELCORDIA. LUGS WITH INSPECTION WINDOWS SHALL BE USED IN ALL NON-CORROSIVE ENVIRONMENTS SO THAT CONNECTIONS MAY BE INSPECTED FOR FULL CONDUCTOR INSERTION.
6. DIE INDEX NUMBERS SHALL BE EMBOSSED ON ALL COMPRESSION CONNECTIONS TO ALLOW FOR CRIMP INSPECTION.
7. CABLE ASSEMBLIES SHALL BE UL LISTED AND CSA CERTIFIED. CABLES SHALL BE A DISTINCTIVE GREEN OR GREEN/YELLOW IN COLOR TO SIGNIFY THAT THEY ARE GROUNDING CONDUCTORS, AND ALL JACKETS SHALL BE UL, VW-1 FLAME RATED.
8. A TELECOMMUNICATIONS GROUNDING BUSBAR (TGB) SHALL BE LOCATED WITHIN EACH IDF ROOM. THE TGB SHALL BE BONDED TO BUILDING STEEL AND GROUNDED/EARTHED TO THE ELECTRICAL SERVICE GROUND ACCORDING TO J-STD-607-A GUIDELINES.

FIRESTOPPING

1. FIRESTOP SYSTEMS SHALL BE PROVIDED FOR ALL THROUGH PENETRATIONS OF TELECOMMUNICATIONS CABLING, CONDUIT, SLEEVES, CABLE TRAYS, ETC., THROUGH FIRE-RATED WALLS AND FLOORS AND OTHER FIRE-RATED PARTITIONS. FIRESTOP SYSTEMS SHALL CONSIST OF MECHANICAL OR NON-MECHANICAL MATERIALS, OR COMBINATION OF MATERIALS, INSTALLED TO RETAIN THE INTEGRITY OF FIRE RESISTANCE RATED CONSTRUCTION BARRIERS.
2. FIRE-STOPPING SYSTEMS AND SOLUTIONS SHALL BE IN ACCORDANCE WITH NFPA 70: NATIONAL ELECTRIC CODE 2011 ARTICLES AND THE AUTHORITY HAVING JURISDICTION (AHJ).
3. WHERE NON-MECHANICAL FIRESTOP SYSTEMS ARE UTILIZED, CONTRACTOR TO PROVIDE PRODUCTS THAT UPON CURING DO NO RE-EMULSIFY, DISSOLVE, BREAKDOWN OR OTHERWISE DETERIORATE OVER TIME FROM EXPOSURE TO ATMOSPHERIC MOISTURE, SWEATING PIPES, PONDING WATER, OR OTHER FORMS OF MOISTURE CHARACTERISTIC DURING OR AFTER CONSTRUCTION.
4. ALL WALL PENETRATIONS FOR CABLE TRAY/LADDER RACK TRANSITIONS SHALL UTILIZE SLEEVES FOR HORIZONTAL CABLING DISTRIBUTION AND FIRESTOPPING.
5. PROVIDE ONLY FIRESTOPPING PRODUCTS THAT HAVE BEEN TESTED FOR SPECIFIC FIRE RESISTANCE RATED CONSTRUCTION CONDITIONS CONFORMING TO CONSTRUCTION ASSEMBLY TYPE, PENETRATING ITEM TYPE, ANNULAR SPACE REQUIREMENTS, AND FIRE RATING INVOLVED FOR EACH SEPARATE INSTANCE.
6. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL CERTIFY THAT ALL THROUGH PENETRATIONS FOR COMMUNICATIONS CABLING HAVE BEEN SATISFACTORILY SEALED AND FIRE-STOPPED.

CROSS-CONNECTING AND PATCHING SCOPE OF WORK NOTES

1. PATCH CORDS SHALL BE FURNISHED AND INSTALLED FOR EACH NEW TELECOM OUTLET.
2. PATCH CORDS SHALL BE OF THE SAME CABLE QUALITY AND MANUFACTURED BY THE SAME MANUFACTURER AS THE CABLE TO WHICH THEY ARE CONNECTING. FOR BIDDING PURPOSES, THE FOLLOWING BREAKDOWN SHALL BE CONSIDERED FOR THE IDF ROOMS:

   5' – 25%
   7' – 65%
   15' – 10%

   EXACT QUANTITIES BY LENGTH TO BE CONFIRMED WITH OWNER PRIOR TO PURCHASING.
3. WORKSTATION PATCH CORDS SHALL HAVE THE FOLLOWING BREAKDOWN:

   7' – 100%

   EXACT QUANTITIES BY LENGTH TO BE CONFIRMED WITH OWNER PRIOR TO PURCHASING.
4. PATCH CORDS SHALL BE COLOR-CODED. CONTRACTOR TO CONFIRM WITH OWNER PATCH CORD COLORS FOR VARIOUS NETWORK APPLICATIONS (VOICE, DATA, WiFi, AV, ETC.).
5. PATCH PANEL PATCHING SHALL BE PERFORMED STARTING FROM PATCH PANEL PORT NUMBER ONE AND CONTINUING IN CONSECUTIVE ORDER TO THE MAXIMUM EXTENT POSSIBLE.
6. ALL PATCHING SHALL BE NEATLY DRESSED AND TIED USING COLOR CODED VELCRO CABLE TIES.

QUANTITIES:

- (1) TIMES THE NUMBER OF TERMINATED CABLES IN THE IDF ROOMS;
- (1) TIMES THE NUMBER OF TELECOM OUTLET PORTS AT END DEVICE LOCATIONS.

TELECOMMUNICATIONS CABLING AND OUTLET NOTES

1. THE TELECOM RISER CABLING SYSTEM SHALL PROVIDE INTERCONNECTIONS BETWEEN EACH OF THE IDF ROOMS. THE RISER SYSTEM INFRASTRUCTURE SHALL CONSIST OF FIBER OPTIC AND COPPER CABLING, MECHANICAL TERMINATIONS, MAIN AND INTERMEDIATE CROSS-CONNECTS, AND PATCH CORDS USED FOR CROSS-CONNECTION.
2. ALL FIBER RISER CABLING SHALL BE INSIDE PLANT, PLENUM RATED, TIGHT BUFFERED OPTICAL FIBER, WITH FIBER COUNTS AS INDICATED ON DRAWINGS. MULTIMODE FIBER SHALL BE OM3 TYPE, 50/125 MICRON. MECHANICAL AND TRANSMISSION PERFORMANCE SHALL MEET OR EXCEED ANSI/TIA/EIA-568-C.3 SPECIFICATIONS.
3. BRIDGED TAPS, SPLITTERS, SPLICES, ETC. SHALL NOT BE USED AS PART OF ANY BACKBONE CABLING INSTALLATION. ALL BACKBONE CABLING SHALL BE HOMERUN FROM IDF ROOM TO IDF ROOM IN A STRAIGHT TOPOLOGY.
4. THE BACKBONE CABLING SYSTEM SHALL COMPLY WITH THE GENERAL PERFORMANCE STANDARDS OF TIA/EIA-568-C.0, WHEN TESTED ACCORDING TO THE TEST PROCEDURES OF THIS STANDARD.
5. ALL HORIZONTAL QUAD SHIELDED RG-6 COAXIAL CABLING FOR CATV USE SHALL BE TERMINATED WITH "F" TYPE COMPRESSION CONNECTORS AT BOTH ENDS. THE COAXIAL CABLING SHALL BE ROUTED BACK TO THE AV RACK SERVING THE OUTLET AND LEFT COILED WITH 10' OF SLACK FOR CONNECTION TO CATV TUNERS (PERFORMED BY OTHERS).
6. ALL HORIZONTAL COPPER CABLING SHALL BE WHITE IN COLOR AND SHALL BE PLENUM RATED 4-PAIR CATEGORY 6 UTP. ALL HORIZONTAL COPPER CABLING SHALL BE TERMINATED ON CATEGORY 6 UTP PATCH PANELS INSTALLED IN THE TELECOM IDF ROOMS. ALL HORIZONTAL COPPER CABLING AND ALL ASSOCIATED COMPONENTS (I.E. CONNECTORS, FACEPLATES, PATCH PANELS, PATCH CORDS, ETC.) SHALL BE PRODUCTS OF THE FOLLOWING MANUFACTURER'S WARRANTED SOLUTIONS: HUBBELL/MOHAWK
7. ALL NEW HORIZONTAL COPPER DATA CABLING SHALL BE TESTED AND CERTIFIED TO MEET MANUFACTURER'S CAT 6 PERFORMANCE CRITERIA AND SHALL BE COVERED UNDER THE MANUFACTURER'S WARRANTY.
8. ALL LOCATIONS IDENTIFIED ON THE FLOOR PLANS WITH A TELECOMMUNICATIONS OUTLET IDENTIFICATION TAG SHALL BE PROVIDED WITH THE APPROPRIATE CABLING AS DESCRIBED IN THIS SECTION.
9. ALL LOCATIONS IDENTIFIED ON THE FLOOR PLANS WITH A TELECOMMUNICATIONS SYMBOL SHALL BE PROVIDED WITH THE APPROPRIATE CABLING AS DESCRIBED IN THIS SECTION (EVEN IF NO OUTLET TAG HAS BEEN PROVIDED).
10. HORIZONTAL CABLING ROUTED THROUGH ACCESSIBLE CEILING OR UNDER RAISED FLOOR SHALL BE SUPPORTED USING J-HOOKS OFF OF CEILING SUPPORT HANGERS OR RAISED FLOOR PEDESTALS NO MORE THAN 5 FEET APART TO ELIMINATE CABLE STRESS. BUNDLES SHALL NOT EXCEED 3" IN DIAMETER, AND SHOULD BE TIE WRAPPED NO MORE THAN 6 FEET ON CENTER.
11. HORIZONTAL CABLING THAT ROUTES EXPOSED, THAT ROUTES WITHOUT CABLE TRAY SUPPORT, OR THAT BRANCHES OFF OF CABLE TRAY AND/OR KINDORF FRAMING SHALL BE SUPPORTED USING J-HOOKS SECURED NO MORE THAN 5 FEET APART TO ELIMINATE CABLE STRESS. MAXIMUM CABLE SAG BETWEEN J-HOOK SUPPORTS SHALL NOT EXCEED 12". BUNDLES SHALL NOT EXCEED 3" IN DIAMETER, AND SHALL BE TIE WRAPPED NO MORE THAN 6 FEET ON CENTER.
12. REFER TO TELECOM SYMBOL LIST FOR BACK BOX REQUIREMENTS FOR ALL TELECOMMUNICATIONS OUTLETS. IF A BACK BOX IS SHARED BETWEEN THE ELECTRICAL AND TELECOM TRADES, THEN A DIVIDER SHALL BE PROVIDED BETWEEN THE ELECTRICAL AND TELECOM SECTIONS OF THE BOX. TWO GANGS SHALL BE RESERVED FOR TELECOM USE WITHIN THE COMMON ELEC/TELECOM BACK BOX.
13. UNLESS OTHERWISE NOTED, ALL TELECOM OUTLETS SHALL BE PROVIDED WITH A 1-1/4" CONDUIT STUB (PROVIDED BY ELECTRICAL CONTRACTOR). IF REQUIRED BY FIELD CONDITIONS, HOME RUN CONDUITS SHALL BE PROVIDED TO THE TELECOM IDF ROOM.
14. ALL COMMUNICATIONS IN-FEEDS TO FURNITURE SYSTEMS SHALL BE COORDINATED WITH THE FURNITURE SYSTEM VENDOR.
15. CONTRACTOR TO PROVIDE WHITE SELF-LAMINATING ADHESIVE LABELS, MACHINE PRINTABLE WITH A LASER PRINTER, FOR ALL HORIZONTAL CABLING AND HORIZONTAL CABLING TERMINATION LOCATIONS (FACEPLATES, PATCH PANELS, ETC.).
16. REFER TO THE TELECOMMUNICATIONS DETAILS SHEETS FOR FACEPLATE DETAILS, JACK POSITION ASSIGNMENTS, AND MORE INFORMATION.
17. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL DEVICES.

DIVISION OF RESPONSIBILITY

CATEGORY	DESCRIPTION	T.C.	CLIENT	G.C.	E.C.
IT PATHWAYS	CONDUITS, SLEEVES, PULLBOXES, STUB-UPS, BACKBOXES, FRAMED WALL OPENINGS				F/I
IT PATHWAYS	FURNITURE INFEEDS FROM WALL				F/I
IT PATHWAYS	FURNITURE INFEEDS FROM FLOOR				F/I
IDF ROOM FITOUT	PLYWOOD BACKBOARDS			F/I	
IDF ROOM FITOUT	POWER FOR EQUIPMENT RACKS				F/I
IDF ROOM FITOUT	GROUNDING BUSBAR				F/I
IDF ROOM FITOUT	GENERAL CONVENIENCE POWER				F/I
IDF ROOM FITOUT	TELECOM EQUIPMENT RACKS, LADDER RACK	F/I			
IDF ROOM FITOUT	HORIZONTAL/VERTICAL WIRE MANAGERS	F/I			
IDF ROOM FITOUT	COPPER/FIBER PATCH PANELS	F/I			
IDF ROOM FITOUT	COPPER/FIBER PATCH CORDS	F/I			
IDF ROOM EQUIPMENT	LAN EQUIPMENT (SWITCHES, SERVERS, ETC.)		F/I		
IDF ROOM EQUIPMENT	WAN EQUIPMENT (ROUTERS, FIREWALLS, ETC.)		F/I		
IDF ROOM EQUIPMENT	UNINTERRUPTIBLE POWER SUPPLIES (UPS)		F/I		
FLOOR FITOUT	VOICE/DATA COMMUNICATIONS CABLING	F/I			
FLOOR FITOUT	CABLING CONNECTORS & FACEPLATES	F/I			
FLOOR FITOUT	WORKSTATION CABLES (PATCH CORDS)	F/I			
FLOOR FITOUT	WIRELESS ACCESS POINTS	I	F		
FLOOR FITOUT	PHONES, PCs, WORKSTATIONS		F/I		

F = FURNISH
I = INSTALL
F/I = FURNISH AND INSTALL

T.C. = TELECOM CONTRACTOR
G.C. = GENERAL CONTRACTOR
E.C. = ELECTRICAL CONTRACTOR

TELECOMMUNICATIONS LIST OF DRAWINGS

DWG. #	DRAWING NAME
T-001	TELECOMMUNICATIONS GENERAL NOTES, SYMBOLS AND DRAWINGS LIST
T-100	TELECOM LEVEL 01 PLAN
T-400	TELECOM MDF ROOM LAYOUTS AND ELEVATIONS
T-500	TELECOM DETAILS SHEET #1
T-501	TELECOM DETAILS SHEET #2
T-700	TELECOM CABLING DISTRIBUTION DIAGRAM AND DETAILS

ADDITIONAL SCOPE OF WORK NOTES

1. TELECOM CONTRACTOR SHALL PROVIDE SEPARATE LINE ITEM PRICING, AS PART OF THE BASE CONTRACT, FOR THE INSTALLATION OF ALL WIRELESS ACCESS POINTS (FURNISHED AND DELIVERED BY CLIENT). SUCH PRICING TO INCLUDE LABOR AND MOUNTING HARDWARE FOR INSTALLATION.

