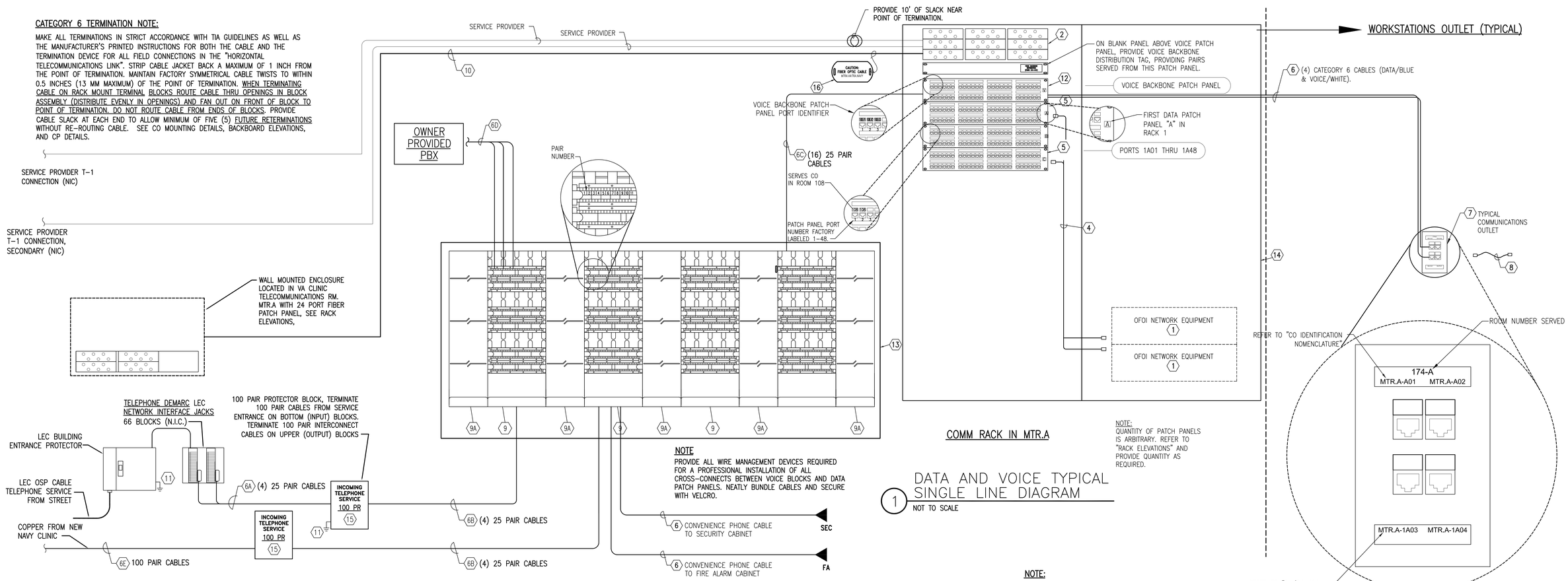
CATEGORY 6 TERMINATION NOTE:

MAKE ALL TERMINATIONS IN STRICT ACCORDANCE WITH TIA GUIDELINES AS WELL AS THE MANUFACTURER'S PRINTED INSTRUCTIONS FOR BOTH THE CABLE AND THE TERMINATION DEVICE FOR ALL FIELD CONNECTIONS IN THE "HORIZONTAL TELECOMMUNICATIONS LINK". STRIP CABLE JACKET BACK A MAXIMUM OF 1 INCH FROM THE POINT OF TERMINATION. MAINTAIN FACTORY SYMMETRICAL CABLE TWISTS TO WITHIN 0.5 INCHES (13 MM MAXIMUM) OF THE POINT OF TERMINATION. WHEN TERMINATING CABLE ON RACK MOUNT TERMINAL BLOCKS ROUTE CABLE THRU OPENINGS IN BLOCK ASSEMBLY (DISTRIBUTE EVENLY IN OPENINGS) AND FAN OUT ON FRONT OF BLOCK TO POINT OF TERMINATION. DO NOT ROUTE CABLE FROM ENDS OF BLOCKS. PROVIDE CABLE SLACK AT EACH END TO ALLOW MINIMUM OF FIVE (5) FUTURE RETERMINATIONS WITHOUT RE-ROUTING CABLE. SEE CO MOUNTING DETAILS, BACKBOARD ELEVATIONS, AND CP DETAILS.



NOTE

PROVIDE ALL WIRE MANAGEMENT DEVICES REQUIRED FOR A PROFESSIONAL INSTALLATION OF ALL CROSS-CONNECTS BETWEEN VOICE BLOCKS AND DATA PATCH PANELS. NEATLY BUNDLE CABLES AND SECURE WITH VELCRO.

