

LAKE COUNTY FIRE STATION #71					
DESIGN AND CONSTRUCTION RESPONSIBILITIES					
ITEM	SYSTEM	SCOPE	DESIGN RESPONSIBILITY	PROCUREMENT RESPONSIBILITY	CONSTRUCTION RESPONSIBILITY
1.00	VOICE SYSTEM (TELEPHONE COMMUNICATIONS SYSTEM ALL AREAS)				
1.01	RACEWAYS	Conduit, boxes, cable tray, etc.	ASE	CM	CM
1.02	INSIDE PREMISE WIRING	Structured cabling system	ASE	CM	CM
1.03	OUTSIDE PREMISE WIRING IN PRIVATE CAMPUS	Structured cabling system	N/A	N/A	N/A
1.04	OUTSIDE PREMISE WIRING FROM SERVICE PROVIDERS	Fiber and copper for services	ASE/Owner	SP	SP
1.05	PATCHING OF VOICE LINES	Patching at patch panel and work areas	ASE	N/A	OWNER
1.06	PHONE SWITCH	Equipment selection, sizing, equipment layout, RFP	OWNER	OWNER	OWNER
2.00	DATA SYSTEM (COMPUTER NETWORKS ALL AREAS)				
2.01	RACEWAYS	Conduit, boxes, cable tray, etc.	ASE	CM	CM
2.02	INSIDE PREMISE WIRING	Structured cabling system	ASE	CM	CM
2.03	PATCHING OF DATA LINES	Patching at patch panel and work areas	ASE	N/A	OWNER
2.04	ACTIVE ELECTRONICS (NETWORKING EQUIPMENT, SWITCHES, ROUTERS, SERVERS AND COMPUTERS)	Equipment selection, sizing, equipment layout, RFP	OWNER	OWNER	OWNER
2.05	WIRELESS SURVEY	Modeling to predict location of WAPs, including measured survey after building shell is completed	OWNER	N/A	OWNER
2.06	WAPs	Wireless access points, including installation labor, support materials.	OWNER	OWNER	CM
3.00	TELECOM ROOM OUTFIT				
3.01	PLYWOOD AND WALL SLEEVES	Plywood and sleeves for cables	ASE	CM	CM
3.02	GROUNDING SYSTEM	Ground bar and ground bus	ASE	CM	CM
3.02	RACKS, WIRE MANAGERS AND LADDER TRAY	Racks and all passive elements	ASE	CM	CM
4.00	CATV DISTRIBUTION (CABLE TV FOR ALL AREAS)				
4.01	RACEWAYS	Conduit, boxes, cable tray, etc.	ASE	CM	CM
4.02	INSIDE PREMISE WIRING	Coaxial cable	ASE	CM	CM
4.03	DISTRIBUTION DEVICES	TAPS, amplifiers, splitter, DC	SP	SP	SP
4.04	MOUNTS FOR TVS	Mounts for the TVs	OWNER	OWNER	CM
5.00	AV SYSTEMS/ PAGING				
5.01	RACEWAYS	Conduit, boxes, cable tray, etc.	N/A	N/A	N/A
5.02	INSIDE PREMISE WIRING	AV wiring for systems	N/A	N/A	N/A
5.03	ACTIVE ELECTRONICS	Projectors, presentation control system, paging system, etc.	N/A	N/A	N/A
6.00	SECURITY SYSTEMS, BUILDING CCTV AND ACCESS CONTROL				
6.01	RACEWAYS	Conduit, boxes, cable tray, etc.	N/A	N/A	N/A
6.02	INSIDE PREMISE WIRING	Cables for cameras and card access	N/A	N/A	N/A
6.03	ACTIVE ELECTRONICS	Cameras, DVRs, Access control panels, readers, etc.	N/A	N/A	N/A
6.04	LOCKING DEVICES	Magnets, electric morse locks	N/A	N/A	N/A
7.00	EMERGENCY POWER BACKUP (UPS) FOR ACTIVE EQUIPMENT				
7.01	POWER WIRING	Conduit, cables and circuits	ASE	CM	CM
7.02	POWER DISTRIBUTION UNITS	ePDU's to be installed in racks and cabinets	OWNER	OWNER	CM
7.03	ACTIVE EQUIPMENT - WORK AREAS	UPS units in work areas	OWNER	OWNER	OWNER
7.04	ACTIVE EQUIPMENT - SMALL UNITS < 10KVA	UPS units in racks or cabinets	OWNER	OWNER	CM
7.05	ACTIVE EQUIPMENT - LARGE UNITS >10KVA	Central UPS system	N/A	N/A	N/A
8.00	FIRE ALARM AND BUILDING MANAGEMENT SYSTEM				
8.01	RACEWAYS	Conduit, boxes, cable tray, etc.	ASE	CM	CM
8.02	INSIDE PREMISE WIRING	Cabling, grounding	ASE	CM	CM
8.03	ACTIVE ELECTRONICS	Data gathering panels, sensors, etc.	ASE	CM	CM
9.00	DISTRIBUTED ANTENNA SYSTEM (LIFESAFETY)				
9.01	RACEWAYS	Conduit, boxes, cable tray, etc.	ASE	CM	CM
9.02	INSIDE PREMISE WIRING	Cabling, grounding	ASE	CM	CM
9.03	ACTIVE ELECTRONICS	Head end system, BDA, TX/RX and antennas	ASE	CM	CM
10.00	DISTRIBUTED ANTENNA SYSTEM (CELL PHONES)				
10.01	RACEWAYS	Conduit, boxes, cable tray, etc.	N/A	N/A	N/A
10.02	INSIDE PREMISE WIRING	Cabling, grounding	N/A	N/A	N/A
10.03	ACTIVE ELECTRONICS	Head end system, BDA, TX/RX and antennas	N/A	N/A	N/A

NOTES: ASE: ARCHITECT AND ALL CONSULTANTS WORKING UNDER ARCHITECT, LIKE TLC ENGINEERING SOLUTIONS
 CM: CONSTRUCTION MANAGER
 N/A: NOT APPLICABLE
 SP: SERVICE PROVIDER
 VENDOR: A SYSTEM INSTALLER HIRED DIRECTLY BY THE OWNER FOR A SPECIFIC SYSTEM

LAKE COUNTY PUBLIC SAFETY
 9/20/2016

PA System Specs

*A shielded 18 Gauge 2 conductor feed/terminus is required from the desired amp location to each volume control location.

*A shielded 18 Gauge 2 conductor feed/terminus is required from the intended location of the VHF and 800MHz control stations to the amplifier.

*All wiring to be shielded 18 Gauge wire with minimum two conductors and a drain wire. All drain wires should be tied together at each volume control and at the amp.

*Minimum of 6" of slack should be provided at each speaker, volume control and the amp to allow removal for testing and troubleshooting.

*All above wiring to be supported every 5' at a minimum per IRC/NESC standards.

*All name runs for volume controls to be labeled on each end with room number.

