



TELECOMMUNICATIONS

110 TWISTED PAIR TERMINATION BLOCK
ADF AREA DISTRIBUTION FACILITY
BDC BUILDING DISTRIBUTION TELECOMMUNICATIONS ROOM
BDF BUILDING DISTRIBUTION FRAME
BEF BUILDING ENTRANCE FRAME
BO BY OTHERS
CAB TELECOM CABINET OR ENCLOSURE
CONN CONNECTOR
CSC COPPER SPLICE CLOSURE
CUE CONTROLLED ENVIRONMENT VAULT
FDF FIBER DISTRIBUTION FACILITY
FS FIBER SHELF/FIBER TERMINATION PANEL
FSC FIBER OPTIC SPLICE CLOSURE
HH HANDHOLE
IDC INTERMEDIATE DISTRIBUTION TELECOMMUNICATIONS ROOM
IDF INTERMEDIATE DISTRIBUTION FRAME
ISP INSIDE PLANT - CABLE WITHIN A BUILDING
IT INFORMATION TECHNOLOGY
LAN LOCAL AREA NETWORK
MDC MAIN DISTRIBUTION TELECOMMUNICATIONS ROOM
MDF MAIN DISTRIBUTION FRAME
MH MANHOLE, MAINTENANCE HOLE
MPOE MINIMUM POINT OF ENTRY
OCEF OPTICAL CABLE ENTRANCE FACILITY
OSP OUTSIDE PLANT - CABLE OUTSIDE A BUILDING
PAV PLACEMENT
PC PLASTIC CONDUIT
PG PAIR GROUP
POP POINT OF PRESENCE
PR PAIR
PVC POLYVINYL CHLORIDE
RU RACK UNIT
R/W RIGHT-OF-WAY
SC SPLICE CLOSURE
SCS STRUCTURED CABLING SYSTEM
SER SERIAL
SMR SURFACE MOUNTED RACEWAY
SS FIBER SPLICE SHELF
TC TELECOM CONDUIT
TCH TELECOM CONDUIT SLEEVE, HORIZONTAL
TCR TELECOM HORIZONTAL AND VERTICAL RISER CONDUIT
TCT TELECOM CABLE TRAY
TEC TELECOM ENTRANCE CONDUIT
TEL TELEPHONE
TELECOM TELECOMMUNICATIONS
TERM TERMINAL
TP TWISTED PAIR
TPB TELECOM PULL BOX
TR TELECOM TRAY
TSL TELECOM WALL OR FLOOR SLOT
TSV TELECOM CONDUIT SLEEVE, VERTICAL
WAN WIDE AREA NETWORK

ELECTRICAL

A or amp AMPERE
BND BOND(ING)
C CONDUIT
ELEC ELECTRICAL
EMT ELECTRICAL METALLIC TUBING
ENT ELECTRICAL NON-METALLIC TUBING
GRD GROUND
Hz HERTZ
IG ISOLATED GROUND
IMC INTERMEDIATE METALLIC CONDUIT
PB PULL BOX
PLN PANEL
PWR POWER
UPS UNINTERRUPTIBLE POWER SUPPLY

