ABBREVIATIONS

-A-	
A	AIR
A/E	ARCHITECT/ENGINEER
AAMA	AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION
ABAN	ABANDON
ABBRV	ABBREVIATION
ABRSV	ABRASIVE
AC	ABOCE CEILING
AC	ALTERNATING CURRENT
AC	ACOUSTICAL PANEL CEILING
ACC	ACCESSIBLE
ACHKV	AUTOMATIC CHECK VALVE
ACID	RES ACID RESISTANT
ACID	RES CI ACID RESISTANT CAST IRON
ACID RES P	ACID RESISTANT PIPE
ACID RES V	ACID RESISTANT VENT
ACID RES W	ACID RESISTANT WASTE
ACR	ACROSS
ACS DR	ACCESS DOOR
AP	ACCESS PANEL
ACV	AUTOMATIC CONTROL VALVE
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
ADDL	ADDITIONAL
ADDM	ADDENDUM
ADH	ADHESIVE
ADJ	ADJOINING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFS	ABOVE FINISHED SLAB
AGA	AMERICAN GAS ASSOCIATION
AGC	ASSOCIATED GENERAL CONTRACTORS
AGGR	AGGREGATE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIA	AMERICAN INSTITUTE OF ARCHITECTS
ALM	ALARM
ALNMT	ALIGNMENT
ALT	ALTERNATE
ALUM	ALUMINUM
AMB	AMBIENT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPD	APPROVED
APPROX	APPROXIMATE
APPX	APPENDIX
APR	AIR PRESSURE RETURN LINE
AR	AS REQUIRED
ARCH	ARCHITECT
ARF	ARCHITECTURAL FINISH
ASC	ABOVE SUSPENDED CEILING
ASD	AUTOMATIC SPRINKLER DRAIN
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS
AS	AUTOMATIC SPRINKLER
ASPE	AMERICAN SOCIETY OF PLUMBING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASR	AUTOMATIC SPRINKLER RISER
ASSN	ASSOCIATION
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ASV	ANGLE STOP VALVE
ATC	ACOUSTICAL TILE CEILING
ATCH	ATTACHMENT
ATTN	ATTENTION
AUTO	AUTOMATIC
AUX	AUXILIARY
AV	ACID VENT
AV	AIR VENT
AVG	AVERAGE
AW	ACID WASTE
AWL	ACID WASTE PIPE
AWP	AIR WATER PUMP
AWWA	AMERICAN WATER WORKS ASSOCIATION
AX FL	AXIAL FLOW
-B-	
B&F	BELL AND FLANGE
B&S	BELL AND SPIGOT
BAC	BANK OF AMERICA
BAL	BALANCE
BAS	BUILDING AUTOMATION SYSTEM
BC	BUILDING CODE
BCV	BUTTERFLY CHECK VALVE
BFBP PUMP	BOILER FEED BOOSTER
BFF	BELOW FINISH FLOOR
BFP	BACKFLOW PREVENTER
BFV	BUTTERFLY VALVE
BFW	BOILER FEEDWATER
BHP	BRAKE HORSE POWER
BJT	BED JOINT
BKG	BACKING
BKGD	BACKGROUND
BL	BASE LINE
BLDG	BUILDING
BLKHD	BULKHEAD
BLO	BLOWER
BLR	BOILER
BLR HP	BOILER HORSEPOWER
BLT IN	BUILT-IN
BLW	BELOW
BLW CLG	BELOW CEILING
BLWDN	BLOWDOWN
BM	BEAM
BMS	BUILDING MANAGEMENT SYSTEM
BO	BLOWOFF
BOCA INTL	BUILDING OFFICIALS AND CODE ADMINISTRATORS ASSOCIATION INTERNATIONAL
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BPS	BLACK STEEL PIPE
BRCG	BRACING
BRG	BEARING
BRZ	BRONZE
BS	BOTH SIDES
BSMT	BASEMENT
BSTR	BOOSTER
BT WLD	BUTT WELD
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BTWN	BETWEEN
BV	BALL VALVE
-C-	
C CONC	CAST CONCRETE
C TO C	CENTER TO CENTER
CAB	CABINET
CAP	CAPACITY
CB	CATCH BASIN
CCU	CORONARY CARE UNIT
CCW	COUNTERCLOCKWISE
CD	CONSTRUCTION DOCUMENTS
CDW	CHILLED DRINKING WATER
CDWR	CHILLED DRINKING WATER RETURN
CDWS	CHILLED DRINKING WATER SUPPLY
CEM	CEMENT
CERT	CERTIFY
CF	CONTRACTOR FURNISHED
CH	CHILLER
CHEM	CHEMICAL
CHK	CHECK
CHKV	CHECK VALVE
CI	CAST IRON
CIP	CAST IRON PIPE
CISP	CAST IRON SOIL PIPE
CL	CENTER LINE
CL	CLOSE
CLASS	CLASSIFICATION
CLG	CEILING
CLO	CLOSET
CML	CLAY MORTAR LINED
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
CO	CLEANOUT
CO2	CARBON DIOXIDE
COL	COLUMN
COM	COMMON
COMB	COMBINATION, COMBINED
COMM	COMMUNICATION
COMPR	COMPRESSOR
CONC	CONCRETE
COND	CONDENSATE
CONN	CONNECT
CONSTR	CONSTRUCTION
CONSULT	CONSULTANT
CONT	CONTROLLER
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
COTG	CLEANOUT TO GRADE
COV	CUT OFF VALVE
CP	CONTROL PANEL
CPVC	CHLORINATED POLYVINYL CHLORIDE
CPLG	COUPLING
CS	CLINIC SINK
CSI	CONSTRUCTION SPECIFICATIONS INSTITUTE
CSP	CORRUGATED PIPE
CSP	COATED STEEL PIPE
CTG	COATING
CTRL	CONTROL
CU	COPPER
CU FT	CUBIC FEET
CUH	CABINET UNIT HEATER
CUR	CURRENT
CV	CONTROL VALVE
CW	CLOCKWISE
CW	COLD WATER PIPING
CWP	CHEMICAL WASTE PIPE
CWP	CIRCULATING WATER PUMP
CY	CYCLE
-D-	
D-B	DESIGN BUILD
DB	DIALYSIS BOX
DBA	UNIT OF SOUND LEVEL
DCW	DOMESTIC COLD WATER
DD	DECK DRAIN
DD	DESIGN DEVELOPMENT
DDC	DIRECT DIGITAL CONTROL
DEF	DEFINITION
DEG	DEGREE
DEG F	DEGREES FAHRENHEIT
DEMO	DEMOLITION
DES	DESIGNATION
DESCR	DESCRIPTION
DET	DETAIL
DF	DRINKING FOUNTAIN
DFU	DRAIN FIXTURE UNIT
DF WL MTD	DRINKING FOUNTAIN, WALL MOUNTED
DGTL	DIGITAL
DHW	DOMESTIC HOT WATER
DIA	DIAMETER
DIAG	DIAGRAM
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DIR	DIRECTION
DISC	DISCONNECT
DISCH	DISCHARGE
DIV	DIVISION
DIW	DEIONIZED WATER
DOM	DOMESTIC
DR	DRAIN
DSP	DRY STANDPIPE
DSPL	DISPOSAL
DW	DISHWASHER
DW	DISTILLED WATER
DW	DOMESTIC WATER
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
DWR	DOMESTIC WATER RETURN
DWS	DOMESTIC WATER SUPPLY
DWV	DRAIN, WASTE, AND VENT
DX	DUPLEX
-E-	
(E)	EXISTING
EA	EACH
ECC RDCR	ECCENTRIC REDUCER
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
EHP	EFFECTIVE HORSE POWER
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC
EMER	EMERGENCY
EMR	ELEVATOR MACHINE ROOM
EMS	ENERGY MANAGEMENT SYSTEM
ENGR	ENGINEER
ENGY	ENERGY
ENVIR	ENVIRONMENT
EOR	ENGINEER OF RECORD
EOV	ELECTRICALLY OPERATED SOLENOID VALVE
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ER	EXISTING TO REMAIN
ERD	EXISTING ROOF DRAIN
ESC	ESCUTCHEON
ESH	EMERGENCY SHOWER
ETR	EXISTING TO BE RELOCATED
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EWS	EYE WASH STATION
EWT	ENTERING WATER TEMPERATURE
EX	EXAMPLE
EXCL	EXCLUDE
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERNAL
-F-	
F	FAHRENHEIT
FACIL	FACILITY
FCO	FLOOR CLEANOUT
FCTY	FACTORY
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDCC	FIRE DEPARTMENT CONNECTION CABINET
FDV	FIRE DEPARTMENT VALVE
FDW	FEEDWATER
FF EL	FINISH FLOOR ELEVATION
FFA	FROM FLOOR ABOVE
FFB	FROM FLOOR BELOW
FHC	FIRE HOSE CABINET
FHV	FIRE HOSE VALVE
FIN	FINISH
FIN FLR	FINISH FLOOR
FIN GR	FINISH GRADE
FIXT	FIXTURE
FL SW	FLOW SWITCH
FLASH	FLASHING
FLEX	FLEXIBLE
FLG	FLANGE
FLMT	FLUSH MOUNT
FLR	FLOOR
FLR SK	FLOOR SINK
FLTR	FILTER
FO	FUEL OIL
FOF	FUEL OIL RETURN LINE
FOP	FUEL OIL PUMP
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOTK	FUEL OIL STORAGE TANK
FOUNT	FOUNTAIN
FOV	FUEL OIL VENT
FOW	FACE OF WALL
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FPW	FIRE PROTECTION WATER SUPPLY
FR	FIRE RATING
FRA	FIRE RATED ASSEMBLY
FRP	FIBER GLASS REINFORCED PLASTIC
FS	FULL SIZE
FSH	FIRE SPRINKLER HEAD
FSP	FIRE STANDPIPE
FT	FOOT/FEET
FTG	FOOTING
FURN	FURNISH
FUT	FUTURE
FV	FLUSH VALVE
FW	FIRE WALL
-G-	
G	NATURAL GAS
G DISP	GARBAGE DISPOSAL
G LN	GAS LINE
GAL	GALLON
GC	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GDR	GUARD RAIL
GEN	GENERAL
GIP	GALVANIZED IRON PIPE
GL	GROUND LEVEL
GLV	GLOBE VALVE
GOVT	GOVERNMENT
GPF	GALLONS PER FLUSH
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPR	GAS PRESSURE REGULATOR
GPS	GALLONS PER SECOND
GR FL	GROUND FLOOR
GR/GAL	GRAINS PER GALLON
GRV	GROOVE
GV	GATE VALVE
GVTR	GAS VENT THROUGH ROOF
GWH	GAS FIRED WATER HEATER
-H-	
H2O	WATER
H&CW	HOT AND COLD WATER
HB	HOSE BIBB
HD	HEAVY DUTY
HD	HUB DRAIN
HDR	HEADER
HE	HELIUM
HG	MERCURY
HOSP	HOSPITAL
HP	HIGH PRESSURE
HP	HORSEPOWER
HPG	HIGH PRESSURE GAS
HR	HOUR
HS	HAND SINK
HV	HOSE VALVE
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING
HW	HOT WATER
HWCP	HOT WATER CIRCULATING PUMP
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HWT	HOT WATER TANK
HYD	HYDRANT
HX	EXCHANGER
-I-	
IBC	INTERNATIONAL BUILDING CODE
ICU	INTENSIVE CARE UNIT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN.	INCH
IND	INDUSTRIAL
IPS	INTERNATIONAL PIPE STANDARD
ISO	ISOMETRIC
IT	INFORMATION TECHNOLOGY
IW	IRRIGATION WATER
-J-	
JC	JANITOR CLOSET
JLL	JONES LANG LASALLE
-K-	
KW	KILOWATT
-L-	
L/S	LITER PER SECOND
LAB	LABORATORY
LAV	LAVATORY
LBS	POUND(S)
LDR	LEADER
LF	LINEAR FEET (FOOT)
LGTH	LENGTH
LH	LATENT HEAT
LH	LEFT HAND
LHR	LEFT HAND REVERSE
LHS	LEFT HAND SIDE
LIM SW	LIMIT SWITCH
LIN	LINEAR
LIQ	LIQUID
LL	LEAD LINED
LNG	LIQUID NATURAL GAS
LOG	LOGARITHM
LOP	LUBRICATING OIL PUMP
LOX	LIQUID OXYGEN
LP	LOW PRESSURE (MECHANICAL)
LPAS	LOW PRESSURE ALARM SWITCH
LPB	LOW PRESSURE BOILER
LPCR	LOW PRESSURE CONDENSATE RETURN
LPDT	LOW PRESSURE DRIP TRAP SET
LPF	LOW POWER FACTOR
LPG	LIQUID PETROLEUM GAS
LPG	LOW PRESSURE GAS
LPL	LIGHTPROOF LOUVER
LPR	LOW PRESSURE RETURN
LPS	LOW PRESSURE STEAM
LT WT	LIGHTWEIGHT
LTHW	LOW TEMPERATURE HOT WATER
LUB	LUBRICATE
LV	LABORATORY VACUUM
LW	LOW WATER
LWCO	LOW WATER CUT OFF
LWM	LOW WATER MARK
LWT	LEAVING WATER TEMPERATURE
-M-	
M	METER
MA	MEDICAL AIR
MBH	THOUSAND BTU PER HOUR
MECH	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIL STD	MILITARY STANDARD
MIN	MINUTE
MP	MEDIUM PRESSURE
MPG	MEDIUM PRESSURE GAS
MR	MOP RECEPTOR
MS	MOP SINK
MU	MAKE UP WATER LINE
MV	MEDICAL VACUUM
MV	MOTORIZED VALVE
-N-	
N	NITROGEN
N	NORTH
N2O	NITROUS OXIDE
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFC	NATIONAL FIRE CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NG	NATURAL GAS
NIC	NOISE ISOLATION CLASS
NICU	NEONATAL INTENSIVE CARE
NO	NORMALLY OPEN
NP	NON-POTABLE WATER
NTS	NOT TO SCALE
-O-	
O2	OXYGEN
OD	OUTSIDE DIAMETER
OF/CI	OWNER FURNISHED/CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/OWNER INSTALLED
OFD	OVERFLOW DRAIN
OP	OPERATING
OR	OPERATING ROOM
ORD	OVERFLOW ROOF DRAIN
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OSHPD	OFFICE OF STATEWIDE HEALTH PLANNING DEVELOPMENT
-P-	
PCU	CARE UNIT PATIENT
PDISCH	PUMP DISCHARGE
PE	POLYETHELENE
PH	ACID/ALKALINE SCALE
PICU	PEDIATRIC INTENSIVE CARE UNIT
PIV	POST INDICATOR VALVE
PLBG	PLUMBING
PNEU	PNEUMATIC
POC	POINT OF CONNECTION
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH, GAGE
-R-	
R	RADIUS
R	REMOVE
R	RISER
RD	ROOF DRAIN
RE	RELOCATED EXISTING
RE	RELOCATED EXISTING
REF	REFERENCE
REQ	REQUIRE
RFI	REQUEST FOR INFORMATION
RO	REVERSE OSMOSIS
RPM	REVOLUTIONS PER MINUTE (3)
RWL	RAIN WATER LEADER
-S-	
S	SINK
SAN	SANITARY
SAND	SANITARY DRAIN
SANV	SANITARY VENT
SCFM	STANDARD CUBIC FEET PER MINUTE
SCHED	SCHEDULE
SCP	SCUPPER
SCSK	SCRUB SINK
SD	SCHEMATIC DESIGN
SD	STORM DRAIN
SF	SQUARE FOOT (FEET)
SH	SHOWER
SHR	SHOWER
SHR HD	SHOWER HEAD
SHRD	SHOWER DRAIN
SLV	SLEEVE
SMP	SUMP PUMP
SOLV	SOLENOID VALVE
SOV	SHUT OFF VALVE
SP	STANDPIPE
SP GR	SPECIFIC GRAVITY
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SS	SANITARY SEWER
SS	SERVICE SINK
SS	STORM SEWER
SSD	SUBSOIL DRAIN
SST	STAINLESS STEEL
STRUCT	STRUCTURAL
SUCT	SUCTION
-T-	
T&P	VALVE TEMPERATURE AND PRESSURE VALVE
T/S	TUB/SHOWER
TC	TIME CLOCK
TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
THRU	THROUGH
TS	TAMPER SWITCH
TYP	TYPICAL
-U-	
UBC	UNIFORM BUILDING CODE
UC	UNDERCOUTNER
UFC	UNIFORM FIRE CODE
UGND	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UN	UNLESS NOTED
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
UPC	UNIFORM PLUMBING CODE
UR	URINAL
UST	UNDERGROUND STORAGE TANK
UTIL	UTILITY
-V-	
V	VOLT
V	VENT
VAC	VACUUM
VAC	VACUUM LINE
VAR	VARIES
VB	VACUUM BREAKER
VB	VALVE BOX
VERT	VERTICAL
VIF	VERIFY IN FIELD
VOC	VOLATILE ORGANIC COMPOUND
VOL	VOLUME
VOLT	VOLTAGE
VP	VACUUM PUMP
VRFY	VERIFY
VRP	VACUUM RETURN PUMP
VS	VENT STACK
VTR	VENT THROUGH ROOF
-W-	
W	WATT
W	WASTE
W	WIDE/WIDTH
W/	WITH
W/O	WITHOUT
WAG	WASTE ANESTMETIC GAS
WC	WATER CLOSET
WC	WATER COLUMN
WC WL HNG	WATER CLOSET, WALL HUNG
WCL WL MTD	WATER COOLER, WALL HUNG
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WG	WATER GAGE
WH	WALL HUNG
WH	WALL HYDRANT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTOR
WL	WATER LINE
WM	WATERMETER
WP	WATER PUMP
WPR	WORKING PRESSURE
WSP	WORKING STEAM PRESSURE
WT	WEIGHT
WTR	WATER
WW	WASTE WATER
-Y-	
YCO	YARD CLEANOUT
YD	YARD DRAIN
YD	YARD DRAINAGE PIPE
YI	YARD INLET

SYMBOLS (AS APPLICABLE)

PIPING

SAN	SANITARY PIPING
(E)SAN	EXISTING SANITARY PIPING
SAN (BLW)	UNDERGROUND SANITARY DRAINAGE
(E)SAN (BLW)	EXISTING UNDERGROUND SANITARY DRAINAGE
SD	STORM DRAIN
(E)SD	EXISTING STORM DRAIN
ORD	OVERFLOW DRAIN
CNDS	CONDENSATE DRAIN
	VENT
	EXISTING VENT
GWV	GREASE VENT
DCW	DOMESTIC COLD WATER
(E)DCW	EXISTING DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
(E)DHW	EXISTING DOMESTIC HOT WATER
DHC	DOMESTIC HOT WATER RETURN
DHC	EXISTING DOMESTIC HOT WATER RETURN
FW	FILTERED WATER
NP	NON-POTABLE WATER
	FIRE LINE
	AUTOMATIC FIRE SPRINKLER
	PREACTION FIRE SPRINKLER PIPING
SCW	EXISTING SOFT COLD WATER
SCW	SOFT COLD WATER

VALVES

- SHUT-OFF VALVE
- PRESSURE REDUCING VALVE
- CHECK VALVE
- BALL VALVE
- BALANCING VALVE/GLOBE VALVE
- DIAPHRAGM VALVE
- OS&Y VALVE
- FLOAT VALVE
- SHUT-OFF VALVE WITH TAMPER SWITCH
- SOLENOID VALVE
- GAS COCK
- PLUG SAFETY VALVE
- AUTOMATIC AIR VENT
- VALVE AND CAPPED OUTLET

FITTINGS

- PIPE-UP UNLESS OTHERWISE NOTED
- ELBOW DOWN
- TEE DOWN
- CLEANOUT (PIPING AT CLG)
- CLEANOUT (BURIED PIPING)
- TRAP
- VENT THROUGH ROOF
- UNION
- CONCENTRIC TRANSITION
- ECCENTRIC TRANSITION
- PLUG

FIXTURES

- FLOOR DRAIN/ROOF DRAIN
- FLOOR DRAIN
- OVERFLOW ROOF DRAIN
- ROOF RECEPTOR
- FLOOR SINK
- TRENCH DRAIN
- HOSE BIBB
- WALL HYDRANT
- MIXING FAUCET
- HUB DRAIN

EQUIPMENT

EHW	INSTANTANEOUS ELECTRIC WATER HEATER

ANNOTATION

Ø	DIAMETER
	SQUARE FEET
	POINT OF CONNECTION
	POINT OF DISCONNECTION
1 / P-201 SYMBOLS SCALE: NOT TO SCALE	TITLE MARK DETAIL OR PLAN NUMBER – 1 DETAIL OR PLAN REFERENCE LOCATION FOUND IN P-201
1 / P-501	SECTION MARK A2T SECTION NUMBER – 1 SECTION FOUND IN P-501
2 / P-201	DETAIL BOUNDARY B DETAIL NUMBER – 2
1	SHEET KEYNOTE
1	REVISION CLOUD (DELTA 1)
1 / P-501	DETAIL REFERENCE DETAIL NUMBER – 1 DETAIL FOUND IN P-501

PLUMBING FIXTURE SCHEDULE

MARK NO.	DESCRIPTION	LOCATION	MIN. ROUGH-IN CONN. (IN) W	V	CW	HW	FW	F.U. SAN	WATER	MANUFACTURER AND MODEL NO.	REMARKS
SK-1	PANTRY SINK	PANTRY ROOM	2	2	3/4	3/4	-	-	-	-	REFER TO ARCHITECTURAL EQUIPMENT SCHEDULE FOR SPECIFICATION. FAUCET: REFER TO ARCHITECTURAL EQUIPMENT SCHEDULE FOR SPEC.
WF-1	WATER FILTER	PANTRY ROOM	-	-	1/2	-	-	-	-	EVERPURE QC4-BH	-
IM-1	ICE MAKER	PANTRY ROOM	-	-	-	-	1/2	-	-	-	REFER TO ARCHITECTURAL EQUIPMENT SCHEDULE FOR SPECIFICATION.
CM-1	COFFEE MAKER	PANTRY ROOM	-	-	-	-	1/2	-	-	-	REFER TO ARCHITECTURAL EQUIPMENT SCHEDULE FOR SPECIFICATION.
FUD-1	FUNNEL DRAIN	PANTRY ROOM	2	2	-	-	-	-	-	J.R. SMITH 3811 SERIES	PROVIDE WITH TRAP PRIMER.
TP-1	TRAP PRIMER	PANTRY ROOM	-	-	1/2	-	-	-	-	P.P.P. INC.	PROVIDE TO FUNNEL DRAIN AND FLOOR SINK W/ ACCESS DOOR
L-1	LAVATORY	RESTROOMS	2	2	3/4	3/4	-	-	-	-	REFER TO ARCHITECTURAL EQUIPMENT SCHEDULE FOR SPECIFICATION. FAUCET: REFER TO ARCHITECTURAL EQUIPMENT SCHEDULE FOR SPECIFICATION.

NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT SPECIFICATIONS, LOCATIONS OF ALL APPLIANCES AND PLUMBING FIXTURES. WHERE THERE IS DISCREPANCY BETWEEN THE ENGINEERING AND ARCHITECTURAL DRAWINGS OF APPLIANCE AND FIXTURE SPECIFICATIONS, NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.

5

INSTANTANEOUS ELECTRIC WATER HEATER SCHEDULE

TAG	LOCATION	FLOW G.P.M.	SERVICE WATER TEMP. IN	TEMP OUT	POWER REQM'T KW	VOLTAGE	PHASE	MANUFACTURER AND MODEL NO.	REMARKS
EWH-1	PANTRY ROOM	1	53	110	8.3	277	1	CHRONOMITE M30	PROVIDE 1 GPM FLOW RESTRICTOR.

PIPE MATERIAL TABLE

SERVICE	PIPE	FITTINGS	REMARKS
DOMESTIC WATER SYSTEM 4" & SMALLER	SEAMLESS COPPER TUBING, TYPE L, DRAWN TEMPER, ASTM B88	WROUGHT COPPER, SOLDER-JOINT, ANSI B16.22 OR CAST BRONZE ANSI B16.23, ANSI B16.18	JOINTS: 95-5 (TIN AND ANTIMONY) SOLDER. ALL EXPOSED WATER PIPING AT PLUMBING FIXTURES SHALL BE CHROME PLATED.
SOIL, WASTE AND VENT 2" & LARGER	STANDARD WEIGHT CAST IRON NO-HUB TYPE SOIL PIPE	STANDARD WEIGHT CAST IRON NO-HUB TYPE SOIL FITTINGS WITH NEOPRENE GASKET AND STAINLESS STEEL BANDS AND SHIELD. NO-HUB COUPLINGS	-
SOIL, WASTE AND VENT 1 1/2" & SMALLER	SEAMLESS COPPER TUBING, TYPE M, DRAWN TEMPER, ASTM B88 OR SCHDEDULE 40 GALVANIZED STEEL	WROUGHT COPPER, SOLDER-JOINT, ANSI B16.22 OR CAST BRONZE ANSI B16.23, ANSI B16.18 OR SCREWED JOINT FOR GALVANIZED PIPE	JOINTS: 95-5 (TIN AND ANTIMONY) SOLDER
INDIRECT DRAINAGE	SEAMLESS COPPER TUBING, TYPE M, DRAWN TEMPER, ASTM B88	WROUGHT COPPER, SOLDER-JOINT, ANSI B16.22 OR CAST BRONZE ANSI B16.23, ANSI B16.18	JOINTS: 95-5 (TIN AND ANTIMONY) SOLDER

NOTES:

1. ALL PIPES AND FITTINGS SHALL BE LISTED FOR IT'S INTENDED USE AND SHALL COMPLY WITH UPC AND THE REQUIREMENTS OF THE CITY OF OXNARD.

2. ALL UNDERGROUND PIPING (DOMESTIC WATER, FIRE WATER, AND GAS PIPING) SHALL BE WRAPPED WITH A MINIMUM OF 10-MILL WRAP.

3. AB1953 COMPLIANT.

GENERAL NOTES

1. ALL PLUMBING EQUIPMENT, INSTALLATION, ETC. SHALL COMPLY WITH 2010 CALIFORNIA PLUMBING CODE, BUILDING STANDARD AND ALL APPLICABLE CODES, AS INTERPRETED BY THE LOCAL AUTHORITIES HAVING JURISDICTION.
2. PLUMBING DRAWINGS AND LAYOUTS ARE DIAGRAMMATIC TO SHOW DESIGN INTENT AND FINISHED CONDITIONS. CONTRACTOR SHALL COORDINATE PIPING WITH EXISTING CONDITIONS. IF FIELD CONDITIONS DIFFER SIGNIFICANTLY FROM THOSE SHOWN ON THE DRAWINGS AND EFFECT WORK, INFORM ARCHITECT IMMEDIATELY BEFORE PROCEEDING WITH THAT AREA.
3. PRIOR TO BIDDING, CONTRACTOR SHALL VISIT SITE AND VERIFY FIELD CONDITIONS, DIMENSIONS, SPACING AND ROUTING OF ALL PIPING. ANY DISCREPANCIES WITH FIELD CONDITIONS AND THESE DOCUMENTS ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR IMMEDIATE RESOLUTION. CONTRACTOR SHALL COODINATE ALL WORK WITH OTHER TRADES FOR CLEARANCES AND TIMELY FINISH.
4. THE WORK OF THIS PROJECT INVOLVES ALTERATIONS OF THE EXISTING BUILDING TO ACHIEVE THE ARRANGEMENT INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL VISIT THE JOB SITE TO DETERMINE THE EXTENT OF THE NEW WORK. ARCHITECTURAL DRAWINGS FOR THESE AREAS SHOW THE CHANGES TO BE MADE. THE CONTRACTOR SHALL REVISED, REARRANGE, REROUTE OR REMOVE PIPING, AS REQUIRED, TO ACCOMMODATE THE CHANGES AND ADDITIONS SHOWN AND TO PROVIDE CONTINUING SERVICE FOR THOSE EXISTING PORTIONS OF THE PROJECT WHICH ARE TO REMAIN IN OPERATION.
5. IN AREAS WHERE NO ALTERATIONS ARE INDICATED, EXISTING FACILITIES SHALL BE RETAINED IN SERVICE. ONLY SELECTED PORTIONS OF EXISTING HAVE BEEN IDENTIFIED ON DRAWINGS.
6. CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES FOR CLEARANCES AND WORK INCLUDED PRIOR TO START OF WORK.
7. COORDINATE ELECTRICAL CHARACTERISTICS OF EQUIPMENT WITH ELECTRICAL SCOPE OF WORK PRIOR TO ORDERING EQUIPMENT.

PLUMBING NOTES

1. SEE ARCHITECTURAL DRAWINGS FOR EXTENT OF DEMOLITION AND NEW CONSTRUCTION, AND EXACT PLUMBING FIXTURE LOCATIONS AND QUANTITIES NOTIFY ARCHITECT FOR DISCREPANCY BETWEEN ARCHITECTURAL AND ENGINEERING DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
2. ALL CLEANOUTS SHALL BE ACCESSIBLE AND INSTALLED PER CODE.
3. PROVIDE ACCESS PANELS IN WALLS FOR SHUT-OFF VALVES, TRAP PRIMERS AND WATER HAMMER ARRESTERS. CONTRACTOR IS ADVISED THAT ITEMS REQUIRING ACCESS SHALL NOT BE LOCATED ABOVE THE AREAS OF GYPSUM BOARD CEILING WITHOUT CONSENT OF ARCHITECT. SUBMIT PROPOSED ACCESS PANEL LOCATIONS TO ARCHITECT FOR APPROVAL.
4. HANDICAPPED PLUMBING FIXTURES SHALL BE MOUNTED AT REQUIRED HEIGHTS AND WITH ALL RELATED ACCESSORIES AS REQUIRED BY THE STATE OF CALIFORNIA, AND AMERICANS WITH DISABILITIES ACT (ADA).
5. ALL WATER FAUCETS SHALL BE PROVIDED WITH CODE-APPROVED FLOW RESTRICTORS.
6. GENERAL CONTRACTOR SHALL COORDINATE WITH BUILDING REPRESENTATIVE FOR PREFERED SUB-CONTRACTORS TO START OF WORK.
7. DURING CONSTRUCTION, PROVIDE MECHANICAL PLUGS IN OPEN DRAINS TO PREVENT DAMAGE TO LOWER FLOOR. ALL WATER PIPING LOCATED ABOVE CEILING, REQUIRING TEMPORARY OR PERMANENT CAPPED CONNECTIONS, SHALL BE PROVIDED WITH LINE-SIZE SHUT-OFF VALVES.
8. INSULATE INDIRECT DRAIN LINES FROM REFRIGERATORS, FREEZERS, ICE BINS, ETC. TO PREVENT CONDENSATION.
9. ALL WATER SHUT-OFF VALVES TO BE BALL TYPE.
10. A MINIMUM 1/2" CLEARANCE SHALL BE PROVIDED AROUND PIPES AT ALL PENETRATIONS THROUGH WALLS. THE GAP SHALL BE PACKED TIGHTLY WITH LOOSE, LIGHTWEIGHT INSULATION THROUGH NON-RATED WALLS, AND APPROVED UL LISTED FIRE SAFING MATERIAL RATED WALLS TO MATCH WALL RATING.
11. SLOPE OF BUILDING SEWERS SHALL NOT BE LESS THAN 2% UNLESS OTHERWISE APPROVED BY THE AUTHORITY HAVING JURISDICTION.
12. ALL DOMESTIC HOT WATER PIPING SHALL BE INSULATED AS REQUIRED BY AHJ.
13. ALL PIPING TO BE SEISMICALLY BRACED TO PREVENT SWAYING.
14. ROUGH-INS, CONNECTIONS AND TERMINATION OF PLUMBING WORK SHALL BE SEQUENCED IN COORDINATION WITH THE PROJECT SCHEDULE AND THE UNIVERSITY'S REPRESENTATIVE OTHER CONTRACTORS AND VENDORS.
15. ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTED AGENCY.
16. BUILDING DRAIN AND VENT PIPING MATERIALS SHALL COMPLY WITH LOCAL JURISDICTION.
17. PROVIDE COPPER PIPE OR APPROVED METALLIC WATER LINE CONNECTORS FROM SHUTOFFS TO PLUMBING FIXTURES.
18. VERIFY EXACT INVERT ELEVATIONS OF POINT OF CONNECTIONS TO EXISTING SERVICES PRIOR INSTALLATION OF THE NEW SYSTEMS. COORDINATE WITH OTHER TRADES BEFORE GENERATING SHOP DRAWINGS.

ENERGY COMMISSION NOTES

1. DOMESTIC WATER HEATERS SHALL BE CERTIFIED AND LISTED BY THE CALIFORNIA ENERGY COMMISSION.
2. ALL HOT WATER SUPPLY PIPING SHALL BE INSULATED PER ENERGY CODE. INSULATE ALL FITTINGS, VALVES, STRAINERS, ETC., BY EITHER PREFABRICATION OR BY FABRICATING FITTINGS FROM METERED SEGMENTS OF PIPE INSULATION TO AN EQUAL THICKNESS OF ADJOINING PIPE INSULATION.
3. ALL WATER FAUCETS AND SHOWER HEADS SHALL BE PROVIDED WITH CODE APPROVED FLOW RESTRICTORS. LAVATORY FAUCETS AND SINK FAUCETS (NOT INCLUDING SERVICE SINK FAUCETS) SHALL MEET THE FLOW REQUIREMENTS OUTLINED IN THE APPLIANCE EFFICIENCY STANDARDS AND SPECIFICATIONS.

FIRE PROTECTION NOTES

1. ALL FIRE PROTECTION WORK SHALL BE IN STRICT ACCORDANCE WITH THE CURRENT EDITION OF CALIFORNIA FIRE CODES, NFPA 13, 24, 72, 75 AND 101, CALIFORNIA BUILDING CODES AND ALL AUTHORITIES HAVING JURISDICTION. MODIFICATIONS TO THE EXISTING FIRE SPRINKLER SYSTEM SHALL BE ON A SEPARATE PERMIT BY A LICENSE C16 CONTRACTOR. MODIFICATIONS TO THE EXISTING FIRE ALARM SYSTEM SHALL BE ON A SEPARATE PERMIT BY A UL LISTED CONTRACTOR. PROVIDE CERTIFICATION TO OWNER AND AUTHORITIES HAVING JURISDICTION.
2. THE FIRE PROTECTION SYSTEM IS A CONTRACTOR DESIGN AND BUILD RESPONSIBILITY.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, CALCULATIONS AND PRODUCT DATA TO THE ARCHITECT FOR REVIEW PRIOR TO INSTALLATION.
4. CONTRACTOR SHALL OBTAIN THE APPROVAL FROM THE ARCHITECT FOR FINAL LOCATION AND TYPE OF SPRINKLER HEADS PRIOR TO REVIEW BY ENGINEER.
5. SPRINKLER HEADS LOCATED IN ACOUSTICAL TILE CEILINGS SHALL BE INSTALLED IN THE CENTER OF THE TILE.
6. THE CONTRACTOR SHALL RE-ROUTE, RELOCATE, EXTEND, RAISE EXISTING PIPING AND SPRINKLER HEADS, AND/OR PROVIDE NEW HEADS PER NFPA 13 REQUIREMENTS IN AREAS BEING REVISED. COORDINATE W/ ARCHITECTURAL REFLECTED CEILING PLANS.
7. SPRINKLER HEADS SHALL BE UL LISTED AND FM APPROVED. PROVIDE QUICK-RESPONSE TYPE WHERE REQUIRED BY AUTHORITIES HAVING JURISDICTION:
   (A) GYPSUM BOARD CEILING AREAS: SUBMIT, SUPPLY AND INSTALL PRODUCT, FULLY CONCEALED HEADS WITH FACTORY FINISHED COVERPLATE, SELECTED BY ARCHITECT, TO MATCH ADJACENT CEILING SURFACE FINISH PAINT.
   (B) ACOUSTICAL TILE CEILING AREAS: SUBMIT, SUPPLY AND INSTALL PRODUCT, FULLY CONCEALED HEADS WITH FACTORY FINISHED COVERPLATE, SELECTED BY ARCHITECT, TO MATCH ADJACENT CEILING SURFACE FINISH PAINT. INSTALL AT CENTER OF TILE.
   (C) EXPOSED CEILING AREAS: SUPPLY AND INSTALL BUILDING STANDARD, PENDENT OR UPRIGHT HEADS; ARCHITECT TO SELECT FINISH.
   (D) CONTRACTOR SHALL PROVIDE INTERMEDIATE TEMPERATURE SPRINKLER HEADS (175°F TO 225°F) IN ALL IT ROOMS, MACHINE ROOMS AND MECHANICAL ROOMS.
8. CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES AND COORDINATE SPRINKLER HEAD LOCATIONS AND PIPING WITH LIGHTING FIXTURES, SPEAKERS AND DIFFUSERS, HVAC DUCTWORK, ETC. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF PARTITIONS, SUSPENDED CEILINGS, SOFFITS AND ILLUMINOUS CEILINGS.
9. SPRINKLER PIPING SHALL BE CONCEALED ABOVE FINISHED CEILINGS AND EXPOSED IN AREAS WITHOUT FINISHED CEILING. FINAL HEAD LOCATION, TYPE AND FINISH SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT.
10. SPRINKLER DRAINS SHALL BE DRAINED INTO APPROVED RECEPTORS.

SHEET INDEXES

verizon

1800 Solar Drive
Oxnard, CA 93030

Gensler

1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.

Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

Issue	Date & Issue Description	By	Check
01	07/31/12 PLAN CHECK	-	-
1	08/10/12 ISSUE FOR CONSTRUCTION	-	-
2	09/12/12 BULLETIN 1	-	-
3	10/09/12 BULLETIN 2	-	-
4	10/23/2012 REVISED FOR PLAN CHECK	-	-
5	11/19/12 BULLETIN 3	-	-
6	02/21/13 BULLETIN 4	-	-

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\P-001-VZCOX000.dwg

Description
PLUMBING SYMBOLS, ABBREVIATIONS AND GENERAL NOTES

Scale
NONE

True North
Ref North

P-001

The corner tick marks represent the 30"x48"

SPECIFICATIONS

DIVISION NO. 22 — SECTION 220000
PLUMBING SPECIFICATIONS

1.00 GENERAL

1.01 GENERAL REQUIREMENTS

A. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS APPLY TO THIS SECTION.

1.02 PRINCIPAL WORK IN THIS SECTION

A. GENERAL ITEMS.
B. PIPING, FITTINGS AND VALVES.
C. PLUMBING EQUIPMENT.
D. INSULATION.
E. PLUMBING FIXTURES.
F. TESTING, FILING AND FEES.
G. CADD AS-BUILT DRAWINGS.

1.03 SUBMITTALS

A. PROVIDE SIX (6) COPIES OF SUBMITTAL MATERIAL.
B. IF THIS CONTRACTOR SUBMITS SHOP DRAWINGS OF SPECIFIED ITEMS AS LISTED IN THIS SPECIFICATION, THEN THE SHOP DRAWINGS SHALL BE SUBMITTED FOR RECORD ONLY.
C. IF THIS CONTRACTOR ELECTS TO USE MANUFACTURERS OTHER THAN THOSE LISTED IN THE SPECIFICATION, THE FOLLOWING IS REQUIRED:
   1. BEFORE COMMENCING WORK, THE CONTRACTOR SHALL SUBMIT A LIST OF MANUFACTURE SUBSTITUTIONS, FOR REVIEW AND ACCEPTANCE. SUBSTITUTION WILL NOT BE ACCEPTED AT ANY OTHER TIME.
   2. AFTER VERIFYING ALL FIELD CONDITIONS THIS CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL.
   3. AT THE TIME OF EACH SUBMISSION, THIS CONTRACTOR IS TO IDENTIFY ANY DEVIATION BY "CLOUDING" ON SHOP DRAWINGS.
D. SUBMIT THE FOLLOWING:
   1. ACCESS DOORS.
   2. VALVES.
   3. SUPPORTS.
   4. PIPE, FITTINGS AND JOINTS.
   5. CLEANOUTS.
   6. INSULATION.
   7. PLUMBING FIXTURES, TRIM, TRAPS, ETC.
   8. WATER HEATERS.
   9. SOLDER.

1.04 QUALITY ASSURANCE

A. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF PIPING. PROVIDE ALL NECESSARY SUPPORTS, PIPE, FITTINGS AND VALVES THAT ARE REQUIRED FOR COORDINATION OF THIS WORK WITH ALL OTHER TRADES AND THE EXISTING STRUCTURE.
B. THIS CONTRACTOR SHALL CONFIRM SIZES AND LOCATIONS OF ALL EXISTING PIPING TO BE CONNECTED TO PRIOR TO START OF WORK.
C. CAREFULLY EXAMINE EXISTING CONDITIONS BEFORE SUBMITTING PROPOSAL. COORDINATE ALL WORK TO MINIMIZE INTERFERANCE WITH EXISTING AND NEW FACILITIES.
D. CONNECTIONS TO EXISTING WORK: SHALL BE AT ODD HOURS TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL PIPING RUN IN OTHER TENANTS' AREAS SHALL BE COORDINATED WITH THAT TENANT, INSTALLED ON OVERTIME AND AT TIMES CONVENIENT TO TENANT AFFECTED. ALL WORK SPACE SHALL BE CLEANED AND RESTORED TO ITS ORIGINAL CONDITION. OBTAIN APPROVAL OF BUILDING MANAGEMENT PRIOR TO INSPECTION, SHUTDOWN OR COMMENCING WORK.
E. PROVIDE WORKMANSHIP OF HIGHEST GRADE. INSTALLATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT BUILDING CODE.
F. PROVIDE ONE YEAR GUARANTEE AGAINST DEFECTIVE WORKMANSHIP AND MATERIAL.
G. ALL MATERIAL, PLUMBING ITEMS, ETC., SHALL BE NEW AND BEST OF ITS KIND, UNLESS OTHERWISE NOTED.
H. NO PIPING PASSING OVER ELECTRICAL, TELEPHONE EQUIPMENT, AND SEWER PIPING OVER FOOD PREPARATION AREAS SHALL BE PERMITTED.
I. ALL PLUMBING SYSTEMS CONVEYING DRINKING WATER IN WATER UTILITY DISTRIBUTION PIPING AND IN CONSUMER PLUMBING VALVES, FITTINGS AND FAUCETS SHALL MEET THE CALIFORNIA ASSEMBLY BILL AB 1953 REQUIREMENTS.

1.05 SCOPE OF WORK

A. PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT AND CONTRACTOR'S SERVICES NECESSARY FOR A COMPLETE SAFE INSTALLATION OF WORK IN FULL CONFORMITY WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION, AS INDICATED ON THE DRAWINGS AND/OR HEREIN SPECIFIED, INCLUDING THE FOLLOWING:
   1. SANITARY DRAINAGE AND VENT SYSTEM, INCLUDING CONNECTIONS TO EXISTING PIPING, PLUMBING FIXTURES AND EQUIPMENT.
   2. DOMESTIC WATER SUPPLY SYSTEM, INCLUDING CONNECTIONS TO EXISTING PIPING, VALVES, PLUMBING FIXTURES AND EQUIPMENT.
   3. PLUMBING FIXTURES.
   4. INSULATION.
   5. CORE DRILLING, ROUGH CUTTING AND PATCHING.
   6. SHOP DRAWINGS.
   7. TESTING, FILING AND FEES.
   8. CADD AS-BUILT DRAWINGS.
   9. DISINFECTION OF DOMESTIC WATER SYSTEM.
   10. DRIP PANS.

1.06 PHASING

A. CONTRACTOR SHALL SUBMIT A PLUMBING PHASING SCHEDULE UPON AWARD OF CONTRACT TO BE APPROVED BY THE ENGINEER AND OWNER.
B. AT NO TIME SHALL THE BUILDING BE WITHOUT WATER EXCEPT IN AREAS OF NEW WORK. IF WATER IS TO BE TURNED OFF, THEN TEMPORARY PIPING IS TO BE INSTALLED AS REQUIRED.
C. WATER PIPING SERVING PLUMBING FIXTURES SHALL NOT BE REMOVED UNTIL NEW PIPING IS INSTALLED AND CONNECTED TO THE EXISTING SOURCE OF SUPPLY.
D. REMOVAL OF EXISTING PIPING SHALL BE DONE IN A SATISFACTORY MANNER TO THE ENGINEER AND COORDINATED WITH THE G.C. SECTION.

2.00 PRODUCTS

2.01 BASE BID MANUFACTURERS

A. THE FOLLOWING IS A LIST OF ACCEPTABLE BASE BID MANUFACTURERS:
   1. STAINLESS STEEL SINKS: ELKAY MFG. CO.
   2. BRASSWARE TRIM: DOE BROS., CHICAGO FAUCET CO., MCGUIRE, JAMCO, AND BRASSCRAFT.
   3. FAUCETS: CHICAGO FAUCET.
   4. BALL AND CHECK VALVES (INSIDE): COMBRACO "APOLLO," STOCKHAM VALVES AND FITTINGS, WALWORTH CO., CRANE CO., WM. POWEL VALVE CO., NIBCO (USA), AND MILWAUKEE VALVE CO.
   5. WATER HEATERS (ELECTRIC): CHRONOMITE.

2.02 GENERAL ITEMS

A. ESCUTCHEONS: PROVIDE EXPOSED PIPING BOTH BARE AND COVERED, WITH CP CAST BRASS ESCUTCHEONS ON BOTH SIDES WHERE PASSING THROUGH CEILINGS, WALLS OR PARTITIONS.
B. HANGER AND PIPING SUPPORTS:
   1. SUPPORT MATERIALS: GALVANIZED.
   2. SUPPORT PIPING AT DISTANCES AS REQUIRED BY CODE.
   3. ALL PIPING SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURE. PIPE SUPPORTED FROM PIPE, CHAIN, STRAP, PERFORATED BAR, OR WIRE HANGERS ARE NOT PERMITTED.
   4. PIPING 2 IN. OR LESS PROVIDE ELECTROPLATED SOLID BAND HANGERS, GRINNELL ADJUSTABLE SWIVEL RING FIG. 70.
   5. FOR HORIZONTAL PIPING 2 ½ IN. AND LARGER, PROVIDE GALVANIZED "CLEVIS" HANGERS, GRINNELL 260.
   6. SUPPORT HORIZONTAL BRANCH PIPING IN PIPE CHASES FROM WALL BRACKETS SUPPORTED FROM STRUCTURE.
   7. TRAPEZE FOR MULTIPLE LINES, SUPPORTED BY A MINIMUM OF TWO HANGERS.
   8. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING HANGER RODS IN REQUIRED LOCATIONS, PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND REVIEWED.
C. ACCESS DOORS:
   1. 18 IN. X 18 IN. NO. 4 FINISH STAINLESS STEEL FLUSH TYPE, LOCATE AND SET AFTER REVIEW. DOOR AND FRAME WITH METAL WINGS OR KEYING INTO CONSTRUCTION WITH CONCEALED HINGES AND SCREWDRIVER OPERATED STAINLESS STEEL CAM LOCK. KAMP STYLE DSC 214W OR KRP-150-FR IN FIRE RATED CONSTRUCTION.
D. LABELING:
   1. PROVIDE ON ALL PIPING IN OR AT CEILING, TO FT. ON CENTERS, INDICATING SYSTEM, SIZE AND DIRECTION OF FLOW.
E. DISSIMILAR METALS:
   1. PROVIDE BRASS OR COPPER WATER PIPING CONNECTED TO GALVANIZED PIPE AND FOR ANY OTHER DISSIMILAR METALS WITH DIELECTRIC FITTINGS.
F. DRIP PANS:
   1. PROVIDE DRIP PANS UNDER PIPING WHEN INSTALLATION IS IN ROOMS CONTAINING TELEPHONE OR ELECTRICAL EQUIPMENT. PAN SHALL BE REINFORCED, PROPERLY SUPPORTED AND MADE WATERTIGHT. PROVIDE ENCLOSED TYPE FOR PRESSURE PIPING. EXTEND 1IN. DRAIN PIPE FROM PAN TO SPILL TO AREA AS INDICATE ON THE DRAWING.
   2. CONSTRUCTION SHALL BE GALVANIZED SHEET METAL PER ASHRAE STANDARDS.

2.03 PIPING AND FITTINGS

A. SANITARY DRAINAGE AND VENT PIPING:
   1. FOR ABOVEGROUND: SERVICE WEIGHT CAST IRON HUB AND SPIGOT SOIL PIPE AND DRAINAGE FITTINGS, OR CAST IRON NO-HUB WITH 24 GAUGE, 304 STAINLESS STEEL COUPLINGS WITH NEOPRENE GASKETS, RATED FOR 15 PSI AND REQUIRING A MINIMUM OF 100 IN./LBS. OF TORQUE.
   2. ALL HUBLESS PIPES SHALL BE ANCHORED AT EACH SIDE OF COUPLING (OR NO HUB CLAMP) AT FIVE (5) FT. INTERVALS.
B. WATER PIPING:
   1. TYPE "L" COPPER TUBING WITH WROUGHT COPPER OR CAST BRONZE FITTINGS WITH SOLDERED JOINTS IN COMPLIANCE WITH CA AB 1953.
   2. ALL EXPOSED WATER PIPING AT PLUMBING FIXTURES SHALL BE CHROME PLATED.

2.04 VALVES

A. SHUT-OFF VALVES (WATER): BRONZE BODY BALL VALVE WITH TWO-PIECE, FULL PORT STAINLESS STEEL BALL AND STEM, VIRGIN TFE SEATS AND SEALS, 600 PSI W.O.G., MSS SP-110, THREADED ENDS, EQUAL TO MILWAUKEE ULTRA PURE VALVE UP5A400/4005 SERIES, SOLDER JOINT ENDS, EQUAL MILWAUKEE ULTRA PURE VALVE UP5B400/4505 SERIES.
B. CHECK VALVES (WATER): BRONZE HORIZONTAL SWING TYPE, 300 PSI W.O.G., BRONZE DISC, MSS SP-80, THREADED ENDS, EQUAL TO MILWAUKEE ULTRA PURE CHECK VALVE UP509 SERIES, SOLDER JOINT ENDS, 200 PSI W.O.G., EQUAL TO MILWAUKEE ULTRA PURE CHECK VALVE UP1509 SERIES.

2.05 PLUMBING EQUIPMENT

A. CLEANOUTS:
   1. PROVIDE CAST BRONZE CLEANOUTS IN ACCORDANCE WITH ANSI A112.36.2. FULL SIZE UP TO 4 IN. AND AT LEAST HALF SIZE FOR LARGER PIPES WITH 4 IN. MINIMUM.
   2. LOCATE AT CHANGE IN DIRECTION OF MORE THAN 450F AT BASE OF STACKS AND WHERE INDICATED ON DRAWINGS.
   3. PIPING IN OR BEHIND WALLS AND PARTITIONS EXTEND OUT TO FINISH WALL AND PROVIDE CAST BRONZE PLUGS WITH SATIN FINISH CP BRASS, NICKEL BRONZE OR STAINLESS STEEL WALL PLATES, J. R. SMITH NO. 4532 IN FINISHED AREAS, IN UNFINISHED AREAS LESS WALL PLATE.
B. WATER HEATERS:
   1. SEE SCHEDULE ON SHEET P001.

2.06 INSULATION

A. INSULATE WATER PIPING, VALVES WITH 4 LB. DENSITY FIBERGLASS ONE PIECE MOLDED SECTIONAL PIPE COVERING. MAXIMUM K FACTOR: 0.23 AT 75 DEG-F MEAN. SEE ENERGY COMMISSION NOTE 2 ON SHEET P001.
B. FIRE RETARDANT ALL SERVICE JACKET ON PIPE INSULATION. MAXIMUM FLAMESPREAD AND SMOKE RATING 25/50.
C. VALVES AND FITTINGS: PREMOLDED FIBERGLASS FITTINGS OR RADIAL MITERED SEGMENTS OF PIPE INSULATION TAPED ON, INSULATING CEMENT, FIBERGLASS REINFORCING CLOTH, AND MASTIC. THICKNESS SAME AS REQUIRED ON PIPING.
D. HW (AND HWR) PIPING: 1.5 IN. FIBERGLASS SECTIONAL PIPE COVERING.
E. PROVIDE SWEATPROOFING ON DRAINAGE PIPING FROM ICE MAKER FLOOR DRAINS AND CONDENSATE DRAINS.

2.07 PLUMBING FIXTURES:

A. REFERENCE STANDARDS:
   1. AMERICAN NATIONAL STANDARDS INSTITUTE:
      a. A117.1 "SPECIFICATIONS FOR MAKING BUILDINGS AND FACILITIES ACCESSIBLE TO AND USABLE BY PHYSICALLY HANDICAPPED PEOPLE."
B. SEE PLUMBING FIXTURE SCHEDULE ON SHEET P001.

3.00 EXECUTION

3.01 INSTALLATION

A. DURING THE COURSE OF CONSTRUCTION, COVER EXPOSED FITTINGS WITH BURLAP AND COVER PLUMBING FIXTURES WITH PROTECTIVE HOUSINGS. UNCOVER AND THOROUGHLY CLEAN FIXTURES AND FITTINGS WHEN DIRECTED AND LEAVE FIXTURES IN PERFECT CONDITION AT COMPLETION OF PROJECT. FIXTURES THAT ARE NOT IN PERFECT CONDITION SHALL BE REPLACED BY THIS CONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNER.
   1. SEAL ALL SPACES BETWEEN FIXTURES, AND WALLS OR FLOORS, WITH A NON-YELLOWING OR SHRINKING FLEXIBLE WATER SEALANT.

3.02 TESTS

A. TEST ALL SYSTEMS AS REQUIRED BY THE 2010 CALIFORNIA BUILDING AND PLUMBING CODES, 2011 LOS ANGELES PLUMBING CODE.

3.03 DISINFECTION

A. DISINFECT DOMESTIC WATER PIPING SYSTEMS AS REQUIRED IN GENERAL NOTES ON PLUMBING DRAWING AND 2010 CALIFORNIA PLUMBING CODE.

DIVISION NO. 22 — SECTION 223300
PLUMBING SPECIFICATIONS — ELECTRIC DOMESTIC WATER HEATERS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 01 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

1.2 SUMMARY

A. THIS SECTION INCLUDES THE FOLLOWING ELECTRIC WATER HEATERS:

ADJUST LIST BELOW TO SUIT PROJECT.

   1. FLOW-CONTROL, ELECTRIC, TANKLESS, DOMESTIC-WATER HEATERS.
   2. THERMOSTAT-CONTROL, INSTANTANEOUS ELECTRIC WATER HEATERS.
   3. LIGHT DUTY-COMMERCIAL ELECTRIC STORAGE WATER HEATERS.
   4. COMMERCIAL ELECTRIC BOOSTER HEATERS.
   5. COMPRESSION TANKS.
   6. WATER HEATER ACCESSORIES.

1.3 PERFORMANCE REQUIREMENTS

A. SEISMIC PERFORMANCE: COMMERCIAL DOMESTIC-WATER HEATERS SHALL WITHSTAND THE EFFECTS OF EARTHQUAKE MOTIONS DETERMINED ACCORDING TO ASCE/SEI 7.
   1. THE TERM "WITHSTAND" MEANS "THE UNIT WILL REMAIN IN PLACE WITHOUT SEPARATION OF ANY PARTS FROM THE DEVICE WHEN SUBJECTED TO THE SEISMIC FORCES SPECIFIED."

1.4 SUBMITTALS

A. PRODUCT DATA: FOR EACH TYPE AND SIZE OF WATER HEATER INDICATED. INCLUDE RATED CAPACITIES, OPERATING CHARACTERISTICS, FURNISHED SPECIALTIES, AND ACCESSORIES.
B. LEED SUBMITTAL:
   1. PRODUCT DATA FOR PREREQUISITE EA 2: DOCUMENTATION INDICATING THAT UNITS COMPLY WITH ASHRAE/IESNA 90.1-2004, SECTION 7 – "SERVICE WATER HEATING."
C. SHOP DRAWINGS: DIAGRAM POWER, SIGNAL, AND CONTROL WIRING.
D. PRODUCT CERTIFICATES: FOR EACH TYPE OF COMMERCIAL AND INSTANTANEOUS ELECTRIC WATER HEATER, SIGNED BY PRODUCT MANUFACTURER.
E. DOMESTIC-WATER HEATER LABELING: CERTIFIED AND LABELED BY TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.
F. SOURCE QUALITY-CONTROL REPORTS.
G. FIELD QUALITY-CONTROL REPORTS.
H. OPERATION AND MAINTENANCE DATA: FOR ELECTRIC DOMESTIC-WATER HEATERS TO INCLUDE IN EMERGENCY, OPERATION, AND MAINTENANCE MANUALS.
I. WARRANTY: SAMPLE OF SPECIAL WARRANTY.

1.5 QUALITY ASSURANCE

A. SOURCE LIMITATIONS: OBTAIN SAME TYPE OF ELECTRIC WATER HEATERS THROUGH ONE SOURCE FROM A SINGLE MANUFACTURER.
B. PRODUCT OPTIONS: DRAWINGS INDICATE SIZE, PROFILES, AND DIMENSIONAL REQUIREMENTS OF ELECTRIC WATER HEATERS AND ARE BASED ON THE SPECIFIC SYSTEM INDICATED. REFER TO DIVISION 01 SECTION "PRODUCT REQUIREMENTS."
C. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
D. ASHRAE/IESNA 90.1 COMPLIANCE: APPLICABLE REQUIREMENTS IN ASHRAE/IESNA 90.1.
E. ASME COMPLIANCE: WHERE ASME-CODE CONSTRUCTION IS INDICATED, FABRICATE AND LABEL COMMERCIAL, DOMESTIC-WATER HEATER STORAGE TANKS TO COMPLY WITH ASME BOILER AND PRESSURE VESSEL CODE: SECTION VIII, DIVISION 1.
F. NSF COMPLIANCE: FABRICATE AND LABEL EQUIPMENT COMPONENTS THAT WILL BE IN CONTACT WITH POTABLE WATER TO COMPLY WITH NSF 61, "DRINKING WATER SYSTEM COMPONENTS – HEALTH EFFECTS; SECTIONS 1 THROUGH 9" AND ANNEX F & G.

1.6 COORDINATION

A. COORDINATE SIZE AND LOCATION OF CONCRETE BASES WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.

1.7 WARRANTY

A. SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF ELECTRIC WATER HEATERS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.
   1. FAILURES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
      a. STRUCTURAL FAILURES INCLUDING STORAGE TANK AND SUPPORTS.
      b. FAULTY OPERATION OF CONTROLS.
      c. DETERIORATION OF METALS, METAL FINISHES, AND OTHER MATERIALS BEYOND NORMAL USE.

VERIFY AVAILABLE WARRANTIES FOR UNITS AND COMPONENTS AND INSERT NUMBERS BELOW.

   2. WARRANTY PERIOD(S): FROM DATE OF SUBSTANTIAL COMPLETION:
      a. INSTANTANEOUS, TANKLESS ELECTRIC WATER HEATERS: ONE YEAR.
      b. COMPRESSION TANKS: ONE YEAR(S).

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. IN OTHER PART 2 ARTICLES WHERE TITLES BELOW INTRODUCE LISTS, THE FOLLOWING REQUIREMENTS APPLY TO PRODUCT SELECTION:
   1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE MANUFACTURERS SPECIFIED.

