

**PARTIAL WEST ELEVATION "A"**  
SCALE: 1:50

**CATEGORY 6 CABLING SPECIFICATIONS**

**CONTRACTOR QUALIFICATIONS**  
THE CONTRACTOR PERFORMING THE DATA CABLING INSTALLATION SHALL HAVE A STRUCTURED CABLING INDUSTRY AFFILIATION SUCH AS BICSI (BUILDING INDUSTRY CONSULTANTS INTERNATIONAL) MEMBERSHIP, RODD (REGISTERED COMMUNICATIONS DISTRIBUTOR DESIGNER) AND/OR A STRUCTURED CABLING VENDOR CERTIFICATION.

ALL DATA CABLING INSTALLERS SHALL BE LICENSED AND INSURED.  
THE DATA CABLING CONTRACTOR SHALL PROVIDE REFERENCES OF SIMILAR PROJECTS.

**HORIZONTAL CABLING**  
1.1 CATEGORY 6 CABLING SHALL BE CERTIFIED AND TESTED TO A MINIMUM OF 250 MHZ. THE CATEGORY 6 HORIZONTAL CABLING SHALL MEET THE MINIMUM TECHNICAL SPECIFICATIONS IN (TELECOMMUNICATIONS INDUSTRY ASSOCIATION) TIA 568A. COLOUR TO BE BLUE.

1.2 ALL DATA TELECOMMUNICATIONS JACKS SHALL BE OF CATEGORY 6 CONNECTORS AND SHALL BE TIA CERTIFIED CATEGORY 6. COLOUR TO BE BLUE.

1.3 NO INSTALLED CABLING MAY BE EXPOSED TO VIEW OUTSIDE OF THE ELECTRICAL ROOM. IT SHALL BE WITHIN CONDUITS.

1.4 ALL HORIZONTAL CABLING RUNS SHALL RUN FROM EACH WORK AREA IN A STAR TOPOLOGY TO ELECTRICAL ROOM OR AS SHOWN. THERE SHALL BE NO CONNECTOR IN THE CABLE RUN BETWEEN THE OUTLET IN THE WORK AREA AND THE ELECTRICAL ROOM. ALL CABLES TO BE RUN INSIDE DATA EMT CONDUITS FROM PULL BOXES TO DATA JACK. ALL EXPOSED CATEGORY 6 CABLING SHALL BE PLENUM-RATED.

1.5 NO CABLING RUN MAY EXCEED A LENGTH OF 90 METERS.

1.6 ALL CATEGORY 6 CABLING SHALL BE TERMINATED IN THE ELECTRICAL ROOM ON RACK MOUNT CATEGORY 6 PATCH PANELS (MAXIMUM OF 48 JACKS PER PANEL). SUPPLY & INSTALL.

1.7 THE CATEGORY 6 CABLING IN THE RACKS SHALL BE INSTALLED WITH SUFFICIENT AND APPROPRIATE MOUNTING CLIPS, BRACKETS, AND CABLE MANAGEMENT TO PROVIDE A SECURE AND MAINTAINABLE SYSTEM. CARE SHALL BE TAKEN TO NOT CAUSE THE CABLES TO BE OVERLY CRIMPED.

1.8 THE UTP CATEGORY 6 CABLE TAIL SHALL BE TERMINATED WITH A MINIMUM OF 14" OF SLACK BUT NOT TO EXCEED 18".

1.9 AFTER DRESSING CABLE TO THE FINAL LOCATION, THE SHEATH SHALL BE REMOVED TO A POINT THAT ALLOWS THE CONDUCTORS TO BE SPAYED AND TERMINATED IN A NEAT AND UNIFORM FASHION. EVERY EFFORT MUST BE MADE TO MAINTAIN SHEATH INTEGRITY BY REMOVING ONLY AS MUCH AS IS PRACTICAL TO ACCOMPLISH TERMINATION. CABLE PAIR TWIST SHALL BE MAINTAINED UP TO THE POINT OF TERMINATION. AS STATED IN 568A, THE PAIRS IN A CABLE SHOULD NEVER BE UNTWISTED MORE THAN 0.5 INCH FROM THE POINT OF TERMINATION. UNDER NO CIRCUMSTANCES SHALL CABLE PAIRS BE UNTWISTED OR OTHERWISE ALTERED PRIOR TO TERMINATION.

1.10 ANY UNUSED HORIZONTAL CABLING SHALL BE LABELED AND LOOSELY COILED.

1.11 CONTRACTOR SHALL SPECIFY CABLES PROPOSED FOR USE AND SUBMIT DOCUMENTATION PROVING THAT THE PROPOSED CABLES MEET THESE SPECIFICATIONS.