ABBREVIATIONS

(THIS LIST OF ABBREVIATIONS DOES NOT APPLY TO ANY LETTERS USED IN CONJUNCTION WITH SYMBOLS)

A – AMPS
AC – ALTERNATING CURRENT
ADJ – ADJACENT
AFF – ABOVE FINISHED FLOOR
AFG – ABOVE FINISHED GRADE
AIR COND – AIR CONDITIONING
ARCH – ARCHITECTURAL
ASYM – ASYMMETRICAL
AUTO – AUTOMATIC
AV – AUDIOVISUAL
AVG – AVERAGE
AWG – AMERICAN WIRE GAUGE
BL – BLANK
BLDG – BUILDING
C – CENTER LINE
CAT – CATEGORY
CATV – CABLE TELEVISION
CCTV – CLOSED CIRCUIT TELEVISION
CKT – CIRCUIT
CLG – CEILING
CLOS – CLOSET
CM – CIRCULAR MIL
COAX – COAXIAL CABLE
COL – COLUMN
CONC – CONCRETE
COND – CONDUIT
DC – DIRECT CURRENT
DIA – DIAMETER
DN – DOWN
DTL – DETAIL
DWG – DRAWING
EA – EACH
E.C. – EMPTY CONDUIT
EC – ELECTRICAL CONTRACTOR
EF – ENTRANCE FACILITY
EIA/TIA – ELECTRONIC INDUSTRIES ASSOC/ TELECOM INDUSTRIES ASSO.
EL – ELEVATION
ELEC – ELECTRIC
ELEV – ELEVATOR
EM – ON EMERGENCY CIRCUIT
F.O. – FIBER OPTIC
FT – FEET
GA – GAUGE
GC – GENERAL CONTRACTOR
HVAC – HEATING VENTILATING
ID – IDENTIFICATION
IDF – INTERMEDIATE DISTRIBUTION FRAME
ISP – INTERNET SERVICE PROVIDER
JBOX – JUNCTION BOX
MDF – MAIN DISTRIBUTION FRAME
MECH – MECHANICAL
MEP – MECH/ELEC/PLUMBING
MIC – MICROPHONE
MIN – MINIMUM
MISC – MISCELLANEOUS
MTD – MOUNTED
NA – NOT APPLICABLE
NEC – NATIONAL ELECTRIC CODE
NEMA – NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
NTS – NOT TO SCALE
OD – OUTSIDE DIAMETER
PB – PULL BOX
PBX – PRIVATE BRANCH EXCHANGE
PCU – POWER CONDITIONING UNIT
PDU – POWER DISTRIBUTION UNIT
PG – PAGING
PH – PHASE
REQ – REQUIRED
RM – ROOM
RMS – RACK MOUNT SPACES
S – SOUND
SEC – SECURITY
SEP – SEPARATE
SO – SOUTH
SPECS – SPECIFICATIONS
SPKLR – SPRINKLER
STD – STANDARD
STP – SHIELDED TWISTED PAIR
TEL – TELEPHONE
TERM – TERMINATION
TELCO – TELEPHONE CO.
TV – TELEVISION
TYP – TYPICAL
UFD – UNDER FLOOR DUCT
UON – UNLESS OTHERWISE NOTED
UPS – UNINTERRUPTIBLE POWER SUPPLY
UTP – UNSHIELDED TWISTED PAIR
V – VOLTS
VA – VOLTAMPERES
VENT – VENTILATING
W – WATTS
W/ – WITH
W/O – WITHOUT

TELECOMMUNICATIONS MATERIALS LIST

SHALL BE PRODUCTS OF THE FOLLOWING MANUFACTURER'S WARRANTED SOLUTIONS: HUBBELL/MOHAWK

HORIZONTAL CABLING

Description	Manufacturer	Model No.
1. Wall/Floor Mounted 2-Port Data Outlet		
Category 6 U/UTP Cable, plenum, white jacket	MOHAWK	M57193
2-Port Single Gang Faceplate	HUBBELL	IFP12x
Category 6 8p8C Modular Jack -Connector	HUBBELL	HXJ60W
2. Wall Mounted 4-Port Data Outlet for copy machine		
Category 6 U/UTP Cable, plenum, white jacket	MOHAWK	M57193
4-Port Single Gang Faceplate	HUBBELL	IFP14x
Category 6 8p8C Modular Jack -Connector	HUBBELL	HXJ60W
2. Furniture/Surface Mounted Mounted 2-Port Data Outlet		
Category 6 U/UTP Cable, plenum, white jacket	MOHAWK	M57193
2-Port Surface Mounted Box	HUBBELL	FP2BK
Category 6 8p8C Modular Jack -Connector	HUBBELL	HXJ60W
3. Wall Mounted 1-Port phone Outlet		
Category 6 U/UTP Cable, plenum, white jacket	MOHAWK	M57193
1-Port Single Gang Faceplate	HUBBELL	P630S1GJ6
4. Ceiling Mounted Wireless Access Point 2-Port Data Outlet		
Category 6A Cable, plenum, white jacket	MOHAWK	M59146
2-Port Surface Mounted Box	HUBBELL	ISB2x
Category 6A 8p8C Modular Jack -Connector	HUBBELL	HXJ6x
5. Wall Mounted Data/Coax Outlet for AV/flat panel displays		
Category 6 U/UTP Cable, plenum, white jacket	MOHAWK	M57193
6-Port Single Gang Faceplate	HUBBELL	IFP16x
Category 6 8p8C Modular Jack -Connector	HUBBELL	HXJ60W
6. Ceiling Mounted 1-Port Data Outlet		
Category 6 U/UTP Cable, plenum, white jacket	MOHAWK	M57193
1-Port Surface Mounted Box	HUBBELL	ISB1OW
Category 6 8p8C Modular Jack -Connector	HUBBELL	HXJ60W

FLOOR TELECOMMUNICATIONS ROOM (IDF Room)

Description	Manufacturer	Model No.
1. Racks		
4 Post ADJUSTABLE RAIL QUADRA RACK, 45RU, 84"H, 36"D, 23"W, SQUARE MOUNTING HOLES WITH CAGE NUTS, BLACK	Chatsworth	15253-703
6" Wide Vertical Wire Manager - Double sided, extended fingers	Chatsworth	40095-703
Horizontal Manager, 2 RU, 19 in, single sided	Chatsworth	35441-702
Horizontal Manager, 1 RU, 19 in, single sided	Chatsworth	35441-701
Category 6 Patch Panel, 48 port - ANGLED	HUBBELL	P648A
Category 6a Patch Panel, 48 port - ANGLED	HUBBELL	HP6A48A
Category 6 U/UTP Patch Cords, lengths vary as required	HUBBELL	HC6Axxyy*
Category 6A Patch Cords, lengths vary as required	HUBBELL	PC6ABK
2. Ladder Rack		
18"Universal Cable Runway (Ladder Rack)	HUBBELL	HLS1018B
Ladder Rack Wall Angle Support	HUBBELL	HLX1518
Ladder Rack Triangular Support Bracket (For Mid-Span Perimeter Support)	HUBBELL	HLTSB18B
Ladder Rack Heavey Duty Butt-Splice Kit	HUBBELL	HLBSK
Ladder Rack Heavey Duty Junction -Splice Kit	HUBBELL	HLTK
Ladder Rack Threaded Ceiling Kit	HUBBELL	HLCMK
3. Grounding and Bonding Materials		
Telecom Main Grounding Busbar	HUBBELL	HBBB14420J
Associated Support Material (6AWG,Lugs,etc.)	HUBBELL	TBD
Fully Loaded 100Pair Stackable Building Entrance Terminal	Circa	1880ECA1-100-3BIE
4. Rack Power Distribution		
Rack mounted 5kVA UPS - PROVIDED BY CLIENT	APC	BY CLIENT
Vertical PDU - PROVIDED BY CLIENT	APC	BY CLIENT

MISCELLANEOUS MATERIAL

Description	Manufacturer	Model No.
1. Supports		
J-Hook	Erico/Caddy	CAT32
1/2 Streaded Rod		
Threaded Rod I-Beam Clamps	Chatsworth	10557-003
Field ConfigurableFittings	Hubbell	TBD
Supports and Hardware	Hubbell	TBD

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Project No. B17-DAYCARE

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Landscape Architect

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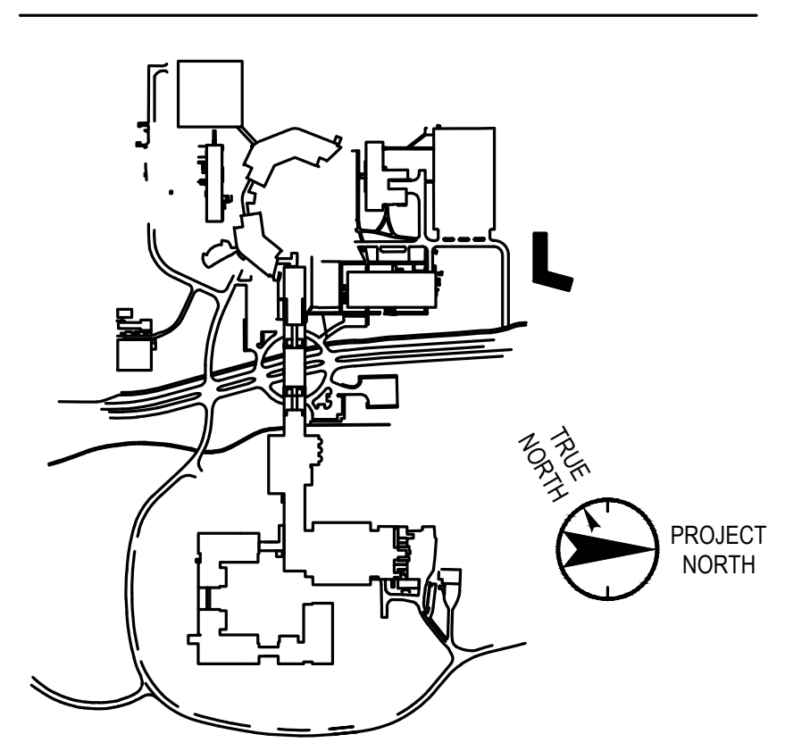
Key Plan



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1	07.01.2022	100% CONSTRUCTION DOCUMENTS-1

Plot Date: 07.01.2022

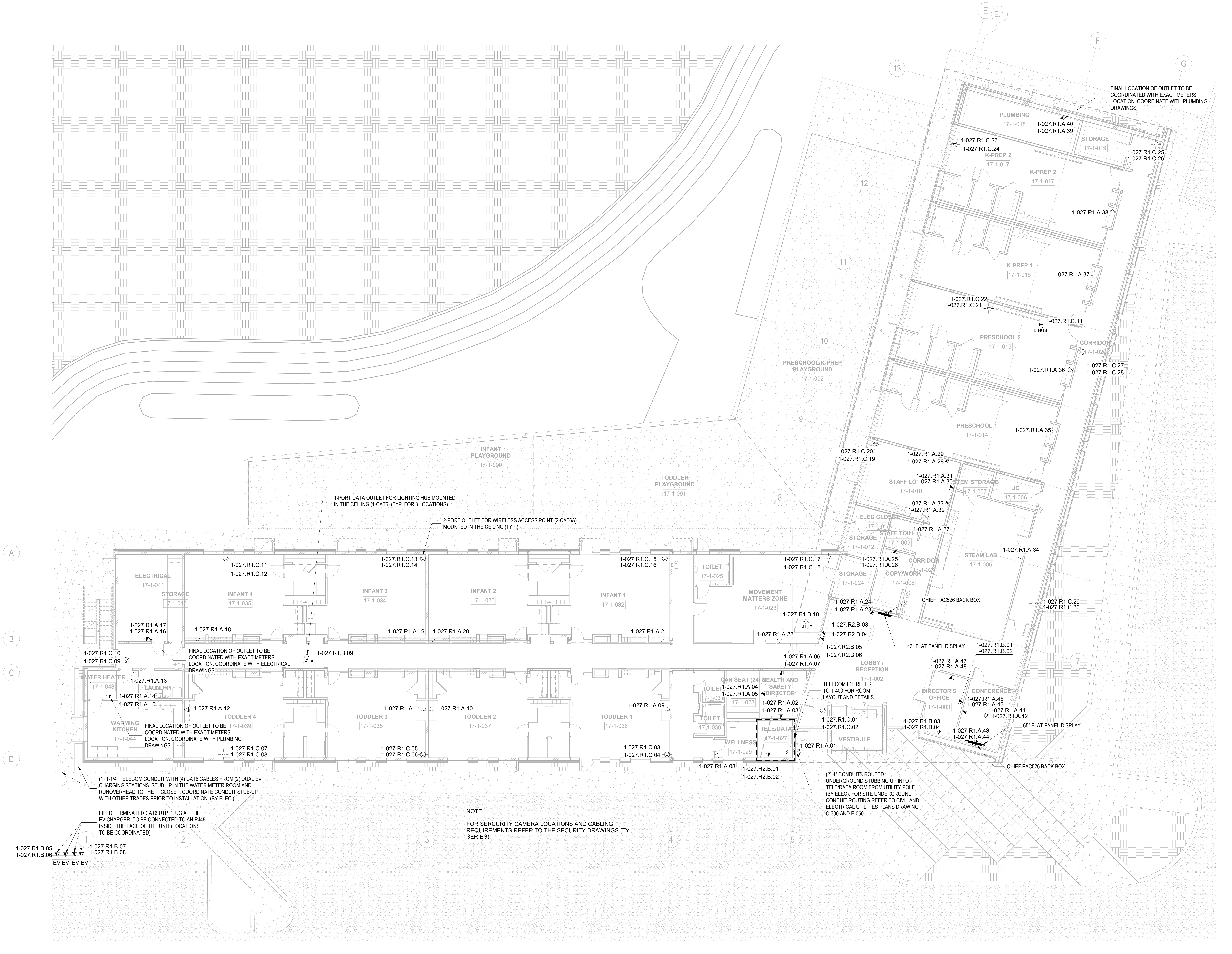
Professional Seal and Signature

Vendor Name: COSENTINI
Vendor Project No.: 210104
Discipline: TELECOM Drawn By: PG

TELECOM GENERAL NOTES, SYMBOLS, AND DRAWING LIST

Scale: N.T.S.
Floor:

T-001



FINAL LOCATION OF OUTLET TO BE COORDINATED WITH EXACT METERS LOCATION. COORDINATE WITH PLUMBING DRAWINGS

1-PORT DATA OUTLET FOR LIGHTING HUB MOUNTED IN THE CEILING (1-CAT6) (TYP. FOR 3 LOCATIONS)

2-PORT OUTLET FOR WIRELESS ACCESS POINT (2-CAT6A) MOUNTED IN THE CEILING (TYP.)

FINAL LOCATION OF OUTLET TO BE COORDINATED WITH EXACT METERS LOCATION. COORDINATE WITH ELECTRICAL DRAWINGS

FINAL LOCATION OF OUTLET TO BE COORDINATED WITH EXACT METERS LOCATION. COORDINATE WITH PLUMBING DRAWINGS

TELECOM IDF REFER TO T-400 FOR ROOM LAYOUT AND DETAILS

(1) 1-1/4" TELECOM CONDUIT WITH (4) CAT6 CABLES FROM (2) DUAL EV CHARGING STATIONS, STUB UP IN THE WATER METER ROOM AND RUNOVERHEAD TO THE IT CLOSET. COORDINATE CONDUIT STUB-UP WITH OTHER TRADES PRIOR TO INSTALLATION. (BY ELEC.)