2.2 ELECTRIC, TANKLESS, DOMESTIC-WATER HEATERS

A. FLOW-CONTROL, ELECTRIC, TANKLESS, DOMESTIC-WATER HEATERS:
   1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
   2. BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCT INDICATED ON DRAWINGS OR AN EQUAL PRODUCT BY ONE OF THE FOLLOWING:
      a. BOSCH WATER HEATING.
      b. CHRONOMITE LABORATORIES, INC.
      c. EEMAX, INC.
      d. STIEBEL ELTRON, INC.
   3. STANDARD: UL 499 FOR ELECTRIC, TANKLESS, (DOMESTIC-WATER HEATER) HEATING APPLIANCE.
   4. CONSTRUCTION: COPPER PIPING OR TUBING COMPLYING WITH NSF 61 BARRIER MATERIALS FOR POTABLE WATER, WITHOUT STORAGE CAPACITY.
      a. CONNECTIONS: ASME B1.20.1 PIPE THREAD.
      b. PRESSURE RATING: 150 PSIG (1035 KPA).
      c. HEATING ELEMENT: RESISTANCE HEATING SYSTEM.
      d. TEMPERATURE CONTROL: FLOW-CONTROL FITTING.
      e. SAFETY CONTROL: HIGH-TEMPERATURE-LIMIT CUTOFF DEVICE OR SYSTEM.
      f. JACKET: ALUMINUM OR STEEL WITH ENAMELED FINISH OR PLASTIC.
   5. CAPACITY AND CHARACTERISTICS: AS SCHEDULED
   6. SUPPORT: BRACKET FOR WALL MOUNTING.
B. THERMOSTAT-CONTROL, ELECTRIC, TANKLESS, DOMESTIC-WATER HEATERS:
   1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
   2. BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCT INDICATED ON DRAWINGS OR AN EQUAL PRODUCT BY ONE OF THE FOLLOWING:
      a. BOSCH WATER HEATING.
      b. CHRONOMITE LABORATORIES, INC.
      c. E-TANKLESS WATER HEATERS CORP.
      d. KELVION, INC.
      e. NIAGARA INDUSTRIES, INC.
   3. STANDARD: UL 499 FOR ELECTRIC, TANKLESS, (DOMESTIC-WATER HEATER) HEATING APPLIANCE.
   4. CONSTRUCTION: COPPER PIPING OR TUBING COMPLYING WITH NSF 61 BARRIER MATERIALS FOR POTABLE WATER, WITHOUT STORAGE CAPACITY.
      a. CONNECTIONS: ASME B1.20.1 PIPE THREAD.
      b. PRESSURE RATING: 150 PSIG (1035 KPA).
      c. HEATING ELEMENT: RESISTANCE HEATING SYSTEM.
      d. TEMPERATURE CONTROL: THERMOSTAT.
      e. SAFETY CONTROL: HIGH-TEMPERATURE-LIMIT CUTOFF DEVICE OR SYSTEM.
      f. JACKET: ALUMINUM OR STEEL WITH ENAMELED FINISH OR PLASTIC.
   5. SUPPORT: BRACKET FOR WALL MOUNTING.
   6. CAPACITY AND CHARACTERISTICS: AS SCHEDULED

2.3 DOMESTIC-WATER HEATER ACCESSORIES

A. DOMESTIC-WATER COMPRESSION TANKS:
   1. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
   2. BASIS-OF-DESIGN PRODUCT: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCT INDICATED ON DRAWINGS OR AN EQUAL PRODUCT BY ONE OF THE FOLLOWING:
      a. AMTROL INC.
      b. FLEXCON INDUSTRIES.
      c. HONEYWELL INTERNATIONAL INC.
      d. PENTAIR PUMP GROUP (THE); MYERS.
      e. SMITH, A. O. WATER PRODUCTS CO.; A DIVISION OF A. O. SMITH CORPORATION.
      f. STATE INDUSTRIES.
      g. TACO, INC.
   3. DESCRIPTION: STEEL PRESSURE-RATED TANK CONSTRUCTED WITH WELDED JOINTS AND FACTORY-INSTALLED BUTYL-RUBBER DIAPHRAGM. INCLUDE AIR PRECHARGE TO MINIMUM SYSTEM-OPERATING PRESSURE AT TANK.
   4. CONSTRUCTION:
      a. TAPPINGS: FACTORY-FABRICATED STEEL, WELDED TO TANK BEFORE TESTING AND LABELING. INCLUDE ASME B1.20.1 PIPE THREAD.
      b. INTERIOR FINISH: COMPLY WITH NSF 61 BARRIER MATERIALS FOR POTABLE-WATER TANK LININGS, INCLUDING EXTENDING FINISH INTO AND THROUGH TANK FITTINGS AND OUTLETS.
      c. AIR-CHARGING VALVE: FACTORY INSTALLED.
B. WATER HEATER MOUNTING BRACKETS: WATER HEATER MANUFACTURER'S FACTORY-FABRICATED STEEL BRACKET FOR WALL MOUNTING AND CAPABLE OF SUPPORTING WATER HEATER AND WATER.
C. SHOCK ABSORBERS: ASSE 1010 OR PDI-WH 201, SIZE A WATER HAMMER ARRESTER.

2.4 SOURCE QUALITY CONTROL

A. FACTORY TESTS: TEST AND INSPECT DOMESTIC-WATER HEATERS SPECIFIED TO BE ASME-CODE CONSTRUCTION, ACCORDING TO ASME BOILER AND PRESSURE VESSEL CODE.
B. ELECTRIC, DOMESTIC-WATER HEATERS WILL BE CONSIDERED DEFECTIVE IF THEY DO NOT PASS TESTS AND INSPECTIONS. COMPLY WITH REQUIREMENTS IN DIVISION 01 SECTION "QUALITY REQUIREMENTS" FOR RETESTING AND REINSPECTING REQUIREMENTS AND DIVISION 01 SECTION "EXECUTION" FOR REQUIREMENTS FOR CORRECTING THE WORK.
C. PREPARE TEST AND INSPECTION REPORTS.

PART 3 – EXECUTION

3.1 DOMESTIC-WATER HEATER INSTALLATION

A. ELECTRIC, TANKLESS, DOMESTIC-WATER HEATER MOUNTING: INSTALL ELECTRIC, TANKLESS, DOMESTIC-WATER HEATERS AT LEAST 18 INCHES ABOVE FLOOR ON WALL BRACKET.
   1. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES.
   2. ARRANGE UNITS SO CONTROLS AND DEVICES THAT REQUIRE SERVICING ARE ACCESSIBLE.
   3. PLACE AND SECURE ANCHORAGE DEVICES. USE SETTING DRAWINGS, TEMPLATES, DIAGRAMS, INSTRUCTIONS, AND DIRECTIONS FURNISHED WITH ITEMS TO BE EMBEDDED.
   4. INSTALL ANCHOR BOLTS TO ELEVATIONS REQUIRED FOR PROPER ATTACHMENT TO SUPPORTED EQUIPMENT.
   5. ANCHOR DOMESTIC-WATER HEATERS TO SUBSTRATE.
B. INSTALL ELECTRIC, DOMESTIC-WATER HEATERS LEVEL AND PLUMB, ACCORDING TO LAYOUT DRAWINGS, ORIGINAL DESIGN, AND REFERENCED STANDARDS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. ARRANGE UNITS SO CONTROLS AND DEVICES NEEDING SERVICE ARE ACCESSIBLE.
   1. INSTALL SHUTOFF VALVES ON DOMESTIC-WATER-SUPPLY PIPING TO DOMESTIC-WATER HEATERS AND ON DOMESTIC-HOT-WATER OUTLET PIPING. COMPLY WITH REQUIREMENTS FOR SHUTOFF VALVES SPECIFIED IN DIVISION 22 SECTION
C. FILL ELECTRIC, DOMESTIC-WATER HEATERS WITH WATER.
D. CHARGE DOMESTIC-WATER COMPRESSION TANKS WITH AIR.

3.2 CONNECTIONS

A. COMPLY WITH REQUIREMENTS FOR PIPING SPECIFIED IN DIVISION 22 SECTION "DOMESTIC WATER PIPING." DRAWINGS INDICATE GENERAL ARRANGEMENT OF PIPING, FITTINGS, AND SPECIALTIES.
B. WHERE INSTALLING PIPING ADJACENT TO ELECTRIC, DOMESTIC-WATER HEATERS, ALLOW SPACE FOR SERVICE AND MAINTENANCE OF WATER HEATERS. ARRANGE PIPING FOR EASY REMOVAL OF DOMESTIC-WATER HEATERS.

3.3 IDENTIFICATION

A. IDENTIFY SYSTEM COMPONENTS WITH PHENOLIC LABELS INDICATING UNIT IDENTIFIER AND ELECTRICAL POWER SOURCE INCLUDING PANEL AND CIRCUIT DESIGNATION.

3.4 FIELD QUALITY CONTROL

A. PERFORM TESTS AND INSPECTIONS.
   1. MANUFACTURER'S FIELD SERVICE: ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO INSPECT COMPONENTS, ASSEMBLIES, AND EQUIPMENT INSTALLATIONS, INCLUDING CONNECTIONS, AND TO ASSIST IN TESTING.
   2. LEAK TEST: AFTER INSTALLATION, CHARGE SYSTEM AND TEST FOR LEAKS. REPAIR LEAKS AND RETEST UNTIL NO LEAKS EXIST.
   3. OPERATIONAL TEST: AFTER ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, START UNITS TO CONFIRM PROPER OPERATION.
   4. TEST AND ADJUST CONTROLS AND SAFETIES. REPLACE DAMAGED AND MALFUNCTIONING CONTROLS AND EQUIPMENT.
B. ELECTRIC, DOMESTIC-WATER HEATERS WILL BE CONSIDERED DEFECTIVE IF THEY DO NOT PASS TESTS AND INSPECTIONS. COMPLY WITH REQUIREMENTS IN DIVISION 01 SECTION "QUALITY REQUIREMENTS" FOR RETESTING AND REINSPECTING REQUIREMENTS AND DIVISION 01 SECTION "EXECUTION" FOR REQUIREMENTS FOR CORRECTING THE WORK.
C. PREPARE TEST AND INSPECTION REPORTS.

3.5 DEMONSTRATION

A. TRAIN OWNER'S MAINTENANCE PERSONNEL TO ADJUST, OPERATE, AND MAINTAIN COMMERCIAL AND TANKLESS, ELECTRIC, DOMESTIC-WATER HEATERS.

END OF SECTION 223300

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
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Culver City, Ca. 90230
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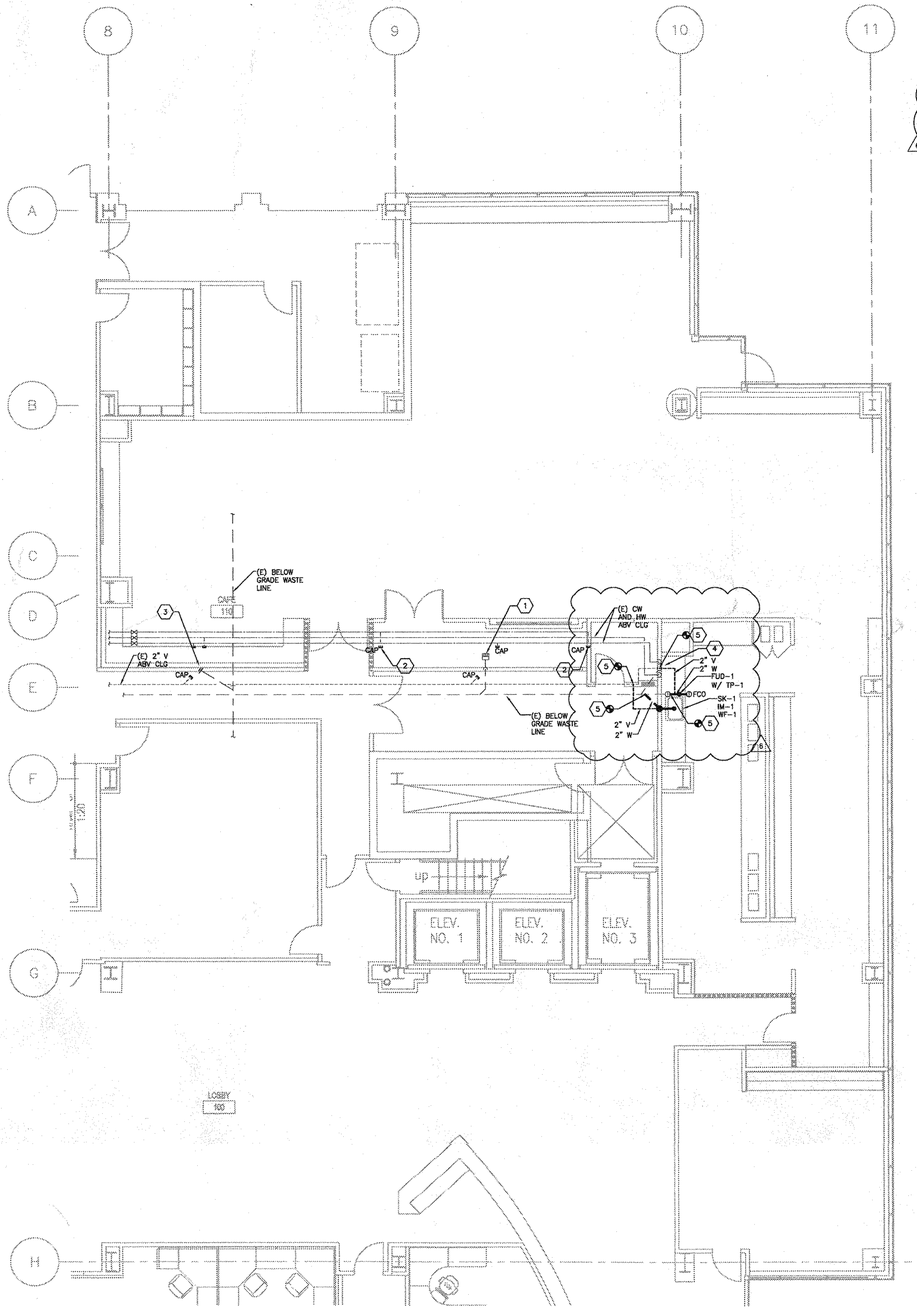
Description
PLUMBING SPECIFICATIONS

Scale
NONE

True North
Ref North

P-002



SHEET NOTES

1. DEMO (E) FLOOR SINK AND (E) TRAP PRIMER. PROVIDE NEW FLOOR CLEANOUT, CAP (E) CW AND (E) VENT ABOVE CEILING CLOSE TO MAIN.
2. DEMO AND CAP (E) RO WATER ABOVE CEILING CLOSE TO MAIN.
3. DEMO (E) PANTRY SINK. CAP (E) WASTE LINE AT THE WALL. CAP (E) CW AND (E) VENT LINE ABOVE CEILING CLOSE TO MAIN. RE-ROUTE (E) CONDENSATE DRAIN FROM (E) AC UNIT TO TAILPIECE OF NEW PANTRY SINK.
4. DEMO (E) PANTRY SINK. RECONNECT (E) CW AND (E) HW TO (N) PANTRY SINK AT NEW LOCATION.
5. POINT OF CONNECTIONS FOR PLUMBING SERVICES.
   - 5.1. 2" VENT TO (E) VENT LINE ABOVE DROP CEILING ON 1ST FLOOR.
   - 5.2. 2" WASTE TO (E) BELOW GRADE WASTE LINE.

GENERAL NOTES

1. WALL, FLOOR, AND CEILING DEVICES SHOWN FOR QUANTITY AND APPROXIMATE LOCATION ONLY. EXACT LOCATION SHALL BE PER ARCHITECTURAL DRAWINGS OR AS DIRECTED BY ARCHITECT IN THE FIELD.

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Oxnard, CA 93030

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1230 Avenue of the Americas
Suite 1500
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Description
PARTIAL FIRST FLOOR PLUMBING PLAN

Scale
3/16" = 1'-0"

True North
Ref North

P-101

PARTIAL FIRST FLOOR PLUMBING PLAN

1

The corner tick marks represent the 30"x42" plot area.

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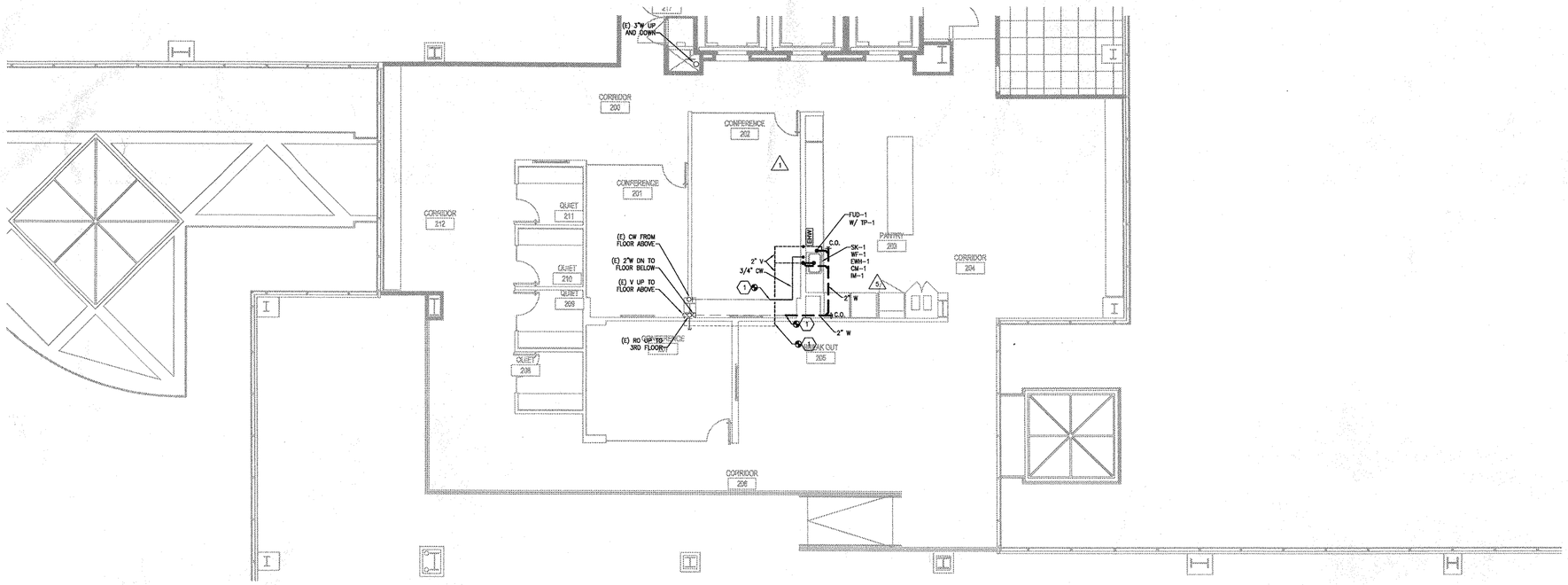
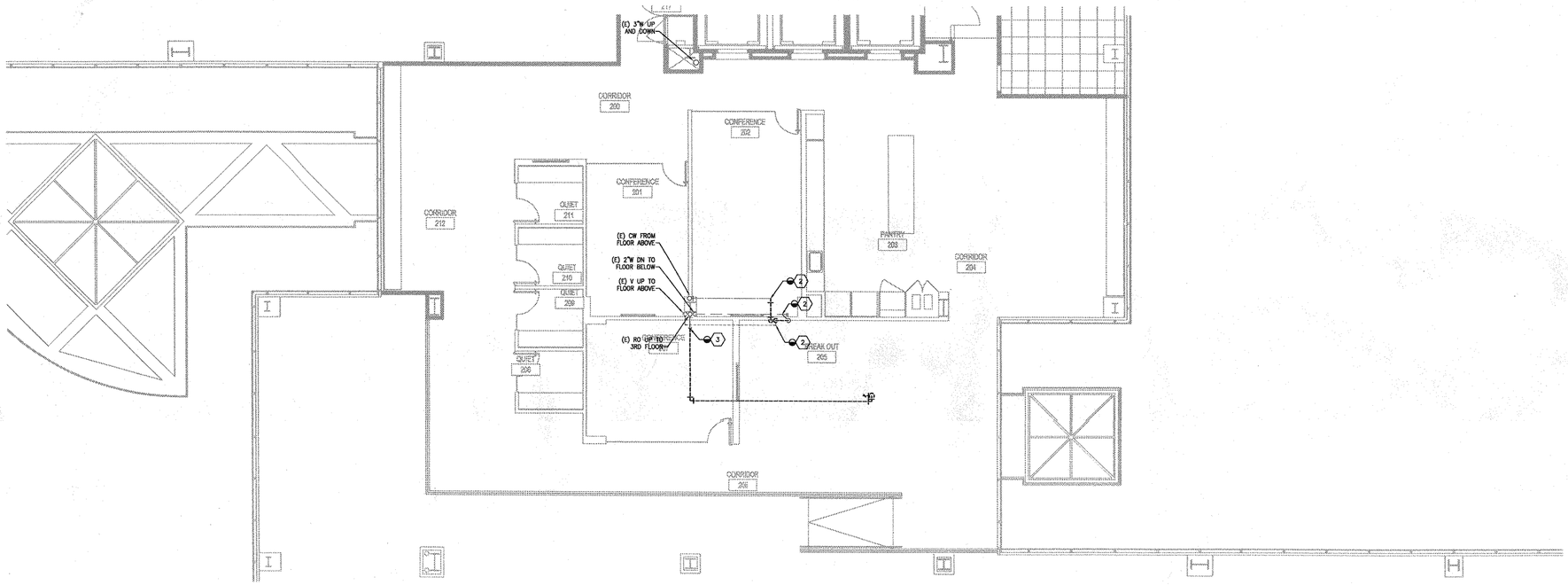


PARTIAL SECOND FLOOR PLUMBING PLAN 1



PARTIAL SECOND FLOOR PLUMBING DEMOLITION PLAN 2

SHEET NOTES

1. POINT OF CONNECTIONS FOR PLUMBING SERVICES.
   - 1.1. 3/4" CW TO (E) CW LINE ABOVE DROP CEILING ON 2ND FLOOR.
   - 1.2. 2" VENT TO (E) VENT LINE ABOVE DROP CEILING ON 2ND FLOOR.
   - 1.3. 2" WASTE TO (E) WASTE LINE ABOVE HARDLID CEILING ON 1ST FLOOR.
2. DEMO (E) CW, WASTE AND VENT LINE FROM POINT OF DISCONNECT. PREP PIPING FOR NEW CONNECTION. FIELD VERIFY EXACT LOCATION OF PIPING.
3. VALVED CAP (E) RO WATER ABOVE CEILING.

GENERAL NOTES

1. WALL, FLOOR, AND CEILING DEVICES SHOWN FOR QUANTITY AND APPROXIMATE LOCATION ONLY. EXACT LOCATION SHALL BE PER ARCHITECTURAL DRAWINGS OR AS DIRECTED BY ARCHITECT IN THE FIELD.
2. CONTRACTOR TO REPAIR FIREPROOFING AROUND COLUMNS IF DAMAGE OCCURS DURING DEMOLITION.

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Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

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		BULLETIN 4		

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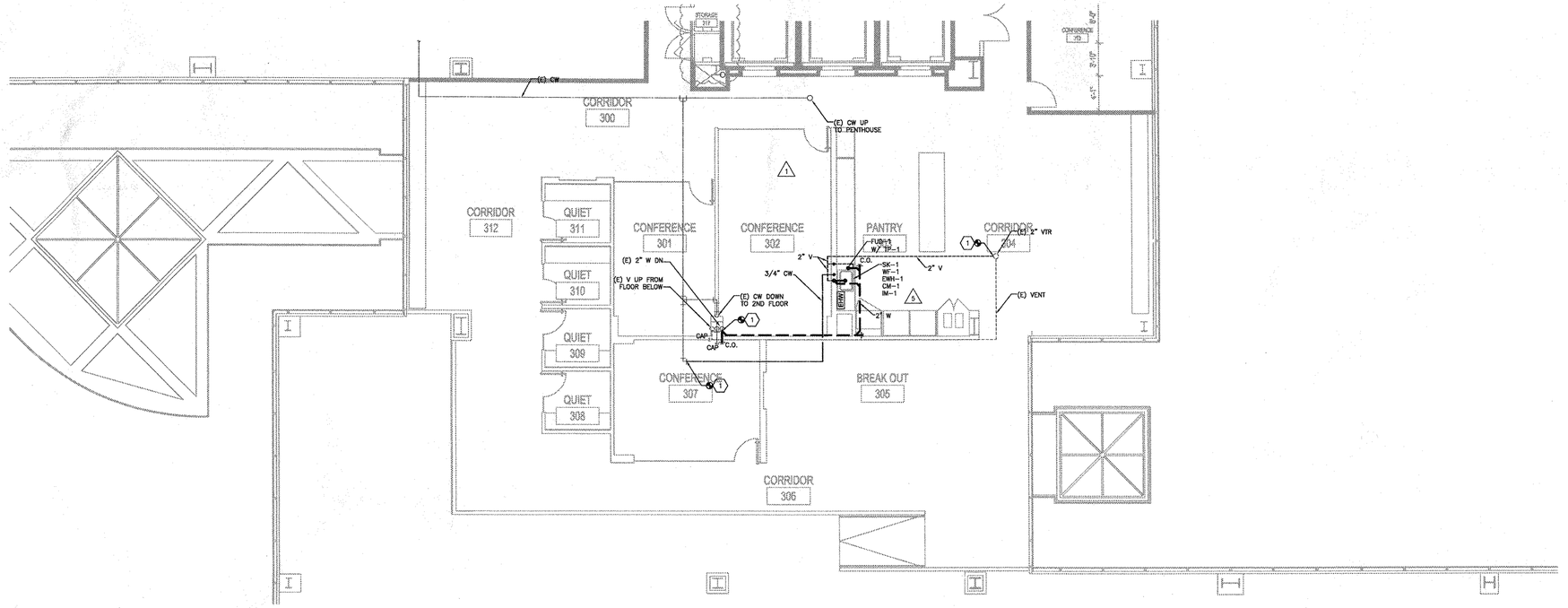
Description
PARTIAL SECOND FLOOR PLUMBING PLANS

Scale
3/16" = 1'-0"

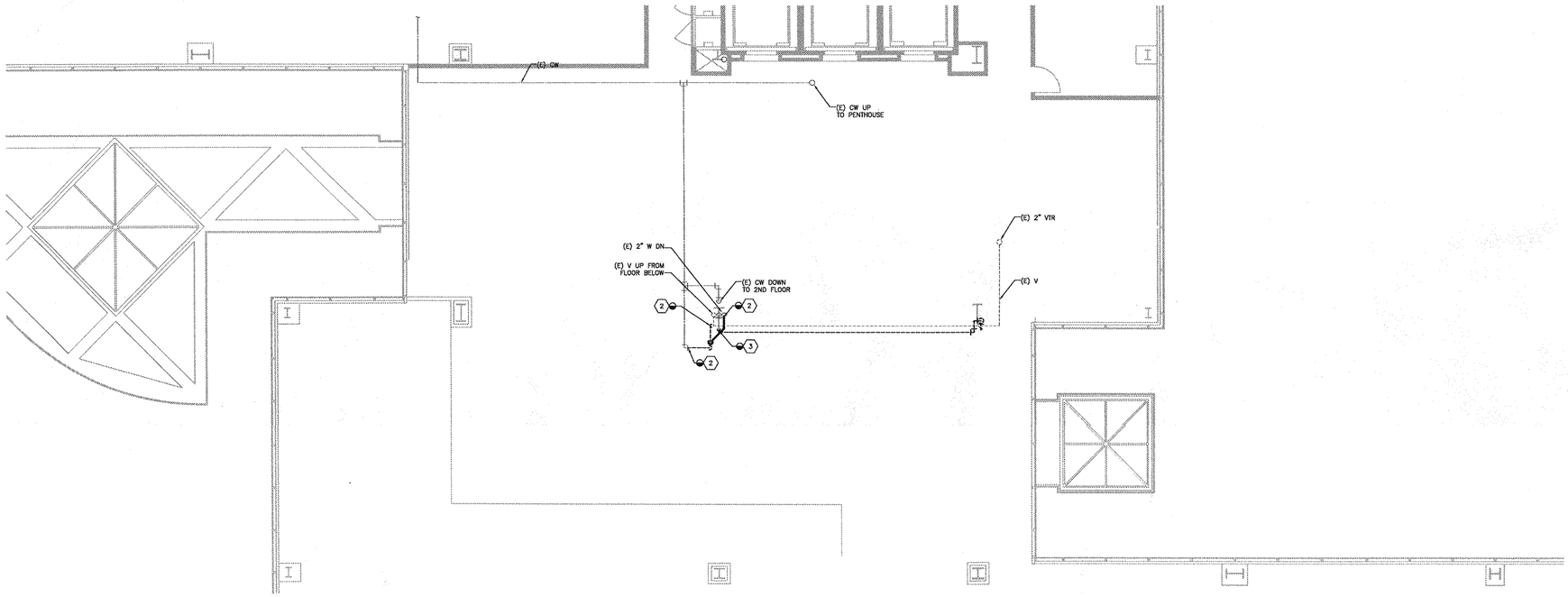
True North
Ref North

P-102

The corner tick marks represent the 30"x42" plot area.



PARTIAL THIRD FLOOR PLUMBING PLAN 1



PARTIAL THIRD FLOOR PLUMBING DEMOLITION PLAN 2

SHEET NOTES

1. POINT OF CONNECTIONS FOR PLUMBING SERVICES.
   - 1.1. 3/4" CW TO (E) CW LINE ABOVE DROP CEILING ON 2ND FLOOR.
   - 1.2. 2" VENT TO (E) VENT LINE ABOVE DROP CEILING ON 2ND FLOOR.
   - 1.3. 2" WASTE TO (E) WASTE LINE ABOVE HAROLID CEILING ON 1ST FLOOR.
2. DEMO (E) CW, WASTE AND VENT LINE FROM POINT OF DISCONNECT. PREP PIPING FOR NEW CONNECTION. FIELD VERIFY EXACT LOCATION OF PIPING.
3. VALVED CAP (E) RO WATER ABOVE CEILING.

GENERAL NOTES

1. WALL, FLOOR, AND CEILING DEVICES SHOWN FOR QUANTITY AND APPROXIMATE LOCATION ONLY. EXACT LOCATION SHALL BE PER ARCHITECTURAL DRAWINGS OR AS DIRECTED BY ARCHITECT IN THE FIELD.
2. CONTRACTOR TO REPAIR FIREPROOFING AROUND COLUMNS IF DAMAGE OCCURS DURING DEMOLITION.

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Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
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Description
PARTIAL THIRD FLOOR PLUMBING PLANS

Scale
3/16" = 1'-0"

True North
Ref North

P-103

The corner tick marks represent the 30"x42" plot area.

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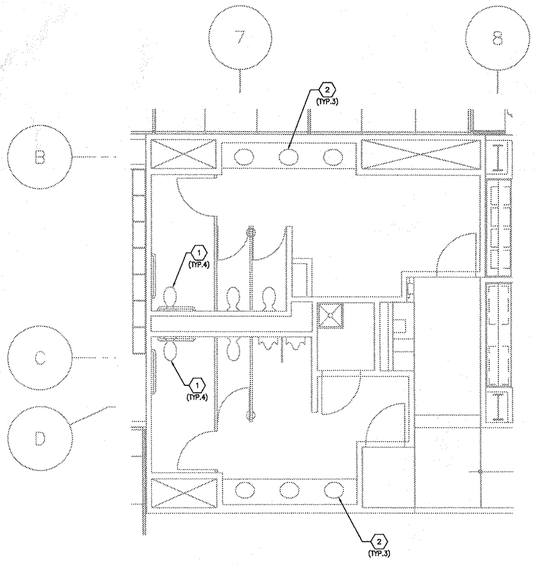
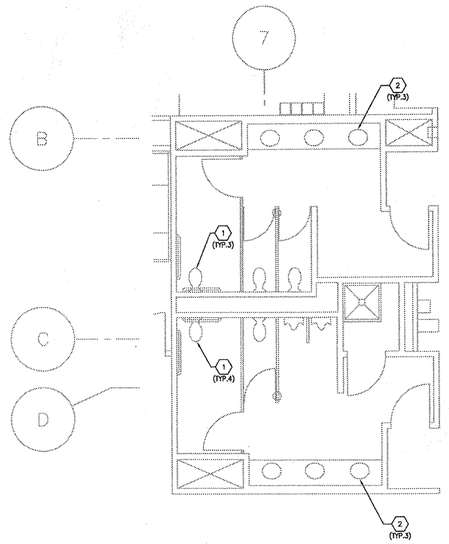
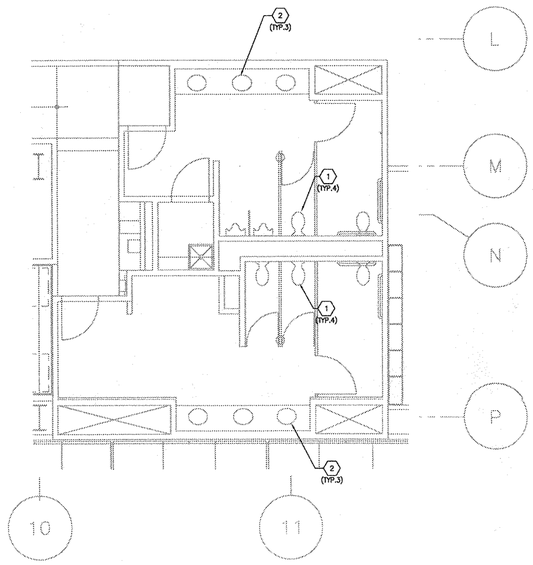


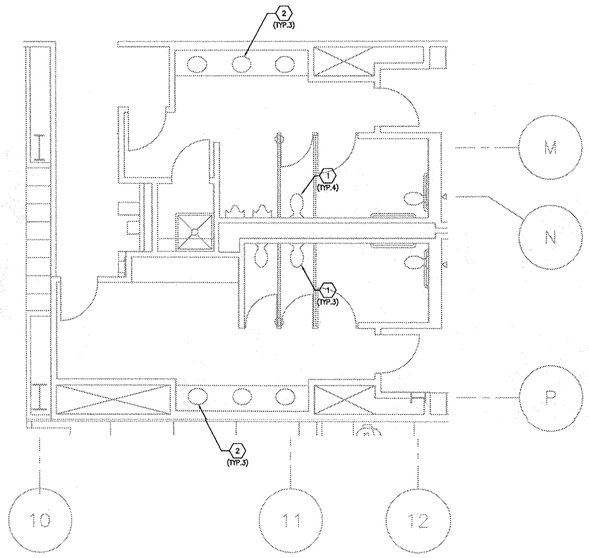
2ND & 3RD FLOOR NORTH RESTROOM ENLARGED PLUMBING PLAN 3



1ST FLOOR NORTH RESTROOM ENLARGED PLUMBING PLAN 1



2ND & 3RD FLOOR SOUTH RESTROOM ENLARGED PLUMBING PLAN 4



1ST FLOOR SOUTH RESTROOM ENLARGED PLUMBING PLAN 2

SHEET NOTES

1. (E) WATER CLOSET/(E) URINAL TO REMAIN.
2. REPLACE (E) LAV WITH (N) LAV, L-1. RECONNECT (E) WASTE LINE TO (N) LAV AND RECONNECT (E) CW AND (E) HW TO (N) FAUCET.

GENERAL NOTES

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Description
RESTROOMS ENLARGED PLAN

Scale
1/4" = 1'-0"

True North
Ref North

P-401

The corner tick marks represent the 30"x42" plot area.

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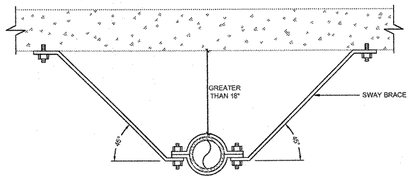
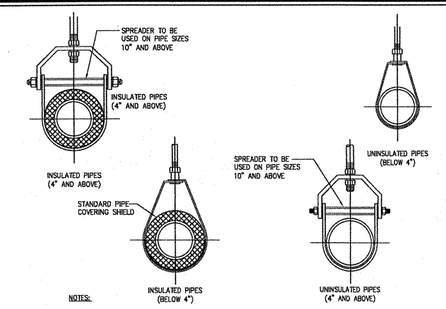


WHEN HUBLESS PIPING IS SUSPENDED IN EXCESS OF 18" BELOW STRUCTURE, SWAY BRACING SHALL BE PROVIDED TO PREVENT HORIZONTAL MOVEMENT. LOCATE BRACE EVERY 30 FT. ON STAIGHT RUNS WITH AT LEAST ONE BRACE ON OFFSETS IN EXCESS OF 10 FEET. SUBMIT DETAILS IF VARIATION IS REQUIRED.

3 HUBLESS PIPE SWAY BRACING FOR HORIZONTAL PIPING

SCALE: NONE

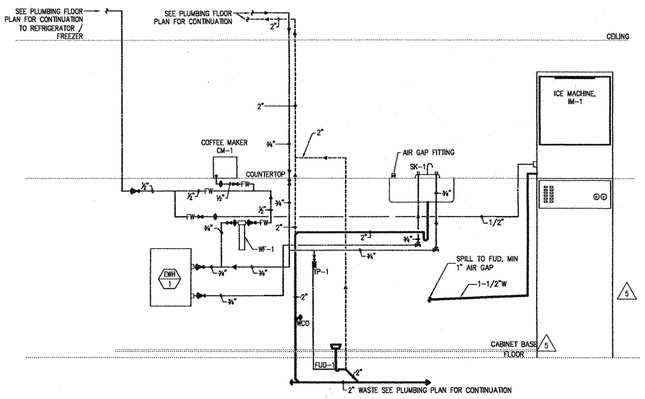


NOTES:

1. FOR UPPER ATTACHMENT TO BUILDING, SEE CURRENT SMACNA HVAC DUCT CONSTRUCTION STANDARDS FIG 5-1 AND FIG 5-2 WITH SPECIFIC BUILDING STRUCTURAL ENGINEER APPROVAL.

1 PIPE HANGER SUPPORT

SCALE: NONE



NOTE:

1. DETAIL IS DIAGRAMMATIC ONLY. REFER TO ARCHITECTURAL FOR EXACT FIXTURE LOCATION.
2. PRIOR TO PROCEEDING WITH THE WORK, PROVIDE SHUT-OFF VALVES ON ALL COPPER LINES CONNECTING TO PLUMBING EQUIPMENT AND/OR APPLIANCES.

2 PANTRY SCHEMATIC DETAIL

SCALE: NONE

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone: 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

Issue	Date & Issue Description	By	Check
01	07/31/12 PLAN CHECK	-	-
1	08/10/12 ISSUE FOR CONSTRUCTION	-	-
2	09/12/12 BULLETIN 1	-	-
3	10/09/12 BULLETIN 2	-	-
4	10/23/2012 REVISED FOR PLAN CHECK	-	-
5	11/19/12 BULLETIN 3	-	-
6	02/21/13 BULLETIN 4	-	-

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\P-501-VZCOX000.dwg

Description
PLUMBING DETAILS

Scale
NONE

True North
Plot North

P-501

The corner tick marks represent the 30"x42" plot area.

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ABBREVIATIONS

	–#–	H	HUMIDIFICATION	TS	TOP SPEED
1PH	SINGLE–PHASE	HC	HEATING COIL	TSTAT	THERMOSTAT
2WAY	TWO–WAY	HD	HEAD	TV	TURNING VANES
3WAY	THREE–WAY	HOA	HAND–OFF–AUTOMATIC	TYP	TYPICAL
4WAY	FOUR–WAY	HORIZ	HORIZONTAL		–U–
	–A–	HP	HORSEPOWER		
		HPC	HIGH PRESSURE CONDENSATE	UON	UNLESS OTHERWISE NOTED
		HPS	HIGH PRESSURE STEAM		
A/C	AIR CONDITION	HSKPG	HOUSEKEEPING		–V–
AAD	AUTOMATIC AIR DAMPER	HT	HEIGHT		
AAV	AUTOMATIC AIR VENT	HTHW	HIGH TEMPERATURE HOT WATER	V	VOLT
ACCU	AIR COOLED CONDENSING UNIT	HTWR	HIGH TEMPERATURE HOT WATER RETURN	VAV	VARIABLE AIR VOLUME
				VD	VOLUME DAMPER
ACS	AUTOMATIC CONTROL SYSTEM	HTWS	HIGH TEMPERATURE HOT WATER SUPPLY	VF	VARIABLE FREQUENCY
ACS	DR ACCESS DOOR			VFD	VARIABLE FREQUENCY DRIVE
ACV	AUTOMATIC CONTROL VALVE	HTWC	HEATING WATER CIRCULATION	VOLT	VOLTAGE
ADA	AMERICAN DISABILITIES ACT	HUM	HUMIDIFIER	VTR	VENT THROUGH ROOF
ADDL	ADDITIONAL	HVAC	HEATING, VENTILATION, AND AIR CONDITIONING		
ADJ	ADJUSTABLE				–W–
AF	AFTER FILTER	HW	HOT WATER		
AFF	ABOVE FINISHED FLOOR	HWP	HOT WATER PUMP	W	WATT
AFMS	AIR FLOW MEASUREMENT STATION	HWR	HOT WATER RETURN	W	WIDTH
		HWS	HOT WATER SUPPLY	W/	WITH
AHJ	AUTHORITY HAVING JURISDICTION	HZ	HERTZ	W/O	WITHOUT
AHU	AIR HANDLING UNIT			WB	WET BULB
AIA	AMERICAN INSTITUTE OF ARCHITECTS		–I–	WBT	WET BULB TEMPERATURE
				WC	WATER COLUMN
ALUM	ALUMINUM	ID	INSIDE DIMENSION	WG	WATER GAGE
AMP	AMPERE	IN	INCH	WMS	WIRE MESH SCREEN
APD	AIR PRESSURE DROP	INWC	INCHES, WATER COLUMN	WP	WATERPROOFING
ARCH	ARCHITECT	INSUL	INSULATION	WP	WEATHERPROOF
AS	AIR SEPARATOR			WSP	WORKING STEAM PRESSURE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS	KW	KILOWATT		
		KWH	KILOWATT HOUR		
AUTO	AUTOMATIC				
AVG	AVERAGE		–L–		
	–B–	LAT	LEAVING AIR TEMPERATURE		
BAS	BUILDING AUTOMATION SYSTEM	LBS	POUND(S)		
BDD	BACKDRAFT DAMPER	LD	LINEAR DIFFUSER		
BFP	BACKFLOW PREVENTER	LF	LINEAR FEET (FOOT)		
BFV	BUTTERFLY VALVE	LFD	LAMINAR FLOW DIFFUSER		
BHP	BRAKE HORSE POWER	LH	LATENT HEAT		
BLW	BELOW	LIN	LINEAR		
BMS	BUILDING MANAGEMENT SYSTEM	LIN FT	LINER FEET		
BOS	BOTTOM OF STEEL	LPC	LOW PRESSURE CONDENSATE		
BTU	BRITISH THERMAL UNIT	LPS	LOW PRESSURE STEAM		
BTUH	BRITISH THERMAL UNIT PER HOUR	LR	LOW RESISTER		
		LTH	LENGTH		
C/C	COOLING COIL	LVDR	LOUVER DOOR		
CAP	CAPACITY	LVR	LOUVER		
CC	COOLING COIL	LWT	LEAVING WATER TEMPERATURE		
CFM	CUBIC FEET PER MINUTE				
CH	CHILLER	MAT	MIXED AIR TEMPERATURE		
CHF	CHEMICAL FEED	MAX	MAXIMUM		
CHWP	CHILLED WATER PUMP	MBTUH	BRITISH THERMAL UNIT (1000)		
CHWR	CHILLED WATER RETURN	MC	THOUSAND BTU PER HOUR		
CHWS	CHILLED WATER SUPPLY	MCC	MECHANICAL CONTRACTOR		
CL	CENTER LINE	MECH	MOTOR CONTROL CENTER		
CLG	CEILING	MER	MECHANICAL		
CLG DIFF	CEILING DIFFUSER	MFG	MECHANICAL EQUIPMENT ROOM		
CLG REG	CEILING REGISTER	MFR	MANUFACTURING		
CNDS	CONDENSATE	MHP	MANUFACTURER		
CO	CARBON MONOXIDE	MIN	MOTOR HORSE POWER		
CO2	CARBON DIOXIDE	MIN	MINIMUM		
COND	CONDENSER	MOD	MINUTE		
CONN	CONNECT	MOT	MODEL		
CM	CONSTRUCTION MANAGER	MP	MOTOR		
COP	COEFFICIENT OF PERFORMANCE (HEATING)	MPC	MEDIUM PRESSURE CONDENSATE		
CP	CONTROL PANEL	MPS	MEDIUM PRESSURE STEAM		
CRP	CONDENSATE RETURN PUMP	MS	MOTOR STARTER		
CV	CONSTANT VOLUME	MSD	MOTORIZED SMOKE DAMPER		
CV	CONTROL VALVE	MTD	MEAN TEMPERATURE DIFFERENCE		
CWP	CONDENSER WATER PUMP				
CWR	CONDENSER WATER RETURN	MTG HT	MOUNTING HEIGHT		
CWS	CONDENSER WATER SUPPLY	MTWR	MEDIUM TEMPERATURE HOT WATER RETURN		
		MTWS	MEDIUM TEMPERATURE HOT WATER SUPPLY		
	–D–				
D	DROP	MU	MAKE UP WATER LINE		
(D)	EXISTING TO BE DEMOLISHED				
DAP	DUCT ACCESS PANEL		–N–		
DB	DECIBEL				
DB	DRY BULB	NC	NORMALLY CLOSED		
DBA	UNIT OF SOUND LEVEL	NC	NOT IN CONTRACT		
DBT	DRY BULB TEMPERATURE	NO	NORMALLY OPEN		
DDC	DIRECT DIGITAL CONTROL	NTS	NOT TO SCALE		
DEFL	DEFLECTION				
DEG	DEGREE		–O–		
DIA	DIAMETER				
DIW	DEIONIZED WATER	O	OXYGEN		
DMPR	DAMPER	OA	OUTSIDE AIR		
DN	DOWN	OD	OUTSIDE DIAMETER		
DPT	DEW POINT TEMPERATURE	OV	OUTSIDE VELOCITY		
DR	DRAIN				
DRLV	DOOR LOUVER		–P–		
DW	DISTILLED WATER				
DWG	DRAWING	PCF	POUNDS PER CUBIC FOOT		
DX	DUPLEX	PCHWR	PRIMARY CHILLED WATER RETURN		
		PCHWS	PRIMARY CHILLED WATER SUPPLY		
	–E–				
		PD	PRESSURE DROP OR DIFFERENCE		
EAR	EXHAUST AIR REGISTER				
EAT	ENTERING AIR TEMPERATURE	PERF	PERFORATED		
EC	ELECTRIC CONTRACTOR	PF	PRE FILTER		
ECU	EVAPORATIVE COOLING UNIT	PH	PHASE		
EDBT	ENTERING DRY BULB TEMPERATURE	PHC	PREHEAT COIL		
		PHWR	PRIMARY HOT WATER RETURN		
EER	ENERGY EFFICIENCY RATIO	PHWS	PRIMARY HOT WATER SUPPLY		
EF	EXHAUST FAN	PLBG	PLUMBING		
EFF	EFFICIENCY	POS	POSITIVE		
EL	ELEVATION	PRS	PRESSURE REDUCING STATION		
ELEC	ELECTRIC	PRV	PRESSURE REDUCING VALVE		
EQ	EQUAL	PSF	POUNDS PER SQUARE FOOT		
ESP	EXTERNAL STATIC PRESSURE	PSI	POUNDS PER SQUARE INCH		
EWBT	ENTERING WET BULB TEMPERATURE	PSIA	POUNDS PER SQUARE INCH ABSOLUTE		
EWT	ENTERING WATER TEMPERATURE	PSIG	POUNDS PER SQUARE INCH, GAGE		
EXH	EXHAUST	PTAC	PACKAGED TERMINAL AIR CONDITIONER		
EXHA	EXHAUST AIR				
EXIST	EXISTING				
EXP	EXPANSION				
(E)	EXISTING TO REMAIN		–R–		
	–F–	R	THERMAL RESISTANCE		
		R	RISE		
F	FAHRENHEIT	(R)	REMOVE		
FA	FACE AREA	RA	RETURN AIR		
FAI	FRESH AIR INLET (INTAKE)	RA	GR RETURN AIR GRILLE		
FAS	FIRE ALARM SYSTEM	RA	REG RETURN AIR REGISTER		
FCU	FAN COIL UNIT	RCP	REFLECTED CEILING PLAN		
FDMPR	FIRE DAMPER	REC	RECESSED		
FIN	FLR FINISH FLOOR	REFR	REFRIGERATION		
FIN GR	FINISH GRADE	REG	REGISTER		
FLA	FULL LOAD AMPERES	REM	REMOVABLE		
FLEX	FLEXIBLE	REQD	REQUIRED		
FLTR	FILTER	RFGT	REFRIGERANT		
FOP	FUEL OIL PUMP	RH	RELATIVE HUMIDITY		
FOR	FUEL OIL RETURN	RHC	REHEAT COIL		
FOS	FUEL OIL SUPPLY	RLL	REFRIGERANT LIQUID LINE		
FOTK	FUEL OIL STORAGE TANK	RLA	RUNNING LOAD AMPERES		
FP	FIREPROOF	RM	ROOM		
FPI	FINS PER INCH	ROT	ROTATION		
FPM	FEET PER MINUTE	RPM	REVOLUTIONS PER MINUTE		
FPS	FEET PER SECOND	RRV	REFRIGERANT RELIEF VENT		
FT	FOOT	RSL	REFRIGERANT SUCTION LINE		
FT	FEET				
FT/LB	FOOT/POUND		–S–		
FTR	FINNED TUBE RADIATION				
FV	FACE VELOCITY	SA	SUPPLY AIR		
		SA REG	SUPPLY AIR REGISTER		
	–G–	SDMPR	SMOKE DAMPER		
		SE	STRUCTURAL ENGINEER		
G	NATURAL GAS	SF	SUPPLY FAN		
GAL	GALLON	SF	SQUARE FOOT (FEET)		
GALV	GALVANIZED	SOV	SHUT OFF VALVE		
GCHWR	GLYCOL CHILLED WATER RETURN	SP	STATIC PRESSURE		
		SPEC	SPECIFICATION		
GCHWS	GLYCOL CHILLED WATER SUPPLY	SQ IN	SQUARE INCH		
		SQ YD	SQUARE YARD		
GHR	GLYCOL HEATING RETURN	SST	STAINLESS STEEL		
GHS	GLYCOL HEATING SUPPLY	STNLS	STAINLESS		
GPH	GALLONS PER HOUR	STRUCT	STRUCTURAL		
GPM	GALLONS PER MINUTE				
GR	GLYCOL RETURN		–T–		
GRL	GRILLE				
GS	GLYCOL SUPPLY	T	THROAT		
		TDH	TOTAL DYNAMIC HEAD		
	–H–	TEMP	TEMPERATURE		

SYMBOLS (AS APPLICABLE)

ANNOTATION

- SYMBOLS (W–20) SCALE: NOT TO SCALE — TITLE MARK; DETAIL OR PLAN NUMBER – 1; DETAIL OR PLAN REFERENCE LOCATION FOUND IN M–201
- 1 / M–301 — SECTION MARK A2T; SECTION NUMBER – 1; SECTION FOUND IN M–301
- 2 / B — DETAIL BOUNDARY B; DETAIL NUMBER – 2
- 1 — SHEET KEYNOTE
- 1 — REVISION CLOUD (DELTA 1)
- 1 / M–501 — DETAIL REFERENCE; DETAIL NUMBER – 1; DETAIL FOUND IN M–301
- XXXXX / XXXXX — FEEDER TAG
- M / 1 — EQUIPMENT TAG, DESCRIPTION M, MARK NUMBER 1
- 1.0 ⊞ FA — LOUVER IN DOOR, MINIMUM 1.0 SQUARE FOOT FREE AREA
- CNDS — CONDENSATE
- UC — UNDERCUT DOOR
- POINT OF CONNECTION
- POINT OF DISCONNECTION

DUCT

- SA — SINGLE LINE DUCTWORK (NEW)
- (E)SA — SINGLE LINE DUCTWORK (EXISTING)
- (D)SA — SINGLE LINE DUCTWORK (EXIST. TO BE DEMOLISHED)
- SA — DOUBLE LINE DUCTWORK (NEW)
- (E)SA — DOUBLE LINE DUCTWORK (EXISTING)
- (D)SA — DOUBLE LINE DUCTWORK (EXISTING TO BE DEMOLISHED)
- SA / SA — DUCTWORK WITH ACOUSTIC LINING
- DUCT UNDER POSITIVE PRESSURE, SUPPLY DUCT OR FAN DISCHARGE
- DUCT UNDER NEGATIVE PRESSURE, RETURN, EXHAUST OR OUTSIDE AIR
- UP — RISE IN DUCTWORK (IN DIRECTION OF AIR FLOW)
- DN — DROP IN DUCTWORK (IN DIRECTION OF AIR FLOW)
- REHEAT COIL
- DUCT TRANSITION
- VANED ELBOW
- RADIUS ELBOW
- DUCT FITTING (SEE DETAILS)

- FLEXIBLE DUCT CONNECTION
- TRANSFER AIR BOOT (STRAIGHT) (SEE SCHEDULE FOR REQUIREMENTS)
- TRANSFER AIR DUCT ELBOW WITH ACOUSTIC LINING
- SA — SOUND ATTENUATOR

AIR TERMINALS

- CO–A 100 — CEILING SUPPLY DIFFUSER, TYPE A, THROW PATTERN 4–WAY, 100 CFM
- CR–A 100 — CEILING RETURN REGISTER (GRILLE), TYPE A, 100 CFM
- EC–A 100 — CEILING EXHAUST, TYPE A, 100 CFM
- EC–A 100 — CEILING EXHAUST, TYPE A, 100 CFM
- CEILING SUPPLY WITH BLANKING PLATE
- EXISTING CEILING SUPPLY TO REMAIN
- EXISTING CEILING RETURN TO REMAIN
- EXISTING CEILING EXHAUST TO REMAIN
- LINEAR SLOT DIFFUSER
- 12X6 WR 150 — 12"X6" SIDEWALL SUPPLY REGISTER, 150 CFM
- 12X6 WG 150 — 12"X6" SIDEWALL RETURN/EXHAUST REGISTER, 150 CFM
- ROUND SUPPLY DIFFUSER
- ROUND RETURN DIFFUSER
- RETURN AIR GRILLE WITH DUCT SOUND BOOT

VAV BOX

- SINGLE DUCT VAV BOX
- SINGLE DUCT VAV BOX WITH ATTENUATOR
- SINGLE DUCT VAV WITH REHEAT
- SINGLE DUCT VAV BOX WITH REHEAT AND ATTENUATOR
- DUAL DUCT VAV BOX
- FAN POWERED VAV BOX
- SHUT–OFF VAV BOX (INLET SIZES AVAILABLE: 5",6",8",10",12",14",16")
- SHUT–OFF VAV BOX WITH HYGRONIC HEATING COIL AND OUTLET BOX

DAMPERS

- COMBINATION SMOKE/FIRE DAMPER AND ACCESS DOOR
- FIRE DAMPER AND ACCESS DOOR
- SMOKE DAMPER AND ACCESS DOOR
- M — AUTOMATIC DAMPER (MOTORIZED)
- VOLUME DAMPER

PIPING

- HWS — NEW PIPING (HOT WATER SUPPLY)
- (E)HWS — EXISTING PIPING (HOT WATER SUPPLY)
- (D)HWS — EXISTING TO BE DEMOLISHED (HOT WATER SUPPLY)
- HWS — HEATING HOT WATER – SUPPLY
- HWR — HEATING HOT WATER – RETURN
- CWS — CONDENSER WATER – SUPPLY
- CWR — CONDENSER WATER – RETURN
- CNDS — CONDENSATE DRAIN
- DW — DOMESTIC WATER

VALVES

- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- AUTOMATIC CONTROL VALVE (2–WAY)
- AUTOMATIC CONTROL VALVE (3–WAY)
- AIR VENT – AUTOMATIC
- AIR VENT – MANUAL
- VALVE AND CAP
- VALVE AND CAP
- VALVE AND CAP
- BALANCING VALVE
- FLEXIBLE CONNECTION

OTHER

- "Y" TYPE STRAINER
- PIPING CONN.–BLW
- PIPING CONN.–DWN
- PIPING CONNE.–UP
- REDUCER CONCENTRIC
- 1 — THERMOSTAT
- 202 — CARBON DIOXIDE SENSOR
- SD — SMOKE DETECTOR

MISCELLANEOUS

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH, BUT NOT LIMITED TO, STATE, CITY, MECHANICAL CODE AND APPLICABLE AMENDMENTS, PLUMBING CODES, LATEST ENERGY CONSERVATION CODE, LOCAL CODES AND ORDINANCES..
2. WHERE THERE IS A DISCREPANCY BETWEEN THE DRAWINGS AND THE PROJECT MANUAL OR BUILDING STANDARD SPECIFICATIONS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
3. THE WORK OF THIS PROJECT INVOLVES ALTERATION OF THE EXISTING BUILDING TO ACHIEVE THE ARRANGEMENT INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL VISIT THE JOB SITE TO DETERMINE THE EXTENT OF WORK REQUIRED BY THE CONSTRUCTION ACTIVITIES. THE ARCHITECTURAL DRAWINGS SHOW THE CHANGES TO BE MADE. THE CONTRACTOR SHALL REVISE, REARRANGE, REROUTE OR REMOVE EXISTING HVAC COMPONENTS AS REQUIRED TO ACCOMMODATE THE CHANGES AND ADDITION SHOWN AND TO PROVIDE CONTINUING HVAC SERVICE TO THOSE EXISTING PORTIONS OF THE PROJECT WHICH ARE TO REMAIN IN OPERATION. IN AREAS WHERE NO ALTERATIONS ARE INDICATED, EXISTING FACILITIES SHALL BE RETAINED IN SERVICE. ONLY SELECTED PORTIONS OF EXISTING SYSTEM HAVE BEEN IDENTIFIED ON DRAWINGS.
4. THESE DRAWINGS INDICATE THE DESIGN INTENT REQUIREMENTS FOR THE HVAC SYSTEMS, EQUIPMENT, DUCTWORK, AIR DISTRIBUTION INLETS AND OUTLETS. DUE TO STRUCTURAL CONDITIONS, ELECTRICAL WIRING OR PIPING INTERFERENCE, OR FOR OTHER REASONS THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS FULLY COORDINATED WITH ALL OTHER TRADES PRIOR TO ANY FABRICATION AND/ OR INSTALLATION.
5. DURING BID, THE CONTRACTOR SHALL EXAMINE THE COMPLETE SET OF DRAWINGS FOR ALL TRADES, AS ISSUED BY THE ARCHITECT AND REVIEW DIMENSIONS SPACE REQUIREMENTS AND POINT OF CONNECTIONS TO ALL EQUIPMENT. MAKE ANY MINOR ADJUSTMENTS NECESSARY TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE AND THE WORK OF OTHER TRADES.
6. UNLESS INSTRUCTED OTHERWISE, THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES, AND FEES REQUIRED FOR INSTALLATION OF THE MECHANICAL WORK. FURNISH FINAL CERTIFICATE OF INSPECTION OR WRITTEN EVIDENCE OF ACCEPTANCE BY INSPECTION AUTHORITIES FOR ALL WORK INSTALLED.
7. CONTRACTOR SHALL COORDINATE WITH ALL TRADES TO ENSURE AN UNDERSTANDING OF THE COMPLETE SCOPE OF PROJECT PRIOR TO START OF WORK.
8. PROVIDE 6 COPIES OF SUBMITTAL MATERIAL WITH DESCRIPTIVE DATA FOR ALL PRODUCTS AND MATERIALS. AS–BUILT DRAWINGS AT 1/8" SCALE SHALL BE INCLUDED WITH SUBMITTALS. ALLOW 10 DAYS FOR ENGINEER TO REVIEW SUBMITTALS.
9. PROVIDE LABELS AND TAGS PER EXISTING BUILDING STANDARDS.
10. CONTRACTOR SHALL PAY ALL PERMIT FEES AND INSPECTIONS AS REQUIRED BY AHJ.
11. CONTRACTOR SHALL COORDINATE ACTUAL WORKING HOUR WITH PM, FM AND CHIEF BUILDING ENGINEER PRIOR TO INSTALLATION.
12. NOT USED. 1

MECHANICAL NOTES

1. TESTING AND BALANCING SHALL BE PERFORMED FOR WORK UNDER THIS CONTRACT. TESTING AND BALANCING SHALL BE PERFORMED ACCORDING TO CURRENT AABC NATIONAL STANDARDS OR NEBB STANDARD.
2. ALL DUCT CONSTRUCTION AND DUCT SUPPORT SHALL CONFORM TO SMACNA. ALL DUCTWORK SHALL BE CAPABLE OF WITHSTAND UP TO 4" W.G. STATIC PRESSURE.
3. THERMOSTATS TO BE LOCATED 48" AFF AND CENTERED DIRECTLY ABOVE LIGHT SWITCHES, U.O.N. COORDINATE CONDUIT REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
4. A MINIMUM OF 36" CLEAR WORKING SPACE, NOT LESS THAN 30" WIDE, SHALL BE MAINTAINED IN FRONT OF ALL SWITCHES, OVERCURRENT DEVICES AND ELECTRIC CONTROL COMPONENTS, AND PER NEC REQUIREMENTS.
5. CONTRACTOR SHALL PROVIDE WRITTEN WARRANTY TO REPLACE ALL FAULTY MATERIALS AND/OR LABOR, AT NO COST TO OWNER, FOR A PERIOD OF ONE YEAR FROM DATE OF OWNER ACCEPTANCE.
6. UPON COMPLETION OF WORK, CONTRACTOR SHALL CLEAN AND REMOVE ALL DEBRIS ASSOCIATED WITH HIS/HER WORK AND DISPOSE OF IT. AREA SHALL BE LEFT IN A CONDITION ACCEPTABLE TO OWNER.
7. ALL MATERIALS AND EQUIPMENT ABOVE CEILING SHALL BE UL RATED FOR PLENUM APPLICATIONS.
8. ALL SUPPLY AND RETURN AIR DUCT SHALL BE INSULATED PER TITLE 24.
9. THESE DRAWINGS INDICATE THE FINISHED REQUIREMENTS FOR THE MECHANICAL.
10. DUCTS, PIPES AND CONDUITS SHALL BE SUPPORTED AND BRACED IN ACCORDANCE WITH 2008 SMACNA (GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS PUBLISHED BY SMACNA).
11. CONTRACTOR IS TO PROVIDE AND COORDINATE STRUCTURAL MOUNTING AND SEISMIC ANCHORAGE FOR ALL EQUIPMENT SHOWN ON THE PLANS OR SPECIFIED, INCLUDING THOSE SHOWN SPECIFICALLY ON THE DETAIL SHEETS.
12. PIPING SHOWN ON THE DRAWINGS ARE SCHEMATIC ONLY. PIPING SEISMIC ANCHORAGE, SUPPORT, AND THERMAL EXPANSION DEVICES ARE TO BE INCORPORATED IN THE SHOP DRAWINGS. SHOP DRAWINGS ARE TO BE SUBMITTED TO STRUCTURAL ENGINEER FOR APPROVAL PIPING SEISMIC ANCHORAGE, SUPPORT AND THERMAL EXPANSION DEVICES ARE TO BE PROVIDED BY CONTRACTOR TO MEET ALL CODE REQUIREMENTS.
13. ALL PIPING CARRYING LIQUID SHALL BE PROVIDED WITH MANUAL AIR VENTS AT HIGH POINTS IN PIPING SYSTEM.
14. COORDINATE ALL CUTTING, DRILLING, PATCHING AND REINFORCING REQUIRED FOR MECHANICAL WORK WITH GENERAL CONTRACTOR.
15. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER SO AS NOT TO INTERRUPT THE OPERATIONS OF THE FACILITY. EXISTING PLANT SHALL REMAIN OPERATIONAL, NO DRAIN DOWN OF ACTIVE LINES.
16. NOT USED.
17. ALL EQUIPMENT AND MATERIALS SHALL MATCH BASE BUILDING SPECIFICATIONS.
18. NOT USED. 1
19. CONTRACTOR SHALL COORDINATE VOLTAGE AND PHASE OF EACH PIECE OF EQUIPMENT WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING.
20. ALL PIPING AND ASSOCIATED FITTINGS AND VALVES SHALL BE OF SIMILAR MATERIAL PER CODE, UNLESS APPROVED OTHERWISE.
21. ALL PIPING SHALL BE LABEL EVERY 10 FT M'R SHALL BE MSI OR APPROVED EQUAL.
22. ALL PIPING PENETRATIONS THROUGH RATED CONSTRUCTION SHALL BE PROPER FIRE STOP WITH UL–LISTED FIRE STOPPING PRODUCTS. CONSULT WITH UL FIRE RESISTANCE DIRECTORY FOR ADDITIONAL REQUIREMENTS.
23. ALL PIPING PENETRATIONS THROUGH NON–RATED CONSTRUCTION SHALL BE PROPERLY AND GENEROUSLY CAULKED WITH SOUND RESISTANT MATERIAL SUCH AS SILICONE.
24. ALL PIPES SIZES SHOWN ARE NOMINAL PIPE DIAMETERS.
25. PIPING AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE WORKING PRESSURES INDICATED IN THE BUILDING SPECIFICATIONS.
26. CONTRACTOR SHALL PRESSURE TEST ALL NEW WORK TO 1–1/2 TIMES WORKING PRESSURE AND HOLD TEST PRESSURE FOR 24 HOURS WITH NO CHANGE IN READING.
27. CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING AND REFILLING PORTIONS OF SYSTEM AS REQUIRED. CONTRACTOR TO COORDINATE WITH BUILDING ENGINEER PRIOR TO ANY DRAINING OF PIPING SYSTEMS.
28. UPON COMPLETION OF WORK, CONTRACTOR SHALL CLEAN AND REMOVE ALL DEBRIS ASSOCIATED WITH HIS/HER WORK AND DISPOSE OF IT. AREA SHALL BE LEFT IN A CONDITION ACCEPTABLE TO OWNER.
29. PROVIDE ACCESS PANEL ON THE CEILING FOR EQUIPMENT LOCATION ABOVE HARD LID CEILING. COORDINATE SIZE AND LOCATION OF ACCESS PANEL WITH ARCHITECT.

