# 1. GENERAL PROVISIONS

## A. GENERAL NOTES:

1. THE CONTRACTOR COVENANTS AND AGREES THAT HE AND HIS SUBCONTRACTORS AND HIS AND THEIR AGENTS, SERVANTS AND EMPLOYEES WILL PROVIDE AND MAINTAIN A SAFE PLACE TO WORK AND THAT HE AND THEY WILL COMPLY WITH ALL LAWS AND REGULATIONS OF ANY GOVERNMENTAL AUTHORITY HAVING JURISDICTION THEREOF AND THE CONTRACTOR AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS THE CONSULTING ENGINEER, THE ARCHITECT AND THE OWNER FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE OR EXPENSE, INCLUDING ATTORNEY'S FEES ARISING FROM FAILURE OR ALLEGED FAILURE ON THE PART OF THE CONTRACTOR, HIS SUBCONTRACTORS AND HIS AND THEIR AGENTS, SERVANTS AND EMPLOYEES TO PROVIDE AND MAINTAIN A SAFE PLACE TO WORK OR TO COMPLY WITH ALL LAWS AND REGULATIONS OF ANY GOVERNMENTAL AUTHORITY HAVING JURISDICTION THEREOF.

2. THE CONTRACTOR AND EACH SUBCONTRACTOR COVENANTS AND AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS THE CONSULTING ENGINEER THE ARCHITECT AND THE OWNER FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE OR EXPENSE, INCLUDING ATTORNEY'S FEES ARISING FROM A FAILURE OR ALLEGED FAILURE ON THE PART OF THE CONTRACTOR, HIS SUBCONTRACTORS AND HIS AND THEIR AGENTS, SERVANTS AND EMPLOYEES PROPERLY TO DISCHARGE THE OBLIGATIONS ASSUMED BY HIM OR THEM IN THE PERFORMANCE OF THE WORK, INCLUDING ANY ACT OR OMISSION ALLEGEDLY RESULTING IN DEATH OR PERSONAL INJURY OR PROPERTY DAMAGE OR IMPROPER CONSTRUCTION, CONSTRUCTION TECHNIQUES OR THE USE OF IMPROPER OR INAPPROPRIATE MATERIAL OR TOOLS.

3. THE CONTRACTOR AGREES THAT ANY CONTROVERSY OR DISPUTE TO WHICH THE CONTRACTOR, THE ARCHITECT, AND THE CONSULTING ENGINEERS ARE PARTIES SHALL BE SUBMITTED TO ARBITRATION FOR DECISION IN ACCORDANCE WITH THE RULES OF SUCH ASSOCIATION FOR CONSTRUCTION INDUSTRY DISPUTES. ALL SUBCONTRACTORS LIKEWISE AGREE TO SUBMIT TO SUCH ARBITRATION ANY DISPUTE BETWEEN OR AMONG THEM, THE CONTRACTOR, THE ARCHITECT AND THE CONSULTING ENGINEERS, AND THE CONTRACTOR AGREES TO MAKE AVAILABLE TO THE CONSULTING ENGINEERS ON DEMAND SIGNED COPIES OF THE CONTRACT BETWEEN THE OWNER AND THE CONTRACTOR AND BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS. THE CONTRACTOR AND EACH SUBCONTRACTOR AGREE THAT BY SUBMITTING A BID WHICH IS ACCEPTED, THIS PARAGRAPH SHALL BE DEEMED A WRITTEN AGREEMENT TO SUBMIT ANY CONTROVERSY THEREAFTER ARISING ARBITRATION.

4. ALL WORK SHALL BE DONE IN CONFORMANCE WITH ALL GOVERNING CODES, INCLUDING AMENDMENTS, BULLETINS, ETC., AS WELL AS STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDING, AND REQUIREMENTS OF THE OWNER.

5. SCOPE: PROVIDE LABOR, MATERIALS, EQUIPMENT AND SERVICES FOR COMPLETE ELECTRICAL SYSTEMS AS SHOWN ON THE DRAWINGS AND AS REQUIRED BY APPLICABLE CITY, STATE AND FEDERAL CODES, INCLUDING OSHA. PAY ALL FEES AND OBTAIN ALL CERTIFICATES AND PERMITS REQUIRED TO BEGIN AND COMPLETE CONSTRUCTION. USE ALL NEW UL LISTED EQUIPMENT. ALL EQUIPMENT SHALL BE BUILDING STANDARD OR SUBJECT TO BUILDING APPROVAL PRIOR TO INSTALLATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT ANY AND ALL EQUIPMENT BEING INSTALLED IS ACCEPTABLE TO THE BUILDING MANAGEMENT. INCLUDE ALL TEMPORARY LIGHTING AND POWER DURING CONSTRUCTION. INCLUDE ALL TEMPORARY LIGHTING AND POWER DURING CONSTRUCTION. INTERRUPTION OF POWER IF REQUIRED SHALL BE COORDINATED WITH THE BUILDING MANAGEMENT.

6. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM GOVERNING AUTHORITIES.

7. ALL EQUIPMENT AND MATERIALS SHALL BE NEW, UL LISTED AND SHALL CONFORM TO ANY ADDITIONAL LABELING, TESTING AND CONSTRUCTION REQUIREMENTS ESTABLISHED BY THE GOVERNING AUTHORITIES. THE SAME SHALL BE GUARANTEED FOR 1 YEAR SUBSEQUENT TO FINAL ACCEPTANCE.

8. COORDINATE SCHEDULING OF ALL WORK TO BE PERFORMED WITH OWNER AND INCLUDE ALL NECESSARY PREMIUM TIME REQUIRED FOR SHUTDOWNS, WORK IN OCCUPIED AREAS, ETC.

9. NO ELECTRICAL CONNECTIONS SHALL BE MADE TO, OR WORK PERFORMED ON, ENERGIZED EQUIPMENT.

10. ALL AREAS ASSOCIATED WITH WORK TO BE PERFORMED SHALL BE EXAMINED. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR CONDITIONS FOUND DURING INSTALLATION.

11. SURVEY EXISTING SPACE, CLOSETS AND PANELBOARDS TO VERIFY SUITABILITY OF INSTALLATION DESIGN INDICATED. ANY MODIFICATIONS NECESSARY TO COMPLY WITH THE DESIGN INDICATED. ANY MODIFICATIONS NECESSARY TO COMPLY WITH THE DESIGN INTENT SHALL BE INCLUDED IN BID SUBMITTED AND SHALL BE HIGHLIGHTED SO THAT CONSIDERATION TO THE SAME IS GIVEN DURING BID EVALUATION. INCLUDED IN THIS REQUIREMENT, SHALL BE THE EVALUATION OF THE AVAILABILITY OF BRANCH CIRCUIT CAPACITY TO ACCOMMODATE THE NUMBER OF BRANCH CIRCUITS TO ALTERNATE PANELS OR THE ADDITION OF SUPPLEMENTAL PANELS, INCLUDING FEEDERS, SHALL BE INCLUDED IN BID PROPOSAL CIRCUIT NUMBERS INDICATING ARE REFERENCE ONLY.

12. ELECTRICAL CONTRACTOR SHALL VERIFY ELECTRICAL REQUIREMENTS OF ALL EXISTING AND NEW EQUIPMENT TO BE USED. ALL SPECIAL PURPOSE OUTLETS INDICATED ON PLAN SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER TO ENSURE PROPER WIRING AND COMPARABILITY WITH ATTACHMENT PLUGS THAT MAY BE FURNISHED AS AN INTEGRAL PART OF THE EQUIPMENT.

13. PROVIDE PLYWOOD BACKBOARD ON CLOSET WALLS FROM FLOOR TO 8 FEET ABOVE FINISHED FLOOR WHERE EQUIPMENT IS TO BE MOUNTED. BACKBOARD TO BE FIRE RETARDANT.

B. WORKMANSHIP: ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER.

C. MATERIALS: ALL MATERIALS SHALL BE OF THE BEST QUALITY FOR THE PURPOSE INTENDED. TRADE NAMES AND CATALOG NUMBERS ARE INTENDED TO INDICATE THIS QUALITY. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND/OR MANUFACTURERS CERTIFIED CUTS TO THE ENGINEER AND THE ARCHITECT AND OBTAIN WRITTEN APPROVAL FROM THE ENGINEER AND THE ARCHITECT FOR ANY AND ALL SUBSTITUTIONS.

D. MOTORS: THE HORSEPOWER INDICATED ON PLANS AND/OR IN SCHEDULES ARE THE HORSEPOWER REQUIREMENTS OF EQUIPMENT FURNISHED UNDER OTHER SECTIONS OF WORK. ALL FEEDERS (CONDUIT AND WIRING) AND DISCONNECTING DEVICES SHALL BE OF THE SIZES AND CAPACITIES TO SUIT THE HORSEPOWER OF MOTORS ACTUALLY FURNISHED UNDER THE VARIOUS SECTIONS.