FIELD TERMINATED CAT6 UTP PLUG AT THE EV CHARGER, TO BE CONNECTED TO AN RJ45 INSIDE THE FACE OF THE UNIT (LOCATIONS TO BE COORDINATED)

(2) 4" CONDUITS ROUTED UNDERGROUND STUBBING UP INTO TELE/DATA ROOM FROM UTILITY POLE (BY ELEC). FOR SITE UNDERGROUND CONDUIT ROUTING REFER TO CIVIL AND ELECTRICAL UTILITIES PLANS DRAWING C-300 AND E-050

NOTE:

FOR SERCURITY CAMERA LOCATIONS AND CABLING REQUIREMENTS REFER TO THE SECURITY DRAWINGS (TY SERIES)

FILE: BIM 360://006.3608.000 - Regeneron, Day Care Facility Tarrytown/210104_TTCX Daycare_IT_2020.rvt PLOTTED ON 11/17/21

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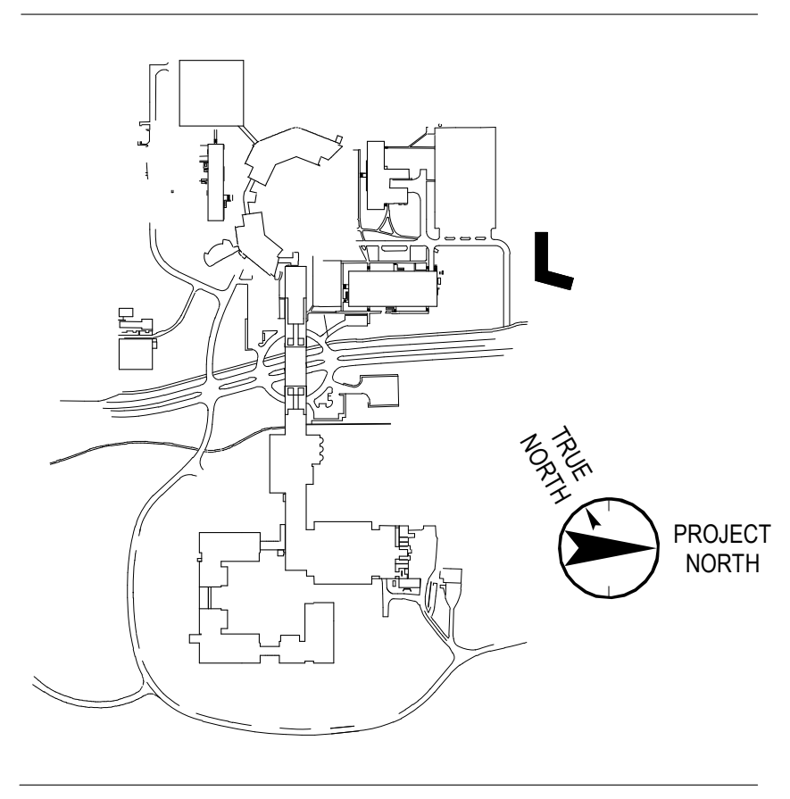

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Plot Date: 07.01.2022

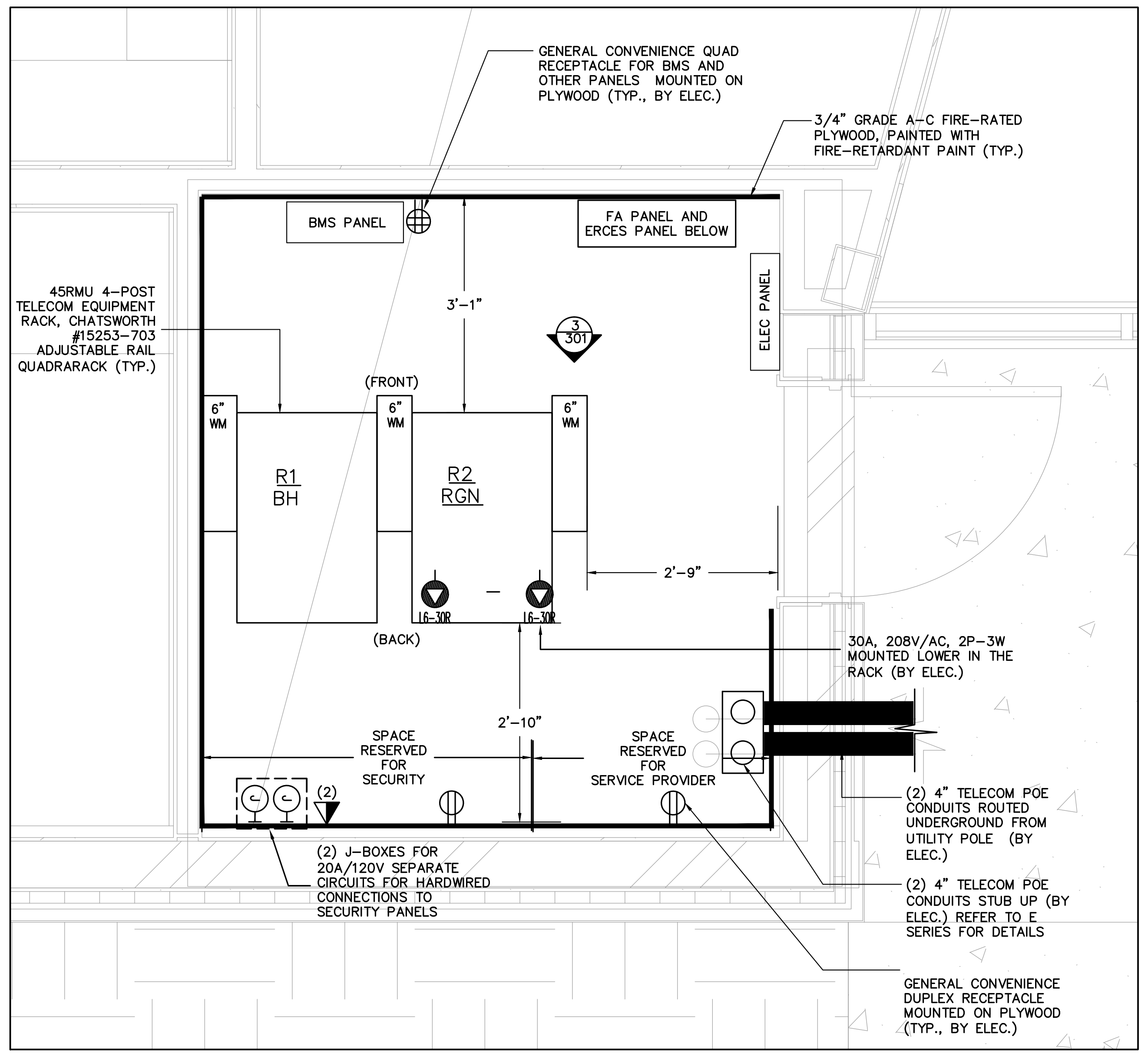
Professional Seal and Signature

Vendor Name: COSENTINI
Vendor Project No.: 210104
Discipline: Drawn By: PG

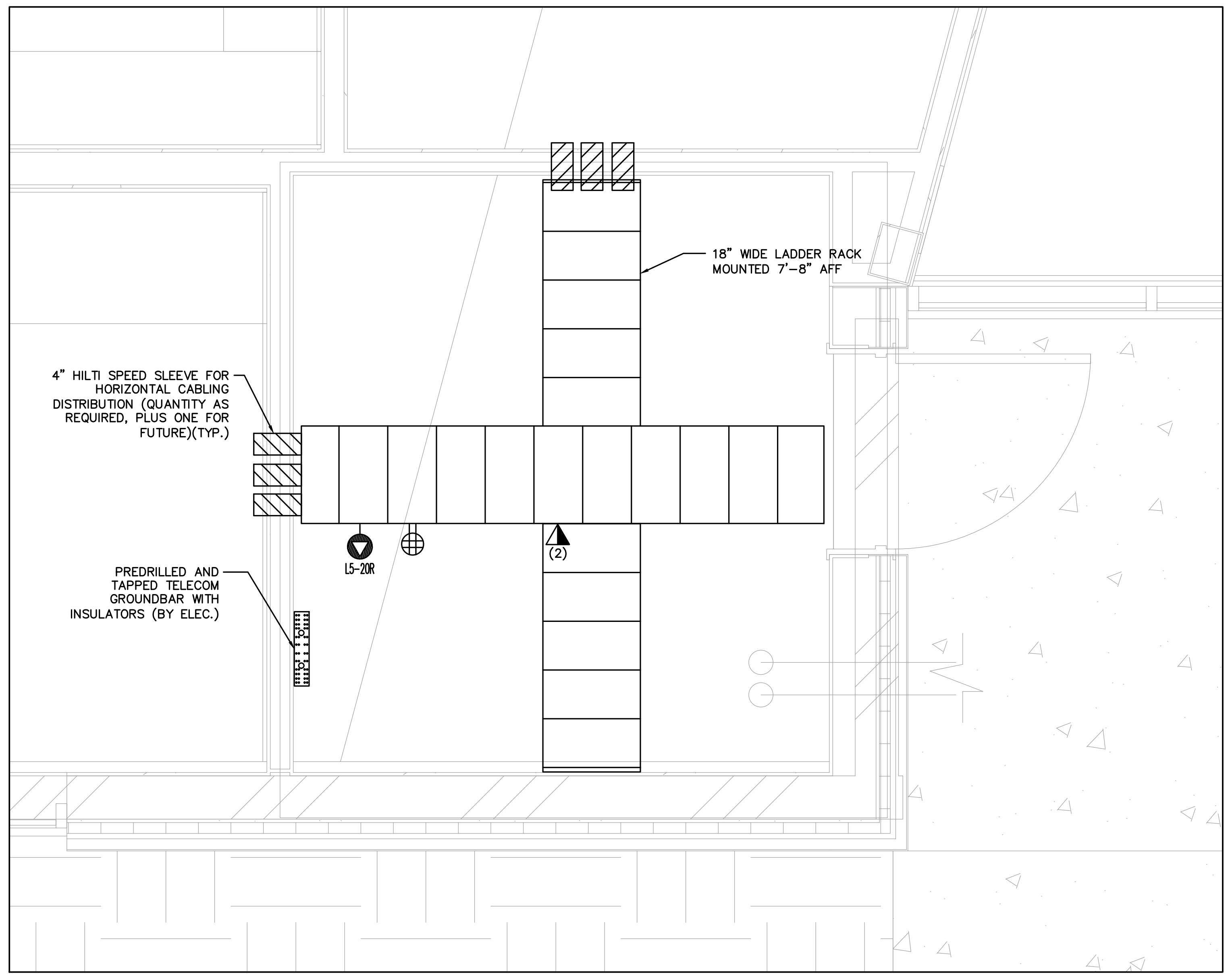
TELECOM LEVEL 01 PLAN

Scale: 1/8" = 1'-0" Floor:

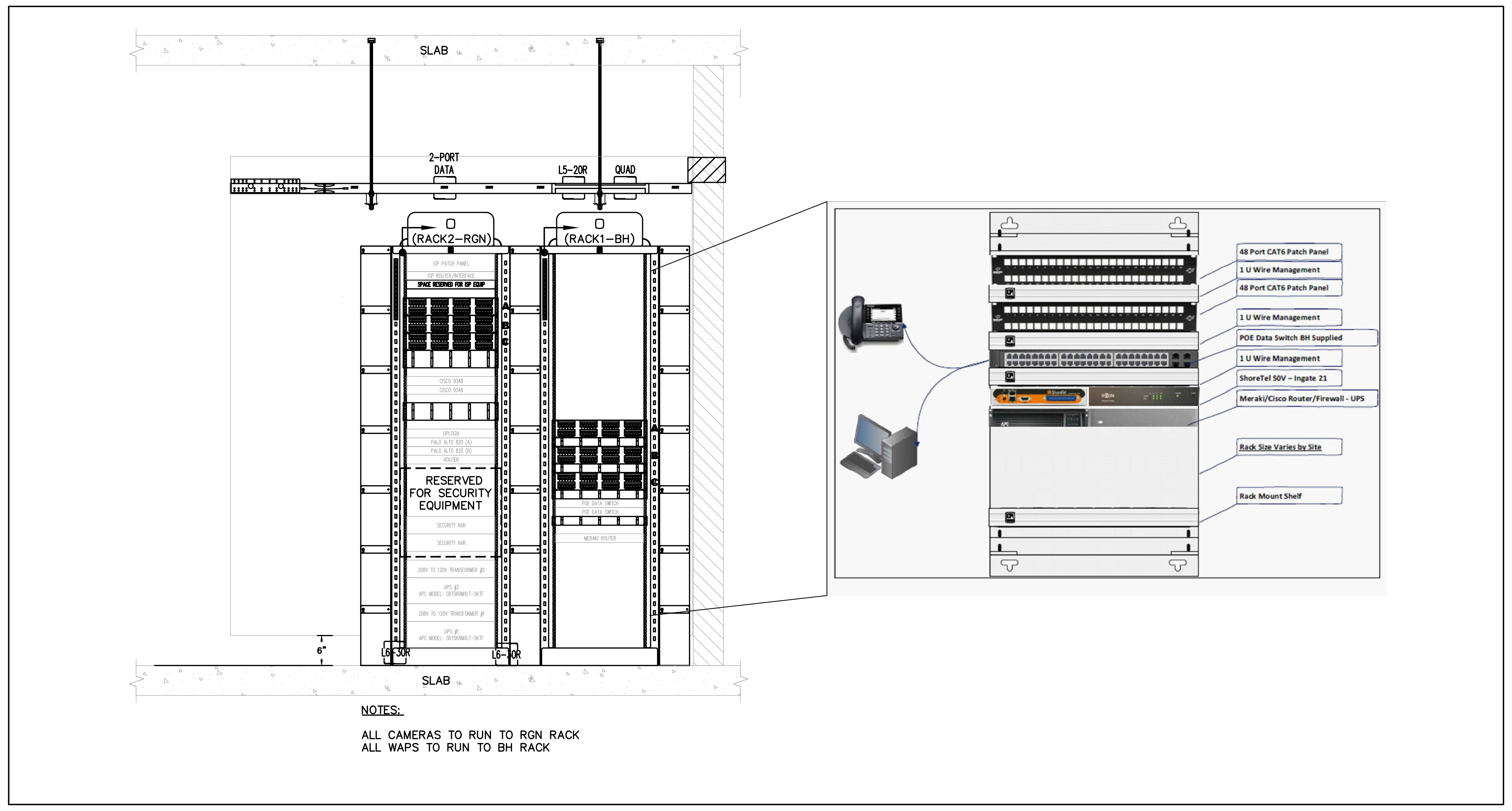
T-100



1 IDF ROOM LAYOUT
3/4" = 1'-0"



2 IDF ROOM RCP LAYOUT
3/4" = 1'-0"



NOTES:

ALL CAMERAS TO RUN TO RGN RACK
ALL WAPS TO RUN TO BH RACK

3 IDF ROOM RACK ELEVATIONS
3/4" = 1'-0"

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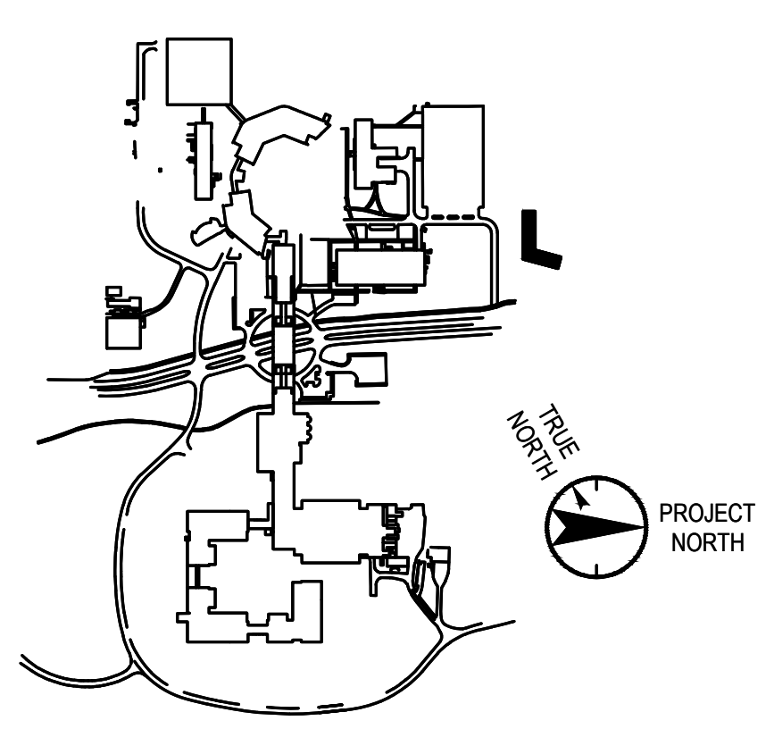