SHEET INDEX

verizon

1800 Solar Drive
Oxnard, CA 93030

Gensler

1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.

Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

Issue	Date & Issue Description	By	Check
01	07/31/12	-	-
	PLAN CHECK		
1	09/10/12	-	-
	ISSUE FOR CONSTRUCTION		
2	09/12/12	-	-
	BULLETIN 1		
3	10/09/12	-	-
	BULLETIN 2		
4	10/23/2012	-	-
	REVISED FOR PLAN CHECK		
5	11/19/12	-	-
	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name: VERIZON V.I.P.

Project Number: VZCOX000

CAD File Name: P:\LAO\CF\VZCOX000\Drawings\Sheets\M-001-VZCOX000.dwg

Description: MECHANICAL SYMBOLS, ABBREVIATIONS AND GENERAL NOTES

Scale: NONE

M-001

True North / Ref North

The corner tick marks represent the 30"x42" plot area.

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SPECIFICATIONS

DIVISION NO. 23 — SECTION 23000 MECHANICAL SPECIFICATION

PART 1 GENERAL

1.01 GENERAL PROVISIONS

A. GENERAL REQUIREMENTS:

1. RELATED DOCUMENTS: ARCHITECTURAL SPECIFICATIONS, APPLIANCE AND FIXTURE SPECIFICATION PACKAGE, GENERAL, SPECIAL AND SUPPLEMENTARY CONDITIONS, SHALL FORM A PART OF THESE SPECIFICATIONS.

2. SCOPE OF WORK: PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT AND CONTRACTOR'S SERVICES NECESSARY FOR COMPETE AND SAFE INSTALLATION OF HEATING, VENTILATING, AIR CONDITIONING (HVAC) WORK IN CONFORMITY WITH REQUIREMENTS OF ALL AUTHORITIES WHO HAVE JURISDICTION; AS INDICATED ON DRAWINGS AND/OR HERE AS SPECIFIED OR DESCRIBED.

3. SITE CLEANLINESS: KEEP SITE FREE FROM THIS SECTION'S SURPLUS MATERIAL, TOOLS AND RUBBISH AT ALL TIMES DURING CONSTRUCTION PERIODS AND, UPON COMPLETION, LEAVE SITE IN CLEAN CONDITION.

4. SITE SECURITY: PROTECT THIS SECTION'S MATERIALS AND EQUIPMENT FROM ALL DAMAGE DUE TO FIRE, THEFT, VANDALISM, WEATHER, ETC.

5. DAMAGE TO OTHER WORK: REPAIR ANY DAMAGED FIREPROOFING CAUSED BY THIS SECTION TO INTEGRITY OF ORIGINAL CONSTRUCTION.

6. DAMAGE TO FIREPROOFING: REPAIR ANY DAMAGED FIREPROOFING CAUSED BY THIS SECTION TO INTEGRITY OF ORIGINAL CONSTRUCTION.

7. SITE SAFETY: 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 CONTRACTOR AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS, ENGINEER, OWNER AND ARCHITECT FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE OR EXPENSE, INCLUDING ATTORNEY'S FEES, ARISING FROM A FAILURE OR ALLEGED FAILURE ON THE PART OF 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.

8. VERIFICATION OF EXISTING: BEFORE SUBMITTING BID, CONTRACTOR SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ACTUAL EXISTING CONDITIONS AND OF THE PRESENT INSTALLATIONS TO WHICH CONNECTIONS MUST BE MADE OR WHICH MUST BE CHANGED OR ALTERED. THE INTENT OF THE WORK IS SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN, AND NO CONSIDERATION WILL BE GRANTED BY REASON OF LACK OF FAMILIARITY ON THE PART OF THE CONTRACTOR WITH ACTUAL PHYSICAL CONDITIONS, REQUIREMENTS, AND PRACTICES AT THE SITE.

9. REQUIREMENTS OF OTHER SECTIONS: CAREFULLY CHECK THE DOCUMENTS OF OTHER SECTIONS TO ASCERTAIN THE REQUIREMENTS OF ANY INTERFACING MATERIALS OR EQUIPMENT BEING FURNISHED AND/OR INSTALLED BY THAT SECTION WHICH RELATE TO THIS SECTION, AND PROVIDE THE PROPER INSTALLATION AND/OR CONNECTION.

10. INFORMATION TRANSFER: TRANSMIT ALL INFORMATION REQUIRED FOR WORK BEING PERFORMED BY OTHER SECTIONS IN AMPLE TIME FOR THE PROPER INSTALLATION AND CONNECTION AND FOR THE PROVISION OF ALL OPENINGS REQUIRED IN FLOORS AND WALLS.

11. HOLES AND STRUCTURE: FIELD DRILLING AND CUTTING OF HOLES IN BUILDING STRUCTURE REQUIRED FOR WORK UNDER THIS SECTION SHALL BE COORDINATED THROUGH THE GENERAL CONTRACTOR AND APPROVED BY OWNER AND BUILDING STRUCTURAL ENGINEER. ALL SUCH COORDINATION, DRILLING, CUTTING AND REINFORCING COSTS SHALL BE BORNE BY THIS CONTRACTOR.

12. SLEEVES: FURNISH AND SET ALL SLEEVES FOR THE PASSAGE OF CONDUIT THROUGH WALLS, ROOF AND FLOORS AND ELSEWHERE AS WILL BE REQUIRED FOR THE PROPER PROTECTION OF EACH CONDUIT PASSING THROUGH BUILDING SURFACES. COORDINATE THIS WORK WITH GENERAL CONTRACTOR IN ORDER TO PROPERLY EXPEDITE AND PERFORM THIS WORK.

13. PASSAGE OF EQUIPMENT: CHECK THE DIMENSIONAL REQUIREMENTS OF EQUIPMENT CAN PASS THROUGH THE NECESSARY AREAS TO REACH ITS ULTIMATE INSTALLED LOCATION. INCLUDE IN BID COSTS ALL WORK REQUIRED, INCLUDING ANY WORK REQUIRED TO MOVE THE EQUIPMENT THROUGH THE SITE TO THIS FINAL LOCATION, AND ANY DISMANTLING AND RE-ASSEMBLY.

14. SIGNAGE: PROVIDE SIGNAGE REQUIRED BY CODES AND AUTHORITIES HAVING JURISDICTION.

15. POTENTIAL DELIVERY PROBLEMS: NOTIFY THE GENERAL CONTRACTOR AND ENGINEER IN WRITING, WITHIN FIVE DAYS OF AWARD OF CONTRACT, OF THE PROPOSED DELIVERY SCHEDULE OF ANY EQUIPMENT OR MATERIAL THAT MAY PREVENT THE INSTALLATION FROM BEING COMPLETED BY THE PROJECT COMPLETION DATE.

16. WARRANTY: SUBMIT A SINGLE GUARANTEE STATING THAT ALL PORTIONS OF THE WORK ARE IN ACCORDANCE WITH CONTRACT REQUIREMENTS. GUARANTEE ALL WORK AGAINST FAULTY AND IMPROPER MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER, EXCEPT THAT WHERE GUARANTEES OR WARRANTIES FOR LONGER TERMS ARE SPECIFIED BY CONTRACT, SUCH LONGER TERM SHALL APPLY.

17. RECTIFICATION: AT NO ADDITIONAL COST TO THE OWNER, WITHIN 24 HOURS AFTER NOTIFICATION, CORRECT ANY DEFICIENCIES WHICH OCCUR DURING THE GUARANTEE PERIODS, ALL TO THE SATISFACTION OF THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY SUCH DEFICIENCIES AND REPAIR THEREOF AND REIMBURSE THE OWNER FOR ALL COSTS INCURRED.

B. MAJOR ITEMS OF WORK INCLUDE(AS APPLICABLE):

B.1. AIR CONDITIONING SYSTEMS: SUPPLY, RETURN AND EXHAUST AIR DISTRIBUTION SYSTEMS, INCLUDING DUCTWORK, SUPPLY AIR DIFFUSERS, RETURN AIR GRILLES, CONTROLS AND CONNECTIONS TO EXISTING WORK.
B.2. PIPE AND PIPING ACCESSORIES.
B.3. CONTROLS.
B.4. TESTING AND BALANCING OF ALL SYSTEMS.
B.5. DEMOLITION OF EXISTING EQUIPMENT, PIPING, DUCTWORK AND APPURTENANCES.

C. GENERAL ITEMS:

C.1. ACCESS DOORS PANELS: PROVIDE CONCEALED CONTROLS, DAMPERS, VALVES AND EQUIPMENT REQUIRING ACCESS WITH ADEQUATELY SIZED ACCESS DOORS/PANELS. IN REMOVABLE TYPE CEILING, PROVIDE ACCESS TILE IDENTIFICATION ONLY.
C.2. CUTTING AND PATCHING FOR MECHANICAL WORK.
C.3. COORDINATE ALL NEW WORK WITH EXISTING INSTALLATIONS.
C.4. CONTRACTOR SHALL INSPECT JOB SITE PRIOR TO BID AND VERIFY EXACT LOCATION, SIZE AND LOADING OF EXISTING PIPING PRIOR TO INSTALLATION AND CONNECTION OF ANY PIPING.

1.02 REFERENCE STANDARDS:

A. IN ADDITION TO COMPLYING WITH ALL OTHER LEGAL REQUIREMENTS, COMPLY WITH CURRENT PROVISIONS OF GOVERNING CODES AND REGULATIONS IN EFFECT DURING THE PROGRESS OF THE WORK, AND WITH THE FOLLOWING:

1. DRAWINGS AND SPECIFICATION REQUIREMENTS SHALL GOVERN WHERE THEY EXCEED CODE AND REGULATION REQUIREMENTS.

2. WHERE REQUIREMENTS BETWEEN GOVERNING CODES AND REGULATIONS VARY, THE MORE STRINGENT SHALL APPLY.

3. NOTHING CONTAINED IN CONTRACT DOCUMENTS SHALL BE CONSTRUED AS AUTHORITY OR PERMISSION TO DISREGARD OR VIOLATE LEGAL REQUIREMENTS. THE CONTRACTOR SHALL IMMEDIATELY DRAW THE ATTENTION OF ARCHITECT TO ANY SUCH CONFLICTS NOTED IN THE CONTRACT DOCUMENTS.

1.03 PERMITS AND INSPECTIONS:

A. THE CONTRACTOR SHALL SECURE ALL APPROVALS AND PAY ALL FEES FOR ALL WORK INSTALLED. CERTIFICATE SHALL BE DELIVERED TO OWNER BEFORE FINAL PAYMENT WILL BE MADE.

1.04 DESCRIPTION:

A. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES, WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL", "SHALL BE", "FURNISH", "PROVIDE", "A", "AN", "THE", AND "ALL" HAVE BEEN OMITTED FOR BREVITY.

B. DRAWING ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITIONS.

C. DEFINITIONS:

1. "FURNISH" OR "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION OF PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.

2. "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.

3. "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES.

4. "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.

5. "PIPING": PIPE, TUBE, FITTINGS, FLANGES, VALVES, CONTROLS, STRAINERS, HANGERS, SUPPORTS, UNIONS, TRAPS, DRAINS, INSULATION, AND RELATED ITEMS.

6. "WIRING": RACEWAY, FITTINGS, WIRE, BOXES AND RELATED ITEMS.

7. "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRAWL SPACES OR IN ENCLOSURES.

8. "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.

9. "EQUIVALENT": EQUIVALENT IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.

D. SCOPE OF WORK: LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETING SAFE INSTALLATION IN CONFORMITY WITH APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION: AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.

1.05 JOB CONDITIONS:

A. CONNECTION TO EXISTING WORK:

1. INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES.

2. TEMPORARY SHUTDOWNS OF EXISTING SERVICES.

2.1. AT NO ADDITIONAL CHARGES.
2.2. AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES.
2.3. ONLY WITH WRITTEN CONSENT OF OWNER.

3. ALARM AND EMERGENCY SYSTEMS: NOT TO BE INTERRUPTED.

4. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTION BETWEEN NEW AND EXISTING WORK.

5. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.

B. REMOVAL AND RELOCATION OF EXISTING WORK:

1. DISCONNECT, REMOVE OR RELOCATE MATERIAL, EQUIPMENT, PLUMBING FIXTURES, PIPING AND OTHER WORK NOTED AND REQUIRED BY REMOVAL OR CHANGES IN EXISTING CONSTRUCTION.

2. WHERE EXISTING PIPES, CONDUITS AND/OR DUCTS WHICH ARE TO REMAIN PREVENT INSTALLATION OF NEW WORK AS INDICATED, RELOCATE OR ARRANGE FOR RELOCATION, OF EXISTING PIPES, CONDUITS AND/OR DUCTS.

3. PROVIDE NEW MATERIAL AND EQUIPMENT REQUIRED FOR RELOCATED EQUIPMENT.

4. PLUG OR CAP ACTIVE PIPING OR DUCTWORK BEHIND OR BELOW FINISH.

5. DO NOT LEAVE LONG DEAD-END BRANCHES. CAP OR PLUG AS CLOSE AS POSSIBLE TO ACTIVE LINE.

6. REMOVE UNUSED PIPING, DUCTWORK AND MATERIAL.

7. DISPOSE OF REMOVED FIXTURES AND EQUIPMENT AS DIRECTED.

1.06 QUALITY ASSURANCE:

A. QUALITY AND GAUGES OF MATERIALS:

1. QUALITY OF MATERIALS:

1.1. NEW, BEST OF THEIR RESPECTIVE KINDS, FREE FROM DEFECTS AND LISTED BY UNDERWRITES' LABORATORIES, INC. AND BEARING THEIR LABEL.
1.2. MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION: SAME MANUFACTURE, EXCEPT AS NOTED.
1.3. CONFORM TO REFERENCE STANDARDS.

1.07 PRODUCT DELIVERY, STORAGE AND HANDLING:

A. MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CRATED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.

B. ACCESSIBILITY:

1. FOR OPERATION, MAINTENANCE AND REPAIR.

2. MINOR DEVIATIONS: PERMISSIBLE.

3. CHANGED OF MAGNITUDE OR INVOLVING EXTRA COST: NOT PERMISSIBLE WITHOUT REVIEW.

4. GROUP CONCEALED MECHANICAL EQUIPMENT REQUIRING ACCESS WITH EQUIPMENT FREELY ACCESSIBLE THROUGH ACCESS DOORS.

1.08 SUBMITTALS:

A. PROVIDE SIX (6) COPIES OF SUBMITTAL MATERIAL WITH DESCRIPTIVE DATA FOR ALL PRODUCTS AND MATERIALS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING, PRIOR TO INSTALLATION. ALL SUBMITTALS SHALL BE HIGHLIGHTED TO INDICATE SPECIFIC PRODUCTS OR MATERIALS BEING USED. ALLOW 10 DAYS FOR ENGINEER TO REVIEW SUBMITTALS.

1. DUCTWORK ACCESSORIES.
2. DUCTWORK TYPICAL CONSTRUCTION.
3. DUCT SEALING.
4. DAMPERS.
5. PIPE AND PIPING ACCESSORIES.
6. DIFFUSERS, GRILLES AND REGISTERS.
7. AIR AND WATER TEST AND BALANCE.
8. COMPLETE FORMS PROPOSED FOR USE IN COMPILING AND RECORDING TEST AND BALANCE DATA.
9. ONE SET OF AS-BUILT REPRODUCIBLE DRAWINGS.

B. PROVIDE 1 COPY OF APPROVED SUBMITTALS TO THE OFFICE OF THE BUILDING ENGINEER.

1.09 MAINTENANCE MANUALS AND AS-BUILT DRAWINGS:

A. PROVIDE FOUR (4) COPIES OF OPERATING AND MAINTENANCE MANUAL FOR OWNER'S USE FOR EACH PIECE OF EQUIPMENT. EACH ITEM SHALL BE CROSS-REFERENCED AND NUMBERED WITH AS-BUILT DRAWING DESCRIPTIONS.

B. AS-BUILT DRAWINGS: DELIVER TO ENGINEER, ONE SET OF REDLINED MARK=UP, AIR BALANCE REPORT AND PANEL SCHEDULES SHOWING WORK AS ACTUALLY INSTALLED THREE (3) DAYS PRIOR TO FINAL PUNCH WALK.

1.10 SEISMIC SUPPORT:

A. CONTRACTOR SHALL SUPPORT AND BRACE ALL NEW HVAC SYSTEMS IN ACCORDANCE WITH CODE SEISMIC REQUIREMENTS.

PART 2 PRODUCTS

2.01 DUCTWORK

A. GENERAL: ALL SAFING, DUCTS, DAMPERS, ACCESS DOORS, JOINTS, HANGERS, STIFFENERS, FIRE DAMPERS AND FIRE RETARDING MATERIALS, IN ACCORDANCE WITH REQUIREMENTS OF SMACNA, "HVAC DUCT CONSTRUCTION STANDARDS", LATEST EDITION, AND ALL OTHER AUTHORITIES HAVING JURISDICTION AND AS DESCRIBED HEREIN. ALL SHEET METAL WORK SHALL HAVE A PRESSURE CLASSIFICATION AS FOLLOWS:

1. SUPPLY DUCT BETWEEN MAIN LOOP AND INLET TO TERMINAL AIR UNIT – 4 INCHES W.G.
2. SUPPLY DUCTS DOWNSTREAM OF TERMINAL AIR UNITS, AIR HANDLING UNITS AND FANS – 2 INCHES W.G.
3. RETURN AND EXHAUST AIR DUCTS – 2 INCHES W.G.

B. DUCTWORK: UNLESS OTHERWISE SPECIFIED.

1. COLD ROLLED "COMMERCIAL" QUALITY HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM NO. M525-67.

1.1. AIR CONDITIONING SYSTEMS.
1.2. VENTILATION SYSTEMS.

2. DIMENSIONS SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS.

3. FITTINGS: SAME GAUGE AND CONSTRUCTION AS DUCTS. ELBOWS SHALL HAVE CENTERLINE RADIUS NOT LESS THAN 1.5 TIMES WIDTH.

4. DUCT SUPPORTS AS REQUIRED.

5. DUCTS WITH TRANSVERSE AND LONGITUDINAL BRACING IN ACCORDANCE WITH SMACNA.

C. ACCESS DOORS:

1. FURNISH ACCESS DOOR OF SUFFICIENT SIZE AS REQUIRED. FOR ACCESS, INSPECTION MAINTENANCE AND REPLACEMENT TO ALL INSTRUMENTS, CONTROLS AND EQUIPMENT.

E. DAMPERS:

1. FURNISH ALL DAMPERS NECESSARY FOR PROPER CONTROL AND BALANCING OF AIR DISTRIBUTION AS FOLLOWS:

1.1. ALL DUCTS WHICH SPLIT IN 2 OR MORE BRANCHES TO SERVE SUPPLY DIFFUSERS.
1.2. AT EACH SUPPLY AND RETURN BRANCH DUCT, AS FAR AWAY FROM EACH OUTLET AND INLET AS POSSIBLE.
1.3. ADJUSTABLE AND ACCESSIBLE.
1.4. ADDITIONALLY AS INDICATED.

2.02 AIR OUTLETS AND INLETS:

A. ALL DIFFUSERS, GRILLES AND REGISTERS SHALL BE OF TYPE AND CAPACITY AS INDICATED ON DRAWINGS, STEEL AND/OR EXTRUDED ALUMINUM CONSTRUCTION WITH BAKED ENAMEL FINISH COLOR AS SELECTED BY ARCHITECT. DIFFUSERS TO HAVE NO VISIBLE SCREW HEADS OR CONNECTORS. RETURN GRILLES AND EXHAUST REGISTERS SIMILAR TO SUPPLY.

B. BALANCING DAMPERS SHALL BE PROVIDED IN THE BRANCH DUCT AS FAR AS POSSIBLE FROM ALL SUPPLY AND RETURN DEVICES. THERE SHALL BE ADJUSTABLE AND ACCESSIBLE.

C. OUTLETS FURNISHED SHALL PROVIDE FOR THE REQUIRED CAPACITY WITH NO APPARENT DRAFTS OR EXCESSIVE AIR MOVEMENT. OUTLET WHICH CAUSE EXCESSIVE AIR MOVEMENT OR DRAFTS SHALL BE REPLACED AT NO COST TO THE OWNER.

D. SEE PLANS AND SCHEDULES FOR DIFFUSER TYPES AND MFR.

E. THE NOISE LEVEL PRODUCED SHALL COMPLY WITH ALL REQUIREMENTS OF THE ACOUSTICAL SPECIFICATION STATED HEREIN. A REPRESENTATIVE SAMPLE SHALL BE TESTED IN ACCORDANCE WITH THE PROCEDURE SPECIFIED HEREIN IN ORDER TO DEMONSTRATE SUCH COMPLIANCE. ALL MEASUREMENTS SHALL MADE IN ACCORDANCE WITH AIR DIFFUSION COUNCIL TEST CODE NO. 1062R3 AND ASHRAE STANDARD 36-72. TEST CONDITIONS SHALL BE IN ACCORDANCE WITH THE APPLICABLE STANDARDS. THE TEST RESULTS SHALL BE CERTIFIED BY THE TESTING AGENCY AND SUBMITTED FOR APPROVAL. THE TEST REPORT SHALL INCLUDE A COMPLETE DESCRIPTION OF THE TEST CONDITIONS, MEASUREMENT PROCEDURE AND SAMPLE CALCULATION.

F. THE SOUND POWER LEVEL (PWL RE 10-12 WATTS) OF EACH TYPE AND SIZE OF DIFFUSER SPECIFIED SHALL NOT EXCEED THE VALUES AS FOLLOWS:

PWL IN DB RE 10-12 WATTS OCTAVE BAND CENTER FREQUENCY, HZ

OCTAVE BAND CENTER FREQUENCY, HZ	DIFFUSER UP TO CFM RANGE: 125	126-180	181-280	281-400
125	46	48	50	51
250	39	41	43	44
500	33	35	35	38
1000	29	31	33	34
2000	26	28	30	31
4000	24	26	28	29
8000	23	25	27	28

2.03 HVAC AND DOMESTIC WATER PIPING

A. HEATING HOT WATER PIPE:

1. 2" AND BELOW SEAMLESS COPPER TUBING, TYPE L, COLD DRAWN, HARD TEMPER. ASTM B88.

1.1. NON-POTABLE: SAME AS HEATING HOT WATER.

1.2. CONDENSATE DRAIN: SAME AS HEATING HOT WATER OR SEAMLESS TYPE M DRAWN TEMPER. ASTM B88.

B. FITTINGS:

1. WROUGHT COPPER SOLDER SWEAT TYPE. ANSI B16.22 OR BRASS CASTING, ANSI B16.18.

1.1. NON-POTABLE: SAME AS DOMESTIC WATER.

C. JOINTS:

1. 95-5 (TIN AND ANTIMONY) SOLDER.

D. CONTROL VALVES:

1. VALVE: BALL TYPE. SEE SHUT OFF VALVE SECTION.

2. ACTUATOR: PNEUMATIC CONTROL VALVE TO MATCH EXISTING BUILDING STANDARD.

E. THERMOMETERS:

1. THERMOMETERS TO BE MERCURY ACTUATED, WITH ADJUSTABLE ANGLE FACE, IMMERSION BULB, CAST ALUMINUM CASE, WHITE BACKGROUND, BLACK MARKINGS ON FACE.

2. SIMILAR TO TRERICE M80700 SERIES. INSTALL IN OVERSIZE PIPE TEE AND NIPPLE.

F. DISSIMILAR METALS:

1. CONNECTION BETWEEN DISSIMILAR METALS SHALL BE ISOLATED BY MEANS OF APPROVED DIELECTRIC FITTINGS.

2. SIMILAR TO "EPCO".

H. INSULATION:

1. INSULATE ALL FITTINGS, VALVES, STRAINERS, ETC., BY EITHER PREFABRICATING OR BY FABRICATING FITTINGS FROM METERED SEGMENTS OF PIPE INSULATION TO AN EQUAL THICKNESS OF ADJOINING PIPE INSULATION.

I. TESTING:

1. HVAC:

1.1. LESS THAN 100 PSI OPERATING PRESSURE:

1.1.1. TEST HYDROSTATICALLY TO 150 PSI.

1.2. OVER 100 PSI OPERATING PRESSURE:

1.2.1. TEST HYDROSTATICALLY TO 1-1/2 TIMES OPERATING PRESSURE.
1.2.2. NEVER EXCEED TEST PRESSURE ANSI B16.1 BASIS.

1.3. DURATION 2 HOURS

1.3.1. WITH SYSTEMS VALVES CAPPED AND PRESSURE APPARATUS DISCONNECTED:
1.3.1.1. PRESSURE CHANGE: NONE.
1.3.1.2. COMPENSATE FOR TEMPERATURE CHANGE.

1.4. LEAKS AND DEFECTS:

1.4.1. REPAIR OR REPLACE AS DIRECTED.
1.4.2. WITHOUT ADDITIONAL COST.

1.5. NOTIFY THE ARCHITECT IN WRITING ONE WEEK BEFORE TEST.

1.6. FURNISH WRITTEN REPORT AND CERTIFICATION THAT TESTS HAVE BEEN SATISFACTORILY COMPLETED.

J. P/T PORTS SHALL BE 'PETE'S PLUG II'.

K. Y-STRAINERS SHALL BE "WATTS" SERIES 777SI 20 MESH PERFORATED, STAINLESS STEEL SCREEN HOSE END CONNECTION W/CAP AND CHAIN.

L. SHUT OFF VALVES SHALL BE "NIBCO" 2-PIECE BRONZE COMMERCIAL BALL TYPE VALVE WITH FULL PORT AND STAINLESS STEEL TRIM, UNLESS OTHERWISE NOTED.

M. FLEXIBLE PIPE CONNECTION SHALL BE "METRAFLEX" 10" LONG MODEL BBS BRAIDED HOSE CONNECTOR.

N. AUTOMATIC BALANCING VALVE SHALL BE "NUTECH" MODEL AB OR APPROVED EQUAL. REFER TO EQUIPMENT SCHEDULE FOR WATER FLOW.

2.04 SUPPORTS, ANCHORS AND RESTRAINTS

A. PIPE HANGERS, SUPPORTS, AND GUIDES:

1. GENERAL:

1.1. ASSURE ADEQUATE SUPPORT FOR PIPE AND CONTENTS.
1.2. PREVENT VIBRATION OR SWAYING.
1.3. PROVIDE FOR EXPANSION AND CONTRACTION.
1.4. SUPPORTS OF WIRE, ROPE, WOOD, CHAIN, STRAP PERFORATED BAR OR ANY OTHER MAKESHIFT DEVICE NOT PERMITTED.
1.5. COMPLY WITH APPLICABLE REQUIREMENTS AT ANSI B31.1.0 AND B31.2 FOR PIPING.
1.6. SUPPORT PIPING INDEPENDENTLY SO THAT EQUIPMENT IS NOT STRESSED BY PIPING WEIGHT OF EXPANSION.
1.7. HANGERS AND SUPPORTS SHALL HAVE MINIMUM SAFETY FACTOR OF THREE (3), BASED ON ULTIMATE TENSILE OR COMPRESSIVE STRENGTH, AS APPLICABLE, OF MATERIAL USED.
1.8. PRIME COAT EXPOSED STEEL HANGERS AND SUPPORTS:
1.8.1. HANGERS AND SUPPORTS LOCATED IN CRAWL SPACES, PIPES SHAFTS AND SUSPENDED CEILING SPACES ARE NOT CONSIDERED EXPOSED.

2. HORIZONTAL PIPING, EXCEPT AS NOTED:

2.1. ADJUSTABLE CLEVIS TYPE AND ROD:

2.1.1. ALL SERVICES AT OR BELOW 250'F.

2.2. ROLLERS OR SLIDE BASES:

2.2.1. PIPE STAND, BRACKET, TRAPEZE OR OTHER EQUIVALENT STRUCTURAL SUPPORT.
2.2.2. ROLLERS NOT REQUIRED WHERE SPRING HANGERS ARE CALLED FOR.

2.3. TRAPEZE HANGERS:

2.3.1. NOT PERMITTED FOR:
2.3.1.1. FIRE AND SPRINKLER PIPING.

2.3.2. GUIDE INDIVIDUAL PIPES ON TRAPEZES WITH 1/4 INCH U-BOLT OR SUPERSTRUT 702 PIPE CLAMP.
2.3.2.1. INSTALL THERMAL HANGER SHIELD AT EACH SUPPORT POINT.

2.4. THREADED STEEL RODS:

2.4.1. 2 IN VERTICAL ADJUSTMENT WITH 2 NUTS EACH END FOR POSITIONING AND LOCKING.
2.4.2. SIZE TO 12 IN IPS:

PIPE, IPS	ROD
TO 2 IN.	3/8 IN.
2-1/2 IN. AND 3 IN.	1/2 IN.
4 IN.	5/8 IN.

3. INSTALL PIPE ISOLATORS BETWEEN HANGERS AND:

3.1. UNINSULATED COPPER TUBING.

3.2. WHEREVER ANY PIPE REQUIRED SOUND AND VIBRATION ISOLATION.

4. MISCELLANEOUS STEEL:

4.1. PROVIDE MISCELLANEOUS STEEL MEMBERS, BEAMS, BRACKETS, ETC., FOR SUPPORT OF WORK IN THIS DIVISION UNLESS SPECIFICALLY INCLUDED IN OTHER DIVISIONS.

B. PIPE SUPPORT SPACING:

1. MAXIMUM SPACING FOR HORIZONTAL PIPING:

TYPE OF PIPE	SIZE	MAXIMUM SPACING
BRASS OR COPPER	3/4 IN. AND SMALLER	5 FT
	1- 1-1/4 IN.	6 FT
	1-1/2 TO 3 IN.	8 FT

SPACING NOTES:

NOTE 1 TYPE OF CAST IRON AND DURIRON.
NOTE 2 TWO SUPPORTS PER JOINT.
NOTE 3 SUPPORT TO BE WITHIN 18 INCHES OF HUB OR JOINT.
NOTE 4 SUPPORT TO BE PLACED ON OR IMMEDIATELY ADJACENT TO COUPLING.
NOTE 5 ADDITIONAL SUPPORT AT:

-CHANGED IN DIRECTION.
-BRANCH PIPING AND RUNOUTS OVER 5 FT.
-CONCENTRATED LOADS DUE TO VALVES, STRAINERS AND OTHER SIMILAR ITEMS.
-AT VALVES 4 IN. AND LARGER IN HORIZONTAL PIPING.
-SUPPORT PIPING ON EACH SIDE OF VALVE.

2. BRACES HUBLESS PIPING TO PREVENT HORIZONTAL AND/OR VERTICAL MOVEMENT.

3. PARALLEL PIPING ON TRAPEZES:

3.1. MAXIMUM SPACING TO BE THAT OF PIPE REQUIRING CLOSEST SPACING.

4. SUPPORT STANDPIPES AND FIRE SPRINKLER PIPING IN ACCORDANCE WITH NFPA.

C. ATTACHMENT TO STRUCTURE:

1. STEEL BEAM ANCHORS:

1.1. APPROVED BEAM OR CHANNEL CLAMPS.
1.2. DO NOT CUT OR WELD TO STRUCTURAL STEEL WITHOUT WRITTEN APPROVAL OF OWNER.
1.3. OTHER METHODS AS DETAILED ON DRAWINGS.

2. STEEL DECK ANCHORS: NO ATTACHMENT TO METAL DECK PERMITTED WITHOUT WRITTEN APPROVAL OF OWNERS'S REPRESENTATIVE.

2.1. CONCRETE FILLED: AS SPECIFIED ABOVE.

3. SIDE WALL SUPPORTS:

3.1. CONCRETE WALLS: AS SPECIFIED FOR HANGERS.

3.2. STUD WALLS:

3.2.1. TOGGLE BOLTS.
3.2.2. STUD WELDED TO STRUCTURAL STUDS.
3.2.3. LAG SCREWS INTO WOOD BACKING.
3.2.4. OTHER METHODS.

4. SUPPORT SPREADERS:

4.1. INSTALL SPREADERS SPANNING BETWEEN STRUCTURAL MEMBERS WHEN HANGERS FALL BETWEEN THEM AND HANGER LOAD IS TOO GREAT FOR SLAB OR DECK ATTACHMENT.

4.2. SPREADERS MAY BE ONE OF METHODS LISTED BELOW, OR COMBINATION OF BOTH AS REQUIRED:

4.2.1. FABRICATED FROM STRUCTURAL CHANNEL:

4.2.1.1. END FITTINGS BOLTED OR WELDED.
4.2.1.2. SECURE TO STRUCTURAL MEMBERS:
- AS REQUIRED BY CONSTRUCTION.
- AS APPROVED BY STRUCTURAL ENGINEER.

4.2.2. FORMED CHANNELS WITH FITTINGS, SIMILAR TO SUPERSTRUT:

4.2.2.1. SUBMIT MANUFACTURER'S CALC. FOR INSTALLATION.

D. DUCT HANGERS AND SUPPORTS:

1. GENERAL:

1.1. SUPPORT HORIZONTAL DUCTS WITH HANGERS OF SIZE AND SPACING AS INDICATED IN PERTINENT SMACNA DUCT CONSTRUCTION STANDARDS. SEAL AROUND ALL SCREWS.

2. HORIZONTAL DUCT SUPPORTS:

2.1. INSTALL HANGERS AT EACH CHANGE IN DIRECTION OF DUCT.

2.2. STRAP HANGERS:

2.2.1. EXTEND STRAP DOWN BOTH SIDES OF DUCTS.
2.2.2. TURN UNDER BOTTOM ONE INCH MINIMUM.
2.2.3. METAL SCREW HANGERS TO:

2.2.3.1. BOTTOM OF DUCT.
2.2.3.2. UPPER AND LOWER SIDES OF DUCTS.
2.2.3.3. NOT MORE THAN 12 INCHES ON CENTER.

2.3. ANGLE HANGERS:

2.3.1. PROVIDE ANGLE HANGERS FORMED BY EXTENDED VERTICAL BRACING ANGLES.

2.05 ACCESS DOORS

A. PROVIDE EQUIPMENT AND CONCEALED VALVE ACCESS, EXCEPT IN REMOVABLE TILE CEILINGS AND APPROVED BY LOCAL CODE, WITH ADEQUATE SIZE ACCESS DOORS FOR INSPECTION AND MAINTENANCE.

2.08 VAV AND FAN POWERED BOX

SEE SCHEDULE

2.10 INSULATION AND LINING

A. MATERIALS:

1. INSULATION, JACKETS, FACINGS, ADHESIVES, COATINGS, AND ACCESSORIES FIRE HAZARD RATING BY UL, INC. STEINER TUNNEL TEST METHOD FOR FIRE HAZARD CLASSIFICATION OF BUILDING MATERIALS, STANDARD UL 723, ASTM E-84, NFPA-225.

1.1. FLAMESPREAD: MAXIMUM 25.
1.2. FUEL CONTRIBUTED AND SMOKE DEVELOPED: MAXIMUM 50.
1.3. FLAMEPROOFING TREATMENTS SUBJECT TO DETERIORATION DUE TO MOISTURE OR HUMIDITY NOT ACCEPTABLE.

2. INSULATION SHALL BE MANVILLE, OR EQUAL.

3. LABEL AS REQUIRED BY CODE.

B. ALL INSULATION APPLIED ACCORDING TO MANUFACTURER'S PUBLISHED RECOMMENDATIONS.

C. INSULATE ALL PIPING, DUCTWORK AND EQUIPMENT, EXCEPT AS FOLLOW:

1. VENTS, COLD WATER, DRAIN AND RELIEF PIPING.

2. SUPPLY & RETURN AIR DUCTS IN CONDITIONED SPACES AND EXHAUST AIR DUCTS, EXCEPT WHERE INDICATED.

D. TYPE OF INSULATION:

1. DUCT INSULATION: 1-1/2" THICK, 3/4 LB. DENSITY, GLASS FIBER INSULATION, WITH ALUMINUM FOIL FACING, MANVILLE R-SERIES MICROLITE. 4.2 R-VALUE.

2. DUCT LINING: 1-1/2" THICK, 1-1/2 LB. DENSITY COATED ON AIR SIDE WITH A FIRE RESISTANT BLACK NEOPRENE COATING. MANVILLE ANTI-MICROBIAL GROWTH LINACOUSTIC. 4.2 R-VALUE.

3. PIPE INSULATION: GLASS FIBER INSULATION WITH ALL SERVICE JACKET AND VAPOR BARRIER, MANVILLE MICRO-LOK

3.1. CONDENSATE:

3.1.1. 1/2" THICK. K=.25

3.2. HEATING HOT WATER:

3.2.1. MAIN: 1-1/2" THINK. K=.25.

3.2.2. BRANCH: 1" THICK. K=.25.

2.12 IDENTIFICATION

A. AN IDENTIFICATION LABEL SHALL BE PROVIDED FOR THE FOLLOWING TYPES OF EQUIPMENT:

1. COMPUTER ROOM A/C UNITS, VAV BOXES, THERMOSTATS.
2. INCLUDING UNIT DESIGNATION, POWER SOURCE AND CIRCUIT.

B. IDENTIFICATION LABELS SHALL BE BY SETON, OR EQUIVALENT. PROVIDE LABELS & FLOW ARROWS ON ALL NEW DUCT AND PIPING. @ 10' INTERVALS.

C. DUCT AND PIPE IDENTIFICATION SHALL CONFORM TO BLDG. STD. WHERE APPLICABLE.

PART 3 EXECUTION

3.01 INSTALLATION OF THE WORK

A. THE CONTRACT DRAWINGS INDICATE THE GENERAL ARRANGEMENTS FOR THE HVAC.

1. DRAWINGS ARE DIAGRAMMATIC AND DO NOT INDICATE NECESSARY OFFSETS, OBSTRUCTIONS OR STRUCTURAL CONDITIONS.

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL THE WORK IN SUCH A MANNER THAT IT WILL BE AT THE HIGHEST ELEVATION POSSIBLE, CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, MAINTAIN HEADROOM, LEAVE ADEQUATE CLEARANCES FOR LIGHT FIXTURES, RETURN AIR PATHWAYS, MAINTENANCE AND REPAIRS, AND PROVIDE CLEARANCE AND ACCESS AS REQUIRED BY CODES. NOTHING SHALL BE INSTALLED BELOW CEILING LEVEL WITHOUT ARCHITECT'S WRITTEN CONSENT.

3. ABOVE ITEMS TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.

4. PROCEED AS RAPIDLY AS THE BUILDING CONSTRUCTION WILL PERMIT.

5. THOROUGHLY CLEAN ITEMS BEFORE INSTALLATION. CAP OPENING TO EXCLUDE DIRT UNTIL FINAL CONNECTION HAVE BEEN MADE.

6. CUT MATERIALS ACCURATELY, WORK INTO PLACE WITHOUT SPRINGING OR FORCING, PROPERLY CLEAR WINDOWS, DOORS AND OTHER OPENINGS. EXCESSIVE CUTTING OR OTHER WEAKENING OF THE BUILDING STRUCTURE WILL NOT BE PERMITTED.

7. MANUFACTURER'S DRAWINGS AND INSTRUCTIONS SHALL BE FOLLOWED IN ALL CASES WHERE THE MAKERS OF DEVICES AND EQUIPMENT FURNISH DIRECTIONS OR DETAILS NOT SHOWN ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS.

8. DRAWINGS ARE NOT INTENDED TO BE SCALED, BUT SHALL BE FOLLOWED WITH SUFFICIENT ACCURACY TO COORDINATE WITH OTHER WORK AND STRUCTURAL LIMITATIONS.

9. SEISMIC DESIGN: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ANCHORS, SUPPORTS AND CONNECTION OF MECHANICAL WORK TO THE BUILDING STRUCTURE TO PREVENT DAMAGE AS A RESULT OF AN EARTHQUAKE, INCLUDING MANUFACTURED EQUIPMENT, THE CONNECTION AND INTEGRITY OF SHOP FABRICATED AND FIELD FABRICATED MATERIALS AND EQUIPMENT. ALL SUPPORTS, EQUIPMENT AND CONNECTIONS THERETO SHALL BE DESIGNED TO CONFORM TO REQUIREMENTS OF THE CALIFORNIA ADMINISTRATIVE CODE, OR OTHER GOVERNING CODES.

10. ALL WORK SHALL BE PROPERLY SUPPORTED FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER, INDEPENDENT OF THE CEILING SUPPORT SYSTEM. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT DIRECT FASTENING OF SUPPORTS, FURNISH ADDITIONAL FRAMING.

11. ALL EQUIPMENT SHALL BE SECURELY FASTENED TO BUILDING CONSTRUCTION WITH APPROVED SUPPORTS.

12. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF DIFFUSERS, GRILLES, REGISTERS, AND THERMOSTATS (IF DEPICTED). IF THERMOSTATS ARE NOT DEPICTED SPECIFICALLY ON ARCHITECT'S DRAWINGS, OBTAIN ARCHITECT'S APPROVAL FOR LOCATIONS PRIOR TO INSTALLATION.

13. COORDINATE THE WORK OF THIS SECTION WITH THE WORK OF OTHER SECTIONS IN AMPLE TIME FOR PROPER INSTALLATION AND CONNECTION.

14. CAREFULLY CHECK SPACE REQUIREMENTS, INCLUDING SERVICING SPACE REQUIREMENTS, WITH OTHER SECTIONS TO ENSURE THAT ALL EQUIPMENT AND MATERIALS CAN BE INSTALLED IN THE SPACES ALLOTTED THERETO.

15. PREPARE DRAWINGS, ATTEND MEETINGS, OBTAIN ALL APPROVALS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION, CONDUCT REQUIRED TESTS AND OBTAIN REQUIRED PERMITS.

16. SEISMIC RESTRAINT:

16.1. 2010 CALIFORNIA BUILDING CODE.
16.2. SEISMIC DESIGN CATEGORIES.
16.3. PROVIDE THE MANUFACTURER'S CERTIFICATE OF COMPLIANCE WHEN REQUIRED BY CONTRACT DOCUMENTS OR REGULATORY AGENCY.
16.4. SEE 2010 CBC SECTION 1614A.1.14 FOR HVAC DUCTWORK SEISMIC RESTRAINTS.
16.5. SEISMIC ANCHORAGE SHALL BE PERFORMED ON ALL SUSPENDED, FLOOR-, ROOF- AND WALL-MOUNTED EQUIPMENT. DESIGN SHALL BE PERFORMED AND CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER.
16.6. SEISMIC BRACES SHALL BE LOCATED ON SHOP DRAWINGS INDICATING MEMBER SIZES, ANCHORAGE REQUIREMENTS AND CERTIFICATION FROM A REGISTERED CIVIL OR STRUCTURAL PROFESSIONAL ENGINEER.

B. GENERAL:

1. PAINTING:

1.1. PAINT:

1.1.1. BEST GRADE FOR ITS PURPOSE.
1.1.2. DELIVER IN ORIGINAL SEALED CONTAINERS.
1.1.3. APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
1.1.4. COLORS: TO MATCH EXISTING OR AS SELECTED BY ENGINEER.

1.2. GALVANIZED IRON PRIMER.
1.3. HOT DIPPED GALVANIZED OR DIPPED IN ZINC CHROMATE.
1.4. ZINC CHROMATE WITH FINISH TO MATCH SURROUNDINGS.

2. CLEANING:

2.1. BRUSH AND CLEAN WORK PRIOR TO CONCEALING PAINTING AND ACCEPTANCE.
2.2. PAINTED EXPOSED WORK SOILED OR DAMAGED: CLEAN AND REPAIR TO MATCH ADJOINING WORK BEFORE FINAL ACCEPTANCE.
2.3. REMOVE DEBRIS FROM INSIDE AND OUTSIDE OF MATERIAL AND EQUIPMENT.

3. CUTTING AND PATCHING: AS REQUIRED FOR NEW WORK.

3.02 TESTING AND BALANCING

A. GENERAL:

1. ADJUSTMENT: EACH PIECE OF EQUIPMENT AND ALL OF THE SYSTEMS SHALL BE ADJUSTED TO INSURE PROPER FUNCTIONING OF ALL CONTROLS, AND SHALL BE LEFT IN OPERATING CONDITION.

2. PRELIMINARY OPERATION: THE OWNER RESERVES THE RIGHT TO OPERATE ANY SYSTEMS OR EQUIPMENT PRIOR TO FINAL COMPLETION AND ACCEPTANCE OF THE WORK. SUCH PRELIMINARY OPERATION SHALL NOT BE CONSTRUED AS AN ACCEPTANCE OF ANY WORK.

B. AIR DISTRIBUTION SYSTEMS:

1. BALANCE AND ADJUST AIR DISTRIBUTION SYSTEM TO QUANTITIES INDICATED ON DRAWINGS IN ACCORDANCE WITH ASSOCIATED AIR BALANCE COUNCIL (AABC) MANUAL OR NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) MANUAL, LATEST EDITION.

2. BALANCING AND TESTING SHALL BE PERFORMED AND SUPERVISED BY A CERTIFIED INDEPENDENT FIRM SPECIALIZING IN TESTING AND BALANCING. FIRM SHALL BE A MEMBER OF AABC OR NEBB. TEST REPORTS SHALL BE SUBMITTED IN BOUND FOLDERS AND ON AABC/NEBB TYPE REPORT FORMS. ALL DIFFUSERS SHALL BE IDENTIFIED BY DESIGNATIONS ON DRAWINGS.

3. DIFFUSER AIR DELIVERY SHALL NOT BE LESS THAN NOR EXCEED BY MORE THAN 5% THE AIR DELIVERY INDICATED ON THE PLANS.

4. UPON COMPLETION OF THE INSTALLATION, CONTRACTOR SHALL REBALANCE ANY AIR DISTRIBUTION SYSTEM AFFECTED BY THE RENOVATION, INCLUDING TERMINAL AIR UNITS AND AIR OUTLETS.

5. CONTRACTOR SHALL CONSTRUCT, SEAL, AND TEST NEW DUCTWORK PER 2008 TITLE 24 REQUIREMENTS.

C. WATER SYSTEM

1. EACH WATER SYSTEM SHALL NOT BE LESS THAN NOR EXCEED BY MORE THAN 5% THAN WATER FLOW INDICATED ON PLAN.

II. SUBMIT TESTING AND BALANCING REPORT FOR REVIEW.

3.04 PROJECT CLOSE-OUT

A. AFTER FINAL OPERATION FOR INSPECTION AND ACCEPTANCE, DELIVER ALL COPIES OF OPERATION INSTRUCTIONS, MAINTENANCE MANUALS AND PARTS DESCRIPTIONS TO THE ENGINEER.

B. ALL TOOLS SUPPLIED WITH THE EQUIPMENT FOR MAINTENANCE SHALL BE TAGGED AND TEMPORARILY SECURED TO THE UNIT, OR TURNED OVER TO THE BUILDING ENGINEER.

END OF SECTION

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

Issue	Date & Issue Description	By	Check
01	07/31/12 PLAN CHECK	-	-
1	08/10/12 ISSUE FOR CONSTRUCTION	-	-
2	09/12/12 BULLETIN 1	-	-
3	10/09/12 BULLETIN 2	-	-
4	10/23/2012 REVISED FOR PLAN CHECK	-	-
5	11/19/12 BULLETIN 3	-	-
6	02/21/13 BULLETIN 4	-	-

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\M-002-VZC0X000.dwg

Description
MECHANICAL SPECIFICATIONS

Scale
NONE

True North
Ref North

M-002

The corner tick marks represent the 30"x48" plot area.

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MANDATORY MEASURES

CERTIFICATION OF EQUIPMENT EFFICIENCY (§110 AND §111)

1. ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY REGULATIONS MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED TO THE COMMISSION, AS SPECIFIED IN THOSE REGULATIONS, THAT THE APPLIANCE COMPLIES WITH THE APPLICABLE STANDARD FOR THAT APPLIANCE.

SERVICE WATER HEATING (§111 AND §113)

2. CERTIFICATION BY MANUFACTURERS. ANY SERVICE WATER-HEATING SYSTEM OR EQUIPMENT MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE SYSTEM OR EQUIPMENT COMPLIES WITH ALL OF THE REQUIREMENTS OF THIS SUBSECTION FOR THAT SYSTEM OR EQUIPMENT

VENTILATION(§121)

3. ALL ENCLOSED SPACES IN A BUILDING THAT ARE NORMALLY USED BY HUMANS SHALL BE VENTILATED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS SECTION AND THE CBC.

4. THE OUTDOOR AIR-VENTILATION RATE AND AIR-DISTRIBUTION ASSUMPTIONS MADE IN THE DESIGN OF THE VENTILATING SYSTEM SHALL BE CLEARLY IDENTIFIED ON THE BUILDING PLANS REQUIRED BY §10-103 OF TITLE 24, PART 1

CONTROLS (§122).

5. CRITERIA FOR ZONAL THERMOSTATIC CONTROLS. THE INDIVIDUAL THERMOSTATIC CONTROLS REQUIRED BY SECTION 122(A) SHALL MEET REQUIREMENTS; FOR HEATING SHALL BE CAPABLE OF BEING SET, LOCALLY OR REMOTELY, DOWN TO 55°F OR LOWER. OR FOR COOLING IT SHALL BE CAPABLE OF BEING SET, LOCALLY OR REMOTELY, UP TO 85°F OR HIGHER.

PIPE INSULATION (§123)

6. THE PIPING FOR ALL SPACE-CONDITIONING AND SERVICE WATER-HEATING SYSTEMS WITH FLUID TEMPERATURES LISTED IN TABLE 123-A SHALL INSTALL THE AMOUNT OF INSULATION SPECIFIED.

DUCT CONSTRUCTION AND INSULATION (§124).

7. ALL AIR DISTRIBUTION SYSTEM DUCTS AND PLENUMS, INCLUDING, BUT NOT LIMITED TO, BUILDING CAVITIES, MECHANICAL CLOSETS, AIR-HANDLER BOXES AND SUPPORT PLATFORMS USED AS DUCTS OR PLENUMS, SHALL BE INSTALLED, SEALED AND INSULATED TO MEET THE REQUIREMENTS OF THE 2010 CMC SECTIONS 601, 602, 603, 604, 605, AND STANDARD 6-5. ACCEPTANCE TESTS (§125 AND REFERENCE NONRESIDENTIAL APPENDIX NA7).

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 5) MECH-1C

Project Name: VERIZON'S TENANT IMPROVEMENT | Date: 11/15/2012 | Climate Zone: 9

Project Address: 1800 SOLAR DRIVE, OXNARD, CA | Conditioned Floor Area: 13800 SQFT (5)

General Information

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room

☐ Schools (Public School) ☐ Relocatable Public School Bldg. ☐ Conditioned Spaces ☐ Unconditioned Spaces

Phase of Construction: ☐ New Construction ☐ Addition ☑ Alteration

Approach of Compliance: ☑ Component ☐ Overall Envelope TDV Energy ☐ Unconditioned (file affidavit)

Front Orientation: N, E, S, W or in Degrees: NE

HVAC SYSTEM DETAILS — FIELD INSPECTION ENERGY CHECKLIST

Equipment[2]	Inspection Criteria	Meets Criteria or Requirements: Special Feature[1]	Pass	Fail - Describe Reason[3]
Items or System Tags (i.e. AC-1, RTU-1, HP-1)	VAV BOXES	☐	☐	☐
Equipment Type[4]:	VAV	☐	☐	☐
No of Systems	17	☐	☐	☐
Max Allowed Heating Capacity	N/A (5)	☐	☐	☐
Minimum Heating Efficiency	N/A	☐	☐	☐
Max Allowed Cooling Capacity	N/A	☐	☐	☐
Cooling Efficiency	N/A	☐	☐	☐
Duct Location/R-Value	M-103, R-4.2	☐	☐	☐
Duct Leakage Testing - If Yes, a MECH - 4A must be submitted	N/A	☐	☐	☐
Economizer	N/A	☐	☐	☐
Thermostat	SETBACK	☐	☐	☐
Fan control	N/A	☐	☐	☐

Equipment[2]	Inspection Criteria	FIELD INSPECTION ENERGY CHECKLIST: Special Feature[1]	Pass	Fail - Describe Reason[3]
Items or System Tags (i.e. AC-1, RTU-1, HP-1)	FP BOXES	☐	☐	☐
Equipment Type[4]:	FAN POWERED	☐	☐	☐
No of Systems	9	☐	☐	☐
Max Allowed Heating Capacity	N/A	☐	☐	☐
Minimum Heating Efficiency	N/A	☐	☐	☐
Max Allowed Cooling Capacity	N/A	☐	☐	☐
Cooling Efficiency	N/A	☐	☐	☐
Duct Location/R-Value	M-103, R-4.2	☐	☐	☐
Duct Leakage Testing - If Yes, a MECH - 4A must be submitted	N/A	☐	☐	☐
Economizer	N/A	☐	☐	☐
Thermostat	SETBACK	☐	☐	☐
Fan control	N/A	☐	☐	☐

1. *Indicate special feature DETAILS on Page 2 of the Inspection Checklist Form.*
2. *If the Actual installed equipment performance efficiency and capacity is less than the Proposed (from the energy compliance submittal or from the building plans) the responsible party shall resubmit energy compliance to include the new changes.*
3. *For additional detailed discrepancy use Page 2 of the Inspection Checklist Form.*
4. *Indicate Equipment Type: Gas(Pkg or, Split), VAV, HP (Pkg or split), Hydronic, PTAC, or other*

AIR SYSTEM REQUIREMENTS (Part 1 of 3) MECH-2C

Project Name: VERIZON'S TENANT IMPROVEMENT | Date: 11/15/2012

		Indicate Air Systems Type (Central, Single Zone, Package, VAV or etc...)		
Item or System Tags (i.e. AC-1, RTU-1, HP-1)		VAV BOXES	FP BOXES	AC UNITS
No. of Systems		17	9	3
	(5)	*Indicate Page Reference on the Plans or Schedule list or list information below*		
MANDATORY MEASURES	*T-24 Sections*			
Heating Equipment Efficiency	112(a)	N/A	N/A	N/A
Cooling Equipment Efficiency	112(a)	N/A	N/A	N/A
HVAC or Heat Pump Thermostats	112(b), 112(c)	N/A	N/A	M-401
Furnace Controls/Thermostat	112(c), 115(a)	N/A	N/A	N/A
Natural Ventilation	121(b)	N/A	N/A	N/A
Mechanical Ventilation	121(b)	M-003	M-003	(E), M-401
VAV Minimum Position Control	121(c)	M-701	M-701	N/A
Demand Control Ventilation	121(c)	N/A	N/A	N/A
Time Control	122(e)	N/A	N/A	N/A
Setback and Setup Control	122(e)	N/A	N/A	N/A
Outdoor Damper Control	122(f)	N/A	N/A	N/A
Isolation Zones	122(g)	N/A	N/A	N/A
Pipe Insulation	123	M-003	M-003	M-003
Duct Insulation	124	M-003	M-003	N/A
PRESCRIPTIVE MEASURES				
Calculated Design Heating Load	144(a & b)	N/A	N/A	N/A
Calculated Design Cooling Load	144(a & b)	N/A	N/A	N/A
Fan Control	144(c)	N/A	N/A	CONSTANT
DP Sensor Location	144(c)	N/A	N/A	N/A
Supply Pressure Reset (DDC only)	144(c)	N/A	N/A	N/A
Simultaneous Heat/Cool	144(d)	N/A	N/A	N/A
Economizer	144(e)	N/A	N/A	N/A
Heat and Cool Air Supply Reset	144(f)	N/A	N/A	N/A
Electric Resistance Heating[1]	144(g)	N/A	N/A	N/A
Heat Rejection System	§144(h)	N/A	N/A	N/A
Air Cooled Chiller Limitation	§144(i)	N/A	N/A	N/A
Duct Leakage Sealing. If Yes, a MECH-4-A must be submitted	144(k)	N/A	N/A	N/A

1. *Total installed capacity (MBtu/hr) of all electric heat on this project exclusive of electric auxiliary heat for heat pumps. If electric heat is used explain which exception(s) to §144(g) apply.* (3)

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 3 of 5) MECH-1C

Project Name: VERIZON'S TENANT IMPROVEMENT | Date: 11/15/2012

Required Acceptance Tests

Designer:

This form is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for mechanical systems. The designer is required to check the applicable boxes by all acceptance tests that apply and list all equipment that requires an acceptance test. If all equipment of a certain type requires a test, list the equipment description and the number of systems. the NA number designates the Section in the Appendix of the Nonresidential Reference Appendices Manual that describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

Enforcement Agency:

Systems Acceptance. *Before occupancy permit is granted for a newly constructed building or space, or a new space-conditioning system serving a building or space is operated for normal use, all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance.*
Systems Acceptance. *Before occupancy permit is granted. All newly installed HVAC equipment must be tested using the Acceptance Requirements.*

The MECH-1C form is not considered a completed form and is not to be accepted by the building department unless the correct boxes are checked. The equipment requiring testing, person performing the test (Example: HVAC installer, TAB contractor, controls contractor, PE in charge of project) and what Acceptance test must be conducted. The following checked-off forms are required for ALL newly installed equipment. In addition a Certificate of Acceptance forms shall be submitted to the building department that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of §10-103(b) and Title 24 part 6. The building inspector must receive the properly filled out and signed forms before the building can receive final occupancy.