E. CUTTING AND PATCHING: ALL CUTTING AND PATCHING IN CONNECTION WITH THIS TRADE SHALL BE DONE AS PART OF THIS CONTRACT. THIS CONTRACT SHALL BE RESPONSIBLE FOR THE REPAIR AND/OR REPLACEMENT (INCLUDING ALL LABOR AND MATERIAL COSTS) FOR ANY OR ALL DAMAGE DONE BY HIMSELF OR HIS WORKMAN, AND SHALL COORDINATE HIS WORK WITH THAT OF THE OTHER TRADES. ALL WORK SHALL BE DONE TO THE SATISFACTION OF THE ARCHITECT.

F. PROTECTION: KEEP CONDUITS AND OTHER OPENINGS CLOSED TO PREVENT THE ENTRY OF FOREIGN MATTER; COVER FIXTURES, EQUIPMENT AND APPARATUS AND PROTECT AGAINST DIRT, WATER, CHEMICAL OR MECHANICAL DAMAGE, BEFORE AND DURING THE CONSTRUCTION PERIOD UNTIL FINAL ACCEPTANCE, INCLUDING RESTORATION OF DAMAGED SHOP COATS OF PAINT. EQUIPMENT SHALL BE DELIVERED AND STORED ON SITE, PROPERLY PACKAGED AND CRATED UNTIL FINAL INSTALLATION.

G. COORDINATION WITH OTHER TRADES: RENDER FULL COOPERATION TO OTHER TRADES. WHERE WORK OF CONTRACTORS WILL BE INSTALLED IN CLOSE PROXIMITY TO WORK OF OTHER TRADES, THIS CONTRACTOR SHALL ASSIST IN WORKING OUT SPACE CONDITIONS. IF CONTRACTOR INSTALLS WORK BEFORE COORDINATING WITH OTHER TRADES, OR CAUSES INTERFERENCE'S, HE SHALL MAKE CHANGES NECESSARY TO CORRECT CONDITION WITHOUT ANY EXTRA CHARGE. CONTRACTOR SHALL COORDINATE WITH THE SPRINKLER CONTRACTOR FOR THE LOCATION AND TYPE OF TAMPER SWITCHES, WATER FLOW SWITCHES, REQUIRED CONTACTS, VOLTAGES, AND WIRING DIAGRAMS. CONTRACTOR FOR THE LOCATION AND TYPE OF COMBINATION FIRE SMOKE DAMPERS, DUCT SMOKE DETECTORS, REQUIRED CONTACTS, VOLTAGES, AND WIRING DIAGRAMS.

H. GUARANTEE AND SERVICE: UPON ACCEPTANCE OF CONTRACT, CONTRACTOR AGREES TO GUARANTEE ALL HIS WORK AND EQUIPMENT FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF INITIAL START UP. MANUFACTURER'S GUARANTEE AND SHALL NOT BE LESS THAN ONE (1) YEAR.

I. INSURANCE: CONTRACTOR SHALL MAINTAIN SUCH LIMITS OF INSURANCE AS DIRECTED UNDER THE GENERAL CONDITIONS.

J. TEMPORARY LIGHT AND POWER: PROVIDE AND MAINTAIN ALL FACILITIES FOR TEMPORARY LIGHT AND POWER WITHIN THE CONSTRUCTION AREA DURING THE ENTIRE BUILDING PERIOD, FOR SAFETY OF PERSONNEL, UTILIZING THE EXISTING ELECTRIC SERVICE WITHIN THE AREA AS ARRANGE WITH THE BUILDING OWNER BY THE ELECTRICAL CONTRACTOR.

K. SHOP DRAWINGS: SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO ORDERING AND INSTALLATION OF THE SAME, FOUR COPIES OF EACH SUBMITTAL ARE REQUIRED.

L. LOCATIONS: DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS. CIRCUIT NUMBERS ARE FOR IDENTIFICATION ONLY, USE AVAILABLE SPARE CIRCUIT BREAKERS, ELECTRICAL CONTRACTOR TO VERIFY IN THE FIELD. FOR EXACT LOCATION OF RECEPTACLE, LIGHTING FIXTURES, TELEPHONE AND SIGNAL OUTLETS REFER TO ARCHITECTURAL DRAWINGS. WHERE NEW WORK INTERRUPTS THE EXISTING ELECTRICAL OR TELEPHONE SYSTEM WHICH IS TO REMAIN, EXISTING SYSTEMS SHALL BE MODIFIED AS REQUIRED TO MAINTAIN CONTINUITY OF SERVICE.

M. RUBBISH: REMOVE RUBBISH FROM PREMISES AS OFTEN AS DIRECTED. ALL WORK AND EQUIPMENT SHALL BE CLEANED TO THE SATISFACTION OF THE OWNER AND TENANT BEFORE TURNING SAME OVER TO THE OWNER AND TENANT.

