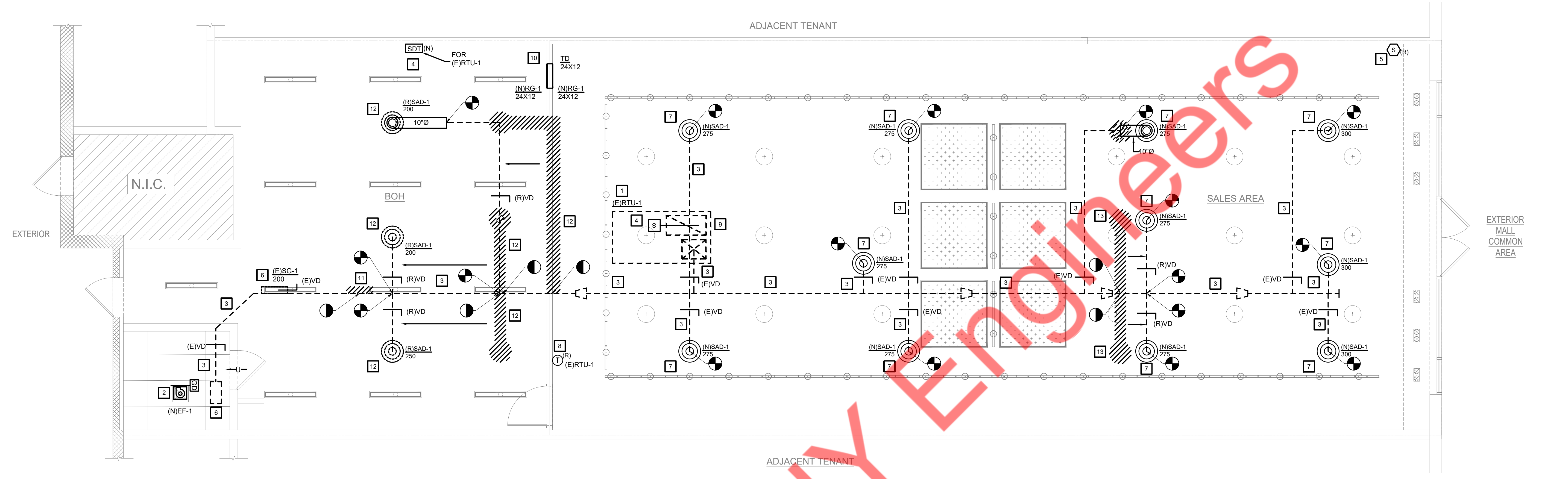


FILTERS MUST BE CHANGED AND ALL DUCT DETECTORS, IF EXISTING, MUST BE CLEANED WHEN YOUR BUILD-OUT CONSTRUCTION IS COMPLETED.

ALL PENETRATIONS OF FIRE RATED CONSTRUCTION MUST BE REINFORCED PER MANUFACTURER'S DETAILS OF THE SEALANT. THE DETAILS SHALL BE FOR EXISTING RANGES OF CONSTRUCTION BRING PENETRATED. PENETRATION DETAILS SHALL BE EXACTLY AS TESTED BY AN APPROVED TESTING LABORATORY OR AGENCY AND SHALL INCLUDE THEIR SYSTEM NUMBERS.

TENANT SHALL SECURE A CONTRACT FOR FACTORY RECOMMENDED MAINTENANCE AND SERVICE OF THE HVAC UNITS SERVING THE SPACE. SCOPE OF CONTRACT MUST BE REFERRED TO THE LABORATORY CONSULTANT MANAGEMENT STAFF FROM TO STORE OPENING.



1 MECHANICAL PLAN
1/8" = 1'-0"

NEW EXHAUST FAN / LIGHT COMBO SCHEDULE													
TAG	SERVES	FAN TYPE	AIRFLOW (CFM)	E.S.P. ("W.C.")	SONES	MOTOR			ELECTRICAL		WEIGHT (LBS)	MANUFACTURER/ MODEL #	
						HP	RPM	DRIVE	V/Ø/HZ	MCA	MOCF		
(NIEF-1)	TOILET ROOM	CEILING	75	0.2	2.5	-	1380	DIRECT	120/1/60	1.5	15	7.1	BROAN / HD80L

NOTES & ACCESSORIES:
 1. PROVIDE FAN WITH GRILLE, VIBRATION ISOLATORS, DISCONNECT SWITCH, INTEGRAL BACKDRAFT DAMPER, & ALL ACCESSORIES REQUIRED BY VENDOR FOR PROPER OPERATION.
 2. INTERLOCK WITH LIGHT SWITCH/OCCUPANCY SENSOR

AIR BALANCE					
UNIT	AREA SERVED	SUPPLY AIR	OUTSIDE AIR	RETURN AIR	EXHAUST AIR
(E)RTU-1	SEE PLAN	4000 CFM	530 CFM	3470 CFM	-
(NIEF-1)	TOILET	-	-	-	75 CFM
TOTAL:		4000 CFM	530 CFM	3470 CFM	75 CFM
BUILDING PRESSURE:				455 CFM	POSITIVE

NEW DIFFUSER, REGISTER, AND GRILLE SCHEDULE					
TAG	MAKE & MODEL	DIFFUSER/ GRILLE SIZE	NECK SIZE	CFM RANGE	DESCRIPTION
(NIRG-1)	TITUS 350RL	24X12	-	0-1000	STEEL CONSTRUCTION RETURN GRILLE. INDIVIDUALLY ADJUSTABLE 3/4" BLADE SPACING SET AT 35 DEGREES. BLADES PARALLEL TO THE LONG DIMENSION. PROVIDE WITH OPPOSED BLADE DAMPER & BORDER TYPE MATCH FOR THE CEILING MOUNTING.

1. COORDINATE FINAL ACCESSORIES, FINISHES, AND LENGTHS WITH CONSTRUCTION MANAGER & ARCHITECT PRIOR TO PROCUREMENT.
 2. SELECTION BASED ON TITUS OR APPROVED EQUIVALENT.

MECHANICAL LEGEND

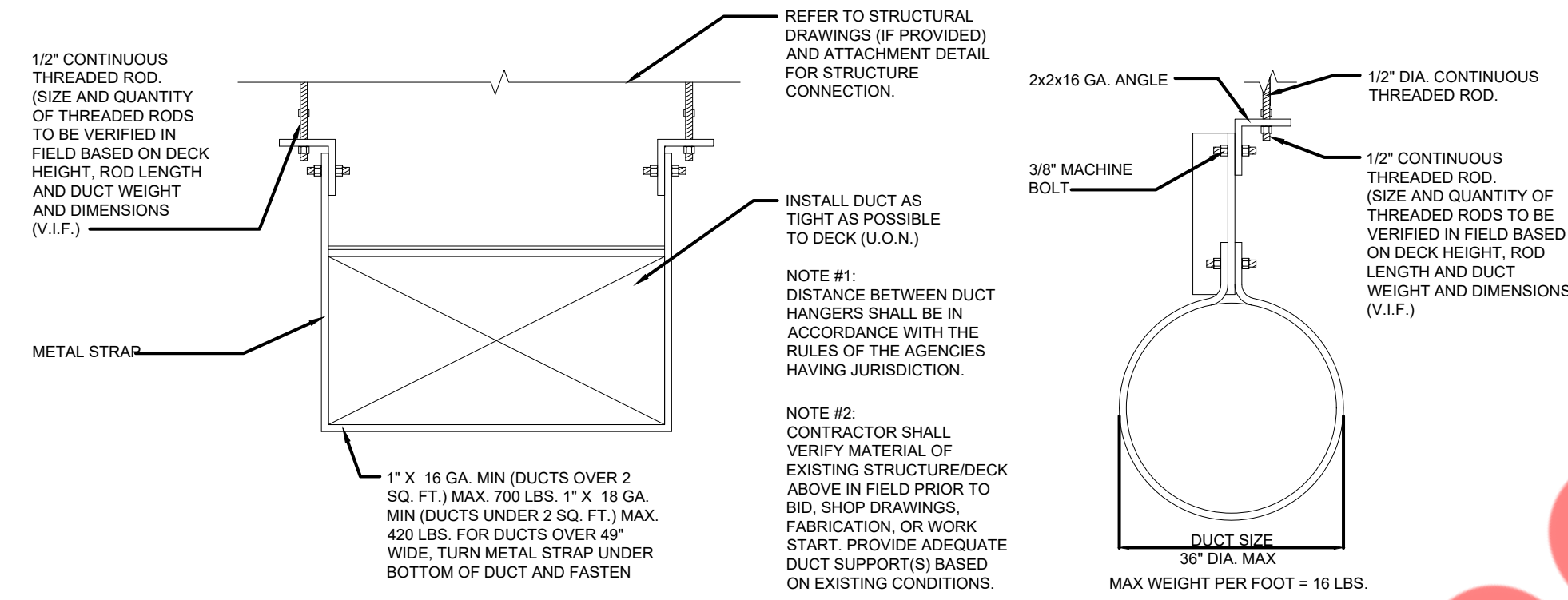
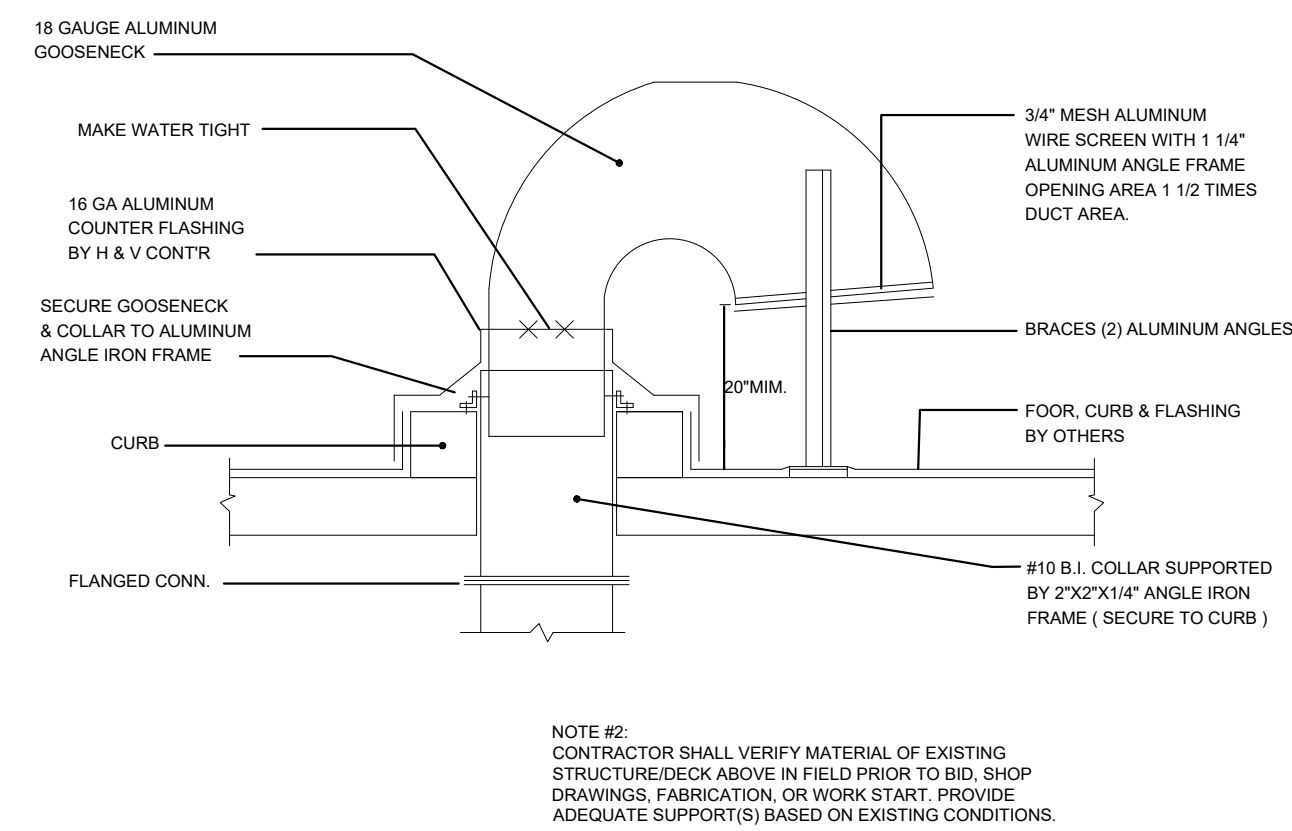
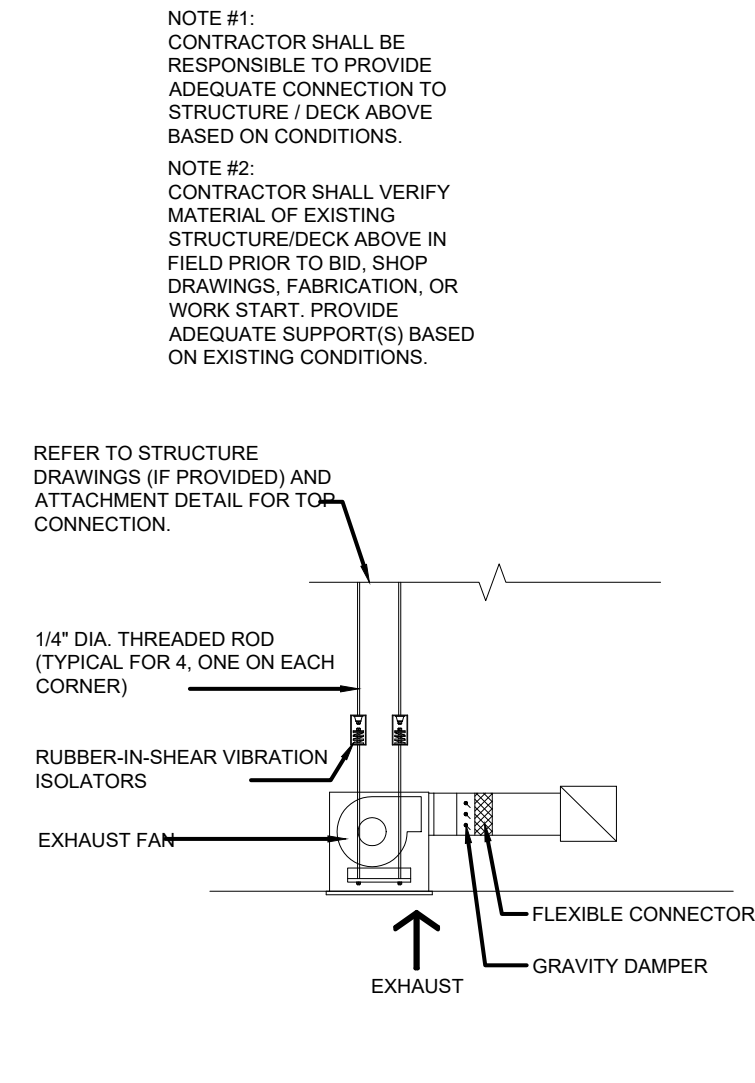
	CEILING SUPPLY AIR DIFFUSER (SAD)		NEW FLEX DUCT
	CEILING SUPPLY AIR DIFFUSER WITH BLANK-OFF SECTION		VOLUME DAMPER W/ REMOTE OPERATOR
	CEILING RETURN AIR GRILLE (RET)		TYPE OF AIR DEVICE
	EXHAUST FAN		X INCHES, SIDE OF DUCT SHOWING
	LINEAR SUPPLY/RETURN DIFFUSER (LENGTH PER PLANS)		MOTORIZED DAMPER
	NEW ROUND CEILING SUPPLY DIFFUSER		DUCT MOUNTED SMOKE DETECTOR
	WALL TRANSFER GRILLE (TG)		RELOCATE
	THERMOSTAT		NEW
	TEMPERATURE SENSOR		FIELD CONNECTION
	NEW DUCTWORK		DOOR UNDER CUT
	EXISTING DUCT TO REMAIN		SUPPLY AIR FLOW
	GRAVITY DAMPER		RETURN AIR FLOW

NOTE: SYMBOL LIST SHOWN IS FOR GENERAL REFERENCE ONLY. THE PRESENCE OF A SYMBOL DOES NOT IMPLY ITS USE ON THIS PROJECT. REFER TO DRAWINGS FOR SPECIFIC SYMBOLS USED.