Test Description / Equipment Requiring Testing or Verification	# of units	MECH-2A Outdoor Ventilation for VAV & CAV	MECH-3A Constant Volume & Single-Zone Unitary	MECH-4A Air Distribution Ducts	MECH-5A Economizer Controls	MECH-6A Demand Control Ventilation DCV	MECH-7A Supply Fan VAV	MECH-8A Valve Leakage Test	MECH-9A Supply Water Temp. Reset	MECH-10A Hydronic System Variable Flow Control	MECH-11A Automatic Demand Shed Control
VAV BOXES	17	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
FP BOXES	9	(5) ☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
AC UNITS	3	☐	☑ (3)	☐	☐	☐	☐	☐	☐	☐	☐

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 4 of 5) MECH-1C

Project Name: VERIZON'S TENANT IMPROVEMENT | Date: 11/15/2012

Test Description / Equipment Requiring Testing or Verification	# of units	MECH-12A Fault Detection & Diagnostics for DX Units	MECH-13A Automatic Fault Detection & Diagnostics for Air & Zone	MECH-14A Distributed Energy Storage DX AC Systems	MECH-5A Thermal Energy Storage (TES) Systems	Test Performed By:
VAV BOXES	17	☐	☐	☐	☐	N/A
FP BOXES	9	(5) ☐	☐	☐	☐	N/A
AC UNITS	3	☐	☐	☐	☐	MECHANICAL CONTRACTOR (3)

MECHANICAL VENTILATION AND REHEAT MECH-3-C

PROJECT NAME: VERIZON TENANT IMPROVEMENT | DATE: 11/15/2012

MECHANICAL VENTILATION (§121(b)2)[2]									REHEAT LIMITATION (§144(d))				
	AREA BASIS			OCCUPANCY BASIS					VAV Minimum				
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Zone/ System	Condition Area (ft²)	CFM per (ft²)	Min CFM by Area B x C	Num of People	CFM per Person	Min CFM by Occupant E x F	REQ'D V.A. Max of D or G	Design Ventilation Air cfm	50% of Design Zone Supply	B x 0.4 cfm/ft²	Max of Columns H, J, K, or 300 cfm	Design minimum Air setpoint	Transfer Air
FPB-1-1	480	0.15	72	31	15	465	465	500	530	240	530	500	
FPB-1-2	420	0.15	63	13	15	195	195	295	490	168	490	295	
FPB-1-3	420	0.15	63	13	15	195	195	425	705	168	705	425	
VAV-1-20	1740	0.15	261	76	15	1140	1140	1140	1090	696	1090	1140	
VAV-1-24	410	0.15	62	1	15	15	62	250	420	164	300	240	
FPB-2-1	400	0.15	60	8	15	120	120	385	640	160	640	450	
FPB-2-2	630	0.15	95	2	15	30	95	290	480	252	480	240	
FPB-2-3	380	0.15	57	19	15	285	285	480	800	152	800	480	
VAV-2-7	265	0.15	40	4	15	60	60	210	350	110	350	210	
VAV-2-8	260	0.15	40	16	15	240	240	360	600	105	600	360	
VAV-2-9	260	0.15	40	13	15	195	195	360	600	105	600	360	
VAV-2-25	600	0.15	90	12	15	180	180	300	500	120	500	300	
VAV-2-26	500	0.15	75	8	15	120	120	290	480	200	480	285	
VAV-2-27	200	0.15	30	8	15	120	120	150	250	80	225	150	
VAV-2-28	500	0.15	75	4	15	60	75	120	200	100	200	120	
VAV-2-29	200	0.15	30	8	15	120	120	150	250	80	225	150	
FPB-3-1	400	0.15	60	8	15	120	120	385	640	160	640	450	
FPB-3-2	630	0.15	95	2	15	30	95	290	480	252	480	240	
FPB-3-3	380	0.15	57	19	15	285	285	480	800	152	800	480	
VAV-3-7	275	0.15	45	10	15	150	150	265	440	110	440	265	
VAV-3-8	300	0.15	45	10	15	150	150	400	660	120	660	400	
VAV-3-21	500	0.15	75	8	15	120	120	290	480	200	480	285	
VAV-3-22	600	0.15	90	12	15	180	180	300	500	120	500	300	
VAV-3-25	200	0.15	30	8	15	120	120	150	250	80	225	150	
VAV-3-26	200	0.15	30	8	15	120	120	150	250	80	225	150	
VAV-3-27	500	0.15	75	4	15	60	75	120	200	200	200	75	
			Totals	325			5082	8500	Column I Total Design Ventilation Air				

(5)

C	Minimum ventilation rate per Section §121, Table 121-A.
E	Based on fixed seat or the greater of the expected number of occupants and 50% of the CBC occupant load for egress purposes for spaces without fixes seating.
H	Required Ventilation Air (REQ'D V.A.) is the larger of the ventilation rates calculated on an AREA BASIS or OCCUPANCY BASIS (Column D or G).
I	Must be greater than or equal to H. or use Transfer Air (column N) to make up the difference.
J	Design fan supply cfm (Fan CFM) x 50%; or the design zone outdoor airflow rate per §121.
K	Condition area (ft²) x 0.4 cfm/ft²; or
L	Maximum of Columns H, J, K, or 300 cfm
M	This must be less than or equal to Column L and greater than or equal to the sum of Columns H plus N.
N	Transfer Air must be provided where the Required Ventilation Air (Column H) is greater than the Design Minimum Air (Column M). Where required, transfer air must be greater than or equal to the difference between the Required Ventilation Air (Column H) and the Design Minimum Air (Column M), Column H minus M.

CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 5 of 5) MECH-1C

Project Name: VERIZON'S TENANT IMPROVEMENT | Date: 11/15/2012

Documentation Autor's Declaration Statement

- I certify that this Certificate of Compliance documentation is accurate and complete.

Name: ANGELICA KAPRIELIAN | Signature:

Company: SYSKA HENNESSY GROUP INC. | Date: 11/15/2012

Address: 800 CORPORATE POINTE, SUITE 200 | If Applicable CEA # CEPE #

City/State/Zip: CULVER CITY, CA 90230 | Phone: (310) 312-0200

Principal Mechanical Designer's Declaration Statement

- I am eligible under Division 3 of the California Business and Professions Code tCode to accept responsibility for the mechanical design.
- This Certificate of Compliance identifies the mechanical features and performance specifications required for compliance with Title 24, Parts 1 and 6 of the California Code of Regulations.
- The design features represented on this Certificate of Compliance are consistent with the information provided to document this design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Name: HAMISH LIST | Signature:

Company Name: SYSKA HENNESSY GROUP INC. | Date: 11/15/2012

Address: 800 CORPORATE POINTE, SUITE 200 | License # M33726

City/State/Zip: CULVER CITY, CA 90230 | Phone: (310) 312-0200

Mandatory Measures
Indicate location on building plans of Note Block for Mandatory Measures M-003

MECHANICAL COMPLIANCE FORMS & WORKSHEETS (check box if worksheet is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, refer to the 2008 Nonresidential Manual
Note: The Enforcement Agency may require all forms to be incorporated onto the building plans.

☑	MECH-1C	Certificate of Compliance. Required on plans for all submittals.
☑	MECH-2C	Mechanical Equipment Summary is required for all submittals.
☑	MECH-3C	Mechanical Ventilation and Reheat is required for all submittals with mechanical ventilation.
☐	MECH-4C	Fan Power Consumption is required when for all prescriptive submittals.

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Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
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01	07/31/12 PLAN CHECK	-	-
1	08/10/12 ISSUE FOR CONSTRUCTION	-	-
2	09/12/12 BULLETIN 1	-	-
3	10/09/12 BULLETIN 2	-	-
4	10/23/2012 REVISED FOR PLAN CHECK	-	-
5	11/19/12 BULLETIN 3	-	-
6	02/21/13 BULLETIN 4	-	-

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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Description
TITLE-24 COMPLIANCE FORMS - MECHANICAL

Scale
NONE

True North
Ref North

M-003

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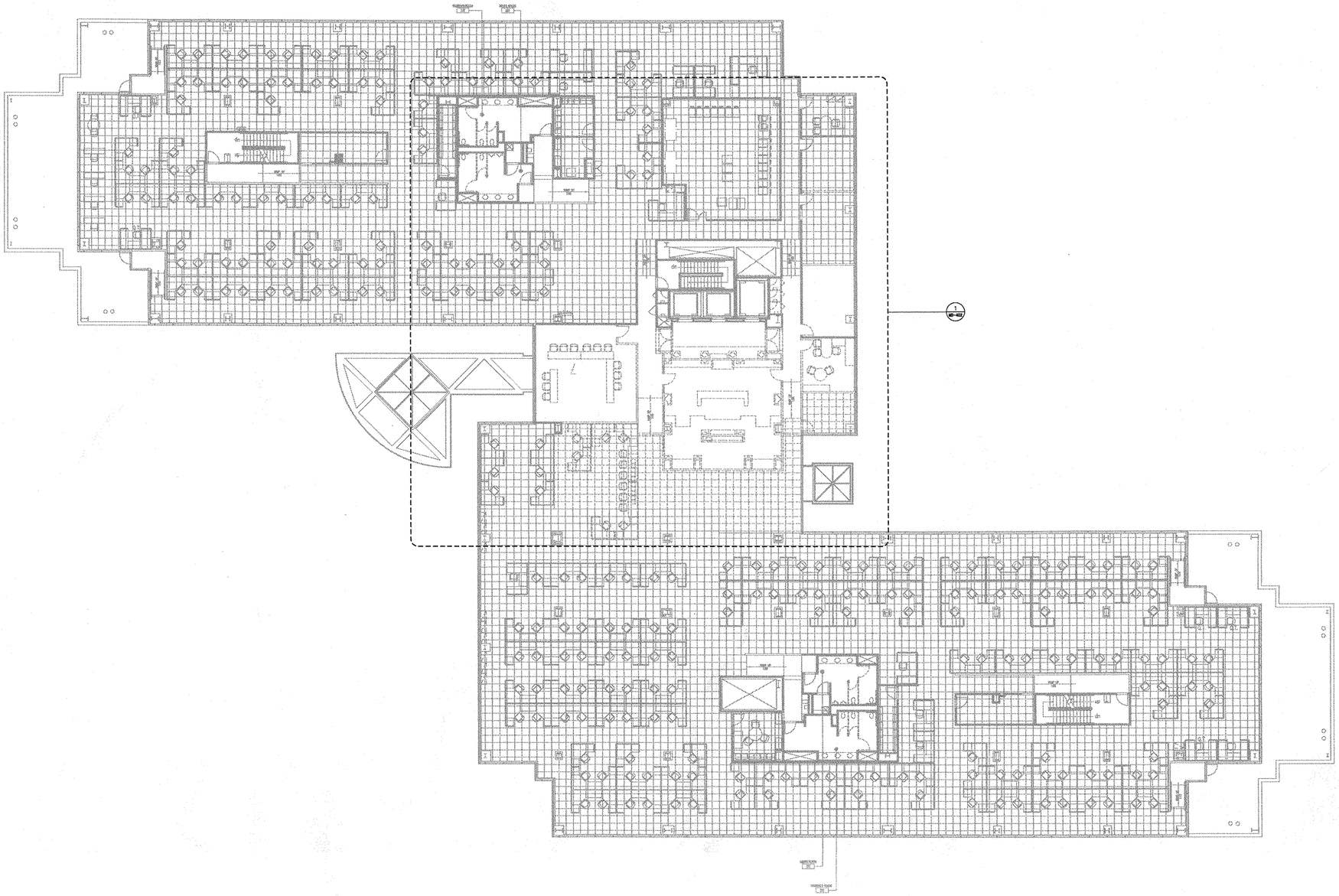

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	REVISED FOR PLAN CHECK		
5	11/19/12	-	-
	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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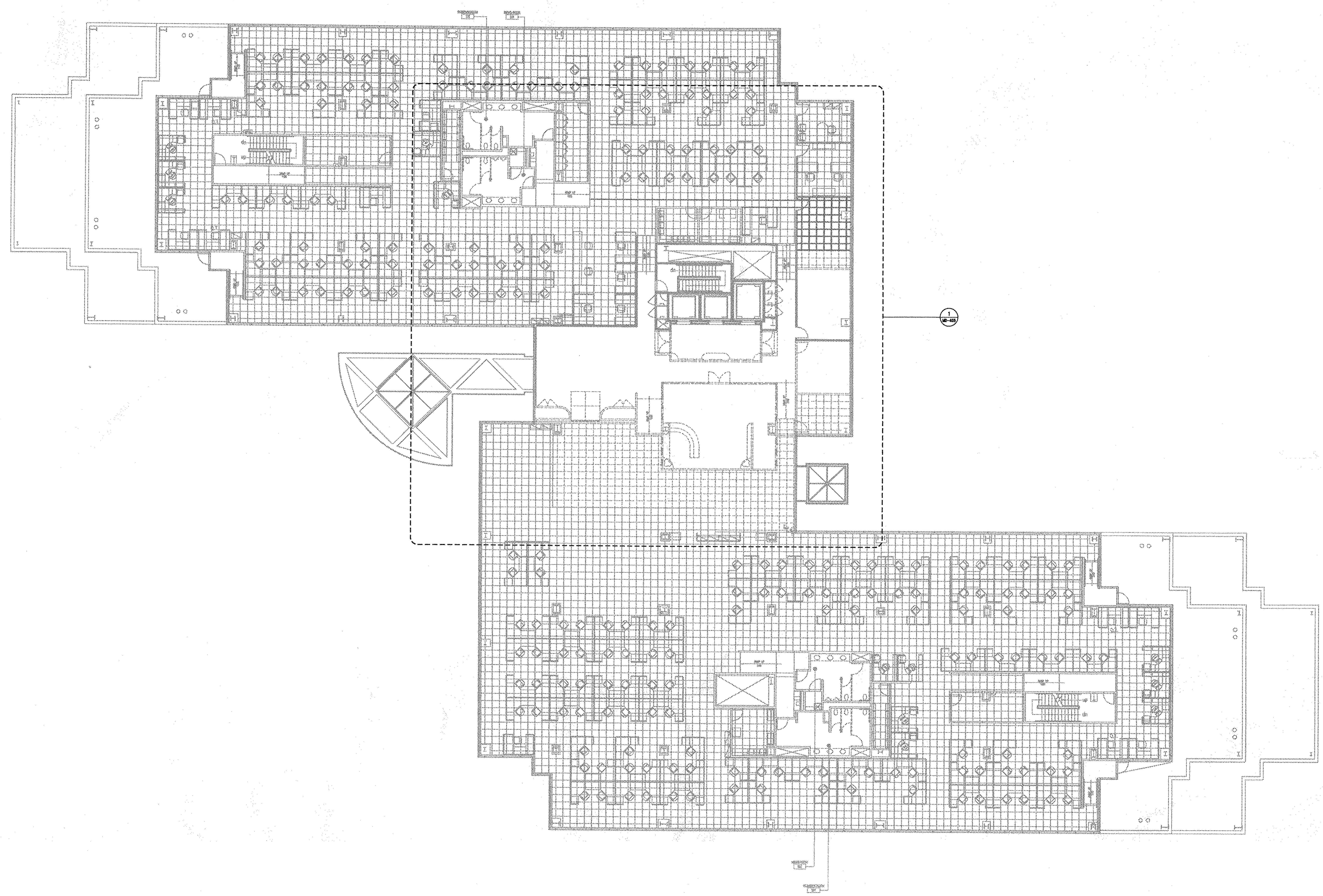
Description
OVERALL SECOND FLOOR MECHANICAL DEMOILTION PLAN

Scale
3/32" = 1'-0"

True North
Ref North

MD-102

The corner tick marks represent the 30"x42" plot area.



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Tel: 310.312.0200
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5	11/19/12	-	-
	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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Description
OVERALL THIRD FLOOR MECHANICAL DEMOLITION PLAN 6

Scale
3/32" = 1'-0"

True North
Ref North

MD-103

5

The corner tick marks represent the 30"x40" plot area.

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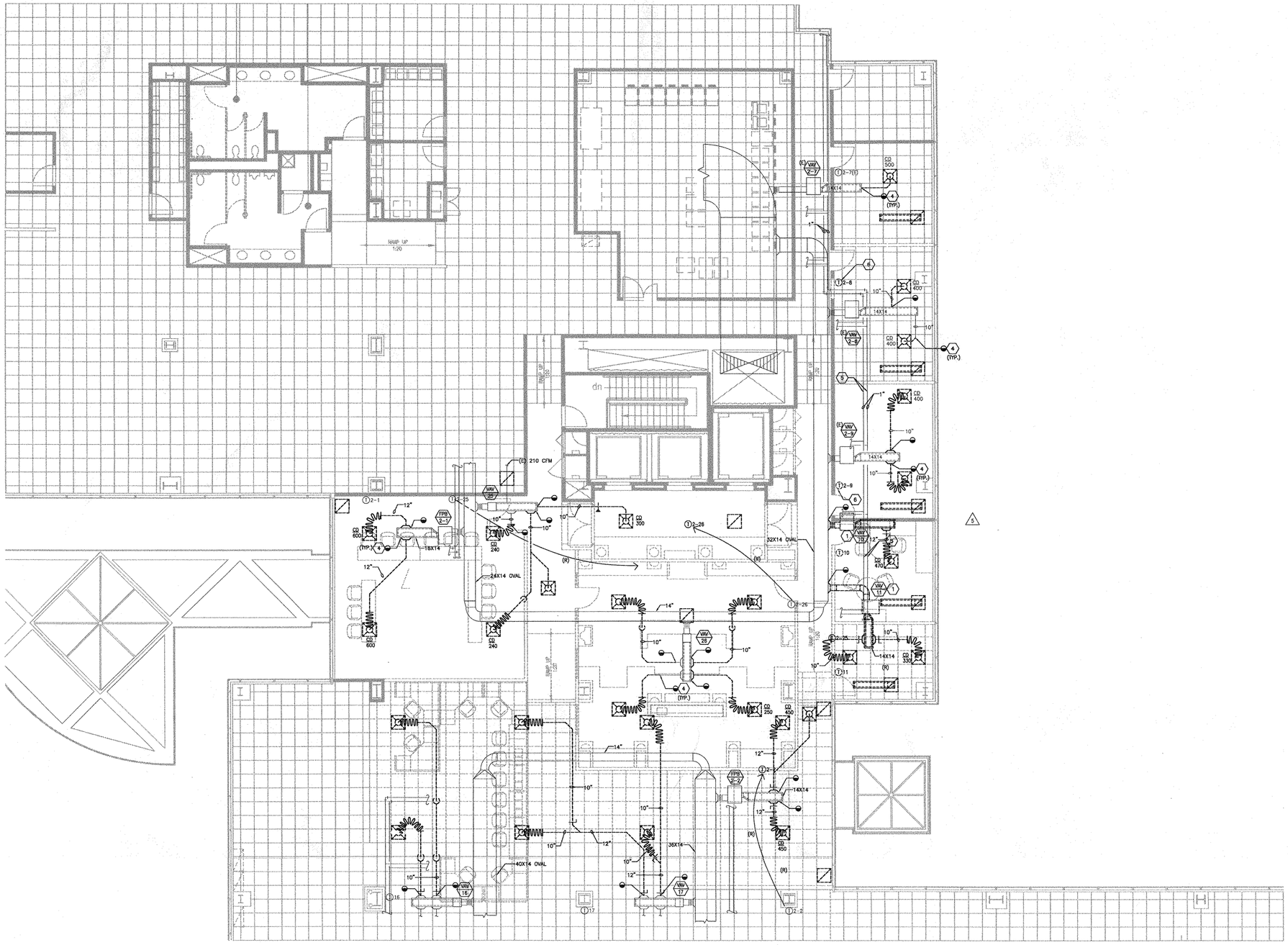

SHEET NOTES ⬡

1. DEMO (E) FPB BOX, ALL ASSOCIATED DUCTWORK, DIFFUSERS, AND PIPING. CAP (E) SA DUCT AND PIPING CLOSE TO MAIN.
2. PROVIDE ¾" HWS&R TO REHEAT COIL FROM (E) HWS&R.
3. INACTIVE BLANKED SEGMENT OF LINEAR SUPPLY DIFFUSER TO MATCH ACTIVE PORTION.
4. DEMO (E) SA DUCT FROM POINT OF DISCONNECT. CAP (E) UNUSED SA DUCT OPENING AIRTIGHT.
5. (E) HWS&R TO REMAIN. △1
6. DEMO (E) THERMOSTAT. △5

GENERAL NOTES

1. WALL, FLOOR, AND CEILING DEVICES SHOWN FOR QUANTITY AND APPROXIMATE LOCATION ONLY. EXACT LOCATION SHALL BE PER ARCHITECTURAL DRAWINGS OR AS DIRECTED BY ARCHITECT IN THE FIELD.
2. DUCT SIZES:
   2.1. UPSTREAM OF VAV BOX SHALL MATCH VAV BOX INLET SIZE.
   2.2. DOWNSTREAM OF VAV BOX. REFER TO BRANCH DUCT SCHEDULE ON M-601.
3. MANUAL VOLUME DAMPER (TYP.) FOR EACH BRANCH DUCT TO AIR OUTLET. LOCATE AT BRANCH AS FAR AS POSSIBLE FROM AIR OUTLET. FOR DAMPERS LOCATED ABOVE HARD LID OR INACCESSIBLE CEILING, PROVIDE REMOTE DAMPER REGULATORS. COORDINATE LOCATION OF DAMPER ACCESS REMOTE REGULATOR CAP WITH ARCHITECT.
4. REPLACE FILTER FOR ALL FPB. △1

ENLARGED SECOND FLOOR MECHANICAL DEMOLITION PLAN 1

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Oxnard, CA 93030

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1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

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		BULLETIN 2		
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5		11/19/12	-	-
		BULLETIN 3		
6		02/21/13	-	-
		BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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Description
ENLARGED SECOND FLOOR MECHANICAL DEMOLITION PLAN

Scale
3/16" = 1'-0"

True North
Ref North

MD-402 6

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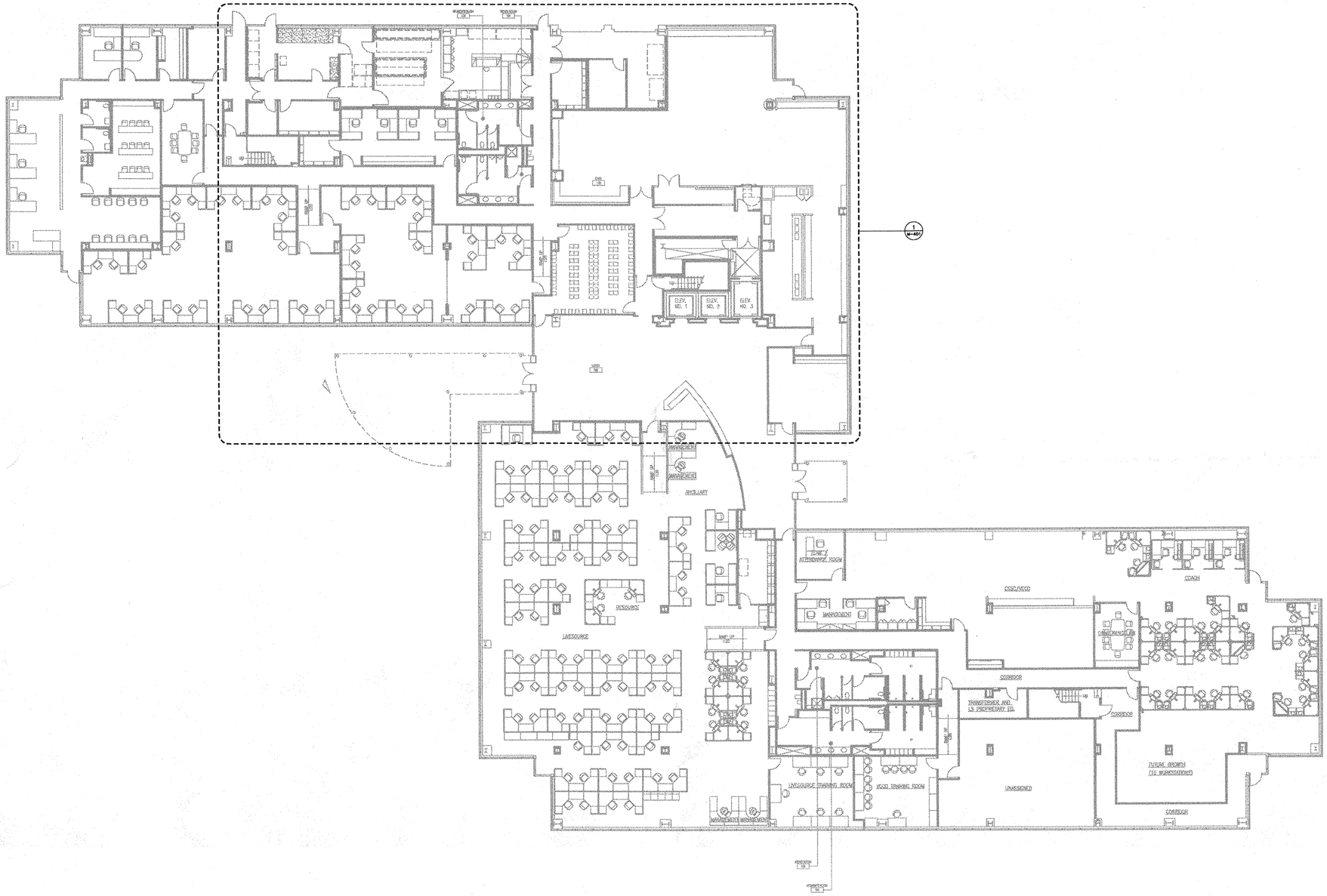

OVERALL FIRST FLOOR MECHANICAL PLAN

1

The corner tick marks represent the 30"x42" plot area.

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Suite 1500
New York, NY 10020
Telephone 212.492.1400
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	BULLETIN 3		
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	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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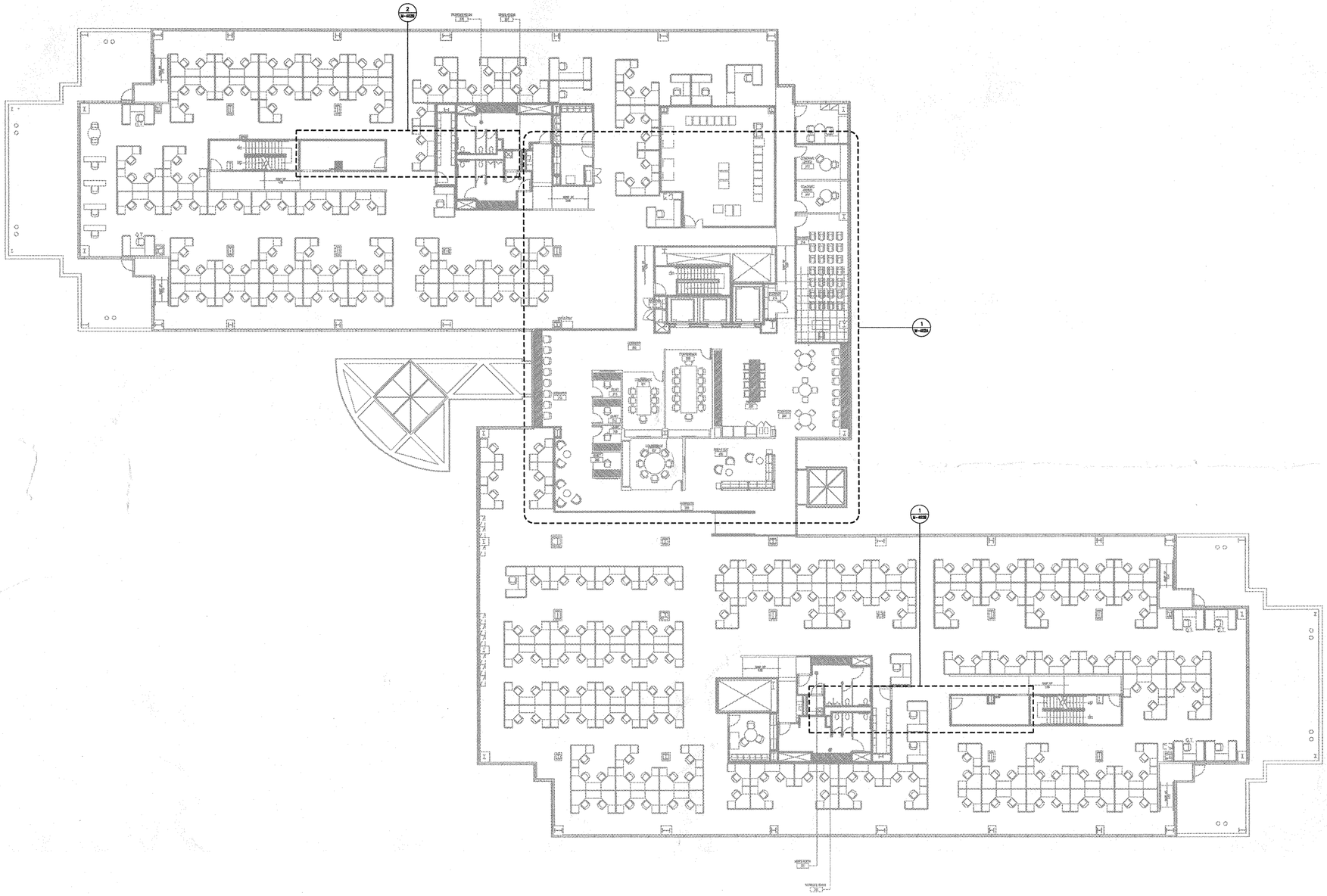
Description
OVERALL FIRST FLOOR MECHANICAL PLAN / 6

Scale
3/32" = 1'-0"

True North
Ref North

M-101



OVERALL SECOND FLOOR MECHANICAL PLAN

1

The corner tick marks represent the 30"x40" plot area.

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New York, NY 10020
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	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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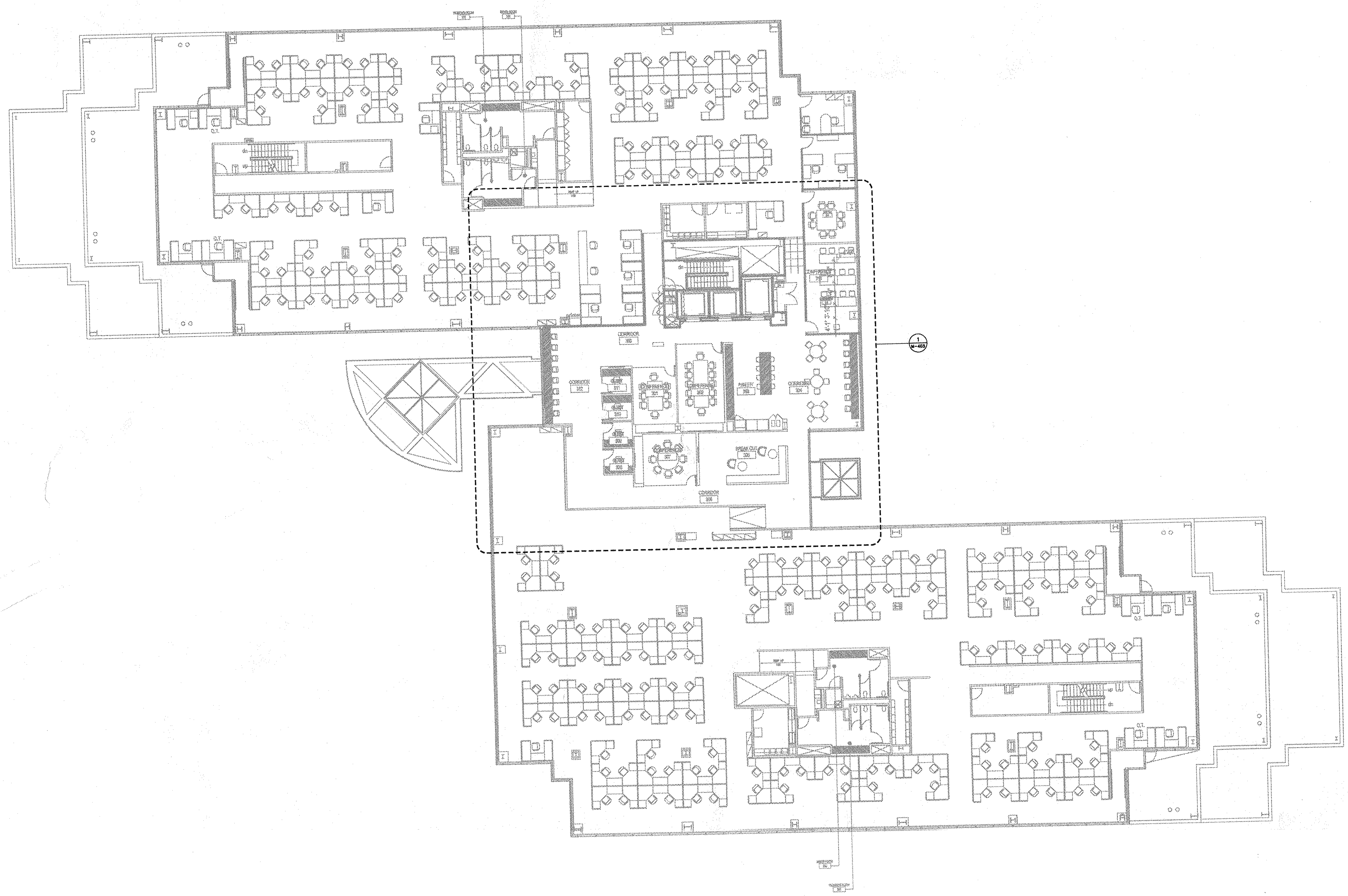
Description
OVERALL SECOND FLOOR MECHANICAL PLAN

Scale
3/32" = 1'-0"

True North
Ref North

M-102



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5	11/19/12	-	-
	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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Description
OVERALL THIRD FLOOR MECHANICAL PLAN 6

Scale
3/32" = 1'-0"

True North
Ref North

M-103

The corner tick marks represent the 30"x46" plot area.

1

OVERALL THIRD FLOOR MECHANICAL PLAN

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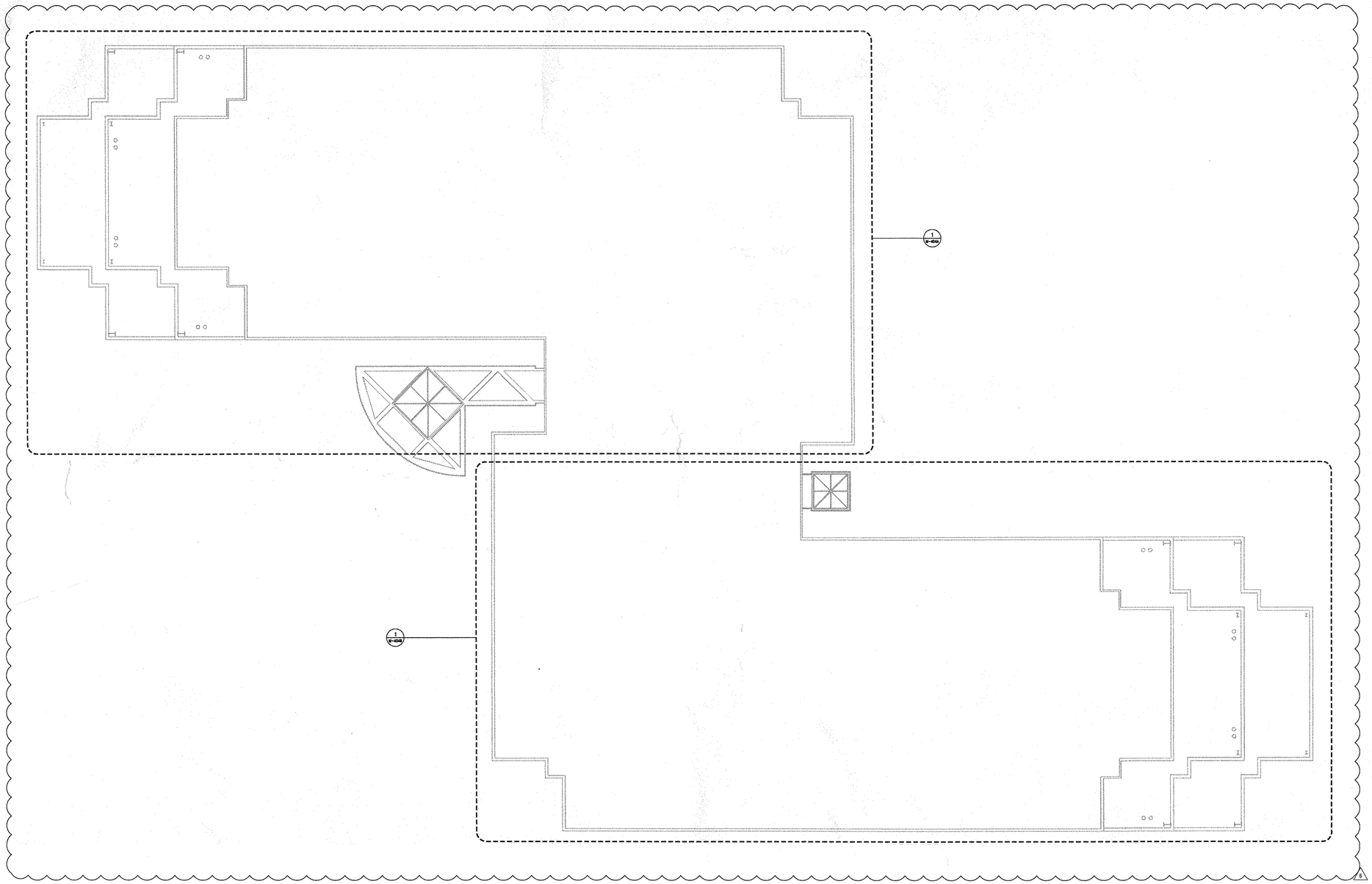

OVERALL ROOF MECHANICAL PLAN

1

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5		11/19/12	-	-
		BULLETIN 3		
6		02/21/13	-	-
		BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\M-104-VZCOX000.dwg

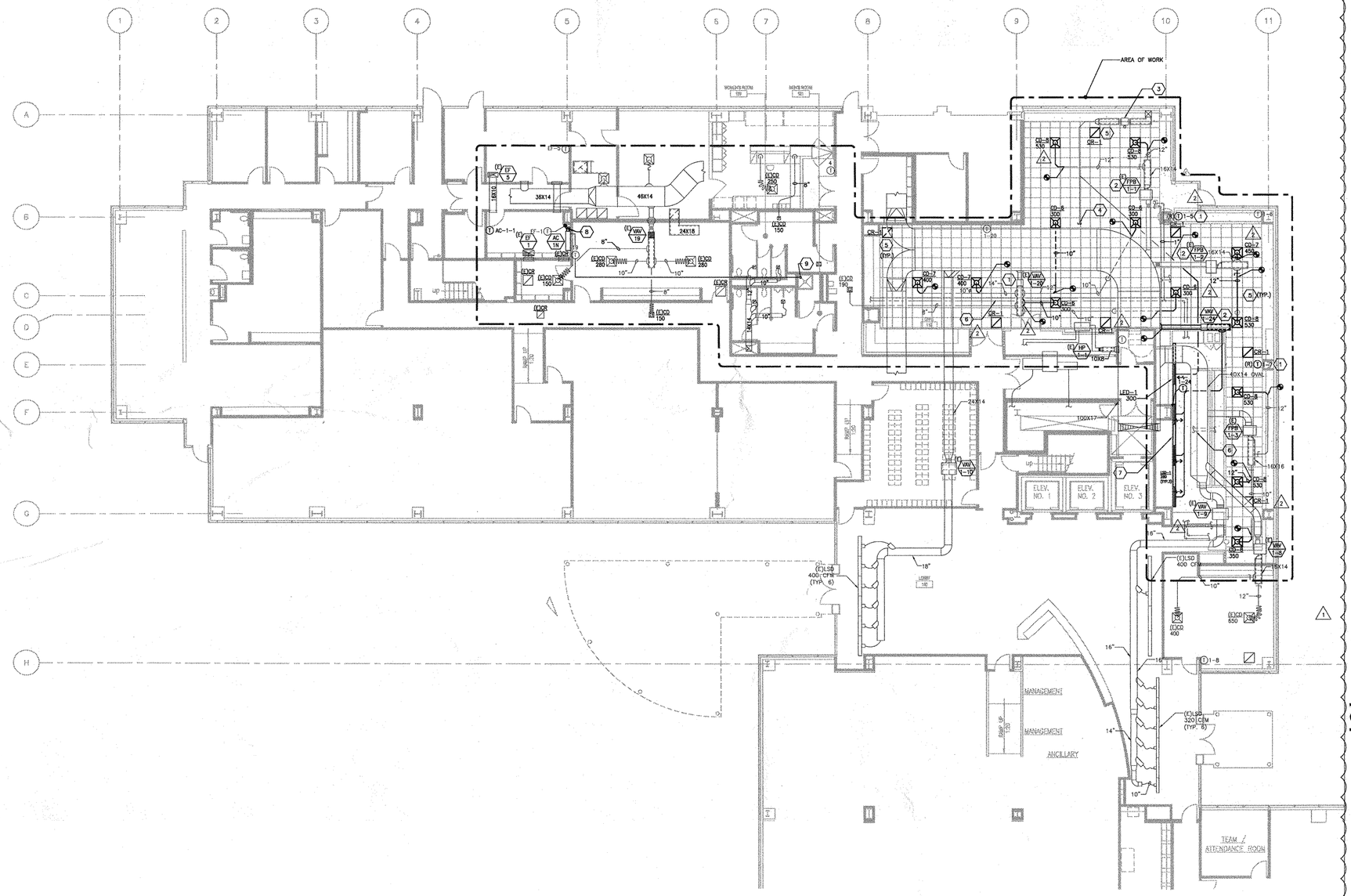
Description
OVERALL ROOF MECHANICAL PLAN

Scale
3/32" = 1'-0"

True North
Ref North

M-104

△ 6



ENLARGED FIRST FLOOR MECHANICAL PLAN

1

SHEET NOTES

1. RELOCATE (E) THERMOSTAT TO LOCATION AS SHOWN. EXTEND (E) PNEUMATIC LINE AS REQUIRED.
2. REBALANCE VAV/FP BOX, ALL ASSOCIATED DIFFUSERS TO CFM AS SHOWN.
3. (E) EXH. FAN TO REMAIN. REBALANCE EXH. FAN TO CFM AS SHOWN.
4. DEMO AND CAP (E) EA DUCT. FIELD VERIFY ROUTING ON (E) EA DUCT.
5. PROVIDE (N) CEILING DIFFUSER, RETURN AIR GRILLE, AND EXHAUST GRILLE TO LOCATION AS SHOWN TO MATCH NEW ARCHITECTURE CEILING GRID.
6. (E) HWS&R TO REMAIN.
7. INACTIVE BLANKED SEGMENT OF LINEAR SUPPLY DIFFUSER TO MATCH ACTIVE PORTION. 1
8. (N) REFRIGERANT PIPING UP THROUGH ROOF. EXACT LOCATION OF PIPING TO BE COORDINATED IN THE FIELD.
9. (N) CONDENSATE PIPE DN THROUGH CEILING AND SPILL TO (E) SERVICE SINK.

GENERAL NOTES

1. WALL, FLOOR, AND CEILING DEVICES SHOWN FOR QUANTITY AND APPROXIMATE LOCATION ONLY. EXACT LOCATION SHALL BE PER ARCHITECTURAL DRAWINGS OR AS DIRECTED BY ARCHITECT IN THE FIELD.
2. DUCT SIZES:
   - 2.1. UPSTREAM OF VAV BOX SHALL MATCH VAV BOX INLET SIZE.
   - 2.2. DOWNSTREAM OF VAV BOX. REFER TO BRANCH DUCT SCHEDULE ON M-601.
3. MANUAL VOLUME DAMPER (TYP.) FOR EACH BRANCH DUCT TO AIR OUTLET. LOCATE AT BRANCH AS FAR AS POSSIBLE FROM AIR OUTLET. FOR DAMPERS LOCATED ABOVE HARD LID OR INACCESSIBLE CEILING, PROVIDE REMOTE DAMPER REGULATORS. COORDINATE LOCATION OF DAMPER ACCESS REMOTE REGULATOR CAP WITH ARCHITECT.
4. REPLACE FILTERS FOR ALL FPB. 1

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1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

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A member company of SH Group, Inc.
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1		08/10/12	-	-
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		BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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Description
ENLARGED FIRST FLOOR MECHANICAL PLAN

Scale
1/8" = 1'-0"

True North
Ref North

M-401

3

The corner tick marks represent the 30"x42" plot area.

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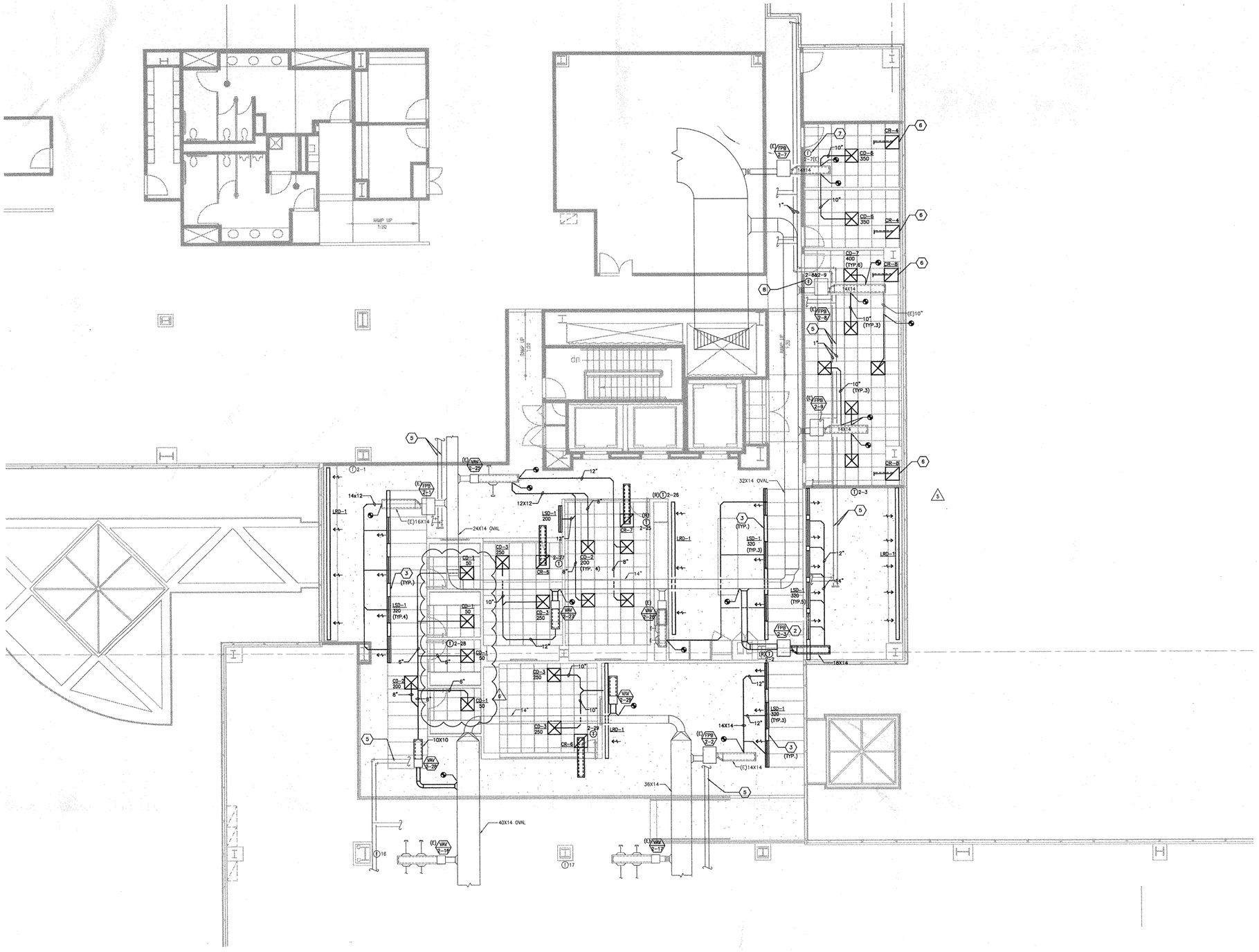

ENLARGED SECOND FLOOR MECHANICAL PLAN

1

SHEET NOTES

1. DEMO (E) FPB BOX, ALL ASSOCIATED DUCTWORK, DIFFUSERS, AND PIPING. CAP (E) SA DUCT AND PIPING CLOSE TO MAIN.
2. PROVIDE ¾" HWS&R TO REHEAT COIL FROM (E) HWS&R.
3. INACTIVE BLANKED SEGMENT OF LINEAR SUPPLY DIFFUSER TO MATCH ACTIVE PORTION.
4. DEMO (E) SA DUCT FROM POINT OF DISCONNECT. CAP (E) UNUSED SA DUCT OPENING AIRTIGHT.
5. (E) HWS&R TO REMAIN.
6. (N) RETURN GRILLE TO HAVE RETURN BOOT. SEE DETAIL 8/M-501.
7. (E) TEMPERATURE SENSOR TO REMAIN.
8. PROVIDE ONE (N) THERMOSTAT TO CONTROL BOTH (E) VAV BOXES 2-8 AND 2-9.

GENERAL NOTES

1. WALL, FLOOR, AND CEILING DEVICES SHOWN FOR QUANTITY AND APPROXIMATE LOCATION ONLY. EXACT LOCATION SHALL BE PER ARCHITECTURAL DRAWINGS OR AS DIRECTED BY ARCHITECT IN THE FIELD.
2. DUCT SIZES:
   - 2.1. UPSTREAM OF VAV BOX SHALL MATCH VAV BOX INLET SIZE.
   - 2.2. DOWNSTREAM OF VAV BOX. REFER TO BRANCH DUCT SCHEDULE ON M-601.
3. MANUAL VOLUME DAMPER (TYP.) FOR EACH BRANCH DUCT TO AIR OUTLET. LOCATE AT BRANCH AS FAR AS POSSIBLE FROM AIR OUTLET. FOR DAMPERS LOCATED ABOVE HARD LID OR INACCESSIBLE CEILING, PROVIDE REMOTE DAMPER REGULATIONS. COORDINATE LOCATION OF DAMPER ACCESS REMOTE REGULATOR CAP WITH ARCHITECT.
4. REPLACE FILTER FOR ALL FPB.

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1800 Solar Drive
Oxnard, CA 93030

Gensler

1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

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6		02/21/13	-	-
		BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\M-402A-VZCOX000.dwg

Description
ENLARGED SECOND FLOOR MECHANICAL PLAN

Scale
3/16" = 1'-0"

True North
Ref North

M-402A

6

The corner tick marks represent the 30"x42" plot area.

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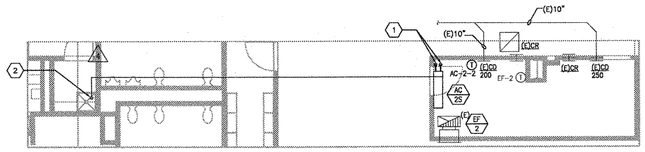
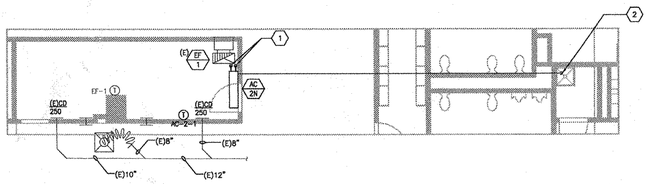


SECOND FLOOR IDF ROOM SOUTH - ENLARGED MECHANICAL PLAN 1



SECOND FLOOR IDF ROOM NORTH - ENLARGED MECHANICAL PLAN 2

SHEET NOTES

1. (N) REFRIGERANT PIPING UP THROUGH ROOF. EXACT LOCATION OF PIPING TO BE COORDINATED IN THE FIELD.
2. (N) CONDENSATE PIPE ON THROUGH CEILING AND SPILL TO (E) SERVICE SINK.

GENERAL NOTES

1. –

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1800 Solar Drive
Oxnard, CA 93030

Gensler

1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

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Suite 200
Culver City, Ca. 90230
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6		02/21/13	-	-
		BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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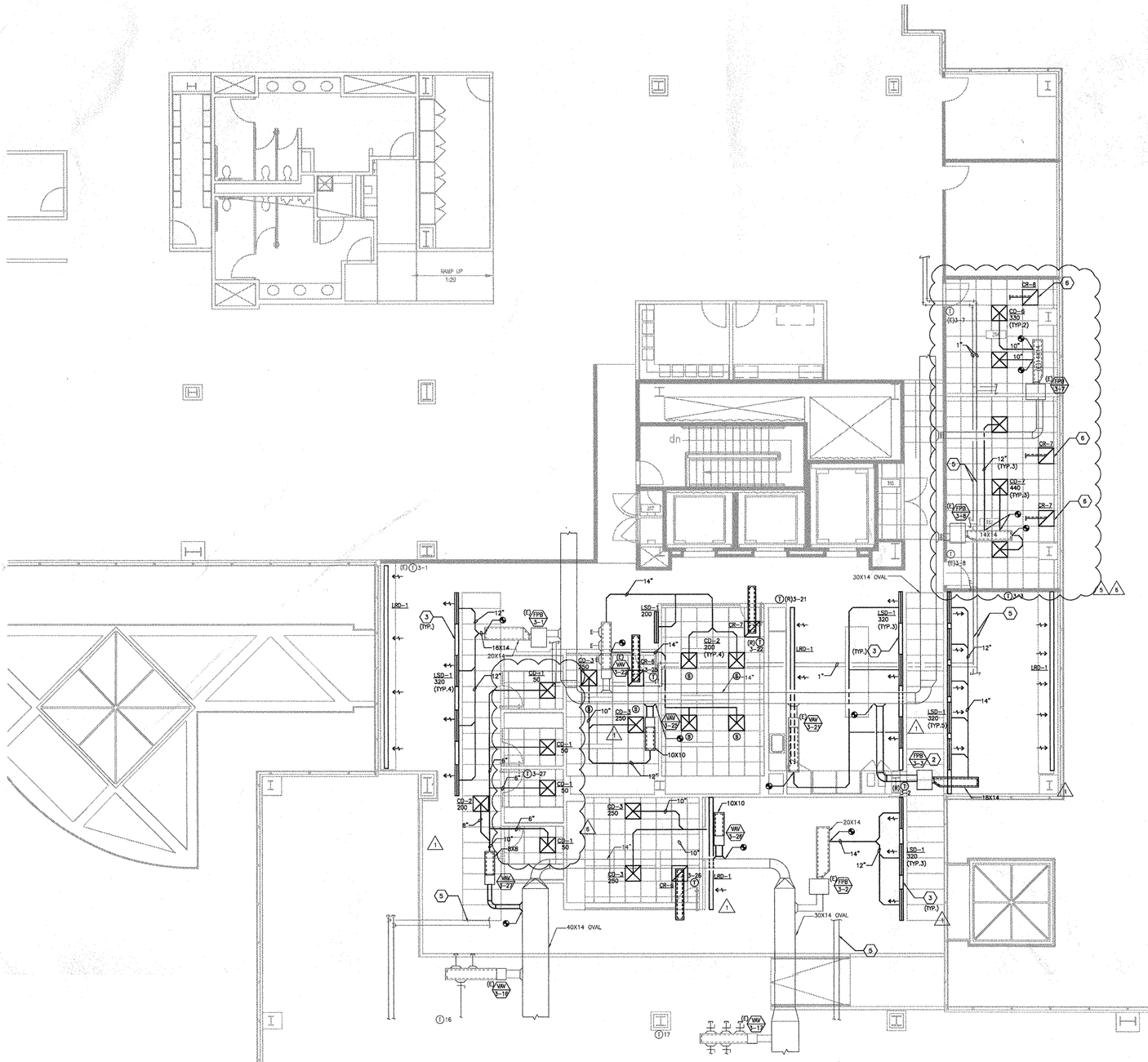
Description
ENLARGED SECOND FLOOR MECHANICAL PLAN

Scale
3/16" = 1'-0"

True North
Ref North

M-402B

The corner tick marks represent the 30"x42" plot area.



ENLARGED THIRD FLOOR MECHANICAL PLAN

1

SHEET NOTES

1. DEMO (E) FPB BOX, ALL ASSOCIATED DUCTWORK, DIFFUSERS, AND PIPING. CAP (E) SA DUCT AND PIPING CLOSE TO MAIN.
2. PROVIDE ¾" HWS&R TO REHEAT COIL FROM (E) HWS&R.
3. INACTIVE BLANKED SEGMENT OF LINEAR SUPPLY DIFFUSER TO MATCH ACTIVE PORTION.
4. DEMO (E) SA DUCT FROM POINT OF DISCONNECT. CAP (E) UNUSED SA DUCT OPENING AIRTIGHT.
5. (E) HWS&R TO REMAIN. 1
6. (N) RETURN GRILLE TO HAVE RETURN BOOT. SEE DETAIL 8/M-501.

GENERAL NOTES

1. WALL, FLOOR, AND CEILING DEVICES SHOWN FOR QUANTITY AND APPROXIMATE LOCATION ONLY. EXACT LOCATION SHALL BE PER ARCHITECTURAL DRAWINGS OR AS DIRECTED BY ARCHITECT IN THE FIELD.
2. DUCT SIZES:
   - 2.1. UPSTREAM OF VAV BOX SHALL MATCH VAV BOX INLET SIZE.
   - 2.2. DOWNSTREAM OF VAV BOX. REFER TO BRANCH DUCT SCHEDULE ON M-601.
3. MANUAL VOLUME DAMPER (TYP.) FOR EACH BRANCH DUCT TO AIR OUTLET. LOCATE AT BRANCH AS FAR AS POSSIBLE FROM AIR OUTLET. FOR DAMPERS LOCATED ABOVE HARD LID OR INACCESSIBLE CEILING, PROVIDE REMOTE DAMPER REGULATORS. COORDINATE LOCATION OF DAMPER ACCESS REMOTE REGULATOR CAP WITH ARCHITECT.
4. REPLACE FILTER FOR ALL FPB. 1

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1800 Solar Drive
Oxnard, CA 93030

Gensler

1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.

Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 92230
Tel: 310.312.0200
Fax: 310.473.7468
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	REVISED FOR PLAN CHECK		
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6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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Description
ENLARGED THIRD FLOOR MECHANICAL PLAN

Scale
3/16"=1'-0"

True North
Ref North

M-403 6

The corner tick marks represent the 30"x42" plot area.

SHEET NOTES

1. (N) REFRIGERANT PIPING DOWN TO SECOND FLOOR AND CONNECT TO AC-2N.
2. (N) REFRIGERANT PIPING DOWN TO FIRST FLOOR AND CONNECT TO AC-1N.

GENERAL NOTES

1. –

ENLARGED ROOF MECHANICAL PLAN

1

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1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
900 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
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4		10/23/2012 REVISED FOR PLAN CHECK	-	-
5		11/19/12 BULLETIN 3	-	-
6		02/21/13 BULLETIN 4	-	-

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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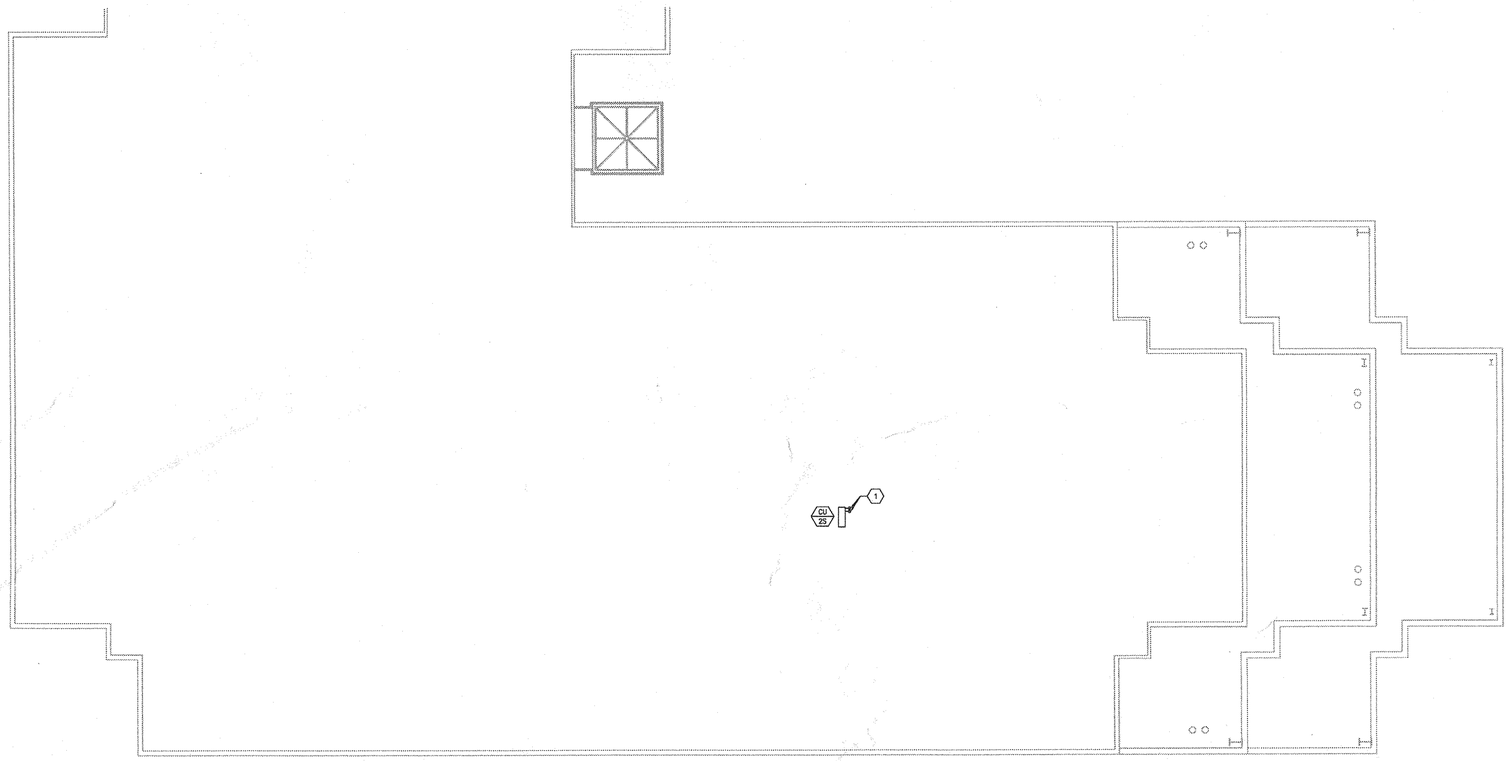
Description
ENLARGED ROOF MECHANICAL PLAN

Scale
1/8" = 1'-0"

True North
Ref North

M-404A
6



ENLARGED ROOF MECHANICAL PLAN

1

SHEET NOTES

1. (N) REFRIGERANT PIPING DOWN TO SECOND FLOOR AND CONNECT TO AC-2S.