COMM RACK IN MTR.A

NOTE:
QUANTITY OF PATCH PANELS IS ARBITRARY. REFER TO "RACK ELEVATIONS" AND PROVIDE QUANTITY AS REQUIRED.

1 DATA AND VOICE TYPICAL SINGLE LINE DIAGRAM

NOT TO SCALE

TYPICAL COMMUNICATIONS OUTLET TYPE "D4"

DATA AND VOICE TYPICAL SINGLE LINE DIAGRAM KEY NOTES

1. OWNER FURNISHED OWNER INSTALLED NETWORK EQUIPMENT
2. FIBER DRAWER, PORT, RACK MOUNT. COORDINATE END CONNECTORS WITH VA IT DEPT. LABEL FRONT COVER TO INDICATE SOURCE (CER) AND EACH DESTINATION(S) (RESPECTIVE CC). SEE "FIBER OPTIC BACKBONE NOMENCLATURE", THIS SHEET.
4. EQUIPMENT ROOM DATA PATCH CORDS, FACTORY TERMINATED AND TESTED CATEGORY 6 (MINIMUM) FOUR PAIR 100-OHM UNSHIELDED TWISTED PAIR (UTP) CABLE WITH 24 GAGE STRANDED COPPER CONDUCTORS, COLOR BLUE. PROVIDE WITH 8-PIN MODULAR PLUG ON BOTH ENDS AND TIA 568A PIN/PAIR ASSIGNMENTS WITH NO BOOT. FIELD BUILT OR ASSEMBLED PATCH CORDS WILL NOT BE ACCEPTED. PROVIDE PATCH CORD QUANTITIES AND LENGTHS AS SCHEDULED THIS SHEET. PROVIDE DOCUMENTATION OF FACTORY TESTING CATEGORY 6 REQUIREMENTS AT SUBMITTAL.
4A. EQUIPMENT ROOM VOICE PATCH CORDS, FACTORY TERMINATED AND TESTED CATEGORY 6 (MINIMUM) FOUR PAIR 100-OHM UNSHIELDED TWISTED PAIR (UTP) CABLE WITH 24 GAGE STRANDED COPPER CONDUCTORS, COLOR WHITE. PROVIDE WITH 8-PIN MODULAR PLUG ON BOTH ENDS AND TIA 568A PIN/PAIR ASSIGNMENTS WITH NO BOOT. FIELD BUILT OR ASSEMBLED PATCH CORDS WILL NOT BE ACCEPTED. PROVIDE PATCH CORD QUANTITIES AND LENGTHS AS SCHEDULED THIS SHEET. PROVIDE DOCUMENTATION OF FACTORY TESTING CATEGORY 5E REQUIREMENTS AT SUBMITTAL.
5. TIA CATEGORY 6, HORIZONTAL WIRING MODULAR ANGLED PATCH PANEL, 48 PORT, PROVIDE WITH FACTORY ICON/LABEL HOLDERS, DESIGNATION LABELS, REAR CABLE MANAGERS, AND MOUNTING HARDWARE. PROVIDE COLORED SNAP-IN BLANK TABS TO MATCH PORT LABELING OF JACKS AT OUTLETS.
6. TIA CATEGORY 6 HORIZONTAL WIRING, 4 PAIR UTP, RISER RATED CABLE, 24 GAGE SOLID COPPER CONDUCTORS. ALL CABLE MUST HAVE THE WORDS 'UL VERIFIED CATEGORY 6' STAMPED ON THE OUTER INSULATION JACKET. MAXIMUM INSTALLED LENGTH 90 METERS (295'). PROVIDE DOCUMENTATION OF CURRENT UL CERTIFICATION WITH SUBMITTALS
6A. 25 PAIR CATEGORY 5E RATED TELEPHONE BACKBONE CABLE, COLOR GREY. CUSTOM LENGTH, PUNCH ONE END DOWN ON 66 BLOCK, FIELD CONNECTORIZE OTHER END ON PROTECTOR BLOCKS.
6B. 25 PAIR CATEGORY 5E TELEPHONE CABLE, CMR (RISER) JACKET, CUSTOM LENGTH, PUNCH ONE END DOWN ON PROTECTOR BLOCK UPPER (OUTPUT) 110 BLOCK. PUNCH OTHER END DOWN ON 110 BLOCK.
6C. 25 PAIR CATEGORY 5E PATCH PANEL INTERCONNECT CABLE, CMR JACKET, COLOR GREY, CUSTOM LENGTH, PUNCH DOWN ONE END IN ORDER ON 110 BLOCK AND THE OTHER END ON PATCH PANELS IN USOC PIN CONFIGURATION.
6D. 25 PAIR CATEGORY 5E TELEPHONE CABLE, CMR (RISER) JACKET, COLOR GREY, CUSTOM LENGTH, PUNCH ONE END DOWN ON 110 BLOCK, FIELD CONNECTORIZE OTHER END ON PBX.