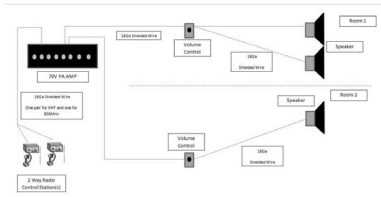
*All designated speaker locations to have a minimum of 12" clearance in all directions from obstructions (not just out to back) to duct work, sprinkler and related piping, electrical conduits, etc.

*Minimum of one speaker for every numbered room in the building and in common areas minimum of one speaker for every 200 sq. foot.

Outside Speaker?
 *Amplifier should be sized appropriately for the number of speakers and provided for noise at least 20dB above ambient noise level.
 *PA system should be a 70V system.
 *Five station interior lighting system should include a dry contact closure to turn on ingress/egress lights throughout the station when the station is alerted for a call. Dry contact closure should be wired each shielded 18 Gauge 2 conductor wire from the location of the 2 way radio control station(s) to the AC controller for the lights and placed to each end. The duration of the lighting during call activation is to be decided by LCR staff at the time of acceptance (in the past the duration has typically been 3 minutes).
 *A provision should be made in the station electrical system to turn off the stove if it's operational during an emergency call. This capability should have either an automatic or manual push button in the kitchen to reset the stove. Turn it be noted that the radio system can provide a dry contact closure to trigger the stove device.

Notes and other comments:
 All LCRF stations currently utilize Bogen Power Vector series amplifiers and Bogen speakers.
 Typical interior speakers are HIC501, ACT, C20202 depending on the design of the station (area ceiling or drop), etc.

LAKE COUNTY PUBLIC SAFETY
PA System Specs (cont)

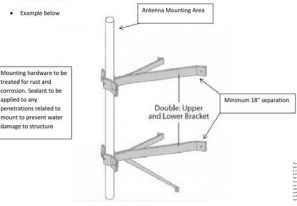


Sample drawing for reference

LAKE COUNTY PUBLIC SAFETY
Fire Station Low Voltage Specs (In addition to IT specs)
 8/29/2016

Requirements:

- A 1" non-conductive, contiguous conduit pathway with pull string from the intended location of the VHF and 800MHz control stations to the peak of the exterior roof line at the rear of the station for access to the Antenna mount.
- A stranded green #6 ground wire should be homerun from the desired antenna mounting location to the main electrical panel ground or primary ground bonding bar for transient voltage mitigation.
- Antenna mount should support 2" diameter SCH 40 pipe and be galvanized or coated to prevent rust.
- Antenna mount, installation of the mount, and related components will be the contractor's responsibility and should be installed according to Lake County Facilities best practices and recommendations.
- Example below



STEPHEN B. COTTON, P.E.
 P.E. LICENSE #00006
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 JEROME BANKS, AIA
 EITHAN J. HINE, AIA
 JENNIFER ZAFFUTO, AIA, LEED, NCARB
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 TEL: 512.451.1500 • FAX: 512.451.1501 • WWW.KTHARCHITECTS.COM
 12/15/2012 12:41:18 PM

KTH ARCHITECTS

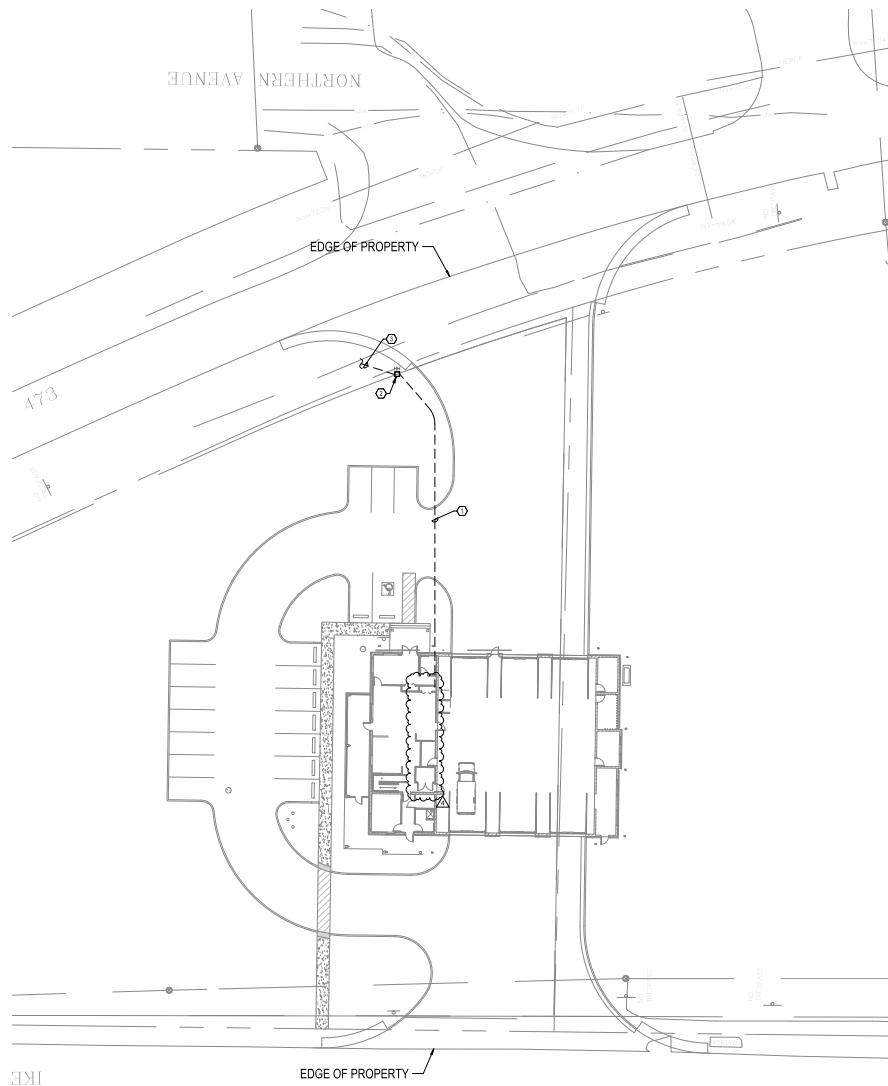
LAKE COUNTY
FIRE STATION NO. 71
TECHNOLOGY OWNER SPECS
 33601 CR. 473, LEEBURG, FL 34788

NOVEMBER 10, 2021

100% CD Submittal - Bid Set

T0.3

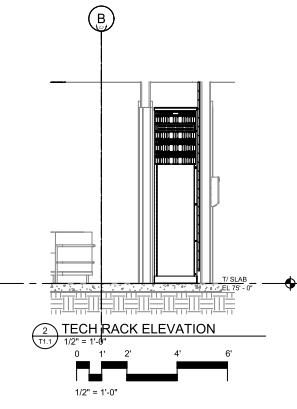
TLC ENGINEERING
 1725 Canal Court, Suite 103
 Melbourne, FL 32940
 P: 321.836.0274
 WWW.TLCENG.COM
 COA: 16
 REG. NO. 121107
 TLC NO. 521107
 THINK. LISTEN. ENGAGE.