KEY NOTES

- EXISTING MECHANICAL ROOFTOP UNIT TO REMAIN. CLEAN AND REFURBISH TO "LIKE-NEW" CONDITION. REPAIR/REPLACE ANY ACCESSORIES AS REQUIRED TO PROVIDE A FULLY FUNCTIONING UNIT. VERIFY IN FIELD PRIOR TO BID. ENSURE UNIT IS BALANCED TO 4000CFM PER EXISTING AS-BUILT CONDITIONS AND BALANCE OUTSIDE AIR DAMPER TO 530CFM. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO BID AND START OF WORK.
- PROVIDE NEW EXHAUST FAN/LIGHT COMBO WITH GRAVITY DAMPER & CONNECT TO EXISTING DUCTWORK. COORDINATE EXACT LOCATION, DISTANCE, & CONNECTION POINT IN FIELD. ENSURE TERMINATION OF THE EXHAUST DUCT AT ROOF PROVIDED WITH GOOSENECK AND INSECT SCREEN AND MINIMUM 10' AWAY FROM ANY FRESH AIR INTAKE.
- EXISTING DUCTWORK TO REMAIN. CONTRACTOR SHALL CLEAN AND REFURBISH TO "LIKE" NEW CONDITION. VERIFY EXACT LOCATION AND SIZE IN FIELD. CONTRACTOR SHALL PATCH AND SEAL DUCTWORK AIRTIGHT. INSPECT, PATCH, REPAIR, AND/OR REPLACE INSULATION AS REQUIRED. COORDINATE IN FIELD PRIOR TO BID.
- CONTRACTOR SHALL CLEAN AND REFURBISH EXISTING DUCT SMOKE DETECTOR IN RETURN DUCTWORK TO "LIKE NEW" CONDITION. ENSURE SMOKE DETECTOR IS IN GOOD WORKING ORDER. REPLACE IN KINDS IF DAMAGED. PROVIDE NEW IF REQUIRED. WIRE BACK TO NEW SMOKE DETECTOR (SDT) LOCATED IN BACK OF HOUSE.
- EXISTING TEMPERATURE SENSORS TO BE RE-USED & RELOCATED. CONTRACTOR TO VERIFY IN FIELD. REPLACE IN KINDS IF DAMAGED. COORDINATE WITH EXISTING UNIT MANUFACTURER FOR COMPATIBLE CONTROLS AS REQUIRED.
- EXISTING SUPPLY GRILLE TO REMAIN ALONG WITH ALL ASSOCIATED SUPPORTS, VOLUME CONTROL DAMPER AND DUCTWORK. CLEAN AND REFURBISH TO "LIKE NEW" CONDITION. CONTRACTOR SHALL BALANCE CFMS INDICATED ON PLAN. VERIFY IN FIELD PRIOR TO BID.
- CONTRACTOR TO REMOVE AND SCRAPE EXISTING SUPPLY DIFFUSER AND PROVIDE NEW TO MATCH WITH EXISTING. MODIFY DUCTWORK FOR THE DIFFUSER & BRANCH DUCT CONNECTION AS REQUIRED. CONTRACTOR SHALL BALANCE CFMS INDICATED ON PLAN. IN THE ABSENCE OF AN EXISTING VOLUME CONTROL DAMPER, PROVIDE A NEW ONE AS REQUIRED. VERIFY IN FIELD PRIOR TO BID.
- EXISTING THERMOSTATS TO BE RE-USED & RELOCATED. CONTRACTOR TO VERIFY IN FIELD, REPLACE WITH NEW IF DAMAGED.
- EXISTING RETURN AIR DUCTWORK TO REMAIN ALONG WITH ASSOCIATED SUPPORTS AND AIR TERMINAL. CLEAN AND REFURBISH TO "LIKE-NEW" CONDITION.
- CONTRACTOR TO PROVIDE NEW TRANSFER DUCT WITH GRILLES ON BOTH SIDES IF THE PARTITION WALL IS OF FULL HEIGHT.
- CONTRACTOR TO REMOVE AND SCRAP EXISTING SUPPLY GRILLE ALONG WITH ASSOCIATED BRANCH DUCT AND DAMPERS. CONTRACTOR SHALL PATCH AND SEAL MAIN DUCTWORK AIRTIGHT. INSPECT, PATCH, REPAIR, AND/OR REPLACE INSULATION AS REQUIRED. COORDINATE IN FIELD PRIOR TO BID.
- CONTRACTOR TO DISCONNECT AND RELOCATE EXISTING SUPPLY DIFFUSERS ALONG WITH ASSOCIATED BRANCH DUCTWORK AS SHOWN. CONTRACTOR SHALL PATCH AND SEAL DUCTWORK AIRTIGHT.
- CONTRACTOR TO REMOVE AND SCRAPE EXISTING SUPPLY DIFFUSERS AND RELOCATE BRANCH DUCT AS SHOWN. PATCH & SEAL MAIN DUCT AIRTIGHT.

2 SCHEDULES
NTS



DUCTWORK SUPPORT DETAIL
NOT TO SCALE

ROUND DUCT SUPPORT DETAIL
NOT TO SCALE

MAX. SIDE INCHES	RECTANGULAR DUCTS MIN. GALV. SHIT. GAUGE	ALUMINUM MIN. B & S GAUGE
THROUGH 12	26 (0.022 IN.)	24 (0.020 IN.)
13 THROUGH 30	24 (0.028 IN.)	22 (0.025 IN.)
31 THROUGH 54	22 (0.034 IN.)	20 (0.032 IN.)
55 THROUGH 84	18 (0.052 IN.)	16 (0.051 IN.)

DIAMETER INCHES	SPIRAL SEAM DUCT STEEL MIN. GALV. SHIT. GAUGE		ROUND DUCTS LONGITUDINAL SEAM DUCT STEEL MIN. GALV. SHIT. GAUGE		FITTINGS STEEL MIN. GALV. SHIT. GAUGE	
	INCHES	GAUGE	INCHES	GAUGE	INCHES	GAUGE
THROUGH 12	28 (0.019 IN.)	26 (0.022 IN.)	26 (0.022 IN.)	26 (0.022 IN.)	26 (0.022 IN.)	26 (0.022 IN.)
13 THROUGH 18	26 (0.022 IN.)	24 (0.028 IN.)	24 (0.028 IN.)	24 (0.028 IN.)	24 (0.028 IN.)	24 (0.028 IN.)
19 THROUGH 28	24 (0.028 IN.)	22 (0.034 IN.)	22 (0.034 IN.)	22 (0.034 IN.)	22 (0.034 IN.)	22 (0.034 IN.)
29 THROUGH 36	22 (0.034 IN.)	20 (0.040 IN.)	20 (0.040 IN.)	20 (0.040 IN.)	20 (0.040 IN.)	20 (0.040 IN.)
37 THROUGH 52	20 (0.040 IN.)	18 (0.052 IN.)	18 (0.052 IN.)	18 (0.052 IN.)	18 (0.052 IN.)	18 (0.052 IN.)

CEILING EXHAUST FAN DETAIL

SCALE
NTS

1

ROOF GOOSENECK DETAIL

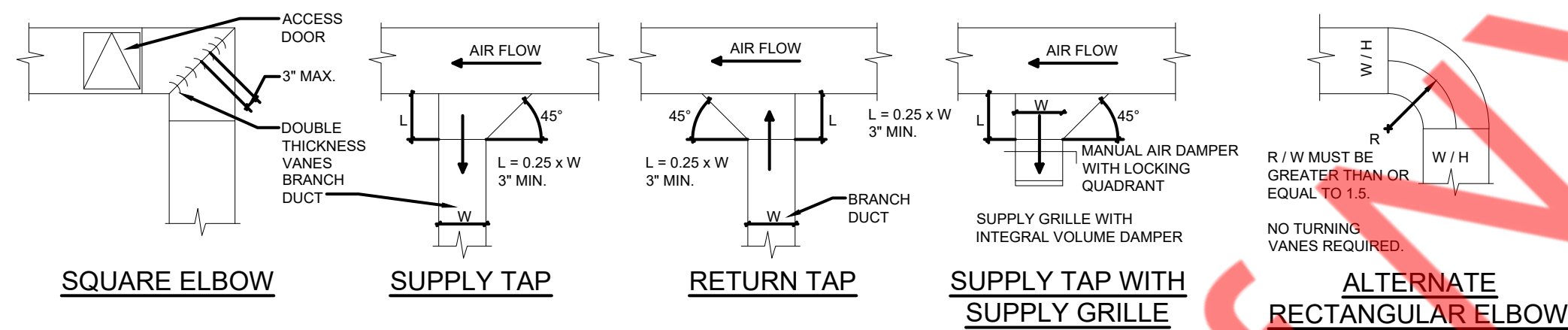
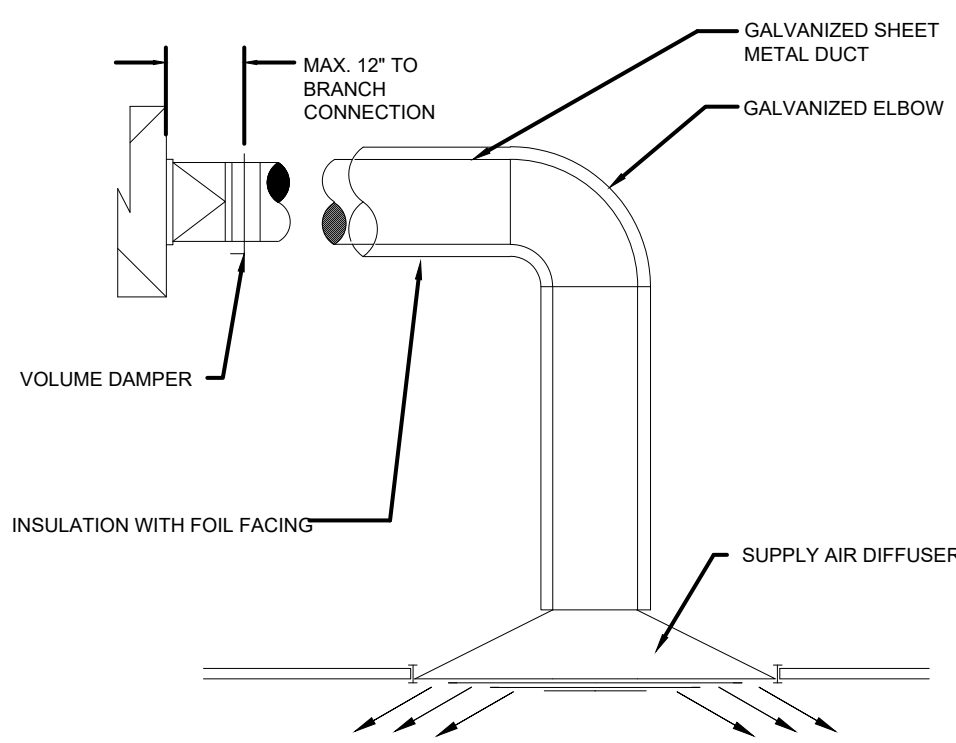
SCALE
NTS

2

DUCT SUPPORT DETAIL

SCALE
NTS

3



STANDARD DIFFUSER DETAIL

SCALE
NTS

4

STANDARD DUCTWORK DETAILS

SCALE
NTS

5

ELECTRICAL GENERAL NOTES

A. SCOPE OF WORK

- FURNISH ALL LABOR AND MATERIAL TO COMPLETE ALL ELECTRICAL WORK SHOWN ON THE DRAWINGS
- THE LISTING OF ARTICLE OR MATERIAL, OPERATION OR METHOD, REQUIRES THAT THE CONTRACTOR SHALL PROVIDE AND INSTALL, UNLESS NOTED TO BE SUPPLIED BY OTHERS, EACH ITEM LISTED OF QUALITY OR SUBJECT TO QUALIFICATION NOTED. EACH OPERATION SHALL BE PERFORMED ACCORDING TO STANDARD PRACTICE. MANUFACTURER'S INSTRUCTIONS AND CONDITIONS STATED, PROVIDING, THEREFORE, ALL NECESSARY LABOR, EQUIPMENT AND INCIDENTALS.
- THE ELECTRICAL CONTRACTOR SHALL SCHEDULE HIS WORK TO CONFORM TO THE PROGRESS OF THE OTHER TRADES AND CONTRACTORS EMPLOYED ON THIS PROJECT. THE PRINCIPAL ITEMS OF WORK INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
 - PROVIDE ELECTRICAL SERVICE INCLUDING CONDUITS, CABLES, TERMINATIONS, METERING EQUIPMENT, ETC. IN ACCORDANCE WITH UTILITY REQUIREMENTS AND DRAWINGS
 - PROVIDE LIGHTING FIXTURE AS SHOWN ON DRAWINGS. THIS SHALL INCLUDE ALL ASSOCIATED LAMPS, BOXES, SWITCHES, CONTRACTORS, AND BRANCH CIRCUIT WIRING AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.
 - PROVIDE DEVICES (RECEPTACLES, SWITCHES, ETC.) AS SHOWN ON DRAWINGS. THIS SHALL INCLUDE ALL ASSOCIATED BRANCH CIRCUIT WIRING AND MATERIAL REQUIRED FOR A COMPLETE INSTALLATION.
 - POWER FEEDERS TO HVAC EQUIPMENT INCLUDING RTU'S, EXHAUST FANS, INCLUDING DISCONNECT SWITCHES, CONTROL DEVICES, STARTERS FOR MOTORS NOT PROVIDED BY OTHERS. (CONSULT HVAC CONTRACTOR FOR PHASE AND VOLTAGE OF EQUIPMENT AND ACTUAL NAMEPLATE RATINGS FOR FEEDER MINIMUM CONDUCTOR AMPACITIES (MCA) AND MAXIMUM OVERCURRENT PROTECTION DEVICES (MOPCD) INFORMATION PRIOR TO INSTALLATION AND PRIOR TO PURCHASING ELECTRICAL EQUIPMENT.
 - PROVIDE POWER DISTRIBUTION EQUIPMENT (PANELBOARDS, DISCONNECT SWITCHES, CONTRACTORS, MOTOR STARTERS, ENCLOSED CIRCUIT BREAKERS, ETC.) AS SHOWN ON DRAWINGS FOR THIS PROJECT. THIS SHALL INCLUDE ALL WIRING AND ASSOCIATED MATERIAL REQUIRED FOR A COMPLETE INSTALLATION.
 - PROVIDE FIRE ALARM SYSTEM ONLY IF REQUIRED BY FIRE MARSHAL OR LOCAL CODES. (E.C. MUST VERIFY REQUIREMENTS PRIOR TO BIDDING)
 - PROVIDE TESTING OF ALL ELECTRICAL EQUIPMENT.
 - PROVIDE TIMERS, PHOTOCELLS, AND CONTRACTORS FOR CONTROL OF EXTERIOR LIGHTING AND HVAC EQUIPMENT.
 - PROVIDE BACKBOXES, PULLSTATIONS, AND CONDUIT TO ABOVE ACCESSIBLE CEILING FOR ALL VOICE AND COMMUNICATIONS OUTLETS.
 - PROVIDE CONDUIT, JUNCTION BOXES, 115 VOLT FEEDERS, BACKBOXES, ETC. AS REQUIRED FOR SECURITY SYSTEM CAMERAS, ENCLOSED CIRCUIT BREAKERS, ALARMS, REQUEST TO EXIT, MOTION SENSORS, KEYPADS AND MAIN SECURITY PANEL AS PER DRAWINGS OR AS DIRECTED BY OWNER OR ARCHITECT. VERIFY EXTENT OF WORK PRIOR TO SUBMITTING BIDS.
 - PROVIDE EMERGENCY LIGHTING, BATTERY UNITS, REMOTE HEADS, EXIT LIGHTS AND ALL ASSOCIATED WIRING, CONDUIT, JUNCTION BOXES, CONNECTIONS, ETC. AS REQUIRED FOR A COMPLETE INSTALLATION.

B. INSTALLATION

- THIS CONTRACTOR SHALL VISIT THE JOB SITE TO DETERMINE PRESENT CONDITIONS AND VERIFY EXACT LOCATION OF EQUIPMENT AND LOCAL REGULATIONS PRIOR TO SUBMITTING BID.
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF EXISTING WALLS CEILINGS AND FLOOR SLABS NECESSARY FOR THE COMPLETION OF HIS WORK.
- UNLESS SPECIFICALLY NOTED OTHERWISE, ALL WORK AND MATERIAL SHOWN SHALL BE PERFORMED, FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- THE COMPLETE INSTALLATION SHALL BE DONE IN STRICT ACCORDANCE WITH ALL APPLICABLE NATIONAL, STATE AND CITY CODES, RULES, REGULATIONS AND ORDINANCE. ALSO MAKE APPLICATION FOR AN ND PAY ALL FEES IN CONNECTION WITH ANY PERMITS, TESTS AND INSPECTIONS THAT MAY BE REQUIRED.
- GUARANTEE ALL WORKMANSHIP, MATERIAL AND PERFORMANCE FOR PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE.
- THE EXACT MOUNTING LOCATIONS OF APPARATUS, DEVICES, EQUIPMENT AND CONDUITS SHALL BE ASCERTAINED FROM OWNER OR THEIR REPRESENTATIVE IN THE FIELD, AND THE WORK SHALL BE LAID OUT ACCORDINGLY. SHOULD THE CONTRACTOR FAIL TO ASCERTAIN SUCH LOCATIONS, THE WORK SHALL BE CHANGED AT HIS OWN EXPENSE WHEN SO ORDERED BY OWNER, THE OWNER RESERVES THE RIGHT TO MAKE MINOR CHANGES IN THE LOCATION OF CABLE, CONDUIT AND EQUIPMENT INSTALLED BY THIS CONTRACTOR UP TO THE TIME OF INSTALLATION, WITHOUT ADDITIONAL COST.
- ALL CONDUCTORS SHALL BE COPPER, THIN INSULATION UNLESS OTHERWISE NOTED. ALL WIRING SHALL BE IN EMT OR MC CABLE RUN CONCEALED IN FINISHED AREAS AND NOT SUBJECT TO PHYSICAL DAMAGE. RUN EMT IN UNFINISHED CEILING AREAS.
- RUN ALL CONDUIT CONCEALED IN BLOCK WALLS AND RECESS ALL DEVICES IN BIRCH WALLS TO THE EXTENT POSSIBLE AND/OR PRACTICAL.

C. DRAWINGS AND SPECIFICATIONS

- ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW THE APPROXIMATE LOCATIONS OF EQUIPMENT AND PIPING. DIMENSIONS GIVEN ON THE PLANS SHALL BE VERIFIED IN THE FIELD. DRAWINGS MAY NOT BE SCALED TO OBTAIN EXACT DIMENSIONS.
- THE EXACT LOCATIONS OF APPARATUS, FIXTURES, EQUIPMENT AND CONDUITS SHALL BE ASCERTAINED FROM THE OWNER OR HIS REPRESENTATIVE IN THE FIELD, AND THE WORK SHALL BE LAID OUT ACCORDINGLY. SHOULD THE CONTRACTOR FAIL TO ASCERTAIN SUCH LOCATIONS, THE WORK SHALL BE CHANGED AT HIS OWN EXPENSE WHEN SO ORDERED BY THE OWNER.
- THIS CONTRACTOR SHALL FURNISH SUCH LABOR AND MATERIALS AS HERE-IN-AFTER SPECIFIED AND AS REQUIRED TO COMPLETE ALL ELECTRICAL CONNECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS FOR ALL MECHANICAL AND PLUMBING EQUIPMENT AND OWNER'S EQUIPMENT AS SHOWN AND/OR SPECIFIED.