**LABELLING**

2.1 ALL CABLES SHALL BE MECHANICALLY LABELLED WITH TAG WRAPS OR SOME OTHER PERMANENT MARKER CAPABLE OF WITHSTANDING MULTIPLE PULLING OF CABLE THROUGH RACEWAYS. LABELS SHALL BE LOCATED 0.5 METER FROM THE WORK AREA END.

2.2 ALL TERMINATIONS SHALL BE CLEARLY IDENTIFIED ON PATCH PANELS IN ELECTRICAL ROOM. ALL JACKS IN THE PATCH PANEL MUST BE IN SEQUENTIAL ORDER.

2.3 AT EACH WORK AREA, FACEPLATE OUTLET SHALL BE PROFESSIONALLY PRINTED WITH JACK NUMBERS CLEARLY VISIBLE WITHOUT REMOVING OUTLET FACEPLATE. THE LABELING SHALL BE METAL OR VINYL ADHESIVE TAPE WITH EMBOSSED OR INDELIBLE PRINTING FOR EACH OUTLET.

2.4 THE ALPHA-NUMERIC NUMBERING SCHEME IS AS SHOWN:

YY-ZZZ

YY ZONE NUMBER OR ROOM NUMBER ON FLOOR

ZZZ WORKSTATION JACK NUMBER

EXAMPLE:

CONTROL ROOM 101, 1st DATA JACK: 101-001

**FIELD TEST QUALITY**

3.1 THE CONTRACTOR SHALL VISUALLY INSPECT ALL CABLES, CABLE REELS, AND SHIPPING CARTONS TO DETECT CABLE DAMAGE INCURRED DURING SHIPPING AND TRANSPORT. VISIBLY DAMAGED ITEMS SHALL NOT BE INSTALLED.

3.2 CONDUCT CABLE TESTING ONLY UPON COMPLETION OF INSTALLATION.

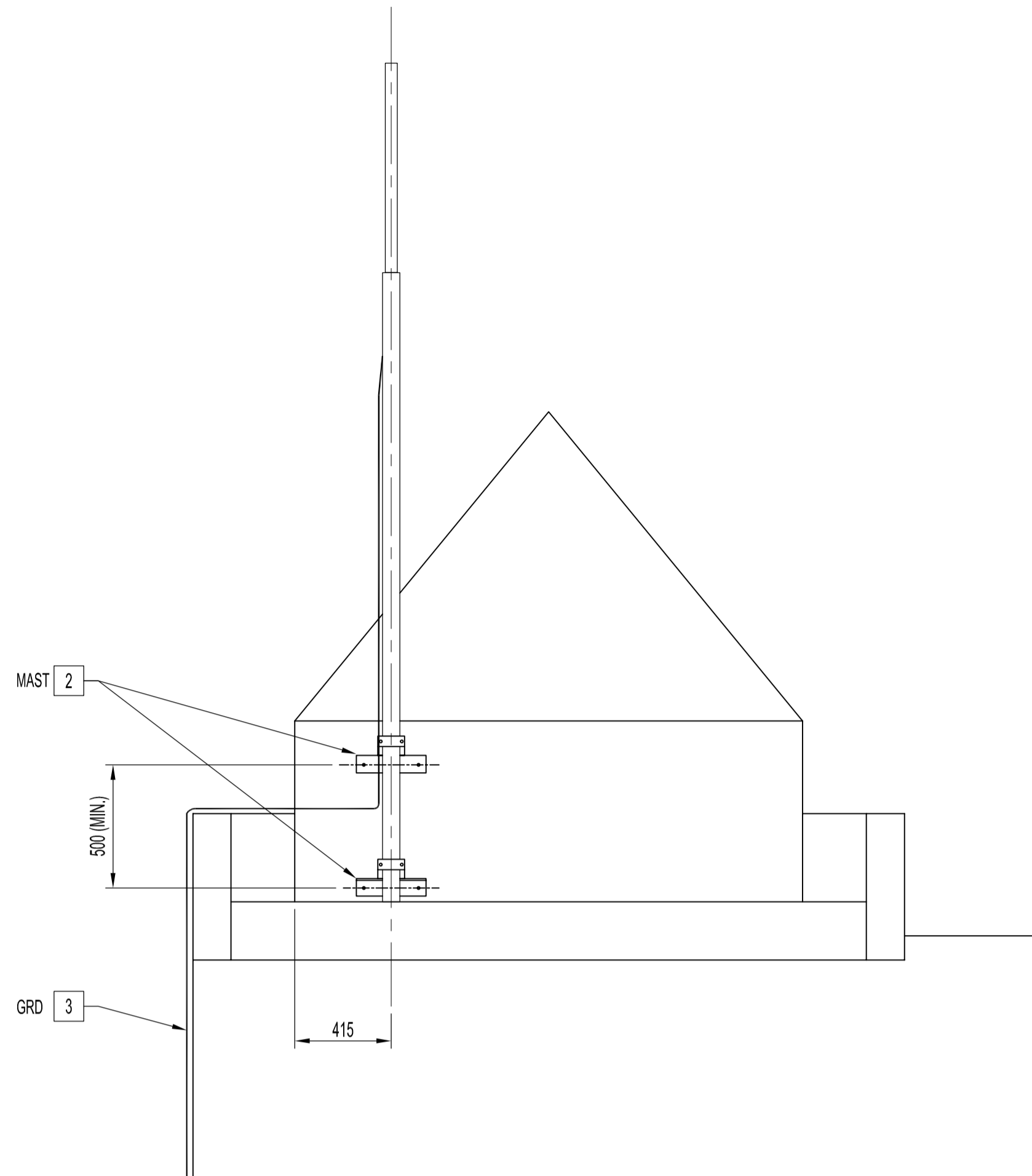
3.3 A MINIMUM OF A LEVEL II-FIELD TESTER SHALL BE USED TO VERIFY CABLING PERFORMANCE.