V VOLT
VAC VOLTS, ALTERNATING CURRENT
VDC VOLTS, DIRECT CURRENT
W WATT
XTRM TRANSFORMER

GENERAL

(a) or (e) EXISTING
(a) or (n) NEW
ABV ABOVE
ACH ABOVE COUNTER HEIGHT
ACT ACoustical CEILING TILE
ADJ ADJUSTABLE
AFC ABOVE FINISHED CEILING
AFF ABOVE FINISHED FLOOR
AFG ABOVE FINISHED GRADE
ALT ALTERNATE
ANS AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX APPROXIMATE
ARCH ARCHITECTURAL
ASA AMERICAN STANDARDS ASSOCIATION
AV AUDIOVISUAL
AVC AUDIOVISUAL CONTRACTOR
BET BETWEEN
BFC BELOW FINISHED CEILING
BLDG BUILDING
BLW BELOW
CB CEILING BOX
C-C CENTER TO CENTER
CL CENTER LINE
CLG CEILING
CLR CLEAR
CMU CONCRETE MASON UNIT
COL COLUMN
CONC CONCRETE
CONT CONTINUOUS
COORD COORDINATE, COORDINATION
CORR CORRIDOR
DED DEDICATE, DEDICATED
DEMO DEMOLISH
DEPT DEPARTMENT
DET DETAIL
DIM DIMENSION
DST DISTANCE
DTC DATA TELECOMMUNICATION CONTRACTOR
DWG DRAWING
EA EACH
EC ELECTRICAL CONTRACTOR
ELEV ELEVATION
EMERG EMERGENCY
EQ EQUAL
EQUIP EQUIPMENT
EQUIV EQUIVALENT
EWB ELECTRONIC WHITE BOARD
EXT EXTERIOR
FCC FEDERAL COMMUNICATIONS COMMISSION
FIN FINISH
FLX FLEXIBLE
FLR FLOOR
FLUOR FLUORESCENT
FUT FUTURE
GA GAUGE
GALV GALVANIZED
GC GENERAL CONTRACTOR
GWB GYPSUM WALL BOARD
IFC IN FINISHED CEILING
IFP IN FINISHED FLOOR
INCLD INCLUDING
INCL INCLUDE, INCLUDING
INFO INFORMATION
INT INTERIOR
LVI LOW VOLTAGE INTERFACE
LW LOW
MAX MAXIMUM
MECH MECHANICAL
MEP MECHANICAL, ELECTRICAL, AND PLUMBING
MFG MANUFACTURER
MIN MINIMUM
MISC MISCELLANEOUS
NA NOT APPLICABLE
NEC NATIONAL ELECTRICAL CODE
NEMA NATIONAL ELECTRICAL MANUFACTURER'S ASSOC.
NFA NATIONAL FIRE PROTECTION ASSOCIATION
NIC NOT IN CONTRACT
NUMB NUMBER
NOM NOMINAL
NTS NOT TO SCALE

MEASUREMENTS

BTU BRITISH THERMAL UNIT
D or Dp DEEP
DA DIAMETER
FT FOOT or FEET
H or HGT HEIGHT or HIGH
ID INSIDE DIAMETER
IN INCH
L LENGTH or LONG
Lb POUND
LN LINEAR
M METER
mm MILLIMETER
OD OUTSIDE DIAMETER
R RADIUS
RAD RADIAN
um MICRON
W WIDE
WT WEIGHT
YD YARD

DIRECTIONAL

DN DOWN
E EAST
HORIZ HORIZONTAL
L LEFT
LH LEFT HAND
N NORTH
PERP PERPENDICULAR
R RIGHT
RH RIGHT HAND
S SOUTH
VERT VERTICAL
W WEST

SYMBOLS

POUND OR NUMBER
AND AND
AT AT
FOOT OR FEET
INCH OR INCHES
PLUS OR MINUS
LESS THAN
EQUAL
GREATER THAN
DEGREES, ANGULAR MEASURE
OHM
PARALLEL
DIAMETER
ANGLE

COLOR CODE

A ALMOND
B BROWN
C CRIMSON RED
E BLACK
G GRAY
I IVORY
L BLUE
O ORANGE
P PURPLE
R DARK RED
V GREEN
W WHITE
Y YELLOW

WIRE AND CABLE

AFMW BONDED FULL FLOODED TWISTED PAIR
ARMW RISER ARMORED BONDED MULTIPAIR CABLE
AWG AMERICAN WIRE GAUGE
CAT3 CATEGORY 3 TWISTED PAIR COPPER CABLE
CAT4 CATEGORY 4 TWISTED PAIR COPPER CABLE
CAT5 CATEGORY 5 TWISTED PAIR COPPER CABLE
CAT5e CATEGORY 5 ENHANCED TWISTED PAIR COPPER CABLE
CAT6 CATEGORY 6 TWISTED PAIR COPPER CABLE
CM NEC, COMMUNICATIONS CABLE
CMP NEC, COMMUNICATIONS PLENUM CABLE
CMP NEC, COMMUNICATIONS RISEN CABLE
COAX COAXIAL CABLE
FO FIBER OPTIC
HDPE HIGH DENSITY POLYETHYLENE
LTFE LOOSE TUBE FILLED & FLOODED
MDPE MEDIUM DENSITY POLYETHYLENE
MTP MULTIMODE FIBER OPTIC CABLE
MM NEC, MULTIPURPOSE PLENUM CABLE
OFC NEC, OPTICAL FIBER CONDUCTIVE CABLE
OFCP NEC, OPTICAL FIBER CONDUCTIVE PLENUM CABLE
OFCR NEC, OPTICAL FIBER CONDUCTIVE RISER CABLE
OFR NEC, OPTICAL FIBER NON-CONDUCTIVE CABLE
OFNR NEC, OPTICAL FIBER NON-CONDUCTIVE RISEN CABLE
OFN NEC, OPTICAL FIBER NON-CONDUCTIVE PLENUM CABLE
OFNP NEC, OPTICAL FIBER NON-CONDUCTIVE RISER CABLE
SM SINGLE MODE FIBER OPTIC CABLE
STP SHIELDED TWISTED PAIR
TB TIGHT BUNDLED
UTP UNSHIELDED TWISTED PAIR
WM WIRE MANAGER/MANAGEMENT