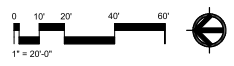
T1.1 TECHNOLOGY SITE PLAN
1" = 20'-0"

- GENERAL NOTES:**
- UNLESS OTHERWISE NOTED, ALL CONDUIT ROUTED ON SITE SHALL BE 1" MINIMUM.
 - ALL PIPES SHALL BE PVC COATED RIGID GALVANIZED STEEL. PROS ALL 6" BODIES BELOW GRADE SHALL BE PVC COATED RIGID GALVANIZED STEEL. PROS. PROVIDE WITH PVC TO STEEL ADAPTERS AS NECESSARY. PROS DO NOT WELD TO LIGHT POLYMER PIPE BODIES.
 - ALL ELECTRICAL WORK AND TREE ASSOCIATED WITH UTILITIES SHALL BE VERIFIED AND COORDINATED WITH LOCAL SERVICE PROVIDER PRIOR TO BID.
 - CONTRACTOR SHALL REFERENCE ALL RELATED CONTRACT DOCUMENTS, SITE SURVEY AND OTHER REQUIREMENTS FOR POSSIBLE CONFLICTS WITH OTHER UNDERGROUND UTILITIES AND UTILITIES OVERPASSING. CONTRACTOR SHALL VERIFY UTILITY DEPT'S AND COORDINATE LOADOUT ROUTING AS NECESSARY.
 - CONTRACTOR SHALL VERIFY AND COORDINATE EXISTING SITE CONDITIONS OF PROJECT SITE AND AFFECTED SURROUNDING AREA PRIOR TO BID.

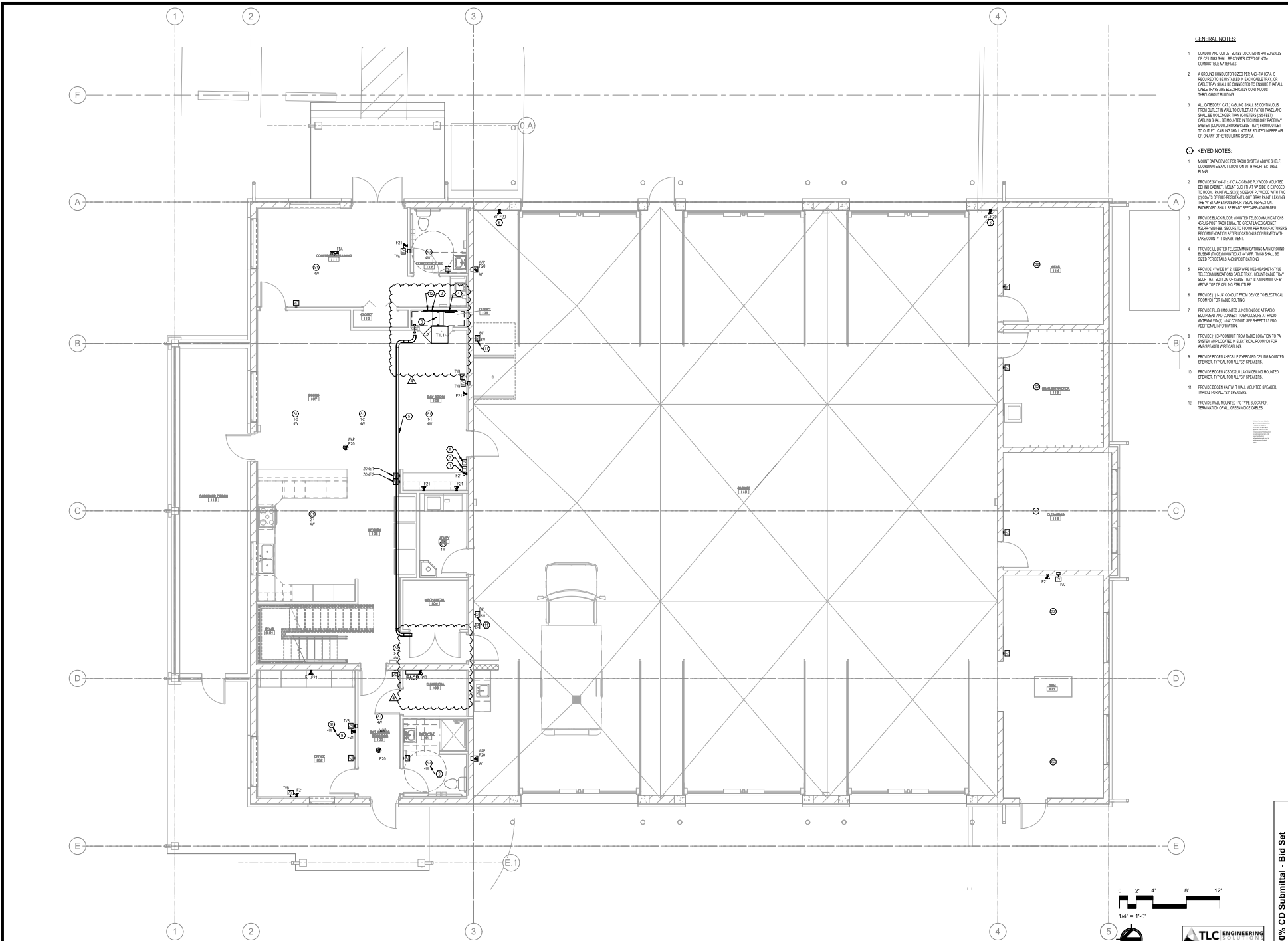
- KEYED NOTES:**
- PROVIDE (2) 4" CONDUITS, EACH WITH (1) 4" SCHEDULE 40S W/INLET, WITH HALL HOPE IN EACH.
 - PROVIDE 4" x 4" x 1/2" DEEP OPEN BOTTOM COMPOSITE HAND HOLE BY NEW BASE OR APPROVED EQUAL. PROVIDE WITH 2" ON CONCRETE LANTERNS FOR HEAVY TRAFFIC WITH "TELECOM" GATE INTO U.D. CONDUITS SHALL ENTER UNDER WALL OF ENCLOSURE.
 - CONTRACTOR SHALL EXTEND CONDUITS TO SERVICE PROVIDER LOCATION AND CONNECT TO SERVICE PROVIDER ENCLOSURE PER THEIR REQUIREMENTS. CONTRACTOR SHALL COORDINATE INSTALLATION OF SERVICE PROVIDER CABLING WITH SERVICE PROVIDER AND EXTEND SERVICE CABLING INTO BUILDING TO ELECTRICAL ROOM FOR TERMINATION.
 - PROVIDE 1RU RACK OPTIC PATCH PANEL, INTERCONNECTION WITH S-P EQUIPMENT.
 - PROVIDE 2RU HORIZONTAL CABLE MANAGER.
 - PROVIDE 48 PORT 48 PORT PATCH PANEL.
 - 1RU OWNER PROVIDED AND INSTALLED SWITCH.
 - PROVIDE 1RU RACK MOUNTED PA SYSTEM BY BOSSN.
 - SPACE PROVIDED FOR OWNER PROVIDED EQUIPMENT.
 - PROVIDE FLOOR MOUNTED 2 POST RACK.
 - PROVIDE FLOOR MOUNTED TO RACK.
 - 2RU OWNER PROVIDED AND INSTALLED UPS.