3.4 IN ADDITION TO HARD COPY TEST RESULTS, ACCEPTABLE ELECTRONIC FORMAT FOR TEST RESULTS ARE MICROSOFT EXCEL FOR EACH LINK.

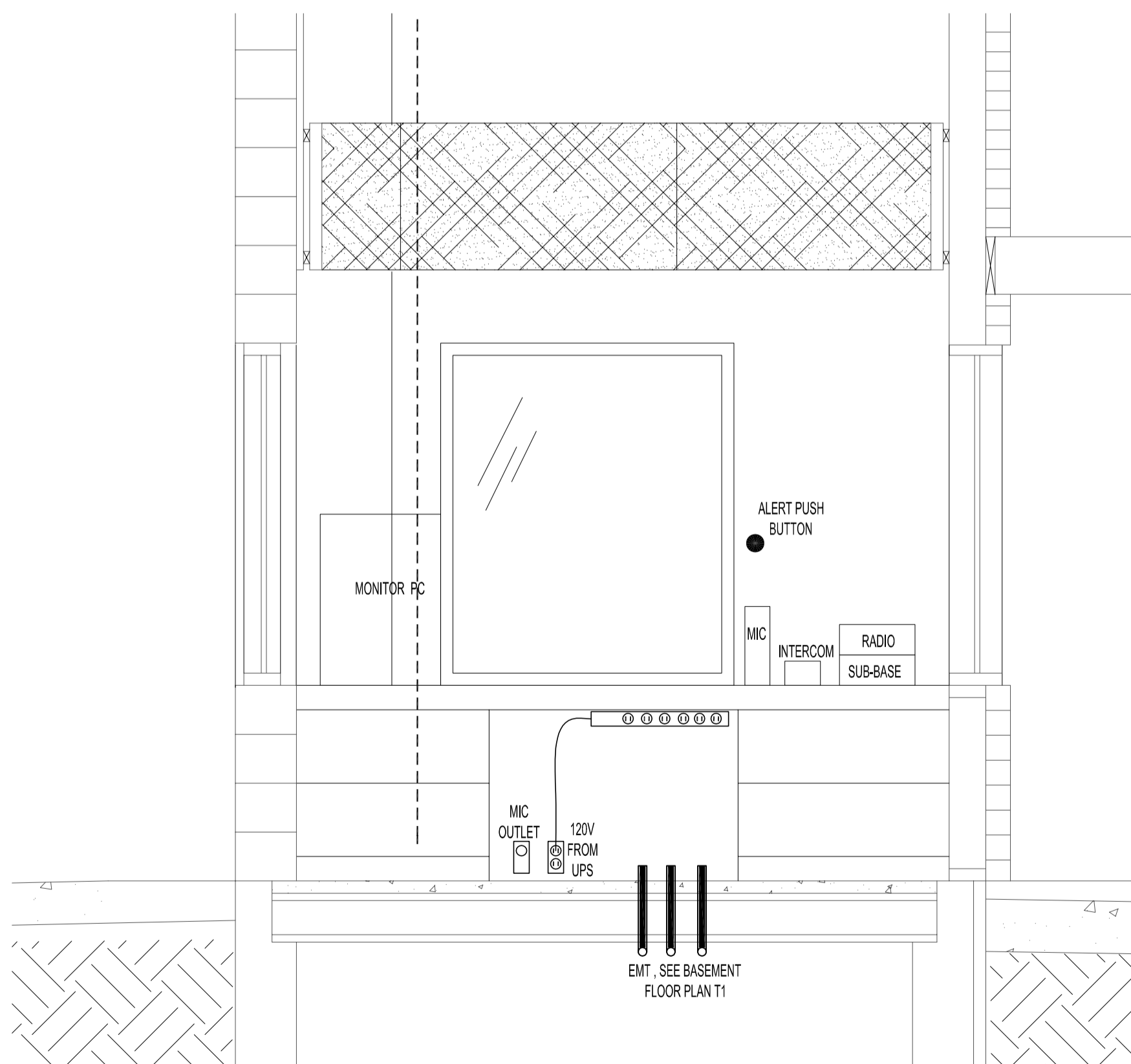
3.5 THE CONTRACTOR SHALL DESCRIBE IN DETAIL ITS PROPOSED TEST PLAN TO DETECT ANY DEFECTIVE COMPONENTS AND TO DEMONSTRATE THAT THE INSTALLATION COMPLIES WITH THE SPECIFICATION.