PROJECT NOTES

- PATCH CABLES - DEDICATED NETWORK PATCH CABLES FOR THE AV NETWORK SHALL BE YELLOW. DEDICATED NETWORK PATCH CABLES FOR THE CONTROL NETWORK SHALL BE BLUE. DATA JACKS SHALL MATCH PATCH CABLE COLOR.
- AUDIO CONNECTORS:** ALL CONNECTIONS TO SCREW CLAMP OR BINDING POST TERMINALS REQUIRE APPROPRIATELY COLOR CODED FLANGED OR SNAP SPADE TYPE LUGS. BARE WIRE CONNECTED TO A BINDING POST IS NOT ACCEPTABLE. GAS TIGHT INSULATION DISPLACEMENT "PUNCH-DOWN BLOCKS" ARE ACCEPTABLE TERMINAL CONNECTIONS FOR MICROPHONE AND LINE LEVEL INTERCONNECTIONS WITHIN EQUIPMENT ENCLOSURES.
- LOUDSPEAKER CONNECTORS:** ALL CONNECTIONS TO SCREW CLAMP OR BINDING POST TERMINALS REQUIRE APPROPRIATELY COLOR CODED FLANGED OR SNAP SPADE TYPE LUGS. BARE WIRE CONNECTED TO A BINDING POST IS NOT ACCEPTABLE. FOR CONSTANT VOLTAGE SYSTEMS CRIMP CONNECTIONS AT LOUSPEAKERS ARE ACCEPTABLE. WIRE NUTS ARE NOT.
- VIDEO CONNECTORS:** ALL COAXIAL CABLE CONNECTIONS SHALL BE MADE WITH CRIMP TYPE CONNECTORS FOR BOTH SHIELD AND INNER CONDUCTOR. INSTALL WITH MANUFACTURER'S APPROVED ASSEMBLY METHODS AND TOOLS. CONNECTORS ATTACHED TO COAXIAL CABLE SHALL BE BNC STYLE CONNECTORS. USE BNC TO VHF ADAPTER OR BNC TO RCA ADAPTER AS APPROPRIATE FOR THE EQUIPMENT BEING CONNECTED.
- RF CONNECTORS:** ALL RF CABLE CONNECTIONS SHALL BE MADE WITH CRIMP TYPE CONNECTIONS FOR BOTH THE SHIELD AND INNER CONDUCTOR. INSTALL WITH MANUFACTURER'S APPROVED ASSEMBLY METHODS AND TOOLS. CONNECTORS ATTACHED TO RF CABLE SHALL BE "T" STYLE CONNECTORS.
- RJ CONNECTORS:** ALL RJ CABLE CONNECTIONS SHALL BE MADE WITH CRIMP TYPE CONNECTIONS. RJ45 CONNECTIONS ARE TO BE MADE WITH SHIELDED GROUNDING CONNECTORS.
- SIGNAL GROUNDING:** USE THE RACK AS A COMMON POINT OF GROUNDING FOR ALL TECHNICAL SYSTEMS. THE RACK IS TO BE GROUND/ BONDED TO EARTH. CABLE SHIELDS SHALL ONLY BE USED FOR SHIELDING AND CONNECTED TO GROUND AT THE RACK ONLY. ALL RACK-MOUNTED EQUIPMENT SHALL BE CHECKED FOR GROUND CONTINUITY BETWEEN CHASSIS AND THE RACK.
- CABLING:**
 - ALL CABLING IS TO BE CONTINUOUS AND UN-SPLICED.
 - CABLING, NOT IN CONDUIT IS TO BE SUPPORTED FROM THE BUILDING STRUCTURE BY J-HOOKS. CABLES ARE NOT TO BE SUPPORTED FROM CEILING WIRES OR OTHER CONVEYANCE SYSTEMS.
