

GENERAL INSTALLATION NOTES

1. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. THE FOLLOWING REFERENCES ARE APPLICABLE FOR THE INSTALLATION OF COMMUNICATIONS SUPPORT STRUCTURES AND EQUIPMENT. IF A DISCREPANCY BETWEEN THE SPECIFICATIONS AND THE REFERENCES EXIST THE MOST STRINGENT REQUIREMENTS SHALL APPLY.
 - a. ANSITIA/EIA 606, DESIGN GUIDELINES FOR ADMINISTRATION OF TELECOMMUNICATIONS IN COMMERCIAL BUILDINGS
 - b. LIST-407-A, GROUNDING AND BONDING FOR TELECOMMUNICATIONS IN COMMERCIAL BUILDINGS
 - c. ANSITIA/EIA 568-A DESIGN GUIDELINES FOR TELECOMMUNICATIONS WIRING SYSTEMS IN COMMERCIAL BUILDINGS
 - d. ANSITIA/EIA 569, COMMERCIAL BUILDING STANDARD FOR TELECOMMUNICATIONS PATHWAYS AND SPACES
 - e. BICSI TELECOMMUNICATIONS DISTRIBUTION METHODS MANUAL 13TH EDITION
 - f. BICSI INFORMATION TRANSPORT SYSTEMS INSTALLATION MANUAL 4TH EDITION
 - g. ANSINECABICSI 568-2001 INSTALLING COMMERCIAL TELECOMMUNICATIONS CABLING
 - h. CANADIAN ELECTRICAL CODE
3. THE CONTRACTOR SHALL BE CERTIFIED BY THE MANUFACTURER OF THE DATA CABLING SYSTEM PROVIDED.
4. THE CONTRACTOR SHALL COMPLY WITH MANITOBA LABOUR ELECTRICIANS LICENCE ACT AND HAVE "LIMITED LICENCES" FOR ALL PERSONNEL ON SITE.
5. THE CONTRACTOR SHALL INCLUDE ALL PERMITS, FEES AND INSPECTIONS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
6. THE CONTRACTOR SHALL REMOVE ALL REDUNDANT CABLING IN THE PROJECT.
7. THE CONTRACTOR SHALL EXAMINE ALL DRAWINGS, SPECIFICATIONS AND SITE CONDITIONS INCLUDING THOSE OF OTHER TRADES. NO CLAIM FOR EXTRA PAYMENT FOR EXTRA WORK WILL BE ENTERTAINED WHERE SITE CONDITIONS WERE VISIBLE PRIOR TO THE SUBMISSION OF BID.

COMMUNICATIONS HORIZONTAL CABLING

1. PROVIDE CATEGORY 5E CABLING FOR DATA AND VOICE LOCATIONS, CABLING JACKET COLOUR BLUE. ALL NEW CABLING TO BE FT-6 RATED, WHEN EXPOSED AND IS NOT IN CONDUIT LOCATED IN PLENUM SPACE OR FT4 RATED CABLE IN CONDUIT LOCATED IN PLENUM SPACE. USE FT4 RATED CABLE FOR ALL OTHER INSTALLATION.
2. PROVIDE 1 METER OF SLACK AT EACH END OF THE CABLE RUN.
3. ACCEPTABLE MANUFACTURER; BELDEN, AMP, PANDUIT