T1.1 TECH RACK ELEVATION
1/2" = 1'-0"



NO.	DESCRIPTION	DATE
		17-2021-11
1.	TRUSS DESIGN AND CH. DOOR SPLIT	
STEPHEN B. COTTON, P.E. SITE LAYOUT DRAWING		
12/15/2022 12:41:41 PM		
John P. Adams, AIA Jerome Banker, AIA Ethan J. Hine, AIA Jennifer Zaffuto, AIA, LEED, NCARB KTH ARCHITECTS 1111 ORANGE TREE • DUNEDIN, FL 32826 • 407.251.1000 • 407.251.1001 • 407.251.1002 100 NORTH HIGHLAND AVE • ORLANDO, FL • 407.203.0070 • 407.203.0069		
KTH ARCHITECTS		
100% CD Submittal - Bid Set LAKE COUNTY FIRE STATION NO. 71 TECHNOLOGY SITE PLAN 33601 CR. 473, LEEBURG, FL 34788 NOVEMBER 10, 2021 20073A		
T1.1		



GENERAL NOTES:

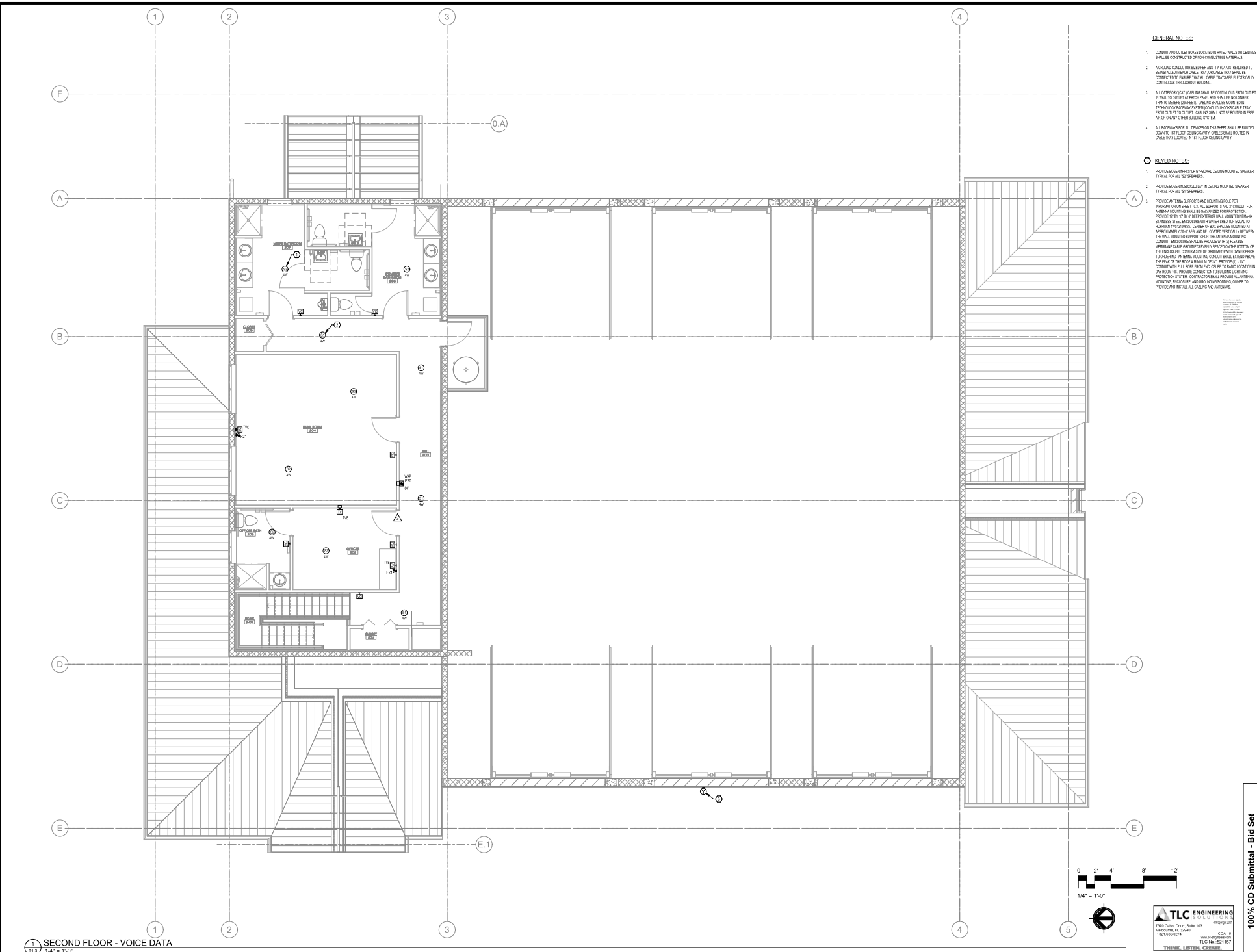
- CONDUIT AND OUTLET BOXES LOCATED IN RATED WALLS OR CEILING SHALL BE CONSTRUCTED OF NON-COMBUSTIBLE MATERIALS.
- A GROUND CONDUCTOR BOND PER ANSI-TIA 607-B IS REQUIRED TO BE INSTALLED IN EACH CABLE TRAY. THE CABLE TRAY SHALL BE CONNECTED TO GROUND THAT ALL CABLE TRAYS ARE ELECTRICALLY CONTINUOUS THROUGHOUT BUILDING.
- ALL CATEGORY (CAT) CABLES SHALL BE CONTINUOUS FROM OUTLET IN WALL TO OUTLET AT PHOTO PANE AND SHALL BE NO LONGER THAN 100 FEET. CABLES SHALL BE MOUNTED TO RIGIDLY MOUNTED WALLS. EXTERIOR CONDUIT SHALL BE MOUNTED TO PHOTO PANE OUTLET TO OUTLET. CABLES SHALL BE MOUNTED TO PHOTO PANE OR ON ANY OTHER BUILDING SYSTEM.