N. AS BUILT DRAWING: SUBMIT DRAWING INDICATING AS BUILT CONDITION INCLUDING COMPLETED PANEL SCHEDULES WHEN INSTALLATION IS COMPLETE. ONE (1) PRINT AND ONE (1) SEPIA SHALL BE SUBMITTED TO TANGEL ENGINEERING ASSOCIATES, INC. FOR OUR RECORDS AS WELL AS ANY AND ALL DRAWINGS REQUESTED BY THE BUILDING OWNER AND TENANT.

## 2. SCOPE OF WORK

A. SUBMIT APPLICATIONS AND FILE FOR NEW ELECTRIC UTILITY SERVICE WITH LOCAL UTILITY.
B. FURNISH AND INSTALL UNDERGROUND CONDUITS & FEEDERS FROM EXISTING UTILITY MANHOLE TO NEW SERVICE END BOX.
C. FURNISH AND INSTALL NEW ELECTRIC METERS, TRANS S, MANHOLES, CABINETS, TROUGHS, CONDUITS, SWITCHES, DISTRIBUTION BOARDS ETC... AS REQUIRED FOR NEW ELECTRIC SERVICE.
D. FURNISH AND INSTALL NEW OUTDOOR, PAD MOUNTED, EMERGENCY GENERATOR, CONCRETE PAD, UNDERGROUND CONDUITS AND WIRING AND AN ASSOCIATED AUTOMATIC TRANSFER SWITCHES.
E. FURNISH AND INSTALL ALL NEW PANELBOARDS.
F. DEMO EXISTING ELECTRIC SERVICE AND ASSOCIATED PANELBOARDS & METERS.
G. TEMPORARY LIGHT AND POWER AS REQUIRED BY ALL TRADES.
H. LIGHTING, INCLUDING LIGHTING FIXTURES AND LAMPS, WIRING DEVICES AND RECEPTACLES, AND FIXTURE SUPPORTS.
I. POWER WIRING AND BRANCH CIRCUIT WIRING.
J. CONNECTIONS TO EXISTING HOUSE DISTRIBUTION PANELS INCLUDING ALL REQUIRED CIRCUIT BREAKERS, SWITCHES AND WIRING.
K. TELEPHONE AND DATA CONDUIT SYSTEM, CABLES, PUNCHDOWN BOARDS AND DATA EQUIPMENT RACKS AS INDICATED ON DRAWINGS.
L. WIRING DEVICES FOR COMPUTERS, PRINTERS, ETC.
M. FIRE ALARM SYSTEMS
N. FURNISH AND INSTALL ALL FIRE ALARM DEVICES INCLUDING FIRE SPEAKERS, STROBES, COMBINATION SPEAKER STROBES,FAIL SAFE DOOR RELAYS, MAGNETIC DOOR HOLDERS, AREA SMOKE DETECTORS, ETC. (COMBINATION SMOKE FIRE DAMPERS AND DUCT SMOKE DETECTORS SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR) , AND WIRE ALL DEVICES. CONTRACTOR SHALL BE RESPONSIBLE FOR PURCHASING ALL REQUIRED FIRE ALARM DEVICES. THE CONTRACTOR SHALL FURTHER BE RESPONSIBLE FOR OBTAINING PERMITS, APPROVALS, ETC.). ALL BUILDING DEPARTMENT AND FIRE DEPARTMENT PERMITS AND FEES, INCLUDING EXPEDITING SERVICES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
O. CONTRACTOR SHALL CORE DRILL AND FIRE PROOF ALL FLOORS AS REQUIRED FOR POWER, DATA, TELEPHONE AND FIRE ALARM WIRING AND CONDUIT PENETRATIONS.
P. CONTRACTOR SHALL CHASE ALL FLOORS AND WALLS AS REQUIRED TO INSTALL DEVICES AND PATCH.
Q. CONTRACTOR SHALL FURNISH AND INSTALL NEW SWITCHES, PANELBOARDS, TRANSFORMERS, FEEDERS, DEVICES, ETC. AS SHOWN.
R FURNISH AND INSTALL EMERGENCY LIGHTING AND EXIT LIGHTS.
S. FURNISH AND INSTALL SECURITY SYSTEM AS PER THE ARCHITECTS DRAWINGS.
T. ALL ELECTRICAL WORK RELATED TO THE WATER FILTRATION, ACID AND BICARBONATE SYSTEMS SHALL BE INSTALLED AS SHOWN IN THE WATER FILTRATION CONTRACTORS PLANS AND SPECIFICATIONS.