COMMUNICATIONS HORIZONTAL CABLING INSTALLATION

1. LABEL ALL FACEPLATES CABLES AND CONNECTORS.
2. PROVIDE THE FOLLOWING SEPARATION FROM ELECTRICAL POWER SYSTEMS INSTALLED IN CONDUITS.
 - a. 50MM FROM CIRCUITS OF 300VOLT AND LESS
 - b. 600MM FROM CIRCUITS 300VOLT AND HIGHER
 - c. 2 METRES FROM CIRCUITS BETWEEN 300V AND 15KV
 - d. 3 METRES FOR CIRCUITS ABOVE 15KV
 - e. ELECTRICAL SYSTEMS CANNOT SHARE THE SAME PATHWAY
3. NEVER CRUSH THE CABLE, VELCRO TIES SHALL BE USED AS PER MANUFACTURER'S RECOMMENDATION.
4. USE OF VELCRO CABLE TIES THROUGHOUT THE INSTALLATION AND IN THE TELECOM ROOMS IS REQUIRED.
5. DO NOT KINK, KNOT OR SNAG THE CABLE WHILE PULLING, THIS WILL CAUSE DAMAGE UNDER THE JACKET AND MAY ALTER CABLE PERFORMANCE.
6. DO NOT EXCEED THE MINIMUM BEND OF 4 X OUTSIDE DIAMETER (OD) FOR 4 PAIR UTP, 10 X OD FOR MULTI PAIR (MORE THAN 4 PAIR) UTP.
7. PER TIA/EIA 568-A NEVER UNTWIST THE PAIRS OF CABLE BEYOND THE ABSOLUTE MINIMUM REQUIRED FOR TERMINATION.
8. USE THE SAME PERFORMANCE CRITERIA FOR BOTH CABLE AND CONNECTING HARDWARE THROUGH THE ENTIRE HORIZONTAL RUN.
9. ONLY ONE PIN-OUT THROUGHOUT THE TOTAL INSTALLATION T568A IS ALLOWED.

TESTING OF COMMUNICATIONS SYSTEMS

1. A PERMANENT LINK TEST SHALL BE PERFORMED ON ALL HORIZONTAL CABLING INSTALLED UNDER THE PROJECT AND ON EXISTING CABLING THAT ARE RE-TERMINATED, REROUTED, AND WHERE THE TERMINATION IS DISTURBED TO PERFORM WORK UNDER THE PROJECT
2. A LINK CONSISTS OF UP TO 90 METERS OF HORIZONTAL CABLING, A CONNECTION AT EACH END, UP TO 2 METERS OF TEST EQUIPMENT LEAD FROM THE MAIN UNIT OF THE HAND-HELD TESTER TO THE LOCAL CONNECTION, AND UP TO 2 METERS OF TEST EQUIPMENT LEAD FROM THE REMOTE UNIT TO THE REMOTE CONNECTION. A TOTAL LENGTH OF UP TO 94 METERS
3. CONTRACTOR TO SUBMIT ELECTRONICALLY ALL CABLE TEST RESULTS IN PDF INCLUDING THE SUMMARY AND TESTERS NATIVE FORMAT TO THE CONTRACT ADMINISTRATOR FOR ACCEPTANCE.
4. FIRMWARE FOR THE TEST EQUIPMENT TO BE USED IN TESTING VOICE AND DATA CABLING SHALL BE UPDATED TO THE LATEST FIRMWARE PRIOR TO USE.

COMMUNICATIONS WORK AREA CORDS AND PATCH CABLES

1. PROVIDE NEW DATA WORK AREA CORDS AND PATCH CORD FOR ALL NEW AND EXISTING TO REMAIN TELECOMMUNICATIONS OUTLETS. WORK AREA CORDS ARE TO BE SAME MANUFACTURER AS THE CABLING SYSTEM (BELDEN, AMP, PANDUIT). PATCH CABLES ARE TO BE 2 METERS IN LENGTH, WORK AREA CORDS ARE TO BE 3 METERS IN LENGTH, PATCH CABLE TO BE BLUE, WORK AREA CORD TO BE WHITE. TELEPHONE LINE CORDS ARE NOT REQUIRED.

WORKSTATION OUTLETS

1. JACKS AND FACEPLATES TO BE SAME MANUFACTURER AS THE CABLING SYSTEM
2. CATEGORY 5E VOICE/ DATA JACKS - COLOUR WHITE PINNED TO T-568A
3. WORK STATION OUTLET SHALL BE 4 PORTS, BANK-OFF UNUSED PORTS.
4. FACEPLATES TO BE STAINLESS STEEL.

DATA PATCH PANELS

1. USE EXISTING PANDUIT PATCH PANEL. CONTRACTOR TO INSTALL NEW CATEGORY 5E JACKS FOR ALL NEW CABLING.
2. REUSE OF DEMOLISHED JACKS AND CABLES IS NOT AUTHORIZED.