**RECORD DRAWINGS**

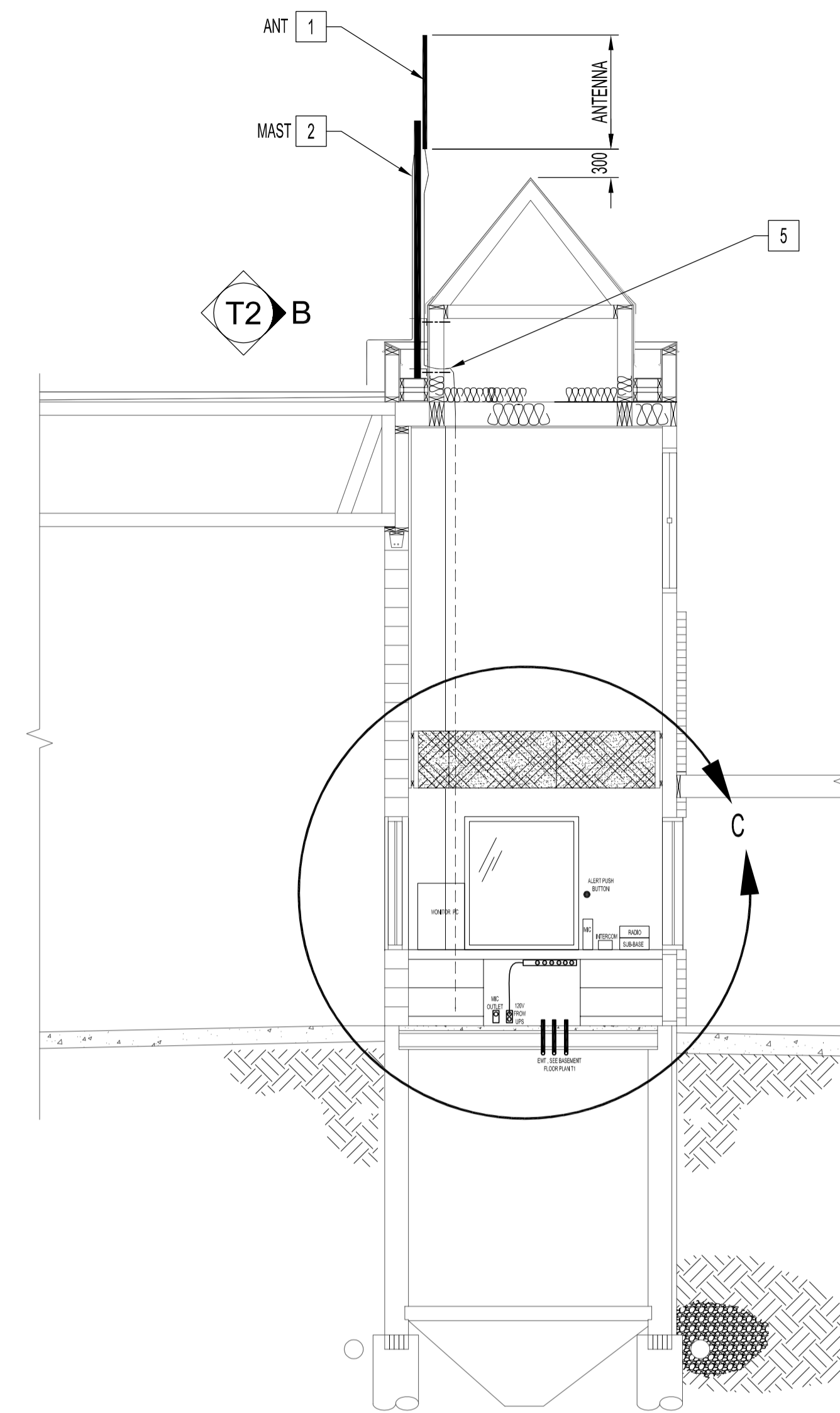
4.1 THE CONTRACTOR SHALL KEEP A RECORD SET OF DRAWINGS ON THE SITE. AT ALL TIMES RECORDING ALL CHANGES THAT MAY OCCUR. AS-BUILT DRAWINGS ARE TO BE SUBMITTED WITH CONTRACTOR'S NAME, SIGNATURE AND DATE OF AS-BUILT.