L. VISITING TO THE SITE

- THE CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING HIS WORK, AND THE SUBMISSION OF HIS PROPOSAL SHALL BE CONSIDERED AS INDICATING SUCH KNOWLEDGE. NO ADDITIONAL PAYMENT WILL BE MADE ON CLAIMS THAT ARISE FROM LACK OF SUCH KNOWLEDGE OF EXISTING CONDITIONS.

E. MATERIALS AND WORKMANSHIP

- ALL WORK SHALL BE INSTALLED IN PRACTICAL AND WORKMANLIKE MANNER BY COMPETENT WORKMEN, SKILLED IN THEIR BRANCH OF THE TRADE.
- UNLESS SPECIFICALLY SPECIFIED OR INDICATED ON THE DRAWINGS TO THE CONTRARY, ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECTS, AND SHALL BE THE BEST OF THEIR SEVERAL KINDS.
- ALL MATERIALS SHALL MEET OR EXCEED STANDARDS SPECIFIED BY UL, NEMA, ANSI AND IEEE WHEREVER SUCH STANDARDS HAVE BEEN ESTABLISHED.
- THE CONTRACTOR SHALL REMOVE ALL DEBRIS AND EXCESS MATERIALS ASSOCIATED WITH HIS WORK AND LEAVE THE WORK AREA CLEAN AT THE END OF EACH WORK DAY.
- ALL ELECTRICAL EQUIPMENT AND MATERIAL SHALL BEAR THE UNDERWRITER'S LABORATORIES LABEL.

F. DEFINITIONS

- "INSTALL" SHALL MEAN TO PLACE, FIX IN POSITION, SECURE, ANCHOR, ETC. INCLUDING NECESSARY APPURTENANCES AND LABOR SO THAT THE EQUIPMENT OR INSTALLATION WILL FUNCTION AS SPECIFIED AND INTENDED.
- "FURNISH" SHALL MEAN TO PURCHASE AND SUPPLY EQUIPMENT OR COMPONENTS,
- "PROVIDE" SHALL MEAN TO "FURNISH AND INSTALL".
- "OR APPROVED EQUIVALENT" AND "OR EQUIVALENT" SHALL MEAN EQUIVALENT IN TYPE, DESIGN, QUALITY, ETC. AS DETERMINED BY THE OWNER AND APPROVED BY THE ENGINEER.

G. CODES, PERMITS, AND INSPECTIONS

- INSTALL ALL WORK IN FULL ACCORDANCE WITH CODES, RULES, AND REGULATIONS OF MUNICIPAL, CITY, COUNTY, STATE AND PUBLIC UTILITY AND ALL OTHER AUTHORITIES HAVING JURISDICTION OVER THE PREMISES. THIS SHALL INCLUDE ALL DEPARTMENT OF INDUSTRIAL RELATIONS, OSHA AND THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODES, AS INTERPRETED BY THE LOCAL INSPECTION DIVISION. ALL THESE CODES, RULES AND REGULATIONS ARE HEREBY INCORPORATED INTO THIS SPECIFICATION.
- COMPLY WITH SPECIFICATION REQUIREMENTS WHICH ARE IN EXCESS OF CODE REQUIREMENTS AND NOT IN CONFLICT WITH SAME.
- THE CONTRACTOR SHALL SECURE ALL PERMITS AND CERTIFICATED OR INSPECTION INCIDENTAL TO HIS WORK, REQUIRED BY THE FOREGOING AUTHORITIES. ALL SUCH CERTIFICATES SHALL BE DELIVERED TO THE OWNER IN DUPLICATE, BEFORE FINAL PAYMENT ON CONTRACT WILL BE ALLOWED. THE CONTRACTOR SHALL PAY ALL FEES, CHARGES AND OTHER EXPENSES IN CONNECTION THEREWITH.

H. LABELING AND NAMEPLATES

- PERMANENTLY LABEL PANELBOARDS, TIME SWITCHES, CONTRACTORS AND SAFETY SWITCHES INDICATING EQUIPMENT OR PANELS AND AREAS WHICH THEY SERVE. LABEL ALL PULL AND JUNCTION BOXES SERVING MECHANICAL EQUIPMENT.
- LIGHTING AND APPLIANCE PANELS SHALL BE LABELED AS SHOWN ON DRAWINGS.
- ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL IDENTIFICATION FOR PULL OR JUNCTION BOXES FURNISHED BY HIM.
- IDENTIFY AS TO USE ON FACE OF EQUIPMENT BY MEANS OF LAMINATED BLACK AND WHITE PHENOLIC LABEL WITH 1/2" LETTERS ENGRAVED THROUGH BLACK TO WHITE.

I. TESTS AND VOLTAGE RECORD

- ELECTRICAL CONTRACTOR SHALL TEST ALL WIRING AND CONNECTIONS FOR CONTINUITY AND GROUNDS. WHEN THE INSULATION RESISTANCE TEST SHALL INDICATE THE POSSIBILITY OF FAULTY INSULATION, THE CONTRACTOR SHALL LOCATED THE POINTS OF SUCH FAULT INSULATION AND HE SHALL PULL OUT THE CONDUCTOR AT FAULT, REPLACE SAME WITH NEW, AND DEMONSTRATE, BY FURTHER TEST THE ELIMINATION OF SUCH FAULT.
- RECORD FEEDER LOAD CURRENTS AND LINE VOLTAGES MEASURED AT EACH PANELBOARD. ADJUST SINGLE PHASE LOAD CONNECTIONS TO BALANCE FEEDER LOADS WITH 10%. PROVIDE THE OWNER WITH A COMPLETE COPY OF ALL LOAD AND VOLTAGE RECORDS.

J. BRANCH CIRCUIT WIRING

- PROVIDE A SYSTEM OF PANELS, CONDUITS, FITTING, BOXES, SUPPORTS AND ALL OTHER MISCELLANEOUS MATERIALS REQUIRED FOR EQUIPMENT INDICATED ON PLANS, COMPLETE AND READY FOR OPERATION BY THE OWNER.
- HOME RUNS FROM 20A OUTLETS 125 FT. OR OVER AT 277 VOLTS, OR 60 FT. OR OVER AT 120 VOLTS SHALL BE #10.0 WIRE.
- ALL FIXTURE AND BRANCH CIRCUIT WIRING CONNECTIONS OR SPICES SHALL BE MADE IN JUNCTION AND OUTLET BOXES WITH U.L. LISTED PRESSURE TYPE. CONNECTORS AND LISTED FOR 600 VOLTS (1,000 VOLTS WHEN ENCLOSED IN FIXTURE). IDEAL INDUSTRIES WING NUTS AND/OR WIRE NUTS OR APPROVED EQUIVALENT MAY BE USED FOR JOINTS IN WIRE OF #8 GAUGE OR LESS.

K. CONDUCTORS

- SIZES OF CONDUCTORS FOR FEEDERS ARE GIVEN ON THE DRAWINGS, AND NO WIRE SMALLER THAN #12 GAUGE SHALL BE USED FOR BRANCH LIGHTING OR POWER CIRCUITS. ALL WIRING SHALL HAVE THE U.L. LABEL AND BE OF 98% CONDUCTIVITY COPPER, ALUMINUM WIRE OR ALUMINUM CABLE IS NOT ACCEPTABLE UNLESS SPECIFICALLY SHOWN ON DRAWINGS.
- THE GAUGE OF ALL WIRE SHALL BE IN ACCORDANCE WITH B & S STANDARD.
- ALL WIRE AND CABLE FOR BRANCH LIGHTING OR SMALL POWER CIRCUITS SHALL HAVE "NEC" TYPE "THHN" 600 VOLT INSULATION,
- WIRE AND CABLE ABOVE #8 GAUGE SHALL BE STRANDED TYPE "THHN" INSULATED 600 VOLTS.

L. CONDUIT AND CABLES

- ALL CONDUIT SHALL BE RIGID, THREADED, METAL CONDUIT OR ELECTRICAL METALLIC TUBING (EMT) UNLESS OTHERWISE SPECIFICALLY STATED HEREIN.
- CONDUIT AND EMT SHALL BE DELIVERED TO THE BUILDING IN 10 FOOT LENGTHS AND EACH LENGTH SHALL HAVE THE APPROVED UNDERWRITER'S LABORATORIES LABEL.
- CONDUIT SHALL BE RUN CONCEALED IN ALL FINISHED AREAS OF THE BUILDING AND MAY BE RUN EXPOSED IN UNFINISHED AREAS AT CEILING OF JOIST LEVEL. RUN CONCEALED IN BLOCK WALLS THE EXTENT THAT IS PRACTICAL.
- EMT CONNECTORS AND COUPLERS SHALL BE RAIN TIGHT COMPRESSION TYPE (OR SET-SCREW WHERE ACCEPTABLE TO OWNER AND LOCAL CODES) MADE OF STEEL AS MANUFACTURED BY THOMAS & BETTS, STEEL CITY OF APPLETON. BENDS AND OFFSETS SHALL BE MADE WITH A HICKEY OR POWER BENDER WITHOUT KINKING OR DESTROYING THE SMOOTH BORE OF THE CONDUIT. PARALLELED CONDUITS SHALL RUN STRAIGHT AND TRUE WITH OFFSETS UNIFORM AND SYMMETRICAL, CONDUIT TERMINALS AT BOXES AND CABINETS SHALL BE RIGIDLY SECURED WITH LOCKNUTS AND BUSHINGS AS REQUIRED BY THE NATION ELECTRICAL CODE. INSULATED BUSHINGS SHALL BE USED ON ALL CONDUIT 1-1/4" TRADE SIZE AND LARGER.
- CONDUIT SHALL BE SECURELY FASTENED IN PLACE AT NO MORE THAN 10 FT. CENTERS, AND HANGER, SUPPORTS, OR FASTENINGS SHALL BE PROVIDED AT EACH CONDUIT ELBOW AND AT THE END OF EACH STRAIGHT RUN TERMINATING AT A BOX OR CABINET. CONDUIT SHALL NOT BE SUSPENDED FROM THE CEILING OR CEILING SUSPENSION WIRES.
- HORIZONTAL AND VERTICAL CONDUIT RUNS SHALL BE SUPPORTED BY ONE-HOLE MALLEABLE STRAPS, OR THEIR APPROVED METAL DEVICE WITH SUITABLE BOLTS, OR BEAM CLAMPS FOR MOUNTING TO BUILDING STRUCTURE OR SPECIAL BRACKETS. CONDUIT SHALL BE SUPPORTED FROM STRUCTURAL STEEL OR JOIST AND INDEPENDENT OF OTHER PIPING. DO NOT SUPPORT CONDUIT FROM METAL ROOF DECK, OR ANY OTHER SUPPORT DEVICE OF ANOTHER TRADE.
- NON-METALLIC SHEATHED CABLE (ROMEX) OR AC CABLE SHALL NOT BE USED. TYPE MC CABLE MAY BE USED ONLY WHEN CONCEALED IN FINISHED WALLS OR ABOVE CEILING AND WHEN NOT SUBJECT TO PHYSICAL DAMAGE UNLESS ITS USE IS NOT APPROVED ABBEY OWNER OR LOCAL CODES.
- ONLY SHORT RUNS OF FLEXIBLE METAL CONDUIT NOT OVER 30" IN LENGTH SHALL BE USED FOR TERMINAL CONNECTIONS TO MOTORS AND OTHER VIBRATING EQUIPMENT, AND ALSO FOR ELECTRICAL EQUIPMENT WHERE IT IS NOT PRACTICAL TO MAKE FINAL CONNECTION WITH RIGID CONDUIT. FLEXIBLE CONDUIT EXPOSED TO WEATHER SHALL BE "SEALTITE" OR EQUIVALENT.
- CONDUIT SYSTEM SHALL CONFORM TO ALL THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND LOCAL CODES.

M. GROUNDING

- THIS CONTRACTOR SHALL PROVIDE, INSTALL AND CONNECT A COMPLETE SYSTEM OF GROUNDING FOR ALL EQUIPMENT AND STRUCTURES A GOOD MECHANICAL AND ELECTRICAL CONNECTION SHALL BE MADE WITH APPROVED GROUNDING CONNECTORS.
- ELECTRICAL SYSTEM AND EQUIPMENT GROUNDS SHALL COMPLY WITH ALL LOCAL, STATE AND NEC CODES AND REGULATIONS.
- PANELS, CONDUIT SYSTEMS MOTOR FRAMES, LIGHTING FIXTURES AND OTHER EQUIPMENT THAT ARE PART OF OF THIS INSTALLATION SHALL BE SECURELY GROUNDED BOTH MECHANICALLY AND ELECTRICALLY IN ACCORDANCE WITH ALL CODES.
- MAIN GROUNDING SYSTEM (WHEN APPLICABLE) SHALL BE SIZED TO CONFORM WITH TABLE 250-66 OF NATIONAL ELECTRIC CODE. PROVED CONDUIT TO PROTECT GROUND WIRE FROM DAMAGE TO ANY AREA 6 FEET ABOVE FLOOR

N. LIGHTING/APPLIANCE PANELBOARDS AND DISTRIBUTION PANELS

- DISTRIBUTION PANELS SHALL BE SQUARE "D" CO. TYPE "LINE" OR APPROVED EQUIVALENT G.E., SIEMENS, OR CUTLER HAMMER.
- 480/277V PANELS SHALL BE SQUARE "D" CO. TYPE "NF" OR APPROVED EQUIVALENT BY G.E., SIEMENS, OR CUTLER HAMMER. BREAKERS SHALL BE BOLTED TO BUS TYPE, QUICK-MAKE, BREAK-BREAKERS, AND CAPABLE OF INTERCHANGING ONE, TWO OR THREE POLE UNITS. MULTIPLE UNITS SHALL BE COMMON TRIP. PROVIDE SPARE BREAKERS IN EACH PANEL AS SHOWN. ALL BUSHING SHALL BE 98% CONDUCTIVITY COPPER, ALUMINUM BUS, ALUMINUM CONDUCTORS OR ALUMINUM LUGS ARE NOT ACCEPTABLE.

- 208/120V PANELS SHALL BE SQUARE "D" CO. TYPE "NOOD" OR APPROVED EQUIVALENT BY G.E., SIEMENS, OR CUTLER HAMMER WITH TYPE "QOB" BOLT-ON BRANCH BREAKERS ONLY.

- SHORT CIRCUIT RATINGS OF NEW PANELS SHALL BE AS NOTED ON DRAWINGS, OR AS OTHERWISE DIRECTED BY LOCAL UTILITY COMPANY. U.L. TESTED AND CERTIFIED SERIES RATINGS ARE ACCEPTABLE WITH WRITTEN DOCUMENTATION SHOWING SERIES RATINGS BUT ONLY IF ACCEPTABLE TO OWNER OR LOCAL CODES.

O. GENERAL FOR ALL PANELS

- METAL FRAMED CARDHOLDERS WITH TYPEWRITTEN CIRCUIT DIRECTORY MUST BE PROVIDED FOR EACH PANEL. DIRECTORY SHALL BE CLEAR AND DESIGNATION SHALL MATCH IDENTIFICATION ON EQUIPMENT. PANELBOARDS (POWER PANELS AND LIGHTING PANELS) SHALL BE WITH IDENTIFICATION LABELED ON SWITCH AND/OR PANEL DOOR. PROVIDE ENGRAVED LAMINATED PHENOLIC NAMEPLATE WITH 1/2" LETTERS.
- ALL PANELS SAFETY SWITCHES, STARTERS AND IN GENERAL, ALL EQUIPMENT REQUIRING LUGS SHALL BE EQUIPPED WITH SOLDERLESS TYPE U.L. APPROVED LUGS.
- PROVIDE ALL NECESSARY UNISTRUT, CHANNEL, BACKING AND SUPPORTS TO MOUNT PANELBOARDS SECURELY IN PLACE.
- SCREW FASTENED HANDLE LOCK-ON DEVICES ARE REQUIRED ON CIRCUIT BREAKERS PROTECTING SERVICES TO THE FOLLOWING EQUIPMENT:

- EMERGENCY, EXIT, SECURITY AND NIGHT LIGHTS.
- HEATING AND COOLING CONTROL CIRCUITS.
- ALL TIME SWITCHES.

P. TOGGLE SWITCHES AND RECEPTACLES

- SINGLE POLE 11221 AND THREE(3) WAY #1223. SWITCHES SHALL BE RATED 20 AMPERE, 277/120 VOLTS, COLOR TO BE BID AS WHITE (FINAL SELECTION BY ARCHITECT) HUBBELL OR EQUIVALENT. SWITCHES SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR TO CENTERLINE.
- DUPLEX RECEPTACLES SHALL BE AS SPECIFIED ON DRAWINGS.

Q. DISCONNECT SWITCHES

- AN APPROVED HORSEPOWER RATED, HEAVY DUTY, DISCONNECT SWITCH SHALL BE PROVIDED WITHIN SIGHT OF EACH MOTOR AND EACH HEATING UNIT. PROVIDE FUSED SWITCHES WHERE BRANCH CIRCUIT FUSES ARE NOT SIZED FOR OVERLOAD PROTECTION.
- SWITCHES ON THE ROOF SHALL BE WEATHERPROOF MOUNTED ON UNISTRUT.
- SWITCHES SHALL BE LABELED ON THEIR COVER IDENTIFYING THE EQUIPMENT TO BE PROTECTED.