KEYED NOTES:

- WARRANT DATA PROVIDE FOR RADIO SYSTEMS WHICH SHALL COORDINATE EXACT LOCATION WITH ARCHITECTURAL PLAN.
- PROVIDE 3/4" x 4" x 4" x 4" C CHANNEL WOOD MOUNTED BEHIND CABINET MOUNT SHALL THAT "X" SIZE IS EXPOSED TO EXTERIOR PANELS SHALL BE USE OF WOOD WITH TWO COATS OF FIRE RESISTANT LIGHT OILY PAINT LEAVING THE 2" STAMP EXPOSED FOR EASY IDENTIFICATION. BACKWARD SHALL BE READY SPEC. PER ADA 903.10.6.
- PROVIDE BLACK FLOOR MOUNTED TELECOMMUNICATIONS AND SPEAKER TRAYS TO BE SET IN LINES CABINET. ROOM NUMBER. SECURE TO FLOOR PER MANUFACTURER'S RECOMMENDATION AT THE LOCATIONS SHOWN WITH LANE COUNTY DEPARTMENT.
- PROVIDE LISTED TELECOMMUNICATIONS MANUFACTURER'S RECOMMENDATION AT THE LOCATIONS SHOWN WITH LANE COUNTY DEPARTMENT AND SPECIFICATIONS.
- PROVIDE 4" x 8" BY 1/2" RIB FIBER REINFORCED PLASTIC TELECOMMUNICATIONS CABLE TRAY. MOUNT CABLE TRAY TO BOTTOM OF CEILING TRAY IN A MINIMUM OF 1" ABOVE TOP OF CEILING STRUCTURE.
- PROVIDE 1/2" x 4" CONDUIT FROM DEVICE TO ELECTRICAL ROOM AND/OR CABLE TRAYING.
- PROVIDE FIBER MOUNTED JUNCTION BOX AT RADIO EQUIPMENT AND CONNECT TO ENCLOSURE AT RADIO ROOM WITH 1/2" CONDUIT. SEE SHEET T1.10 FOR ADDITIONAL INFORMATION.
- PROVIDE 1/2" x 4" CONDUIT FROM RADIO LOCATION TO PHOTO PANE MOUNTED ELECTRICAL ROOM FOR 1/2" x 4" x 4" x 4" SPEAKER AND CABLE TRAY.
- PROVIDE 8" x 8" x 4" x 4" x 4" x 4" x 4" x 4" MOUNTED SPEAKER. TYPICAL FOR ALL 1/2" SPEAKERS.
- PROVIDE 8" x 8" x 4" x 4" x 4" x 4" x 4" x 4" MOUNTED SPEAKER. TYPICAL FOR ALL 1/2" SPEAKERS.
- PROVIDE 8" x 8" x 4" x 4" x 4" x 4" x 4" x 4" MOUNTED SPEAKER. TYPICAL FOR ALL 1/2" SPEAKERS.
- PROVIDE WALL MOUNTED 1/2" TYPE BLOCK FOR TERMINATION OF ALL GREEN VOICE CABLES.

FIRST FLOOR - VOICE DATA
1/4" = 1'-0"

DATE	11-22-21
DESCRIPTION	VOICE DATA AND CD ROOM SHEET
NO.	T1.2
<p>STEPHEN B. COTTON, P.E. REGISTERED PROFESSIONAL ENGINEER STATE OF FLORIDA 121552022 12-14-18 PM</p>	
<p>John P. Adams, AIA Jerome Bankhead, AIA Ethel J. Hines, AIA Jennifer Zarifuto, AIA, LEED, NCARB TLC ARCHITECTS 1111 AVENUE TITUS • SUITE 200 • AUSTIN, TX 78701 • TEL: 512.477.4477 • FAX: 512.477.4478 180 NORTH HIGHLAND AVE • ORLANDO, FL • 407.203.2070 • FAX: 407.203.9589</p>	
<p>KTH ARCHITECTS</p>	
<p>100% CD Submittal - Bid Set</p>	
<p>LAKE COUNTY FIRE STATION NO. 71 TECHNOLOGY LEVEL 1 PLAN 33601 CR. 433, LEEBURG, FL 34788</p>	
<p>NOVEMBER 10, 2021</p>	
<p>T1.2</p>	



- GENERAL NOTES**
1. CONDUIT AND OUTLET BOXES LOCATED IN RATED WALLS OR CEILING SHALL BE CONSTRUCTED OF NON-COMBUSTIBLE MATERIALS.
 2. A GROUND CONDUCTOR (SEE PER ANSI-TIA 604-B) IS REQUIRED TO BE INSTALLED IN EACH CABLE TRAY. CABLE TRAYS SHALL BE CONNECTED TO ENSURE THAT ALL CABLE TRAYS ARE ELECTRICALLY CONTINUOUS THROUGHOUT BUILDING.
 3. ALL CATEGORY (CAT) CABLES SHALL BE CONTINUOUS FROM OUTLET IN WALL TO DEVICE AT ENDPOINT AND SHALL BE NO LONGER THAN 100 FEET (30 METERS). CABLES SHALL BE INSTALLED IN TECHNICALLY APPROVED SYSTEM (CONDUIT AND/OR CABLE TRAY) PROTECTED TO DEVICE. CABLES SHALL NOT BE INSTALLED IN FIRE ALARM OR OTHER BUILDING SYSTEMS.
 4. ALL ENDPOINTS ON ALL DEVICES ON THIS SHEET SHALL BE RATED DOWN TO SET FLOOR-CEILING CAVITY. CABLES SHALL BE RATED IN CABLE TRAY LOCATED IN SET FLOOR-CEILING CAVITY.

- KEYED NOTES**
1. PROVIDE BOKEN AWFS-15 EP BYWARD CEILING MOUNTED SPEAKER, TYPICAL FOR ALL 30' SPEAKERS.
 2. PROVIDE BOKEN AWFS-15-15 IN CEILING MOUNTED SPEAKER, TYPICAL FOR ALL 30' SPEAKERS.
 3. PROVIDE ANTENNA SUPPORTS AND MOUNTING HOLE FOR INFORMATION SHEET T1.3. ALL SUPPORTS AND CONDUIT FOR ANTENNA MOUNTING SHALL BE DRIVEN INTO WALL MOUNTING STRAPLESS (SEE INCLUDES WITH THIS SHEET) (TYPICAL TO HOSPITALS AND OFFICES). CENTER OF BOX SHALL BE LOCATED AT APPROPRIATE 18" FROM WALL LOCATED MAXIMUM BETWEEN THE WALL MOUNTING SUPPORTS OF THE ANTENNA MOUNTING CONDUIT. MOUNTING SHALL BE PROVIDED WITHIN 2" OF EDGE. MOUNTING SHALL BE PROVIDED ON THE BOTTOM OF THE END USER CHAIR BACK BY FASTENERS WITH SINKER HOLES TO CENTER. ANTENNA MOUNTING CONDUIT SHALL EXTEND ABOVE HEIGHT OF THE ROOF MINIMUM OF 30" INSIDE OF 1/4" CONDUIT WITH HOLE FROM MOUNTING TO MOUNT LOCATION IN SHED ROOF OR PROVIDE CONNECTION TO BUILDING AIRING PROTECTION SYSTEM. CONTRACTOR SHALL PROVIDE ALL ANTENNA MOUNTING ENCLOSURE AND DRILLING AND MARKING. CONTRACTOR SHALL PROVIDE AND INSTALL ALL CABLES AND ANTENNAS.