 - PLENUM RATED CABLES AND CABLE TIES MUST BE USED WHEN CABLES ARE LOCATED IN AN AIR PLENUM.
 - CABLES WITHIN RACKS SHALL BE BUNDLED AND LACED NEATLY TO SUPPORT MEMBERS WITH A SERVICE LOOP LARGE ENOUGH TO MAINTAIN CONVENIENT ACCESS TO ALL EQUIPMENT CONNECTIONS.
 - EQUIPMENT POWER CABLE IS TO BE SEPARATED FROM SIGNAL CABLES WITH AN ENCLOSURE. PROVIDE THE MAXIMUM SEPARATION POSSIBLE WITHIN THE ENCLOSURE.
- WIRING:** ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH NETWORK AND BROADCAST STANDARD PRACTICES. CABLE JACKET SHALL BE COLOR CODED TO MAINTAIN A CONSISTENT IDENTIFICATION OF PHASING.
- MARKINGS:** PERMANENTLY MARK ALL CONNECTORS, CABLES, AND CABLE TERMINATIONS TO INDICATE THEIR FUNCTION AS IT CORRESPONDS TO THE WIRING DIAGRAM. ALL CABLE PARS SHALL BE CODED WITH PERMANENTLY ATTACHED LABELS ON THE CABLE ENDS WITH CONSISTENT COLOR-CODED MARKINGS TO INDICATE THEIR FUNCTION. SEE CABLE LABEL DETAIL (DETAIL 5/TA-400).
- AESTHETICS:** COORDINATE THE ELEVATION/LOCATION, FINISH AND COLOR OF ALL PLATES, WALL SWITCHES, FLOOR BOXES AND JUNCTION BOXES WITH THE CONSULTANT.
- VENTILATION:** PROVIDE ADEQUATE VENTILATION IN EQUIPMENT RACKS TO CONFORM TO THE EQUIPMENT MANUFACTURER'S TEMPERATURE REQUIREMENTS.
- FASTENERS, HANGERS, SUPPORTS:** PROVIDE FASTENERS, SUPPORTS AND SEISMIC RESTRAINTS TO ADEQUATELY SUPPORT THE LOAD.
- WORKMANSHIP:** INSTALLATION OF ALL WORK INCLUDING CABLING SHALL BE NEAT. ALL BOXES INCLUDING THE LOUSPEAKER ENCLOSURES, EQUIPMENT RACKS, ETC. SHALL BE PLUMB AND SQUARELY LOCATED. REPLACE/PATCH ALL CEILING, WALLS AND FLOOR REMOVED OR MODIFIED FOR THIS WORK WHEN THE WORK IS COMPLETE. LEAVE THE JOB SITE CLEAN AND FREE FROM MARKS AND BLEMISHES.
- UNDESIGNED LOCATIONS:** AV DEVICE LOCATIONS ILLUSTRATED WITH DIMENSIONS ARE CRITICAL TO DESIRED PERFORMANCE. CONTRACTOR SHALL NOT FIELD ADJUST LOCATIONS WITHOUT COORDINATING WITH THE DESIGN CONSULTANT.
- THE FINISH OF ALL AUDIOVISUAL SYSTEM FACEPLATES SHALL BE ANODIZED BRUSHED ALUMINUM. FINAL COLOR TO BE APPROVED BY PROJECT'S OWNER, ARCHITECT, AND/OR CONSULTANT.
- ALL ENGRAVED LABELS SHALL BE FILLED WITH WHITE OR BLACK AS REQUIRED FOR THE GREATEST CONTRAST BETWEEN THE ENGRAVING AND FACEPLATE/LABEL BACKGROUND COLOR.