R. MOTORS AND WIRING

- FURNISH AND INSTALL DISCONNECT SWITCHES (EXCEPT WHERE SPECIFICALLY SPECIFIED BY OTHERS) AND RUN POWER CIRCUITS FROM THE POWER PANEL THROUGH DISCONNECT SWITCHES & CONTROL DEVICES TO MOTOR TERMINALS.
- PROVIDE ALL STARTERS, CONTROLS AND PUSH BUTTON STATIONS ETC. NOT SUPPLIED BY MECHANICAL OR OTHER CONTRACTORS REQUIRED FOR THE PROPER AND INTENDED OPERATION OF MOTORS AND OR MOTORIZED EQUIPMENT SUPPLIED BY OTHERS.
- THE ABOVE ELECTRICAL EQUIPMENT SHALL BE MOUNTED SECURELY TO WALL OR FRAMES AND THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL NECESSARY BRACKETS, STRUCTURAL PIECES, EXPANSION BOLTS AND OTHER ACCESSORIES REQUIRED.
- WOODEN PLUGS SHALL NOT BE PERMITTED FOR ANCHORING.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LUBRICATION OF ALL MOTORS.
- REFER ALSO TO MECHANICAL SPECIFICATIONS FOR WORK BY MECHANICAL CONTRACTOR WHICH MAY RESULT IN ADDITIONAL WORK FOR THIS ELECTRICAL CONTRACTOR.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER WIRING AN CONNECTIONS TO ALL HVAC EQUIPMENT.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONTROL WIRING AND CONNECTIONS TO ALL HVAC EQUIPMENT NOT PROVIDED BY OTHERS.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONTROL EQUIPMENT (STARTERS, CONTRACTORS ETC) NOT SUPPLIED BY HVAC CONTRACTOR BUT REQUIRED FOR THE INTENDED OPERATION OF HVAC EQUIPMENT
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECT SWITCHES FOR ALL HVAC EQUIPMENT NOT SUPPLIED BY OTHERS.
- REFER TO MECHANICAL SPECIFICATION AND DRAWINGS FOR ADDITIONAL ELECTRICAL WORK AND COORDINATION.

S. FUSES

- REPLACE ALL FUSES BLOWN DURING CONSTRUCTION AND TESTING AN PROVIDE A COMPLETE ST OF FUSES IN ALL FUSE HOLDERS, SWITCHES, PANELS AND ALL OTHER DEVICES REQUIRING FUSES.
- FUSES SHALL BE CURRENT LIMITING, DUAL ELEMENT TIME DELAY TYPE PROVIDE OWNER WITH ONE SET OF SPARE FUSES FOR EACH FUSED SWITCH.

T. GUARANTEE

- IN ADDITION TO WARRANTIES OF EQUIPMENT BY MANUFACTURER OF SAME, THIS CONTRACTOR SHALL ALSO GUARANTEE EQUIPMENT PROVIDED BY HIM AND SHALL BEHELD FOR A PERIOD OF ONE (1) YEAR TO MAKE GOOD ANY DEFECTS IN MATERIALS AND WORKMANSHIP OCCURRING DURING THIS PERIOD, AT HIS SOLE EXPENSE. THE ONE (1) YEAR PERIOD SHALL START FROM DATE OF FINAL ACCEPTANCE BY OWNER.

U. FIELD DRAWING

- KEEP ONE (1) SET OF WORKING DRAWINGS AND SHIP DRAWINGS AT THE JOB SITE FOR SOLE PURPOSE OF RECORDING ALL CHANGES MADE DURING CONSTRUCTION. AFTER COMPLETION OF THE WORK AND BEFORE REQUESTING FINAL PAYMENT, THE ABOVE MENTIONED DRAWINGS SHALL BE DELIVERED TO THE OWNER.

V. SUBSTITUTION

- WHENEVER ALTERNATE MATERIALS ARE SPECIFIED, IT IS WITH THE UNDERSTANDING THAT ANY ONE OF THE MATERIALS IS ACCEPTABLE TO THE OWNER. MATERIALS AND EQUIPMENT OTHER THAN THOSE SPECIFIED ARE NOT TO BE ASSUMED TO BE SATISFACTORY SUBSTITUTES WITHOUT PRIOR APPROVAL OF THE OWNER.

W. SHOP DRAWINGS

- ONLY MANDATORY SHOP DRAWINGS AS LIMITED OUTLINE HEREIN SHALL BE SUBMITTED.
- NO WORK SHALL BE INSTALLED UNTIL THE MANDATORY SHOP DRAWINGS HAVE BEEN APPROVED BY THE ARCHITECT/ENGINEER. THE ARCHITECT/ENGINEER SHALL REVIEW SUBJECT SHOP DRAWINGS BEFORE A COPY IS SUBMITTED TO THE OWNER FOR RECORD PURPOSES.
- ONLY MATERIAL AND EQUIPMENT MANUFACTURERS OF PRODUCTS OR SYSTEMS LISTED BELOW SHALL FURNISH MANDATORY SHOP DRAWINGS FOR APPROVAL BY THE ARCHITECT/ENGINEER PRIOR TO CONTRACTORS PURCHASING EQUIPMENT, SHIP DRAWINGS ARE TO CONTAIN THE FOLLOWING:
 - MANUFACTURER'S NAME, MATERIAL DESCRIPTION, SIZES AND DIMENSIONS AND OTHER PERTINENT INFORMATION TO CONFIRM AS MINIMUM STANDARD FOR EQUIPMENT LISTED IN THE SCHEDULES ON THE DRAWINGS AND OR IN THE SPECIFICATIONS.
- SUBMIT A COPY OF SEVEN (7) COPIES OF ALL REQUIRED ELECTRICAL SHOP DRAWINGS.
- THE FOLLOWING SHOP DRAWING SUBMITTALS ARE A MANDATORY REQUIREMENT OF THE OWNER, IF THE FOLLOWING EQUIPMENT IS TO BE INSTALLED:

- * STEP DOWN TRANSFORMERS (480-120/208V) WHEN APPLICABLE
- * WIRING DEVICES (INCLUDING WEATHERPROOF RECEPTACLES)
- * LIGHTING FIXTURES & EMERGENCY LIGHTING FIXTURES
- * DISCONNECT SWITCHES
- * POWER/LIGHTING PANELS
- * MOTOR STARTERS
- * FIRE ALARM DEVICES

X. ALARM AND DETECTION SYSTEMS (BY VENDOR)

- PROVIDE NECESSARY CONDUIT AND POWER FOR ALARM AND DETECTION SYSTEMS. THIS SHALL INCLUDE THE FOLLOWING:
 - DEDICATED 20 AMP / 120 VOLT CIRCUIT (S).
 - 3/4" CONDUIT (EMPTY) TO EACH TO DOOR CONTACT, SOUND DETECTION SILENT DURESS ALARM, FILM CAMERA, SUSPICION BUTTON, ETC. (REFER TO ARCHITECTURAL DOOR SCHEDULE)
 - COORDINATE ALL LOCATIONS OF ALARM AND DETECTION SYSTEM WITH OWNER. THESE ITEMS ARE NOT SHOWN ON ELECTRICAL DRAWINGS.

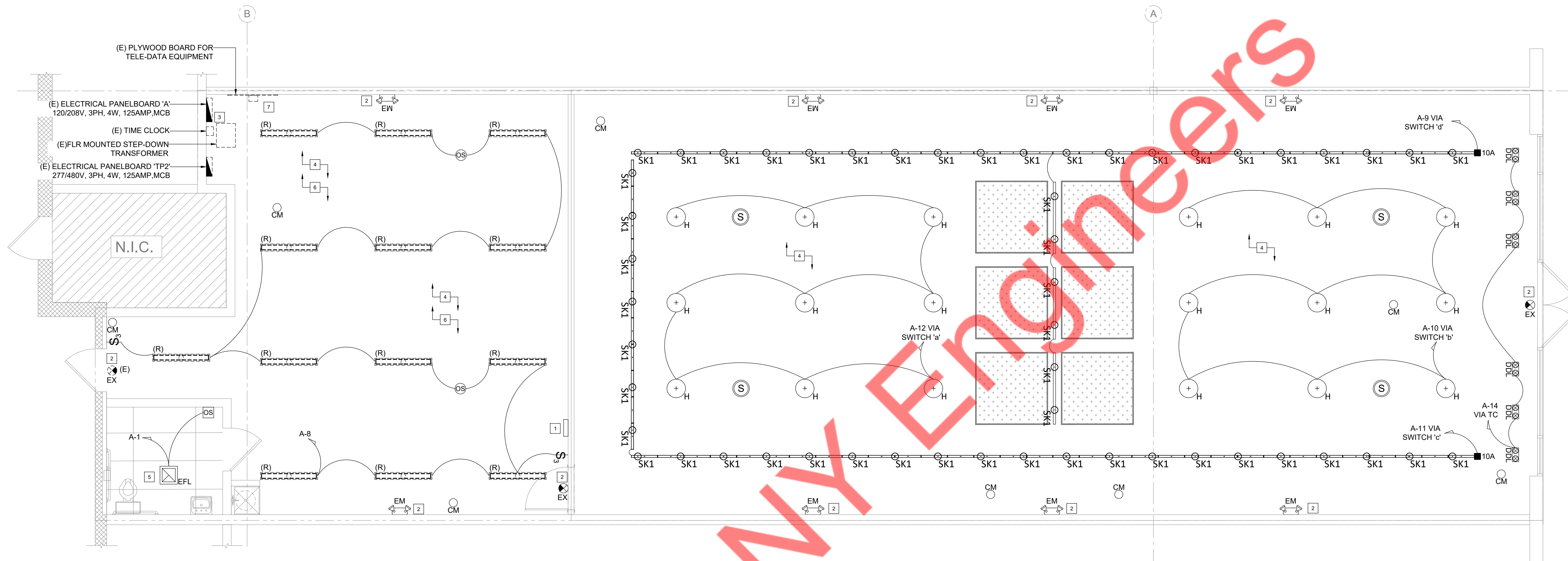
Y. COMMUNICATION SYSTEMS

- WORK INCLUDES: EMPTY CONDUIT WITH NYLON PULLWIRES AND BOXES FOR UTILITY TELEPHONE WIRING.
- WORK BY COMMUNICATIONS CONTRACTOR:
 - ALL WIRING FOR TELEPHONE INSTRUMENTS
 - ALL TELEPHONE INSTRUMENTS

HOME RUNS AND BRANCH WIRING FOR 120 VOLT 16 AMP CIRCUITS SHALL BE AS FOLLOWS TO ACCOUNT FOR VOLTAGE DROP:

LENGTH	HOME RUN WIRE SIZE	CIRCUIT WIRE SIZE
1' TO 65'	12	12
66' TO 104'	10	12
105' TO 156'	8	12
157' TO 263'	6	12
264' TO 419'	4	12

- EMERGENCY, EXIT, SECURITY AND NIGHT LIGHTS.
- HEATING AND COOLING CONTROL CIRCUITS.
- ALL TIME SWITCHES.



1 ELECTRICAL LIGHTING PLAN
1/4" = 1'-0"

LIGHT FIXTURE SCHEDULE

TYPE	SYMBOL	MANUFACTURER	MODEL	DESCRIPTION	COLOR	LAMP	LAMP WATT.	FIXTURE WATT.	VOLTAGE	MOUNTING
SK1	SK1	NORDEON	SK1-28W-UNV-835-11-DIM	LED TRACKHEAD -3500K	BLACK	LED	24.4w	28w	120v	TRACK
-	-	-	-	NEW LIGHT TRACK	BLACK	-	-	-	-	CLNG. MNTD. @ 11'-0" A.F.F.
DDL	DDL	SOLAIS LIGHTING	XSR12-Xm24/25C-25C/35K/2000/WH/WH/010/HL/HL	2 HEAD LED MULTIPLA DOWNLIGHT-3500 K W/ LOUVER (SEMI-RECESSED DOUBLE DOWNLIGHT)	WHITE	-	-	44	-	SEMI-RECESSED
H	H	ENVISION LED LIGHTING	LED-RH83C-3P150W-CTR/BL-10-UNV	ENVISION DECORATIVE LED, HIGHBAY 16" LED W SUSPENDED BEAD REFRACTOR AND CONICAL DROP LENS SUSPENDED HIGH BAY PENDANTS	BLACK	LED	60W	-	-	SUSPENDED @ 11'-10" AFF
DL	DL	GREE LIGHTING	CR67-1800L-35K-12	LED 1800LM DOWNLIGHT-3500K	-	LED	20.5	-	-	RECESSED
EM	EM	EXITRONIX	LED51-EM	REMOTE LAMPS FOR LED EXIT	-	-	-	-	-	WALL MOUNTED @ 11'-0" A.F.F.
EX	EX	EXITRONIX	VEX-U-BP-WB-WH-R6-G2	VEX REMOTE SERIES, REMOTE CABLE THERMOPLASTIC LED	-	-	-	-	-	-
SL	SL	METALUX	6SLSTP2040DD-UNV	LENSED 8'-0" LONG STRIP	WHITE	LED	76W	-	120	SUSPENDED @ 12'-0"
SL	SL	METALUX	4SLSTP4040DD-UNV	LENSED 4'-0" LONG STRIP	WHITE	LED	35W	-	120	SUSPENDED @ 12'-0"
EFL	EFL	BROAN / NUTONE	AE110LK	NEW RESTROOM LIGHTING	-	-	-	-	-	CEILING MOUNTED
(R)	(R)	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	-	120v	EXISTING

NOTE: ANY LIGHTING SUBSTITUTIONS TO BE APPROVED BY HEY DUDE.
 (E) EXISTING (R) RELOCATED (NL) FIXTURE CONNECTED TO NIGHT LIGHT CIRCUIT. (EM) FIXTURE WITH EMERGENCY BATTERY BACK-UP.
 TLEDs TO BE USED FOR EXISTING STRIP LIGHTS (15W 3500K)

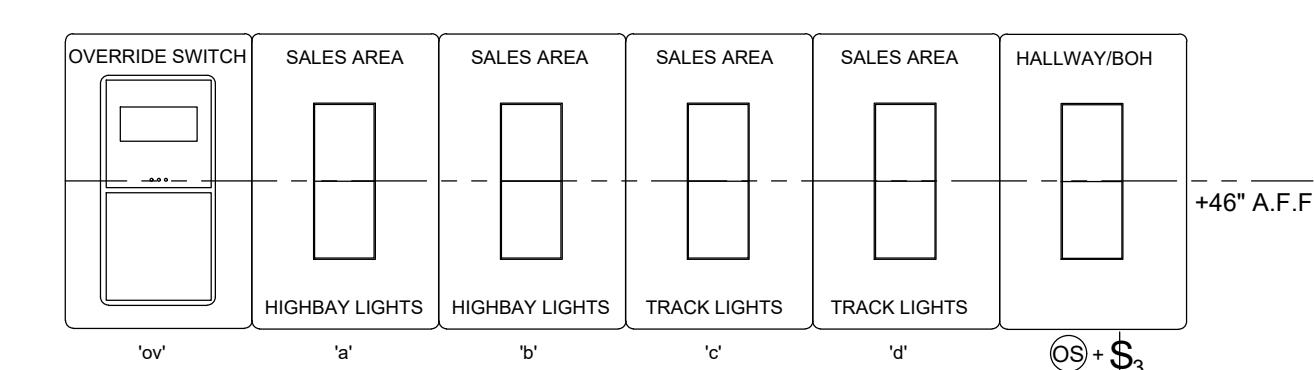
GENERAL NOTES

- ALL ELECTRICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE OR LOCAL CODE AND/OR OTHER AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE, REVIEW EXISTING CONDITIONS AGAINST THE PLANS, AND FAMILIARIZE HIMSELF WITH THE WORK PRIOR TO BIDDING AND START OF WORK.
- SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION AND QUANTITY OF LIGHTING FIXTURES.
- EMERGENCY AND EXIT LIGHTS SHALL BE INSTALLED AND CIRCUITED PER LATEST NATIONAL ELECTRICAL CODE AND ALL LOCAL CODES. ALL EMERGENCY AND EXIT FIXTURES SHALL HAVE A MINIMUM 90-MINUTE BATTERY BACK-UP.
- ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS AS REQUIRED FOR A FULLY COMPLETE AND OPERABLE SYSTEM.
- ALL EQUIPMENT SHALL HAVE UL OR CSA LABELS.
- G.C. IS RESPONSIBLE FOR ALL FINAL CONNECTIONS, TERMINATIONS, AND COORDINATION IN ALL MILLWORK FIXTURES.
- ELECTRICAL CONTRACTOR'S BID SHALL INCLUDE INSTALLATION OF ALL LIGHT FIXTURES AND ASSOCIATED LAMPS. SOME FIXTURES REQUIRE ASSEMBLY. E.C. IS RESPONSIBLE TO ENSURE THE ADJUSTABILITY OF ALL DIRECTIONAL FIXTURES AFTER INSTALLATION AND SHALL AIM FIXTURES PER DIRECTION FROM OWNER. IF THE CEILING SYSTEMS ARE FIRE RATED, E.C. SHALL CLOSELY COORDINATE RECESSED FIXTURE REQUIREMENT WITH OWNER AND SUPPLIER TO MAINTAIN THE FIRE RATING OF THE CEILING.
- G.C. SHALL PROVIDE TIME CLOCK PROGRAMMING TRAINING SESSION FOR THE STORE MANAGER AND AT LEAST ONE OTHER EMPLOYEE PRIOR TO PROJECT CLOSEOUT.
- ALL FIXTURES INSTALLED OUTDOORS SHALL BE RATED FOR DAMP/WET LOCATIONS AS REQUIRED. THE CONTRACTOR SHALL COORDINATE DAMP/WET LOCATION RATING PER NEC ARTICLE 410.10 (A). ALL INSTALLATIONS SHALL CONFORM TO NEC ARTICLE 410, ALL SUB ARTICLES. ALL FLUORESCENT FIXTURES THAT UTILIZE DOUBLE ENDED LAMPS AND CONTAIN BALLAST(S) THAT CAN BE SERVICED IN PLACE SHALL BE CODE COMPLIANT WITH N.E.C. 410.130(G).
- THE ELECTRICAL LIGHTING INSTALLATIONS SHALL CONFORM TO ALL STATE AND LOCAL SEISMIC AND CODE REQUIREMENTS REGARDING LIGHT FIXTURE SUPPORT. ALL ELECTRICAL METALLIC TUBING (EMT), RIGID NON-METALLIC CONDUITS, "SEAL TIGHT" TYPE CONDUITS AND ALL OTHER CONDUITS THAT DO NOT CONTAIN A CODE SIZED GROUND WIRE SHALL HAVE A CODE SIZED BOND WIRE INSTALLED WITH THE CIRCUIT CONDUCTORS.