6E. 100 PAIR CATEGORY 3 RATED OUTDOOR RATED TELEPHONE BACKBONE CABLE CUSTOM LENGTH, PUNCH ONE END DOWN ON PROTECTOR BLOCK IN VA CLINIC, CONNECTORIZE OTHER END ON NAVY CLINIC PROTECTOR BLOCKS.
7. TYPICAL COMMUNICATIONS OUTLET (CO) WITH CATEGORY 6 8-PIN MODULAR JACKS FOR DATA AND VOICE CONNECTIONS. SEE OUTLET DETAILS.
8. WORKSTATION PATCH CORDS, FACTORY TERMINATED AND TESTED CATEGORY 6 (MINIMUM) FOUR PAIR 100-OHM UNSHIELDED TWISTED PAIR (UTP) CABLE WITH 24 GAGE STRANDED COPPER CONDUCTORS, COLOR GRAY. PROVIDE WITH 8-PIN MODULAR PLUG ON BOTH ENDS AND TIA 568A PIN/PAIR ASSIGNMENTS, PROVIDE FACTORY-MADE PATCH CORDS WITH NO BOOT. FIELD BUILT OR CONTRACTOR SHOP ASSEMBLED PATCH CORDS WILL NOT BE ACCEPTED.
9. 110 CROSS-CONNECT BLOCK DISTRIBUTION FRAME, 300 PAIR EACH FRAME, 4 PAIR CONNECTING BLOCKS FOR TERMINATION. PROVIDE FULLY LOAD WITH 110 BLOCKS AND HORIZONTAL WIRE MANAGEMENT.
9A. 110 DISTRIBUTION FRAME VERTICAL WIRE MANAGEMENT FRAME. PROVIDE COMPLETE WITH RINGS AS REQUIRED. PROVIDE MATCHED TO 110 FRAME.
10. FIBER OPTIC CABLE, INDOOR/OUTDOOR RATED, 12 STRAND MULTIMODE OM3/12 STRAND SINGLEMODE. PROVIDE SPLITTER FAN-OUT KIT AT BOTH ENDS AND COORDINATE REQUIRED END CONNECTORS WITH VA/EGLIN HOSPITAL IT DEPT. PROVIDE DROP LOOP IN CABLE BEHIND FIBER DRAWER TO ALLOW DRAWER PULL-OUT, AND PROTECT DROP LOOP WITH SPIRAL WRAP. EXTEND CABLE JACKET AND SPIRAL WRAP INTO DRAWER AND SECURE. COIL 24" SLACK BUFFERED FIBER IN DRAWER USING FACTORY HARDWARE. RUN CONTINUOUS FROM SOURCE TO DESTINATION WITH NO SPLICES OR TERMINATIONS.
11. COPPER INSULATED GROUNDING CONDUCTOR, #6 AWG. FOR GROUNDING AT CER AND CC LOCATIONS, ROUTE TO BACKBOARD MOUNTED VOICE GROUNDING BUSBAR.
12. 48 PORT VOICE BACKBONE ANGLED PATCH PANEL, CATEGORY 5e, PROVIDE MODULAR JACKS, EACH WITH USOC WIRING PINOUT. TERMINATE 25 PAIR BACKBONE CABLES FROM WALL BLOCKS TO PATCH PANEL WITH ALL PAIRS IN ORDER. LABEL EACH PORT WITH PAIR NUMBERS. TERMINATE PAIR IN ORDER WITH (2) PAIRS FOR EVERY MODULAR PORT. SEE "TYPICAL VOICE PATCH PANEL MODULAR JACK PIN CONFIGURATION", THIS SHEET.
13. PLYWOOD BACKBOARD, 8'-0" HIGH X FULL LENGTH OF WALL, MOUNT WITH BOTTOM AT 12" ABOVE FINISH FLOOR. BACKBOARDS SHALL BE 3/4" THICK AC EXTERIOR GRADE PLYWOOD. COUNTERSINK ALL SCREWS. FILL AND SAND SMOOTH ALL SEAMS, COUNTERSUNK SCREW HOLES AND VOIDS. PRIME WITH TWO COATS PRIMER, SANDING SMOOTH AFTER EACH COAT. FINISH WITH TWO COATS SEMI-GLOSS FIREPROOF PAINT, COLOR BATTLESHIP GREY. FINAL SURFACE SHALL BE UNIFORMLY SMOOTH AND EVEN. TOUCH UP AT END OF PROJECT. COORDINATE WORK WITH ELECTRICAL CONTRACTOR TO ENSURE THAT POWER RECEPTACLES ARE PROPERLY LOCATED.
14. FLOOR MOUNT EQUIPMENT CABINET SEE RACK ELEVATIONS FOR SPECIFICATIONS
15. PRIMARY PROTECTOR, 110 STYLE 100 PAIR PROTECTOR BLOCKS WITH 110 BLOCK INPUT AND 110 BLOCK OUTPUT. PROVIDE WITH 100 SOLID STATE PROTECTOR UNITS, 150V/250V LINE TO LINE, 100A RATED PULSE, <1nS, 100MΩ INSULATION, <200pf CAP. SEE "VOICE LABELING NOTES".
16. FIBER OPTIC CABLING TAG