**PARTIAL ENLARGED ELEVATION "B"**  
SCALE: 1:20



**ENLARGED DETAIL "C"**  
SCALE: 1:20



**BUILDING SECTION**  
SCALE: 1:50

- 1 ANTENNA (ANT) AND CABLE, SEE RADIO EQUIPMENT SCHEDULE, SHALL BE MOUNTED PLUMB AND SECURELY TO THE MAST WITH MANUFACTURER RECOMMENDED HARDWARE. THE ANTENNA ELEVATION SHALL PROVIDE CLEARANCE OF THE BUILDING AND AN UNOBSTRUCTIVE 360 DEGREE LINE OF SIGHT OF THE HORIZON. NOTIFY CONTRACT ADMINISTRATOR OF DIFFERENCES.
- 2 MAST, SEE RADIO EQUIPMENT SCHEDULE, SHALL BE POSITIONED AND FASTENED SECURELY TO BUILDING TOWER EXTERIOR WALL AS SHOWN. USE APPROVED MAST MANUFACTURER MOUNTING HARDWARE FOR COMMUNICATION TOWER, MINIMUM TWO (2) ANGLES ON TOWER WALL. ALL PENETRATIONS SHALL BE WATER-TIGHT.
- 3 GROUNDING CABLE (GRD), SEE RADIO EQUIPMENT SCHEDULE, SHALL BE CONNECTED AND FASTENED TO THE MAST AND CLIPPED ALONG THE BUILDING WALL TO THE 1.8 METRES LONG (MIN); GROUND ROD DRIVEN INTO THE GROUND AS CLOSE AS POSSIBLE TO ANTENNA MAST.
- 4 A 25 DIAx 2500 LONG EMT CONDUIT SHALL ENCLOSE THE GROUND CABLE FROM 50mm FROM THE GRADE. CONDUIT CLIPS SHALL FASTEN THE PLUMB CONDUIT TO THE WALL.
- 5 ANTENNA CABLE, SEE RADIO EQUIPMENT SCHEDULE, SHALL ENTER THE TOWER WALL AND INSIDE THE NORTH-WEST STUD FRAME WALL AS SHOWN TO THE BACK OF THE CONTROL ROOM COUNTER TO CONNECT TO THE RADIO. ROUTING OF ANTENNA CABLE SHALL BE DONE PRIOR TO WALL VAPOUR BARRIER INSTALLATION. ALL PENETRATION SHALL BE WATER-TIGHT.

NOTES :  
SEE NOTES ON DRAWING T1.

NO.	REVISION/DESCRIPTION	BY	DATE
SEALS			

DRAWN BY	DATE	CHECKED BY	APPROVED
DTA	2006.07.14	USER APPROVAL	

**CITY OF WINNIPEG**  
PLANNING, PROPERTY &  
DEVELOPMENT DEPARTMENT  
CIVIC ACCOMMODATIONS DIVISION  
300 - 65 GARRY ST. R3C 4K4

PROJECT  
**WEST TRANSCONA**  
FIRE PARAMEDIC STATION 21

1446 REGENT AVE. WEST

SHEET TITLE  
ELEVATION, SECTION AND DETAILS  
VOICE, DATA AND COMMUNICATION

SCALE	PROJECT NO.	SHEET NO.
AS SHOWN	2004-058-01	T2