GENERAL NOTES

1. –

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1800 Solar Drive
Oxnard, CA 93030

Gensler

1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

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	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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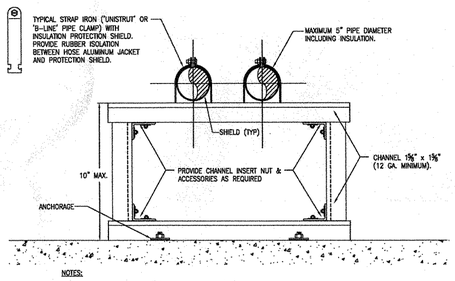
Description
ENLARGED ROOF MECHANICAL PLAN

Scale
1/8" = 1'-0"

True North
Ref North

M-404B
6

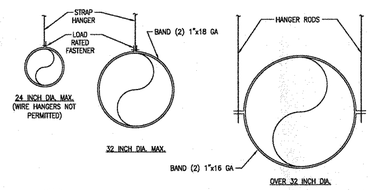
The corner tick marks represent the 30"x42" plot area.



NOTES:

1. PROVIDE INDEPENDENT PIPE SUPPORTS IF PIPES ARE AT DIFFERENT ELEVATIONS OR OBSTRUCTIONS UNDER RAISED FLOOR PREVENT MULTIPLE PIPE SUPPORT INSTALLATION.

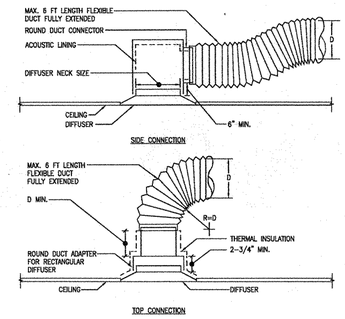
10 FLOOR MOUNTED PIPING SUPPORT
SCALE: NONE



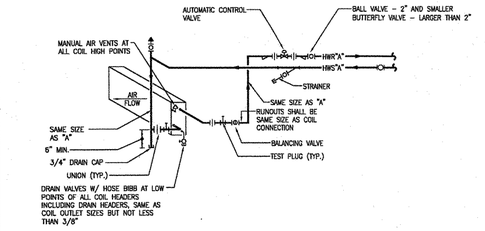
NOTES:

1. FOR HANGERS SIZE AND SPACING, SEE CURRENT SMACNA HVAC DUCT CONSTRUCTION STANDARDS TABLE 5-2.
2. FOR UPPER ATTACHMENT TO BUILDING, SEE CURRENT SMACNA HVAC DUCT CONSTRUCTION STANDARDS FIG 5-1 AND FIG 5-2 WITH SPECIFIC BUILDING STRUCTURAL ENGINEER APPROVAL.
3. FOR BRACING AND OTHER SEISMIC REQUIREMENTS, SEE GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS PUBLISHED BY SMACNA AND INTERNATIONAL MECHANICAL CODE.
4. STRAPS ARE GALVANIZED STEEL, RODS ARE UNCOATED OR GALVANIZED STEEL.
5. PROVIDE MAX 6 FT SPACING FOR DUCT HANGERS.

7 TYPICAL HORIZONTAL ROUND DUCT SUPPORTS
SCALE: NONE



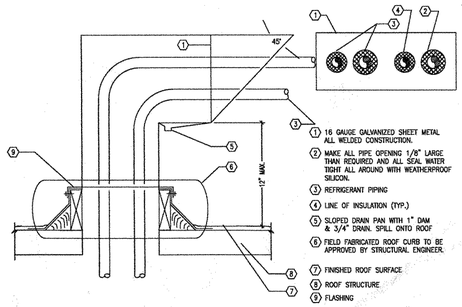
4 DIFFUSER CONNECTION DETAIL
SCALE: NONE



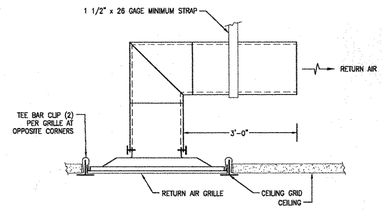
NOTES:

1. LOCATE PIPE UNIONS AND ARRANGE PIPING TO FACILITATE COIL REMOVAL.
2. PROVIDE SIMILAR PIPING ARRANGEMENTS ON EACH SIDE FOR TWO SECTION WIDE COIL ASSEMBLY.
3. ON LINES 2" AND SMALLER, LOCATE THERMOMETER WELLS IN PIPE ELBOW.
4. FOR PIPE SIZES "A", SEE PLANS.

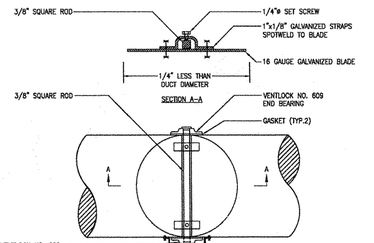
1 HOT WATER HEATING COIL - ONE HIGH
SCALE: NONE



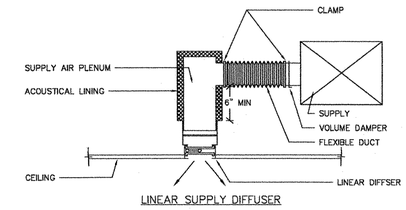
11 REFRIGERANT PIPING ROOF PENETRATION
SCALE: NONE



8 RETURN AIR SOUND BOOT DETAIL
SCALE: NONE

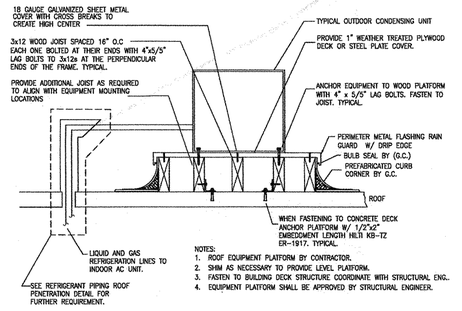


5 ROUND VOLUME DAMPER LOW PRESSURE UP TO 14"ϕ
SCALE: NONE



LINEAR SUPPLY DIFFUSER

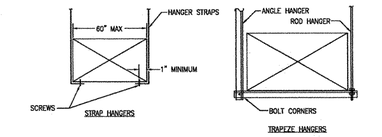
2 LINEAR DIFFUSER DETAIL
SCALE: NONE



NOTES:

1. ROOF EQUIPMENT PLATFORM BY CONTRACTOR.
2. SHIM AS NECESSARY TO PROVIDE LEVEL PLATFORM.
3. FASTEN TO BUILDING DECK STRUCTURE COORDINATE WITH STRUCTURAL ENG..
4. EQUIPMENT PLATFORM SHALL BE APPROVED BY STRUCTURAL ENGINEER.

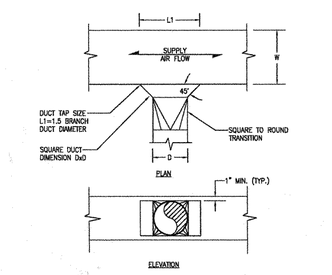
12 CONDENSER ROOF MOUNTING DETAIL
SCALE: NONE



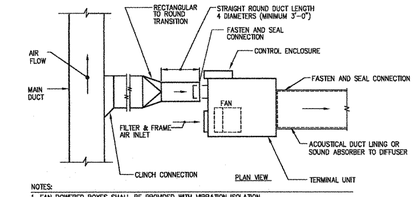
NOTES:

1. FOR HANGERS SIZE AND SPACING, SEE CURRENT SMACNA HVAC DUCT CONSTRUCTION STANDARDS TABLE 5-1.
2. FOR UPPER ATTACHMENT TO BUILDING, SEE CURRENT SMACNA HVAC DUCT CONSTRUCTION STANDARDS FIG 5-1 AND FIG 5-2 WITH SPECIFIC BUILDING STRUCTURAL ENGINEER APPROVAL.
3. FOR BRACING AND OTHER SEISMIC REQUIREMENTS, SEE GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS PUBLISHED BY SMACNA AND INTERNATIONAL MECHANICAL CODE..
4. STRAPS ARE GALVANIZED STEEL, RODS ARE UNCOATED OR GALVANIZED STEEL.
5. PROVIDE MAX 6 FT SPACING FOR DUCT HANGERS.

9 TYPICAL HORIZONTAL RECTANGULAR DUCT SUPPORTS
SCALE: NONE



6 RECTANGULAR TO ROUND BRANCH TAP
SCALE: NONE



NOTES:

1. FAN POWERED BOXES SHALL BE PROVIDED WITH VIBRATION ISOLATION. SUPPORT FROM BUILDING STRUCTURE ABOVE.
2. WHEN MINIMUM UPSTREAM STRAIGHT DUCT CONNECTION TO TERMINALS AS INDICATED ABOVE CANNOT BE MAINTAINED, PROVIDE ORIFICE PLATE, STRAIGHTENING VANES OR OTHER DEVICE AS RECOMMENDED BY TERMINAL UNIT MANUFACTURER AND SUBMIT TO ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
3. MANUFACTURER OF TERMINAL UNIT SHALL PROVIDE CONTROLS ON LEFT OR RIGHT SIDE AS REQUIRED BY FIELD CONDITIONS.
4. ARRANGE ACCESS TO PERMIT EASY FIELD BALANCE AND MAINTENANCE OF TERMINAL UNIT.
5. THERMOSTAT WITH MINIMUM 20'-0" PIGTAIL

3 FAN POWERED TERMINAL UNIT INSTALLATION (PLAN VIEW)
SCALE: NONE

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
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Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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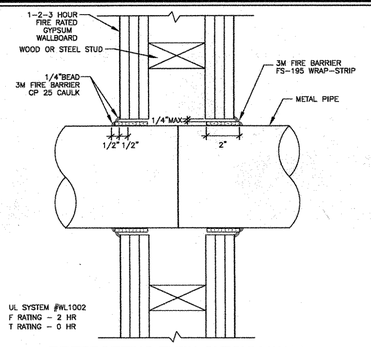
Description
MECHANICAL DETAILS

Scale
NONE

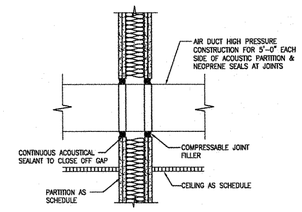
True North
Ref North

M-501

The corner tick marks represent the 30"x42" plot area.



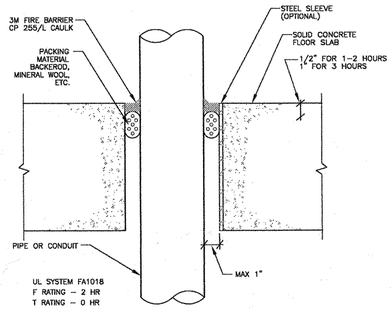
4 FIREPROFFING THRU GYPSUM WALL
SCALE: NONE



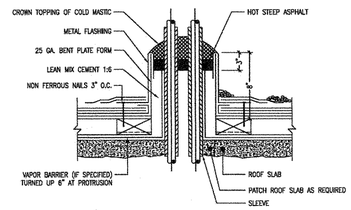
NOTES:

1. PENETRATION OF ACOUSTICAL PARTITIONS BY DUCTWORK SHALL BE ACOUSTICALLY SEALED AS SHOWN. ANY GAP LARGER THAN 1/2" SHALL BE COVERED WITH GYPSUM BOARD, LAPPED A MINIMUM OF 2" AND SCREWED BEFORE USING ACOUSTICAL SEALANT.

1 DUCT PENETRATION OF ACOUSTIC PARTITION
SCALE: NONE

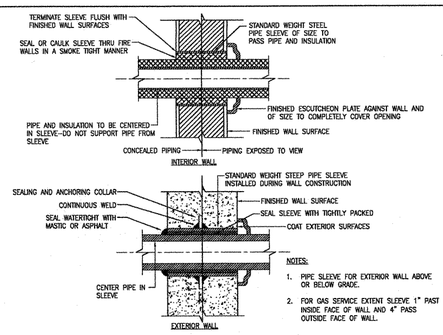


5 FIREPROFFING THRU CONCRETE SLAB
SCALE: NONE



NOTE:
SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR THE ROOF CONSTRUCTION.

2 PIPING THROUGH ROOF DETAIL
SCALE: NONE



NOTES:

1. PIPE SLEEVE FOR EXTERIOR WALL ABOVE OR BELOW GRADE.
2. FOR GAS SERVICE EXTENT SLEEVE 1" PAST INSIDE FACE OF WALL AND 4" PASS OUTSIDE FACE OF WALL.

3 PIPE SLEEVE THRU WALL
SCALE: NONE

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

△	Issue	Date & Issue Description	By	Check
	01	07/31/12	-	-
		PLAN CHECK		
1		08/10/12	-	-
		ISSUE FOR CONSTRUCTION		
2		09/12/12	-	-
		BULLETIN 1		
3		10/09/12	-	-
		BULLETIN 2		
4		10/23/2012	-	-
		REVISED FOR PLAN CHECK		
5		11/19/12	-	-
		BULLETIN 3		
6		02/21/13	-	-
		BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\M-502-VZCOX000.dwg

Description
MECHANICAL DETAILS

Scale
NONE

M-502

True North
Ref North

The corner tick marks represent the 30"x42" plot area.

AIR COOLED AC UNIT (EVAPORATOR) SCHEDULE

UNIT NO.	SERVICE	LOCATION	REFRIGERANT	EVAPORATOR FAN				DX COIL				FILTER	ELECTRIC DATA		DIMENSIONAL DATA		BASIS OF DESIGN		REMARKS
				CFM	ESP (IN WG)	MOTOR		CAPACITY		EAT		TYPE	V/PH/HZ	FLA/MCA	LxWxH (IN.)	WEIGHT (LB.)	MANUFACTURER	MODEL NO.	
						HP	RPM	TOTAL	SENSIBLE	DB °F	RH %								
AC-1N	IDF ROOM	1ST FLOOR NORTH	R-410A	775	-	-	-	24000	-	75	40	-	208/1/60	1 / 0.36	46 x 12 x 14	46	MITSUBISHI	PKA-A24KA4	NOTE 1
AC-2N	IDF ROOM	2ND FLOOR NORTH	R-410A	920	-	-	-	34200	-	75	40	-	208/1/60	1 / 0.57	46 x 12 x 14	46	MITSUBISHI	PKA-A36KA4	NOTE 1
AC-2S	IDF ROOM	2ND FLOOR SOUTH	R-410A	920	-	-	-	34200	-	75	40	-	208/1/60	1 / 0.57	46 x 12 x 14	46	MITSUBISHI	PKA-A36KA4	NOTE 1

NOTES:
1. PROVIDE FACTORY-OPTIONAL CONDENSATE PUMP, PRIMARY PAN FLOAT SWITCH, AND PROGRAMMABLE THERMOSTAT.

AIR COOLED CONDENSING UNIT SCHEDULE

UNIT NO.	SERVICE	LOCATION	REFRIGERANT	NOMINAL CAPACITY (TONS)	AMBIENT AIR TEMP. (°F)	CONDENSER FAN (S)		COMPRESSOR (S)		ELECTRIC DATA		DIMENSIONAL DATA		VIBRATION ISOLATION			BASIS OF DESIGN		REMARKS
						TYPE	QTY.	NO.	TYPE	V/PH/HZ	MCA / MOCP	LxWxH (IN)	WEIGHT (LB.)	SPECIFICATION		MIN. STATIC DEFLECTION (IN)	MANUFACTURER	MODEL NO.	
														MOUNTING TYPE	BASE TYPE				
CU-1N	AC-1N	ROOF	R-410A	2	95	PROPELLER	1	-	SCROLL	208/1/60	18 / 30	37 x 13 x 37	163	NEOPRENE PAD	ROOF PLATFORM	0.25	MITSUBISHI	PUY-A24NHA4-BS	-
CU-2N	AC-2N	ROOF	R-410A	3	95	PROPELLER	1	-	SCROLL	208/1/60	25 / 40	37 x 13 x 37	163	NEOPRENE PAD	ROOF PLATFORM	0.25	MITSUBISHI	PUY-A36NHA4-BS	-
CU-2S	AC-2S	ROOF	R-410A	3	95	PROPELLER	1	-	SCROLL	208/1/60	25 / 40	37 x 13 x 37	163	NEOPRENE PAD	ROOF PLATFORM	0.25	MITSUBISHI	PUY-A36NHA4-BS	-

NOTES:
1. -

VAV BOX SCHEDULE

UNIT NO.	AHU NO.	COOLING CFM		HEATING CFM		ELECTRIC HEAT				NC		INLET DIAM. (IN)	BASIS OF DESIGN		REMARKS
		MAX.	MIN.	MAX.	MIN.	EAT/LAT (°F)	KW	NO. STAGES	V/PH/HZ	DISCHARGE	RADIATED		MANUFACTURER	MODEL NO.	
(E) VAV-1-20	1	2190	1140	-	-	-	-	-	-	-	-	14	EXISTING	-	NOTE 3
VAV-1-24	1	840	250	-	-	-	-	-	-	-	-	10	PRICE	SPV	NEW NOTES
(E) VAV-2-25	2	1000	300	-	-	-	-	-	-	-	-	10	EXISTING	-	NOTE 3
(E) VAV-2-26	2	960	290	-	-	-	-	-	-	-	-	10	EXISTING	-	NOTE 3
VAV-2-27	2	500	150	-	-	-	-	-	-	-	-	8	PRICE	SPV	NEW. NOTES
VAV-2-28	2	400	120	-	-	-	-	-	-	-	-	6	PRICE	SPV	NEW. NOTES
VAV-2-29	2	500	150	-	-	-	-	-	-	-	-	8	PRICE	SPV	NEW. NOTES
(E) VAV-3-22	3	1000	300	-	-	-	-	-	-	-	-	10	EXISTING	-	NOTE 3
VAV-3-25	3	500	150	-	-	-	-	-	-	-	-	8	PRICE	SPV	NEW. NOTES
VAV-3-26	3	500	150	-	-	-	-	-	-	-	-	8	PRICE	SPV	NEW. NOTES
VAV-3-27	3	400	120	-	-	-	-	-	-	-	-	6	PRICE	SPV	NEW. NOTES

NOTES:
1. NEW VAV BOX SHALL BE PRICE MODEL SPV, PRESSURE INDEPENDENT TYPE WITH INTEGRAL SOUND ATTENUATOR.
2. PROVIDE NEW VAV BOX WITH PNEUMATIC CONTROLS AND THERMOSTAT TO MATCH BUILDING STANDARD.
3. REBALANCE ALL VAV BOX TO CFM AS SHOWN.

PARALLEL FAN POWERED TERMINAL SCHEDULE (HOT WATER)

UNIT NO.	AHU NO.	INLET DIA.	PRIMARY AIR FAN (CFM)		NC		DOWNSTREAM SP (IN H2O)	FAN DATA			HOT WATER REHEAT				BASIS OF DESIGN		REMARKS
			MAX.	MIN.	DISCHARGE	RADIATED		CFM	HP	V / PH	GPM	NO. ROWS	EAT/LAT (°F)	EWT/LWT (°F)	MANUFACTURER	MODEL NO.	
(E) FPB-1-1	1	10	1060	500	-	-	0.5	400	-	120 / 1	2	-	55/95	180/160	EXISTING	-	NOTE 1
(E) FPB-1-2	1	10	980	295	-	-	0.5	390	-	120 / 1	2	-	55/95	180/160	EXISTING	-	NOTE 1
(E) FPB-1-3	1	12	1410	425	-	-	0.5	600	-	120 / 1	2	-	55/95	180/160	EXISTING	-	NOTE 1
(E) FPB-2-1	2	10	1280	385	-	-	0.5	400	-	120 / 1	2	-	55/95	180/160	EXISTING	-	NOTE 1
(E) FPB-2-2	2	10	960	290	-	-	0.5	400	-	120 / 1	1	-	55/95	180/160	EXISTING	-	NOTE 1
FPB-2-3	2	12	1600	480	-	-	0.5	800	K	120 / 1	2	1	55/95	180/160	PRICE	FPV-3012	NOTE 1 & 2
(E) FPB-2-7	2	8	700	210	-	-	0.5	250	-	120 / 1	1	-	55/95	180/160	EXISTING	-	NOTE 1
(E) FPB-2-8	2	10	1200	360	-	-	0.5	400	-	120 / 1	2	-	55/95	180/160	EXISTING	-	NOTE 1
(E) FPB-2-9	2	10	1200	360	-	-	0.5	400	-	120 / 1	2	-	55/95	180/160	EXISTING	-	NOTE 1
(E) FPB-3-1	3	10	1280	385	-	-	0.5	450	-	120 / 1	2	-	55/95	180/160	EXISTING	-	NOTE 1
(E) FPB-3-2	3	10	960	290	-	-	0.5	400	-	120 / 1	1	-	55/95	180/160	EXISTING	-	NOTE 1
FPB-3-3	3	12	1600	480	-	-	0.5	800	K	120 / 1	2	1	55/95	180/160	PRICE	FPV-3012	NOTE 1 & 2
(E)FPB-3-7	3	10	660	230	-	-	0.5	400	-	120 / 1	2	-	55/95	180/160	EXISTING	-	NOTE 1
(E) FPB-3-8	3	10	1320	400	-	-	0.5	400	-	120 / 1	2	-	55/95	180/160	EXISTING	-	NOTE 1

NOTES:
1. REBALANCE ALL FAN POWERED BOX TO CFM AS SHOWN.
2. PROVIDE FAN POWERED BOX WITH DISCONNECT AND ECM FAN.
3. NEW FPB SHALL BE PRICE MODEL FPV, PRESSURE INDEPENDENT TYPE, WITH HOT WATER COILS, RETURN AIR FILTER.

BRANCH DUCT SCHEDULE

CFM	ROUND DUCT (IN)	RECTANGULAR DUCT (IN)					
		W x 4	W x 6	W x 8	W x 10	W x 12	W x 14
UP TO 120	6	8	6	X	X	X	X
120 - 150	8	10	8	X	X	X	X
151 - 240	8	16	10	8	X	X	X
241 - 320	10	X	12	10	X	X	X
321 - 420	10	X	16	12	10	X	X
421 - 500	12	X	X	14	10	X	X
501 - 660	12	X	X	16	12	X	X
661 - 850	14	X	X	20	14	12	X
851 - 1000	14	X	X	22	16	14	X
1001 - 1200	16	X	X	26	20	16	14
1201 - 1400	16	X	X	30	24	18	16
1401 - 1700	X	X	X	34	26	20	18

NOTES:
1. THIS SCHEDULE APPLIES TO BRANCH DUCT TO INDIVIDUAL DIFFUSERS THAT ARE NOT SIZED ON PLANS .
2. APPLICABLE FOR LOW PRESSURE DUCT WORK ONLY (<2" WG).
3. "W" INDICATED IN THE SCHEDULE IS DUCT WIDTH.

DIFFUSER SCHEDULE

MARK NO.	TYPE	CFM RANGE	MAX. SP (IN.)	FRAME SIZE	NECK SIZE	MAX N.C.	REMARKS
CD-1	CEILING DIFFUSER	0 - 130	0.10	24 X 24	6" Ø	30	PRICE ASM SERIES ADJUSTA SLOT, MODULAR, 1" SLOT WIDTH
CD-2	CEILING DIFFUSER	131 - 200	0.10	24 X 24	8" Ø	30	PRICE ASM SERIES ADJUSTA SLOT, MODULAR, 1" SLOT WIDTH
CD-3	CEILING DIFFUSER	201 - 250	0.15	24 X 24	10" Ø	30	PRICE ASM SERIES ADJUSTA SLOT, MODULAR, 1" SLOT WIDTH
CD-4	CEILING DIFFUSER	0 - 130	0.10	24 X 24	6 X 6	30	PRICE SPD SQUARE PLAQUE DIFFUSER
CD-5	CEILING DIFFUSER	131 - 255	0.10	24 X 24	8 X 8	30	PRICE SPD SQUARE PLAQUE DIFFUSER
CD-6	CEILING DIFFUSER	226 - 350	0.10	24 X 24	10 X 10	30	PRICE SPD SQUARE PLAQUE DIFFUSER
CD-7	CEILING DIFFUSER	351 - 450	0.10	24 X 24	12 X 12	30	PRICE SPD SQUARE PLAQUE DIFFUSER
CD-8	CEILING DIFFUSER	451 - 550	0.10	24 X 24	14 X 14	30	PRICE SPD SQUARE PLAQUE DIFFUSER
CR / EG-1	CEILING GRILLE	0 - 2000	0.10	24 X 24	24 X 24	30	PRICE PDDR - PERFORATED RETURN
CR / EG-2	CEILING GRILLE	0 - 200	0.10	24 X 24	8 X 8	30	PRICE PDDR - DUCTED PERFORATED RETURN
CR / EG-3	CEILING GRILLE	226 - 350	0.10	24 X 24	10 X 10	30	PRICE PDDR - DUCTED PERFORATED RETURN
CR / EG-4	CEILING GRILLE	351 - 450	0.10	24 X 24	12 X 12	30	PRICE PDDR - DUCTED PERFORATED RETURN
CR / EG-5	CEILING GRILLE	451 - 550	0.10	24 X 24	14 X 14	30	PRICE PDDR - DUCTED PERFORATED RETURN
CR / EG-6	CEILING GRILLE	551 - 700	0.10	24 X 24	16 X 16	30	PRICE PDDR - DUCTED PERFORATED RETURN
CR / EG-7	CEILING GRILLE	701 - 900	0.10	24 X 24	18 X 18	30	PRICE PDDR - DUCTED PERFORATED RETURN
CR / EG-8	CEILING GRILLE	901 - 1600	0.10	24 X 24	22 X 22	30	PRICE PDDR - DUCTED PERFORATED RETURN
LSD-1	LINEAR SUPPLY	80 CFM / LINEAR FOOT	0.10	SEE PLAN	12" Ø	30	PRICE FLOW LINEAR AS SERIES 4 FEET SUPPLY PLENUM, 1.5" SLOT WIDTH, 2 SLOT
LED-1	LINEAR SUPPLY	80 CFM / LINEAR FOOT	0.10	SEE PLAN	12" Ø	30	PRICE FLOW LINEAR AS SERIES 4 FEET SUPPLY PLENUM, 1.5" SLOT WIDTH, 2 SLOT
LRD-1	LINEAR RETURN	-	0.10	SEE PLAN	-	30	PRICE FLOW LINEAR AS SERIES, 1.5" SLOT WIDTH, 2 SLOT

NOTES:
1. COORDINATE FRAME STYLE WITH CEILING GRID.
2. OBTAIN ARCHITECT'S APPROVAL FOR FINISH.

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
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800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
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www.syska.com

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01	07/31/12	-	-
	PLAN CHECK		
1	08/10/12	-	-
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	BULLETIN 1		
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	REVISED FOR PLAN CHECK		
5	11/19/12	-	-
	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\M-701-VZC0X000.dwg

Description
MECHANICAL SCHEDULES

Scale
NONE

True North
Ref North

M-701

The corner tick marks represent the 30"x42" plot area.

ABBREVIATIONS

Abbreviation	Meaning
-#-	
1P	SINGLE POLE
1PH	SINGLE-PHASE
1WAY	ONE-WAY
2WAY	TWO-WAY
3/C	THREE-CONDUCTOR
3PH	THREE-PHASE
3PLY	THREE-PLY
3WAY	THREE-WAY
4PST	FOUR-POLE SINGLE THROW
4W	FOUR-WIRE
4WAY	FOUR-WAY
-A-	
A/E	ARCHITECT/ENGINEER
AC	ALTERNATING CURRENT
ACS	PNL ACCESS PANEL
ADDL	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AGGR	AGGREGATE
AH	AMPERE HOUR
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
ALT	ALTERNATE
ALUM	ALUMINUM
AMP	AMPERE
ARCH	ARCHITECT
ASC	ABOVE SUSPENDED CEILING
ASC	AMPS SHORT CIRCUIT
ASSN	ASSOCIATION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ATM	AUTOMATIC TELLER MACHINE
ATS	AUTOMATIC TRANSFER SWITCH
ATTN	ATTENTION
AUTO	AUTOMATIC
AUTOXFMR	AUTO TRANSFORMER
AUX	AUXILIARY
AV	AUDIO VISUAL
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
-B-	
BAS	BUILDING AUTOMATION SYSTEM
BC	BUILDING CODE
BFF	BELOW FINISH FLOOR
BLDG	BUILDING
BLT IN	BUILT-IN
BLW	BELOW
BLW CLG	BELOW CEILING
BRKR	BREAKER
BSMT	BASEMENT
BSTR	BOOSTER
BTWN	BETWEEN
BX	INTERLOCKED AMORED CABLE
-C-	
CAB	CABINET
CAP	CAPACITOR
CATV	COMMUNITY ANTENNA TELEVISION
CATW	CATWALK
CB	CIRCUIT BREAKER
CCR	CONTROL CONTACTOR
CCTV	CLOSED CIRCUIT TELEVISION
CCW	COUNTERCLOCKWISE
CD	CONSTRUCTION DOCUMENTS
CERT	CERTIFY
CF	CONTRACTOR FURNISHED
CG	COMMON GROUND
CH	CHILLER
CHK	CHECK
CHWP	CHILLED WATER PUMP
CHWPP	CHILLED WATER PRIMARY PUMP
CHWRP	CHILLED WATER RECIRCULATING PUMP
CI	CAST IRON
CKT	CIRCUIT
CKT BRKR	CIRCUIT BREAKER
CL	CENTER LINE
CL	CLOSE
CLASS	CLASSIFICATION
CLF	CURRENT LIMITING FUSE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CND	CONDUIT
CO	CUTOUT
COAX	COAXIAL CABLE
COL	COLUMN
COM	COMMON
COMB	COMBINATION, COMBINED
COMM	COMMUNICATION
COMPR	COMPRESSOR
CONC	CONCRETE
COND	CONDENSER
CONN	CONNECT
CONSTR	CONSTRUCTION
CONSULT	CONSULTANT
CONT	CONTROLLER
CONTR	CONTRACTOR
COORD	COORDINATE
CORR	CORRIDOR
COV PL	COVER PLATE
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CRP	CONDENSATE RETURN PUMP
CS	CONTROL SWITCH
CSI	CONSTRUCTION SPECIFICATIONS INSTITUTE
CT	CURRENT TRANSFORMER
CTRL	CONTROL
CTV	CABLE TELEVISION
CU	COEFFICIENT OF UTILIZATION
CU	COPPER
CUH	CABINET UNIT HEATER
CUR	CURRENT
CW	CLOCKWISE
-D-	
DB	DECIBEL
D-B	DESIGN BUILD
DBA	UNIT OF SOUND LEVEL
DC	DIRECT CURRENT
DCP	DIMMER CONTROL PANEL
DDC	DIRECT DIGITAL CONTROL
DEF	DEFINITION
DEG	DEGREE
DEG F	DEGREES FAHRENHEIT
DEMO	DEMOLITION
DES	DESIGNATION
DESCR	DESCRIPTION
DET	DETAIL
DGTL	DIGITAL
DIA	DIAMETER
DIAG	DIAGRAM
DIFF	DIFFERENTIAL
DIM	DIMENSION
DIR	DIRECTION
DISC	DISCONNECT
DISCH	DISCHARGE
DISTR PNL	DISTRIBUTION PANEL
DIV	DIVISION
DMPR	DAMPER
DMR	DIMMER
DMR SW	DIMMER SWITCH
DPDT	DOUBLE POLE, DOUBLE THROW
DPS	DIFFERENTIAL PRESSURE SENSOR
DPST	DOUBLE POLE, SINGLE THROW
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
DR	DRIVE
DS	DISCONNECT SWITCH
DSPL	DISPOSAL
DWG	DRAWING
DX	DUPLEX
DX OUT	DUPLEX OUTLET
-E-	
EA	EACH
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
EH	ELECTRIC HEATER
EHP	ELECTRIC HEATING PANEL
EHP	EFFECTIVE HORSE POWER
EL	ELEVATION
ELEC	ELECTRIC
ELECDROP	ELECTRIC DOOR OPENER
EM	ELECTROMAGNETIC
EMCP	EMERGENCY MONITORING CONTROL PANEL
EMER	EMERGENCY
EMI	ELECTROMAGNETIC INTERFERENCE
EMR	ELEVATOR MACHINE ROOM
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
ENGR	ENGINEER
ENGY	ENERGY
ENVIR	ENVIRONMENT
EO	ELECTRICAL OUTLET
EOV	ELECTRICALLY OPERATED VALVE
EP	ELECTRICAL PANEL (PANELBOARD)
EPB	ELECTRIC PANEL BOARD
EPO	EMERGENCY POWER OFF
EPRF	EXPLOSION PROOF
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ETR	EXISTING TO BE RELOCATED
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EX	EXAMPLE
EXCL	EXCLUDE
EXH FN	EXHAUST FAN
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERNAL
EXT LT	EXIT LIGHT
-F-	
F	FAHRENHEIT
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FABL	FIRE ALARM BELL
FABX	FIRE ALARM BOX
FACIL	FACILITY
FACP	FIRE ALARM CONTROL PANEL
FAS	FIRE ALARM STATION
FC	FOOTCANDLE
FCO	FUSE CUT-OUT
FCTY	FACTORY
FCU	FAN COIL UNIT
FDR	FEEDER
FF EL	FINISH FLOOR ELEVATION
FFA	FROM FLOOR ABOVE
FFB	FROM FLOOR BELOW
FIN	FINISH
FIN FLR	FINISH FLOOR
FIN GR	FINISH GRADE
FL OUT	FLOOR OUTLET
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLMT	FLUSH MOUNT
FLOUTS	SINGLE RECEPTACLE FLOOR OUTLET
FLR	FLOOR
FLT	FLOODLIGHT
FLUOR	FLUORESCENT
FLUOR FIX	FLUORESCENT FIXTURE
FOUTT	TELEPHONE FLOOR OUTLET
FOW	FACE OF WALL
FR	FIRE RATING
FRA	FIRE RATED ASSEMBLY
FREQ	FREQUENCY
FS	FULL SIZE
FT	FOOT
FU	FUSE
FU SW	FUSED SWITCH
FURN	FURNISH
FUT	FUTURE
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
FW	FIRE WALL
-G-	
G	GROUND
GA	GAGE
GC	GENERAL CONTRACTOR
GDR	GUARD RAIL
GEN	GENERATOR
GFR	GROUND FAULT RELAY
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GL	GROUND LEVEL
GOVT	GOVERNMENT
GR FL	GROUND FLOOR
GRD OUT	GROUNDED OUTLET
-H-	
HP	HORSEPOWER
HZ	HERTZ
=J=	
JB	JUNCTION BOX
-L-	
LA	LIGHTNING ARRESTER
LAV	LAVATORY
LBS	POUND(S)
LD	LINEAR DIFFUSER
LDR	LEADER
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET (FOOT)
LH	LEFT HAND
LHR	LEFT HAND REVERSE
LHS	LEFT HAND SIDE
LIM SW	LIMIT SWITCH
LIN	LINEAR
LL	LOW LEVEL
LLD	LAMP LUMEN DEPRECIATION
LM	LUMEN
LOG	LOGARITHM
LP	LIGHT POLE
LPAS	LOW PRESSURE ALARM SWITCH
LPF	LOW POWER FACTOR
LPS	LOW PRESSURE SODIUM
LPW	LUMENS PER WATT
LRA	LOCKED ROTOR AMPS
LT	LIGHT
LT	FLUOR FLUORESCENT LIGHTING
LT	GA LIGHT GAGE
LT	SW LIGHT SWITCH
LT WT	LIGHTWEIGHT
LTG	LIGHTING
LTG PNL	LIGHTING PANEL
LV	LOW VOLTAGE
-M-	
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MIN	MINIMUM
MV	MEDIUM VOLTAGE
-N-	
NC	NORMALLY CLOSED
NEUT	NEUTRAL
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
NUM	NUMERAL
-P-	
P	POLE
PB	PULL BOX
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PWR	POWER
-R-	
R	RADIUS
R	REMOVE
RE	RELOCATED EXISTING
REC	RECESSED
RECPT	RECEPTACLE
REQD	REQUIRED
RM	ROOM
-S-	
SCHED	SCHEDULE
SD	SMOKE DETECTOR
SECT	SECTION
SPDT	SINGLE POLE, DOUBLE THROW
SPEC	SPECIFICATION
SPKR	SPEAKER
SPST	SINGLE POLE, SINGLE THROW
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYS	SYSTEM
-T-	
TC	TIME CLOCK
TCP	TELEPHONE CONTROL PANEL
TEL	TELEPHONE
TEL JK	TELEPHONE JACK
TEL OUT	TELEPHONE OUTLET
TELCOM	TELECOMMUNICATIONS
THRU	THROUGH
TL	TWIST LOCK
TP	TWISTED PAIR
TP	TELEPHONE POLE
TPS	TWISTED PAIR SHIELDED
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TVOUT	TELEVISION OUTLET
TYP	TYPICAL
-U-	
UC	UNDERCOUNTER
UGND	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
UN	UNLESS NOTED
UNF	UNFUSED
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTIL	UTILITY
UTP	UNTWISTED PAIR
-V-	
V	VOLT
VA	VOLT AMPERE
VAM	VOLT-AMMETER
VAP PRF	VAPOR PROOF
VAR	VOLT AMPERE REACTIVE
VCB	VACUUM CIRCUIT BREAKER
VD	VOLTAGE DROP
VF	VARIABLE FREQUENCY
VFD	VARIABLE FREQUENCY DRIVE
VHF	VERY HIGH FREQUENCY
VHO	VERY HIGH OUTPUT
VID	VIDEO
VIDAMP	VIDEO AMPLIFIER
VIF	VERIFY IN FIELD
VM	VOLTMETER
VOLT	VOLTAGE
VR	VOLTAGE REGULATOR
VRFY	VERIFY
VRLY	VOLTAGE RELAY
VS	VOLTMETER SWITCH
-W-	
W	WATT OR WIRE
W/	WITH
W/O	WITHOUT
WHM	WATTHOUR METER
WP	WEATHERPROOF
WR	WEATHER RESISTANT
WW	WIREWAY
WWX	WARM WHITE DELUXE
-X-	
XFER	TRANSFER
XFMR	TRANSFORMER

SYMBOLS (AS APPLICABLE)

POWER OUTLETS

FLOOR WALL CEILING

- DUPLEX
- QUADRUPLEX
- DUPLEX-VOICE-DATA
- GFCI DUPLEX
- SIMPLEX
- EMERGENCY DUPLEX
- EMERGENCY QUADRUPLEX
- EMERGENCY SIMPLEX
- DUPLEX-VOICE
- DUPLEX-DATA
- QUAD-VOICE
- QUAD-VOICE-DATA
- QUAD-DATA
- JUNCTION BOX
- POKE THRU
- COUNTERTOP DUPLEX
- ISOLATED GROUND DUPLEX
- ISOLATED GROUND SIMPLEX
- SPECIAL OUTLET

TELECOM

FLOOR WALL CEILING

- VOICE OUTLET
- DATA OUTLET
- VOICE-DATA
- CR — CARD READER
- BG — EMERGENCY BREAK GLASS
- PB — PUSH BUTTON
- S — SPEAKER - AV
- TELCOM GROUNDING BUS BAR
- TELEPHONE BACKBOARD

WIRING

- 3/4" CONDUIT WITH 2#12 WIRES, UON. GROUND WIRE NOT SHOWN.
- 3/4" CONDUIT WITH 3#12 WIRES, UON. GROUND WIRE NOT SHOWN.
- 3/4" CONDUIT WITH 4#12 WIRES, UON. GROUND WIRE NOT SHOWN.
- 1LA-1,3,5 — CONDUIT HOMERUN TO PANEL BOARD 1LA WITH CIRCUIT 1,3,5
- CAPPED CONDUIT
- CONDUIT RUN UNDERGROUND OR UNDER THE FLOOR SLAB
- CONDUIT TURNING DOWN
- CONDUIT TURNING UP
- CONDUIT BREAK

LIGHTING

FLOOR WALL CEILING

- RECESSED DOWNLIGHT
- 1X4 SURFACE MOUNTED LIGHT
- 2X4 SURFACE MOUNTED LIGHT
- 4FT WALL MOUNTED LIGHT
- 1X4 EMERGENCY LIGHT
- 2X4 EMERGENCY LIGHT
- 2X4 RECESSED LIGHT
- EXIT SIGN 1 FACE
- EXIT SIGN 1 FACE LEFT ARROW

SWITCHES/CONTROLS

FLOOR WALL CEILING

- $T — LIGHT SWITCH - TIME OPERATED
- $ — LIGHT SWITCH - SINGLE POLE
- $3 — LIGHT SWITCH - THREE WAY
- $K — LIGHT SWITCH - KEY OPERATED
- $P — LIGHT SWITCH - WITH PILOT LIGHT
- $TO — SWITCH - WITH THERMAL OVERLOAD
- D — DIMMER
- OS — OCCUPANCY SENSOR
- PC — PHOTOCELL
- PP — OCCUPANCY SENSOR POWER PACK
- OR — OVERRIDE SWITCH
- ELECTRICAL PUSH BUTTON

POWER

- DISTRIBUTION BOARD
- 480/277V OR 208/120V RECESSED PANEL
- 480/277V OR 208/120V SURFACE MOUNTED PANEL
- T — TRANSFORMER
- DISCONNECT SWITCH
- $M — SWITCH - MOTOR RATED
- FUSED DISCONNECT SWITCH
- MAGNETIC MOTOR STARTER - NEMA SIZE 1 INDICATED
- STARTER-DISCONNECT SWITCH
- M — MOTOR
- R — RELAY
- VFD — VARIABLE FREQUENCY DRIVE
- PB — PULL BOX
- MH — MANHOLE
- CABLE TRAY

SINGLE LINE DIAGRAM

- CIRCUIT BREAKER SWITCH
- FUSE - INLINE
- FUSE SWITCH
- FUSED-SWITCH BUS PLUG
- CB — CIRCUIT BREAKER - ENCLOSED
- K — KIRK KEY INTERLOCK
- BUSDUCT
- SWITCHGEAR BUSWAY
- GFR — GROUND FAULT RELAY
- A — AMMETER
- M — DIGITAL METER U.O.N.
- TRANSFORMER - DELTA WYE-GROUNDED
- ATS - 3-POLE U.O.N. BP - WITH BYPASS ISOLATION (E, N, L, BP)
- BATTERY
- G — GENERATOR
- XXXXX — PANEL

ANNOTATION

- 1 / E-201 SYMBOLS SCALE: NOT TO SCALE — TITLE MARK DETAIL OR PLAN NUMBER-1 DETAIL OR PLAN REFERENCE LOCATION FOUND IN E-201
- 1 / E-501 — SECTION MARK A2T SECTION NUMBER - 1 SECTION FOUND IN E-501
- 2 / E-201 — DETAIL BOUNDARY B DETAIL NUMBER - 2
- 1 — SHEET KEYNOTE
- REVISION CLOUD (DELTA 1)
- 1 / E-501 — DETAIL REFERENCE DETAIL NUMBER - 1 DETAIL FOUND IN E-501

FIRE LIFE SAFETY NOTES

1. UNDER DESIGN/BUILD SCOPE OF WORK PROVIDE COMPLETE FIRE/LIFE SAFETY SYSTEM. CONTRACTOR SHALL PROVIDE AS PART OF FIRE ALARM SYSTEM: (Δ1)
   - CONSTRUCTION DOCUMENT AND SHOP DRAWINGS.
   - COORDINATE WITH MECHANICAL AND PLUMBING DRAWINGS FOR ALL REQUIRED FIRE ALARM DEVICES UNDER MECHANICAL/PLUMBING SECTION AND PROVIDE INTERCONNECTING WIRING FOR A COMPLETE WORKING SYSTEM.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, CALCULATIONS AND PRODUCT DATA TO THE ARCHITECT FOR REVIEW PRIOR TO INSTALLATION.
3. PROPOSED SYSTEM DOCUMENTS SHALL BE PREPARED AND SUBMITTED TO AUTHORITIES HAVING JURISDICTION FOR REVIEW AND APPROVAL BY CONTRACTOR BEFORE START OF WORK.
4. COMPLETE SYSTEM SHALL BE TESTED, APPROVED AND SIGNED-OFF BY AUTHORITIES HAVING JURISDICTION.
5. THE ENTIRE INSTALLATION OF LIFE SAFETY SYSTEM INCLUDING MATERIALS AND EQUIPMENT SHALL BE COMPATIBLE WITH BASE BUILDING EQUIPMENT AND MEET OR EXCEED THE MINIMUM STANDARD AND REQUIREMENTS OF THE FOLLOWING:
   a. U.L. LISTING SERVICES
   b. N.F.P.A. NATIONAL FIRE CODE
   c. U.B.C. AS ACCEPTED AND OR MODIFIED BY LOCAL AUTHORITIES
   d. CITY FIRE AND BUILDING CODE
   e. CITY ELECTRICAL CODE
   f. STATE OF CALIFORNIA
   g. AMERICAN DISABILITY ACT (ADA REQUIREMENTS)

FIRE ALARM SYSTEM SHALL BE SUBMITTED UNDER A SEPARATE PERMIT.

MISCELLANEOUS

1. REMOVE ALL EXISTING FIXTURES, WIRING DEVICES, ELECTRICAL EQUIPMENT AND CIRCUITING, WHETHER SPECIFICALLY INDICATED OR NOT, AS REQUIRED DUE TO THE ARCHITECTURAL AND MECHANICAL DEMOLITION WORK IN THE AREA TO BE RENOVATED. ALL EQUIPMENT THAT HAS BEEN REMOVED AND IS NOT REUSED SHALL BE RETURNED TO THE OWNER, OR DISPOSED OF AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
2. RECONNECT CIRCUITING AS REQUIRED TO MAINTAIN CONTINUITY TO REMAINING OUTLETS WHEN EXISTING FIXTURES AND DEVICES ARE REMOVED. CONSOLIDATE PARTIALLY LOADED CONVENIENCE RECEPTACLE CIRCUITS TO MAXIMIZE SPACE MADE AVAILABLE AT THE PANELBOARD. TRACE CONSOLIDATED CIRCUITS TO VERIFY THAT THE TOTAL LOAD DOES NOT OVERLOAD CKT.
3. PROVIDE EXTENSION RINGS, COVER PLATES OR ACCESS DOORS AS NECESSARY TO MAINTAIN ACCESS TO EXISTING WIRING, WHERE REQUIRED BY NEW CONSTRUCTION. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
4. FIELD VERIFY LOCATIONS OF EXISTING OUTLETS. WHERE NEW CONSTRUCTION CONFLICTS WITH EXISTING OUTLETS, REMOVE WIRING DEVICES OR RELOCATE FIXTURES AS REQUIRED, WHETHER OR NOT SPECIFICALLY INDICATED.
5. PROVIDE BLANK COVER PLATES ON JUNCTION BOXES WHICH ARE NOT REUSED.
6. PROVIDE TYPE AND SIZE ON CONDUCTORS TO MATCH EXISTING FOR EXISTING CIRCUITS WHICH ARE EXTENDED TO SERVE NEW OR RELOCATED DEVICES OR FIXTURES.
7. PROVIDE CUTTING AND PATCHING AS REQUIRED, WHETHER OR NOT SPECIFICALLY INDICATED. VERIFY EXTENT OF NEW AND EXISTING PARTITIONS WITH ARCHITECTURAL DRAWINGS.
8. FIELD VERIFY EXISTING CIRCUITING AND MAKE ADJUSTMENTS AS NECESSARY TO THE CIRCUITING SHOWN ON THE PLANS, AS REQUIRED BY FIELD CONDITIONS.
9. REMOVE ALL UNUSED CONDUITS AND WIRING, SWITCHES, RECEPTACLES, LIGHT FIXTURES, ETC., WHERE CEILINGS, CEILING TILES OR WALLS ARE BEING DEMOLISHED EXCEPT AS FOLLOWS: WHERE WALLS AND CEILINGS ARE TO REMAIN. MAINTAIN EXISTING CONDUIT, WIRING AND BOXES SERVING ALL ELECTRICAL EQUIPMENT, OUTLETS AND SWITCHES IN THOSE AREAS. REMOVE ALL POWER WIRING BACK TO ITS OVERCURRENT DEVICE AND MARK CIRCUIT BREAKERS AS "SPARE." INSTALL BLANK COVERS ON ALL BOXES. REFER TO DRAWINGS FOR ADDITIONAL REQUIREMENTS AND OTHER SPECIFIC EXCEPTIONS.
10. COORDINATE ALL DEMOLITION WORK WITH NEW REQUIREMENTS TO ASSURE THAT EXISTING EQUIPMENT, WIRING, ETC., THAT IS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM IS NOT REMOVED.
11. ALL EXISTING ELECTRICAL EQUIPMENT AND CONDUITS THAT INTERFERE WITH ANY NEW CONSTRUCTION SHALL BE RELOCATED OR RE-ROUTED AS REQUIRED TO CLEAR THE NEW CONSTRUCTION. RECONNECT ALL EXISTING EQUIPMENT THAT ARE TO REMAIN AND NOT AFFECTED BY THE NEW CONSTRUCTION, TO THE NEWLY RELOCATED OR RE-ROUTED SYSTEM TO ENSURE A SAFE AND OPERATIONAL SYSTEM.
12. DISCONNECT AND RECONNECT THE EXISTING ELECTRICAL EQUIPMENT AS REQUIRED BY THE CONSTRUCTION MODIFICATIONS.
13. MODIFY AND RECONNECT THE EXISTING ELECTRICAL EQUIPMENT AS REQUIRED TO REMAIN, AND NOT AFFECTED BY THE NEW CONSTRUCTION, TO ENSURE THE FINAL SYSTEM WILL FUNCTION IN A SAFE MANNER ACCEPTABLE TO AUTHORITIES.
14. CONTRACTOR TO PROVIDE FIRE STOPPING AND WATERPROOF SEALING TO WALLS AND FLOORS PENETRATED. (E) RATING OF WALLS AND FLOORS SHALL BE MAINTAINED.

GENERAL NOTES

1. THE ENTIRE INSTALLATION OF LIFE SAFETY SYSTEM INCLUDING MATERIALS AND EQUIPMENT SHALL BE COMPATIBLE WITH BASE BUILDING EQUIPMENT AND MEET OR EXCEED THE MINIMUM STANDARD AND REQUIREMENTS OF THE FOLLOWING:
   a. U.L. LISTING SERVICES
   b. N.F.P.A. NATIONAL FIRE CODE, 2010 EDITION, AS AMENDED BY LAFD
   c. U.B.C. AS ACCEPTED AND OR MODIFIED BY LOCAL AUTHORITIES
   d. STATE OF CALIFORNIA-TITLE 24 REQUIREMENTS
   e. LOCAL CITY CODE
   f. LOCAL CITY FIRE CODE
   g. LOCAL CITY ELECTRICAL CODE
   h. LOCAL CITY BUILDING CODE
2. ALL ELECTRICAL MATERIALS SHALL BE NEW AND BEAR THE UNDERWRITERS (AND/OR EQUIVALENT TESTING AGENCY) LABEL.
3. UNLESS REQUESTED OTHERWISE, THE AMPACITY OF 600 VOLTS OR LESS CONDUCTORS SHALL BE BASED ON THE TERMINALS NOT TO EXCEED 60°C (140°F) FOR CONDUCTOR SIZE #14 THROUGH #1 AWG OR 75°C (167°F) FOR CONDUCTOR SIZES OVER #1 AWG.
4. NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE LOCATED WITHIN THE DEDICATED SPACE ABOVE THE ELECTRICAL EQUIPMENT.
5. GREEN INSULATED COPPER GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL BRANCH CIRCUITS AND FEEDERS.
6. ALL LIGHTING CONTROL DEVICES SHALL BE CALIFORNIA ELECTRICAL CODE CERTIFIED.
7. ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL BE WEATHERPROOF.
8. CUT AND PATCH TO MATCH ALL EXISTING CONSTRUCTION AS REQUIRED FOR THE PROPER INSTALLATION OF NEW ELECTRICAL WORK. ALL PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP AND FINISH AS EXISTING AND SHALL ACCURATELY MATCH ALL SURROUNDING WORK.
9. UNLESS INSTRUCTED OTHERWISE, THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES, AND FEES REQUIRED FOR INSTALLATION OF THE ELECTRICAL WORK. FURNISH FINAL CERTIFICATE OF INSPECTION OR WRITTEN EVIDENCE OF ACCEPTANCE BY INSPECTION AUTHORITIES FOR ALL WORK INSTALLED.
10. BEFORE STARTING ANY WORK, THE CONTRACTOR SHALL EXAMINE THE COMPLETE SET OF DRAWINGS FOR ALL TRADES, INCLUDING ARCHITECTURAL HEATING-VENTILATING-AIR CONDITIONING. VERIFY ALL DIMENSIONS SPACE REQUIREMENTS AND POINTS OF CONNECTION TO ALL EQUIPMENT. MAKE ANY MINOR ADJUSTMENTS NECESSARY TO AVOID CONFLICTS WITH THE BUILDING STRUCTURE AND THE WORK OF OTHER TRADES.
11. THE DRAWINGS INDICATE, IN A DIAGRAMMATIC MANNER, THE DESIRED LOCATIONS AND ARRANGEMENT OF THE COMPONENTS OF THE ELECTRICAL WORK. DETERMINE EXACT CONDUIT ROUTING, CONDUIT BENDS, AUXILIARY JUNCTION BOXES, SUPPORTS, AND UNDEFINED CONSTRUCTION DETAILS, AS A JOB CONDITION TO BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS.
12. FOR EXACT LOCATIONS OF RECEPTACLES, J-BOXES, LIGHTING FIXTURES, SWITCHES, ETC. SEE ARCHITECTURAL DRAWINGS.
13. ALL WALL JUNCTION BOXES SHALL BE MOUNTED FLUSH WITH FINISHED FACE OF WALL. PROVIDE EXTENSION BOXES AT WALLS WITH APPLIED ACOUSTIC PANELS. ALL WALL JUNCTION BOXES SHALL BE INSTALLED WITH MOUNTING HOLES AT TOP AND BOTTOM, UNLESS OTHERWISE NOTED.
14. THE CONTRACTOR SHALL PROVIDE PULL CORDS IN ALL EMPTY CONDUITS. WHERE MORE THAN ONE CONDUIT TERMINATES IN A JUNCTION BOX, THE ELECTRICAL CONTRACTOR SHALL IDENTIFY EACH J-BOX AND CONDUIT IN A MANNER ALLOWING IDENTIFICATION OF J-BOXES CONDUITS AFTER ALL WALL FINISHES HAVE BEEN APPLIED.
15. PROVIDE FINISH TRIM ON ALL FLOOR ELECTRICAL BOXES. FINISH REQUIREMENTS SHALL BE DETERMINED BY ARCHITECT.
16. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE AND ALL LOCAL APPLICABLE CODES AND REGULATIONS.
17. MINIMUM SIZE OF CONDUITS SHALL BE 3/4", MINIMUM SIZE OF CONDUCTORS SHALL BE #12 AWG, U.O.N.
18. ALL CONDUCTORS SHALL BE COPPER TYPE THWN INSULATION U.O.N.
19. ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS TO ACCOMMODATE CONDUCTORS SHOWN.
20. ALL JUNCTION BOXES AND PULL BOXES SHALL BE OF CODE GAUGE AND OF THE REQUIRED SIZE TO ACCOMMODATE NUMBER OF CONDUCTORS SHOWN. ALL J-BOXES SHALL BE SIZED PER NEC TABLE 314-16(a).
21. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL MECHANICAL EQUIPMENT AND OTHER EQUIPMENT REQUIRING ELECTRICAL CONNECTION PRIOR TO ROUGH IN.
22. THE CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, RECEPTACLES, SWITCHES, ETC. AND MAKE FINAL CONNECTION AS REQUIRED TO ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTION.
23. THE CONTRACTOR SHALL COORDINATE WITH OWNER THE LOCATION OF ALL OUTLET BOXES FOR SWITCHES, RECEPTACLES, SPEAKERS, ETC...
24. FOR ALL WIRING DEVICES VERIFY FINISH COLOR WITH ARCHITECT.
25. PROVIDE TYPEWRITTEN PANEL SCHEDULES TO BE MOUNTED ON INSIDE OF ALL PANEL COVER DOORS. SCHEDULE TO MATCH THOSE SHOWN ON DRAWINGS.
26. VERIFY NAME-PLATE RATINGS OF ALL MOTORS AND APPLIANCES WITH DRAWINGS. NOTIFY ARCHITECT/ENGINEER IMMEDIATELY WITH ANY DISCREPANCIES BEFORE INSTALLATION.
27. ALUMINUM CONDUCTORS SHALL NOT BE USED ON THIS PROJECT.
28. ARMORED CABLES SHALL NOT BE USED.
29. THESE DRAWINGS INDICATE THE FINISHED REQUIREMENTS FOR THE ELECTRICAL SYSTEMS, EQUIPMENT, LIGHTING FIXTURES, OUTLETS AND DEVICES. DUE TO STRUCTURAL CONDITIONS, MECHANICAL DUCT OR PIPING INTERFERENCE, OR FOR OTHER REASONS, THE CONTRACTOR MAY DESIRE TO INSTALL THE WORK IN A MANNER DIFFERENT FROM THAT SHOWN. SUCH CHANGES SHALL BE PRESENTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING, AND THE RECORD DRAWINGS SHALL BE ACCURATELY REVISED TO SHOW THE CHANGES AS COMPLETED.
30. ALL WORK SHALL COMPLY WITH THE STATE OF CALIFORNIA, TITLE 24 AND ALL OTHER GOVERNING CODES AND ORDINANCES.
31. INTERCONNECT FIRE ALARM STROBE LIGHT (+80"AFF) WITH WIRE AND MINIMUM 3/4" CONDUIT AND ROUTE TO EXISTING LIFE SAFETY TERMINAL CABINET. STROBE LIGHT TYPE AND WIRING SHALL MATCH BUILDING STANDARD. CONTRACTOR TO COORDINATE WITH BUILDING FIRE ALARM SYSTEM CONTRACTOR FOR POWER SUPPLY REQUIREMENTS. PROVIDE NEW POWER SUPPLY IF REQUIRED.
32. EVERY OUTLET HEIGHT SHALL BE VERIFIED ON EACH WALL WITH THE INTERIOR PLANNING AND DESIGN DRAWINGS AND CABINET SHOP DRAWINGS TO INSURE THE PROPER HEIGHT AND LOCATION WITH RESPECT TO CABINETS, EQUIPMENT, ETC.
33. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL SWITCHES.
34. COORDINATE BOX LOCATION IN MILLWORK W/ARCHITECT AND/OR MILLWORK CONTRACTOR.
35. THE WORK OF THIS PROJECT INVOLVES ALTERATION OF THE EXISTING BUILDING TO ACHIEVE THE ARRANGEMENT INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL VISIT THE JOB SITE TO DETERMINE THE EXTENT OF WORK REQUIRED BY THE CONSTRUCTION ACTIVITIES. THE ARCHITECTURAL DRAWINGS SHOW THE CHANGES TO BE MADE. THE CONTRACTOR SHALL REVISE, REARRANGE, REROUTE OR REMOVE EXISTING WIRING AS REQUIRED TO ACCOMMODATE THE CHANGES AND ADDITION SHOWN AND TO PROVIDE CONTINUING ELECTRICAL SERVICE TO THOSE EXISTING PORTIONS OF THE PROJECT WHICH ARE TO REMAIN IN OPERATION.
36. THE CONTRACTOR WILL BE REQUIRED TO DO HIS WORK IN FULL COOPERATION WITH THE OTHER CONSTRUCTION TRADES.
37. BEFORE SUBMITTING PROPOSALS FOR THIS WORK, EACH BIDDER SHALL BECOME FAMILIAR WITH DRAWINGS AND SHALL HAVE EXAMINED THE PREMISES AND BE AWARE OF ALL EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGATED TO OPERATE IN PERFORMING HIS CONTRACT. THE CONTRACTOR WILL NOT BE ENTITLED TO ANY EXTRA COMPENSATION FOR FAILURE TO ALLOW FOR ALL EXISTING CONDITIONS. SUBMITTING OF A BID OR PROPOSAL WILL BE CONSIDERED EVIDENCE OF THE FACT THAT CONTRACTOR IS FULLY AWARE OF THESE CONDITIONS AND IS ABLE TO COMPLETE ALL WORK REQUIRED BY THE DRAWINGS.
38. THE CONTRACTOR SHALL INTERCONNECT ALL FANS AND AC UNITS WITH THE BUILDING LIFE SAFETY SYSTEM, FOR UNIT SHUT-DOWN UPON A SIGNAL FROM THE LIFE SAFETY SYSTEM. VERIFY WITH LIFE SAFETY SYSTEM CONTRACTOR.
39. ALL J-BOXES SHALL BE SIZED PER NEC TABLE 314-16(a).
40. MAINTAIN CIRCUIT CONTINUITY TO THOSE AREAS NOT AFFECTED BY THE ALTERATION.
41. CONTRACTOR SHALL PROVIDE COMPLETE RED LINED AS-BUILT DRAWINGS PRIOR TO COMPLETION OF PROJECT FOR REVIEW BY ARCHITECT / ENGINEER.
42. SEE ARCHITECTURAL DRAWINGS FOR SCOPE/EXTENT OF DEMOLITION, NEW CONSTRUCTION AND EXACT LIGHTING LOCATIONS AND QUANTITIES.
43. PROVIDE LIFE SAFETY SYSTEM COMPONENTS NECESSARY FOR A COMPLETE SYSTEM AS APPROVED BY FIRE MARSHALL AND OTHER ENFORCING AGENCIES HAVING JURISDICTION AND CONNECT TO EXISTING BASE BUILDING SYSTEM FOR PROPER OPERATION.
44. A DUPLEX RECEPTACLE INSTALLED ON AN INDIVIDUAL 20A CIRCUIT BREAKER SHALL HAVE 20A RATING.
45. INFORMATION ON AVAILABLE CIRCUITS TO BE USED FOR NEW WORK, ON EXISTING PANEL BOARDS WAS OBTAINED FROM THE ORIGINAL DOCUMENTS. CONTRACTOR SHALL VERIFY ITS ACCURACY AND REASSIGN CIRCUIT NUMBERS AS REQUIRED. UPDATE PANEL DIRECTORY WITH LATEST INFORMATION AND SWITCH-OFF ALL SPARE CIRCUIT BREAKERS.
46. ALL OUTLET, FACE PLATES (RECEPTACLE, SWITCHES, ETC.) COLOR AND MATERIAL SHALL BE SUBMITTED TO OWNER FOR APPROVAL.
47. PROVIDE MIN 6" SEPARATION FOR BACK TO BACK OUTLET BOXES.
48. ALL RECESSED LIGHTING FIXTURES SHALL BE EQUIPPED WITH FRAMES AND SUPPORTS AS REQUIRED BY CEILING CONSTRUCTION. CONTRACTOR SHALL VERIFY CEILING TYPES PRIOR TO ORDERING RECESSED FIXTURES AND INSURE CORRECT MOUNTING METHOD FOR CONDITIONS OF INSTALLATION. FIXTURES SHALL BE SEALED TO PREVENT LIGHT LEAKS, AND SHALL BE INSPECTED, APPROVED AND BEAR LABEL OF UNDERWRITERS LABORATORIES,INC.
49. GENERAL CONTRACTOR TO COORDINATE WITH BUILDING ENGINEER FOR PREFERRED SUB-CONTRACTOR.
50. REFER TO BUILDING STANDARD SPECIFICATION FOR ALL NEW EQUIPMENT INSTALLED. (Δ5)

SHEET INDEX

Δ3

verizon

1800 Solar Drive
Oxnard, CA 93030

Gensler

1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.

Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

Δ Issue	Date & Issue Description	By	Check
01	07/31/12 PLAN CHECK	-	-
1	08/10/12 ISSUE FOR CONSTRUCTION	-	-
2	09/12/12 BULLETIN 1	-	-
3	10/09/12 BULLETIN 2	-	-
4	10/23/2012 REVISED FOR PLAN CHECK	-	-
5	11/19/12 BULLETIN 3	-	-
6	02/21/13 BULLETIN 4	-	-

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\E-001-VZCOX000.dwg

Description
SYMBOLS ABBREVIATIONS AND GENERAL NOTES

Scale
NONE

E-001

SPECIFICATIONS

PART 1

GENERAL

1.01 DESCRIPTION

A. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "A," "AN," "THE," AND "ALL" HAVE BEEN OMITTED FOR BREVITY.

B. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITIONS.

C. DEFINITIONS:

1. "FURNISH" OR "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION OF PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.
2. "INSTALL":TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.
3. "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES.
4. "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.
5. "WIRING": RACEWAY, FITTINGS, WIRE, BOXES AND RELATED ITEMS.
6. "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRAWL SPACES OR IN ENCLOSURES.
7. "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.
8. "EQUAL": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.

D. SCOPE OF WORK: LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE SAFE INSTALLATION IN CONFORMITY WITH APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION; AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.

E. THE CONTRACTOR SHALL SECURE ALL APPROVALS AND PAY ALL FEES FOR ALL WORK INSTALLED. CERTIFICATES SHALL BE DELIVERED TO THE OWNER BEFORE FINAL PAYMENT WILL BE MADE.

1.02 JOB CONDITIONS

A. CONNECTIONS TO EXISTING WORK:

1. INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES.
2. TEMPORARY SHUTDOWNS OF EXISTING SERVICES:
   a. AT NO ADDITIONAL CHARGES.
   b. AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES.
   c. ONLY WITH WRITTEN CONSENT OF UNIVERSITY.
3. ALARM AND EMERGENCY SYSTEMS: NOT TO BE INTERRUPTED.
4. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK.
5. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL WORKING CONDITION INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.

B. DEMOLITION:

1. REMOVE ALL UNUSED CONDUITS AND WIRING, SWITCHES, RECEPTACLES, LIGHT FIXTURES, ETC., WHERE CEILINGS, CEILING TILES OR WALLS ARE BEING DEMOLISHED EXCEPT AS FOLLOWS: WHERE WALLS AND CEILINGS ARE REMAIN. MAINTAIN EXISTING CONDUIT, WIRING AND BOXES SERVING ALL ELECTRICAL EQUIPMENT, OUTLETS AND SWITCHES IN THOSE AREAS. REMOVE ALL POWER WIRING BACK TO ITS OVERCURRENT DEVICE AND MARK CIRCUIT BREAKERS AS "SPARE". INSTALL BLANK COVERS ON ALL BOXES. REFER TO DRAWINGS FOR ADDITIONAL REQUIREMENTS AND OTHER SPECIFIC OPERABLE SYSTEM IS NOT REMOVED.
2. COORDINATE ALL DEMOLITION WORK WITH NEW REQUIREMENTS TO ASSURE THAT EXISTING EQUIPMENT, WIRING, ETC., THAT IS REQUIRED FOR A COMPLETE INSTALLATION IS TO REMAIN.
3. ALL EXISTING ELECTRICAL EQUIPMENT AND CONDUITS THAT INTERFERE WITH ANY NEW CONSTRUCTION SHALL BE RELOCATED OR RE-ROUTED AS REQUIRED TO CLEAR THE NEW CONSTRUCTION. RECONNECT ALL EXISTING EQUIPMENT THAT ARE TO REMAIN AND NOT AFFECTED BY THE NEW CONSTRUCTION, TO THE NEWLY RELOCATED OR RE-ROUTED SYSTEM TO ENSURE A SAFE AND OPERATIONAL SYSTEM.ENSURE THE FINAL SYSTEM WILL FUNCTION IN A SAFE MANNER ACCEPTABLE TO AUTHORITIES.
4. ALL REMOVED MATERIAL AND EQUIPMENT WHICH ARE SALVAGEABLE SHALL REMAIN THE PROPERTY OF THE UNIVERSITY. DELIVER SUCH SALVAGED MATERIAL AND EQUIPMENT ON THE PREMISES AS DIRECTED BY THE UNIVERSITY, AND NEATLY PILE OR STORE THEM AND PROTECT FROM DAMAGE. REMOVE FROM PREMISES AND DISPOSE OF ALL MATERIAL CONSIDERED BY THE UNIVERSITY TO BE SCRAP. FOR EQUIPMENT SUCH AS BALLASTS, TRANSFORMERS, ETC., CONTAINING PCB OR OTHER MATERIAL CLASSIFIED AS HAZARDOUS PROVIDE CERTIFICATE OF DESTRUCTION.
5. UNLESS OTHERWISE NOTED, REMOVE ALL ELECTRICAL EQUIPMENT THAT ARE NOT TO BE REUSED WITHIN THE RENOVATED AREA, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   a. LIGHTING FIXTURES
   b. WALL SWITCHES
   c. FIRE ALARM DEVICES
   d. RECEPTACLES
   e. TELEPHONE OUTLETS
   f. DATA OUTLETS
   g. DISCONNECT SWITCHES
   h. FIDS OUTLETS

REFER TO ARCHITECTURAL DRAWINGS AND NOTES FOR ADDITIONAL REQUIREMENTS FOR THE DEMOLITION WORK WITHIN THIS AREA.

1.03 QUALITY ASSURANCE

A. QUALITY AND GAUGES OF MATERIALS:

1. QUALITY OF MATERIALS:
   a. NEW, BEST OF THEIR RESPECTIVE KINDS, FREE FROM DEFECTS AND LISTED BY UNDERWRITERS LABORATORIES, INC., OR BEARING THEIR LABEL.
   b. MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION: SAME MANUFACTURE, EXCEPT AS NOTED.

B. VOLTAGE CHARACTERISTICS:

1. DISTRIBUTION.
   a. 480Y/277 VOLTS, 60 HERTZ WITH GROUNDED NEUTRAL.
   b. 208Y/120 VOLTS, 60 HERTZ WITH GROUNDED NEUTRAL.

C. HEIGHTS OF OUTLETS:

1. FROM FINISHED FLOOR TO CENTERLINE OF OUTLETS FOR:
   a. RECEPTACLES AND TELEPHONES. GENERALLY: 1 FT.- 3 IN.
   b. WALL SWITCHES: 3 FT.- 6 IN.
   c. MOTOR CONTROLLERS: 5 FT.- 0 IN.
2. EXCEPTIONS:
   a. AT JUNCTION OF DIFFERENT WALL FINISH MATERIALS.
   b. ON MOLDING OR BREAK IN WALL SURFACE.
   c. IN VIOLATION OF CODE.
   d. AS NOTED OR DIRECTED.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

A. MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CRATED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.

B. ACCESSIBILITY:

1. FOR OPERATION, MAINTENANCE AND REPAIR.
2. MINOR DEVIATIONS: PERMISSIBLE.
3. CHANGES OF MAGNITUDE OR INVOLVING EXTRA COST: NOT PERMISSIBLE WITHOUT REVIEW.
4. GROUP CONCEALED ELECTRICAL EQUIPMENT REQUIRING ACCESS WITH EQUIPMENT FREELY ACCESSIBLE THROUGH ACCESS DOORS.

1.05 SUBMITTALS

A. SUBMIT SHOP DRAWINGS AND PRODUCT DATA IN ACCORDANCE WITH GENERAL REQUIREMENTS SPECIFIED IN ARCHITECTURAL SPECIFICATIONS, SUBMITTALS. OR PROVIDE SIX (6) COPIES OF SUBMITTAL MATERIAL WITH DESCRIPTIVE DATA FOR ALL PRODUCTS AND MATERIALS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING, PRIOR TO INSTALLATION. ALL SUBMITTALS SHALL BE HIGHLIGHTED TO INDICATE SPECIFIC PRODUCTS OR MATERIALS BEING USED.

B. SHOP DRAWINGS: SUBMIT PRIOR TO INSTALLATION.

1. E-MON METER AND ASSOCIATED COMPONENTS.
2. TRANSFORMER, UPS, AND PDU.
3. PANELBOARDS: DIMENSIONS, SCHEDULES AND CATALOG CUTS.
4. WALL SWITCHES
5. RECEPTACLES.
6. DEVICE PLATES.
7. POKE-THROUGHS.
8. LIFE SAFETY SYSTEM:
   a. DESCRIPTIVE DATA FOR ALL PRODUCTS AND MATERIALS.
   b. RECOMMENDED APPLICATION AND INSTALLATION METHODS, INCLUDING AREA COVERAGE FOR SMOKE DETECTORS.
   c. INFORMATION AND DATA, SUCH AS DRAWINGS SHOWING DEVICE LOCATIONS AND TYPES, RISER DIAGRAMS, WIRING DIAGRAMS, APPROVALS, TEST DATA, ETC. REQUIRED BY LOCAL AUTHORITIES.
   d. COMPLETE SHOP DRAWINGS OF ALL CUSTOM-FABRICATED OR ASSEMBLED PRODUCTS, INCLUDING WIRING DIAGRAMS.
   e. DRAWINGS IDENTIFYING ALL TERMINALS AND ILLUSTRATING ALL DEVICE WIRING CONNECTIONS.
9. ONE SET OF AS-BUILT DRAWINGS AND TWO SETS OF PRINTS.

1.06 MAINTENANCE MANUALS AND AS-BUILT DRAWINGS

A. PROVIDE FOUR (4) COPIES OF OPERATING AND MAINTENANCE MANUAL FOR UNIVERSITY'S USE FOR EACH PIECE OF EQUIPMENT. EACH ITEM SHALL BE CROSS-REFERENCED AND NUMBERED WITH AS-BUILT DRAWING DESCRIPTIONS.

B. AS-BUILT DRAWINGS: DELIVER TO UNIVERSITY, ONE SET OF AS-BUILTS AND TWO BOUND SET OF RED-LINED AND PANEL SCHEDULES SHOWING WORK AS ACTUALLY INSTALLED AND AUTOCAD 2004 AS-BUILT DRAWINGS TO THE ENGINEER.

PART 2

PRODUCTS

2.01 GENERAL

A. NAMEPLATES:

1. FASTENED WITH EPOXY CEMENT, ENGRAVED BLACK LAMICOID SHEET WITH 3/8 IN. WHITE LETTERING FOR UTILITY POWER. RED WITH WHITE LETTERS FOR EMERGENCY EQUIPMENT, BLUE WITH WHITE LETTERING FOR UPS, OR BUILDING STANDARD.
2. INSPECTION: SUBJECT TO REVIEW, INDICATING EQUIPMENT, AMPERAGE, VOLTAGE AND SOURCE.
3. PROVIDE FOR:
   a. DISCONNECT SWITCHES.
   b. CIRCUIT BREAKERS.
   c. PANELS.
   d. CABINETS.
   e. MOTOR CONTROLLERS.

B. SUPPORTS:

1. SUPPORTS FROM BUILDING CONSTRUCTION: BEAM CLAMPS, STEEL FISHPLATES (IN CONCRETE FILL ONLY) OR CANTILEVER BRACKETS.
2. GROUPED LINES AND SERVICES: TRAPEZE HANGERS OF BOLTED ANGLES OR CHANNELS.
3. WHERE BUILDING CONSTRUCTION IS INADEQUATE: PROVIDE ADDITIONAL FRAMING.

2.02 MATERIALS

A. RACEWAYS:

1. ELECTRICAL METALLIC TUBING (EMT): THIN WALL PIPE, GALVANIZED, THREADLESS.
2. RIGID STEEL CONDUIT: FULL WEIGHT PIPE, GALVANIZED, TREADED.

B. FITTINGS AND ACCESSORIES:

1. RACEWAY FITTINGS:
   a. ELECTRICAL METALLIC TUBING: COMPRESSION. GALVANIZED RIGID STEEL ELBOWS., 2 IN. OR LARGER.
   b. FLEXIBLE METALLIC CONDUIT: ANGLE WEDGE TYPE WITH INSULATED THROAT.
   c. BUSHINGS: METALLIC INSULATED TYPE.

C. BOXES:

1. OUTLET BOXES: EXCEPT AS OTHERWISE REQUIRED BY CONSTRUCTION, DEVICES OR WIRING.
   a. STAMPED OR WELDED STEEL, 4 IN. SQUARE OR OCTAGON FOR:
      a.a. LIGHTING FIXTURES: 1-1/2 IN. DEEP ABOVE CEILING, 2-1/8 IN. DEEP IN WALL.
      a.b. IN WALL FOR TELEPHONE AND DATA: 2-1/8 IN. DEEP.
      a.c. WITH RAISED COVERS AND FIXTURE STUDS WHERE REQUIRED.
      a.d. THROUGH-THE-WALL TYPE, NOT PERMITTED.
      a.e. WITHOUT FIXTURE OR DEVICE: BLANK COVER.
   b. GALVANIZED CAST IRON OR ALUMINUM WITH THREADED HUBS: 4 INCH ROUND, 2 INCH DEEP ON CEILING, AND 4 INCH SQUARE, 2 INCH DEEP ON WALL.
   c. BOXES WITHOUT FIXTURE OR DEVICE: PROVIDE WITH BLANK COVER.
2. JUNCTION AND PULL BOXES:
   a. GALVANIZED SHEET STEEL.
   b. COVERS: SCREW-ON, EXCEPT AS NOTED.
   c. WITH INSULATED SUPPORTS FOR CABLES.
   d. LOCATION: AS NOTED OR REQUIRED AND ACCESSIBLE.
   e. PROVIDE BARRIERS BETWEEN:
      e.a. 480Y/277 VOLT WIRING ENERGIZED FROM SEPARATE SERVICES.
      e.b. 208Y/120 VOLT AND 480Y/277 VOLT WIRING.
      e.c. EMERGENCY AND NORMAL WIRING.
   f. PROVIDE BARRIERS IN EXISTING BOXES BETWEEN:
      f.a. 480/277 VOLT WIRING ENERGIZED FROM SEPARATE SERVICES.
      f.b. 208/120 VOLT AND 480Y/277 VOLT WIRING.
      f.c. EMERGENCY AND NORMAL WIRING.

D. WIRE AND CABLE:

1. CONDUCTORS:
   a. ASTM STANDARD SOLID NO. 14 AND SMALLER, STRANDED NO. 12 AND LARGER.
      a.a. TYPE: COPPER.
      a.a.a. GENERAL USE:
      a.a.a.a. NO. 12 MINIMUM.
      a.a.a.b. AT 120 VOLTS AND OVER 100 FT. CIRCUIT LENGTH: NO. 10 MINIMUM.
      a.a.a.c. AT 277 VOLTS AND OVER 200 FT. CIRCUIT LENGTH: NO. 10 MINIMUM.
      a.a.b. CONTROL AND ALARM, EXCEPT AS NOTED:
      a.a.b.a. NO. 14 MINIMUM.
      a.a.b.b. AT 120 VOLTS AND OVER 200 FT. CIRCUIT LENGTH: NO. 12 MINIMUM.
      a.a.c. OTHER VOLTAGES AND PHASES: AS REQUIRED TO MAINTAIN VOLTAGE DROP.
      a.a.d. INCREASE RACEWAY SIZES FOR LARGER WIRE AS REQUIRED.
2. INSULATION:
   a. THWN/THHN: FEEDERS AND BRANCH CIRCUITS EXCEPT AS NOTED.
   b. SFF-2: BRANCH CIRCUITS LOCATED IN:
      b.a. WIRING CHANNELS OF CONTINUOUS FLUORESCENT FIXTURES.
      b.b. AMBIENT TEMPERATURES OVER 75 DEG. C.
   c. COLOR CODING: AS PER CODE. WHERE COLOR CODING IS UNAVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION TO OVERLAP COLOR TAPING CONDUCTORS (MINIMUM LENGTH 6 IN.) IN ACCESSIBLE LOCATIONS.
   d. 600 V INSULATION, INCLUDING CONTROL WIRING.
3. ACCESSORIES:
   a. TAGS:
      a.a. FLAMEPROOF LINEN OR FIBER IN ACCESSIBLE LOCATIONS.
      a.b. FEEDERS: INDICATE FEEDER NUMBER, SIZE, PHASE AND POINTS OF ORIGIN AND TERMINATIONS.
      a.c. CONTROL AND ALARM WIRING: INDICATE TYPE (CONTROL OR ALARM), SIZE OF WIRE, AND POINTS OR ORIGIN AND TERMINATIONS.
   b. TERMINATIONS, SPLICES AND TAPS UNDER 600 VOLTS:
      b.a. COPPER CONDUCTORS NO. 10 AND SMALLER: WITH COMPRESSION-TYPE OF TWIST-ON SPRING-LOADED CONNECTORS AND CLEAR NYLON-INSULATED COVERING.
      b.b. COPPER CONDUCTORS NO. 8 AND LARGER: MECHANICAL BOLTED PRESSURE OR HYDRAULIC COMPRESSION TYPE USING MANUFACTURER'S RECOMMENDED TOOLING.
      b.c. CABLE LUGS AND CONNECTORS: COMPRESSION TYPE OF SAME METAL AS CONDUCTOR. PROVIDE TO MATCH CABLE, WITH MARKING INDICATING SIZE AND TYPE.
      b.d. COPPER LUG CONNECTIONS TO BUS BARS: USE ANTI SEIZE COMPOUND ON TANG.

E. DEVICES:

1. LOCAL WALL SWITCHES:
   a. NON-MODULAR LIGHTING SYSTEM:
      a.a. HEAVY DUTY, TOGGLE, QUIET TYPE.
      a.b. 20A, 120/277V, AC.
      a.c. LEVITON DECORA 5621W OR EQUAL TOGGLE TYPE. OR BUILDING STANDARD.
      a.d. COLOR: BY ARCHITECT.
      a.e. FACEPLATE: BUILDING STANDARD SPECIFICATIONS GRADE.
      a.f. TO MATCH BUILDING STANDARDS
   b. MODULAR LIGHTING SYSTEM:
      b.a. HEAVY DUTY, TOGGLE, QUIET TYPE.
      b.b. 20A, 120/277V, AC.
      b.c. COLOR: BY ARCHITECT.
      b.d. FACEPLATE: BUILDING STANDARD SPECIFICATIONS GRADE.
      b.e. TO MATCH BUILDING STANDARD.
2. INSERTION RECEPTACLES:
   a. GROUNDED, EXCEPT AS NOTED. MEETING NEMA STANDARDS, PUBLICATION WD-1-1971.
   b. EQUAL TO HUBBELL NOS. INDICATED OR BUILDING STANDARD.
   c. DUPLEX CONVENIENCE.
      c.a. FOR MULTI-OUTLET CIRCUITS, 125 VOLTS, 2 POLE, 3 WIRE, GROUNDED, 20 AMP, EQUAL TO NO. 5352.
      c.b. FOR SEPARATE CIRCUITS, 125 VOLTS, 2 POLE, 3 WIRE, GROUNDED, 20 AMP, EQUAL TO NO. 5352.
   d. SPECIAL USE: NON-INTERCHANGEABLE TYPES AND RATINGS.
   e. COLOR: BY ARCHITECT.
   f. TO MATCH BUILDING STANDARDS.
3. DEVICE FACEPLATES:
   a. BUILDING STANDARD SPECIFICATION GRADE.

F. LIGHTING FIXTURES:

1. ALL LIGHTING FIXTURES THAT ARE EXISTING SHALL BE CLEANED AND RELAMPED.
2. REPLACE BALLAST AS REQUIRED.
3. NEW EXIT SIGN (IF REQUIRED BY INSPECTOR) SHALL BE LITHONIA PRECISE SERIES GREEN LED WITH DUAL 277V INPUTS.
4. RELOCATE LIGHTING FIXTURES AS REQUIRED, VERIFY CEILING CONSTRUCTION.
5. ANY NEW LIGHTING FIXTURES SHALL BE BUILDING STANDARD OR AS DIRECTED BY ARCHITECT. VERIFY CEILING CONSTRUCTION.

H. FIRE ALARM SYSTEM:

1. PROVIDE FIRE ALARM SYSTEM DEVICES AND COMPONENTS NECESSARY FOR A COMPLETE SYSTEM AND CONNECT TO EXISTING BASE BUILDING SYSTEM. THE WORK SHALL INCLUDE, BUT NOT LIMITED TO THE FOLLOWING:
   a. EMERGENCY SIGNALING AND PAGING SPEAKERS.
   b. FLASHING STROBE.
   c. CONDUIT, WIRING, OUTLETS, WIRES, ETC. REQUIRED TO PROVIDE POWER TO AND INTERCONNECT ALL COMPONENTS LISTED ABOVE.
2. THE ENTIRE INSTALLATION, INCLUDING MATERIALS AND EQUIPMENT SHALL BE COMPATIBLE WITH EXISTING BUILDING EQUIPMENT AND MEET OR EXCEED THE MINIMUM STANDARDS AND REQUIREMENTS OF THE FOLLOWING:
   a. UNDERWRITERS LABORATORIES, INC. LISTING SERVICE.
   b. NFPA NATIONAL FIRE CODES.
   c. UNIFORM BUILDING CODE AS ACCEPTED AND/OR MODIFIED BY LOCAL AUTHORITIES.
   d. LOCAL CITY FIRE BUILDING CODE.
   e. LOCAL CITY ELECTRICAL CODE.
3. ALL EQUIPMENT AND MATERIALS USED SHALL BE STANDARD COMPONENTS, REGULARLY MANUFACTURED AND OF THE SAME MANUFACTURER, AS THE EXISTING BASE BUILDING STANDARDS.
4. SYSTEM SUPERVISION: PER BUILDING STANDARDS.
5. EMERGENCY SIGNALING: PER BUILDING STANDARDS.

PART 3

EXECUTION

3.01 INSTALLATION

A. GENERAL:

1. PAINTING:
   a. PAINT:
      a.a. BEST GRADE FOR ITS PURPOSE.
      a.b. DELIVER IN ORIGINAL SEALED CONTAINERS.
      a.c. APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
      a.d. COLORS: AS SELECTED BY ARCHITECT.
   b. GALVANIZED IRON PRIMER: PANEL AND PULL BOXES, AFTER FABRICATION.
   c. HOT DIPPED GALVANIZED OR DIPPED IN ZINC CHROMATE: OUTLET BOXES, JUNCTION BOXES, CONDUIT HANGERS, RODS INSERTS AND SUPPORTS.
   d. ZINC CHROMATE WITH FINISH TO MATCH SURROUNDINGS: MARRED SURFACES OF STEEL EQUIPMENT AND RACEWAYS.
2. CLEANING:
   a. BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE.
   b. PAINTED EXPOSED WORK SOILED OR DAMAGED: CLEAN AND REPAIR TO MATCH ADJOINING WORK BEFORE FINAL ACCEPTANCE.
   c. REMOVE DEBRIS FROM INSIDE AND OUTSIDE OF MATERIAL AND EQUIPMENT.
3. CUTTING AND PATCHING: AS REQUIRED FOR NEW WORK.

B. RACEWAYS.

1. RUN CONCEALED, EXCEPT AS NOTED.
2. SUPPORTS:
   a. CEILING TRAPEZE, STRAP HANGERS OR WALL BRACKETS.
   b. U-BOLTS: AT EACH FLOOR LEVEL OF RISER RACEWAYS AND CONNECTED TO ACCEPTABLE SUPPORTS.
   c. RISER CLAMPS: AT EACH FLOOR LEVEL OR RISER RACEWAYS AND RESTING ON SLAB.
   d. SPACING:
      d.a. MINIMUM 10 FT. ON CENTERS FOR METALLIC RACEWAY AND AS REQUIRED FOR NON-METALLIC RACEWAY.
      d.b. 5 FT. ON CENTERS FOR WIREWAYS.
      d.c. PER CODE AND AS NOTED FOR OTHERS.
   e. MOUNT SUPPORTS TO STRUCTURE WITH:
      e.a. TOGGLE BOLTS ON HOLLOW MASONRY.
      e.b. EXPANSION SHIELDS OR INSERTS IN CONCRETE AND BRICK.
      e.c. MACHINE SCREWS ON METAL.
      e.d. BEAM CLAMPS ON FRAMEWORK.
      e.e. WOOD SCREWS ON WOOD.
      e.f. PAN THROUGH STRAPS IN METAL DECK.
      e.g. NAILS, RAWL PLUGS OR WOOD PLUGS NOT PERMITTED.
      e.h. WHERE REQUIRED BY STRUCTURE: THROUGH BOLTS AND FISH PLATES.
3. EXPOSED: RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
4. CLEARANCE FROM WATER, STEAM OR OTHER PIPING: MINIMUM 3 IN. SEPARATION FROM STEAM AND HOT WATER PIPES, EXCEPT 1 IN. FROM PIPE COVER AT CROSSINGS.
5. FOR HUNG CEILING OUTLETS: RUN IN HUNG CEILINGS AND CONNECT TO CEILING SUPPORT CHANNELS.
6. IN MASONRY: RUN VERTICALLY ONLY.
7. MAINTAIN GROUNDING CONTINUITY OF INTERRUPTED METALLIC RACEWAYS WITH GROUND CONDUCTOR, AND IN FLEXIBLE CONDUIT FOR FEEDERS AND MOTOR TERMINAL CONNECTIONS.
8. EMPTY RACEWAYS OVER 10 FT. LONG: PROVIDE FISH OR PULL WIRE, GALVANIZED OR NYLON ROPE.
9. EMT:
   a. PERMITTED USES:
      a.a. FEEDERS AND BRANCH CIRCUITS.
      a.b. DRY LOCATIONS, DRY WALLS, HUNG CEILINGS, HOLLOW BLOCK WALLS AND FURRED SPACES.
10. FLEXIBLE STEEL CONDUIT:
   a. PERMITTED USES:
      a.a. FOR SHORT CONNECTIONS WHERE RIGID CONDUIT IS IMPRACTICABLE. (MAXIMUM OF 3')
      a.b. FROM OUTLET BOX TO RECESSED LIGHTING FIXTURE: MINIMUM 4 FT., MAXIMUM 6 FT. LENGTH.
      a.c. FOR FINAL CONNECTION TO MOTOR TERMINAL BOX, TRANSFORMERS AND OTHER VIBRATING EQUIPMENT: WITH POLYVINYL SHEATHING AND GROUND CONDUCTOR. MINIMUM LENGTH 18 IN. WITH SLACK. CONNECT GROUND CONDUCTOR TO ENCLOSURE OR RACEWAY AT EACH END.
      a.d. FOR EXPANSION JOINT CROSSINGS, CROSS AT RIGHT ANGLES AND ANCHOR ENDS.
      a.e. USE ONLY IN DRY LOCATIONS, DRY WALLS, HUNG CEILINGS AND FURRED SPACES.
11. EXPANSION FITTINGS: AT RIGHT ANGLES WITH SLIP JOINT CENTERED IN EXPANSION JOINT. PROVIDE ON LENGTH OF RUNS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PRESET TO ALLOW FOR TEMPERATURE VARIATION.
12. RACEWAYS PASSING THROUGH FIRE-RATED CONSTRUCTION: SEAL OPENING WITH FIRE SEALANT.
13. OUTLET BOXES:
   a. SET BOXES SQUARE AND TRUE WITH BUILDING FINISH.
   b. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS OR GROUT IN WITH MASONRY.
   c. VERIFY OUTLET LOCATIONS IN FINISHED SPACES WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISHES.
   d. PROVIDE BARRIERS BETWEEN SWITCHES CONNECTED TO DIFFERENT PHASES FOR VOLTAGES EXCEEDING 150 VOLTS TO GROUND.
14. PANEL, JUNCTION AND PULL BOXES:
   a. LOCATION:
      a.a. CLEAR OF OTHER TRADES.
      a.b. CONCEAL JUNCTION AND PULL BOXES IN FINISHED SPACES. 3) ACCESSIBLE.
   b. SUPPORT: FROM BUILDING STRUCTURE, INDEPENDENT OF CONDUIT. PROVIDE FLOOR-TO-CEILING CHANNELS FOR MOUNTING ON DRY WALL AND LIGHTWEIGHT CONSTRUCTION.
   c. OUTLET BOXES FOR FIXTURES RECESSED IN HUNG CEILINGS: ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURE. SECURE TO BLACK IRON CEILING SUPPORT.
   d. MOTOR TERMINAL BOXES: COORDINATE WITH MOTOR BRANCH CIRCUIT CONDUIT AND WIRING. ADD BOX VOLUME WHERE REQUIRED.
   e. PROVIDE NEW PANELBOARDS WITH DOUBLE NEUTRAL, GROUND AND ISOLATED GROUND BUS.
15. FIRE SEALANTS: PROVIDE FOR RACEWAYS AND WIRE PASSING THROUGH FLOOR SLOTS, SLEEVES OR OPENINGS IN FIRE-PARTITIONED ROOMS.
16. OUTDOOR INSTALLATION: RIGID STEEL CONDUIT EXCEPT AS NOTED; BELOW GRADE, WATERPROOF.
17. TESTS:
   a. CONTINUITY:
      a.a. TEST RESISTANCE OF FEEDER CONDUITS FROM SERVICE TO POINT OF FINAL DISTRIBUTION USING 1 CONDUCTOR RETURN.
      a.b. MAXIMUM: 25 OHMS RESISTANCE.

C. WIRE AND CABLE:

1. 600 VOLT CABLE:
   a. NOT MORE THAN THREE (3) LIGHTING OR CONVENIENCE OUTLET CIRCUITS IN 1 CONDUIT UNLESS OTHERWISE INDICATED.
   b. SEPARATE RACEWAYS FOR CONDUCTORS OF 208Y/120 AND 480Y/277 VOLT SYSTEMS, EXCEPT 480 VOLT MOTOR BRANCH CIRCUIT WIRING AND RELATED 120 VOLT CONTROL WIRING.
2. TESTS:
   a. CONTINUITY AND INSULATION TESTS:
      a.a. 600 VOLTS: MEGGER.
      a.b. 100 PERCENT OF FEEDERS.
      a.c. 10 PERCENT OF BRANCH CIRCUITS.
   b. PERFORM:
      b.a. PRIOR TO CONNECTING EQUIPMENT.
      b.b. IN PRESENCE OF AUTHORIZED REPRESENTATIVES.
   c. SUBMIT WRITTEN REPORT OF RESULTS.
   d. CORRECT OR REPLACE CABLE RESTING BELOW MANUFACTURER'S STANDARDS.

D. PANELBOARDS:

1. BALANCE THE LOAD OVER PHASES WHEN NEW CIRCUITS ARE ADDED TO NEW OR EXISTING PANELS.
   a. PROVIDE MULTI-CABLE LUGS WHERE REQUIRED.
2. PROVIDE NEW TYPEWRITTEN DIRECTORY IN NEW PANELBOARDS.
3. UPDATE WITH NEW DIRECTORIES ON EXISTING PANELBOARDS WHERE CIRCUITING IS CHANGED.
4. TESTS: OPEN AND CLOSE LOAD BREAK SWITCHING DEVICES UNDER LOAD.

E. LIFE SAFETY SYSTEM:

1. INSTALLATION SHALL BE SUPERVISED AND TESTED BY THE MANUFACTURER OF THE SYSTEM EQUIPMENT. THE WORK SHALL BE PERFORMED BY SKILLED TECHNICIANS UNDER THE DIRECTION OF EXPERIENCED ENGINEERS, ALL OF WHOM SHALL BE PROPERLY TRAINED AND QUALIFIED FOR THIS WORK.
2. SYSTEM SHALL BE INSTALLED WITH ALL CONDUITS, CONDUCTORS, OUTLET BOXES, FITTINGS, CONNECTORS AND ACCESSORIES NECESSARY TO ENSURE A COMPLETE, OPERABLE SYSTEM IN COMPLIANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
   a. CONDUIT: ALL CONDUIT AND ITS INSTALLATION SHALL BE IN ACCORDANCE WITH THIS SPECIFICATIONS.
   b. WIRE AND CABLE: ALL WIRING SHALL BE INSTALLED IN METAL CONDUIT OR WITHIN EQUIPMENT. CONDUCTORS SHALL BE INSTALLED IN ACCORD WITH THIS SPECIFICATIONS. CONDUCTORS WITHIN EQUIPMENT ENCLOSURES SHALL BE CAREFULLY CABLED AND LACED. THEY SHALL BE COLOR-CODED AND INDIVIDUAL CONDUCTORS SHALL BE TAGGED WITH E-Z CODE MARKERS INDICATING CIRCUIT NUMBER AND TYPE. MARKERS SHALL BE USED ON ALL CONDUCTORS AT EACH OUTLET OR PULL BOX AND AT EACH EQUIPMENT ENCLOSURE.
   c. OUTLET PULL AND JUNCTION BOXES SHALL BE PAINTED RED ON THE EXTERIOR AND SHALL BE INSTALLED IN ACCORD WITH THIS SPECIFICATIONS.
   d. END-OF-LINE RESISTORS FOR SPEAKER CIRCUITS SHALL BE INSTALLED IN FLOOR TERMINAL CABINETS.
   e. PIGTAIL AND/OR TAPPED CONNECTION WILL NOT BE ALLOWED ON SUPERVISED CIRCUIT. CONNECTIONS SHALL BE MADE DIRECTLY TO AND FROM DEVICE TERMINAL SCREWS.
3. CONTRACTOR IS TO ENSURE THE EXISTING FIRE ALARM CONTROL PANEL WILL ACCOMMODATE THE NEW FIRE ALARM INITIATING DEVICES, SPEAKERS AND STROBE LIGHTS. MODIFY AND ADD NEW CONTROL MODULES IN EXISTING CONTROL PANEL AS REQUIRED.
4. ALL NEW AIR HANDLING EQUIPMENT SHALL BE SHUT DOWN VIA THE BUILDING FIRE ALARM PANEL UPON ACTIVATION OF ANY NEW DUCT DETECTORS DESCRIBED UNDER THIS SCOPE OF WORK.
5. PROVIDE FIRE LIFE SAFETY DRAWINGS TO BUILDING OPERATIONS MANAGER. COORDINATE WITH BUILDING STAFF ALL FIRE LIFE SAFETY INSPECTIONS PRIOR TO THEIR OCCURRENCE.

F. TELEPHONE/DATA AND FIDS SYSTEMS:

1. PROVIDE CABLES AS INDICATED.
2. RUN CONDUIT FROM OUTLET INTO ACCESSIBLE HUNG CEILING.

verizon

1800 Solar Drive
Oxnard, CA 93030

Gensler

1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.

Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

Issue	Date & Issue Description	By	Check
01	07/31/12 PLAN CHECK	-	-
1	08/10/12 ISSUE FOR CONSTRUCTION	-	-
2	09/12/12 BULLETIN 1	-	-
3	10/09/12 BULLETIN 2	-	-
4	10/23/2012 REVISED FOR PLAN CHECK	-	-
5	11/19/12 BULLETIN 3	-	-
6	02/21/13 BULLETIN 4	-	-

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\E-002-VZCOX000.dwg

Description
SPECIFICATION

Scale
NONE

E-002

CERTIFICATE OF COMPLIANCE (Part 4 of 4) LTG-1C

Project Name: Verizon | Date: 2/20/2013

CONDITIONED AND UNCONDITIONED SPACE LIGHTING MUST NOT BE COMBINED FOR COMPLIANCE

Indoor Lighting Power for Conditioned Spaces		Watts	Indoor Lighting Power for Unconditioned Spaces		Watts
Installed Lighting (from Conditioned LTG-1C, Page 2)		10,468	**Installed** Lighting (from Unconditioned LTG-1C, Page 2)		0
Lighting Control Credit Conditioned Spaces (from LTG-2C)	-	1,664	Lighting Control Credit Unconditioned Spaces (from LTG-2C)	-	0
Adjusted **Installed** Lighting Power	=	8,804	Adjusted **Installed** Lighting Power	=	0
Complies if **Installed** ≤ **Allowed**		↕	Complies if **Installed** ≤ **Allowed**		↕
Allowed Lighting Power Conditioned Spaces (from LTG-3C or PERF-1)		18,055	**Allowed** Lighting Power Unconditioned Spaces (from LTG-3C)		0

Required Acceptance Tests

Designer:

This form is to be used by the designer and attached to the plans. Listed below is the acceptance test for the Lighting system, **LTG-2A and LTG-3A**. The designer is required to check the acceptance tests and list all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance. If all the lighting system or control of a certain type requires a test, list the different lighting and the number of systems. The NA7 Section in the Appendix of the Nonresidential Reference Appendices Manual describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately. **Forms can be grouped by type of Luminaire controlled.**

Enforcement Agency:

Systems Acceptance. Before Occupancy Permit is granted for a newly constructed building or space or when ever new lighting system with controls is installed in the building or space shall be certified as meeting the Acceptance Requirements. The **LTG-2A and LTG-3A** forms are not considered complete forms and are not to be accepted by the enforcement agency unless the boxes are checked and/or filled and signed. In addition, a Certificate of Acceptance forms shall be submitted to the enforcement agency that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of §10-103(b) of Title 24 Part 6. The field inspector must receive the properly filled out and signed forms before the building can receive final occupancy. A copy of the **LTG-2A and LTG-3A** for each different lighting luminaire control(s) must be provided to the owner of the building for their records.

Luminaires Controlled				LTG-2A and LTG-3A
Equipment Requiring Testing	Description	Number of Luminaires controlled	Location	Controls and Sensors and Automatic Daylighting Controls Acceptance
Occ Sensor - Multi-Level	F4A - ROUND FLUORECENT RECES	1	BREAKOUT 205	☑
Occ Sensor - Multi-Level	F4B - ROUND FLUORECENT RECES	2	BREAKOUT 205	☑
Occ Sensor - Multi-Level	F4C - ROUND FLUORECENT RECES	1	BREAKOUT 205	☑
Occ Sensor - Multi-Level	F4A - ROUND FLUORECENT RECES	1	BREAKOUT 305	☑
Occ Sensor - Multi-Level	F4B - ROUND FLUORECENT RECES	2	BREAKOUT 305	☑
Occ Sensor - Multi-Level	F4C - ROUND FLUORECENT RECES	1	BREAKOUT 305	☑
Occ Sensor - Multi-Level	F1 - LINEAR FLUORESCENT 2-28W	2	CONFERENCE 201	☑
Occ Sensor - Multi-Level	F1 - LINEAR FLUORESCENT 2-28W	3	CONFERENCE 202	☑
Occ Sensor - Multi-Level	F1 - LINEAR FLUORESCENT 2-28W	2	CONFERENCE 207	☑
Occ Sensor - Multi-Level	F1 - LINEAR FLUORESCENT 2-28W	2	CONFERENCE 301	☑
Occ Sensor - Multi-Level	F1 - LINEAR FLUORESCENT 2-28W	3	CONFERENCE 302	☑
Occ Sensor - Multi-Level	F1 - LINEAR FLUORESCENT 2-28W	2	CONFERENCE 307	☑
Occ Sensor - Multi-Level	F12 - 2'x2' LINEAR FLUORECENT RE	6	CONFERENCE 313	☑
Occ Sensor - Multi-Level	F12 - 2'x2' LINEAR FLUORECENT RE	4	MEETING 314	☑
Occ Sensor - Multi-Level	F3 - 20W LED RECESSED DOWNLO	6	PANTRY 203	☑
				☐

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CERTIFICATE OF COMPLIANCE (Part 3 of 4) LTG-1C

Project Name: Verizon | Date: 2/20/2013

INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST

Fill in controls for all spaces: a) area controls, b) multi-level controls, c) manual daylighting controls for daylit areas > 250 ft², automatic daylighting controls for daylit areas > 2,500 ft², d) shut-off controls, e) display lighting controls, f) tailored lighting controls – general lighting controlled separately from display, ornamental and display case lighting and g) demand responsive automatic controls for retail stores > 50,000 ft², in accordance with Section 131.

MANDATORY LIGHTING CONTROLS – FIELD INSPECTION ENERGY CHECKLIST

Type/ Description	Number of Units	Location in Building	Special Features	Field Inspector Pass	Field Inspector Fail
			☐	☐	☐

SPECIAL FEATURES INSPECTION CHECKLIST (See Page 2 of 4 of LTG-1C)

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification. The local enforcement agency determines the adequacy of the justification, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

Field Inspector's Notes or Discrepancies:

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CERTIFICATE OF COMPLIANCE (Part 2 of 4) LTG-1C

Project Name: Verizon | Date: 2/20/2013

INDOOR LIGHTING SCHEDULE and FIELD INSPECTION ENERGY CHECKLIST

Installation Certificate, LTG-1-INST (Retain a copy and verify form is completed and signed.) **Field Inspector** ☐

Certificate of Acceptance, LTG-2A and LTG-3A (Retain a copy and verify form is completed and signed.) **Field Inspector** ☐

A separate Lighting Schedule Must Be Filled Out for Conditioned and Unconditioned Spaces Installed Lighting Power listed on this Lighting Schedule is only for:

☑ **CONDITIONED SPACE** ☐ **UNCONDITIONED SPACE**

☑ The actual indoor lighting power listed below includes all installed permanent and portable lighting systems in accordance with §146(a).

☑ Only for offices: Up to the first 0.2 watts per square foot of portable lighting shall not be required to be included in the calculation of actual indoor lighting power density in accordance with the Exception to §146(a). All portable lighting in excess of 0.2 watts per square foot is totaled below.

A	B	C	D	E		F	G	H	
Luminaire (Type, Lamps, Ballasts)		Installed Watts							
Name or Item Tag	Complete Luminaire Description[1] (i.e. 2 lamp fluorescent troffer, F32T8, one dimmable electronic bal ast)		Watts per Luminaire[1]	How wattage Was determined: CEC Default From NA8	According To §130 (d or e)	Number of Luminaires	Installed Watts (D X F)	Field Inspector Pass	Fail
D1	D1 - FLUORESCENT PENDANT 4-32W PLT		64.0	☑	☐	6	384	☐	☐
F1	F1 - LINEAR FLUORESCENT 2-28W T5		64.0	☑	☐	14	896	☐	☐
F12	F12 - 2'x2' LINEAR FLUORECENT RECESSED 2-14W T5		34.0	☑	☐	22	748	☐	☐
F2	F2 - 20W LED RECESSED DOWNLIGHT		20.0	☑	☐	35	700	☐	☐
F3	F3 - 20W LED RECESSED DOWNLIGHT		20.0	☑	☐	91	1,820	☐	☐
F4A	F4A - ROUND FLUORECENT RECESSED 6-28W T5		192.0	☑	☐	2	384	☐	☐
F4B	F4B - ROUND FLUORECENT RECESSED 6-28W T5		192.0	☑	☐	4	768	☐	☐
F4C	F4C - ROUND FLUORECENT RECESSED 10-28W T5		320.0	☑	☐	2	640	☐	☐
F5	F5 - 2' LINEAR FLUORECENT RECESSED 2-28W T5		60.0	☑	☐	8	480	☐	☐
F5A	F5A - 6' LINEAR FLUORECENT RECESSED 2-28W T5		64.0	☑	☐	27	1,728	☐	☐
F6	F6 - STAGGERED FLUORESCENT STRIP 2-28W T5		64.0	☑	☐	30	1,920	☐	☐

Installed Watts Page Total: 10,468

Building total number of pages: | Installed Watts Building Total (Sum of all pages) Enter into LTG-1C Page 4 of 4: 10,468

1. Wattage shall be determined according to Section 130 (d and e). Wattage shall be rating of light fixture, not rating of bulb.
2. If Fail then describe on Page 2 of the Inspection Checklist Form and take appropriate action to correct. Verify building plans if necessary.

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CERTIFICATE OF COMPLIANCE (Part 1 of 4) LTG-1C

Project Name			Date
Verizon			2/20/2013
Project Address	Climate Zone	Total Cond. Floor Area	Unconditioned Floor Area
1800 Solar Drive Oxnard	6	13,099	0

GENERAL INFORMATION

Building Type: ☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/Motel Guest Room ☐ School ☐ Relocatable Public School ☑ Conditioned Spaces ☐ Unconditioned Spaces

Phase of Construction: ☐ New Construction ☐ Addition ☐ Alteration

Method of Compliance: ☐ Complete Building ☑ Area Category ☐ Tailored

Documentation Author's Declaration Statement

I certify that this Certificate of Compliance documentation is accurate and complete.

Name | Signature: [signature]

Company: Syska Hennessy Group, Inc. | Date: 2/20/2013

Address | CEA # | CEPE #

City/State/Zip | Phone

The Principal Lighting Designer's Declaration Statement

- I am eligible under Division 3 of the California Business and Professional Code to accept responsibility for the lighting design.
- This Certificate of Compliance identifies the lighting features and performance specifications required for compliance with Title 24, Pages 1 and 6 of the California Code of Regulations.
- The design features represented on this Certificate of Compliance are consistent with the information provided to document this design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Name: Ben Sadighi | Signature

Company: Syska Hennessy Group, Inc. | Phone: 310.312.0200

Address: 800 Corporate Pointe Suite 200 | License #

City/State/Zip: Culver City, CA 90230 | Date

Lighting Mandatory Measures
Indicate location on building plans of Mandatory Measures Note Block: THIS SHEET

LIGHTING COMPLIANCE FORMS & WORKSHEETS (check box if worksheets is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the Nonresidential Manual published by the California Energy Commission.

- ☑ LTG-1C Pages 1 through 4 — Certificate of Compliance. All Pages required on plans for all submittals.
- ☑ LTG-2C — Lighting Controls Credit Worksheet
- ☑ LTG-3C — Indoor Lighting Power Allowance
- ☑ LTG-4C Pages 1 through 4 — Tailored Method Worksheet
- ☐ LTG-5C Pages 1 and 2 — Line Voltage Track Lighting Worksheet

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LIGHTING MANDATORY MEASURES: NONRESIDENTIAL LTG-MM

Project Name: Verizon | Date: 2/20/2013

Indoor Lighting Measures:

§131(d):	**Shut-off Controls**
1.	For every floor, all interior lighting systems shall be equipped with a separate automatic control to shut off the lighting. This automatic control shall meet the requirements of Section 119 and may be an occupancy sensor, automatic time switch, or other device capable of automatically shutting off the lighting.
2.	Override for Building Lighting Shut-off: The automatic building shut-off system is provided with a manual, accessible override switch in sight of the lights. The area of override is not to exceed 5,000 square feet.
§119(h):	Automatic Control Devices Certified: All automatic control devices specified are certified, all alternate equipment shall be certified and installed as directed by the manufacturer.
§111:	Fluorescent Ballast and Luminaires Certified: All fluorescent fixtures specified for the project are certified and listed in the Directory. All installed fixtures shall be certified.
§131(a):	Individual Room/Area Controls: Each room and area in this building is equipped with a separate switch or occupancy sensor device for each area with floor-to-ceiling walls.
§131(b):	Uniform Reduction for Individual Rooms: All rooms and areas greater than 100 square feet and more than 0.8 watts per square foot of lighting load shall be controlled with bi-level switching for uniform reduction of lighting within the room.
§131(c):	Daylight Area Control: All rooms with windows and skylights that are greater than 250 square feet and that allow for the effective use of daylight in the area shall have 50% of the lamps in each daylit area controlled by a separate switch; or the effective use of daylight cannot be accomplished because the windows are continuously shaded by a building on the adjacent lot. Diagram of shading during different times of the year is included on plans.
§131(c):	Display Lighting. Display lighting shall be separately switched on circuits that are 20 amps or less.6.

Outdoor Lighting Measures:

§130(c)1:	Mandatory lighting power determination for medium base sockets without permanently installed ballasts
§132(a):	All permanently installed luminaires with lamps rated over 100 Watts either have a lamp efficacy of at least 60 lumens per Watt or are controlled by a motion sensor.
§132(b):	All Luminaires with lamps rated greater than 175 Watts in hardscape area, including parking lots, building entrances, canopies, and all outdoor sales areas meet the Cutoff Requirements.
§132(c)1:	All permanently installed outdoor lighting meets the control requirements listed.
§132(c):	Building facades, parking lots, garages, canopies, and outdoor sales areas meet the Multi-Level Lighting Requirements listed.

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INDOOR LIGHTING POWER ALLOWANCE LTG-3C

Project Name: Verizon | Date: 2/20/2013

ALLOWED LIGHTING POWER (Chose One Method)

A Separate LTG-3C must be filled out for Conditioned and Unconditioned Spaces. Indoor Lighting Power Allowances listed on this page are only for:
☑ CONDITIONED SPACES ☐ UNCONDITIONED SPACES

COMPLETE BUILDING METHOD

BUILDING CATEGORY (From §146 Table 146 E)	WATTS PER (ft²)	X	COMPLETE BLDG. AREA	=	ALLOWED WATTS
TOTALS			AREA		WATTS

AREA CATEGORY METHOD

BUILDING CATEGORY (From §146 Table 146-F)	WATTS PER (ft²)	X	Area ft²	=	ALLOWED WATTS
Corridor/Restroom/Support	0.60		3,204		1,922
Lounge, Recreation	1.10		1,268		1,395
Convention/Conference/Meeting	1.40		2,190		3,066
Kitchen, Food Preparation	1.60		5,113		8,181
Office <= 250 sqft	1.10		761		837
Commercial, Industrial Storage	0.60		36		22
Classroom, Lecture, Training	1.20		527		632
TOTALS			13,099 AREA		18,055 WATTS

TAILORED METHOD

Total Allowed Watts using the Tailored Method taken from LTG-4C (Page 1 of 4) Row 3: 0

The indoor lighting power allowance using the Tailored Method of compliance shall be determined using the LTG 4C set of forms. A separate set of LTG 4C forms shall be filled out for CONDITIONED and UNCONDITIONED spaces.

EnergyPro 5.1 by EnergySoft User Number: 3982 RunCode: 2013-02-20T09:38:55 ID: VZOX000 Page 7 of 8

LIGHTING CONTROLS CREDIT WORKSHEET (Part 1 of 2) LTG-2C

Project Name: Verizon | Date: 2/20/2013

POWER ADJUSTMENT FACTORS (PAF) FOR NON-DAYLIGHT CONTROLS

A Separate PAF Worksheet Must Be Filled Out for Conditioned and Unconditioned Spaces. Control Credits listed on this schedule are only for:
☑ **CONDITIONED SPACES** ☐ **UNCONDITIONED SPACES**

A	B	C	D	E	F	G
Room # Zone ID Areas	Lighting Control Description[1]	Plan Reference	Room Area (ft²)	Watts of Control Lighting	Power Adjustments Factor[2]	Control Credit Watts (E X F)
BREAKOUT 205	Occ Sensor - Multi-Level	F4A	634	192	0.20	38
BREAKOUT 205	Occ Sensor - Multi-Level	F4B	634	384	0.20	77
BREAKOUT 205	Occ Sensor - Multi-Level	F4C	634	320	0.20	64
BREAKOUT 305	Occ Sensor - Multi-Level	F4A	634	192	0.20	38
BREAKOUT 305	Occ Sensor - Multi-Level	F4B	634	384	0.20	77
BREAKOUT 305	Occ Sensor - Multi-Level	F4C	634	320	0.20	64
CONFERENCE 20	Occ Sensor - Multi-Level	F1	225	128	0.20	26
CONFERENCE 20	Occ Sensor - Multi-Level	F1	325	192	0.20	38
CONFERENCE 20	Occ Sensor - Multi-Level	F1	245	128	0.20	26
CONFERENCE 30	Occ Sensor - Multi-Level	F1	225	128	0.20	26
CONFERENCE 30	Occ Sensor - Multi-Level	F1	325	192	0.20	38
CONFERENCE 30	Occ Sensor - Multi-Level	F1	245	128	0.20	26
CONFERENCE 31	Occ Sensor - Multi-Level	F12	375	204	0.20	41
MEETING 314	Occ Sensor - Multi-Level	F12	225	136	0.20	27
PANTRY 203	Occ Sensor - Multi-Level	F3	812	120	0.20	24
PANTRY 203	Occ Sensor - Multi-Level	D1	812	192	0.20	38
PANTRY 203	Occ Sensor - Multi-Level	F3	812	120	0.20	24
CAFE 110	Occ Sensor - Multi-Level	F5A	3,489	1,728	0.20	346
CAFE 110	Occ Sensor - Multi-Level	F6	3,489	1,152	0.20	230
CAFE 110	Occ Sensor - Multi-Level	F3	3,489	660	0.20	132
CAFE 110	Occ Sensor - Multi-Level	F5	3,489	480	0.20	96
PANTRY 303	Occ Sensor - Multi-Level	F3	812	120	0.20	24
PANTRY 303	Occ Sensor - Multi-Level	D1	812	192	0.20	38
PANTRY 303	Occ Sensor - Multi-Level	F3	812	120	0.20	24
COACHING OFFIC	Occ Sensor - Multi-Level	F12	147	68	0.20	14
COACHING OFFIC	Occ Sensor - Multi-Level	F12	134	68	0.20	14
TRAINING 215	Occ Sensor - Multi-Level	F12	527	272	0.20	54
					PAGE TOTAL	1,664

Note: Conditioned and Unconditioned Space shall be separately totaled

Building total of non-daylight control credit watts for all pages of LTG-2C Page 1 of 2

Enter building total of all daylight controls credit watts from LTG-2C Page 2 of 2: 0

BUILDING TOTAL OF ALL CONTROL CREDIT WATTS (FOR BOTH NON-DAYLIGHT AND DAYLIGHT CONTROL CREDITS) Enter in LTG-1C, Page 4: Lighting Control Credit as appropriate for CONDITIONED or UNCONDITIONED Spaces: 1,664

1. Description shall be consistent with Type of Control defined in Table 146-C
2. Power Adjustment Factor taken from Table 146-C

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CERTIFICATE OF COMPLIANCE (Part 4 of 4) LTG-1C

Project Name: Verizon | Date: 2/20/2013

CONDITIONED AND UNCONDITIONED SPACE LIGHTING MUST NOT BE COMBINED FOR COMPLIANCE

Indoor Lighting Power for Conditioned Spaces		Watts	Indoor Lighting Power for Unconditioned Spaces		Watts
Installed Lighting (from Conditioned LTG-1C, Page 2)		10,468	**Installed** Lighting (from Unconditioned LTG-1C, Page 2)		0
Lighting Control Credit Conditioned Spaces (from LTG-2C)	-	1,664	Lighting Control Credit Unconditioned Spaces (from LTG-2C)	-	0
Adjusted **Installed** Lighting Power	=	8,804	Adjusted **Installed** Lighting Power	=	0
Complies if **Installed** ≤ **Allowed**		↕	Complies if **Installed** ≤ **Allowed**		↕
Allowed Lighting Power Conditioned Spaces (from LTG-3C or PERF-1)		18,055	**Allowed** Lighting Power Unconditioned Spaces (from LTG-3C)		0

Required Acceptance Tests

Designer:

This form is to be used by the designer and attached to the plans. Listed below is the acceptance test for the Lighting system, **LTG-2A and LTG-3A**. The designer is required to check the acceptance tests and list all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance. If all the lighting system or control of a certain type requires a test, list the different lighting and the number of systems. The NA7 Section in the Appendix of the Nonresidential Reference Appendices Manual describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately. **Forms can be grouped by type of Luminaire controlled.**

Enforcement Agency:

Systems Acceptance. Before Occupancy Permit is granted for a newly constructed building or space or when ever new lighting system with controls is installed in the building or space shall be certified as meeting the Acceptance Requirements. The **LTG-2A and LTG-3A** forms are not considered complete forms and are not to be accepted by the enforcement agency unless the boxes are checked and/or filled and signed. In addition, a Certificate of Acceptance forms shall be submitted to the enforcement agency that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of §10-103(b) of Title 24 Part 6. The field inspector must receive the properly filled out and signed forms before the building can receive final occupancy. A copy of the **LTG-2A and LTG-3A** for each different lighting luminaire control(s) must be provided to the owner of the building for their records.