GENERAL NOTES

- POWER:**
 - EACH CIRCUIT THAT SERVES TECHNOLOGY SYSTEMS MUST HAVE A DEDICATED GROUND AND NEUTRAL CONDUCTOR. SHARED GROUNDS AND NEUTRALS ARE NOT ACCEPTABLE.
 - ALL CIRCUITS ARE 120 VAC, 60 HZ, 1-PHASE, UNO.
 - NOMINAL ELECTRICAL VOLTAGE IS 120 VAC. VOLTAGE MUST BE MAINTAINED WITH +/-10 PERCENT OF NOMINAL AT ALL TIMES FOR PROPER EQUIPMENT OPERATION.
- TECHNOLOGY CONVEYANCE SYSTEM:**
 - CONDUITS WHICH CARRY POWER MUST BE SEPARATED FROM TECHNOLOGY CONDUITS BY 12 INCHES FOR VOLTAGES OVER 100 VAC, 24 INCHES FOR VOLTAGES OVER 200 VAC AND 48 INCHES FOR ALL VOLTAGES OVER 300 VAC. WHERE POWER AND TECHNOLOGY CABLING AND CONDUIT CROSS, THEY SHOULD DO SO AT RIGHT ANGLES.
 - ALL CONDUIT SHALL BE CLEANED, DEBURRED AND HAVE PULL-STRINGS INSTALLED.
 - ALL INTERIOR AND ABOVE GRADE CONDUIT SHALL BE SOLID FERRIC METALLIC. ALL CONDUIT BELOW GRADE SHALL BE PLASTIC. CONTRACTOR SHALL NOT CHANGE CONDUIT TYPE WITHOUT DESIGN CONSULTANT APPROVAL.
 - PROVIDE PULL BOXES USING SNEEP ELBOWS AS REQUIRED BY CONDUIT PATH, CABLE BEND RADIUS OR PULLING TENSION LIMITS.
 - BACK BOXES TO BE SET TO ALLOW ALL TECHNOLOGY FACEPLATES TO BE INSTALLED TIGHT TO THE ADJACENT SURFACE.
- PRIOR TO THE START OF ACTIVE EQUIPMENT INSTALLATION THE EQUIPMENT SPACES SHALL BE:
 - CLEAN AND SEALED FROM DUST PRIOR TO EQUIPMENT INSTALLATION.
 - MAINTAINED AT A TEMPERATURE OF 72 ± 10 DEGREES FAHRENHEIT AT ALL TIMES.
 - MAINTAINED AT A RELATIVE HUMIDITY BETWEEN 40 AND 70 PERCENT AT ALL TIMES.
- ALL PHONE, DATA, CABLE AND NETWORK LINES ARE IN CONTRACT.
- ALL BLOCKING TO BE PROVIDED BY GC
- VENTS, GRILLS AND GROMMETS PROVIDED BY THE CASEWORK/MILLWORK VENDOR.

PROJECT SYMBOLS

	PROJECTOR CART BY OPE
	CONDUIT STUB-UP
	CONDUIT HOME RUN TO LOCATION
	CONDUIT DESTINATION
	DISTRIBUTED AUDIO STUB UP
	AUDIOVISUAL FLOOR BOX 2 GANG, 2.5" DEEP SEE DETAIL 5/TA-701
	AUDIOVISUAL WALL BOX 2 GANG, 2.5" DEEP SEE DETAIL 2/TA-701
	FLAT PANEL DISPLAY WALL BOX 2 GANG, 2.5" DEEP SEE DETAIL 9/TA-701
	VOLUME CONTROL WALL BOX 2 GANG, 2.5" DEEP SEE DETAIL 2/TA-601
	FLAT PANEL DISPLAY CEILING BOX 2 GANG, 2.5" DEEP SEE DETAIL 7/TA-701
	PROGRAM LOUSPEAKER CEILING BOX 2 GANG, 2.5" DEEP SEE DETAIL 3/TA-701
	CEILING MOUNTED PENDANT LOUSPEAKER BY AVS SEE DETAIL 1/TA-701
	FLAT PANEL DISPLAY
	AUDIOVISUAL EQUIPMENT RACK PROVIDED BY AVS EC TO PROVIDE (1)120 VAC/20 AMP DEDICATED CIRCUIT (4) CLIENT LAN OUTLETS PROVIDED BY OTHERS
	DETAIL LOCATION ARROW

ABBREVIATIONS

FACILITY NOTES

PROJECT SYMBOLS

SHEET INDEX

NUMBER	DRAWING NAME				
TA-001	SHEET INDEX AND NOTES	X	X	X	X
TA-101A	FIRST FLOOR PLAN - AREA A	X	X	X	X
TA-101Bh	FIRST FLOOR PLAN - AREA B	X	X	X	X
TA-201A	FIRST FLOOR REFLECTED CEILING PLAN - AREA A	X	X	X	X
TA-201Bh	FIRST FLOOR REFLECTED CEILING PLAN - AREA Bh	X	X	X	X
TA-301	SECTIONS AND ELEVATIONS	X	X	X	
TA-401	AUDIO FUNCTIONAL	X	X	X	
TA-501	RACK ELEVATIONS AND INTERFACE PLATE DETAILS	X	X	X	
TA-701	COORDINATION DETAILS	X	X	X	X

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REVISIONS

No.	Description	Date
2	ADDENDUM #2	6/19/2018

ISSUED: CONSTRUCTION DOCUMENTS

DATE: 05/24/2018
SCALE: 1/16" = 1'-0"
SHEET NAME:
SHEET INDEX AND NOTES
SHEET NUMBER:

TA-001