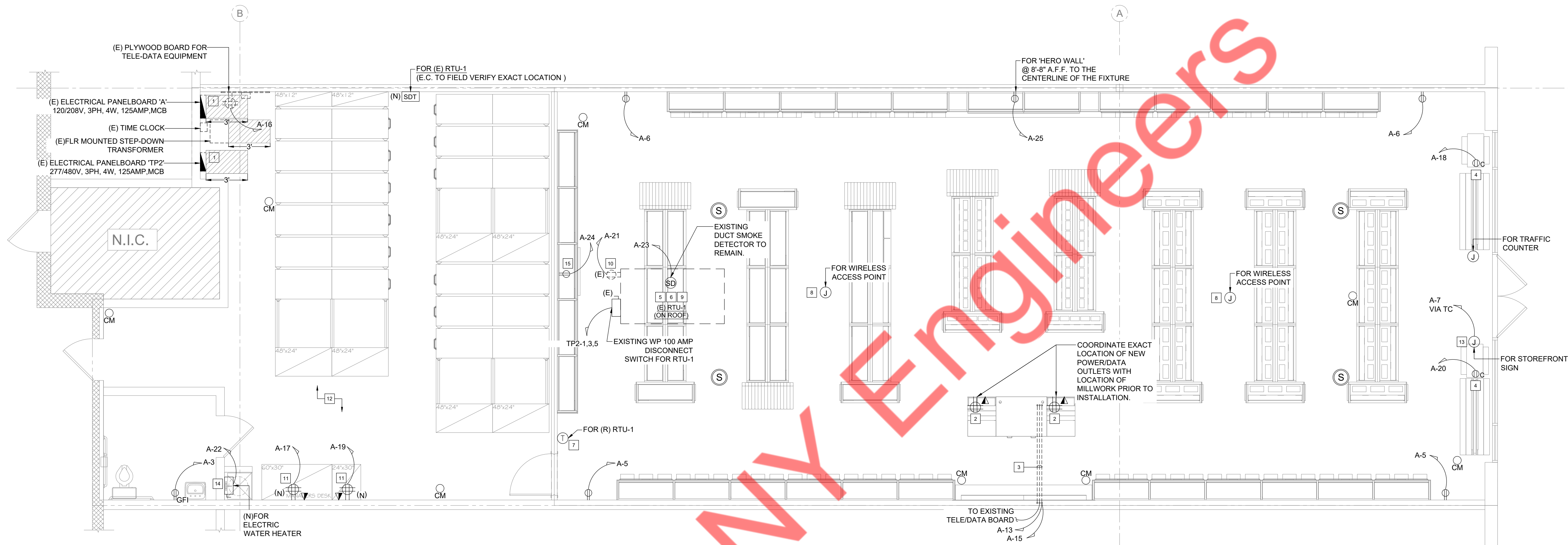
KEY NOTES

- NEW MASTER SWITCH BANK LOCATION. SEE DETAIL IN THIS SHEET FOR ADDITIONAL INFORMATION. VERIFY/CONFIRM LOCATION WITH OWNER PRIOR TO INSTALLATION AND ROUGH-IN.
- ALL NEW/EXISTING/RELOCATED EXIT SIGNS & EMERGENCY LIGHTS TO BE CONNECTED TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCHING.
- EXISTING TIME CLOCK FOR CONTROL OF LIGHTING LOADS. E.C. TO VERIFY THE OPERABLE CONDITION OF EXISTING TIME CLOCK PRIOR TO BID, REUSE IF POSSIBLE. OTHERWISE PROVIDE NEW TIME CLOCK AS SHOWN ON SHEET E4.0 - TIME CLOCK AND LIGHTING CONTACTOR DETAILS.
- NEW SPEAKERS AND CAMERAS. COORDINATE LOW VOLTAGE REQUIREMENTS WITH LOW VOLTAGE PLAN ON SHEET E3.1.
- NEW RESTROOM FAN LIGHT COMBO. TIE TO EXISTING CIRCUIT SERVING THE AREA. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT REQUIREMENT.
- EXISTING LIGHTS TO REMAIN. CONTRACTOR TO REUSE LIGHTS AND CONTROLS ALONG WITH EXISTING CIRCUIT SERVING BOH AREA LIGHT FIXTURES. CONTRACTOR SHALL RE-LAMP WITH LED BULBS. REPLACE WITH NEW LED LIGHT FIXTURE IF RETRO-FIT NOT POSSIBLE. PROVIDE NEW CONTROLS IF EXISTING ARE NOT WORKABLE.
- EXISTING LIGHTING CONTACTORS. WIRE CONTACTORS TO EXISTING TIME CLOCK. E.C. TO VERIFY THE OPERABLE CONDITION OF EXISTING CONTACTORS PRIOR TO BID, REUSE IF POSSIBLE. PROVIDE NEW IF REQUIRED. SEE CONTACTORS DETAIL ON SHEET E4.0.

NEW LIGHTING SWITCHBANK



- 'a,b,c,d' - SINGLE POLE SWITCHES FOR CONTROL OF SALES LIGHTING.
- 'w' - 2-HR OVERRIDE BYPASS SWITCH. ADJUST TO ON/OFF SCHEDULE DIRECTED BY TENANT REPRESENTATIVE.
- OS - CEILING MOUNTED OCCUPANCY SENSOR
- OSD - WALL MOUNTED OCCUPANCY SENSOR WITH DIMMING CAPABILITIES (WATTSTOPPER PW-211 OR EQUAL) AT+46" A.F.F. SENSOR "ON" SETTING TO BE SET TO AUTOMATIC IN FIELD.
- OS - WALL MOUNTED OCCUPANCY SENSOR (WATTSTOPPER PW-201 OR EQUAL) AT+46" A.F.F. SENSOR "ON" SETTING TO BE SET TO AUTOMATIC IN FIELD.
- PH - CEILING MOUNTED PHOTO SENSOR FOR TOPLIT DAYLIGHT RESPONSIVE CONTROL.
- S3 - WALL MOUNTED MANUAL 3-WAY TOGGLE SWITCH.



NOTE:
ALL WIRES TO BE COPPER AND IN CONDUIT, INCLUDING LOW VOLTAGE

1 ELECTRICAL POWER PLAN

GENERAL NOTES

- REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF MECHANICAL EQUIPMENT.
- FIRE ALARM SYSTEM BY FIRE ALARM CONTRACTOR. INSTALL AUDIO / VISUAL ALARM, P.A. SPEAKER, SMOKE CONTROL WIRING TO RTU PLUS ROOM SMOKE DETECTOR. EMPLOY LANDLORD'S APPROVED CONTRACTOR FOR ALL CONNECTIONS TO THE MALL MASTER ALARM SYSTEM.
- ALL DUPLEX RECEPTACLES, LIGHT SWITCHES AND COVER-PLATES SHALL MATCH ADJACENT FINISHES. SEE ARCHITECTURAL FINISH SCHEDULE.
- CONDUIT TO BE GROUPED IN PARALLEL RUNS SUPPORTED BY UNISTRUT HANGERS W/ 90 DEGREE BRANCH RUNS TO FIXTURES. ELECTRICAL CONTRACTOR TO COORDINATE WITH HVAC CONTRACTOR FOR LOCATION AND CLEARANCES FOR EQUIPMENT.
- PROVIDE 120V, 20A DEDICATED CIRCUIT, IF REQUIRED, FOR FIRE ALARM. COORDINATE WITH LANDLORD'S REPRESENTATIVE.
- CIRCUITING MAY BE ADJUSTED IN THE FIELD AS CONDITIONS REQUIRE. PROVIDE A TYPE-WRITTEN PANEL SCHEDULE IN ALL PANELS.
- CIRCUIT NUMBERS SHOWN ARE FOR REFERENCE ONLY. MAINTAIN EXISTING CIRCUIT OF EXISTING EQUIPMENT, DEVICES, FIXTURES, ETC. TO REMAIN.

CONTRACTOR TO ENSURE THAT ALL EXISTING OUTLET/RECEPTACLE TO REMAIN/RE-USE ARE IN GOOD WORKING CONDITION. REPLACE COVER PLATES WITH NEW TO MATCH NEW OUTLETS.

ALL MECHANICAL/HVAC EQUIPMENT TO REMAIN. UTILIZED EXISTING CIRCUIT. VERIFY IN FIELD. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

ALL RECEPTACLES WITHOUT TAG (E) ARE NEW TO BE PROVIDED AND INSTALLED BY CONTRACTOR.

NOTE: NOT ALL SYMBOLS MAY APPEAR ON DRAWINGS. ALL OUTLETS TO BE WHITE.
(E) - EXISTING (R) - EXISTING/RELOCATED
(C) - CEILING MOUNTED (F) - FLOOR MOUNTED

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
—	HOME RUN.
⊕	DUPLEX RECEPTACLE @ 18" A.F.F. U.N.O. MOUNTED AT CODE HEIGHT.
⊕	GROUND FAULT PROTECTED DUPLEX RECEPTACLE.
⊕	QUAD RECEPTACLE @ 18" A.F.F. U.N.O. MOUNTED AT CODE HEIGHT.
⊕	USB/ DUPLEX COMBINATION RECEPTACLE
⊕	SHOW WINDOW OUTLET
⊕	SINGLE OUTLET/SPECIAL RECEPTACLE
⊕	FLOOR QUAD
⊕	TELEPHONE RECEPTACLE AT +18" A.F.F., U.N.O.
⊕	FLOOR TELEPHONE RECEPTACLE.
⊕	DATA RECEPTACLE AT +18" A.F.F., U.N.O.
⊕	TELEPHONE / DATA COMBINATION RECEPTACLE AT +18" A.F.F., U.N.O.
⊕	FLOOR TELEPHONE / DATA COMBINATION RECEPT.
⊕	THERMOSTAT
⊕	POWER POLE.
⊕	LIGHT SWITCH.
⊕	WALL MOUNTED OCCUPANCY SENSOR AT +48" A.F.F.
⊕	CEILING MOUNTED OCCUPANCY SENSOR.
⊕	JUNCTION BOX.
⊕	DISCONNECT SWITCH.
⊕	ELECTRICAL PANEL.
⊕	FLOOR DUPLEX RECEPTACLE
⊕	DUCT SMOKE DETECTOR
⊕	WALL MOUNTED SMOKE DETECTOR TEST STATION

ELECTRICAL LEGEND

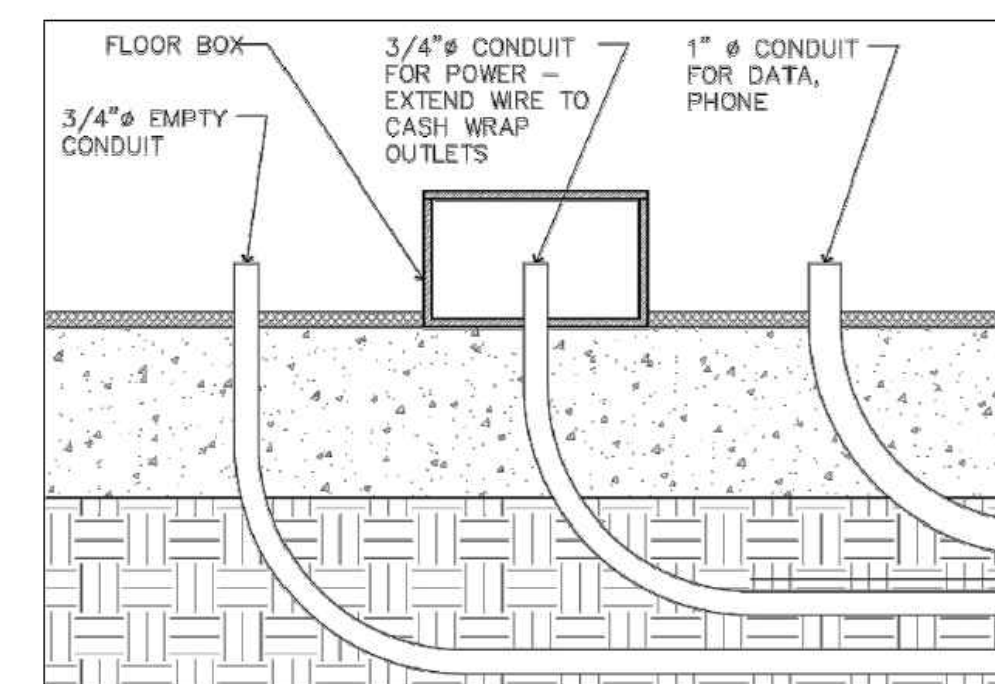
⊕	DUCT SMOKE DETECTOR
⊕	WALL MOUNTED SMOKE DETECTOR TEST STATION
⊕	SECURITY CAMERA
⊕	SPEAKER
NOTE: NOT ALL SYMBOLS MAY APPEAR ON DRAWINGS.	

KEY NOTES

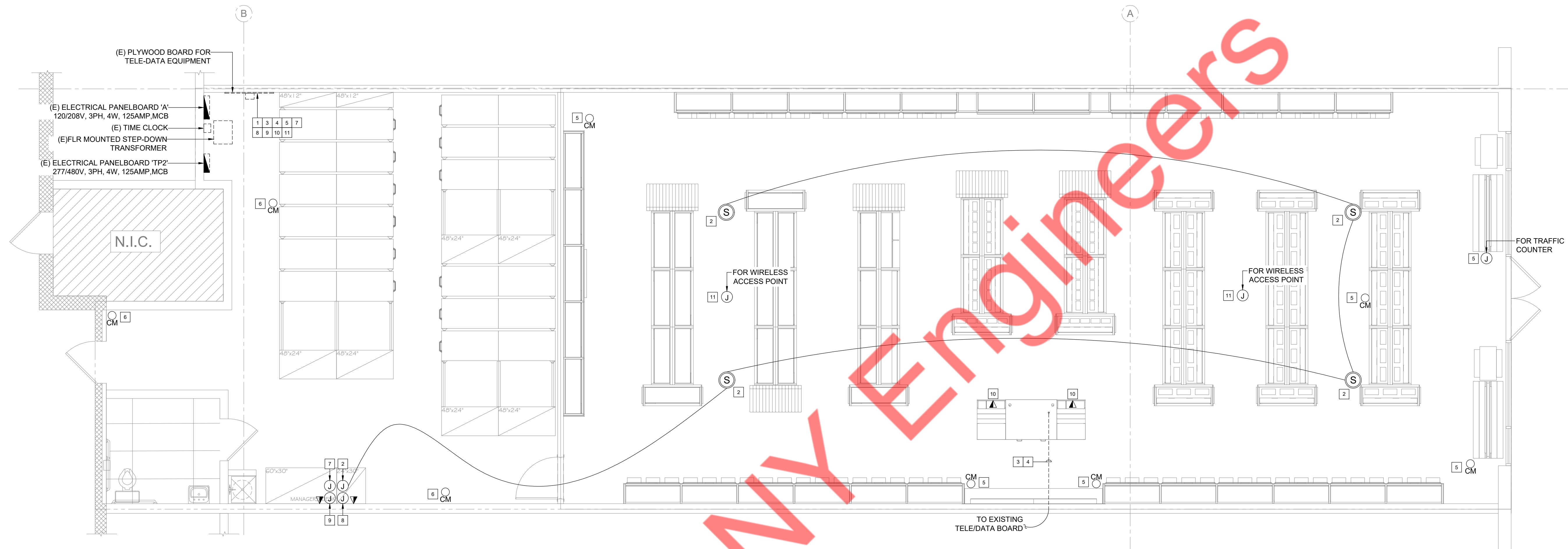
- EXISTING ELECTRICAL PANELS SHALL REMAIN. E.C. SHALL VERIFY EXACT LOCATION, RATING, OPERABLE CONDITION IN FIELD. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY. E.C. SHALL MAINTAIN CLEARANCE FOR ELECTRICAL PANEL PER NEC 110.26 (A) (1). REFER SHEET E4.0 ELECTRICAL RISER DIAGRAM FOR MORE INFORMATION
- PROVIDE SURFACE MOUNTED QUAD RECEPTACLES AND DATA OUTLETS ON BOTTOM OF CASHWRAP UNIT. EXTEND EXISTING POWER AND DATA CONDUITS AND WIRES FROM EXISTING LOCATION TO NEW QUAD RECEPTACLE AND DATA OUTLET LOCATION IF POSSIBLE (CONTRACTOR TO VERIFY IN FIELD PRIOR TO BID). OTHERWISE, PROVIDE NEW AS SHOWN.
- APPROXIMATE LOCATION OF CONDUIT UNDER SLAB USE FOR CASH WRAP. IF POSSIBLE, REUSE EXISTING ELECTRICAL AND DATA LINES (CONTRACTOR TO VERIFY IN FIELD PRIOR TO BID). OTHERWISE, CONTRACTOR TO PROVIDE CONDUITS FOR NEW CASH WRAP. PROVIDE NEW (3) EMT CONDUITS: (1) 3/4" CONDUIT FOR POWER, (1) 1" CONDUIT FOR PHONE/DATA, AND (1) 3/4" FOR SPARE. PROVIDE CAPS AT ENDS OF EACH CONDUITS. TRENCH FLOOR AND ROUTE TO NEAREST WALL AND UP TO CEILING TO TELEPHONE/DATA BOARD AND EXISTING PANEL LOCATION. VERIFY TRENCHING REQUIREMENTS WITH LANDLORD'S REPRESENTATIVE PRIOR TO START OF WORK.
- NEW CEILING MOUNTED SHOW WINDOW POWER OUTLET. COORDINATE EXACT LOCATION WITH ARCHITECT. E.C. TO FIELD VERIFY THE EXISTING SHOW WINDOW RECEPTACLE AVAILABILITY & OPERABLE CONDITION REUSE IF POSSIBLE, OTHERWISE PROVIDE NEW AS SHOWN ON PLAN.
- E.C. SHALL COORDINATE WITH MECHANICAL/PLUMBING CONTRACTOR FOR EXACT LOCATION AND ELECTRICAL REQUIREMENTS OF MECHANICAL/PLUMBING EQUIPMENT IN FIELD AND PROVIDE THE ELECTRICAL CONNECTION ACCORDINGLY.
- EXISTING ROOFTOP UNIT AND ASSOCIATED CIRCUITS TO REMAIN. UTILIZE EXISTING DISCONNECT IF IT'S IN OPERABLE CONDITION, PROVIDE NEW IF INOPERABLE.
- CONTRACTOR TO PROVIDE 3/4" EMPTY EMT CONDUIT WITH PULL STRING FROM THERMOSTAT AND SENSOR (WHERE REQUIRED) TO MECHANICAL UNIT. VERIFY LOCATION IN THE FIELD.
- NEW CEILING MOUNTED JUNCTION BOX AND DATA OUTLETS FOR WAP. COORDINATE EXACT LOCATION WITH ARCHITECT & COORDINATE WITH VENDOR FOR REQUIREMENTS PRIOR TO INSTALLATION
- CONTRACTOR SHALL ENSURE DUCT MOUNTED SMOKE DETECTOR IS PROPERLY WIRED TO EXISTING PANEL. NEW WALL MOUNTED SMOKE DETECTOR TEST STATION SHALL BE WIRED TO EXISTING PANEL AS NEEDED. COORDINATE WITH MECHANICAL CONTRACTOR IN FIELD AND VERIFY EXACT CONDITIONS IN FIELD PRIOR TO BID.
- CONTRACTOR TO VERIFY IN FIELD ANY RECEPTACLE IS PRESENT WITHIN 25FT OF RTU. IF YES, EXISTING RECEPTACLES TO REMAIN. WIRE TO NEW AVAILABLE CIRCUIT IF NEEDED. VERIFY EXACT LOCATION. ELSE PROVIDE NEW WEATHER PROOF, GFI, 120V, 20A RECEPTACLE WITHIN 25FT OF THE RTU AS SHOWN.
- QUAD RECEPTACLE AND TELE/DATA OUTLETS CENTERED AT +18" A.F.F. FOR NEW MANAGER'S DESK. VERIFY LOCATION IN THE FIELD.
- CONTRACTOR TO PROVIDE NEW COVERS FOR EXISTING & RELOCATED WALL/FLOOR RECEPTACLES, FINAL COVER FINISH SHALL BE AS PER ARCHITECT.
- NEW STOREFRONT SIGN. CONTRACTOR TO COORDINATE LOCATION IN FIELD. E.C. TO COORDINATE WITH SIGN VENDOR FOR REQUIREMENTS PRIOR TO INSTALLATION.
- NEW INSTANT WATER HEATER (EWH-1). E.C. TO COORDINATE THE EXACT LOCATION AND ELECTRICAL REQUIREMENTS WITH PLUMBING CONTRACTOR IN FIELD.
- E.C. SHALL PROVIDE DUPLEX RECEPTACLE WITH DEDICATED CIRCUIT CENTERED AT LOCATION OF HEY DUDE SIGNAGE. MOUNT RECEPTACLE AT 8'-4" A.F.F. TO THE CENTERLINE AT THE FIXTURE, COORDINATE EXACT LOCATION & HEIGHT WITH ARCHITECT/OWNER PRIOR TO ROUGH-IN.