Luminaires Controlled				LTG-2A and LTG-3A
Equipment Requiring Testing	Description	Number of Luminaires controlled	Location	Controls and Sensors and Automatic Daylighting Controls Acceptance
Occ Sensor - Multi-Level	D1 - FLUORESCENT PENDANT 4-32	3	PANTRY 203	☑
Occ Sensor - Multi-Level	F3 - 20W LED RECESSED DOWNLO	6	PANTRY 203	☑
Occ Sensor - Multi-Level	F5A - 6' LINEAR FLUORECENT REC	27	CAFE 110	☑
Occ Sensor - Multi-Level	F6 - STAGGERED FLUORESCENT S	18	CAFE 110	☑
Occ Sensor - Multi-Level	F3 - 20W LED RECESSED DOWNLO	33	CAFE 110	☑
Occ Sensor - Multi-Level	F5 - 2' LINEAR FLUORECENT RECE	8	CAFE 110	☑
Occ Sensor - Multi-Level	F3 - 20W LED RECESSED DOWNLO	6	PANTRY 303	☑
Occ Sensor - Multi-Level	D1 - FLUORESCENT PENDANT 4-32	3	PANTRY 303	☑
Occ Sensor - Multi-Level	F3 - 20W LED RECESSED DOWNLO	6	PANTRY 303	☑
Occ Sensor - Multi-Level	F12 - 2'x2' LINEAR FLUORECENT RE	2	COACHING OFFICE 213	☑
Occ Sensor - Multi-Level	F12 - 2'x2' LINEAR FLUORECENT RE	2	COACHING OFFICE 214	☑
Occ Sensor - Multi-Level	F12 - 2'x2' LINEAR FLUORECENT RE	8	TRAINING 215	☑
				☐
				☐
				☐
				☐

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6

5

The corner tick marks represent the 30"x48" plot area.

verizon

1800 Solar Drive
Oxnard, CA 93030

Gensler

1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

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Issue	Date & Issue Description	By	Check
01	07/31/12	-	-
	PLAN CHECK		
1	08/10/12	-	-
	ISSUE FOR CONSTRUCTION		
2	09/12/12	-	-
	BULLETIN 1		
3	10/09/12	-	-
	BULLETIN 2		
4	10/23/2012	-	-
	REVISED FOR PLAN CHECK		
5	11/19/12	-	-
	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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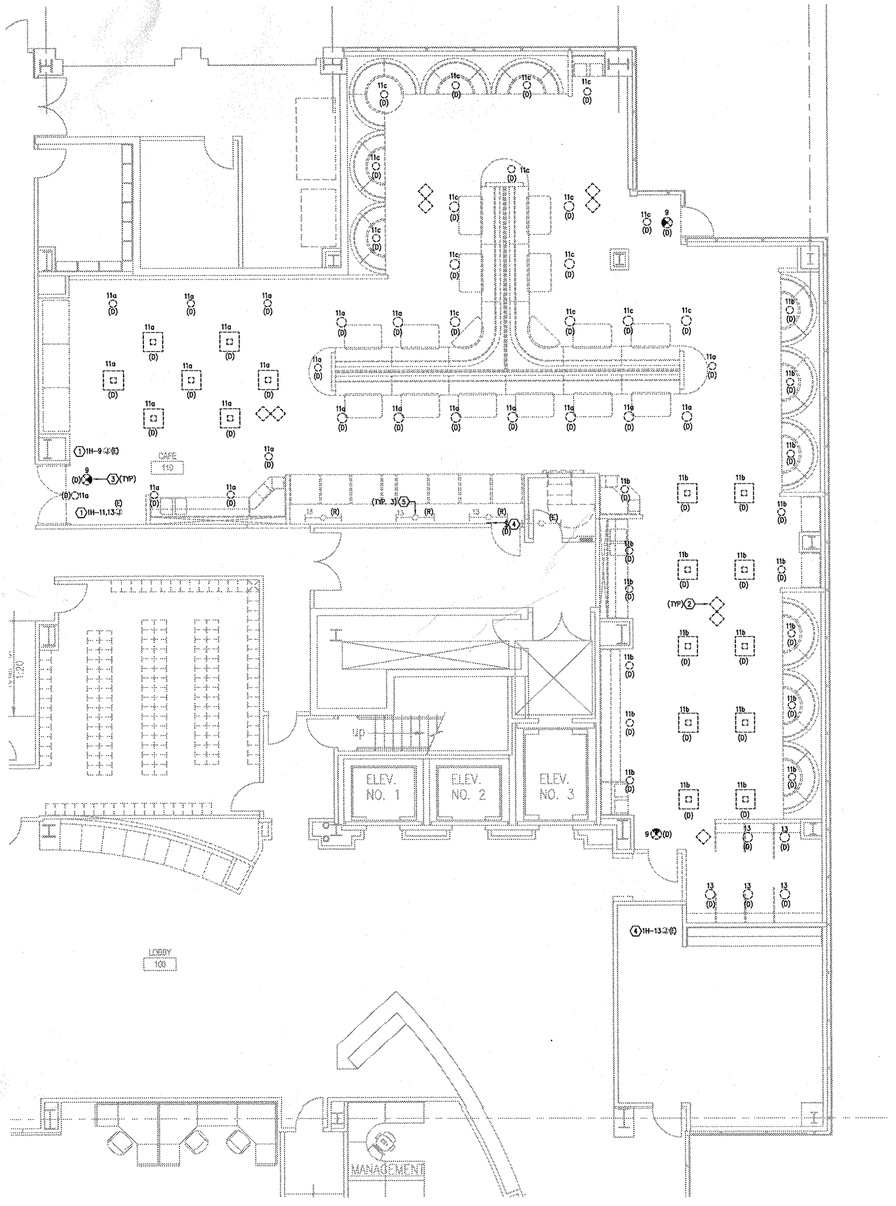
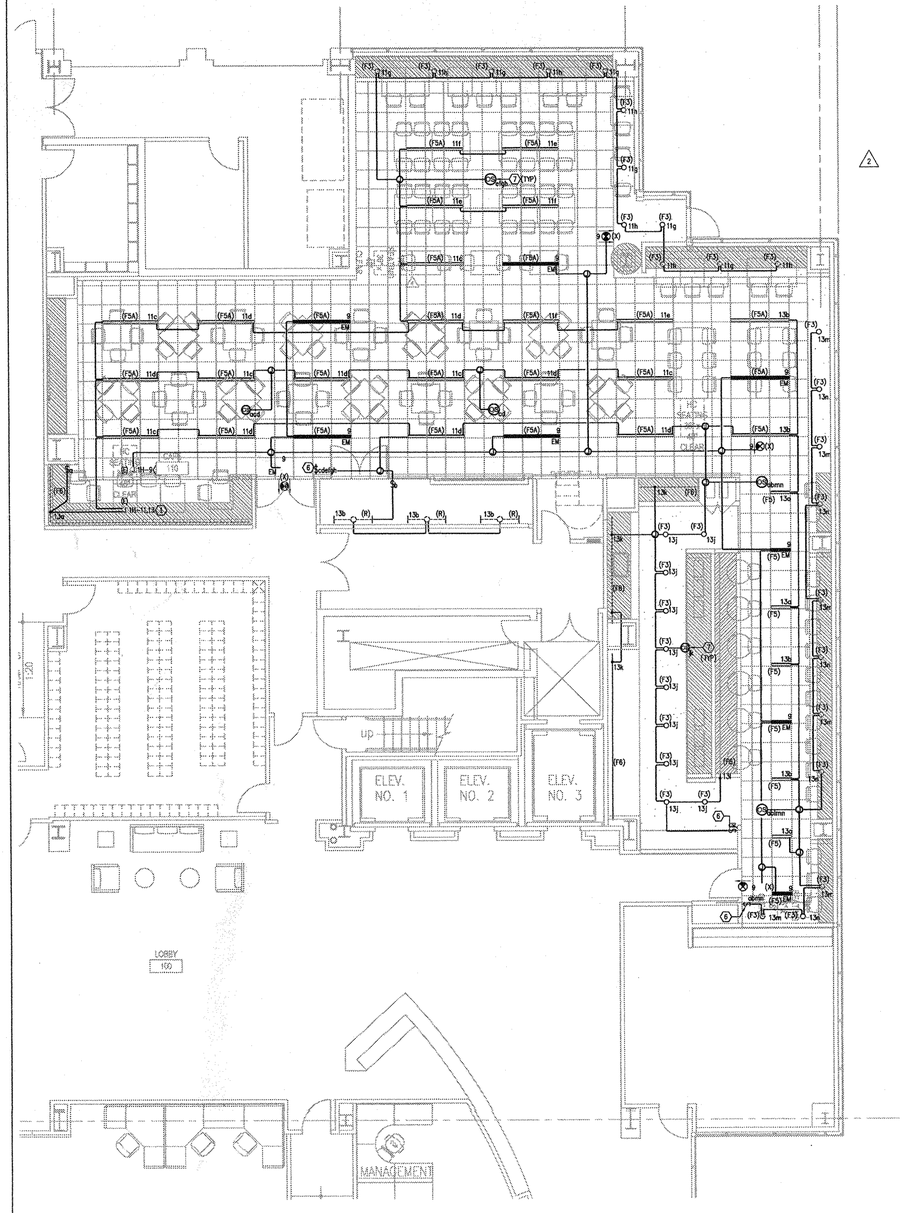
Description
TITLE 24 COMPLIANCE SCHEDULES

Scale
NONE

E-003



1ST FLOOR - PARTIAL LIGHTING DEMOLITION PLAN 2



1ST FLOOR - PARTIAL LIGHTING PLAN 1

DEMOLITION NOTES

1. CONTRACTOR IS RESPONSIBLE FOR ACTUAL CIRCUIT IDENTIFICATION. CIRCUIT IDENTIFICATION SHOWN ON THIS DRAWING IS INFORMATIONAL PURPOSES ONLY. ALL CIRCUITS MUST BE IDENTIFIED BEFORE REMOVAL. ALL DISCREPANCIES MUST BE REPORTED TO PROJECT MANAGER & SYSKA IMMEDIATELY.
2. THIS PROJECT IS OF A COMPLEX NATURE. CONTRACTOR SHALL VISIT THE JOB SITE AND GET FAMILIAR WITH FIELD CONDITIONS. EXISTING CONDITIONS MAY VARY FROM WHAT SHOWN ON DRAWING. CONTRACTOR SHALL BRING TO ENGINEERS ATTENTION ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DESIGN DOCUMENTS.
3. SEAL ALL EXPOSED FLOOR CORE HOLES. AFTER SETS MUST BE REMOVED AND HOLES TO BE SEALED BY APPROVED METHOD. COORDINATE PROCEDURE WITH PROJECT MANAGER.
4. SEE ADDITIONAL RENOVATION NOTES ON DRAWING ED_1.
5. ELECTRICAL CONTRACTOR TO PROVIDE COVER PLATES FOR ALL HOLES, OPENING, ETC. TO MATCH EXISTING.
6. IN THE AREAS WHERE THERE ARE NO ALTERATIONS INDICATED, THE EXISTING FACILITIES SHALL BE RETAINED IN SERVICE. IN CASE OF DOUBT, ASSUME THAT THE EXISTING ELECTRICAL WIRING IS TO REMAIN IN OPERATION THROUGHOUT THE CONSTRUCTION PERIOD AND THEREAFTER.
7. UNLESS OTHERWISE NOTED, ALL DEVICES NOTED AS (D) ARE TO BE REMOVED. REMOVE ALL ASSOCIATED CONDUITS/WIRING BACK TO SOURCE (DO NOT ABANDON).
8. ALL LIGHTING FIXTURES NOTED AS (E) ARE EXISTING TO REMAIN. MAINTAIN OPERATION AND CIRCUITRY.
9. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL DEVICES SHOWN AND ALSO VERIFY THE CIRCUIT DESIGNATION PRIOR TO COMMENCING DEMOLITION WORK.
10. ALL EXISTING ELECTRICAL EQUIPMENT AND CONDUITS THAT INTERFERE WITH ANY NEW CONSTRUCTION SHALL BE RELOCATED OR RE-ROUTED AS REQUIRED TO CLEAR THE NEW CONSTRUCTION. RECONNECT ALL EXISTING EQUIPMENT THAT ARE TO REMAIN AND NOT AFFECTED BY THE NEW WORK.
11. FIRE ALARM CONTRACTOR SHALL REWORK (REMOVE, RELOCATE, RE-ROUTE AND/OR PROVIDE NEW) ALL FIRE LIFE SAFETY SYSTEM DEVICES INCLUDING FIRE SPRINKLER HEAD TO MEET FIRE/LIFE SYSTEM SAFETY CODE. COORDINATE WITH ARCHITECT AND BUILDING ENGINEER FOR EXACT REQUIREMENTS.
12. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT REQUIREMENTS OF DEMOLITION WORK.

SHEET NOTES

1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND QUANTITY OF OF ALL LIGHTING FIXTURES.
2. WHERE MULTIPLE SWITCHES ARE INDICATED, SWITCHES SHALL BE GANGED UNDER A COMMON WALL PLATE.
3. CONDUIT ROUTING AND LOCATION OF ALL J-BOXES ARE FOR REFERENCE ONLY. ALL OPENING AROUND CONDUITS PASSING THROUGH FIRE RATED WALL, CEILING, FLOORS, ETC. SHALL BE PACKED AND SEALED TO CONFORM WITH THE FIRE RATING OF THE PENETRATED.
4. NO EQUIPMENT, J-BOXES ETC. REQUIRING ACCESS SHALL BE LOCATED IN THE HARD CEILING AREAS (UNLESS ACCESS PANEL IS PROVIDED, COORDINATE WITH ARCHITECT). LOCATE ANY EXISTING EQUIPMENT, J-BOXES ETC. TO ACCESSIBLE CEILING AREAS.
5. ROUTE CIRCUITS THRU BUILDING LIGHTING RELAY PANEL AND OCCUPANCY SENSOR, EXCEPT EGRESS LIGHTING.
6. ALL JUNCTION BOXES, OUTLETS BOXES, PULL BOXES AND ETC. SHALL BE LABELED WITH PROPER CIRCUIT AND PANEL DESIGNATION AT THE CONCLUSION OF WORK.
7. CIRCUITS SHOWN USED ARE ASSUMED SERVING EXISTING LIGHTING LOAD. WHERE INDICATED ARE SERVING EXISTING TO REMAIN, CONTRACTOR TO MAINTAIN EXISTING CIRCUITING AND SWITCHING SCHEME, UNLESS OTHERWISE NOTED.
8. ALL WORK SHOWN ARE NEW, UNLESS OTHERWISE NOTED.
9. SUPPORT CEILING MOUNTED LIGHTING FIXTURES DIRECTLY FROM BUILDING STRUCTURE. DO NOT SUPPORT FIXTURES FROM PIPING, DUCTWORK OR ANY OTHER EQUIPMENT, OR SOLELY FROM SUSPENDED CEILING.
10. ALIGN ALL WALL SWITCHES TO DOOR HARDWARE AND COORDINATE WITH THERMOSTAT LOCATIONS. VERIFY EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
11. PROVIDE J-BOX FOR INSTALLATION OF EACH ILLUMINATED EXIT SIGN.
12. EMERGENCY LIGHTING REQUIREMENTS: PROVIDE 1 FOOT CANDLE MINIMUM ALONG EGRESS PATHWAY PER IBC 1006.4.

KEY NOTES

1. KEEP THE (E) J-BOX VIA INDICATED CIRCUITS OF EXISTING CONNECTIONS TO EXISTING TO REMAIN LIGHT FIXTURES LOCATED OUTSIDE THE AREA OF WORK. MAINTAIN EXISTING CIRCUITING, CONNECTIONS AND SWITCHING SCHEME OF EXISTING LIGHT FIXTURES.
2. (E) OCCUPANCY SENSOR TO BE DEMOLISHED. REMOVE ALL EXISTING LIGHT FIXTURE WITH DENOTED "D" AND ASSOCIATED CONDUITS/WIRING BACK TO SOURCES.
3. (E) LIGHT FIXTURES VIA UN-SWITCH CIRCUIT TO BE DEMOLISHED. REMOVE EXISTING CONNECTIONS TO NEAREST J-BOX. MAINTAIN EXISTING CIRCUIT FOR INSTALLATION OF BATTERY PACK EMERGENCY LIGHT FIXTURES SHOWN IN THE NEW CONSTRUCTION PLANS.
4. REMOVE (E) SWITCH AND CONDUIT/WIRING TO THE NEAREST J-BOX. MAINTAIN EXISTING CIRCUITING FOR RECONNECTION TO RELOCATED FLUORESCENT LIGHT FIXTURES. SEE CONSTRUCTION PLANS FOR LOCATION OF NEW SWITCH.
5. FIELD VERIFY AND RELOCATE (E) FLUORESCENT STRIP LIGHT FIXTURE TO NEW LOCATION. MAINTAIN EXISTING CIRCUITING AS REQUIRED.
6. PROVIDE "WATTSTOPPER" MOMENTARY OVERRIDE SWITCH WITH LED PILOT LIGHT. PROVIDE ALL NECESSARY POWER PACK AND HARDWARE/COMPONENTS FOR A COMPLETE OPERABLE SYSTEM.
7. "WATTSTOPPER" DUAL TECHNOLOGY CEILING MOUNTED SENSOR COMBINATION OF PASSIVE INFRARED AND ULTRASONIC TECHNOLOGY- DT SERIES. PROVIDE WITH POWER PACK AND ALL ACCESSORIES TO ACCOMMODATE SWITCHING SCHEME SHOWN.

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
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Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7466
www.syska.com

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2		09/12/12	-	-
		BULLETIN 1		
3		10/09/12	-	-
		BULLETIN 2		
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		BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\EL-401-VZCOX000.dwg

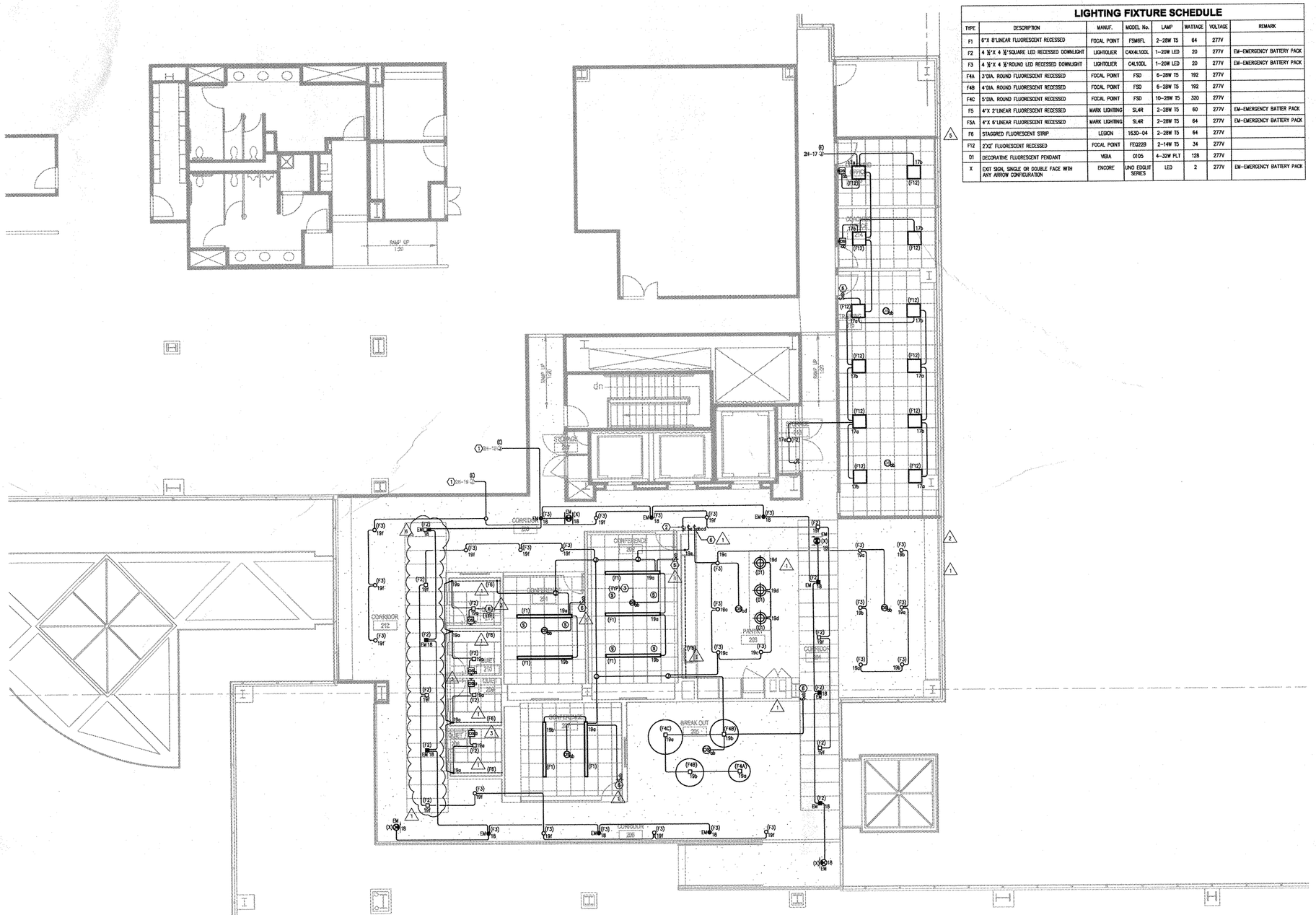
Description
1ST FLOOR PARTIAL DEMOLITION AND LIGHTING PLAN

Scale
3/16" = 1'-0"

True North
Ref North

EL-401

The corner tick marks represent the 30"x42" plot area.



LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUF.	MODEL No.	LAMP	WATTAGE	VOLTAGE	REMARK
F1	6"X 8'LINEAR FLUORESCENT RECESSED	FOCAL POINT	FSM6FL	2-28W T5	64	277V	
F2	4 ½"X 4 ½"SQUARE LED RECESSED DOWNLIGHT	LIGHTOLIER	C4X4L10DL	1-20W LED	20	277V	EM-EMERGENCY BATTERY PACK
F3	4 ½"X 4 ½"ROUND LED RECESSED DOWNLIGHT	LIGHTOLIER	C4L10DL	1-20W LED	20	277V	EM-EMERGENCY BATTERY PACK
F4A	3'DIA. ROUND FLUORESCENT RECESSED	FOCAL POINT	FSD	6-28W T5	192	277V	
F4B	4'DIA. ROUND FLUORESCENT RECESSED	FOCAL POINT	FSD	6-28W T5	192	277V	
F4C	5'DIA. ROUND FLUORESCENT RECESSED	FOCAL POINT	FSD	10-28W T5	320	277V	
F5	4"X 2'LINEAR FLUORESCENT RECESSED	MARK LIGHTING	SL4R	2-28W T5	60	277V	EM-EMERGENCY BATTER PACK
F5A	4"X 6'LINEAR FLUORESCENT RECESSED	MARK LIGHTING	SL4R	2-28W T5	64	277V	EM-EMERGENCY BATTERY PACK
F6	STAGGRED FLUORESCENT STRIP	LEGION	1630-04	2-28W T5	64	277V	
F12	2'X2' FLUORESCENT RECESSED	FOCAL POINT	FEQ223I	2-14W T5	34	277V	
D1	DECORATIVE FLUORESCENT PENDANT	VIBIA	0105	4-32W PLT	128	277V	
X	EXIT SIGN, SINGLE OR DOUBLE FACE WITH ANY ARROW CONFIGURATION	ENCORE	UNO EDGIT SERIES	LED	2	277V	EM-EMERGENCY BATTERY PACK

SHEET NOTES

1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND QUANTITY OF OF ALL LIGHTING FIXTURES.
2. WHERE MULTIPLE SWITCHES ARE INDICATED, SWITCHES SHALL BE GANGED UNDER A COMMON WALL PLATE.
3. CONDUIT ROUTING AND LOCATION OF ALL J-BOXES ARE FOR REFERENCE ONLY. ALL OFFSING AROUND CONDUITS PASSING THROUGH FIRE RATED WALL, CEILING, FLOORS, ETC. SHALL BE PACKED AND SEALED TO CONFORM WITH THE FIRE RATING OF THE PENETRATED.
4. NO EQUIPMENT, J-BOXES ETC. REQUIRING ACCESS SHALL BE LOCATED IN THE HARD CEILING AREAS (UNLESS ACCESS PANEL IS PROVIDED, COORDINATE WITH ARCHITECT). LOCATE ANY EXISTING EQUIPMENT, J-BOXES ETC. TO ACCESSIBLE CEILING AREAS.
5. ROUTE CIRCUITS THRU BUILDING LIGHTING RELAY PANEL AND OCCUPANCY SENSOR, EXCEPT EGRESS LIGHTING.
6. ALL JUNCTION BOXES, OUTLETS BOXES, PULL BOXES AND ETC. SHALL BE LABELED WITH PROPER CIRCUIT AND PANEL DESIGNATION AT THE CONCLUSION OF WORK.
7. CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, RECEPTACLES, SWITCHES, ETC AND MAKE FINAL CONNECTIONS AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
8. CIRCUITS SHOWN USED ARE ASSUMED SERVING EXISTING LIGHTING LOAD. WHERE INDICATED ARE SERVING EXISTING TO REMAIN. CONTRACTOR TO MAINTAIN EXISTING CIRCUITING AND SWITCHING SCHEME, UNLESS OTHERWISE NOTED.
9. ALL WORK SHOWN ARE NEW, UNLESS OTHERWISE NOTED.
10. IN THE AREA WHERE THERE ARE NO ALTERATIONS INDICATED, THE EXISTING FACILITIES SHALL BE RETAINED IN SERVICE. IN CASE OF DOUBT, ASSUME THAT THE EXISTING ELECTRICAL WIRING IS TO REMAIN IN OPERATION THROUGHOUT THE CONSTRUCTION PERIOD AND THEREAFTER.
11. SUPPORT CEILING MOUNTED LIGHTING FIXTURES DIRECTLY FROM BUILDING STRUCTURE. DO NOT SUPPORT FIXTURES FROM PIPING, DUCTWORK OR ANY OTHER EQUIPMENT, OR SOLELY FROM SUSPENDED CEILING.
12. ALIGN ALL WALL SWITCHES TO DOOR HARDWARE AND COORDINATE WITH THERMOSTAT LOCATIONS. VERIFY EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
13. PROVIDE J-BOX FOR INSTALLATION OF EACH ILLUMINATED EXIT SIGN.
14. EMERGENCY LIGHTING REQUIREMENTS: PROVIDE 1 FOOT CANDLE MINIMUM ALONG EGRESS PATHWAY PER IBC 1006.4.

KEY NOTES

1. (E) J-BOX IN ACCESSIBLE CEILING SPACE TO REMAIN, FIELD VERIFY FOR EXACT LOCATION AND (E) CIRCUITING. MAKE FINAL CONNECTIONS SHOWN. REFER TO PARTIAL LIGHTING DEMOLITION PLAN FOR REFERENCE LOCATION OF (E) J-BOX.
2. PROVIDE MOMENTARY OVERRIDE SWITCH WITH PILOT LED BYPASSING BUILDING RELAY CONTROL CIRCUIT. FIELD VERIFY AND PROVIDE ALL NECESSARY HARDWARE/COMPONENTS AND PROGRAMMING COMPATIBLE WITH (E) BUILDING LIGHTING RELAY CONTROL SYSTEM TO ACCOMMODATE NEW SWITCHING SCHEME.
3. "WATTSTOPPER" DUAL TECHNOLOGY CEILING MOUNTED SENSOR COMBINATION OF PASSIVE INFRARED AND ULTRASONIC TECHNOLOGY – DT SERIES. PROVIDE WITH POWER PACK AND ALL ACCESSORIES TO ACCOMMODATE SWITCHING SCHEME SHOWN.
4. DUAL TECHNOLOGY WALL MOUNTED SENSOR COMBINATION OF PASSIVE INFRARED AND ULTRASONIC TECHNOLOGY – DT SERIES. PROVIDE WITH POWER PACK AND ALL ACCESSORIES TO ACCOMMODATE SWITCHING SCHEME SHOWN.
6. PROVIDE "WATTSTOPPER" MOMENTARY OVERRIDE SWITCH WITH LED PILOT LIGHT. PROVIDE ALL NECESSARY POWER PACK AND HARDWARE/COMPONENTS FOR A COMPLETE OPERABLE SYSTEM.

verizon
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Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
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New York, NY 10020
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SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
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Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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Description
2ND FLOOR PARTIAL LIGHTING PLAN

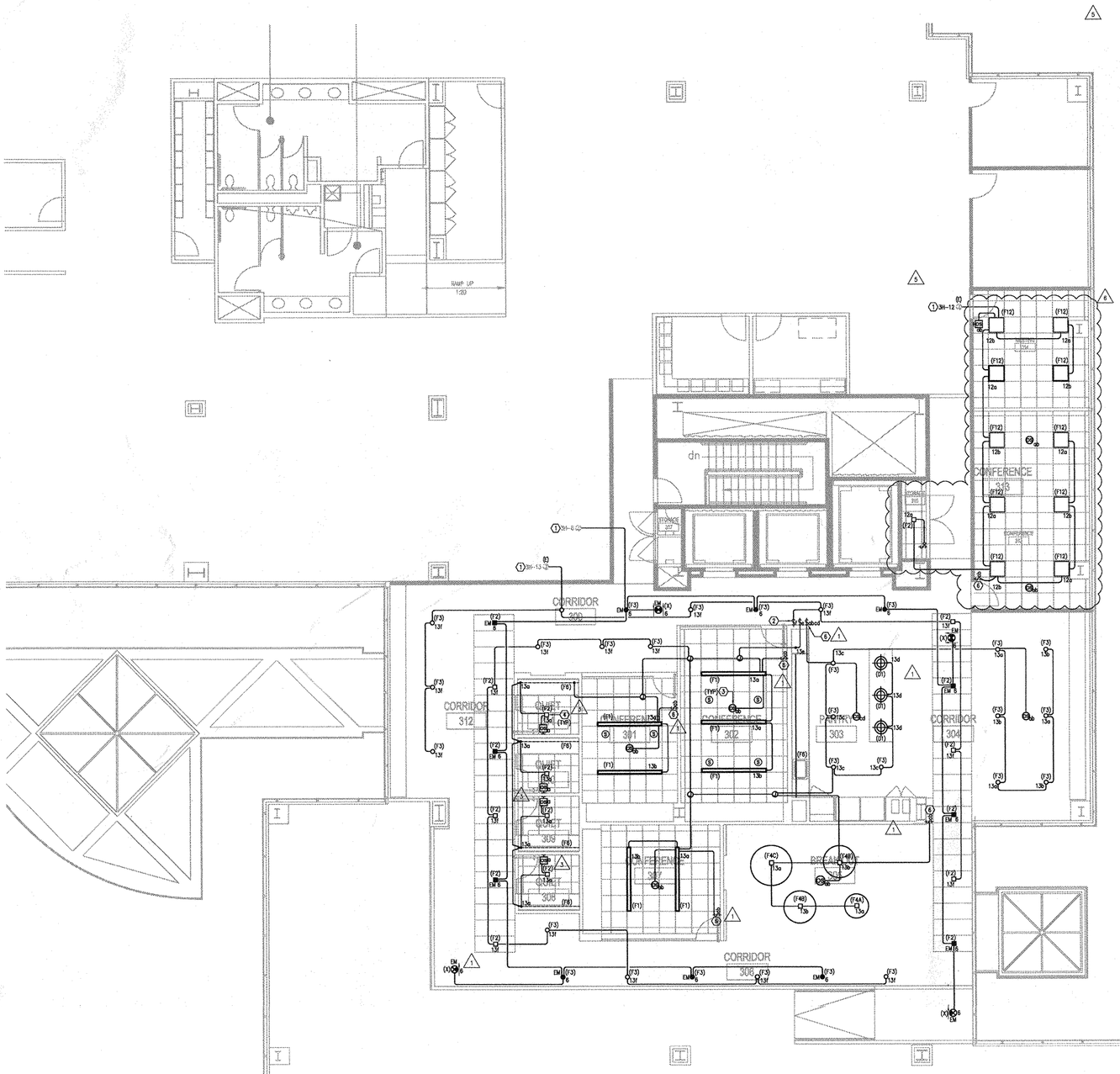
Scale
3/16" = 1'-0"

True North
Ref North

EL-402

2ND FLOOR - PARTIAL LIGHTING PLAN 1

The corner tick marks represent the 30"x40" plot area.



3RD FLOOR - PARTIAL LIGHTING PLAN

1

SHEET NOTES

1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND QUANTITY OF OF ALL LIGHTING FIXTURES.
2. WHERE MULTIPLE SWITCHES ARE INDICATED, SWITCHES SHALL BE GANGED UNDER A COMMON WALL PLATE.
3. CONDUIT ROUTING AND LOCATION OF ALL J-BOXES ARE FOR REFERENCE ONLY. ALL OPENING AROUND CONDUITS PASSING THROUGH FIRE RATED WALL, CEILING, FLOORS, ETC. SHALL BE PACKED AND SEALED TO CONFORM WITH THE FIRE RATING OF THE PENETRATED.
4. NO EQUIPMENT, J-BOXES ETC. REQUIRING ACCESS SHALL BE LOCATED IN THE HARD CEILING AREAS (UNLESS ACCESS PANEL IS PROVIDED, COORDINATE WITH ARCHITECT). LOCATE ANY EXISTING EQUIPMENT, J-BOXES ETC. TO ACCESSIBLE CEILING AREAS.
5. ROUTE CIRCUITS THRU BUILDING LIGHTING RELAY PANEL AND OCCUPANCY SENSOR, EXCEPT EGRESS LIGHTING.
6. ALL JUNCTION BOXES, OUTLETS BOXES, PULL BOXES AND ETC. SHALL BE LABELED WITH PROPER CIRCUIT AND PANEL DESIGNATION AT THE CONCLUSION OF WORK.
7. CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, RECEPTACLES, SWITCHES, ETC AND MAKE FINAL CONNECTIONS AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
8. CIRCUITS SHOWN USED ARE ASSUMED SERVING EXISTING LIGHTING LOAD. WHERE INDICATED ARE SERVING EXISTING TO REMAIN, CONTRACTOR TO MAINTAIN EXISTING CIRCUITING AND SWITCHING SCHEME, UNLESS OTHERWISE NOTED.
9. ALL WORK SHOWN ARE NEW, UNLESS OTHERWISE NOTED.
10. IN THE AREA WHERE THERE ARE NO ALTERATIONS INDICATED, THE EXISTING FACILITIES SHALL BE RETAINED IN SERVICE. IN CASE OF DOUBT, ASSUME THAT THE EXISTING ELECTRICAL WIRING IS TO REMAIN IN OPERATION THROUGHOUT THE CONSTRUCTION PERIOD AND THEREAFTER.
11. SUPPORT CEILING MOUNTED LIGHTING FIXTURES DIRECTLY FROM BUILDING STRUCTURE. DO NOT SUPPORT FIXTURES FROM PIPING, DUCTWORK OR ANY OTHER EQUIPMENT, OR SOLELY FROM SUSPENDED CEILING.
12. ALIGN ALL WALL SWITCHES TO DOOR HARDWARE AND COORDINATE WITH THERMOSTAT LOCATIONS. VERIFY EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.
13. PROVIDE J-BOX FOR INSTALLATION OF EACH ILLUMINATED EXIT SIGN.
14. EMERGENCY LIGHTING REQUIREMENTS: PROVIDE 1 FOOT CANDLE MINIMUM ALONG EGRESS PATHWAY PER IBC 1006.4.

KEY NOTES

1. (E) J-BOX IN ACCESSIBLE CEILING SPACE TO REMAIN, FIELD VERIFY FOR EXACT LOCATION AND (E) CIRCUITING. MAKE FINAL CONNECTIONS SHOWN. REFER TO PARTIAL LIGHTING DEMOLITION PLAN FOR REFERENCE LOCATION OF (E) J-BOX.
2. PROVIDE MOMENTARY OVERRIDE SWITCH WITH PILOT LED BYPASSING BUILDING RELAY CONTROL CIRCUIT. FIELD VERIFY AND PROVIDE ALL NECESSARY HARDWARE/COMPONENTS AND PROGRAMMING COMPATIBLE WITH (E) BUILDING LIGHTING RELAY CONTROL SYSTEM TO ACCOMMODATE NEW SWITCHING SCHEME.
3. "WATTSTOPPER" DUAL TECHNOLOGY CEILING MOUNTED SENSOR COMBINATION OF PASSIVE INFRARED AND ULTRASONIC TECHNOLOGY - DT SERIES. PROVIDE WITH POWER PACK AND ALL ACCESSORIES TO ACCOMMODATE SWITCHING SCHEME SHOWN.
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Seal/Signature

Project Name
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Project Number
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CAD File Name
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Description
3RD FLOOR PARTIAL LIGHTING PLAN

Scale
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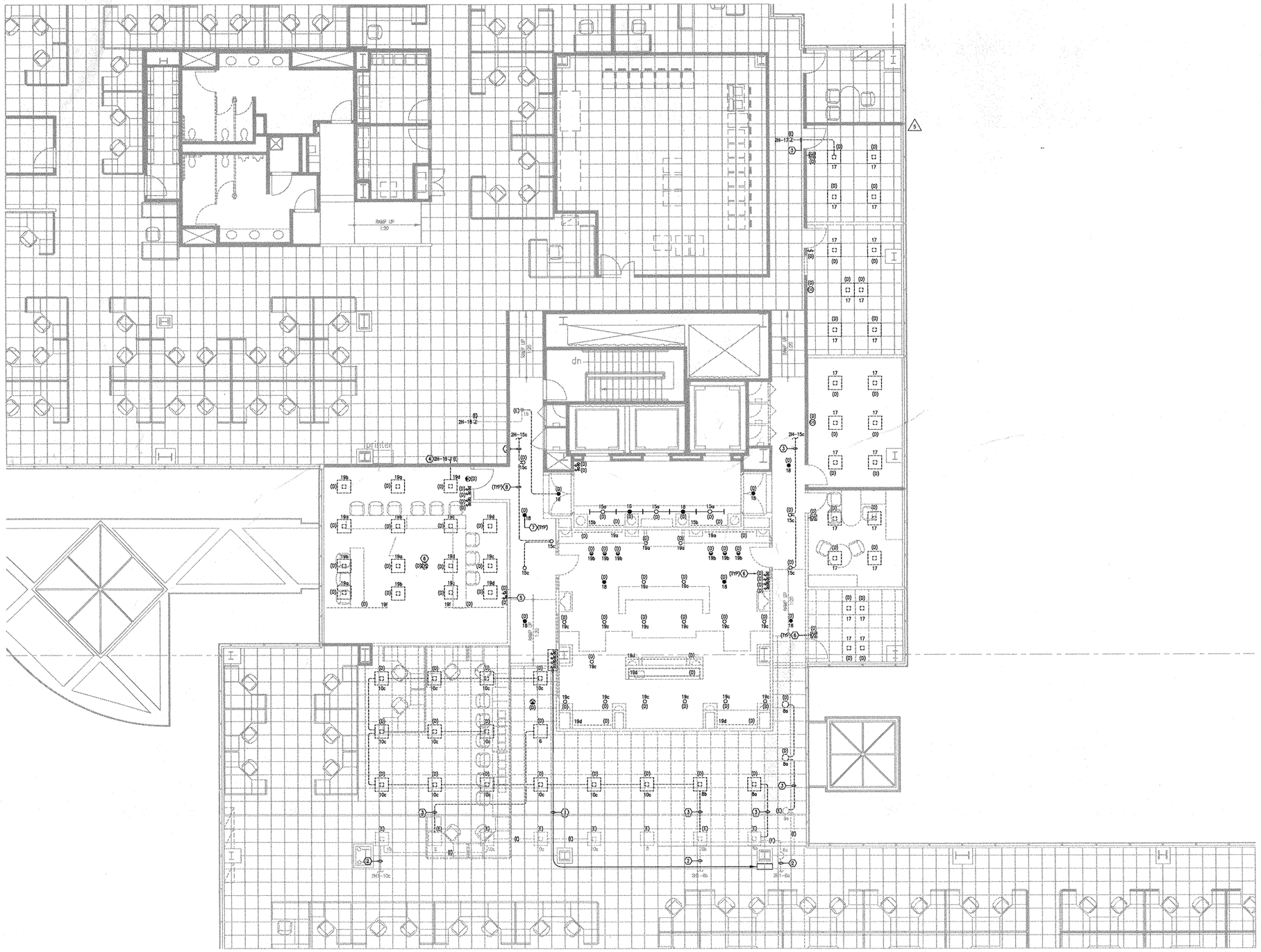
True North
Ref North

EL-403

The corner tick marks represent the 30"x42" plot area.



SHEET NOTES

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2. THIS PROJECT IS OF A COMPLEX NATURE. CONTRACTOR SHALL VISIT THE JOB SITE AND GET FAMILIAR WITH FIELD CONDITIONS. EXISTING CONDITIONS MAY VARY FROM WHAT SHOWN ON DRAWING. CONTRACTOR SHALL BRING TO ENGINEERS ATTENTION ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DESIGN DOCUMENTS.
3. SEAL ALL EXPOSED FLOOR CORE HOLES. AFTER SETS MUST BE REMOVED AND HOLES TO BE SEALED BY APPROVED METHOD. COORDINATE PROCEDURE WITH PROJECT MANAGER.
4. SEE ADDITIONAL RENOVATION NOTES ON DRAWING E0_1.
5. COORDINATE WITH MECHANICAL AND PLUMBING DRAWINGS FOR THE REMOVAL OF ALL MECHANICAL AND PLUMBING EQUIPMENT. REMOVE ALL EXISTING ELECTRICAL DEVICES, CONDUITS/WIRING BACK TO PANEL. LABEL REMOVED CIRCUITS AS SPARES. FIELD VERIFY FOR EXACT LOCATIONS.
6. COORDINATE ALL RAISED FLOOR ACTIVITIES WITH BUILDING ENGINEER. ALL OPEN FLOOR TILES IN AREAS WHERE VERIZON EMPLOYEES ARE WORKING MUST HAVE BARRICADES AND WARNING SIGNS.
7. ALL JUNCTION BOXES, OUTLETS BOXES, PULL BOXES AND ETC. SHALL BE LABELED WITH PROPER CIRCUIT AND PANEL DESIGNATION AT THE CONCLUSION OF WORK PER BUILDING STANDARDS.
8. ELECTRICAL CONTRACTOR TO PROVIDE COVER PLATES FOR ALL HOLES, OPENING, ETC. TO MATCH EXISTING.
9. IN THE AREAS WHERE THERE ARE NO ALTERATIONS INDICATED, THE EXISTING FACILITIES SHALL BE RETAINED IN SERVICE. IN CASE OF DOUBT, ASSUME THAT THE EXISTING ELECTRICAL WIRING IS TO REMAIN IN OPERATION THROUGHOUT THE CONSTRUCTION PERIOD AND THEREAFTER.
10. UNLESS OTHERWISE NOTED, ALL DEVICES NOTED AS (D) ARE TO BE REMOVED. REMOVE ALL ASSOCIATED CONDUITS/WIRING BACK TO SOURCE (DO NOT ABANDON).
11. ALL LIGHTING FIXTURES NOTED AS (E) ARE EXISTING TO REMAIN, MAINTAIN OPERATION AND CIRCUITRY.
12. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL DEVICES SHOWN AND ALSO VERIFY THE CIRCUIT DESIGNATION PRIOR TO COMMENCING DEMOLITION WORK.
13. ALL EXISTING ELECTRICAL EQUIPMENT AND CONDUITS THAT INTERFERE WITH ANY NEW CONSTRUCTION SHALL BE RELOCATED OR RE-ROUTED AS REQUIRED TO CLEAR THE NEW CONSTRUCTION. RECONNECT ALL EXISTING EQUIPMENT THAT ARE TO REMAIN AND NOT AFFECTED BY THE NEW WORK, TO THE NEWLY RELOCATED OR RE-ROUTED SYSTEM TO ENSURE A SAFE AND OPERATIONAL SYSTEM.
14. FIRE ALARM CONTRACTOR SHALL REWORK (REMOVE, RELOCATE, REFROFIT AND/OR PROVIDE NEW) ALL FIRE/ LIFE SAFETY SYSTEM DEVICES INCLUDING FIRE SPRINKLER HEAD TO MEET SYSTEM FIRE/LIFE SAFETY CODE REQUIREMENTS. COORDINATE WITH ARCHITECT AND BUILDING ENGINEER FOR EXACT REQUIREMENTS.
15. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT REQUIREMENTS OF DEMOLITION WORK.

KEY NOTES

1. FIELD VERIFY AND RELOCATE (E) SWITCHES TO NEW LOCATION SHOWN. MAINTAIN (E) SWITCHING SCHEME AND MAKE FINAL CONNECTIONS TO ALL (E) LIGHTS FIXTURES OUTSIDE OF AREA OF WORK THAT REQUIRED TO REMAIN IN OPERATION.
2. (E) CONNECTIONS FED FROM EXISTING TO REMAIN LIGHT FIXTURES LOCATED OUTSIDE THE SCOPE OF WORK. MAINTAIN EXISTING CIRCUITING, CONNECTIONS AND SWITCHING SCHEME OF EXISTING LIGHT FIXTURES.
3. (E) CONNECTIONS TO BE DEMOLISHED. CONTRACTOR TO FIELD VERIFY AND REMOVE EXISTING CONDUITS/WIRING AS REQUIRED. MAINTAIN EXISTING SWITCHING SCHEME AND OPERATION OF EXISTING TO REMAIN LIGHT FIXTURES LOCATED OUTSIDE THE SCOPE OF WORK.
4. (E) J-BOX VIA INDICATED CIRCUITS TO REMAIN FOR NEW WORK. CONTRACTOR TO FIELD VERIFY AND RELOCATE J-BOX TO ACCESSIBLE CEILING SPACE AS REQUIRED.
5. (E) PROJECTION SCREEN MOTORIZED SWITCH TO BE DEMOLISHED. REMOVE ALL ASSOCIATED CONDUITS/WIRING BACK TO SOURCE.
6. (E) LIGHT SWITCH/OCCUPANCY SENSOR TO BE DEMOLISHED. REMOVE ALL EXISTING LIGHT FIXTURE WITH DENOTED "D" AND ASSOCIATED CONDUITS/WIRING BACK TO SOURCES.
7. (E) LIGHT FIXTURES WITH UN-SWITCH CIRCUIT TO BE DEMOLISHED. REMOVE EXISTING CONNECTIONS TO NEAREST J-BOX. MAINTAIN EXISTING CIRCUIT FOR INSTALLATION OF BATTERY PACK EMERGENCY LIGHT FIXTURES SHOWN IN THE NEW CONSTRUCTION PLANS.
8. (E) LIGHTING CONNECTIONS TO BE REMOVED UNLESS OTHERWISE NOTED. FIELD VERIFY AND REMOVE ALL ASSOCIATED CONDUITS/WIRING OF DEMOLISHED LIGHT FIXTURES (DO NOT ABANDON).

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
900 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
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6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000
CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\ELD-402-VZCOX000.dwg
Description
2ND FLOOR PARTIAL LIGHTING DEMOLITION PLAN

Scale
3/16" = 1'-0"

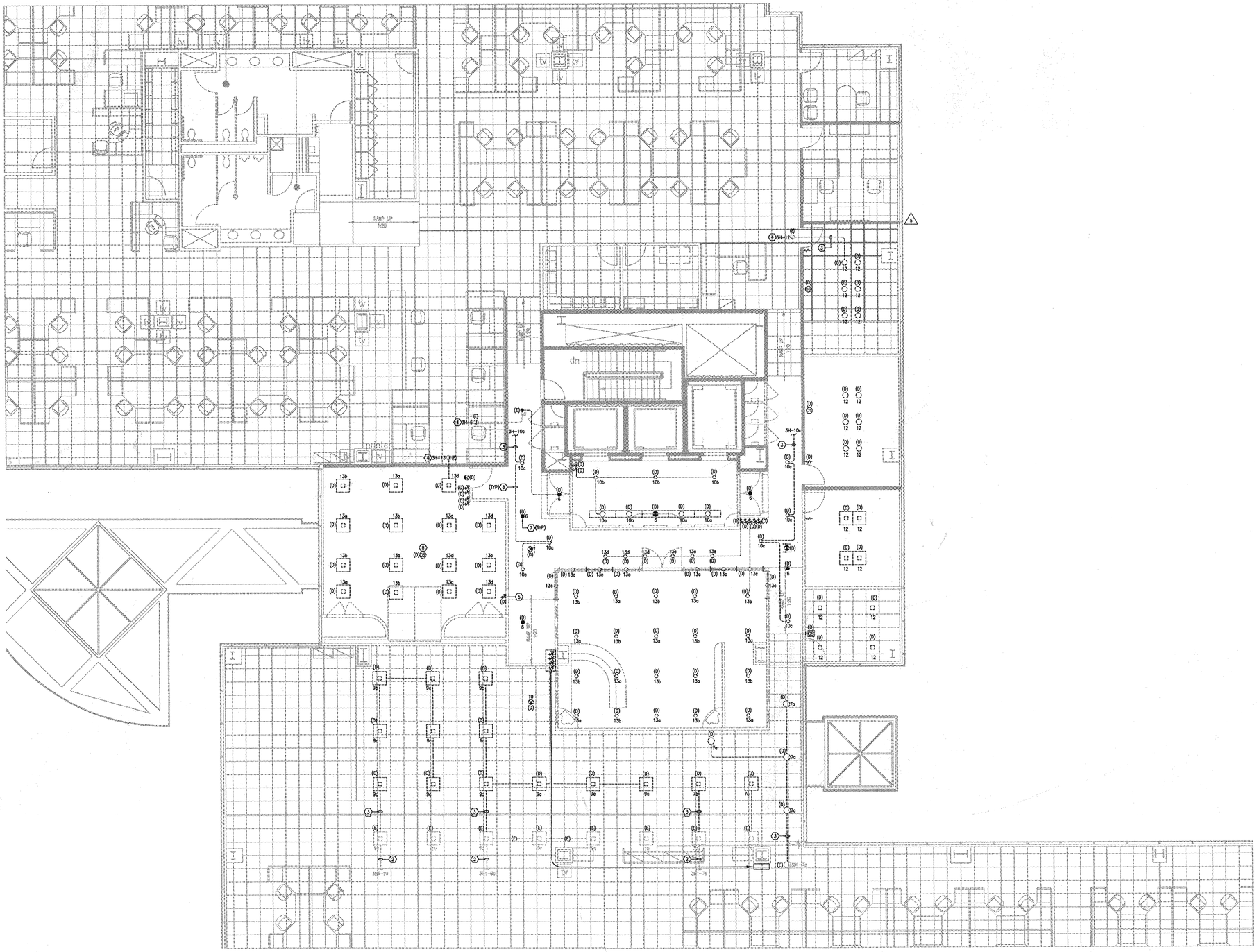
True North
Ref North

ELD-402

2ND FLOOR - PARTIAL LIGHTING DEMOLITION PLAN

1

The corner tick marks represent the 30"x42" plot area.



SHEET NOTES

1. CONTRACTOR IS RESPONSIBLE FOR ACTUAL CIRCUIT IDENTIFICATION. CIRCUIT IDENTIFICATION SHOWN ON THIS DRAWING IS INFORMATIONAL PURPOSES ONLY. ALL CIRCUITS MUST BE IDENTIFIED BEFORE REMOVAL. ALL DISCREPANCIES MUST BE REPORTED TO PROJECT MANAGER & SYSKA IMMEDIATELY.
2. THIS PROJECT IS OF A COMPLEX NATURE. CONTRACTOR SHALL VISIT THE JOB SITE AND GET FAMILIAR WITH FIELD CONDITIONS. EXISTING CONDITIONS MAY VARY FROM WHAT SHOWN ON DRAWING. CONTRACTOR SHALL BRING TO ENGINEERS ATTENTION ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DESIGN DOCUMENTS.
3. SEAL ALL EXPOSED FLOOR CORE HOLES. AFTER SETS MUST BE REMOVED AND HOLES TO BE SEALED BY APPROVED METHOD. COORDINATE PROCEDURE WITH PROJECT MANAGER.
4. SEE ADDITIONAL RENOVATION NOTES ON DRAWING ED_1.
5. COORDINATE WITH MECHANICAL AND PLUMBING DRAWINGS FOR THE REMOVAL OF ALL MECHANICAL AND PLUMBING EQUIPMENT. REMOVE ALL EXISTING ELECTRICAL DEVICES, CONDUITS/WIRING BACK TO PANEL. LABEL REMOVED CIRCUITS AS SPARES. FIELD VERIFY FOR EXACT LOCATIONS.
6. COORDINATE ALL RAISED FLOOR ACTIVITIES WITH BUILDING ENGINEER. ALL OPEN FLOOR TILES IN AREAS WHERE VERIZON EMPLOYEES ARE WORKING MUST HAVE BARRICADES AND WARNING SIGNS.
7. ALL JUNCTION BOXES, OUTLETS BOXES, PULL BOXES AND ETC. SHALL BE LABELED WITH PROPER CIRCUIT AND PANEL DESIGNATION AT THE CONCLUSION OF WORK PER BUILDING STANDARDS.
8. ELECTRICAL CONTRACTOR TO PROVIDE COVER PLATES FOR ALL HOLES, OPENING, ETC. TO MATCH EXISTING.
9. IN THE AREAS WHERE THERE ARE NO ALTERATIONS INDICATED, THE EXISTING FACILITIES SHALL BE RETAINED IN SERVICE. IN CASE OF DOUBT, ASSUME THAT THE EXISTING ELECTRICAL WIRING IS TO REMAIN IN OPERATION THROUGHOUT THE CONSTRUCTION PERIOD AND THEREAFTER.
10. UNLESS OTHERWISE NOTED, ALL DEVICES NOTED AS (D) ARE TO BE REMOVED. REMOVE ALL ASSOCIATED CONDUITS/WIRING BACK TO SOURCE (DO NOT ABANDON).
11. ALL LIGHTING FIXTURES NOTED AS (E) ARE EXISTING TO REMAIN, MAINTAIN OPERATION AND CIRCUITRY.
12. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL DEVICES SHOWN AND ALSO VERIFY THE CIRCUIT DESIGNATION PRIOR TO COMMENCING DEMOLITION WORK.
13. ALL EXISTING ELECTRICAL EQUIPMENT AND CONDUITS THAT INTERFERE WITH ANY NEW CONSTRUCTION SHALL BE RELOCATED OR RE-ROUTED AS REQUIRED TO CLEAR THE NEW CONSTRUCTION. RECONNECT ALL EXISTING EQUIPMENT THAT ARE TO REMAIN AND NOT AFFECTED BY THE NEW WORK, TO THE NEWLY RELOCATED OR RE-ROUTED SYSTEM TO ENSURE A SAFE AND OPERATIONAL SYSTEM.
14. FIRE ALARM CONTRACTOR SHALL REWORK (REMOVE, RELOCATE, RETROFIT AND/OR PROVIDE NEW) ALL FIRE LIFE SAFETY SYSTEM DEVICES INCLUDING FIRE SPRINKLER HEAD TO MEET SYSTEM FIRE/LIFE SAFETY CODE REQUIREMENTS. COORDINATE WITH ARCHITECT AND BUILDING ENGINEER FOR EXACT REQUIREMENTS.
15. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT REQUIREMENTS OF DEMOLITION WORK.

KEY NOTES

1. FIELD VERIFY AND RELOCATE (E) SWITCHES TO NEW LOCATION SHOWN. MAINTAIN (E) SWITCHING SCHEME AND MAKE FINAL CONNECTIONS TO ALL (E) LIGHTS FIXTURES OUTSIDE OF AREA OF WORK THAT REQUIRED TO REMAIN IN OPERATION.
2. (E) CONNECTIONS FED FROM EXISTING TO REMAIN LIGHT FIXTURES LOCATED OUTSIDE THE SCOPE OF WORK. MAINTAIN EXISTING CIRCUITING, CONNECTIONS AND SWITCHING SCHEME OF EXISTING LIGHT FIXTURES.
3. (E) CONNECTIONS TO BE DEMOLISHED. CONTRACTOR TO FIELD VERIFY AND REMOVE EXISTING CONDUITS/WIRING AS REQUIRED. MAINTAIN EXISTING SWITCHING SCHEME AND OPERATION OF EXISTING TO REMAIN LIGHT FIXTURES LOCATED OUTSIDE THE SCOPE OF WORK.
4. (E) J-BOX VIA INDICATED CIRCUITS TO REMAIN FOR NEW WORK. CONTRACTOR TO FIELD VERIFY AND RELOCATE J-BOX TO ACCESSIBLE CEILING SPACE AS REQUIRED.
5. (E) PROJECTION SCREEN MOTORIZED SWITCH TO BE DEMOLISHED. REMOVE ALL ASSOCIATED CONDUITS/WIRING BACK TO SOURCE.
6. (E) LIGHT SWITCH/OCCUPANCY SENSOR TO BE DEMOLISHED. REMOVE ALL EXISTING LIGHT FIXTURE WITH DENOTED "D" AND ASSOCIATED CONDUITS/WIRING BACK TO SOURCES.
7. (E) LIGHT FIXTURES WITH UN-SWITCH CIRCUIT TO BE DEMOLISHED. REMOVE EXISTING CONNECTIONS TO NEAREST J-BOX, MAINTAIN EXISTING CIRCUIT FOR INSTALLATION OF BATTERY PACK EMERGENCY LIGHT FIXTURES SHOWN IN THE NEW CONSTRUCTION PLANS.
8. (E) LIGHTING CONNECTIONS TO BE REMOVED UNLESS OTHERWISE NOTED. FIELD VERIFY AND REMOVE ALL ASSOCIATED CONDUITS/WIRING OF DEMOLISHED LIGHT FIXTURES (DO NOT ABANDON).

verizon
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Seal/Signature

Project Name
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Project Number
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CAD File Name
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Description
3RD FLOOR PARTIAL LIGHTING DEMOLITION PLAN

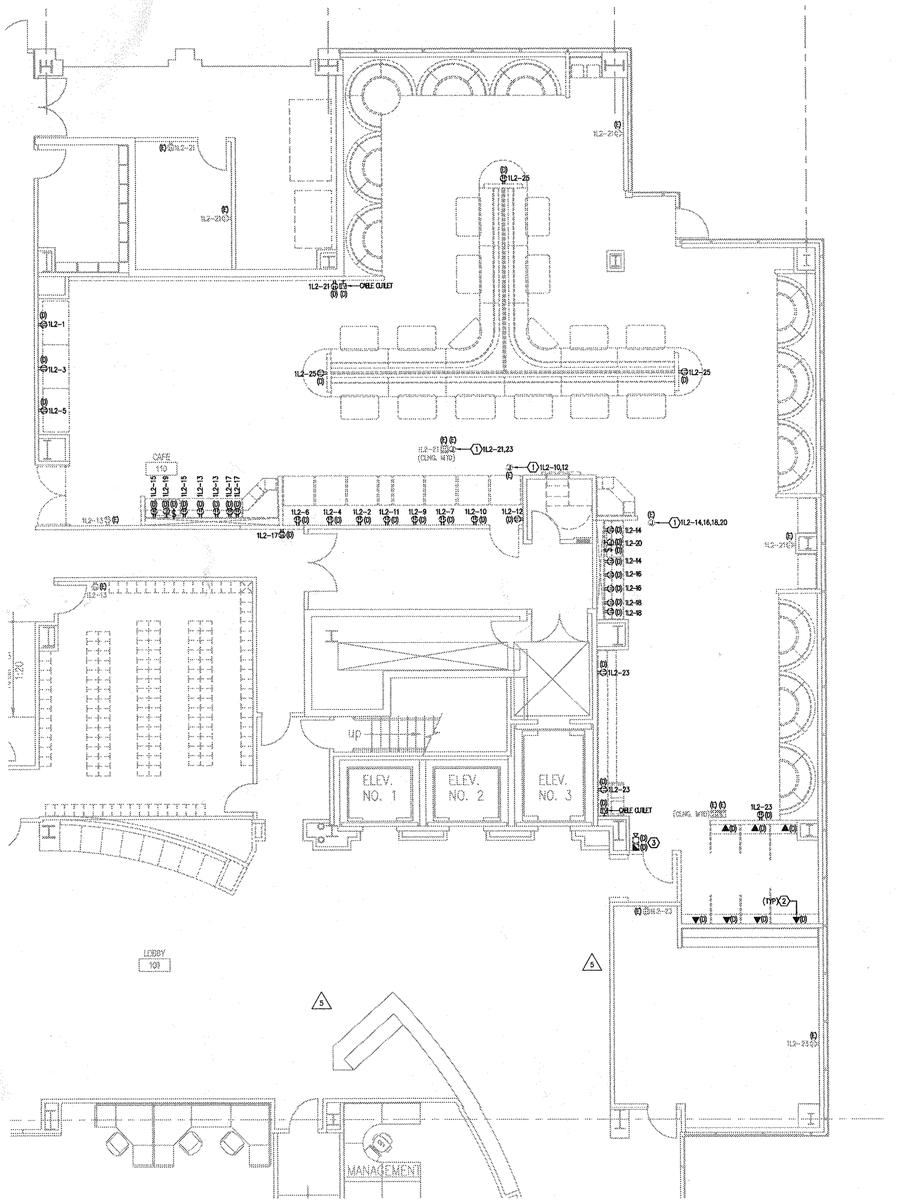
Scale
3/16" = 1'-0"

True North
Plot North

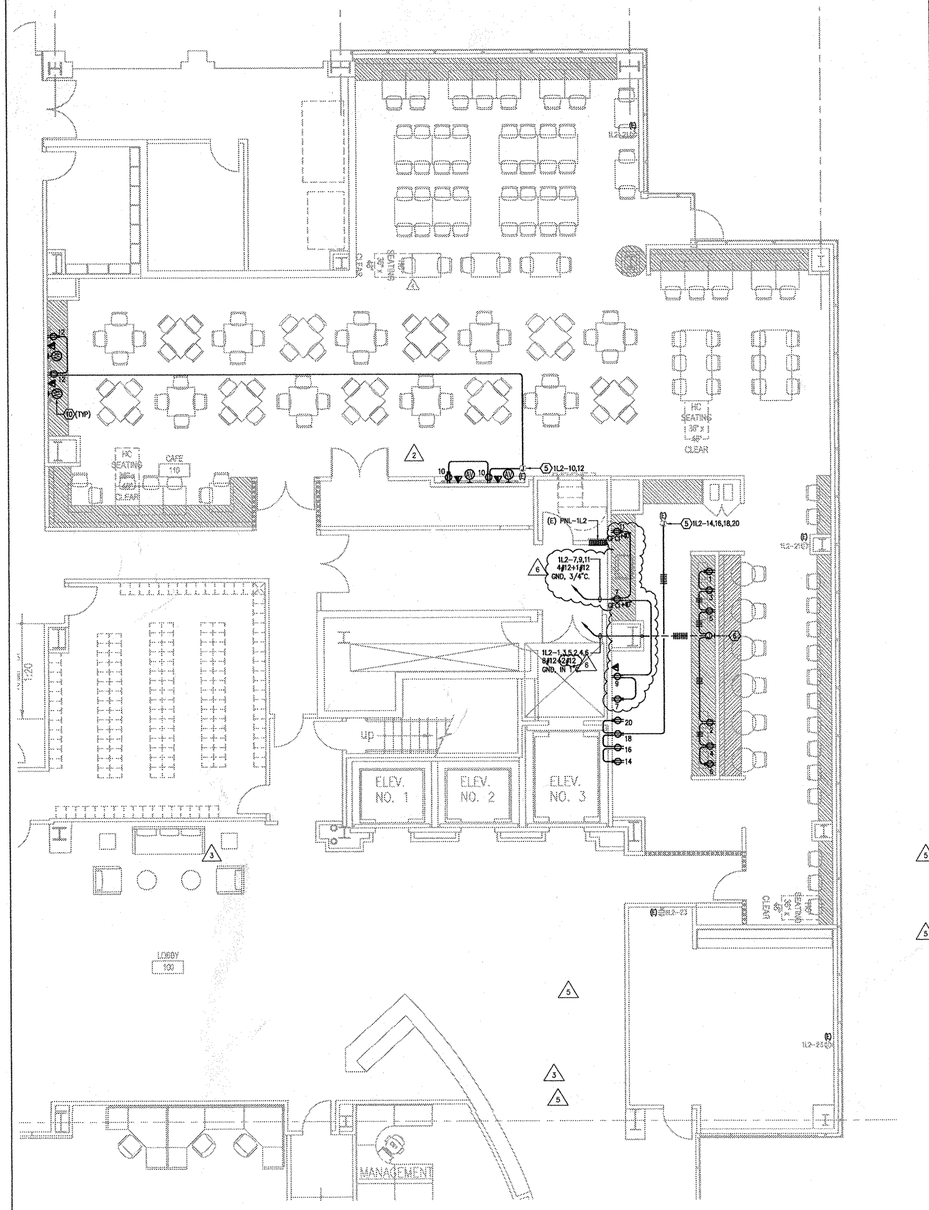
ELD-403

3RD FLOOR - PARTIAL LIGHTING DEMOLITION PLAN

The corner tick marks represent the 30"x42" plot area.