DATE	02/25/21
NO.	3
DESCRIPTION	PERMIT COMMENT RESPONSE #1

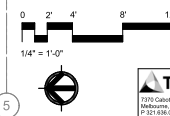
STEPHEN B. COTTON, P.E.
 STATE OF FLORIDA
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John P. Adams, AIA
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 Ethin J. Hino, AIA
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 KTH ARCHITECTS
 100 NORTH HIGHLAND AVE. • ORLANDO, FL • 407.203.0070 • FAX 407.939.9999



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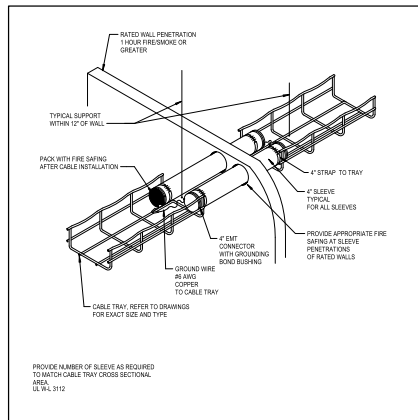
LAKE COUNTY
 FIRE STATION NO. 71
 TECHNOLOGY LEVEL 2 PLAN
 33601 CR. 433, LEEBURG, FL 34788
 NOVEMBER 10, 2021



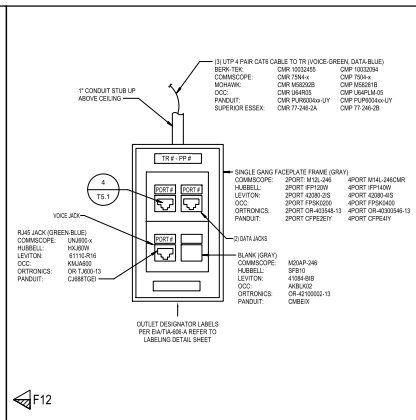
1 SECOND FLOOR - VOICE DATA
 T1.3
 1/4" = 1'-0"

100% CD Submittal - Bid Set

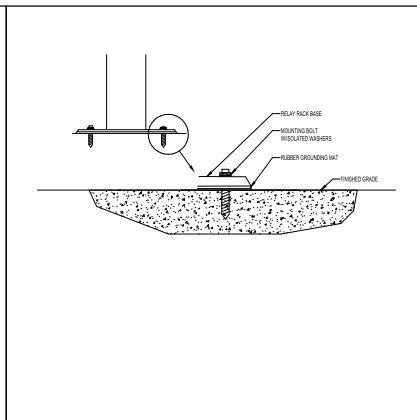
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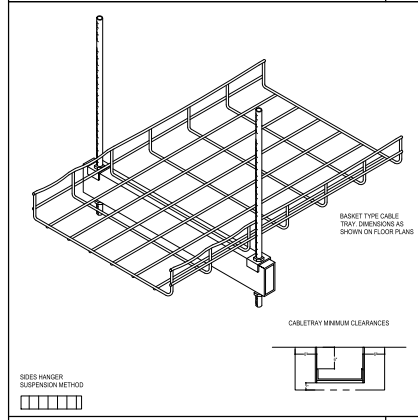
CABLE TRAY WALL PENETRATION
No Scale



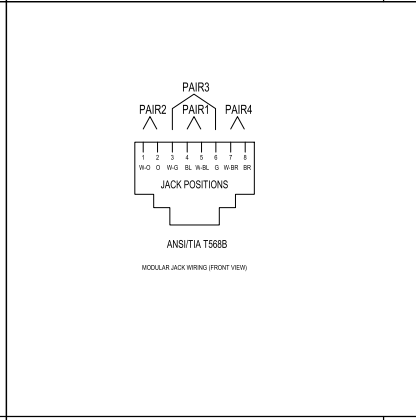
WALL OUTLET - VOICE/DATA
No Scale



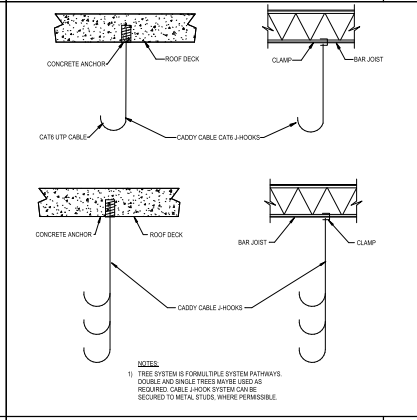
FLOOR RACK MOUNTING
No Scale



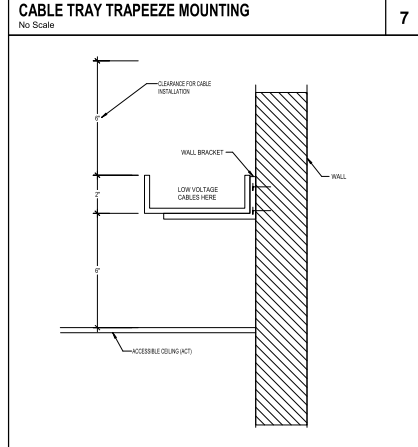
CABLE TRAY TRAPEZEE MOUNTING
No Scale



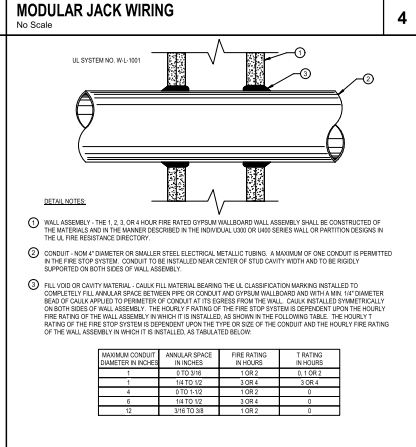
MODULAR JACK WIRING
No Scale



CABLE HANGER (J-HOOK)
No Scale



CABLE TRAY WALL MOUNTING
No Scale



CONDUIT PENETRATION OF FIRE WALL
No Scale

NO.	DESCRIPTION	DATE

STEPHEN B. COTTON, P.E.
REGISTERED PROFESSIONAL ENGINEER
STATE OF FLORIDA
12/15/2022 12:41:40 PM

John P. Adams, AIA
Lead Architect
Jerome Banker, AIA
Ethel J. Hines, AIA
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TLC ENGINEERING
110 NORTH HOUSTON AVENUE • ORLANDO, FL • 32801
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KTH ARCHITECTS