## 3. WIRE AND CABLE

A. WIRE SHALL BE COPPER. INSULATION TYPE 'THHN'.
B. CONDUCTOR SIZE SHALL BE AS INDICATED ON DRAWINGS, NOT LESS THAN #12 AWG (THHN) FOR POWER AND LIGHTING WORK; NOT LESS THAN #14 FOR CONTROL WIRING CIRCUITS. CONDUCTORS IN EXCESS OF 100 FEET SHALL BE #10.
C. FACTORY COLOR CODING USING THE SAME CODE THROUGHOUT SHALL BE AS FOLLOWS: 120/208 VOLTS - BLACK, RED, BLUE AND WHITE; WHITE CONDUCTOR SHALL SERVE AS NEUTRAL CONDUCTOR. GREEN CONDUCTOR SHALL BE USED WHERE GROUND WIRE IS SPECIFIED. 265/460 VOLTS - BROWN, ORANGE, YELLOW AND GRAY; GRAY CONDUCTOR SHALL SERVE AS NEUTRAL CONDUCTOR.
D. ALL POWER AND COMMUNICATION CABLES WITHIN PERIMETER HEATING UNIT ENCLOSURES TO BE WITHIN CONDUIT.
E. ALL TELEPHONE AND DATA CABLING SHALL BE AS PER PLANS.
F. ALL CABLE TO FIRE ALARM DEVICES SHALL BE AS PER THE BASE BUILDING FIRE ALARM COMPANY SPECIFICATIONS
G. ALL TELEPHONE OUTLETS, DATA, COMMUNICATIONS, FIRE ALARM, ETC. SHALL BE AS SHOWN ON THE ELECTRICAL DRAWINGS.
H. ALL DATA AND TELEPHONE CABLE SHALL BE 4 PAIR, 24 GAUGE CAT 5E PLENUM RATED CABLE AND SHALL BE ROUTED AS PER DRAWINGS.

## 4. TAPS, SPLICES AND TERMINATIONS

A. CONNECTORS FOR LIGHTING FIXTURES FROM BRANCH CIRCUIT WIRING SHALL BE MADE WITH TWIST ON TYPE CONNECTORS, T&B SERIES PT-L, OR EQUAL OF 3M OR IDEAL.

## 5. CONDUITS AND FITTINGS

A. CONDUITS: ALL POWER WIRING IN RACEWAYS; MINIMUM SIZE CONDUIT TO BE 3/4". USE EMT IN HUNG CEILING, EXPOSED DRY LOCATIONS AND HOLLOW WALL SPACES. USE FLEXIBLE METAL CONDUIT IN SHORT LENGTHS TO FIXTURES. USE LIQUID TIGHT METAL CONDUIT AT MOTOR CONNECTIONS. UTILIZE EXISTING CONDUIT AS PER FIELD CONDITIONS. GREENFIELD OR BX WILL NOT BE PERMITTED EXCEPT WHERE REQUIRED BY CODE I.E. CONNECTION TO LIGHT FIXTURES, ETC.
B. FITTINGS: FITTINGS FOR EMT SHALL BE STEEL, CONCRETE TIGHT WITH INSULATED THROATS, T&B SERIES 5123 AND 5120, OR APPROVED EQUAL. FITTINGS FOR FLEXIBLE METAL CONDUITS SHALL BE STEEL WITH NYLON INSULATED THROATS. BUSHINGS FOR CONDUITS 1" AND LARGER SHALL BE THE INSULATING TYPE, T&B SERIES 222, OR APPROVED EQUAL. GROUNDING BUSHINGS SHALL BE O.Z. TYPE BLG, OR APPROVED EQUAL. CONDUIT TERMINATIONS, EXCEPT CONDUIT FOR TELEPHONE, SIGNAL AND OTHER LOW TENSION SERVICES, SHALL HAVE DOUBLE LOCKNUTS, T&B SERIES 141 OR AS APPROVES.

## 6. OUTLET BOXES

A. GALVANIZED STEEL AND OF STANDARD SIZES SUITABLE FOR THE USE INTENDED AND CONFORMING TO THE FOLLOWING:
B. OUTLETS IN GYPSUM-BOARD WALLS FOR SWITCHES, RECEPTACLES, TELEPHONE, ETC. TO BE 4" SQUARE WITH PLASTIC COVERS. DEPTH OF BOXES SHALL BE AS REQUIRED BY CODE TO ACCOMMODATE THE CONDUITS, NUMBER OF WIRES, SPLICES AND DEVICES TO BE INSTALLED. ALL OUTLETS FOR THE ATTACHMENT OF FIXTURES TO BE PROVIDED WITH FIXTURE STUDS SECURELY ANCHORED TO THE BOXES.