CASHWRAP POWER DETAILS

NOTE:
COORDINATE ANY SAW-CUTTING OR CORE DRILLING OF SLAB WITH LANDLORD'S ONSITE REPRESENTATIVE PRIOR TO START OF WORK. WHERE REQUIRED, PROVIDE X-RAYING OF EXISTING SLAB



CONTRACTOR TO VERIFY SIZES OF EXISTING CONDUIT IN FIELD. CONTRACTOR TO USED CONDUIT SIZES ON THIS DETAIL IF EXISTING CONDUIT ARE UNDERSIZED.



1 LOW VOLTAGE PLAN
1/4" = 1'-0"

GENERAL NOTES

- A. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF MECHANICAL EQUIPMENT.
- B. FIRE ALARM SYSTEM BY FIRE ALARM CONTRACTOR.
- C. CONDUIT TO BE GROUPED IN PARALLEL RUNS SUPPORTED BY UNISTRUT HANGERS W/ 90 DEGREE BRANCH RUNS TO FIXTURES. ELECTRICAL CONTRACTOR TO COORDINATE WITH HVAC CONTRACTOR FOR LOCATION AND CLEARANCES FOR EQUIPMENT.
- D. PROVIDE 120V, 20A DEDICATED CIRCUIT, IF REQUIRED, FOR FIRE ALARM. COORDINATE WITH LANDLORDS REPRESENTATIVE.
- E. CIRCUITING MAY BE ADJUSTED IN THE FIELD AS CONDITIONS REQUIRE. PROVIDE A TYPE-WRITTEN PANEL SCHEDULE IN ALL PANELS.
- F. CIRCUIT NUMBERS SHOWN ARE FOR REFERENCE ONLY. MAINTAIN EXISTING CIRCUIT OF EXISTING EQUIPMENT, DEVICES, FIXTURES, ETC. TO REMAIN.
- G. I.T./SPEAKER CABLE SPECIFICATIONS:
 - WHEN THE SALES AREA HAS OPEN CEILING, SUBSTITUTE LANMARK 350 STATION CABLE WHITE (PART# 10032070 PLENUM RATED) FOR THE LANMARK 350 STATION CABLE BLUE AND BLACK.
 - PROVIDE JUNCTION BOXES FOR NOTES 2, 5, 6 AND 11. QUANTITY AND LOCATION TO BE DETERMINED BY PROJECT MANAGERS FOR NOTES 5, 6 AND 11.
- H. IF A LOW VOLTAGE PERMIT IS REQUIRED TO RUN THE CABLES THEN IT IS THE ELECTRICIAN'S RESPONSIBILITY TO OBTAIN THIS PERMIT AS WELL AS RESEARCH WHETHER IT IS NEEDED PRIOR TO THE START OF THE PROJECT.

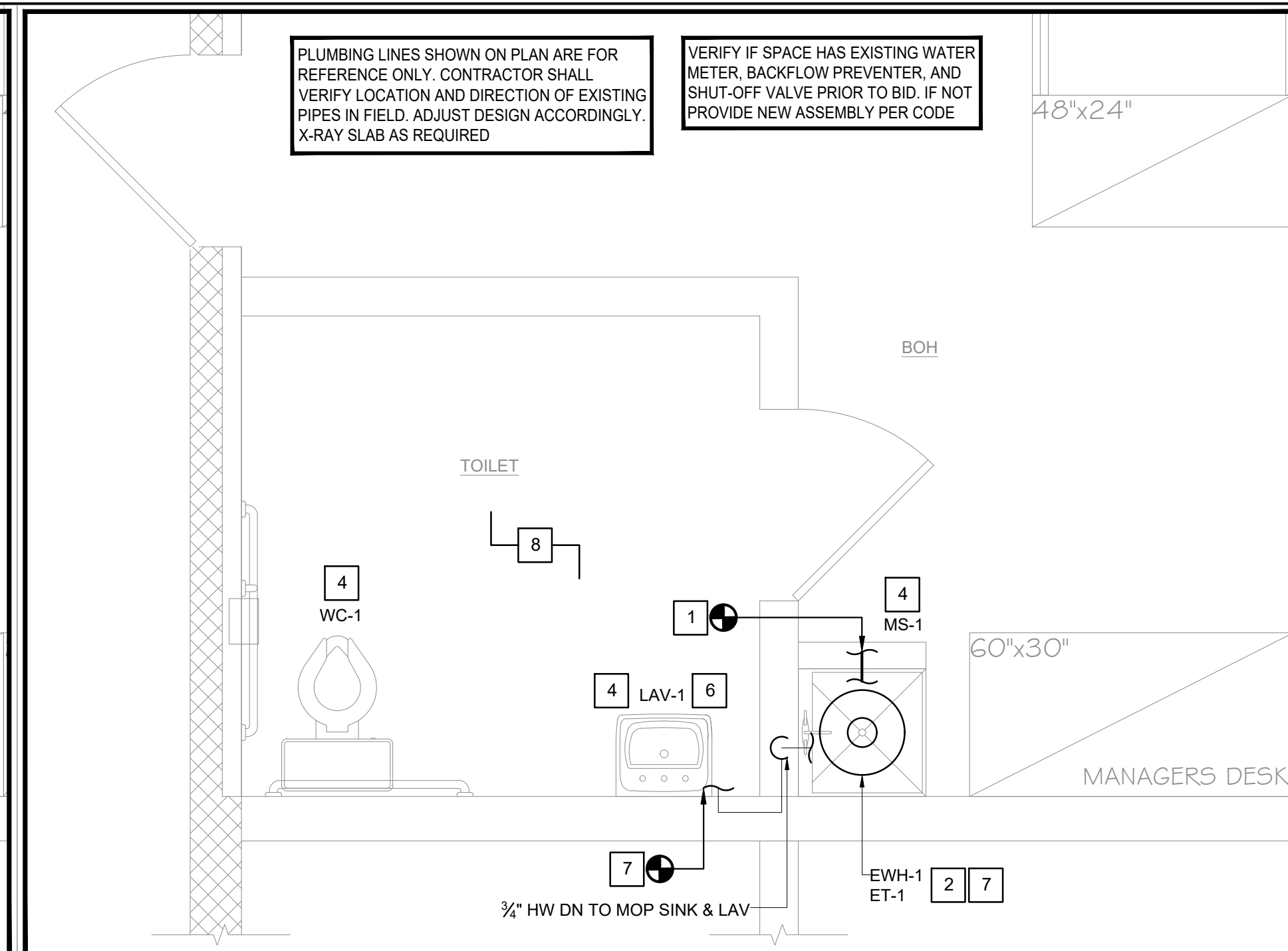
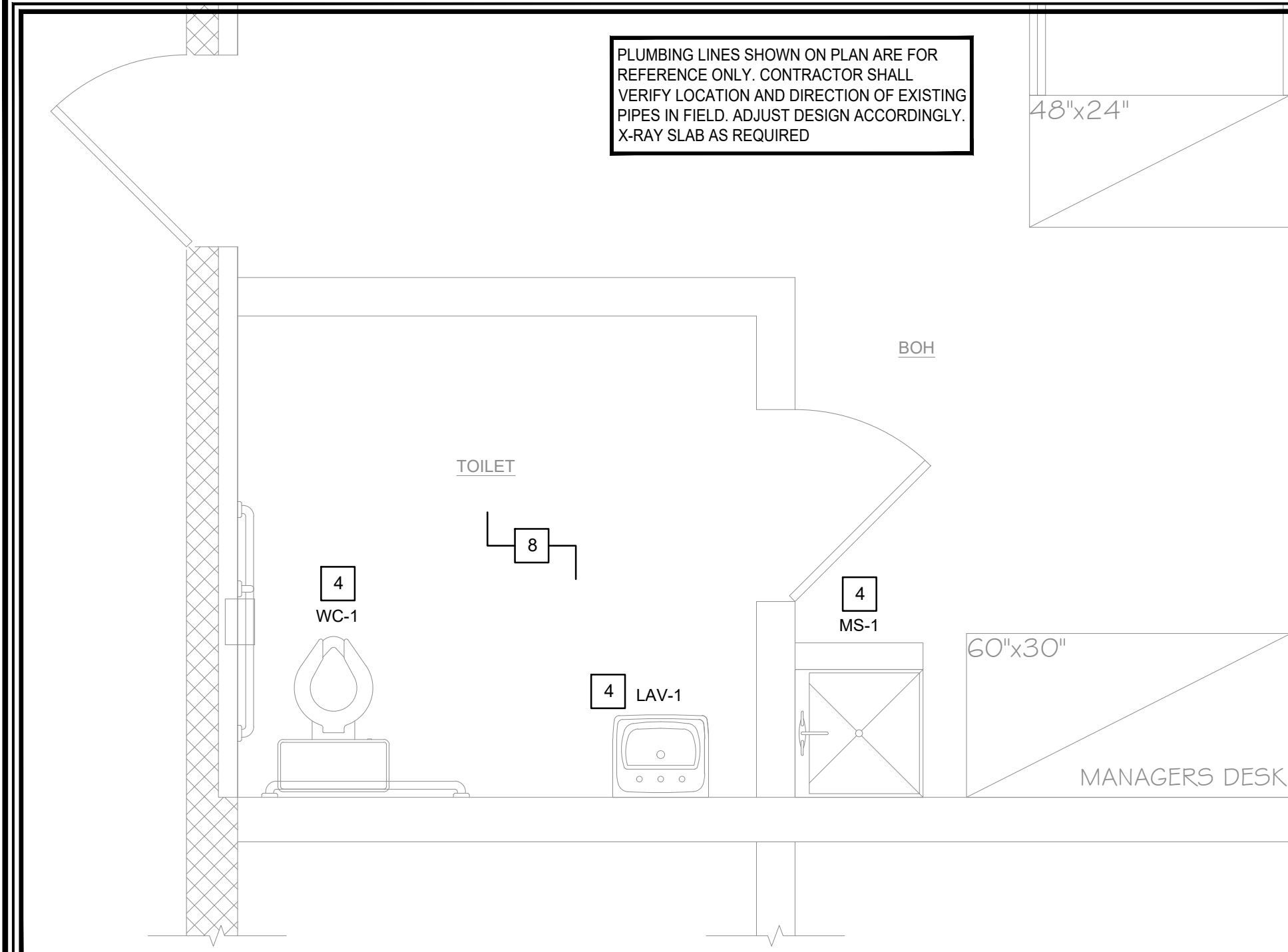
ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
CM	SECURITY CAMERA
S	SPEAKER

NOTE: NOT ALL SYMBOLS MAY APPEAR ON DRAWINGS.