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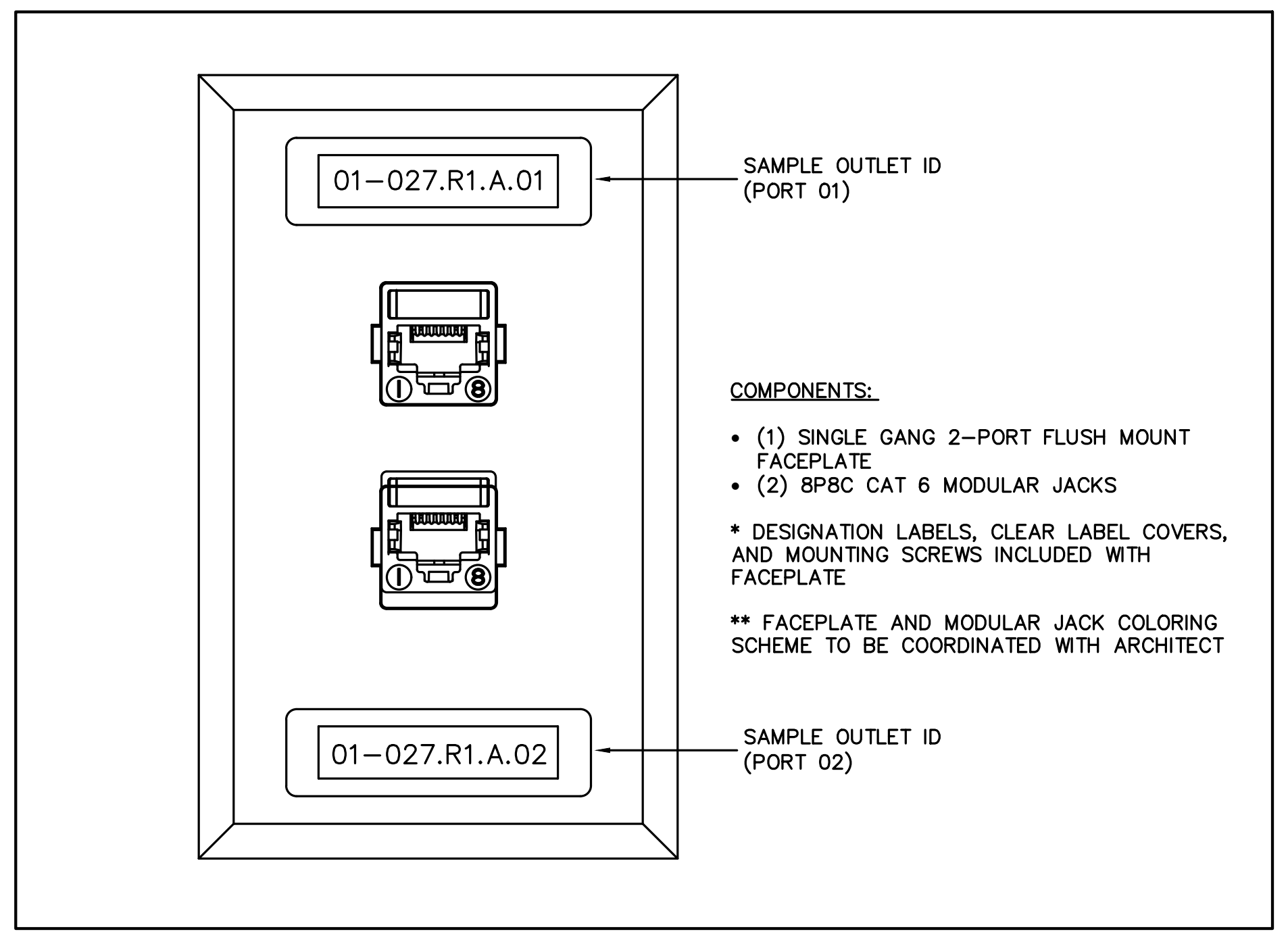
Vendor Project No.: 210104
Discipline: TELECOM Drawn By: PG

TELECOM IDF ROOM LAYOUT AND ELEVATIONS

Scale: AS NOTED Floor:

T-400



COMPONENTS:

- (1) SINGLE GANG 2–PORT FLUSH MOUNT FACEPLATE
- (2) 8P8C CAT 6 MODULAR JACKS

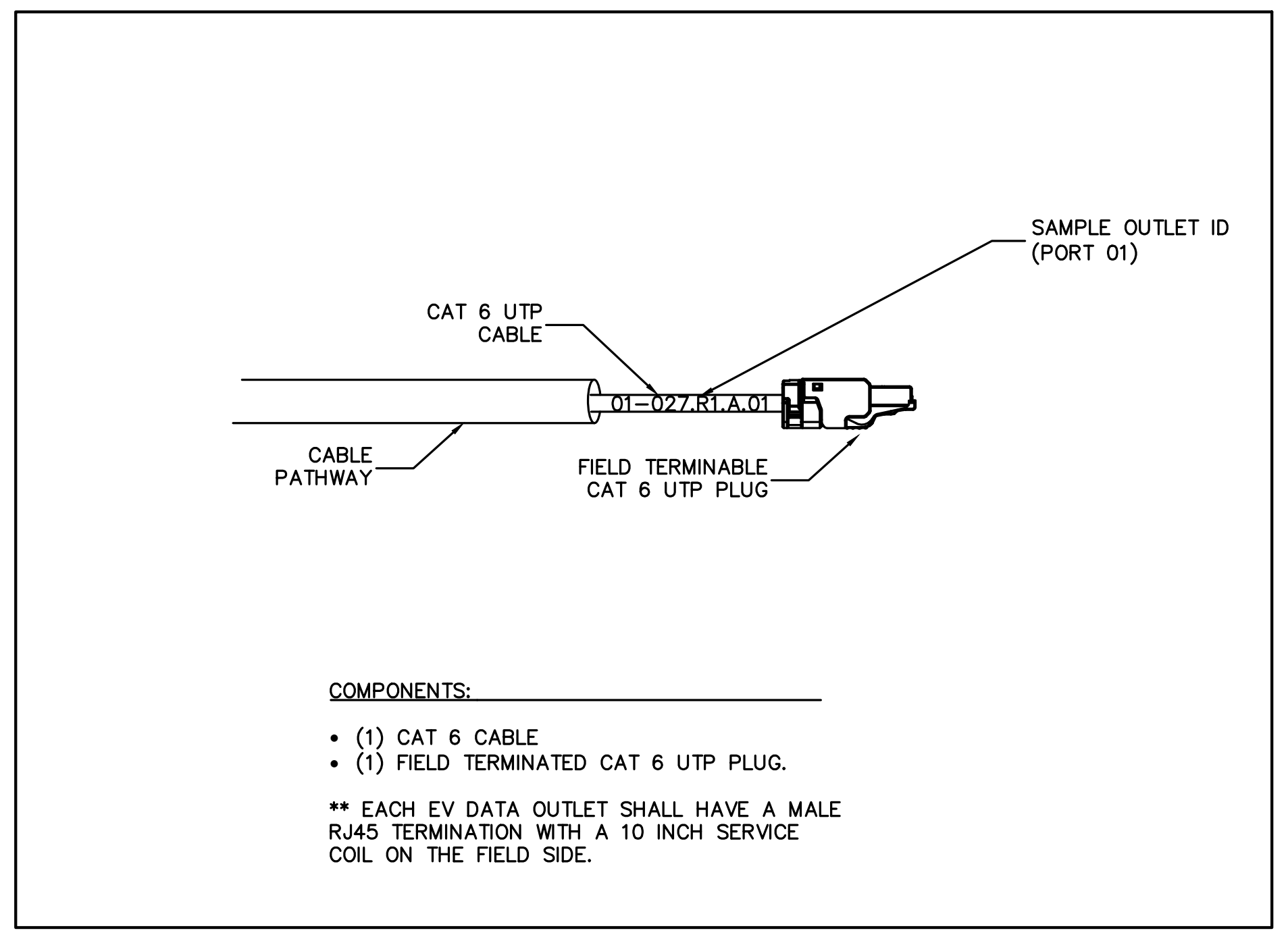
* DESIGNATION LABELS, CLEAR LABEL COVERS, AND MOUNTING SCREWS INCLUDED WITH FACEPLATE

** FACEPLATE AND MODULAR JACK COLORING SCHEME TO BE COORDINATED WITH ARCHITECT

2–PORT VOICE/DATA OUTLET

NOT TO SCALE

01



COMPONENTS:

- (1) CAT 6 CABLE
- (1) FIELD TERMINATED CAT 6 UTP PLUG.

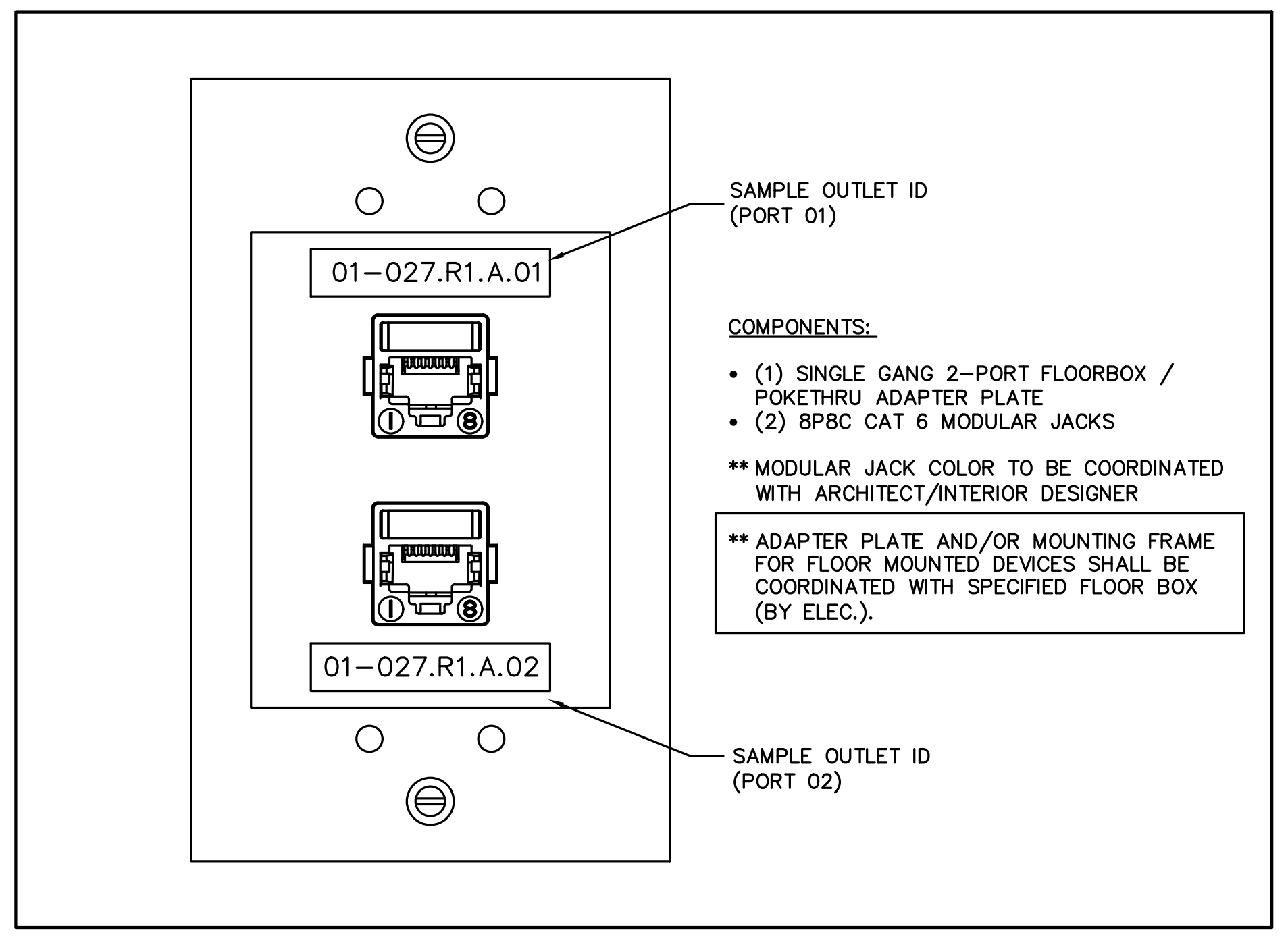
** EACH EV DATA OUTLET SHALL HAVE A MALE RJ45 TERMINATION WITH A 10 INCH SERVICE COIL ON THE FIELD SIDE.

EV

1–PORT DATA PLUG FOR EV CHARGING STATION

NOT TO SCALE

01



COMPONENTS:

- (1) SINGLE GANG 2–PORT FLOORBOX / POKETHRU ADAPTER PLATE
- (2) 8P8C CAT 6 MODULAR JACKS

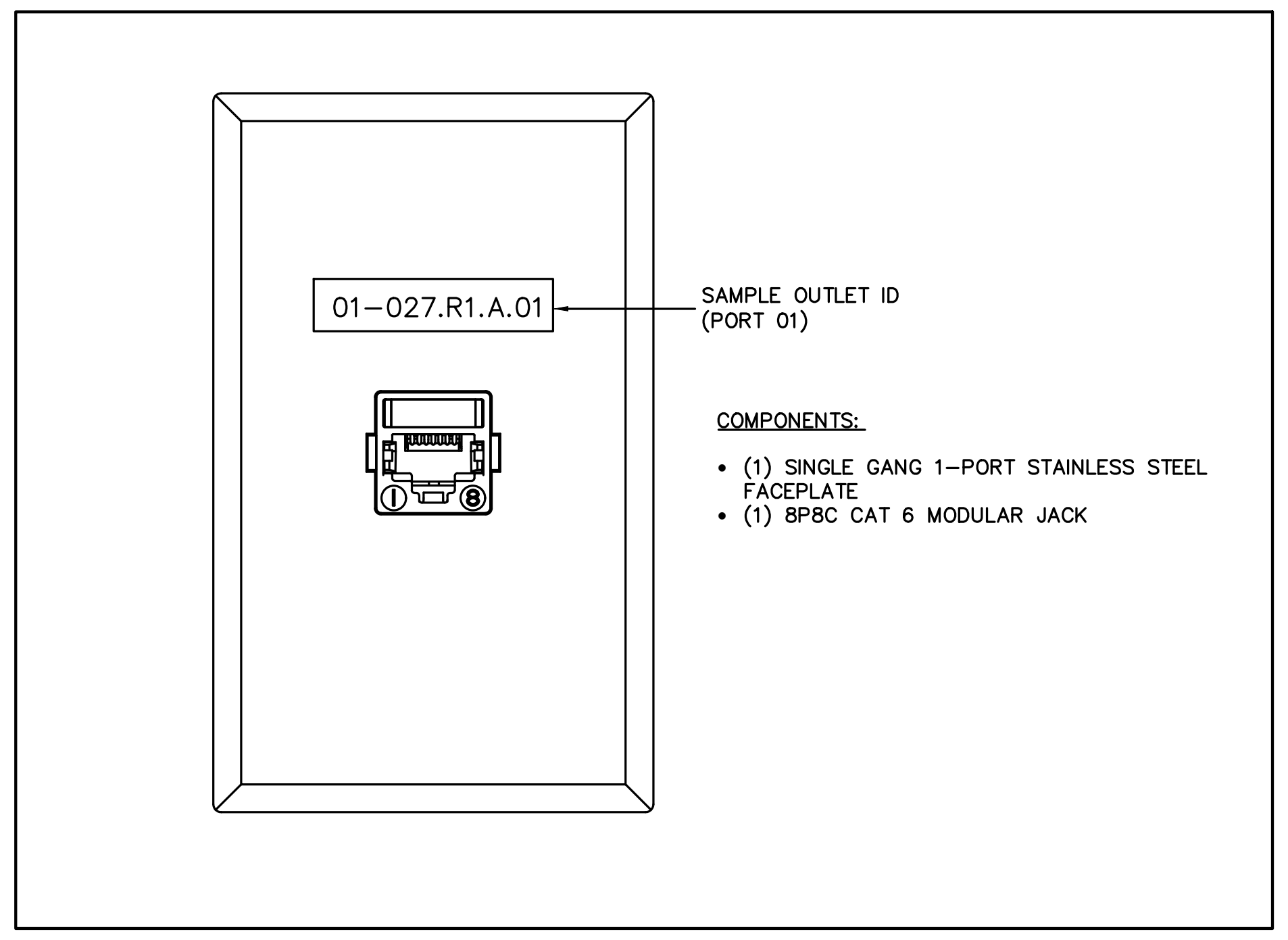
** MODULAR JACK COLOR TO BE COORDINATED WITH ARCHITECT/INTERIOR DESIGNER

** ADAPTER PLATE AND/OR MOUNTING FRAME FOR FLOOR MOUNTED DEVICES SHALL BE COORDINATED WITH SPECIFIED FLOOR BOX (BY ELEC.).