## 7. WIRING DEVICES

A. RECEPTACLES: ALL RECEPTACLES TO BE PROVIDED WITH U SHAPED GROUNDING CONTACT. ALL RECEPTACLES SHALL BE AS SPECIFIED BELOW UNLESS OTHERWISE NOTED BY THE ARCHITECT.
B. ALL DUPLEX RECEPTACLES SHALL BE SIMILAR TO LEVITON 'DECORA' TYPE WITH GROUNDING CONTACT. FINISH SHALL BE WHITE. FINISH PLATES SHALL BE WHITE WITH WHITE SCREWS. AMPERAGE RATING SHALL BE AS INDICATED ON PLANS (15 A OR 20 A)
C. ALL DEDICATED DUPLEX RECEPTACLES SHALL BE LEVITON 'DECORA' TYPE WITH GROUNDING CONTACT. FINNISH SHALL BE WHITE, WITH AN ORANGE TRIANGLE TO INDICATE DEDICATED RECEPTACLE. FINISH PLATES SHALL BE WHITE WITH WHITE SCREWS.
D. ALL LIGHT SWITCHES SHALL BE LEVITON 'DECORA' TYPE ROCKER SWITCHES SUITABLE FOR THE VOLTAGE AND WATTAGE DRAWN. FINISH SHALL BE WHITE. FINISH PLATE SHALL BE WHITE WITH WHITE SCREWS.
E. ALL DIMMER SWITCHES SHALL BE LEVITON 'DECORA' SLIDE TYPE DIMMERS SUITABLE FOR VOLTAGE AND WATTAGE DRAWN.
F. ALL DEVICES SHALL BE GANGED IN A COMMON GANGED FINISH PLATE AS REQUIRED TO ACCOMMODATE ALL SWITCHES AND/OR RECEPTACLES.
G. ALL DATA/ TELEPHONE OUTLETS SHALL HAVE FOUR SPACES FOR JACKS WITH (2)JACKS INSTALLED IN EACH OUTLET. (1) JACK SHALL BE FOR DATA AND (1) JACK SHALL BE FOR TELEPHONE. THE DEVICE FINISH SHALL BE WHITE AND SHALL BE SECURED TO THE WALL JUNCTION BOX. THE DATA/ TELEPHONE OUTLETS SHALL MATCH THE EXISTING DEVICES IN THE EXISTING REMAINING TENANT SPACE. SPECIFICATIONS FOR THE EXACT DEVICE SHALL BE PROVIDED BY THE TENANT.

8. LIGHTING FIXTURES: ALL LIGHTING FIXTURES SHALL BE AS SPECIFIED ON THE ELECTRICAL DRAWINGS UNLESS OTHERWISE NOTED BY THE ARCHITECT.
A. FURNISH, INSTALL AND SET ALL LIGHT FIXTURES INCLUDING FLUORESCENT STRIP LIGHTS AND EXIT LIGHTS.
B. INCLUDE ALL NECESSARY SUPPORTS AND HANGERS WHERE REQUIRED. ALL FIXTURES SHALL BE SUPPLIED COMPLETELY WIRED, ASSEMBLED AND READY FOR INSTALLATION.
C. FINISHES SHALL BE AS APPROVED BY THE ARCHITECT AND ALL FIXTURES SHALL HAVE THE UL LABEL.
D. ALL FLUORESCENT LIGHT FIXTURES SHALL BE RETURN AIR TYPE.

## 9. REMOVALS

A. ABANDONED WIRING AND DEVICES SHALL BE PROPERLY REMOVED AND CAPPED WITH ABANDONED WIRING REMOVED. ELECTRICAL ITEMS NOT INDICATED ON DRAWINGS SHALL BE REMOVED AND PATCHED.

## 10. TELEPHONE AND SIGNAL

A. ALL WALL MOUNTED TELEPHONE AND DATA OUTLETS SHALL BE PROVIDED WITH A SINGLE OUTLET REDUCING PLATE AND EITHER A) 3/4" CONDUIT TO THE FLOOR CELL WHERE THE FLOOR CELL IS AVAILABLE.
B. A 3/4" CONDUIT WITH FLOOR POKE-THROUGH TO THE FLOOR CELL SYSTEM OR
C. A 3/4" CONDUIT STUB UP WITH A 90° BEND APPROXIMATELY 6" ABOVE THE HUNG CEILING. NO DATA OR TELEPHONE CABLE MAY BE EXPOSED TO VIEW.
D. THE FURNISHING AND INSTALLING OF ALL DATA AND TELEPHONE CABLING INCLUDING ALL TERMINATIONS SHALL BE INCLUDED IN THIS SCOPE OF WORK.
E. EACH TELEPHONE OUTLET SHALL HAVE (1) 2-PAIR CAT-5E CABLE PLENUM RATED DATA CABLES FROM THE JACK TO THE PUNCHDOWN BOARD IN STORAGE ROOM 131.
F. EACH TELEPHONE DATA OUTLET SHALL HAVE (2) 2-PAIR CAT-5E PLENUM RATED DATA CABLES FROM THE JACKS TO THE PUNCHDOWN BOARD IN STORAGE ROOM 131.