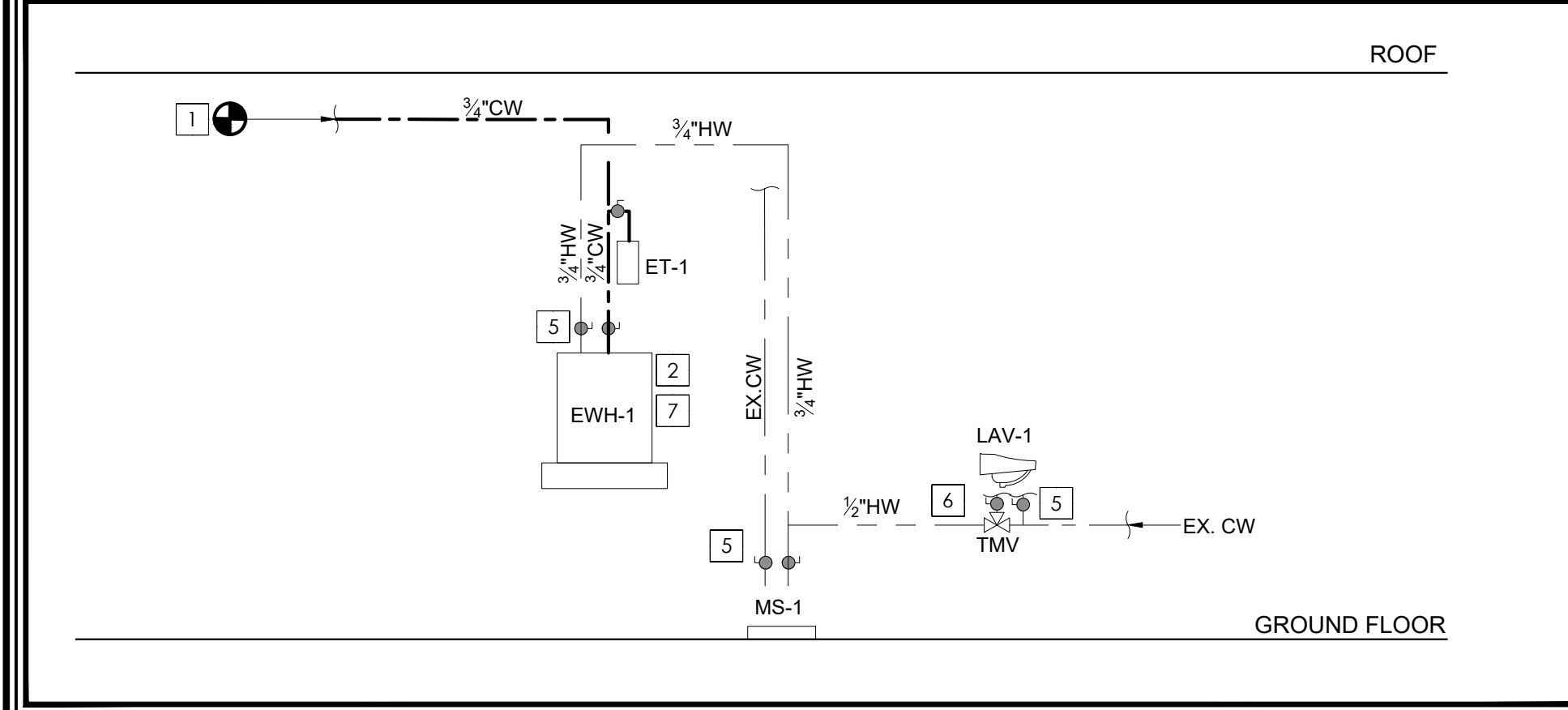
KEY NOTES

- 1 NEW TELEPHONE BACKBOARD LOCATION (V.I.F.). ENSURE THERE IS CONDUIT FOR THE PHONE LINES AND 66 PHONE WIRING BLOCK. SEE ARCHITECTURAL PLAN FOR TELEPHONE BACKBOARD INFORMATION.
- 2 PROVIDE J-BOX ABOVE CEILING FOR SPEAKER LINE. RUN ONE SINGLE LINE BELDEN 6200UE 16 AWG PLENUM RATED SPEAKER WIRE (PART# 102-1102) (WHITE AT ALL TIMES) TO THE FIRST SPEAKER LOCATION AND CONTINUE IN A DAISY-CHAIN FASHION FOR THE REMAINING SPEAKER LOCATIONS.
- 3 PROVIDE 6 LINES OF LANMARK 350 STATION CABLE BLUE (PART# 10032063 PLENUM RATED) FROM THE TELEPHONE BACKBOARD TO THE CASHWRAP LOCATION. LEAVING A SERVICE LOOP OF 12 FT FOR EACH LINE (FOR CASHWRAP DATA). (SEE GENERAL NOTES FOR OPEN CEILING IN SALES AREA).
- 4 PROVIDE 2 LINES OF LANMARK 350 STATION CABLE BLACK (PART# 10067869 PLENUM RATED) FROM THE TELEPHONE BACKBOARD TO THE CASHWRAP LOCATION. LEAVING A SERVICE LOOP OF 12 FT FOR EACH LINE (FOR CASHWRAP PHONE). (SEE GENERAL NOTES).
- 5 PROVIDE 6 LINES OF LANMARK 350 STATION CABLE BLUE (PART# 10032063 PLENUM RATED) FROM THE TELEPHONE BACKBOARD TO THE FRONT DOOR LOCATION. LEAVING A SERVICE LOOP OF 12 FT FOR EACH LINE (FOR SECURITY CAMERAS AND TRAFFIC COUNTER). (SEE GENERAL NOTES).
- 6 PROVIDE 3 LINES OF LANMARK 350 STATION CABLE BLUE (PART# 10032063 PLENUM RATED) FROM THE TELEPHONE BACKBOARD TO SECURITY CAMERAS. (SEE GENERAL NOTES FOR OPEN CEILING IN SALES AREA).
- 7 PROVIDE 4 LINES OF LANMARK 350 STATION CABLE BLUE (PART# 10032063 PLENUM RATED) FROM THE TELEPHONE BACKBOARD TO JUNCTION BOX AT MANAGER'S DESK LOCATION. LEAVING 1FT OF SLACK CABLE LOCATE JUNCTION BOX AT 18" A.F.F. (FOR MANAGER'S PC AND PRINTER). (SEE GENERAL NOTES FOR OPEN CEILING IN SALES AREA).
- 8 PROVIDE 2 LINES OF LANMARK 350 STATION CABLE BLUE (PART# 10032063 PLENUM RATED) FROM THE TELEPHONE BACKBOARD TO THE MANAGER'S DESK AUDIO/VISUAL JUNCTION BOX AT 5'-6", LEAVING 1FT OF SLACK CABLE (SEE GENERAL NOTES).
- 9 PROVIDE 2 LINES OF LANMARK 350 STATION CABLE BLACK (PART# 10067869 PLENUM RATED) FROM THE TELEPHONE BACKBOARD TO A JUNCTION BOX AT MANAGER'S DESK LOCATION. LEAVING 1FT OF SLACK CABLE. LOCATE JUNCTION BOX AT 18" A.F.F. (FOR MANAGER'S PHONE AND FAX) (SEE GENERAL NOTES).
- 10 PROVIDE 3 LINES OF LANMARK 350 STATION CABLE BLUE (PART# 10032063 PLENUM RATED) FROM THE TELEPHONE BACKBOARD TO ABOVE CASHWRAP. LEAVING A SERVICE LOOP OF 12FT. (SEE GENERAL NOTES).
- 11 PROVIDE 2 LINE OF LANMARK 350 STATION CABLE BLUE (PART# 10032063 PLENUM RATED) FROM THE TELEPHONE BACKBOARD TO THE MIDDLE OF THE STORE. LEAVING A SERVICE LOOP OF 12FT (FOR THE WAP). (SEE GENERAL NOTES FOR OPEN CEILING IN SALES AREA). PROVIDE ENOUGH EXTRA CABLING FOR FUTURE CAMERA AND SHOPPERTRACK NEAR ENTRY DOORS.



1 SANITARY & VENT PLAN
SCALE: 1/2"=1'-0"

2 DOMESTIC WATER PLAN
SCALE: 1/2"=1'-0"



4 PLUMBING LEGENDS
SCALE: N.T.S.

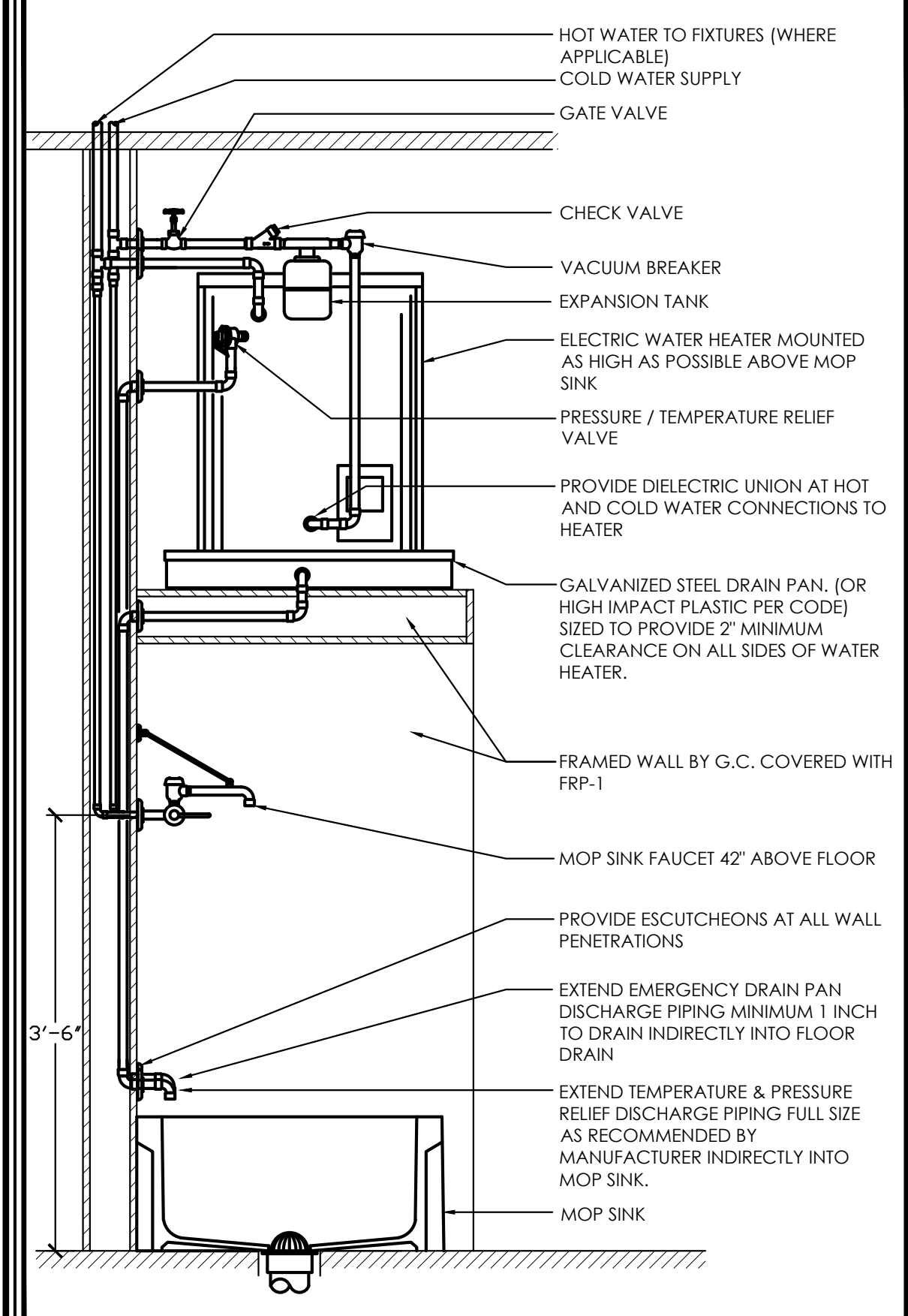
IDENTIFIER	DESCRIPTION
CW	COLD WATER
DN	DOWN
EQUIP	EQUIPMENT
F.C.O.	FLOOR CLEAN OUT
GC	GENERAL CONTRACTOR
HW	HOT WATER
EX.	EXISTING FIXTURE/EQUIPMENT
(N)	NEW FIXTURE/EQUIPMENT
V.I.F.	VERIFY IN FIELD
EWH	ELECTRIC WATER HEATER

NOTE: SYMBOL LIST SHOWN IS FOR GENERAL REFERENCE ONLY. THE PRESENCE OF A SYMBOL DOES NOT IMPLY ITS USE ON THIS PROJECT. REFER TO DRAWINGS FOR SPECIFIC SYMBOLS USED.

	DOMESTIC COLD WATER PIPING (CW)
	DOMESTIC HOT WATER PIPING (HW)
	BALL / GATE VALVE
	FIELD CONNECTION

3 DOMESTIC WATER RISER
SCALE: N.T.S.

4 PLUMBING LEGENDS
SCALE: N.T.S.



- 6 PLUMBING KEY NOTES**
SCALE: N.T.S.
- CONTRACTOR SHALL CONNECT NEW 3/4" COLD WATER PIPE TO NEW HOT WATER HEATER FROM THE EXISTING COLD WATER LINE FOR SPACE. MODIFY AND EXTEND EXISTING COLD WATER LINES AS REQUIRED. CONTRACTOR TO VERIFY SIZE, LOCATION, ROUTING & CONNECTION POINT PRIOR TO BID. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO BID.
 - NEW ELECTRIC HOT WATER HEATER EWH-1, INSTALLED ABOVE MOP-SINK, REFER PLUMBING FIXTURE SCHEDULE
 - CONTRACTOR SHALL CONNECT NEW 3/4" HOT WATER PIPE TO EXISTING HOT WATER CONNECTION TO NEW LAVATORY. FIELD VERIFY EXACT LOCATION FOR CONNECTION.
 - EXISTING WATER CLOSET, LAVATORY & MOP SINK TO BE REPLACED WITH NEW FIXTURE IN THE EXISTING LOCATION WITH THE EXISTING SANITARY, VENT AND WATER LINES WITH ASSOCIATED ACCESSORIES AND FITTINGS TO REMAIN. CONTRACTOR TO VERIFY IN FIELD, CONDITION OF EXISTING PIPING AND REPLACE IF PIPES ARE NOT IN GOOD CONDITION.
 - ALL PLUMBING FIXTURES SHALL BE INSTALLED WITH STOP VALVES TO ISOLATE EACH FIXTURE.
 - PROVIDE THERMOSTATIC MIXING VALVE SET AT 110°F FOR LAVATORY.
 - CONTRACTOR SHALL DRAIN WATER HEATER, RELIEF VALVE, AND DRAIN PAN INDIRECTLY TO MOP SINK PER LOCAL CODE.
 - CONTRACTOR TO COORDINATE WITH CLIENT AND FIELD VERIFY THE EXISTING SANITARY AND WATER MAIN LINES IN THE SPACE ARE IN GOOD CONDITION. REPLACE THE PIPES IF NOT IN GOOD CONDITION AND NOTIFY THE ENGINEER IF ANY DISCREPANCIES IN THE FIELD PRIOR TO BID.

7 PLUMBING FIXTURE SCHEDULE
SCALE: N.T.S.

DESCRIPTION	MANUFACTURER / CATALOG NO.
MOP SINK (MS-1)	24X24 ZURN 21996-04 WHITE MOP SINK, MOLDED HIGH DENSITY COMPOSITE MOP BASIN. 3" ST. STL. DRAIN ASSEMBLY. CONCEALED CLINICAL SERVICE SINK. FAUCET WITH 1/2" VB AND INTEGRAL STOPS. 3" DIAMETER FOUR ARM HANDLES. MOP HANGER.
WATER HEATER (EWH-1)	PROVIDE 10 GALLON ELECTRIC WATER HEATER, 1.65KW @ 120V WITH MANUFACTURER SUPPLIED TEMPERATURE AND PRESSURE RELIEF VALVE. (A.O. SMITH #EJC-10, OR EQUAL). PROVIDE THERMAL EXPANSION TANK. (AMTROL THERM-X-TROL ST-5, OR EQUAL). PROVIDE THERMAL EXPANSION TANK SUPPORT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SUPPORT FOR THE EXPANSION TANK. SUPPORT TO ADJACENT WALL OR FROM EXISTING STRUCTURE ABOVE WITH UNISTRUT. DO NOT SUPPORT FROM PIPE ALONE. PROVIDE DRAIN PAN UNDER WATER HEATERS. PROVIDE SEISMIC STRAPPING ON WATER HEATERS. TERMINATE (EWH-1) DRAIN LINE DRAIN LINE IN MOP SINK (MS-1). PROVIDE FULL SIZE T&P RELIEF LINE. REFER TO WATER HEATER DETAIL FOR ADDITIONAL INFORMATION.
ADA LAVATORY LAV-1	20"X18" WALL HUNG ADA LAVATORY W/ FRONT OVERFLOW, CONCEALED HANGERS & 4" CENTERS. AMERICAN STANDARD LUCERNE #0355.012 OR EQUAL. FAUCET SHALL BE POLISHED CHROME-PLATED CAST BRASS BODY WITH 4" SPOUT. 4" BRASS WRIST BLADE. 0.5 GPM SPRAY AND GRID STRAINER DRAIN. AMERICAN STANDARD MONTERREY #5502.175 WITH WATTS MODEL USG-B-M1 TEMPERING VALVE OR EQUAL. INSULATE EXPOSED DRAIN & WATER PIPES WITH TRUEBRO LAV GUARD KIT #102 E-Z. PROVIDE SUPPLIES, STOP VALVES AND P-TRAP.
WATER CLOSET WC-1	FLOOR MOUNTED ADA VITREOUS CHINA ELONGATED 1.6 FLUSH GALLON CLOSE COUPLED TWO PIECE SIPHON JET WATER CLOSET. FLUSH TANK WITH 12" ROUGH-IN. AMERICAN STANDARD CHAMPION 4 "RIGHT HEIGHT" #2002.014 OR EQUAL WITH ALTERNATE TANK ASSEMBLY #4266.804 (RIGHT HAND TRIP LEVER). PROVIDE STOP VALVE, FLEXIBLE SUPPLY LINE, OPEN FRONT SEAT (AMERICAN STANDARD #5901.100 OR EQUAL).
FLOOR CLEANOUT FCO	JOSAM SERIES OR ZURN OR EQUAL. SEE PLUMBING PLAN AND RISER FOR SIZE.

5 WATER HEATER DETAIL
SCALE: N.T.S.

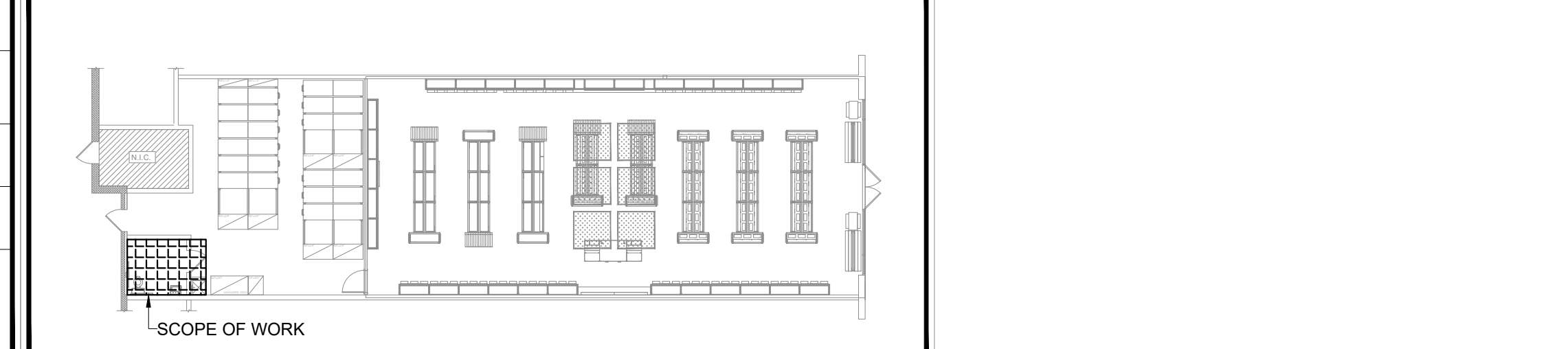
7 PLUMBING FIXTURE SCHEDULE
SCALE: N.T.S.