FLOOR MTD. 2–PORT VOICE/DATA OUTLET

NOT TO SCALE

03



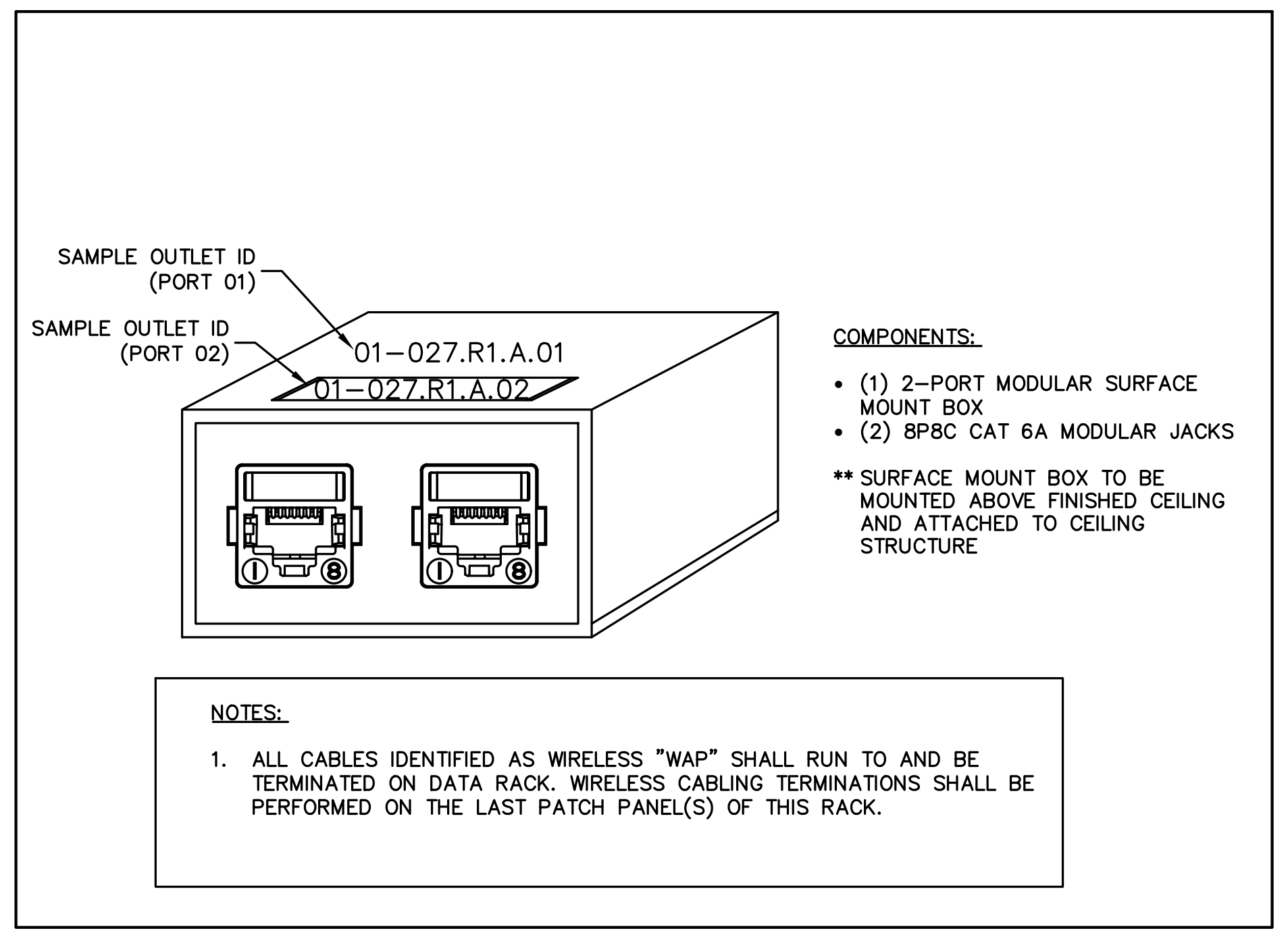
COMPONENTS:

- (1) SINGLE GANG 1–PORT STAINLESS STEEL FACEPLATE
- (1) 8P8C CAT 6 MODULAR JACK

WALL MTD. 1–PORT VOICE OUTLET

NOT TO SCALE

04



COMPONENTS:

- (1) 2–PORT MODULAR SURFACE MOUNT BOX
- (2) 8P8C CAT 6A MODULAR JACKS

** SURFACE MOUNT BOX TO BE MOUNTED ABOVE FINISHED CEILING AND ATTACHED TO CEILING STRUCTURE

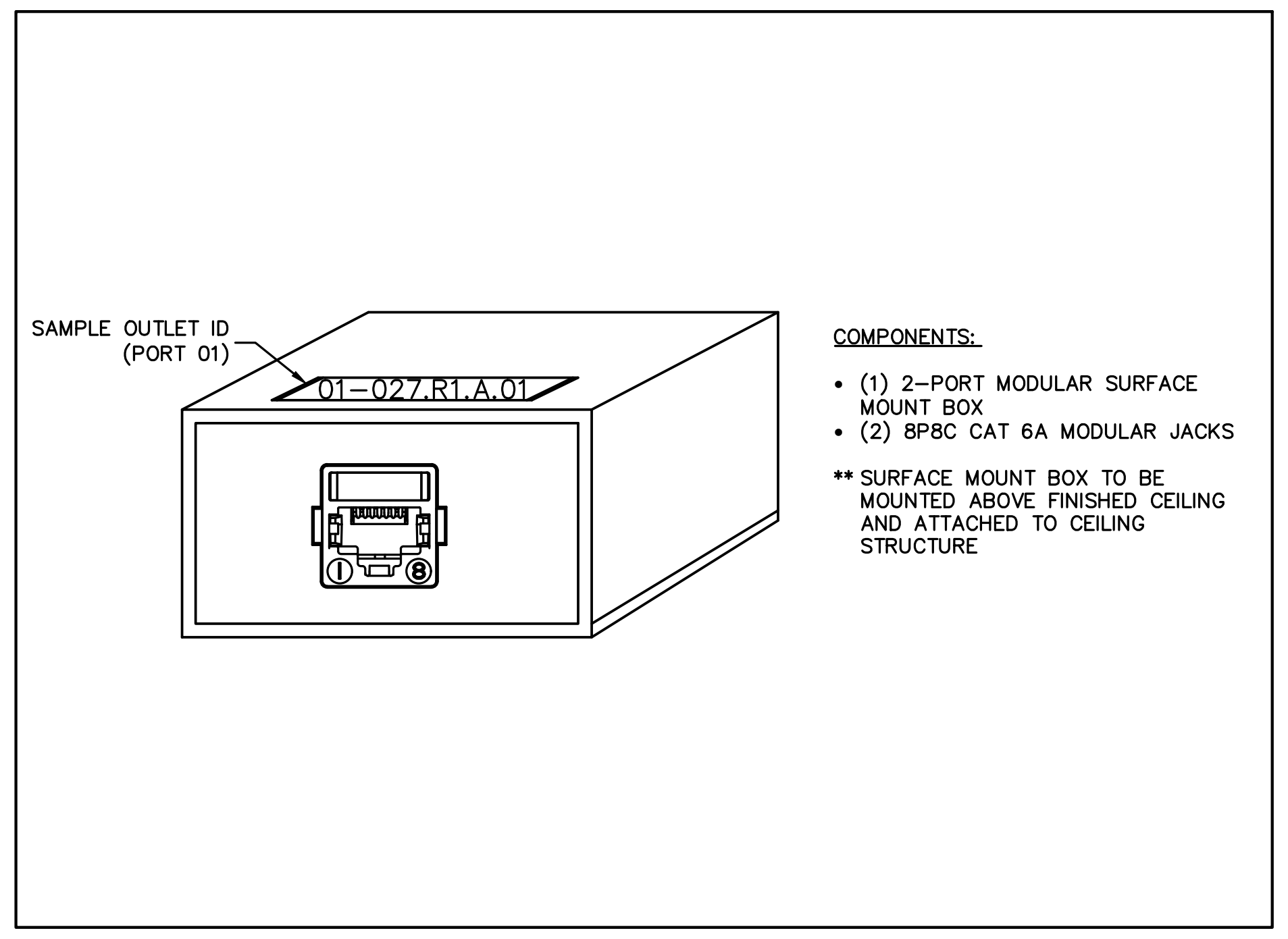
NOTES:

1. ALL CABLES IDENTIFIED AS WIRELESS "WAP" SHALL RUN TO AND BE TERMINATED ON DATA RACK. WIRELESS CABLING TERMINATIONS SHALL BE PERFORMED ON THE LAST PATCH PANEL(S) OF THIS RACK.

CEILING MOUNTED 2–PORT WIRELESS ACCESS POINT OUTLET

NOT TO SCALE

07



COMPONENTS:

- (1) 2–PORT MODULAR SURFACE MOUNT BOX
- (2) 8P8C CAT 6A MODULAR JACKS

** SURFACE MOUNT BOX TO BE MOUNTED ABOVE FINISHED CEILING AND ATTACHED TO CEILING STRUCTURE

L–HUB

CEILING MOUNTED 1–PORT LIGHTING HUB OUTLET

NOT TO SCALE

07

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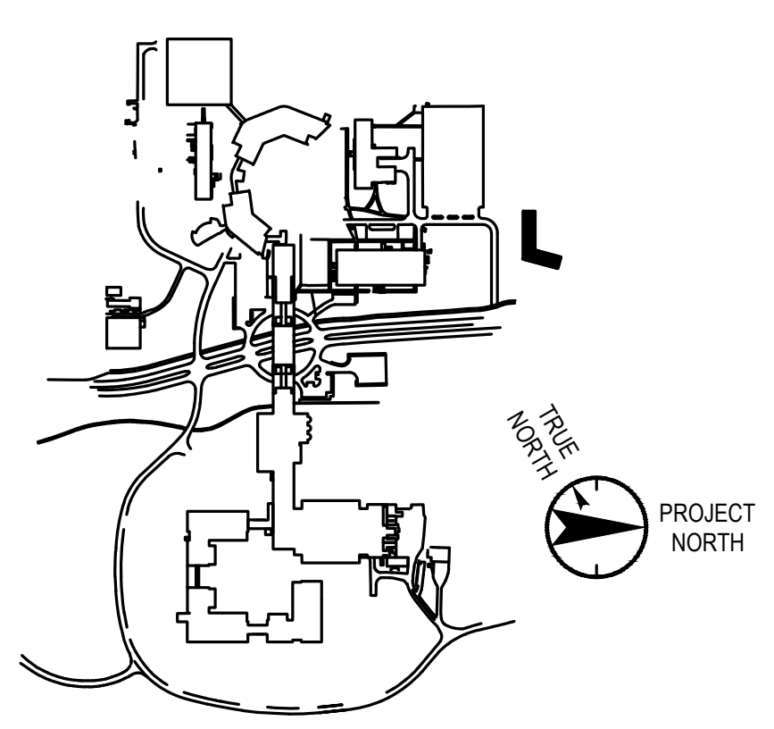

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Plot Date: 07.01.2022

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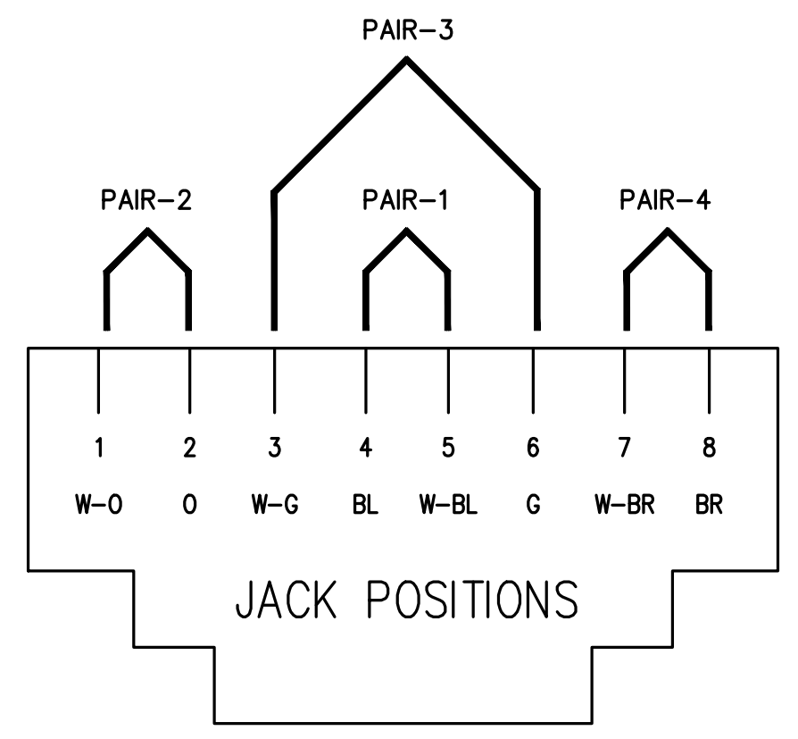
Vendor Project No.: 210104
Discipline: TELECOM Drawn By: PG
TELECOM DETAILS SHEET #1

Scale: N.T.S. Floor:

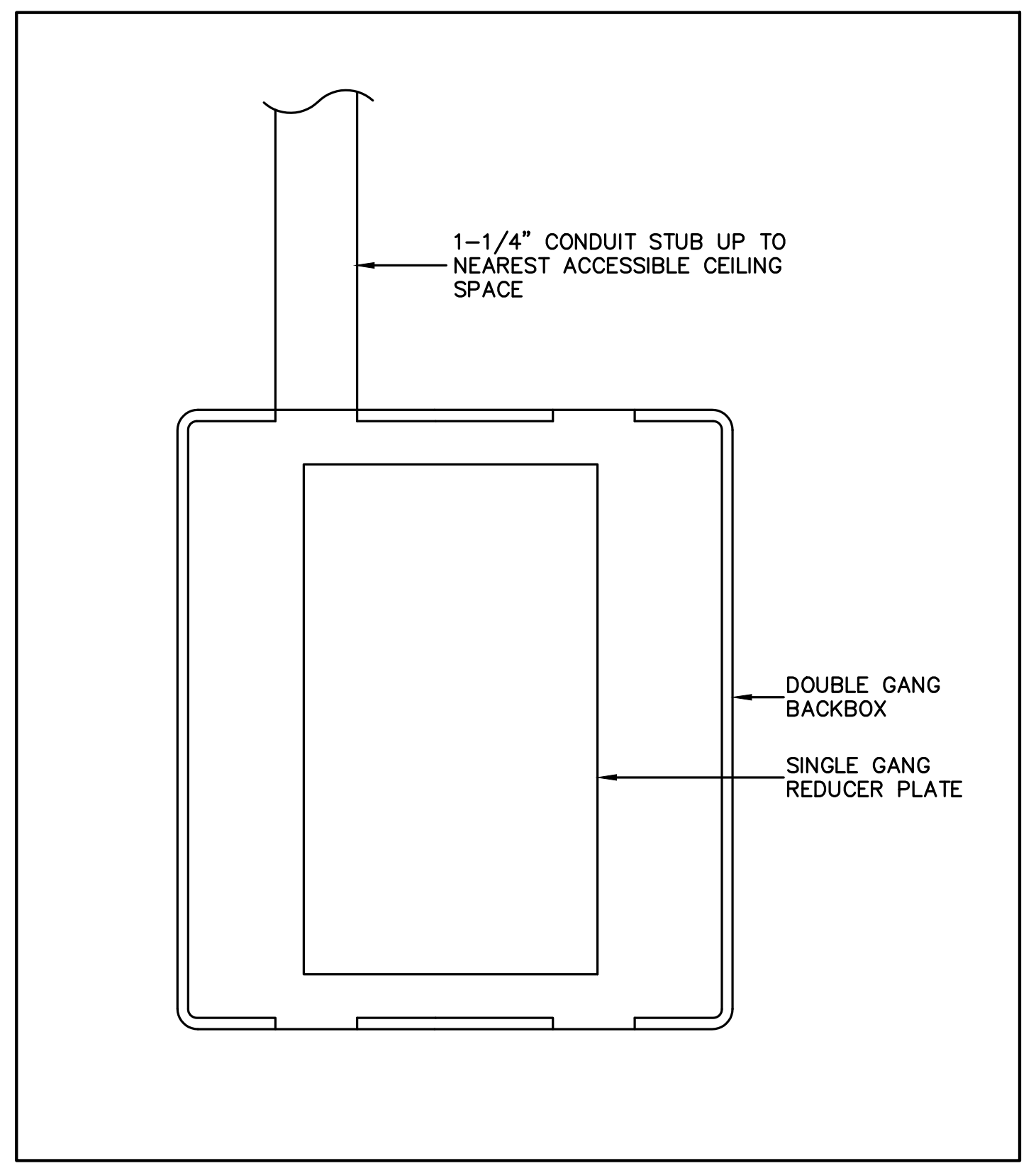
T-500



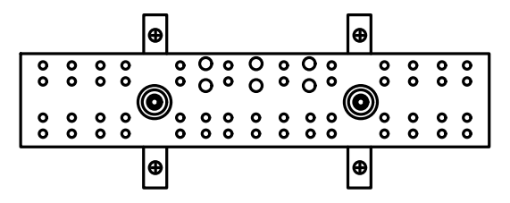
THIS ILLUSTRATION IS A FRONT VIEW OF THE CONNECTOR. THE COLORS INDICATED ARE ASSOCIATED WITH THE STATION DISTRIBUTION CABLE.