## 11. GROUNDING

A. THE ELECTRICAL SYSTEM AND EQUIPMENT SHALL BE GROUNDED. THE GROUNDING CONDUCTOR SHALL BE AN INSULATED COPPER WIRE OF THE REQUIRED SIZE. ACCESSIBLE CONNECTIONS SHALL BE MADE WITH MULTIPLE BOLT SILICON BRONZE CONNECTORS SPECIFICALLY DESIGNED AND APPROVED FOR THE CONNECTION TO BE MADE. CONNECTIONS SHALL BE AS MANUFACTURED BY BURNDY OR O.Z. ELECTRIC. GROUNDING CONDUCTORS SHALL BE PROVIDED ACROSS METAL PARTS WHICH ARE SEPARATED BY NON CONDUCTING MATERIALS OR JOINED SO THERE IS HIGH RESISTANCE AT THE JOINTS.

## 12. SAFETY SWITCHES

SAFETY SWITCHES SHALL BE HORSEPOWER RATED HEAVY DUTY TYPE WITH QUICK -MAKE/ QUICK-BREAK MECHANISM AND COVER INTERLOCK. HANDLE SHALL BE CAPABLE OF BEING PADLOCKED IN THE OFF POSITION. SWITCH SHALL BE FUSED OR UN-FUSED AS INDICATED. DISCONNECT SWITCHES FOR FANS SHALL HAVE BUILT IN THERMAL OVERLOADS.

## 14. PANELBOARDS AND CABINETS

A. PANELBOARD CABINETS SHALL BE OF THE GENERAL PURPOSE, DEAD FRONT TYPE FOR FLUSH OR SURFACE WALL MOUNTED AS INDICATED ON THE DRAWINGS. MOUNT THE TOP OF THE CABINET 6'-6" ABOVE FINISHED FLOOR. CABINET SHALL BE FABRICATED FROM HOT GALVANIZED SHEET METAL GAUGES SHALL MATERIAL BE LIGHTER THAN 14 GAUGE. OUTSIDE OR SURFACE MOUNTED CABINETS, TRIM AMD PANELBOARD FRONTS SHALL BE GIVEN A COAT OF ZINC CHROMATE PRIMER AND ONE FINISH COAT OF ENAMEL. TRIM OF PANELBOARD FRONT SHALL BE MADE OF COLD ROLLED SHEETMETAL OF GAUGES AS REQUIRED BY UL, EXCEPT THAT THEY SHALL NOT BE LESS THAN12 GAUGE. TRIM SHALL HAVE DOORS WITH CONCEALED HINGES AND SHALL HAVE FLUSH MOUNTED TYPE COMBINATION LOCK AND CATCH OR A MULTIPLE POINT CONTACT CATCH. EACH LOCK SHALL BE PROVIDED WITH TWO MILLED TYPE KEYS. ALL PANELBOARDS SHALL BE KEYED ALIKE. TYPEWRITTEN DIRECTORIES UNDER GLASSINE SHALL BE PROVIDED ON DOORS. DIRECTORIES SHALL CLEARLY INDICATE CIRCUIT NUMBERS AND DESCRIPTION OF THE ASSOCIATED BRANCH CIRCUIT. DIRECTORIES FOR SWITCH AND FUSED PANELS SHALL ALSO INDICATE WSWITCH, FUSE AND BRANCH FEEDER SIZE. ALL DETAIL CHARACTERISTICS SUCH AS NUMBER OF BRANCHES, FRAME OR AMPERE RATING, TRIP OR FUSE SIZE, ETC... SHALL BE AS INDICATED ON DRAWINGS. EACH CABINET SHALL HAVE A GROUND LU WELDED TO THE INSIDE OF EACH CABINET BOX. GUTTER SIZES SHALL BE ACCORDANCE WITH NYC CODE PARAGRAPH B30-47V. MINIMUM GUTTER SIZE FOR ALL POWER DISTRIBUTION PANELS SHALL BE 6". FINISH COAT OF ENAMEL SHALL BE GRAY FOR 120/208 VOLT PANELS. CIRCUIT BREAKERS SHALL BE OF THE BOLT ON TYPE. A THREADED BOLT SHALL BE INSTALLED IN THE TOP LIP OF THE PANEL BOARD BOX AND A HOLE SHALL BE DRILLED IN THE FACE OF THE PANEL TO ALLOW FOR EASY MOUNTING AND REMOVAL OF THE PANEL COVER.