LABELING

1. CONTRACTOR TO FOLLOW THE LABELING STANDARD IDENTIFIED ON THE DRAWINGS.
2. USE A BRADY OR PANDUIT MECHANICAL LABELMAKER.
3. USE WHITE SELF-ADHESIVE NON-SMEAR LABELS WITH BLACK NUMBERS AND LETTERS.
4. DATA AND TELEPHONE OUTLETS SHALL HAVE 6MM LABELS FOLLOWING THE STANDARD IN PLACE IN THE OFFICE AREA.
5. ALL CABLES SHALL BE IDENTIFIED AT BOTH ENDS WITH MACHINE PRINTED LABELS.

SUBMITTAL PROCEDURES

1. CONTRACTOR WILL SUBMIT ELECTRONIC SHOP DRAWINGS FOR ALL PRODUCTS USED IN THE PROJECT TO THE CONTRACT ADMINISTRATOR FOR REVIEW PRIOR TO INSTALLATION.

CABLE SUPPORT PATHWAYS

1. ALL CABLING SHALL BE SUPPORTED BY 53MM J-HOOKS THROUGHOUT ITS LENGTH. AT A MINIMUM OF 4FT (1200mm) INTERVALS. ADDITIONAL SUPPORT IS REQUIRED AROUND OBSTRUCTIONS.
2. CONTRACTOR SHALL ENSURE THE CABLING IS NOT SUPPORTED BY THE CEILING SUPPORT STRUCTURE.
3. ALL TELECOMMUNICATIONS OUTLETS IN NEW WALLS SHALL HAVE A 27mm CONDUIT TO THE OUTLET BOX.
4. CABLING LOCATED IN DRYWALL CEILING SPACE WHICH IS NOT ACCESSIBLE SHALL USE 19MM EMT CONDUIT AND STUBOUT TO ACCESSIBLE CEILING SPACE.

OUTLET BOXES

1. CONTRACTOR SHALL SUPPLY AND INSTALL OUTLET BOXES AND 27mm CONDUIT BOXES REQUIRED FOR DEVICES. OUTLET BOX TO BE 100x100x65mm C/W SINGLE GANG PLASTER RING.

PROGRESS MEETINGS

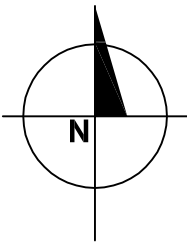
1. DURING THE COURSE OF WORK, PROGRESS MEETINGS WILL BE CONDUCTED, REPRESENTATIVES OF THE CONTRACTOR AND ANY SUB-CONTRACTORS, AND CITY WILL BE IN ATTENDANCE.

O x M MANUALS AND AS-BUILT

1. CONTRACTOR TO PROVIDE OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENTS, 3 HARD COVERED COPIES AND CD.
2. CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS INDICATING DEVICE LOCATIONS, CABLE ROUTING ETC. PROVIDE HARD COPIES AND CD.

Ownership of Documents:
Drawings and specifications as instruments of service are and shall remain the property of the Architect whether the project for which they are made is executed or not. They are not to be used by the owner on other projects or extensions to this project except by agreement in writing and with appropriate compensation to the Architect.

This drawing shall not be scaled. Follow given dimensions only.



ISSUED FOR

ISSUED FOR CONSTRUCTION

AUGUST 24, 2015

SEAL



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Mechanical|Electrical|Communications|Security Engineering

PROJECT TITLE

CENTRAL YARDS FIELD
SERVICES BUILDING

1220 PACIFIC AVENUE
OFFICE RENOVATION

1220 PACIFIC AVE.

WINNIPEG MANITOBA

DRAWING TITLE

723-2015_COMMUNICATIONS
SPECIFICATIONS_E4-R0

DESIGNED BY

HCC

DRAWN BY

PL

ISSUE DATE

08-24-2015

REVISION No.

0

PROJECT No.

15040

DRAWING No.

E4

NOTE: THIS DRAWING SUPERCEDES ALL
PREVIOUSLY ISSUED DRAWINGS.