PAIR 1 = BLUE
PAIR 2 = ORANGE
PAIR 3 = GREEN
PAIR 4 = BROWN

8 POSITION JACK PIN/PAIR ASSIGNMENTS (DESIGNATION T568B)
NOT TO SCALE
01

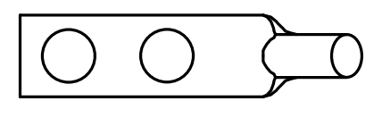


TYPICAL BACKBOX FOR WALL–MOUNTED TELECOM OUTLET LOCATIONS
NOT TO SCALE
02



TELECOMMUNICATIONS GROUNDING BUSBAR (TGB)
SCALE: N.T.S.

EACH TGB SHALL BE PREDRILLED COPPER BUSBAR WITH HOLES FOR USE WITH STANDARD–SIZED LUGS, HAVE MINIMUM DIMENSIONS OF 1/4 INCH THICK BY 2 INCHES WIDE BY A MINIMUM OF 10 INCHES LONG (SCOPE AND STANDARD DICTATES ACTUAL LENGTH) AND SHALL BE LISTED BY AN NRTL.

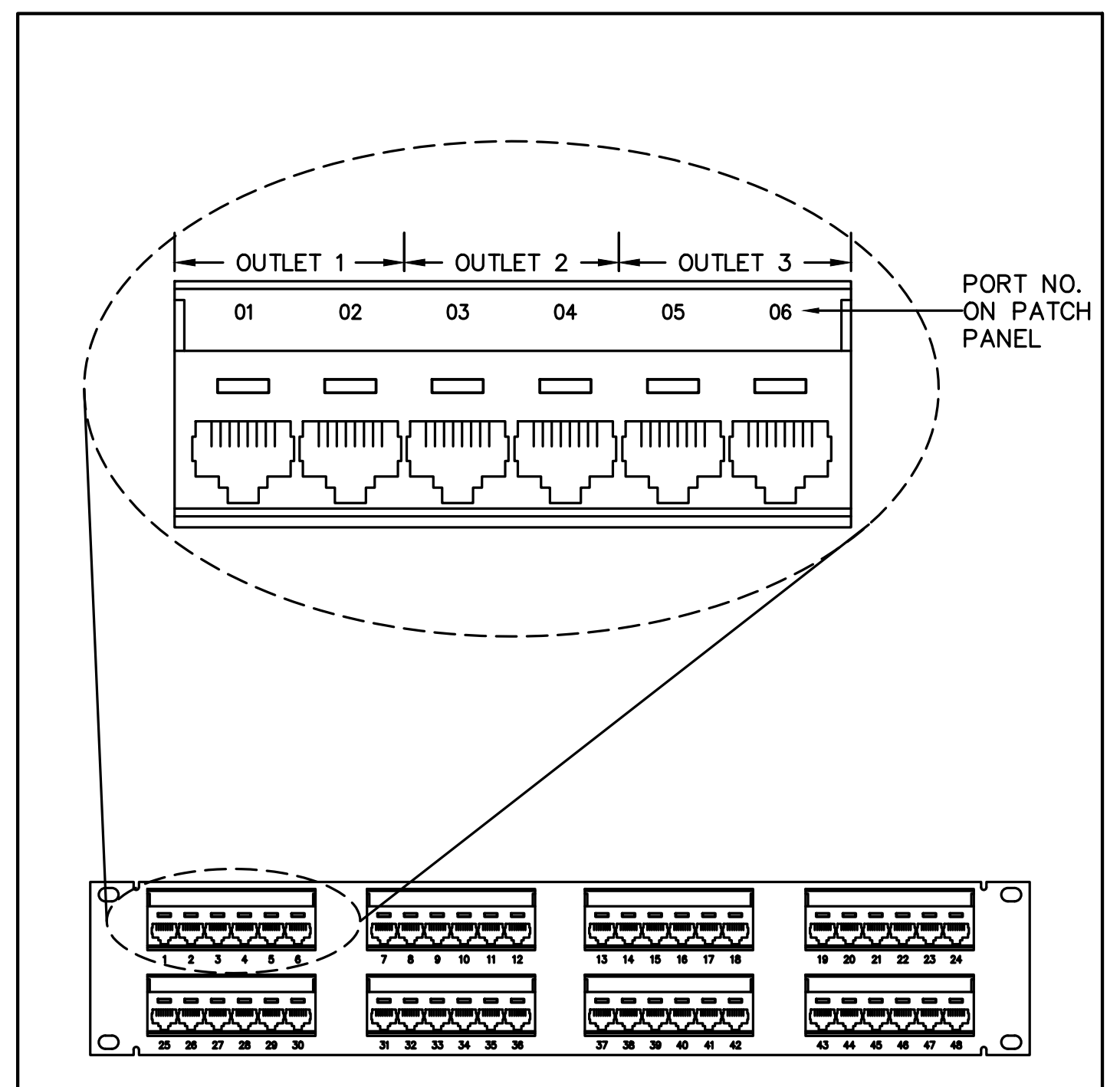


COPPER COMPRESSION TWO–HOLE LUG
SCALE: N.T.S.

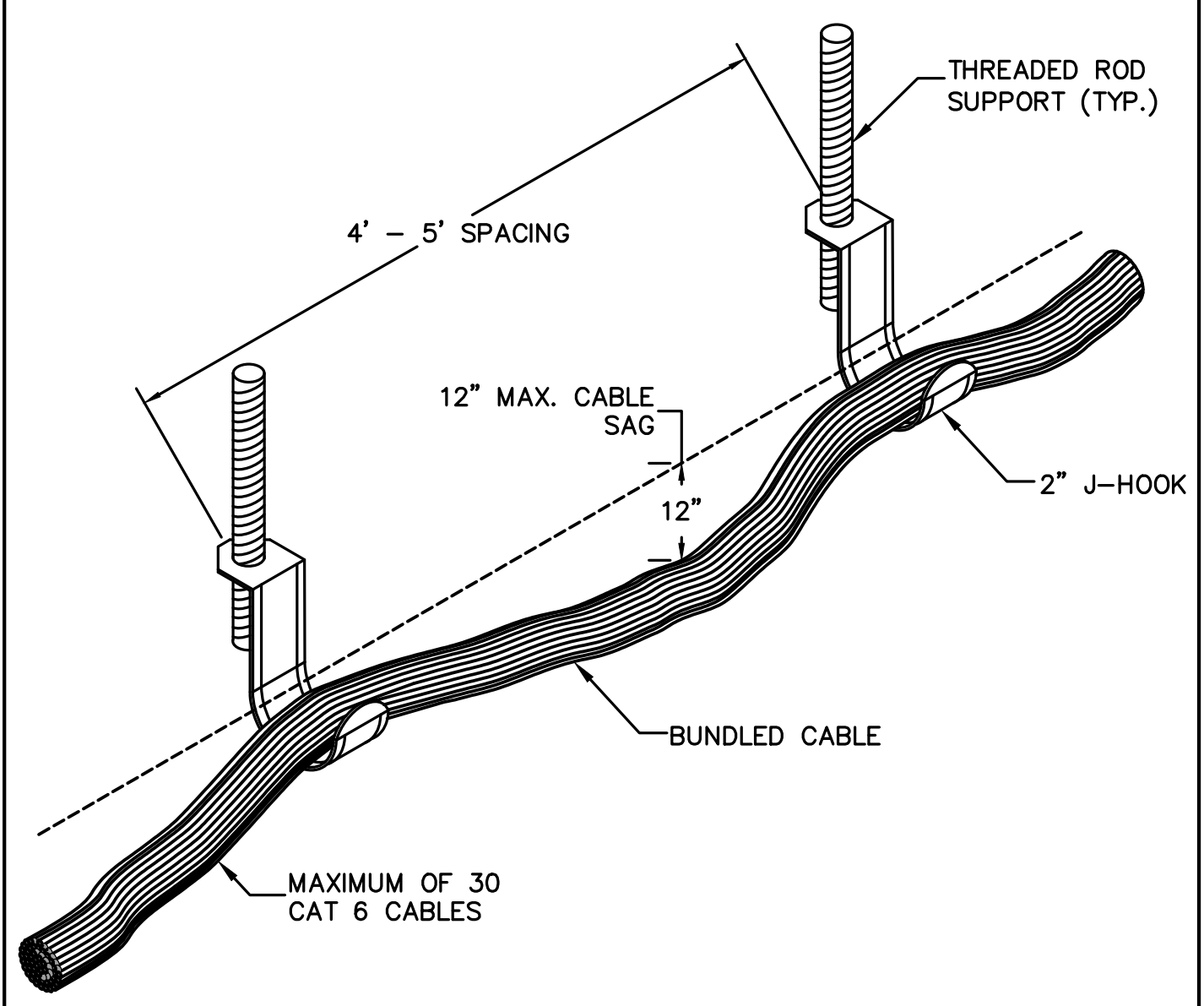
ONLY TWO–HOLE LUGS SHALL BE USED. LUGS SHALL BE IRREVERSIBLE COMPRESSION AND MEET NEBS LEVEL 3 AS TESTED BY TELCORDIA. LUGS WITH INSPECTION WINDOWS SHALL BE USED IN ALL NON–CORROSIVE ENVIRONMENTS SO THAT CONNECTIONS MAY BE INSPECTED FOR FULL CONDUCTOR INSERTION. DIE INDEX NUMBERS SHALL BE EMBOSSED ON ALL COMPRESSION CONNECTIONS TO ALLOW CRIMP INSPECTION.

NOTE: LUGS, HTAPS, GROUNDING STRIPS, AND BUSBARS SHALL BE UL LISTED AND MADE OF PREMIUM QUALITY TIN–PLATED ELECTROLYTIC COPPER THAT PROVIDES LOW ELECTRICAL RESISTANCE WHILE INHIDITING CORROSION. ANTIOXIDANT SHALL BE USED WHEN MAKING BONDED CONNECTIONS IN THE FEILD.