- IT IS THE INTENT OF THESE SPECIFICATIONS TO PROVIDE A COMPLETE INSTALLATION FOR FINISHED WORK, TESTED AND READY FOR OPERATION. THE WORK THROUGHOUT SHALL BE EXECUTED IN THE BEST AND MOST THOROUGH MANNER UNDER THE DIRECTION OF AND TO THE SATISFACTION OF THE OWNER.
 - ALL MATERIALS REQUIRED FOR THIS WORK SHALL BE NEW, UNUSED, BEST OF ITS RESPECTIVE KINDS, AND FREE FROM DEFECTS AND OF FIRST CLASS QUALITY. BASIS OF QUALITY SHALL BE LATEST STANDARDS OF ASTM, ANSI FEDERAL SPECIFICATIONS OR OTHER ACCEPTABLE STANDARDS.
 - THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR WORK UNTIL ITS COMPLETION AND FINAL ACCEPTANCE AND SHALL REPLACE ANY OF THE SAME WHICH MAY BE DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER.
 - THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL WORK PERFORMED AND MATERIALS INSTALLED TO BE FREE FROM INHERENT DEFECTS AND SHALL KEEP IN REPAIR AND REPLACE ANY DEFECTIVE MATERIALS OF WORKMANSHIP, FREE OF COST TO THE TENANT (OWNER) FOR A PERIOD OF ONE (1) YEAR AFTER THE OPENING FOR BUSINESS.
 - ALL WORK SHALL BE DONE ACCORDING TO THE REQUIREMENTS OF ALL APPLICABLE CODES AND LEASE CRITERIA (IF APPLICABLE) AND SHALL RECEIVE THE APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION. PREPARE ALL REQUIRED DOCUMENTS, DRAWINGS AND PERFORM ALL REQUIRED TESTS AND PAY ALL REQUIRED CHARGES TO OBTAIN THESE APPROVALS.
 - CONTRACTOR SHALL BE HELD TO HAVE EXAMINED THE SITE FOR THE WORK BEFORE HAVING SUBMITTED A PROPOSAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CONDITIONS FOUND DURING THE COURSE OF THE CONTRACT.
 - THIS CONTRACTOR MUST PROVIDE LANDLORD'S CONSTRUCTION REPRESENTATIVE WITH COPIES OF REQUIRED INSURANCE AND COPIES TO BE FURNISHED TO THE OWNER BEFORE COMMENCING WORK.
 - SUBMIT THREE (3) SETS OF SHOP DRAWINGS IDENTIFIED WITH PROJECT NAME OF THE FOLLOWING (1) ELECTRIC HOT WATER HEATER OR INSINKERATOR (2) PLUMBING FIXTURES AND TRIM. CONTRACTOR SHALL SUBMIT SHOP DRAWING OF PIPING LAYOUT TO THE OWNER FOR THEIR FILE.
 - THE PLUMBING SUBCONTRACTOR IS A SUBCONTRACTOR OF THE TENANT'S GENERAL CONTRACTOR.
 - NOTHING AND BORING OF STRUCTURAL STEEL MEMBERS IS NOT PERMITTED. WHEN HANGING FROM STRUCTURAL STEEL ONLY HANG FROM TOP FLANGE OF BEAMS AND TOP CHORDS ONLY AT PANEL POINTS OF JOISTS / TRUSSES.
- I. WORK RESPONSIBILITY**
- FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND CONTRACTORS FOR A COMPLETE, SAFE INSTALLATION OF PLUMBING WORK IN FULL CONFORMITY WITH REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION AS INDICATED ON DRAWINGS AND/OR HEREIN SPECIFIED, INCLUDING IN GENERAL THE FOLLOWING:
 - SANITARY DRAINAGE CONNECTIONS TO PLUMBING FIXTURES AND EQUIPMENT REQUIRING SAME WITH FINAL CONNECTIONS TO EXISTING PREINSTALLED OUTLETS PROVIDED BY PRIOR TENANT (S) OR LANDLORD. PLUMBER SHALL VERIFY EXACT LOCATION OF WASTE PIPE OUTLET BEFORE SUBMITTING BID AND NOTIFY THE ARCHITECT OF ANY LOCATION DISCREPANCIES. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CONCRETE SAWCUTTING REQUIRED TO MAKE THE FINAL CONNECTION TO THE EXISTING WASTE PIPING OR CAPPED OUTLET(S). SAWCUTTING, BRICKLAPPING, BACKFILLING AND NEW CONCRETE MUST BE WITH THE LANDLORD'S APPROVAL.
 - SNAKE SANITARY FOR A DISTANCE OF 100 FEET AND REPORT ANY BLOCKAGE.
 - TEST WATER PRESSURE TO INSURE MINIMUM OF 50 PSI.
 - COMPLETE VENT SYSTEM, ALL FIXTURES INDIVIDUALLY VENTED WITH FINAL CONNECTION THROUGH ROOF OR TO EXISTING LANDLORD SUPPLIED COMMON VENT. ROOF PENETRATION AND FLASHING TO BE PERFORMED BY LANDLORD'S ROOFER (IF APPLICABLE). COST OF ROOF PENETRATION AND FLASHING TO BE PART OF THIS CONTRACT, UNLESS NOTED OTHERWISE IN BID PROPOSAL (IF APPLICABLE).
 - DOMESTIC WATER SUPPLY SYSTEM INCLUDING CONNECTION TO EXISTING CAPPED OUTLET AND FINAL CONNECTIONS TO PLUMBING FIXTURES AND EQUIPMENT REQUIRING SAME. VERIFY EXACT LOCATION AND SIZE BEFORE SUBMITTING BID.
 - INSULATION OF ALL HOT AND COLD WATER PIPING, INCLUDING UNDER LAVATORY A.D.A. PIPE WRAPPINGS.
 - FURNISH AND INSTALL WATER METER (IF APPLICABLE) ACCESSIBLE TO UTILITY COMPANY OR LANDLORD'S REPRESENTATIVE FOR MONITORING WATER, BUT METER SHOULD IN NO WAY BE IN THE PATH OF THE A.D.A./C.A.B.O.-ANSI, 5'-0" CIRCULAR PATTERN.
 - COSTS FOR WORKING BELOW TENANT'S SLAB IN ANOTHER TENANT'S SPACE.
 - INSTALLATION OF FLOOR DRAIN, BACKFLOW PREVENTER (IF REQ. BY CODE) PER LANDLORD REQUIREMENT AND CLEANOUT PER LOCAL CODE. COORDINATE ALL LOCATIONS WITH OPERATIONS MANAGER.
- II. GENERAL ITEMS**
- SLEEVES: PROVIDE #22 GAGE GALVANIZED IRON PIPE SLEEVES FOR PIPING THROUGH WALLS AND FLOOR. PACK WITH NON-ASBESTOS ROPE AND FILL WITH EXPANDO NON-SHRINKING CEMENT.
 - ESCUTCHEONS: PROVIDE EXPOSED PIPING, BOTH BARE AND COVERED, WITH CP CAST BRASS ESCUTCHEONS WHERE PASSING THROUGH FLOORS, CEILINGS, WALLS OR PARTITIONS.
 - HANGERS AND SUPPORTS: SUPPORT HORIZONTAL DRAINAGE PIPING AT LEAST EVERY 5 FEET OR AT EVERY HUB. COPPER TUBING EVERY 7 FEET AND STEEL PIPE EVERY 10 FEET WITH "CLEVIS" HANGERS AND INSULATION PROTECTION SHIELDS. PIPING SHALL NOT BE SUPPORTED FROM BRIDGING OR OTHER PIPING. ONLY SUPPORT FROM TOP FLANGES OF BEAMS AND TOP CHORDS AT PANELS OF JOIST AND TRUSSES. PROVIDE SWAY AND SEISMIC BRACING WHERE REQUIRED BY CODES.
 - TEST: TEST PIPING AND PROVE TIGHT FOR AT LEAST TWO HOURS IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND/OR AS SPECIFIED. TEST SHALL BE PERFORMED IN THE PRESENCE OF OWNER'S REPRESENTATIVE AND LOCAL INSPECTOR. TEST SHALL BE REPEATED IF NECESSARY UNTIL FINAL APPROVAL OF SYSTEM IS OBTAINED.
 - TEST DRAINAGE AND VENT PIPING BY FILLING WITH WATER TO OVERFLOWING AT ROOF. WATER LEVEL TO REMAIN.
 - TEST WATER PIPING WITH WATER 1 1/2 TIMES THE WORKING PRESSURE.
 - STERILIZATION OF DOMESTIC WATER SYSTEM: BEFORE BEING PLACED IN SERVICE, ALL WATER LINES SHALL BE CHLORINATED TO THE SATISFACTION OF THE ARCHITECT OR LANDLORD'S REPRESENTATIVE, IN ACCORDANCE WITH A.W.W.A. SPECIFICATION C651-05.
 - SLOPE WASTE LINES 2 INCHES AND SMALLER NOT LESS THAN 1/4 INCH PER FOOT. SLOPE LARGER MAINS NOT LESS THAN 1/8 INCH PER FOOT.
 - INSTALL A CLEANOUT AT BASE OF EACH SOIL STACK. AT EACH CHANGE IN DIRECTION, AT INTERVALS NOT OVER 50 FEET AND ELSEWHERE AS SHOWN ON DRAWINGS OR REQUIRED BY LOCAL CODE. CLEANOUTS SHALL NOT BE INSTALLED IN PUBLIC AREAS WITHOUT SPECIFIC PERMISSION BY TENANT'S CONSTRUCTION MANAGER.
- III. MATERIALS**
- DRAINAGE AND VENT PIPING: EXTRA HEAVY HUB AND SPIGOT CAST IRON SOIL WITH RUBBER GASKETS CONFORMING TO ASTM C564. NO-HUB CAST IRON TO HAVE HEAVY DUTY, TYPE 304 STAINLESS STEEL COUPLINGS CONFORMING TO ASTM A 686, TYPE 304 STAINLESS STEEL SHIELD, TYPE 304 STAINLESS STEEL BANDS AND SLEEVE. NPS 1 1/2" TO NPS 4": 3" WIDE SHIELD WITH 4 BANDS; NPS 5" TO NPS 10": 4" WIDE BAND WITH 6 BANDS.
 - WATER PIPING BELOW SLAB: TYPE K HARD COPPER TUBING, WITH CAST BRONZE OR WROUGHT COPPER SOLDER JOINT FITTINGS USING 95-5 SOLDER. WATER PIPING ABOVE SLAB: TYPE L HARD COPPER TUBING USING SILVER SOLDER. ALL WATER SUPPLY PIPING TO CONFORM

- IV. INSULATION**
- ALL HOT AND COLD WATER PIPING AND FITTINGS SHALL BE INSULATED WITH 1" THICK RIGID FIBERGLASS WITH VAPOR BARRIER UNIVERSAL JACKET PASTED WITH VAPOR BARRIER CEMENT. VAPOR BARRIER NOT REQUIRED ON HOT WATER PIPING.
 - ALL ADA CONFORMING, WHEELCHAIR ACCESSIBLE LAVATORY P-TRAP AND ANGLE VALVE ASSEMBLIES TO BE COVERED WITH THE MOLDED, ANTIMICROBIAL TRUBRO, INC. "LAV-GUARD" UNDERSINK PROTECTIVE PIPE COVER MODEL #103.
- V. SPECIFIC PLUMBING SPECIFICATIONS**
- INSTALL NEW ONLY IF EXISTING DOES NOT MEET CURRENT ADA/C.A.B.O.-ANSI (AS APPLICABLE) STANDARDS, OR IS DAMAGED, NOT IN WORKING ORDER OR NOT EXISTING AS APPLICABLE.
 - IT IS THIS CONTRACTOR'S RESPONSIBILITY TO SUPPLY HANDICAPPED TOILET FIXTURES, IF REQUIRED BY CODE OR NOTED ON THE DRAWINGS, UTILIZING THE SPECIFICATION ABOVE AS A STANDARD AND MEETING CODE REQUIREMENTS. SPACING OF FIXTURES TO BE COORDINATED WITH THE GENERAL CONTRACTOR AS WELL AS THE PLUMBING INSPECTOR'S REQUIREMENTS.
- VI. LANDLORD'S CRITERIA**
- THE PLUMBING CONTRACTOR IS TO BECOME FAMILIARIZED WITH LANDLORD'S CRITERIA FOR THIS LOCATION AND INCLUDE ANY WORK REQUIRED OF THIS CRITERIA, WHICH IS NOT SPECIFICALLY NOTED IN THESE DRAWINGS AND SPECIFICATIONS.

- FIELD VERIFY ALL CONDITIONS**
DESIGN DRAWINGS ARE SCHEMATIC. THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS.
- THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO ANY MODIFICATIONS OF THE DESIGN AND INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES. THE PLANS AND SPECIFICATIONS NOT WITHSTANDING, THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.
- BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES. THE PLANS AND SPECIFICATIONS NOT WITHSTANDING, THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.**
- PLUMBING COMMENTS:**
- ANY CHANGES AND OR UPGRADES TO TENANT'S EXISTING PLUMBING SYSTEMS SHALL COMPLY WITH ALL CODES AND MALL CRITERIA.
- ALL MAIN WATER LINES SHALL BE COPPER - PVC IS NOT PERMITTED THERE SHALL BE NO PIPING JOINTS OR FITTINGS INSTALLED IN WATER PIPING BELOW THE FLOOR SLAB. PEX IS AN ALTERNATIVE, IF ALLOWABLE AND COMPLIANT WITH LOCAL CODE.
- ALL DRAIN, WASTE AND VENT PIPING AND FITTINGS ABOVE GRADE MUST BE CAST IRON PIPE. (PVC IS ACCEPTANCE IN OUR NEW CONSTRUCTION AS LONG AS IT IS NOT INSTALLED IN A RETURN AIR PLENUM.)
- PLUMBING IS NOT PERMITTED IN ANY DEMISING PARTITIONS. FUR OUT THE WALL AS NECESSARY.
- EXHAUST AND PLUMBING VENTS SHALL BE LOCATED A MINIMUM OF 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKE, AND 5'-0" FROM ANY DEMISING WALL VERTICAL PLANE. ALL VENTS SHALL BE LOCATED OUTSIDE OF ANY SNOW DRIFT ZONES AS SPECIFIED ON THE CENTER'S DOCUMENTATION.
- ALL PENETRATIONS TO ROOF MUST BE APPROVED BY LANDLORD. ALL RELATED ROOF WORK MUST BE DONE BY MALL'S DESIGNATED ROOFING CONTRACTOR. AT TENANT'S EXPENSE. COORDINATE ALL WORK WITH PROPERTY MANAGEMENT ON SITE.
- ANY UNUSED PLUMBING EQUIPMENT, PIPING, ETC., WITHIN OR SERVING THE PREMISES MUST BE COMPLETELY REMOVED TO POINT OF ORIGIN. DO NOT ABANDON IN PLACE. ALL PENETRATIONS THROUGH THE ROOF SHALL BE PATCHED AND REPAIRED BY THE APPROVED ROOFING CONTRACTOR APPROVED BY PROPERTY MANAGEMENT.
- IF NOT ALREADY EXISTING, INSTALL A SHUT OFF VALVE ON DOMESTIC WATER LINE INSIDE SPACE. EXISTING SHUT OFF VALVE TO THE SPACE SHALL SERVE AS THE POINT OF SERVICE TO THE TENANT SPACE.
- ALL NEW PLUMBING (DOMESTIC WATER AND DRAIN WASTE VENT DWV PIPING) SHALL BE INSULATED WHERE EXPOSED OR IN PLENUM SPACES.
- TENANT IS REQUIRED TO INSTALL A WATERPROOF MEMBRANE IN ALL WET AREAS OF THE SPACE. TENANT SHALL USE A 30 MIL POLYETHYLENE CLEAVAGE MEMBRANE (EQUAL TO NOBLESEAL TS) INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND ANSI A108. MEMBRANE MUST BE EXTENDED UP THE WALL A MINIMUM OF 6" OR EQUAL TO THE HEIGHT OF THE FLOOR BASE.
- TENANT'S GENERAL CONTRACTOR SHALL ADVISE THE PROPERTY MANAGEMENT TEAM PRIOR TO ANY SLAB MODIFICATIONS OR REMOVAL. TENANT GC SHALL VERIFY THAT WORK SHALL NOT CONFLICT WITH ANY EXISTING STRUCTURAL UTILITY, OF OTHER UNDER-SLAB CONDITION. NON-DESTRUCTIVE VERIFICATION MAYBE REQUIRED. ANY DAMAGE OR DOWNTIME CAUSED BY TENANT'S WORK SHALL BE REPAIRED AND REIMBURSED AT TENANT'S EXPENSE.
- VAPOR BARRIER AND DOWELS MUST BE REVIEWED AND APPROVED BY THE PROPERTY'S OPERATION DIRECTOR PRIOR TO TRENCH CONCRETE BACKFILL WHERE THE SLAB IS SAWCUT AND REMOVED FOR TRENCHING. LANDLORD REQUIRES TENANT'S CONTRACTOR TO INSTALL APPROPRIATE MOISTURE BARRIER (STEGO 15 MIL THICK), CONFIRM WORK WITH CENTER OPERATIONS DIRECTOR BEFORE YOU BACKFILL.
- GENERAL NOTE:**
- POUR BACK MUST BE DOWELED INTO EXISTING SLAB. VAPOR BARRIER MUST BE REPAIRED BEFORE POUR BACK.
- SOME TENANT SUITES HAVE FURRED OUT COLUMNS WITH ACCESS PANELS TO AN EXISTING CLEAN OUT OR EXPOSED ROOF DRAIN. TENANT WILL BE REQUIRED TO ALWAYS KEEP THIS ACCESS PANEL AREA CLEAR OF OBSTRUCTIONS. REFER TO PLUMBING DRAWINGS FOR PIPE LOCATIONS. EXISTING CONDUITS, EXPOSED LOW VOLTAGE WIRING, WATER PIPES, DRAIN LINES, ETC. MAY BE INSTALLED EITHER ABOVE THE EXISTING CEILING, INSIDE THE ORIGINAL CONCRETE SLAB OR JUST BELOW THE SLAB. LANDLORDS AS BUILT DRAWINGS MAY NOT ACCURATELY REFLECT THESE INSTALLATIONS. IT IS THE TENANT AND ITS CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ANY PIPE OR CONDUIT UNDER THE SLAB BY WHATEVER MEANS THE CONTRACTOR DEEMS APPROPRIATE PRIOR TO CUTTING THE SLAB. LIKEWISE, IDENTIFY ALL WIRING, CONDUITS, PIPING OR OTHER ITEMS IN THE ABOVE CEILING SPACE PRIOR TO REMOVING IT. ANY REPAIRS OR DAMAGES RESULTING FROM THE TENANT CONTRACTORS WORK WILL BE THAT CONTRACTORS RESPONSIBILITY TO REPAIR TO THE LANDLORDS SATISFACTION.

8 PLUMBING GENERAL NOTES
SCALE: N.T.S.



9 KEY PLAN
SCALE: N.T.S.