100% CD Submittal - Bid Set

LAKE COUNTY
FIRE STATION NO. 71
TECHNOLOGY DETAILS
33601 CR. 453, LEESBURG, FL 34788

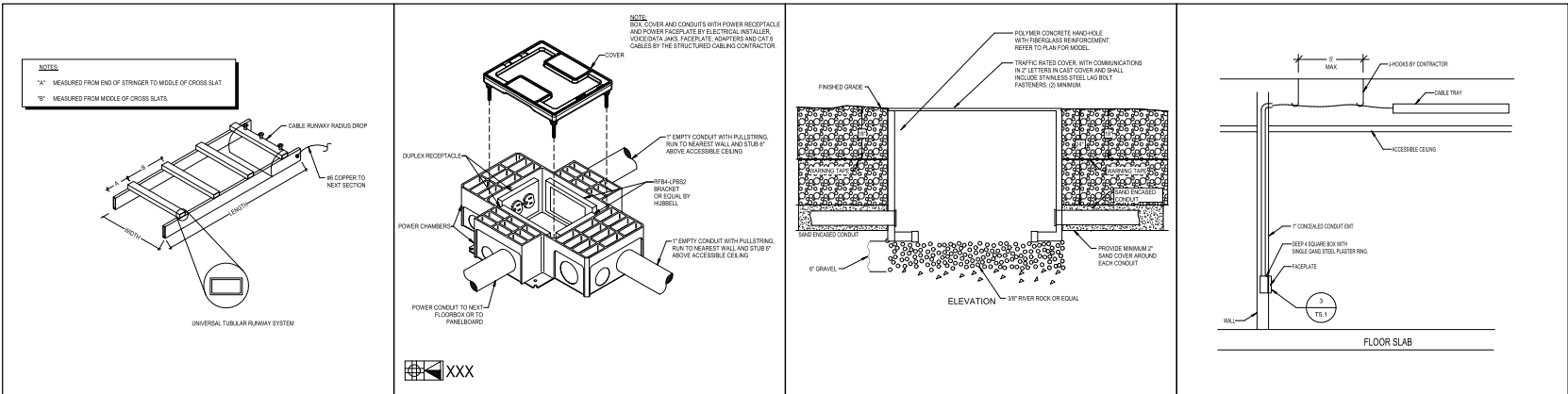
NOVEMBER 10, 2021

T5.1

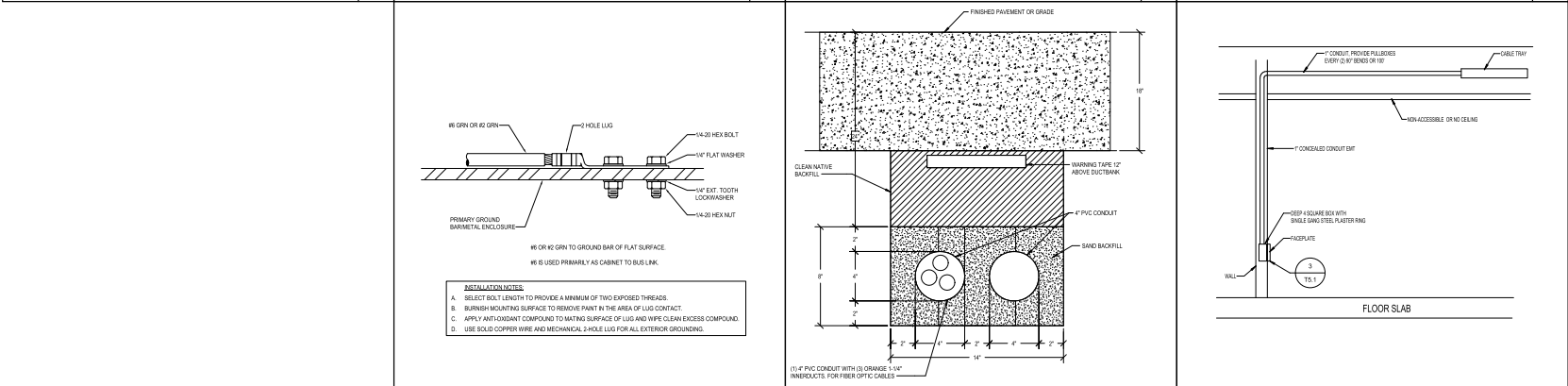
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Melbourne, FL 32940
P: 321.836.0274

www.tlc-engineering.com
CON. 16
TLC No. 521.107

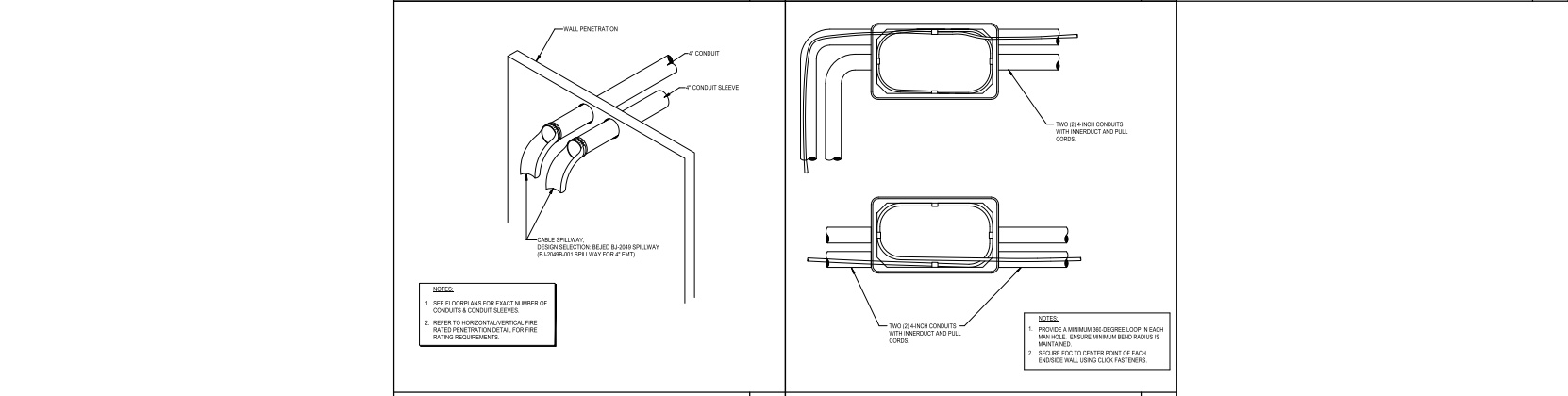
THINK. LISTEN. FOLLOW.



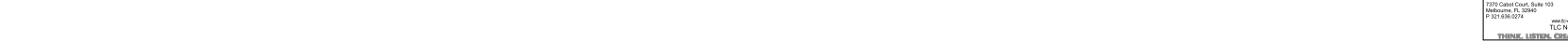
TUBLAR RUNWAY-STYLE LADDER TRAY No Scale	9 POWER/VOICE/DATA A-V FLOOR BOX No Scale	6 COMMUNICATIONS HAND-HOLE No Scale	3 TYPICAL FLUSH OUTLET ACCESSIBLE CEILING No Scale	1
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TUBLAR RUNWAY-STYLE LADDER TRAY No Scale	9 POWER/VOICE/DATA A-V FLOOR BOX No Scale	6 COMMUNICATIONS HAND-HOLE No Scale	3 TYPICAL FLUSH OUTLET NON-ACCESSIBLE CEILING No Scale	2
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CONDUIT SPILLWAY No Scale	8 COMMUNICATIONS HAND-HOLE LOOP No Scale	5
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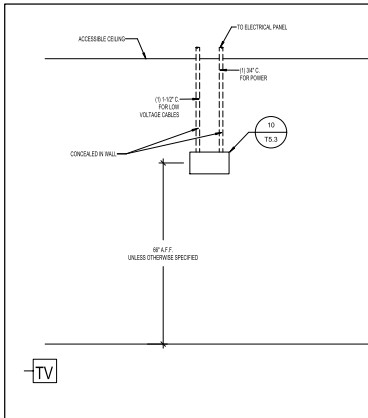