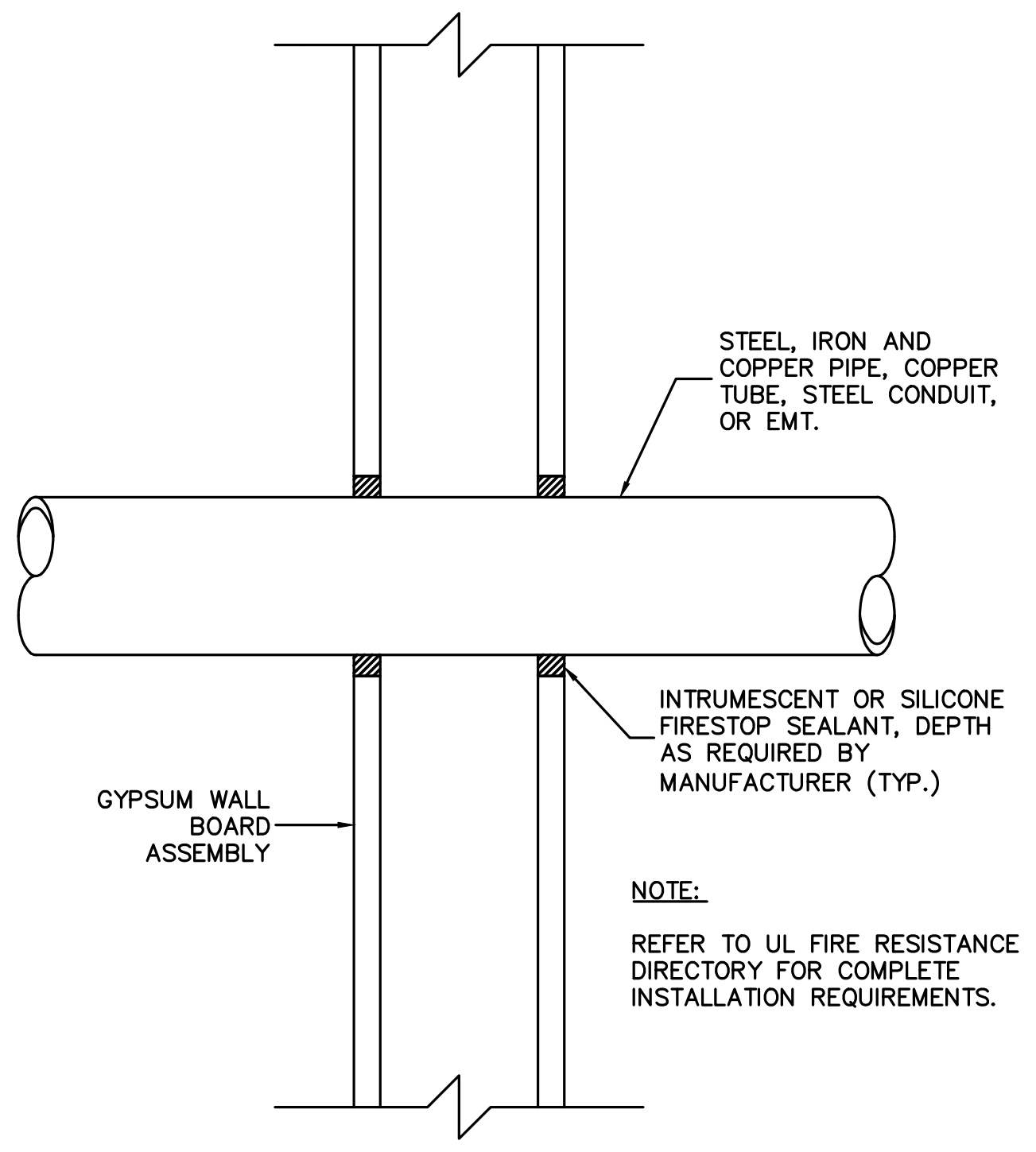
GROUNDING BUSBAR DETAILS AND NOTES
NOT TO SCALE
03



TYPICAL PATCH PANEL LABELLING SCHEME
NOT TO SCALE
04



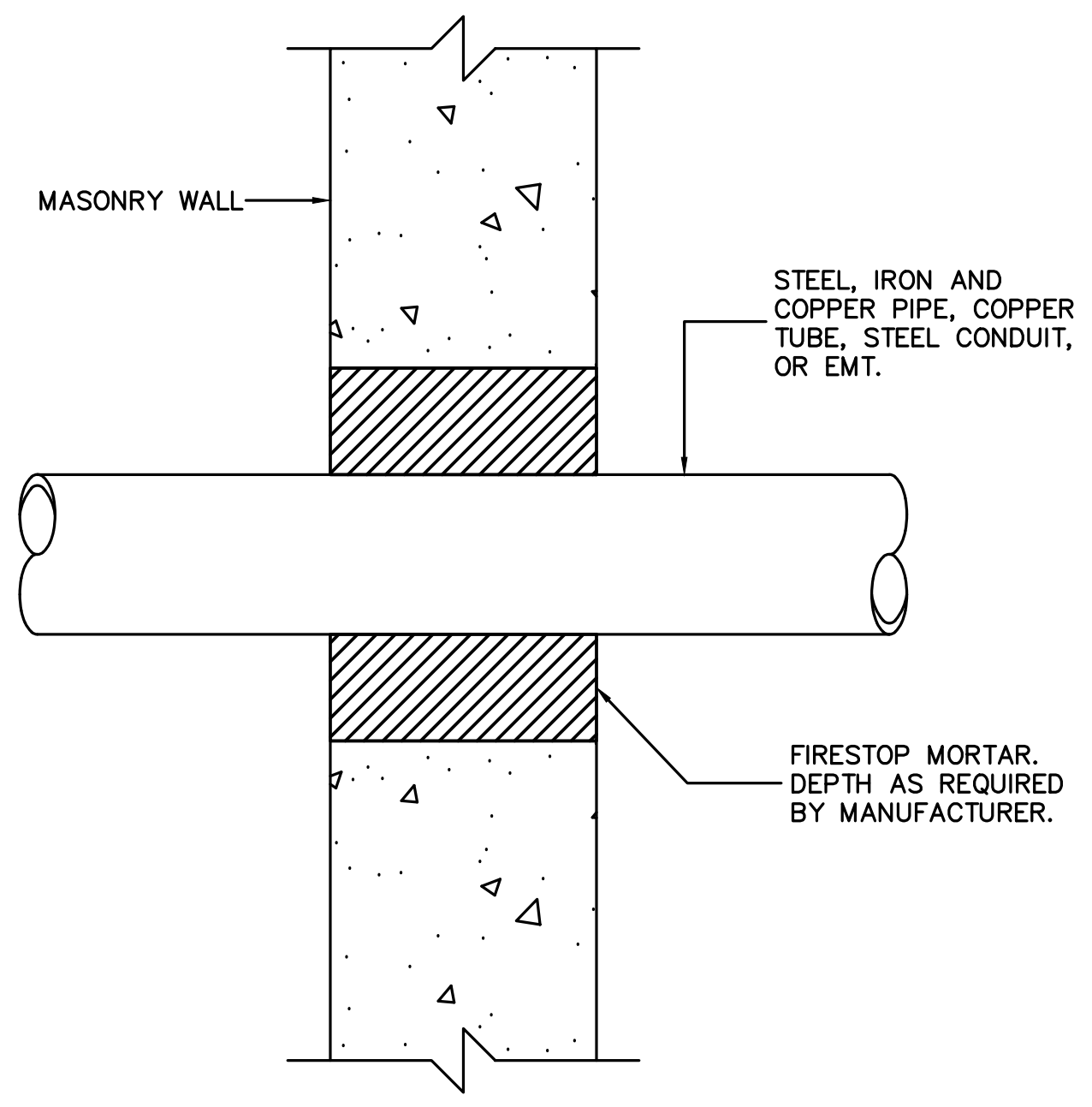
J–HOOK SUPPORT DETAIL
NOT TO SCALE
05



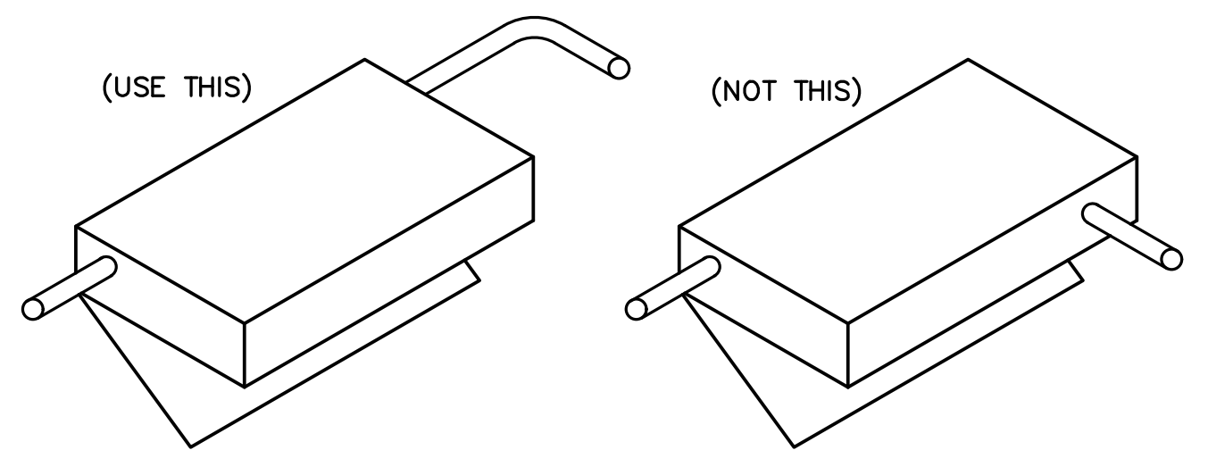
NOTE:

REFER TO UL FIRE RESISTANCE DIRECTORY FOR COMPLETE INSTALLATION REQUIREMENTS.

METALLIC PIPE THROUGH GYPSUM WALL BOARD WITH FIRE RATED SEALANT
NOT TO SCALE
06



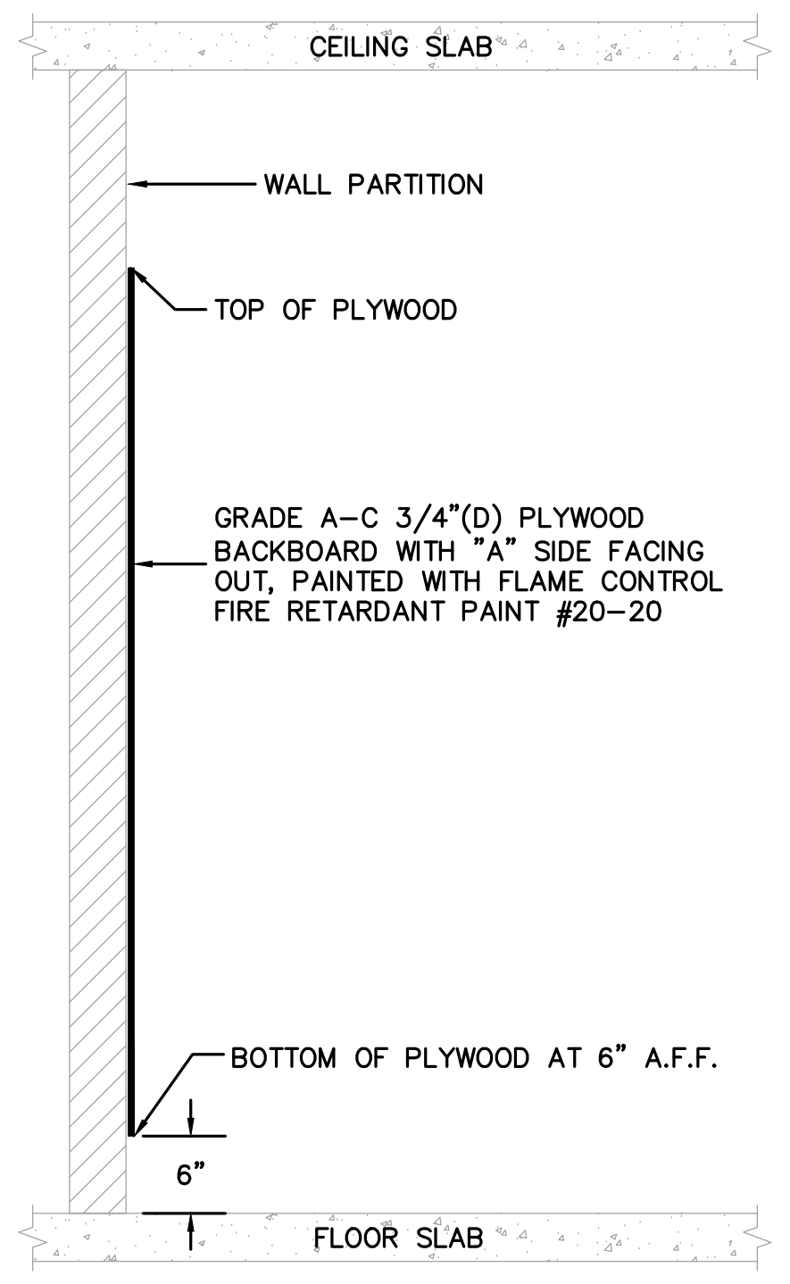
METALLIC PIPE THROUGH CONCRETE WALL WITH FIRE RATED SEALANT
NOT TO SCALE
07



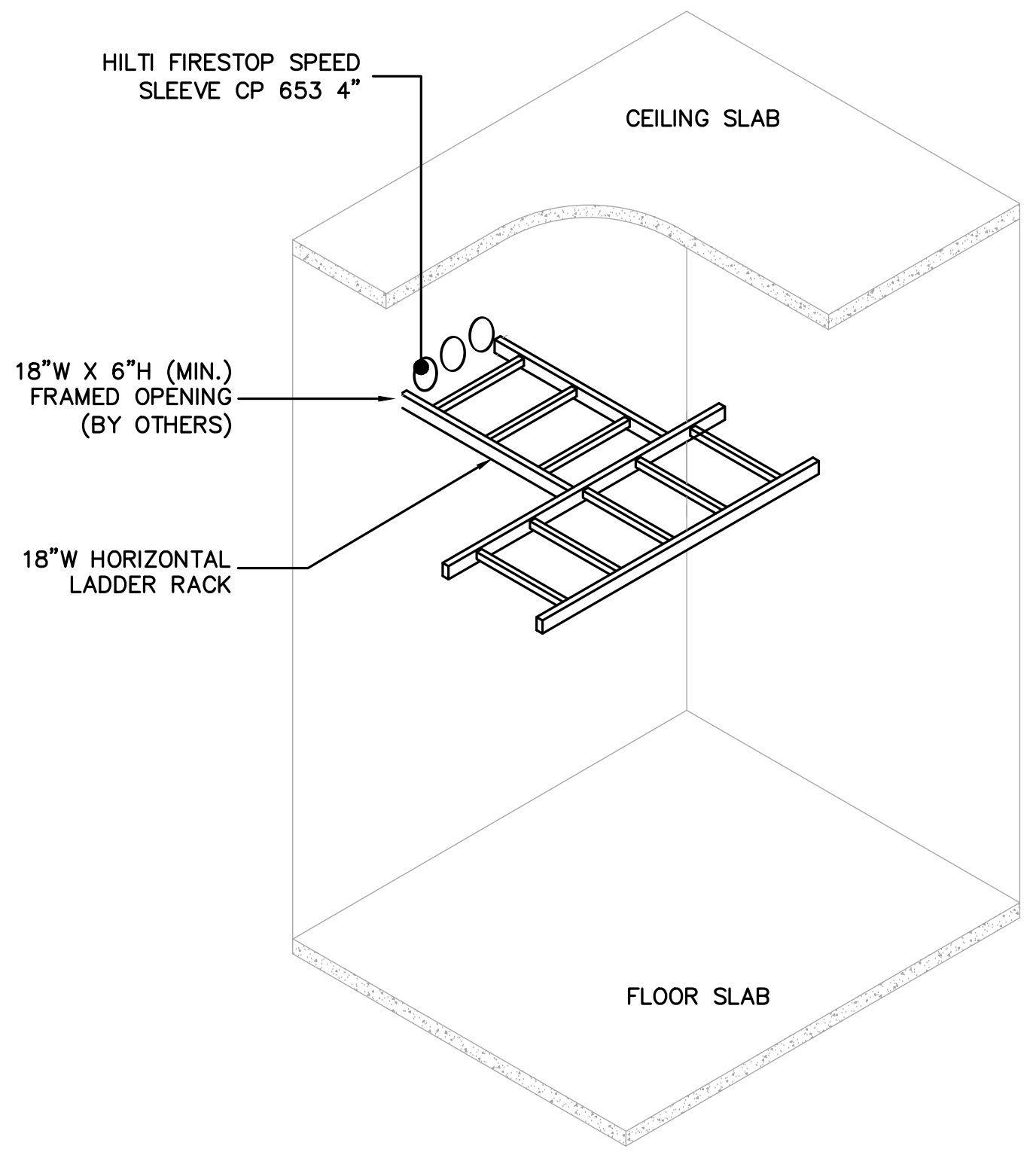
NOTES:

1. THE CONTRACTOR SHALL INSTALL:
   - PULL POINT OR PULL BOX IN EASILY ACCESSIBLE LOCATION;
   - HORIZONTAL CABLING BOX IMMEDIATELY ABOVE SUSPENDED CEILING. PULL BOX MUST BE PROVIDED WITH ACCESS FOR FUTURE CABLING PULLS.
2. THE FOLLOWING PULL POINT OR PULL BOX INFORMATION APPLIES TO INSIDE PLANT CABLES ONLY:
   - FOR DIRECT ACCESS TO A BOX, PROVIDE A SUITABLE, MARKED, HINGED PANEL (OR EQUIVALENT) IN THE SUSPENDED CEILING. THIS ACCESS PANEL CAN ALSO SERVE AS THE COVER FOR THE BOX.

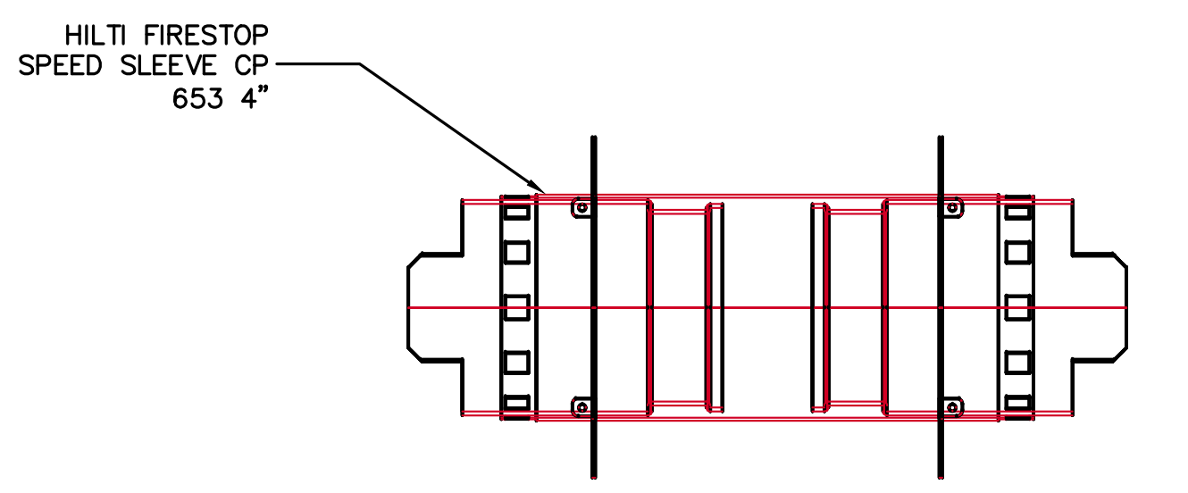
PULLBOX INSTALLATION FOR CONDUIT RUNS
NOT TO SCALE
08



TYPICAL TELECOM ROOM WALLFIELD CONSTRUCTION
NOT TO SCALE
09



LADDER RACK PENETRATION THROUGH TELECOM ROOM FRAMED OPENING
NOT TO SCALE
10



TYPICAL IT ROOM WALL PENETRATION 4" HILTI SPEED SLEEVE DETAIL
NOT TO SCALE
11

WARNING
FIRESTOP SEAL
DO NOT DISTURB

CONTRACTOR: ____________
CONTRACTORS ADDRESS: ____________
CONTRACTORS PHONE: ____________
CONTRACTORS FAX: ____________

INSTALLER: ____________ DATE: ____________
UL# ____________ F RATING: ____________

NOTES:

1. FOR EACH FIRESTOPPED PENETRATION THE INTEGRITY OF THE BARRIER SHALL BE RETURNED, AT MINIMUM TO ITS ORIGINAL INTEGRITY
2. EACH TYPE OF BARRIER PENETRATION SHALL HAVE A UL CLASSIFIED SOLUTION THAT IS APPROVED BY THE LOCAL AHJ (AUTHORITY HAVING JURISDICTION)
3. WITH THE SAME INFORMATION AS ILLUSTRATED, THE CONTRACTOR SHALL INSTALL A LABEL AT EACH BARRIER PENETRATION UPON FIRESTOP COMPLETION.

FIRESTOP SEAL
NOT TO SCALE
12

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CONSERVATION CODE OF NYS

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Alterations or additions to this engineering document by an unlicensed person is a violation of Chapter 16, Title VIII, Article 145 § 7209.2 of the New York State Education Law.