NOTE:

RUN ALL CABLES CONTINUOUS BETWEEN TERMINATION POINTS INDICATED WITH NO INTERMEDIATE SLICES OR TERMINATIONS.

PATCH CORD ROUTING NOTE:

SEE SINGLE LINE DIAGRAMS AND SPECIFICATIONS. BUNDLE IN VERTICAL CABLE SECTION WITH VELCRO STRAPS AT 6" ON CENTER (COLOR BLACK). BUNDLE FIBER OPTIC, VOICE, AND DATA PATCH CORDS SEPARATELY.

CABLE "SERVICE LOOP" NOTE:

PROVIDE SLACK LENGTH IN ALL CABLES TO ALLOW FUTURE RETERMINATION OF ALL CONDUTORS/STRANDS UP TO FIVE TIMES WITHOUT REROUTING CABLE.

GENERAL LABELING NOTE:

ALL LABELS SHALL BE PRODUCED USING FACTORY LABEL SHEETS FOR LASER PRINTERS PROVIDED FOR THE SPECIFIC DEVICE BY THE DEVICE MANUFACTURER, AND USING SOFTWARE PROVIDED BY THE DEVICE MANUFACTURER. THIRD PARTY LABELS ARE NOT ACCEPTABLE.

VOICE AND DATA PATCH CORD SCHEDULE

TYPE	LENGTH/QT'Y	LENGTH/QT'Y	LENGTH/QT'Y	LENGTH/QT'Y	LENGTH/QT'Y
KEY NOTE 4	3' / 50	5' / 50	7' / 200	10' / 150	12' / 150
KEY NOTE 4A	3' / 80	5' / 80	7' / 80	10' / 80	12' / 150
KEY NOTE 8	-- / --	5' / 200	7' / 200	10' / 100	-- / --

VOICE/DATA PATCH CORD SCHEDULE NOTES

1) FURNISH PATCH CORDS TO OWNER LOOSE. VERIFY ALL QUANTITIES AND LENGTHS WITH VA COMMUNICATIONS IT AND PROVIDE SIGNED COPY OF RECEIPT TO ENGINEER AT PROJECT SUBSTANTIAL COMPLETION.
2) SEE SPECIFICATIONS FOR DETAILED REQUIREMENTS FOR PATCH CORD DELIVERY AND INSTALLATION. THE STRUCTURED CABLING SYSTEM CONTRACTOR SHALL ASSIST THE TELEPHONE SYSTEM PROVIDER IN INSTALLING PATCH CORDS FOR EACH TELEPHONE INSTRUMENT. ALL PATCH CORDS SHALL BE INSTALLED IN WIRE MANAGEMENT HARDWARE, UTILIZING LENGTHS THAT MAKE CONNECTIONS REQUIRED WITHOUT EXCESS STORAGE IN WIREWAYS. ALL PATCH CORDS SHALL BE NEATLY ROUTED, BUNDLED AND SECURED AT 6" ON CENTER WITH VELCRO STRAPS. BUNDLE VOICE PATCH CORDS SEPARATELY, DO NOT BUNDLE WITH DATA PATCH CORDS.
3) PROVIDE SPREADSHEET IDENTIFYING CONNECTIONS MADE, SEE SPECIFICATIONS.

FINAL SUBMISSION / FULLY SPRINKLERED

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Drawing Title: **TELECOMMUNICATIONS VOICE AND DATA SINGLE LINE DIAGRAM**
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Location: PANAMA CITY, FLORIDA
Date: APRIL 2013
Checked: TAN
Drawn: CEC
Project Number: 520-326
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Dwg. 9 of 14

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