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## 15. FIRE ALARM

A. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL FIRE ALARM DEVICES AND ASSOCIATED CABLING AS PER THE PLANS AND DIAGRAMS.
B. ALL FIRE ALARM DEVICES WILL BE COMPATIBLE WITH THE NEW FIRE ALARM SYSTEM. ALL DEVICES SHALL BE PURCHASED FROM THE SAME MANUFACTURER.
D. ALL STROBES, SPEAKERS AND COMBINATION SPEAKER STROBES SHALL BE WHITE.
E. THE CONTRACTOR SHALL INCLUDE IN HIS BID FILING FOR AND OBTAINING ALL PERMITS AND APPROVALS FROM ALL AUTHORITIES HAVING JURISDICTION.

## ELECTRIC LEGEND

| Symbol | Description |
|---|---|
| | DUPLEX OUTLET (GENERAL PURPOSE) |
| GFI | GROUND FAULT INTERRUPT OUTLET |
| | SEPARATE CIRCUIT DUPLEX OUTLET |
| GFI/HG | HOSPITAL GRADE GFI OUTLET |
| | DEDICATED DUPLEX OUTLET (HOT, NEUTRAL AND GROUND WIRE SHALL NOT BE CONNECTED TO ANY POWER OTHER THEN DEDICATED OUTLETS) |
| | SPECIALTY OUTLET (SEE PLAN FOR INFO) |
| | POWER WIRING HOMERUN TO POWER PANEL |
| | FLUSH MOUNTED FLOOR GENERAL PURPOSE DUPLEX OUTLET. CONNECT TO UNDERFLOOR RACEWAY SYSTEM AND/OR CHASE FLOORS AND PROVIDE 3/4" E.C. WITH DRAG LINE TO WALL OR COLUMN TO ABOVE H.C.. |
| | FLUSH MOUNTED FLOOR DATA AND TELEPHONE OUTLET. CONNECT TO UNDERFLOOR RACEWAY SYSTEM AND/OR CHASE FLOORS AND PROVIDE 3/4" E.C. WITH DRAG LINE TO WALL OR COLUMN TO ABOVE H.C.. |
| | WALL MOUNTED FLUSH TELEPHONE/DATA OUTLET WITH DOUBLE GANG BACK BOX WITH REDUCER AND SINGLE GANG FACE PLATE. PROVIDE 3/4" E.C. UP TO ABOVE H.C. WITH NYLON DRAG LINE. |
| | WALL MOUNTED FLUSH TELEPHONE OUTLET IN A SINGLE GANG BACK BOX. PROVIDE 3/4" E.C. UP TO ABOVE HUNG CEILING (H.C.) WITH NYLON DRAG LINE. |
| 2 | QUAD (DOUBLE DUPLEX) OUTLET. (2) SIGNIFIES QUAD FOR ANY TYPE OF OUTLET. |
| TS | TAMPER SWITCH (FURNISHED BY SPRINKLER CONTRACTOR) |
| WF | WATER FLOW SWITCH (FURNISHED BY SPRINKLER CONTRACTOR) |
| FSR | FAN SHUTDOWN RELAY TO STOP FANS UPON FIRE ALARM. |
| DSD | DUCT MOUNTED SMOKE DETECTOR (FURNISHED AND MOUNTED BY HVAC CONTRACTOR) |
| F | FIRE ALARM MANUAL PULL STATION |
| M | ELECTRIC METER |
| | COMBINATION HORN/STROBE |
| | FIRE ALARM STROBE |
| | EXIT SIGN |
| | DISCONNECT SWITCH |
| J | JUNCTION BOX |
| $ | WALL SWITCH |
| $ | OCCUPANCY SENSING WALL SWITCH |
| | EMERGENCY LIGHT |
| EM/NL | EMERGENCY LIGHT, NIGHT LIGHT |
| EM | OUTDOOR EM LIGHT |
| CFSDAD | COMBINATION SMOKE FIRE DAMPER W/ ACCESS DOOR |

JOB#: 9039
DATE: 1/16/07
SCALE: N/A
DRAWING NUMBER: E-9

OCEAN MEDICAL PROPERTIES
3 NORTH MAIN STREET
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DRAWING: ELECTRICAL SPECIFICATIONS

| REV #: | DATE: | NOTE: | BY: |
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| ⚠ | 4/08/10 | GENERAL REVISIONS | TET |

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