REGENERON
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www.regeneron.com

Building #17
Campus Expansion Child
Day-care Center

899 Old Saw Mill River Road
Mount Pleasant, NY 10591

Project No. B17-DAYCARE

Architect
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1700 Broadway, Suite 400
New York, NY 10019
(212) 492-1400 Phone
(212) 492-1472 Fax

Structural Engineer

Thornton Tomasetti
120 Broadway, 15th Floor
New York, NY 10271
(917) 661-7800 Phone
(917) 661-7801 Fax

MEP / IT / Security Engineer

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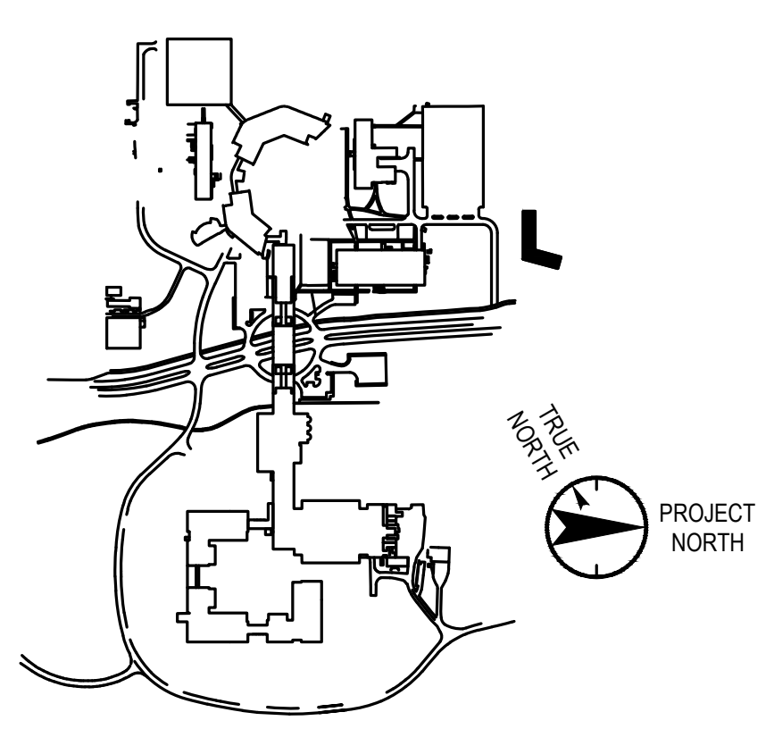
Armonk, NY 10504
(914) 273-5225 Phone
(914) 273-2102 Fax

Landscape Architect

Langan
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
(212) 479-5400 Phone
(212) 479-5444 Fax

Key Plan



No.	Date	Description
0	06.20.2022	100% CONSTRUCTION DOCUMENTS
1	07.01.2022	100% CONSTRUCTION DOCUMENTS-1

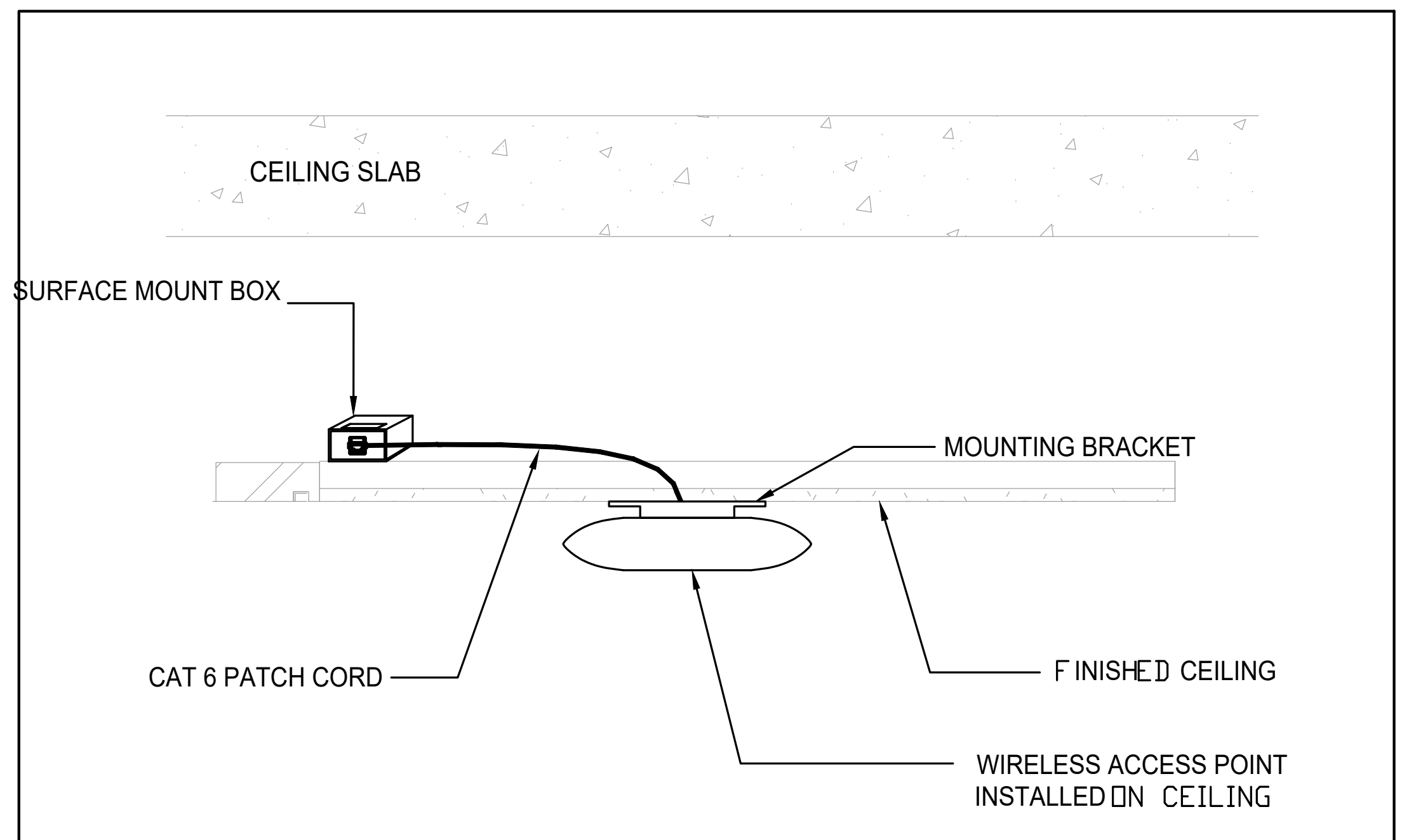
Plot Date: 07.01.2022

Professional Seal and Signature

Vendor Name: COSENTINI
Vendor Project No.: 210104
Discipline: TELECOM Drawn By: PG
TELECOM DETAILS SHEET #2

Scale: N.T.S. Floor:

T-501



NOTES:

1. ARCHITECTURAL FINISHES AND DETAIL VARY DEPENDING ON BUILDING CEILING CONDITION. REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.

2. REFER TO IT FLOOR PLANS FOR QUANTITIES AND LOCATIONS OF WAP DEVICES.

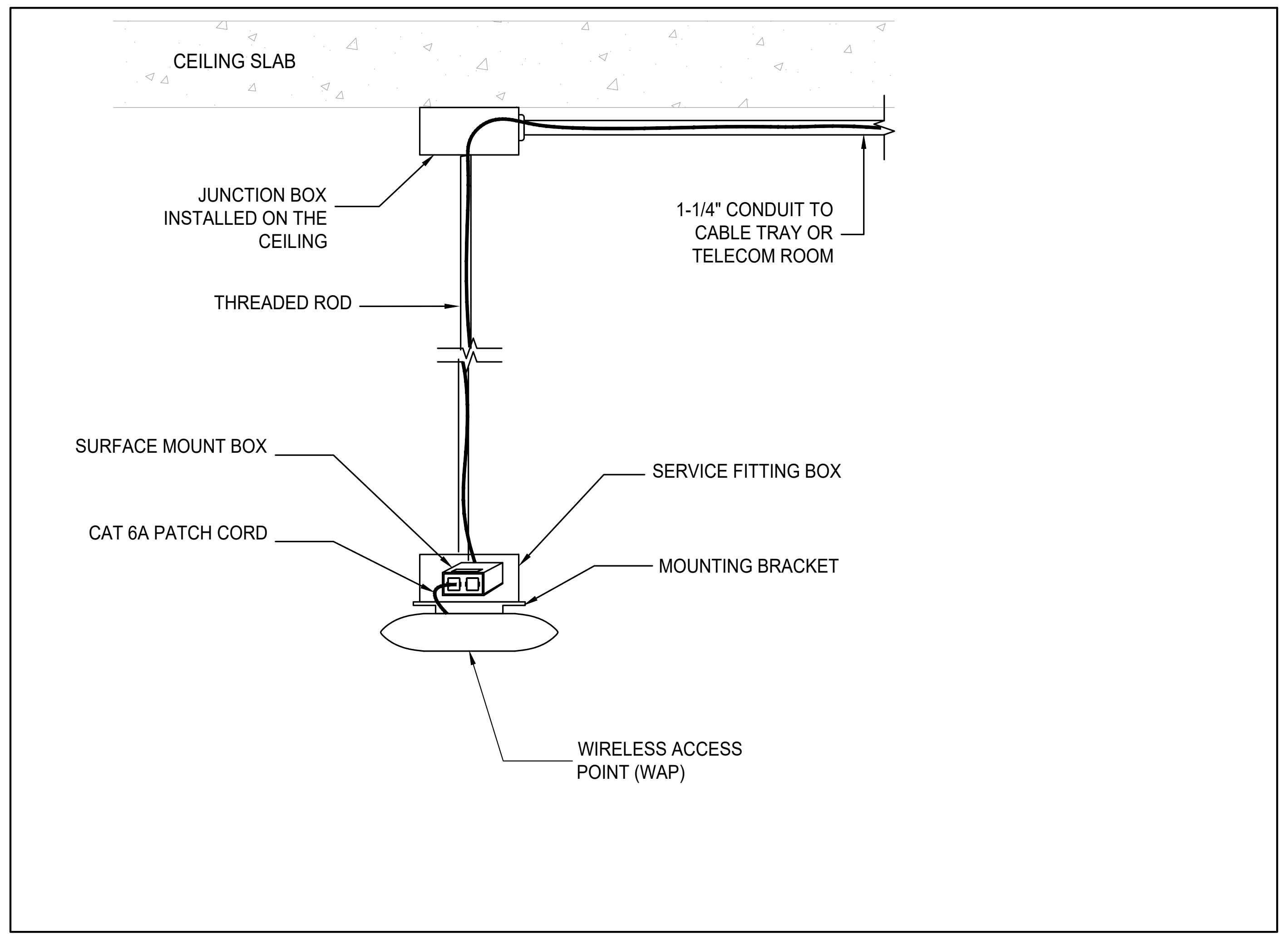
3. TELECOM CONTRACTOR TO INCLUDE ALL MOUNTING ACCESSORIES REQUIRED TO MOUNT WAP AND EXTERNAL ANTENNA, IF NECESSARY. COORDINATE MOUNTING REQUIREMENTS WITH CEILING INSTALLER.

4. REFER TO SPECIFICATIONS FOR ADDITIONAL WLAN REQUIREMENTS, MATERIALS LIST, AND INSTALLATION PARAMETERS.

FINISHED CEILING WIRELESS ACCESS POINT INSTALLATION

NOT TO SCALE

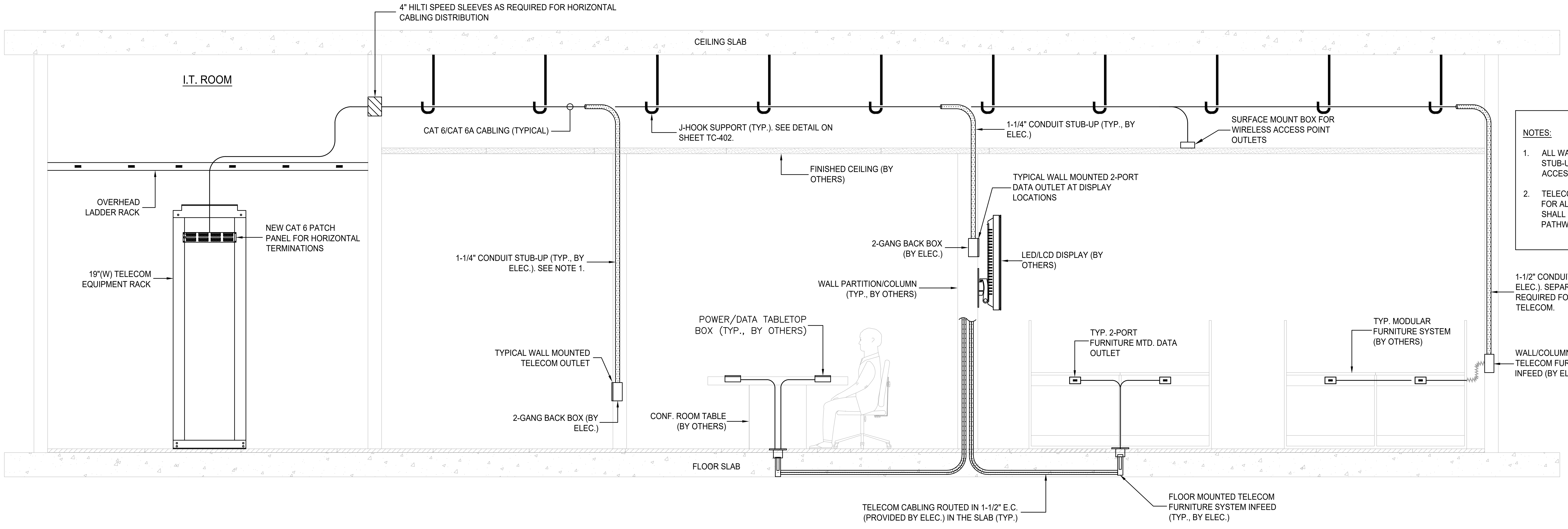
01



OPEN CEILING WIRELESS ACCESS POINT INSTALLATION

NOT TO SCALE

02



NOTES:

1. ALL WALL MOUNTED TELECOM CONDUIT STUB-UPS SHALL BE EXTENDED TO ACCESSIBLE CEILING SPACE.

2. TELECOM CONDUIT CAPACITY (FILL RATIO) FOR ALL HORIZONTAL CABLING RUNS SHALL NOT EXCEED 40% OF THE PATHWAY CROSS SECTION.

TYPICAL HORIZONTAL CABLING DISTRIBUTION SCHEME (FLOOR SECTION VIEW)

NOT TO SCALE

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CONSERVATION CODE OF NYS

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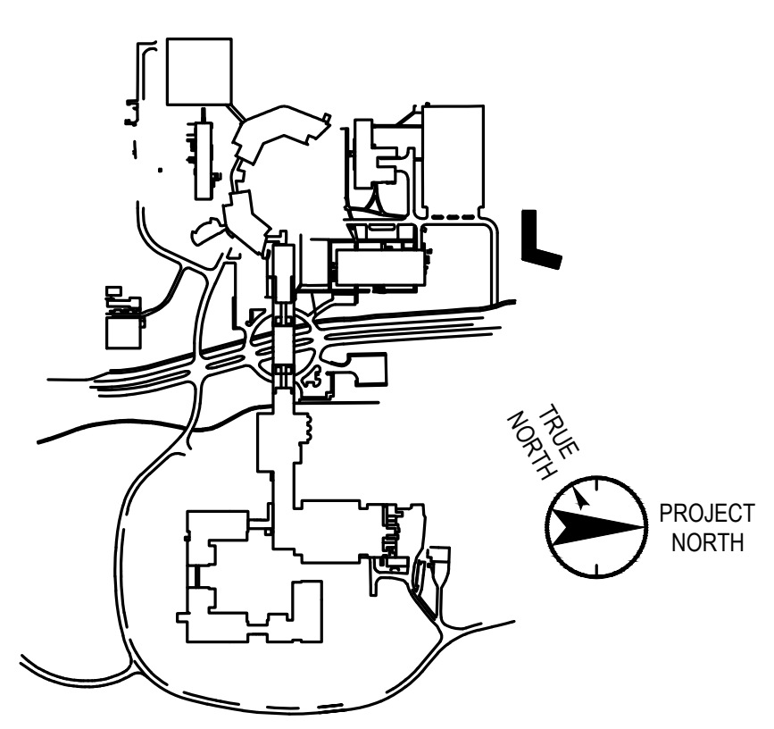

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Plot Date: 07.01.2022

Professional Seal and Signature

Vendor Name: COSENTINI
Vendor Project No.: 210104
Discipline: TELECOM Drawn By: PG

TELECOM CABLING DISTRIBUTION DIAGRAM AND DETAILS

Scale: N.T.S. Floor:

T-700