GROUND BAR 2-LUG TERMINATION No Scale	7 2-WAY 4\"/> 	4
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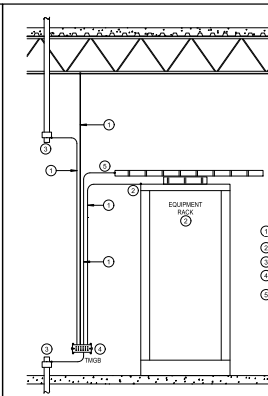
UNIVERSAL TUBULAR RUNWAY SYSTEM No Scale	9 POWER/VOICE/DATA A-V FLOOR BOX No Scale	6 COMMUNICATIONS HAND-HOLE No Scale	3 TYPICAL FLUSH OUTLET ACCESSIBLE CEILING No Scale	1
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DATE	
NO.	
DESCRIPTION	
STEPHEN B. COTTON, P.E. REGISTERED PROFESSIONAL ELECTRICAL ENGINEER STATE OF FLORIDA 12155222 / 1241432 PM	
JOHN P. ADAMS, AIA JEROME BANKS, AIA ETHEL J. HINE, AIA JENNIFER ZIFFUTO, AIA, LEED, NCARB ARCHITECTS 11511 AVENUE TALL • SUITE 200 • FORT LAUDERDALE, FL 33304 754.971.7000 • FAX 754.971.7001 • WWW.KTHARCHITECTS.COM 100 NORTH HIGHLAND AVENUE • ORLANDO, FL • 407.203.8270 • FAX 407.269.8589	
100% CD Submittal - Bid Set	
LAKE COUNTY FIRE STATION NO. 71 TECHNOLOGY DETAILS 33661 CR. 433, LEEBURNING, FL 34788 NOVEMBER 10, 2021	
T5.2	



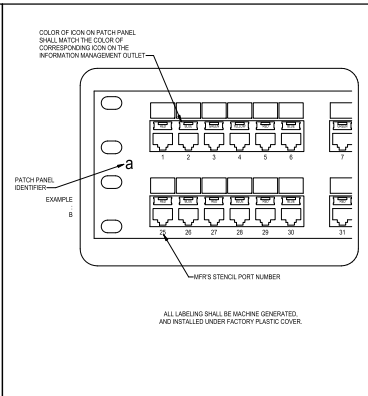
DISPLAY MOUNTING FRONT ELEVATION
No Scale

9



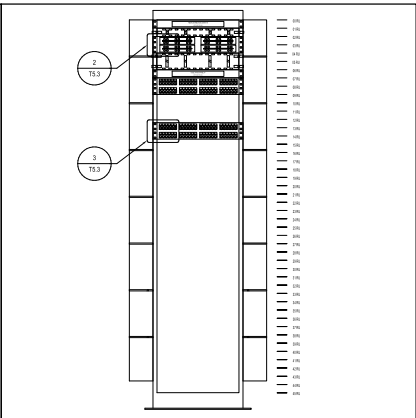
TYPICAL GROUNDING-BONDING ELEVATION
No Scale

6



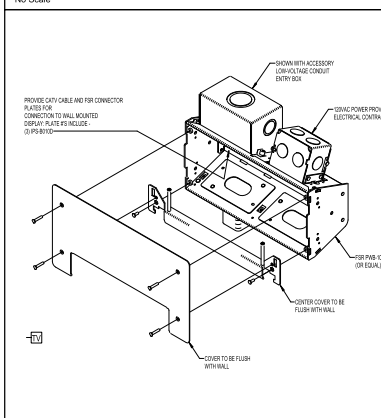
TYPICAL COPPER PATCH PANEL LABEL
No Scale

3



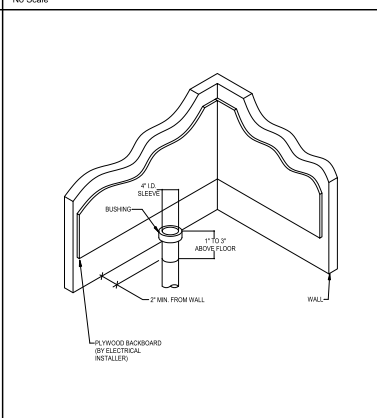
TYPICAL RACK LABELING ELEMENTS
No Scale

1



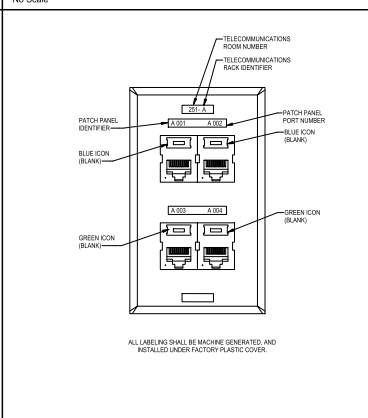
DISPLAY BACK-BOX
No Scale

10



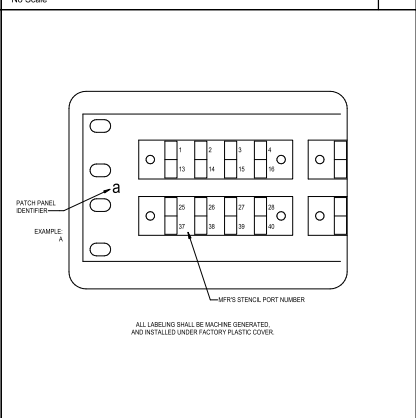
TYPICAL THROUGH FLOOR PENETRATION
No Scale

7



TYPICAL WORK AREA OUTLET LABEL
No Scale

4



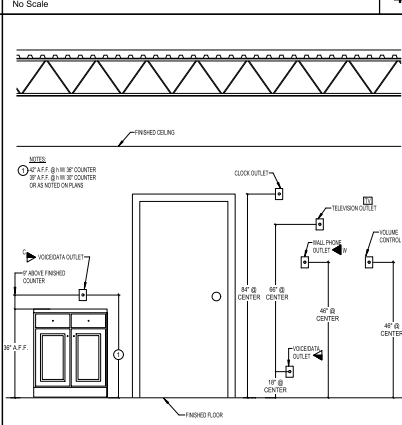
TYPICAL FIBER OPTIC PATCH PANEL LABEL
No Scale

2



DISPLAY MOUNTING ELEVATION
No Scale

8



TYPICAL TECH MOUNTING HEIGHTS
No Scale

5

DATE: _____
NO. _____
DESCRIPTION: _____
STEPHEN B. COTTON, P.E.
REGISTERED PROFESSIONAL ENGINEER
FLORIDA STATE BOARD OF PROFESSIONAL ENGINEERING EXAMINERS
12/15/2022 12:41:55 PM
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1100 AVENUE TOWN & SQUARE • SUITE 100 • FORT LAUDERDALE, FL 33404
TEL: 954.577.1000 • FAX: 954.577.1001 • WWW.TLC-ENG.COM
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LAKE COUNTY
FIRE STATION NO. 71
TECHNOLOGY DETAILS
NOVEMBER 10, 2021
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T5.3
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