1ST FLOOR - PARTIAL POWER DEMOLITION PLAN 2



1ST FLOOR - PARTIAL POWER PLAN 1

DEMOLITION NOTES

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2. SEAL ALL EXPOSED FLOOR CORE HOLES. AFTER SETS MUST BE REMOVED AND HOLES TO BE SEALED BY APPROVED METHOD. COORDINATE PROCEDURE WITH PROJECT MANAGER.
3. SEE ADDITIONAL RENOVATION NOTES ON DRAWING E0_1.
4. UNLESS OTHERWISE NOTED, ALL DEVICES NOTED AS (D) ARE TO BE REMOVED. REMOVE ALL UNUSED CONDUITS/WIRING BACK TO NEAREST J-BOXES LOCATED OUTSIDE OF THE DEMOLITION AREA (DO NOT ABANDON).
5. ALL DEVICES NOTED AS (E) ARE EXISTING TO REMAIN, MAINTAIN OPERATION AND CIRCUITRY.
6. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL DEVICES SHOWN AND ALSO VERIFY THE CIRCUIT DESIGNATION PRIOR TO COMMENCING DEMOLITION WORK.
7. FIRE ALARM CONTRACTOR SHALL REWORK (REMOVE, RELOCATE, REFRONT AND/OR PROVIDE NEW) ALL FIRE LIFE SAFETY SYSTEM DEVICES INCLUDING FIRE SPRINKLER HEAD TO MEET SYSTEM FIRE/LIFE SAFETY CODE REQUIREMENTS. COORDINATE WITH ARCHITECT AND BUILDING ENGINEER FOR EXACT REQUIREMENTS.
8. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT REQUIREMENTS OF DEMOLITION WORK.
9. ALL EXISTING ELECTRICAL EQUIPMENT AND CONDUITS THAT INTERFERE WITH ANY NEW CONSTRUCTION SHALL BE RELOCATED OR RE-ROUTED AS REQUIRED TO CLEAR THE NEW CONSTRUCTION. RECONNECT ALL EXISTING EQUIPMENT THAT ARE TO REMAIN AND NOT AFFECTED BY THE NEW WORK, TO THE NEWLY RELOCATED OR RE-ROUTED SYSTEM TO ENSURE A SAFE AND OPERATIONAL SYSTEM.

SHEET NOTES

1. ALL WORK SHOWN IN POWER PLAN ARE NEW, UNLESS NOTED OTHERWISE.
2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, HEIGHT AND FINISH REQUIREMENTS.
3. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL TELECOMM DEVICES WITH CONDUITS AND PULL WIRES, STUB UP 6" ABOVE FINISHED CEILING AT 90° BEND FOR CABLES (BY OTHERS). PROVIDE FITTED SOFT BUSHING TO PROTECT CABLING.
5. TELECOMM VENDOR IS RESPONSIBLE FOR PULLING ALL TEL/DATA CABLING AND INSTALLATION OF ALL TEL/DATA OUTLETS. COORDINATE WITH VERIZON TELECOMM REPRESENTATIVES FOR EXACT REQUIREMENTS.
6. CONDUIT ROUTING AND LOCATION OF ALL J-BOXES ARE FOR REFERENCE ONLY. ALL OPENING AROUND CONDUITS PASSING THROUGH FIRE RATED WALL, CEILING, FLOORS, ETC. SHALL BE PACKED AND SEALED TO CONFORM WITH FIRE RATING OF THE PENETRATED.
7. NO EQUIPMENT, J-BOXES, ETC. REQUIRING ACCESS SHALL BE LOCATED IN THE HARD CEILING AREAS, UNLESS ACCESS PANEL IS PROVIDED. LOCATE ANY (E) EQUIPMENT, J-BOXES TO ACCESSIBLE CEILING AREAS.
8. ALL J-BOXES, OUTLETS BOXES, PULL BOXES, ETC. SHALL BE LABELED WITH PROPER CIRCUIT AND PANEL DESIGNATION AT THE CONCLUSION OF WORK.
9. IN THE AREA WHERE THERE ARE NO ALTERATIONS INDICATED, THE EXISTING FACILITIES SHALL BE RETAINED IN SERVICE. IN CASE OF DOUBT, ASSUME THAT THE EXISTING ELECTRICAL WIRING IS TO REMAIN IN OPERATION THROUGHOUT THE CONSTRUCTION PERIOD AND THEREAFTER.

KEY NOTES

1. (E) J-BOX VIA INDICATED CIRCUITS SHOWN TO REMAIN FOR NEW WORK. CONTRACTOR TO FIELD VERIFY AND MAINTAIN (E) CIRCUITING AS REQUIRED.
2. TELE/COMM VENDOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING TEL/DATA WALL OUTLETS AND CABLING BACK TO SOURCE. COORDINATE WITH VERIZON REPRESENTATIVES FOR EXACT REQUIREMENTS PRIOR TO PROCEEDING DEMOLITION WORK. REFER TO ARCHITECTURAL DRAWINGS FOR PATCHING REQUIREMENTS OF ALL EXISTING WALL OPENINGS.
3. ELECTRICAL CONTRACTOR TO COORDINATE WITH FIRE ALARM VENDOR FOR THE DEMOLITION WORK OF DEMOLISHED FIRE ALARM DEVICES.
4. NOT USED.
5. CONTRACTOR TO UTILIZE (E) J-BOX AND CIRCUITING SHOWN. PROVIDE MAKE FINAL CONNECTIONS TO NEW EQUIPMENT/DEVICES AS REQUIRED.
6. COORDINATE WITH ARCHITECT AND FURNITURE VENDOR FOR EXACT LOCATION OF J-BOX AND CONDUIT ROUTING TO OUTLETS.
7. NOT USED.
8. NOT USED.
9. NOT USED.
10. PROVIDE AV OUTLETS AND ALL REQUIRED ELECTRICAL COMPONENTS PER AV EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE 1" CONDUIT WITH PULL WIRES TO ACCESSIBLE CEILING SPACE. COORDINATE WITH ARCHITECT AND AV/IT VENDORS FOR EXACT REQUIREMENTS.

verizon
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Oxnard, CA 93030

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Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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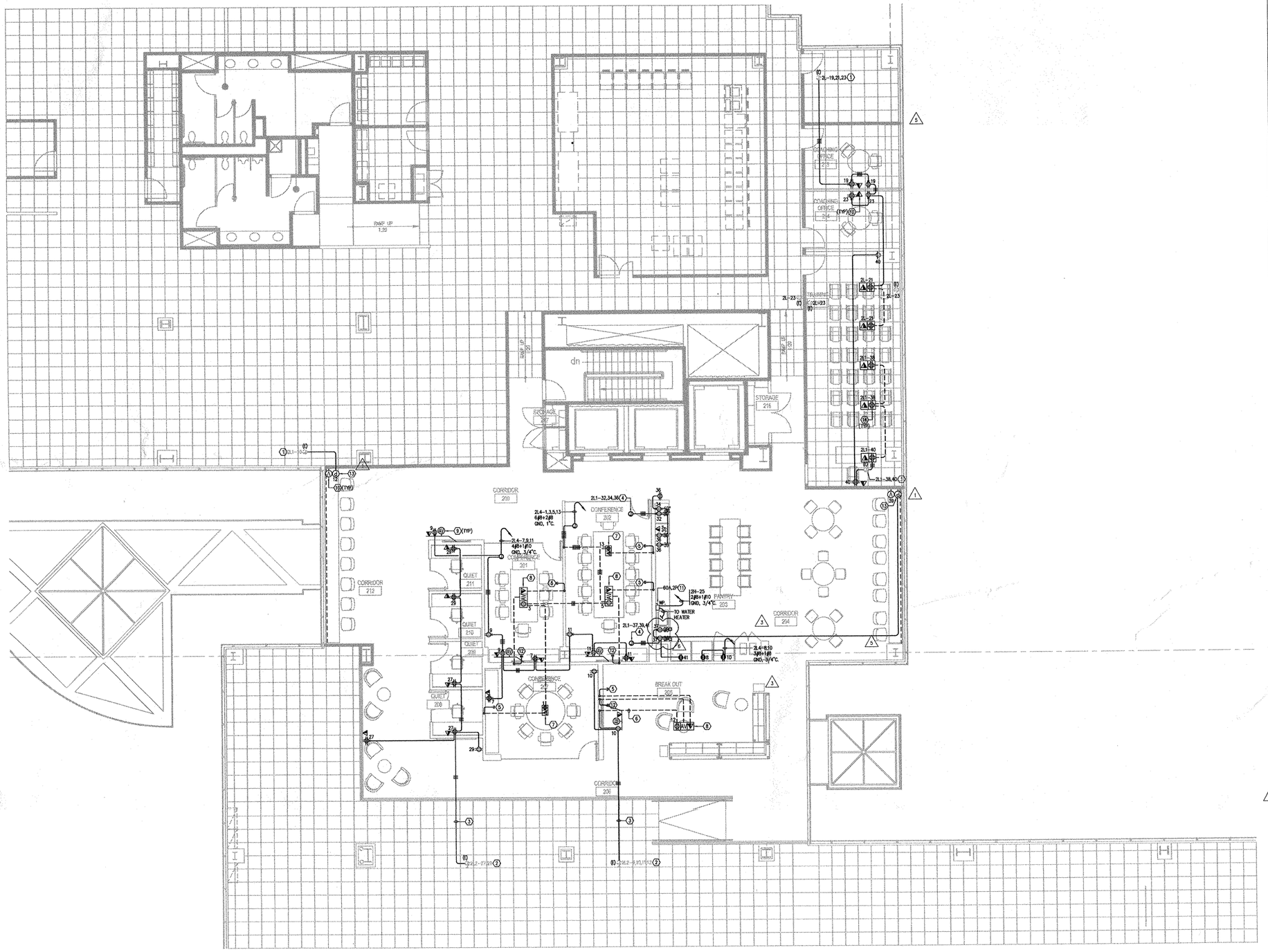
Description
1ST FLOOR PARTIAL DEMOLITION AND POWER PLAN

Scale
3/16" = 1'-0"

True North
Ref North

EP-401

The corner tick marks represent the 30"x42" plot area.



SHEET NOTES

1. ALL WORK SHOWN ARE NEW, UNLESS NOTED OTHERWISE.
2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, HEIGHT AND FINISH REQUIREMENTS.
3. CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE OWNER'S AV/IT SYSTEM VENDOR AS NECESSARY TO OBTAIN INSTALLATION DRAWINGS, WIRING DIAGRAMS, ETC. THIS INFORMATION SHALL BE CONSIDERED PRIOR TO SUBMITTING A BID FOR THE WORK, AND ALL LABOR AND INCIDENTAL MATERIALS INCLUDED IN BID FOR A COMPLETE FUNCTIONING INSTALLATION.
4. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT.
5. FIELD COORDINATE FOR FINAL LOCATIONS OF SWITCHES, OUTLETS, AV PLATES AND JUNCTION BOXES WITH WALL TREATMENT AND SURFACES, PRIOR TO ROUGH-IN.
6. FOR TELECOMMUNICATION CABLES THAT ARE INSTALLED IN INACCESSIBLE AREAS SUCH AS HARD CEILINGS, CONTRACTOR SHALL PROVIDE CONDUITS WITH PULL WIRES AND TERMINATE CONDUITS BACK TO THE TELECOMM ROOM. COORDINATE ALL WORK WITH VERIZON TELECOMM VENDOR.
7. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL TELECOMM DEVICES WITH CONDUITS AND PULL WIRES, STUB UP 6" ABOVE FINISHED CEILING AT 90° BEND FOR CABLES (BY OTHERS). PROVIDE FITTED SOFT BUSHING TO PROTECT CABLING.
8. TELECOMM VENDOR IS RESPONSIBLE FOR PULLING ALL TEL/DATA CABLING AND INSTALLATION OF ALL TEL/DATA OUTLETS. COORDINATE WITH VERIZON TELECOMM REPRESENTATIVES FOR EXACT REQUIREMENTS.
9. CONDUIT ROUTING AND LOCATION OF ALL J-BOXES ARE FOR REFERENCE ONLY. ALL OPENING AROUND CONDUITS PASSING THROUGH FIRE RATED WALL, CEILING, FLOORS, ETC. SHALL BE PACKED AND SEALED TO CONFORM WITH FIRE RATING OF THE PENETRATED.
10. NO EQUIPMENT, J-BOXES, ETC. REQUIRING ACCESS SHALL BE LOCATED IN THE HARD CEILING AREAS, UNLESS ACCESS PANEL IS PROVIDED. LOCATE ANY (E) EQUIPMENT, J-BOXES TO ACCESSIBLE CEILING AREAS.
11. ALL J-BOXES, OUTLETS BOXES, PULL BOXES, ETC. SHALL BE LABELED WITH PROPER CIRCUIT AND PANEL DESIGNATION AT THE CONCLUSION OF WORK.
12. IN THE AREA WHERE THERE ARE NO ALTERATIONS INDICATED, THE EXISTING FACILITIES SHALL BE RETAINED IN SERVICE. IN CASE OF DOUBT, ASSUME THAT THE EXISTING ELECTRICAL WIRING IS TO REMAIN IN OPERATION THROUGHOUT THE CONSTRUCTION PERIOD AND THEREAFTER.

KEY NOTES

1. (E) J-BOX IN ACCESSIBLE CEILING SPACE TO REMAIN, FIELD VERIFY FOR EXACT LOCATION AND (E) CIRCUITING. MADE FINAL CONNECTIONS SHOWN. REFER TO PARTIAL LIGHTING DEMOLITION PLAN FOR REFERENCE LOCATION OF (E) J-BOX.
2. (E) UNDER RAISED FLOOR J-BOX TO REMAIN, FIELD VERIFY FOR EXACT LOCATION AND (E) CIRCUITING. UTILIZE AVAILABLE CIRCUITS OBTAINED FROM DEMOLITION WORK FOR NEW CONNECTIONS SHOWN.
3. PROVIDE CONNECTIONS TO (E) EXISTING CIRCUITING VIA UNDER RAISED FLOOR J-BOX. RUN VERTICAL CONDUITS FROM CEILING SPACE DOWN TO RAISED FLOOR VIA (E) COLUMN.
4. NEW J-BOX IN ACCESSIBLE CEILING SPACE WITH EXTENDED FEEDERS AND CIRCUITING FROM (E) BREAK ROOM FOR NEW POWER CONNECTIONS TO ELECTRICAL EQUIPMENT/ DEVICES. REFER TO PARTIAL POWER DEMOLITION PLAN FOR REFERENCE LOCATION OF (E) J-BOX. (△1)
5. PROVIDE 2" CONDUIT WITH PULL WIRES STUB-UP INTO ACCESSIBLE CEILING SPACE FOR TEL/DATA FEEDS.
6. 1@12+1@12GND IN 3/4" CONDUIT STUB-UP INTO ACCESSIBLE CEILING SPACE TO NEAREST J-BOX FOR POWER CONNECTIONS OF FLUSHED FLOOR MOUNTED OUTLETS VIA POKE-THRU.
7. PROVIDE FIRE RATED FLUSHED MOUNTED POKE-THRU WITH OUTLETS TO ACCOMMODATE POWER AND TEL/DATA CONNECTIONS, SIMILAR TO "WIREMOLD" INFLOOR SYSTEM "EVOLUTION-6AT" SERIES WITH FLUSHED FLOOR COVER AND SLIDE ACCESS DOORS. COORDINATE WITH ARCHITECT AND TELECOMM VENDOR FOR EXACT OUTLET CONFIGURATIONS AND POKE-THRU REQUIREMENTS PRIOR TO ROUGH-IN. COORDINATE WITH STRUCTURAL CONSULTANTS FOR REQUIREMENTS. REFER TO SHEET E-501 FOR DETAILS.
8. PROVIDE FIRE RATED FLUSHED MOUNTED POKE-THRU WITH J-BOXES TO ACCOMMODATE POWER AND TEL/DATA CONNECTIONS, SIMILAR TO "WIREMOLD" INFLOOR SYSTEM "EVOLUTION-8AT" SERIES WITH FURNITURE WHIP CONNECTOR AND FLUSHED FLOOR COVER. COORDINATE WITH ARCHITECT AND FURNITURE VENDOR FOR POWER AND TEL/DATA WHIPS REQUIREMENTS PRIOR TO ROUGH-IN. COORDINATE WITH STRUCTURAL CONSULTANTS FOR REQUIREMENTS. REFER TO SHEET E-501 FOR DETAILS. (△1)
9. PROVIDE AV OUTLETS AND ALL REQUIRED ELECTRICAL COMPONENTS PER AV EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE 1" CONDUIT WITH PULL WIRES TO ACCESSIBLE CEILING SPACE. COORDINATE WITH ARCHITECT AND AV/IT VENDORS FOR EXACT REQUIREMENTS.
10. COORDINATE WITH TELECOMM VENDOR AND PROVIDE 1" CONDUIT WITH PULL WIRES TO ACCESSIBLE CEILING SPACE FOR DATA CONNECTIONS AS REQUIRED.
11. PROVIDE 2-POLE, 1PH NON-FUSIBLE 277V AC MANUAL RATED WEATHER PROOF DISCONNECT SWITCH, LOCATED NEXT TO ELECTRIC WATER HEATER UNDER SINK COUNTER. DISCONNECT SWITCH SHALL BE ACCESSIBLE THRU THE CABINET DOORS. PROVIDE UNISTRUT SUPPORT ASSEMBLY FOR WALL MOUNTING AS REQUIRED. PROVIDE 1"-TOUCH LABEL ON SWITCH STATING "KEEP CLEARANCE IN FRONT OF THE SWITCH FOR ACCESS". (△1) (△3)
12. PROVIDE 1-1/4" CONDUIT WITH PULL WIRES STUB-UP INTO ACCESSIBLE CEILING SPACE FOR A/V FEEDS.
13. ELECTRICAL CONTRACTOR TO PROVIDE PLUGMOLD, LENGTH AS REQUIRED PER ARCHITECTURAL DRAWINGS. COORDINATE WITH FURNITURE VENDOR FOR INSTALLATION REQUIREMENTS.
14. (N) FLUSHED FLOOR MOUNTED POWER AND TEL/DATA BOX ON RAISED FLOOR, TO MATCH BUILDING STANDARD. COORDINATE WITH TELCOMM VENDOR FOR EXACT REQUIREMENTS AND TERMINATIONS OF TEL/DATA OUTLETS. (△5)

verizon
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Oxnard, CA 93030

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Seal/Signature

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Description
2ND FLOOR PARTIAL POWER PLAN

Scale
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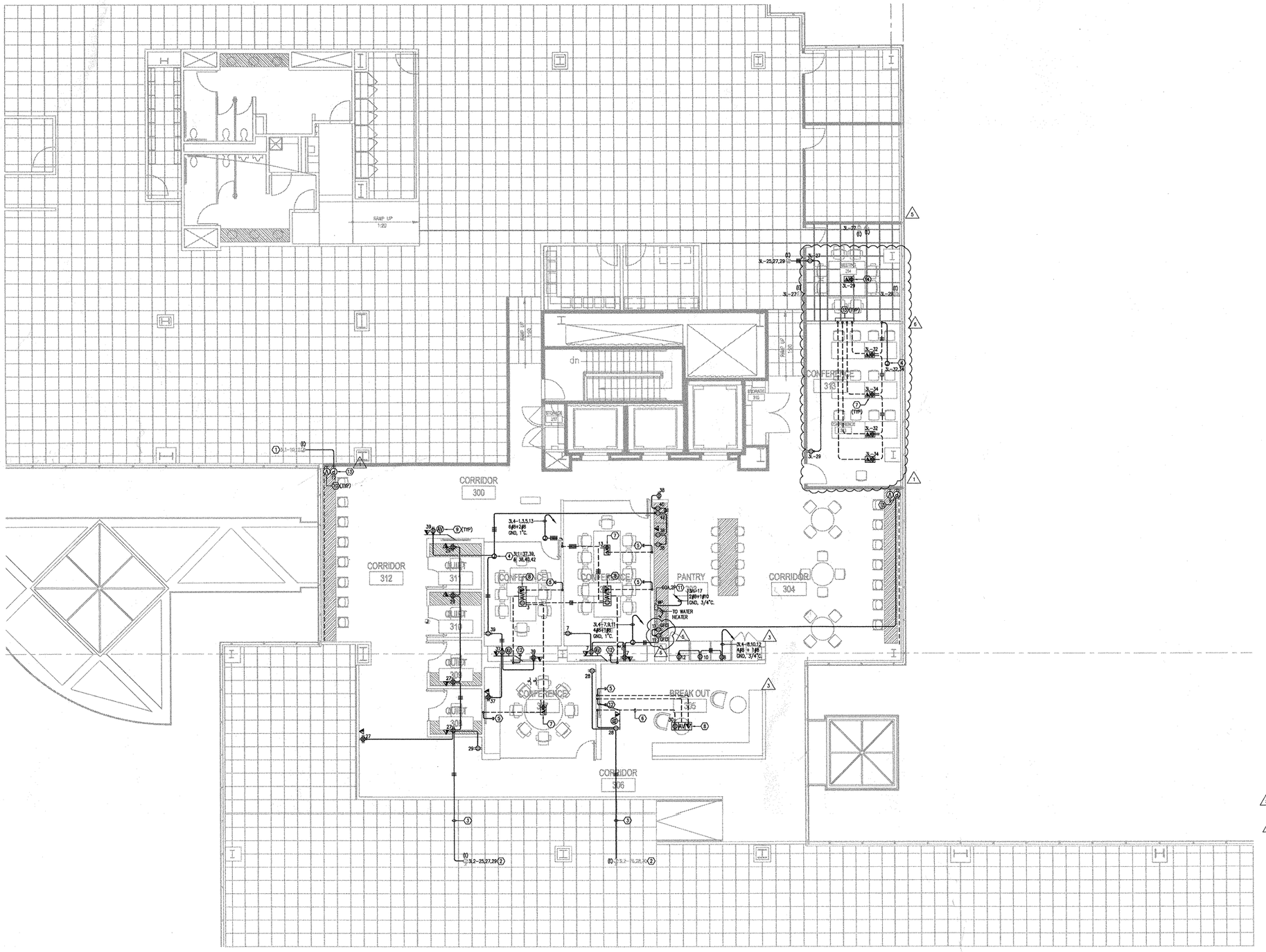
True North
Ref North

EP-402

2ND FLOOR - PARTIAL POWER PLAN



3RD FLOOR - PARTIAL POWER PLAN

1

SHEET NOTES

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4. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT.
5. FIELD COORDINATE FOR FINAL LOCATIONS OF SWITCHES, OUTLETS, AV PLATES AND JUNCTION BOXES WITH WALL TREATMENT AND SURFACES, PRIOR TO ROUGH-IN.
6. FOR TELECOMMUNICATION CABLES THAT ARE INSTALLED IN INACCESSIBLE AREAS SUCH AS HARD CEILINGS, CONTRACTOR SHALL PROVIDE CONDUITS WITH PULL WIRES AND TERMINATE CONDUITS BACK TO THE TELECOMM ROOM. COORDINATE ALL WORK WITH VERIZON TELECOMM VENDOR.
7. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL TELECOMM DEVICES WITH CONDUITS AND PULL WIRES, STUB UP 6" ABOVE FINISHED CEILING AT 90° BEND FOR CABLES (BY OTHERS). PROVIDE FITTED SOFT BUSHING TO PROTECT CABLING.
8. TELECOMM VENDOR IS RESPONSIBLE FOR PULLING ALL TEL/DATA CABLING AND INSTALLATION OF ALL TEL/DATA OUTLETS. COORDINATE WITH VERIZON TELECOMM REPRESENTATIVES FOR EXACT REQUIREMENTS.
9. CONDUIT ROUTING AND LOCATION OF ALL J-BOXES ARE FOR REFERENCE ONLY. ALL OPENING AROUND CONDUITS PASSING THROUGH FIRE RATED WALL, CEILING, FLOORS, ETC. SHALL BE PACKED AND SEALED TO CONFORM WITH FIRE RATING OF THE PENETRATED.
10. NO EQUIPMENT, J-BOXES, ETC. REQUIRING ACCESS SHALL BE LOCATED IN THE HARD CEILING AREAS, UNLESS ACCESS PANEL IS PROVIDED. LOCATE ANY (E) EQUIPMENT, J-BOXES TO ACCESSIBLE CEILING AREAS.
11. ALL J-BOXES, OUTLETS BOXES, PULL BOXES, ETC. SHALL BE LABELED WITH PROPER CIRCUIT AND PANEL DESIGNATION AT THE CONCLUSION OF WORK.
12. IN THE AREA WHERE THERE ARE NO ALTERATIONS INDICATED, THE EXISTING FACILITIES SHALL BE RETAINED IN SERVICE. IN CASE OF DOUBT, ASSUME THAT THE EXISTING ELECTRICAL WIRING IS TO REMAIN IN OPERATION THROUGHOUT THE CONSTRUCTION PERIOD AND THEREAFTER.

KEY NOTES

1. (E) J-BOX IN ACCESSIBLE CEILING SPACE TO REMAIN. FIELD VERIFY FOR EXACT LOCATION AND (E) CIRCUITING. MADE FINAL CONNECTIONS SHOWN. REFER TO PARTIAL LIGHTING DEMOLITION PLAN FOR REFERENCE LOCATION OF (E) J-BOX.
2. (E) UNDER RAISED FLOOR J-BOX TO REMAIN. FIELD VERIFY FOR EXACT LOCATION AND (E) CIRCUITING. UTILIZE AVAILABLE CIRCUITS OBTAINED FROM DEMOLITION WORK FOR NEW CONNECTIONS SHOWN.
3. PROVIDE CONNECTIONS TO (E) EXISTING CIRCUITING VIA UNDER RAISED FLOOR J-BOX. RUN VERTICAL CONDUITS FROM CEILING SPACE DOWN TO RAISED FLOOR VIA (E) COLUMN.
4. NEW J-BOX IN ACCESSIBLE CEILING SPACE WITH EXTENDED FEEDERS AND CIRCUITING FROM (E) CONFERENCE ROOM FOR NEW POWER CONNECTIONS TO ELECTRICAL EQUIPMENT/ DEVICES. REFER TO PARTIAL POWER DEMOLITION PLAN FOR REFERENCE LOCATION OF (E) J-BOX.
5. PROVIDE 2" CONDUIT WITH PULL WIRES STUB-UP INTO ACCESSIBLE CEILING SPACE FOR TEL/DATA FEEDS.
6. 1@12+1@12GND IN 3/4" CONDUIT STUB-UP INTO ACCESSIBLE CEILING SPACE TO NEAREST J-BOX FOR POWER CONNECTIONS OF FLUSHED FLOOR MOUNTED OUTLETS VIA POKE-THRU.
7. PROVIDE FIRE RATED FLUSHED MOUNTED POKE-THRU WITH OUTLETS TO ACCOMMODATE POWER AND TEL/DATA CONNECTIONS, SIMILAR TO "WIREMOLD" INFLOOR SYSTEM "EVOLUTION-841" SERIES WITH FLUSHED FLOOR COVER AND SLIDE ACCESS DOORS. COORDINATE WITH ARCHITECT AND TELECOMM VENDOR FOR EXACT OUTLET CONFIGURATIONS AND POKE-THRU REQUIREMENTS PRIOR TO ROUGH-IN. COORDINATE WITH STRUCTURAL CONSULTANTS FOR REQUIREMENTS. REFER TO SHEET E-501 FOR DETAILS.
8. PROVIDE FIRE RATED FLUSHED MOUNTED POKE-THRU WITH J-BOXES TO ACCOMMODATE POWER AND TEL/DATA CONNECTIONS, SIMILAR TO "WIREMOLD" INFLOOR SYSTEM "EVOLUTION-841" SERIES WITH FURNITURE WMP CONNECTOR AND FLUSHED FLOOR COVER. COORDINATE WITH ARCHITECT AND FURNITURE VENDOR FOR POWER AND TEL/DATA WHIPS REQUIREMENTS PRIOR TO ROUGH-IN. COORDINATE WITH STRUCTURAL CONSULTANTS FOR REQUIREMENTS. REFER TO SHEET E-501 FOR DETAILS.
9. PROVIDE AV OUTLETS AND ALL REQUIRED ELECTRICAL COMPONENTS PER AV EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE 1" CONDUIT WITH PULL WIRES TO ACCESSIBLE CEILING SPACE. COORDINATE WITH ARCHITECT AND AV/IT VENDORS FOR EXACT REQUIREMENTS.
10. COORDINATE WITH TELECOMM VENDOR AND PROVIDE 1" CONDUIT WITH PULL WIRES TO ACCESSIBLE CEILING SPACE FOR DATA CONNECTIONS AS REQUIRED.
11. PROVIDE 2-POLE, 1PH NON-FUSIBLE 277V AC MANUAL RATED WEATHER PROOF DISCONNECT SWITCH, LOCATED NEXT TO ELECTRIC WATER HEATER UNDER SINK COUNTER. DISCONNECT SWITCH SHALL BE ACCESSIBLE THRU THE CABINET DOORS. PROVIDE UNISTRUT SUPPORT ASSEMBLY FOR WALL MOUNTING AS REQUIRED. PROVIDE P-TOUCH LABEL ON SWITCH STATING "KEEP CLEARANCE IN FRONT OF THE SWITCH FOR ACCESS".
12. PROVIDE 1-1/4" CONDUIT WITH PULL WIRES STUB-UP INTO ACCESSIBLE CEILING SPACE FOR A/V FEEDS.
13. ELECTRICAL CONTRACTOR TO PROVDE PLUGMOLD, LENGTH AS REQUIRED PER ARCHITECTURAL DRAWINGS. COORDINATED WITH FURNITURE VENDOR FOR INSTALLATION REQUIREMENTS.
14. (N) FLUSHED FLOOR MOUNTED POWER AND TEL/DATA BOX ON RAISED FLOOR, TO MATCH BUILDING STANDARD. COORDINATE WITH TELCOMM VENDOR FOR EXACT REQUIREMENTS AND TERMINATIONS OF TEL/DATA OUTLETS.
15. PROVIDE 1" CONDUIT WITH PULL WIRES STUB-UP INTO ACCESSIBLE CEILING SPACE FOR TEL/DATA FEEDS.

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

Issue	Date & Issue Description	By	Check
01	07/31/12 PLAN CHECK	-	-
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2	09/12/12 BULLETIN 1	-	-
3	10/09/12 BULLETIN 2	-	-
4	10/23/2012 REVISED FOR PLAN CHECK	-	-
5	11/19/12 BULLETIN 3	-	-
6	02/21/13 BULLETIN 4	-	-

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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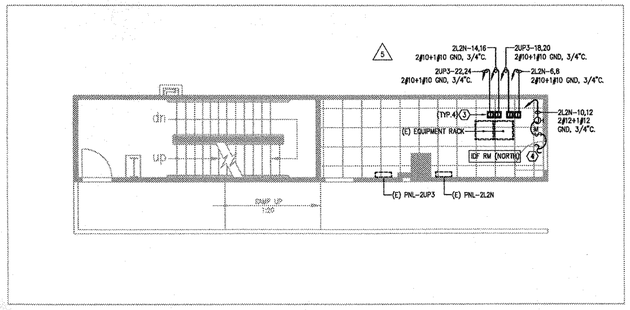
Description
3RD FLOOR PARTIAL POWER PLAN

Scale
3/16" = 1'-0"

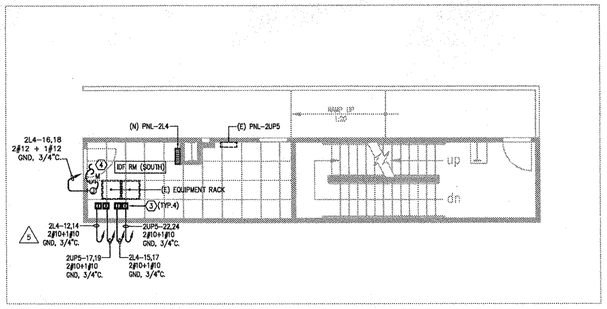
True North
Ref North

EP-403

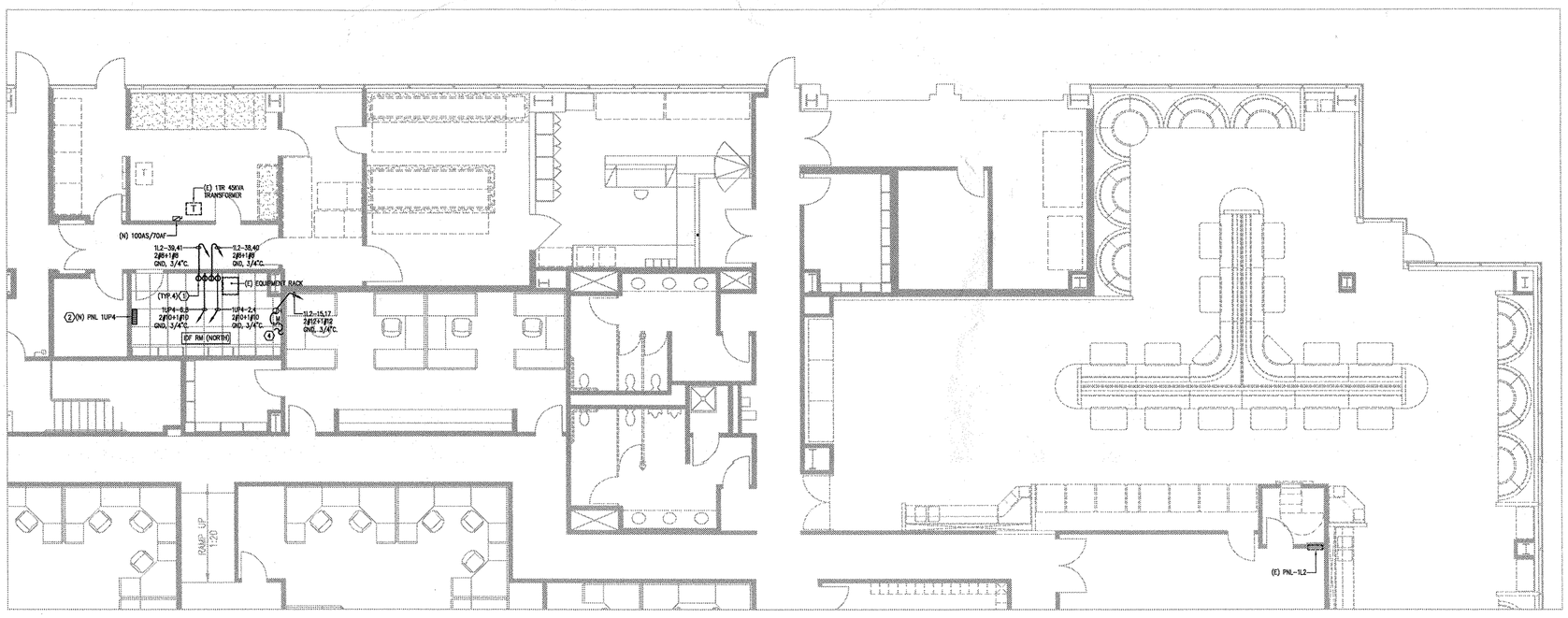
The corner tick marks represent the 30"x42" plot area.



2ND FLOOR IDF ROOM NORTH - PARTIAL POWER PLAN 3



2ND FLOOR IDF ROOM SOUTH - PARTIAL POWER PLAN 2



1ST FLOOR IDF ROOM NORTH - PARTIAL POWER PLAN 1

SHEET NOTES

1. ALL WORK SHOWN ARE NEW, UNLESS NOTED OTHERWISE.
2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, HEIGHT AND FINISH REQUIREMENTS.
3. CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE OWNER'S AV/IT SYSTEM VENDOR AS NECESSARY TO OBTAIN INSTALLATION DRAWINGS, WIRING DIAGRAMS, ETC. THIS INFORMATION SHALL BE CONSIDERED PRIOR TO SUBMITTING A BID FOR THE WORK, AND ALL LABOR AND INCIDENTAL MATERIALS INCLUDED IN BID FOR A COMPLETE FUNCTIONING INSTALLATION.
4. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS OF MECHANICAL AND PLUMBING EQUIPMENT.
5. FIELD COORDINATE FOR FINAL LOCATIONS OF SWITCHES, OUTLETS, AV PLATES AND JUNCTION BOXES WITH WALL TREATMENT AND SURFACES, PRIOR TO ROUGH-IN.
6. FOR TELECOMMUNICATION CABLES THAT ARE INSTALLED IN INACCESSIBLE AREAS SUCH AS HARD CEILINGS, CONTRACTOR SHALL PROVIDE CONDUITS WITH PULL WIRES AND TERMINATE CONDUITS BACK TO THE TELECOMM ROOM. COORDINATE ALL WORK WITH VERIZON TELECOMM VENDOR.
7. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL TELECOMM DEVICES WITH CONDUITS AND PULL WIRES, STUB UP 6" ABOVE FINISHED CEILING AT 90° BEND FOR CABLES (BY OTHERS). PROVIDE FITTED SOFT BUSHING TO PROTECT CABLING.
8. TELECOMM VENDOR IS RESPONSIBLE FOR PULLING ALL TEL/DATA CABLING AND INSTALLATION OF ALL TEL/DATA OUTLETS. COORDINATE WITH VERIZON TELECOMM REPRESENTATIVES FOR EXACT REQUIREMENTS.
9. CONDUIT ROUTING AND LOCATION OF ALL J-BOXES ARE FOR REFERENCE ONLY. ALL OPENING AROUND CONDUITS PASSING THROUGH FIRE RATED WALL, CEILING, FLOORS, ETC. SHALL BE PACKED AND SEALED TO CONFORM WITH FIRE RATING OF THE PENETRATED.
10. NO EQUIPMENT, J-BOXES, ETC. REQUIRING ACCESS SHALL BE LOCATED IN THE HARD CEILING AREAS, UNLESS ACCESS PANEL IS PROVIDED. LOCATE ANY (E) EQUIPMENT, J-BOXES TO ACCESSIBLE CEILING AREAS.
11. ALL J-BOXES, OUTLETS BOXES, PULL BOXES, ETC. SHALL BE LABELED WITH PROPER CIRCUIT AND PANEL DESIGNATION AT THE CONCLUSION OF WORK.
12. IN THE AREA WHERE THERE ARE NO ALTERATIONS INDICATED, THE EXISTING FACILITIES SHALL BE RETAINED IN SERVICE. IN CASE OF DOUBT, ASSUME THAT THE EXISTING ELECTRICAL WIRING IS TO REMAIN IN OPERATION THROUGHOUT THE CONSTRUCTION PERIOD AND THEREAFTER.
13. CONTRACTOR IS RESPONSIBLE FOR ACTUAL CIRCUIT IDENTIFICATION. CIRCUIT IDENTIFICATION SHOWN ON THIS DRAWINGS IS INFORMATIONAL PURPOSE ONLY.

KEY NOTES

1. (N) WALL SURFACE MOUNTED TWIST-LOCK RECEPTACLE NEMA L6-20R. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH TELCOMM VENDOR FOR EXACT LOCATIONS.
2. COORDINATE WITH BUILDING ENGINEER AND TELCOMM VENDOR FOR EXACT LOCATION OF PANEL.
3. (N) UNDER RAISED FLOOR TWIST-LOCK RECEPTACLE NEMA L6-20R MOUNTED ON BACK BOX. PROVIDE UNDER RAISED FLOOR FLEXIBLE SEAL-TITE CONDUIT WITH TRANSITION KITS FOR EMT CONDUIT RUN TO DESIGNATED PANEL.
4. POWER CONNECTION FOR AC UNIT, MAKE FINAL CONNECTION BASED ON MANUFACTURER'S RECOMMENDATIONS. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION.

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7488
www.syska.com

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		BULLETIN 3		
6		02/21/13	-	-
		BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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Description
1ST AND 2ND FLOOR IDF ROOM PARTIAL POWER PLANS

Scale
3/16" = 1'-0"

True North
Ref North

EP-404

The corner tick marks represent the 30"x42" plot area.

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SHEET NOTES

1. CONDUIT ROUTING AND LOCATION OF ALL J-BOXES ARE FOR REFERENCE ONLY. ALL OPENING AROUND CONDUITS PASSING THROUGH FIRE RATED WALL, CEILING, FLOORS, ETC. SHALL BE PACKED AND SEALED TO CONFORM WITH FIRE RATING OF THE PENETRATED.
2. ALL J-BOXES, OUTLETS BOXES, PULL BOXES, ETC. SHALL BE LABELED WITH PROPER CIRCUIT AND PANEL DESIGNATION AT THE CONCLUSION OF WORK.

KEY NOTES

1. POWER CONNECTION FOR ROOF TOP CONDENSING UNIT, MAKE FINAL CONNECTION BASED ON MANUFACTURER'S RECOMMENDATIONS. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION. COORDINATE WITH BUILDING REPRESENTATIVE FOR APPROVED ROOF PENETRATION METHOD. PROVIDE UNISTRUT SUPPORT FOR DISCONNECT SWITCH MOUNTING AS NECESSARY.
2. PROVIDE WEATHERPROOF GFCI RECEPTACLE WITH IN USE COVER. PROVIDE UNISTRUT SUPPORT FOR EQUIPMENT MOUNTING AS NECESSARY.

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
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SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.6200
Fax: 310.473.7468
www.syska.com

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6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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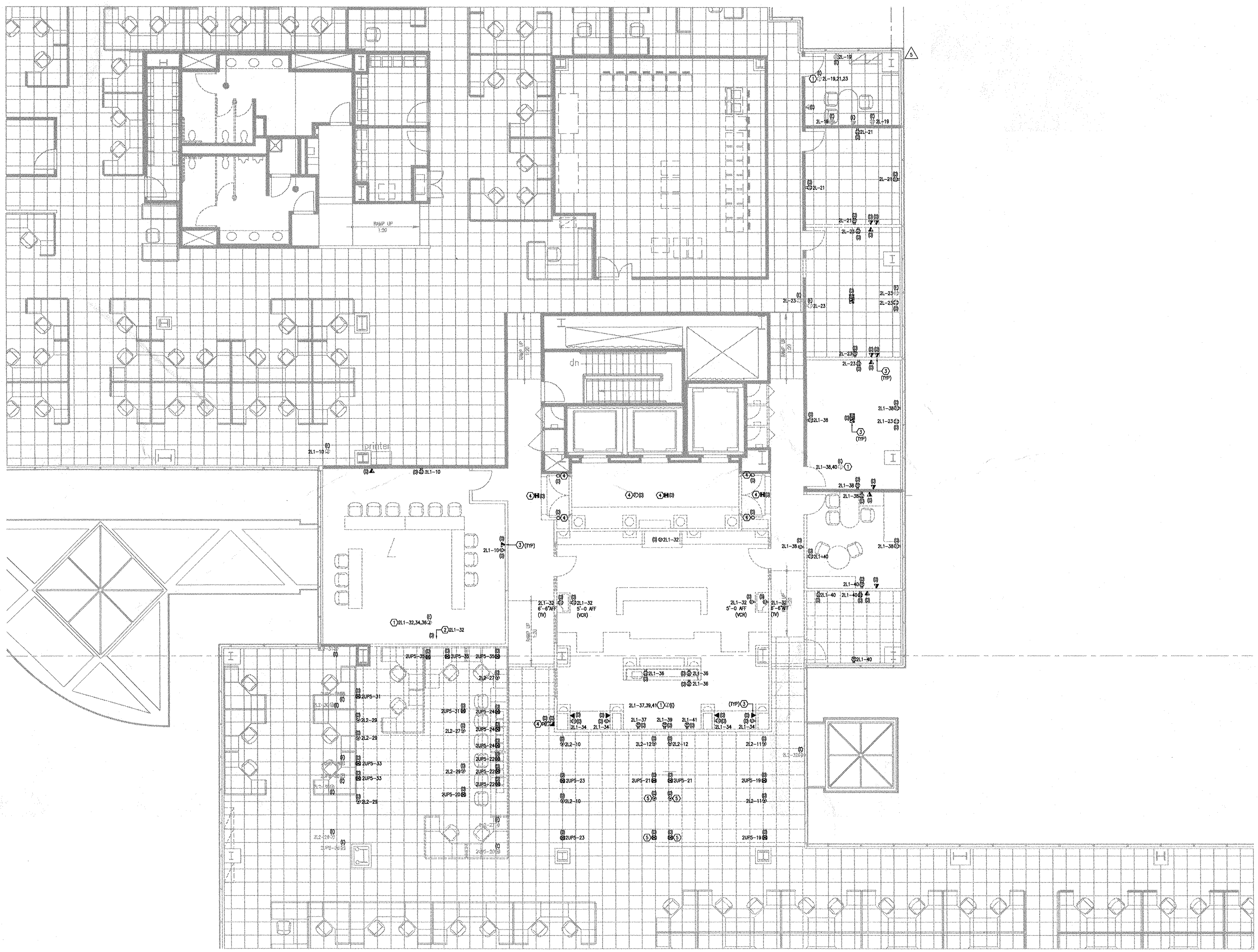
Description
ROOF POWER PLAN

Scale
3/32" = 1'-0"

EP-405 3

True North
Ref North

The corner tick marks represent the 30"x42" grid areas.



2ND FLOOR - POWER DEMOLITION PLAN

1

SHEET NOTES

1. CONTRACTOR IS RESPONSIBLE FOR ACTUAL CIRCUIT IDENTIFICATION. CIRCUIT IDENTIFICATION SHOWN ON THIS DRAWING IS INFORMATIONAL PURPOSES ONLY. ALL CIRCUITS MUST BE IDENTIFIED BEFORE REMOVAL. ALL DISCREPANCIES MUST BE REPORTED TO PROJECT MANAGER & SYSKA IMMEDIATELY.
2. THIS PROJECT IS OF A COMPLEX NATURE. CONTRACTOR SHALL VISIT THE JOB SITE AND GET FAMILIAR WITH FIELD CONDITIONS. EXISTING CONDITIONS MAY VARY FROM WHAT SHOWN ON DRAWING. CONTRACTOR SHALL BRING TO ENGINEERS ATTENTION ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DESIGN DOCUMENTS.
3. SEAL ALL EXPOSED FLOOR CORE HOLES. AFTER SETS MUST BE REMOVED AND HOLES TO BE SEALED BY APPROVED METHOD. COORDINATE PROCEDURE WITH PROJECT MANAGER.
4. SEE ADDITIONAL RENOVATION NOTES ON DRAWING E0_1.
5. COORDINATE ALL RAISED FLOOR ACTIVITIES WITH BUILDING ENGINEER. ALL OPEN FLOOR TILES IN AREAS WHERE VERIZON EMPLOYEES ARE WORKING MUST HAVE BARRICADES AND WARNING SIGNS.
6. ALL JUNCTION BOXES, OUTLETS BOXES, PULL BOXES AND ETC. SHALL BE LABELED WITH PROPER CIRCUIT AND PANEL DESIGNATION AT THE CONCLUSION OF WORK PER BUILDING STANDARDS.
7. ELECTRICAL CONTRACTOR TO PROVIDE COVER PLATES FOR ALL HOLES, OPENING, ETC. TO MATCH EXISTING.
8. IN THE AREAS WHERE THERE ARE NO ALTERATIONS INDICATED, THE EXISTING FACILITIES SHALL BE RETAINED IN SERVICE. IN CASE OF DOUBT, ASSUME THAT THE EXISTING ELECTRICAL WIRING IS TO REMAIN IN OPERATION THROUGHOUT THE CONSTRUCTION PERIOD AND THEREAFTER.
9. PROVIDE AS-BUILT PANEL SCHEDULES AND DRAWINGS AT THE CONCLUSION OF WORK. CONTRACTOR SHALL MODIFY THE PANEL DIRECTORIES TO REFLECT THE CHANGES AND MODIFICATIONS.
10. THE CONTRACTOR IS RESPONSIBLE FOR WRITING AND SECURING APPROVALS FOR ALL CRITICAL WORK RELATED TO UPS POWER. COORDINATE ALL WORK WITH VERIZON PROJECT MANAGER AND BUILDING ENGINEERS SO AS NOT TO INTERRUPT THE OPERATIONS OF THE BUILDING, WORK HOURS SHALL BE CLOSELY COORDINATED.
11. UNLESS OTHERWISE NOTED, ALL DEVICES NOTED AS (D) ARE TO BE REMOVED. REMOVE ALL UNUSED CONDUITS/WIRING BACK TO NEAREST J-BOXES LOCATED OUTSIDE OF THE DEMOLITION AREA (DO NOT ABANDON).
12. ALL DEVICES NOTED AS (E) ARE EXISTING TO REMAIN, MAINTAIN OPERATION AND CIRCUITRY.
13. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL DEVICES SHOWN AND ALSO VERIFY THE CIRCUIT DESIGNATION PRIOR TO COMMENCING DEMOLITION WORK.
14. ALL EXISTING ELECTRICAL EQUIPMENT AND CONDUITS THAT INTERFERE WITH ANY NEW CONSTRUCTION SHALL BE RELOCATED OR RE-ROUTED AS REQUIRED TO CLEAR THE NEW CONSTRUCTION. RECONNECT ALL EXISTING EQUIPMENT THAT ARE TO REMAIN AND NOT AFFECTED BY THE NEW WORK, TO THE NEWLY RELOCATED OR RE-ROUTED SYSTEM TO ENSURE A SAFE AND OPERATIONAL SYSTEM.
15. COORDINATE WITH MECHANICAL AND PLUMBING DEMOLITION PLANS FOR THE REMOVAL OF ALL MECHANICAL AND PLUMBING EQUIPMENT. UNLESS OTHERWISE NOTED, FIELD VERIFY AND REMOVE ALL EXISTING ELECTRICAL DEVICES, CONDUITS/WIRING BACK TO PANEL. LABEL REMOVED CIRCUITS AS SPARES.
16. FIRE ALARM CONTRACTOR SHALL REWORK (REMOVE, RELOCATE, RETROFIT AND/OR PROVIDE NEW) ALL FIRE LIFE SAFETY SYSTEM DEVICES INCLUDING FIRE SPRINKLER HEAD TO MEET SYSTEM FIRE/LIFE SAFETY CODE REQUIREMENTS. COORDINATE WITH ARCHITECT AND BUILDING ENGINEER FOR EXACT REQUIREMENTS.
17. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT REQUIREMENTS OF DEMOLITION WORK.
18. RELOCATE ALL UNDER RAISED FLOOR J-BOXES TO OUTSIDE OF THE DEMOLITION AREA. MAINTAIN EXISTING CIRCUITING TO EXTEND SERVICE TO NEW EQUIPMENT/DEVICES IN THE NEW AREA OF WORK.
19. TELECOMM VENDOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL EXISTING TEL/DATA OUTLETS AND ASSOCIATED CONNECTIONS. COORDINATE WITH VERIZON REPRESENTATIVES FOR EXACT REQUIREMENTS.

KEY NOTES

1. (E) J-BOX VIA INDICATED CIRCUITS TO REMAIN FOR NEW WORK. CONTRACTOR TO FIELD VERIFY AND RELOCATE J-BOX TO ACCESSIBLE CEILING SPACE AS REQUIRED PER NEW CONSTRUCTION PLANS.
2. (E) PROJECTION SCREEN TO BE DEMOLISHED. REMOVE ALL ASSOCIATED CONDUITS/WIRING BACK TO SOURCE.
3. TELE/COMM VENDOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING TEL/DATA WALL OUTLETS AND CABLING BACK TO SOURCE. COORDINATE WITH VERIZON REPRESENTATIVES FOR EXACT REQUIREMENTS PRIOR TO PROCEEDING DEMOLITION WORK. REFER TO ARCHITECTURAL DRAWINGS FOR PATCHING REQUIREMENTS OF ALL EXISTING WALL OPENINGS.
4. ELECTRICAL CONTRACTOR TO COORDINATE WITH FIRE ALARM VENDOR FOR THE DEMOLITION WORK OF DEMOLISHED FIRE ALARM DEVICES.
5. CONTRACTOR TO FIELD VERIFY AND IDENTIFY (E) CIRCUITING FEEDING (E) OUTLETS PRIOR TO PROCEEDING OF DEMOLITION WORK.

verizon

1800 Solar Drive
Oxnard, CA 93030

Gensler

1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

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Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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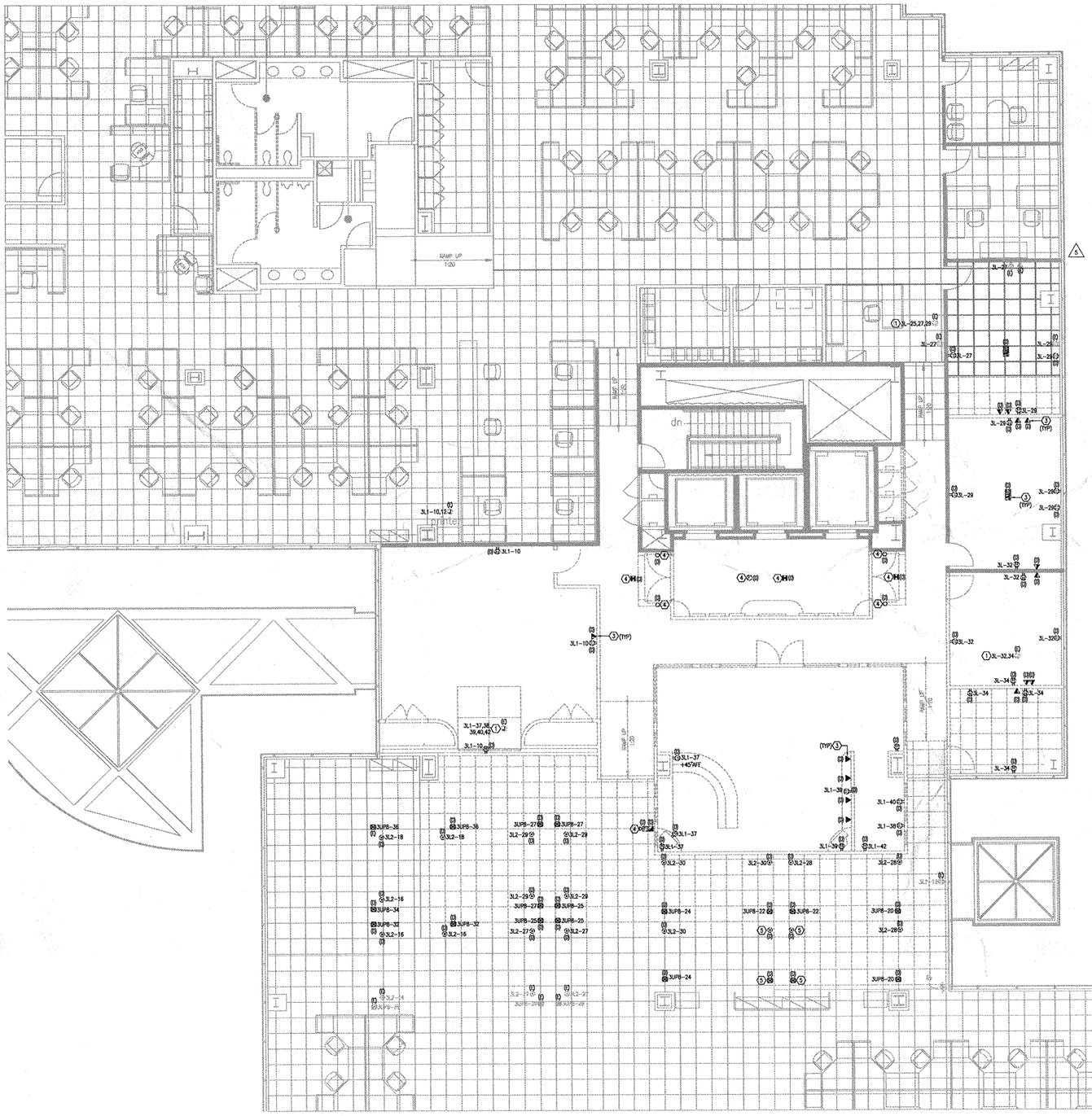
Description
2ND FLOOR PARTIAL POWER DEMOLITION PLAN

Scale
3/16" = 1'-0"

True North
Ref North

EPD-402

The corner tick marks represent the 30"x48" plot area.



3RD FLOOR - POWER DEMOLITION PLAN

1

SHEET NOTES

1. CONTRACTOR IS RESPONSIBLE FOR ACTUAL CIRCUIT IDENTIFICATION. CIRCUIT IDENTIFICATION SHOWN ON THIS DRAWING IS INFORMATIONAL PURPOSES ONLY. ALL CIRCUITS MUST BE IDENTIFIED BEFORE REMOVAL. ALL DISCREPANCIES MUST BE REPORTED TO PROJECT MANAGER & SYSKA IMMEDIATELY.
2. THIS PROJECT IS OF A COMPLEX NATURE. CONTRACTOR SHALL VISIT THE JOB SITE AND GET FAMILIAR WITH FIELD CONDITIONS. EXISTING CONDITIONS MAY VARY FROM WHAT SHOWN ON DRAWING. CONTRACTOR SHALL BRING TO ENGINEERS ATTENTION ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DESIGN DOCUMENTS.
3. SEAL ALL EXPOSED FLOOR CORE HOLES. AFTER SETS MUST BE REMOVED AND HOLES TO BE SEALED BY APPROVED METHOD. COORDINATE PROCEDURE WITH PROJECT MANAGER.
4. SEE ADDITIONAL RENOVATION NOTES ON DRAWING E0_1.
5. COORDINATE ALL RAISED FLOOR ACTIVITIES WITH BUILDING ENGINEER. ALL OPEN FLOOR TILES IN AREAS WHERE VERIZON EMPLOYEES ARE WORKING MUST HAVE BARRICADES AND WARNING SIGNS.
6. ALL JUNCTION BOXES, OUTLETS BOXES, PULL BOXES AND ETC. SHALL BE LABELED WITH PROPER CIRCUIT AND PANEL DESIGNATION AT THE CONCLUSION OF WORK PER BUILDING STANDARDS.
7. ELECTRICAL CONTRACTOR TO PROVIDE COVER PLATES FOR ALL HOLES, OPENING, ETC. TO MATCH EXISTING.
8. IN THE AREAS WHERE THERE ARE NO ALTERATIONS INDICATED, THE EXISTING FACILITIES SHALL BE RETAINED IN SERVICE. IN CASE OF DOUBT, ASSUME THAT THE EXISTING ELECTRICAL WIRING IS TO REMAIN IN OPERATION THROUGHOUT THE CONSTRUCTION PERIOD AND THEREAFTER.
9. PROVIDE AS-BUILT PANEL SCHEDULES AND DRAWINGS AT THE CONCLUSION OF WORK. CONTRACTOR SHALL MODIFY THE PANEL DIRECTORIES TO REFLECT THE CHANGES AND MODIFICATIONS.
10. THE CONTRACTOR IS RESPONSIBLE FOR WRITING AND SECURING APPROVALS FOR ALL CRITICAL WORK RELATED TO UPS POWER. COORDINATE ALL WORK WITH VERIZON PROJECT MANAGER AND BUILDING ENGINEERS SO AS NOT TO INTERRUPT THE OPERATIONS OF THE BUILDING. WORK HOURS SHALL BE CLOSELY COORDINATED.
11. UNLESS OTHERWISE NOTED, ALL DEVICES NOTED AS (D) ARE TO BE REMOVED. REMOVE ALL UNUSED CONDUITS/WIRING BACK TO NEAREST J-BOXES LOCATED OUTSIDE OF THE DEMOLITION AREA (DO NOT ABANDON).
12. ALL DEVICES NOTED AS (E) ARE EXISTING TO REMAIN, MAINTAIN OPERATION AND CIRCUITRY.
13. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL DEVICES SHOWN AND ALSO VERIFY THE CIRCUIT DESIGNATION PRIOR TO COMMENCING DEMOLITION WORK.
14. ALL EXISTING ELECTRICAL EQUIPMENT AND CONDUITS THAT INTERFERE WITH ANY NEW CONSTRUCTION SHALL BE RELOCATED OR RE-ROUTED AS REQUIRED TO CLEAR THE NEW CONSTRUCTION. RECONNECT ALL EXISTING EQUIPMENT THAT ARE TO REMAIN AND NOT AFFECTED BY THE NEW WORK, TO THE NEWLY RELOCATED OR RE-ROUTED SYSTEM TO ENSURE A SAFE AND OPERATIONAL SYSTEM.
15. COORDINATE WITH MECHANICAL AND PLUMBING DEMOLITION PLANS FOR THE REMOVAL OF ALL MECHANICAL AND PLUMBING EQUIPMENT. UNLESS OTHERWISE NOTED, FIELD VERIFY AND REMOVE ALL EXISTING ELECTRICAL DEVICES, CONDUITS/WIRING BACK TO PANEL. LABEL REMOVED CIRCUITS AS SPARES.
16. FIRE ALARM CONTRACTOR SHALL REWORK (REMOVE, RELOCATE, RETROFIT AND/OR PROVIDE NEW) ALL FIRE LIFE SAFETY SYSTEM DEVICES INCLUDING FIRE SPRINKLER HEAD TO MEET SYSTEM FIRE/LIFE SAFETY CODE REQUIREMENTS. COORDINATE WITH ARCHITECT AND BUILDING ENGINEER FOR EXACT REQUIREMENTS.
17. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT REQUIREMENTS OF DEMOLITION WORK.
18. RELOCATE ALL UNDER RAISED FLOOR J-BOXES TO OUTSIDE OF THE DEMOLITION AREA. MAINTAIN EXISTING CIRCUITING TO EXTEND SERVICE TO NEW EQUIPMENT/DEVICES IN THE NEW AREA OF WORK.
19. TELECOMM VENDOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL EXISTING TEL/DATA OUTLETS AND ASSOCIATED CONNECTIONS. COORDINATE WITH VERIZON REPRESENTATIVES FOR EXACT REQUIREMENTS.

KEY NOTES

1. (E) J-BOX VIA INDICATED CIRCUITS TO REMAIN FOR NEW WORK. CONTRACTOR TO FIELD VERIFY AND RELOCATE J-BOX TO ACCESSIBLE CEILING SPACE AS REQUIRED PER NEW CONSTRUCTION PLANS.
2. (E) PROJECTION SCREEN TO BE DEMOLISHED. REMOVE ALL ASSOCIATED CONDUITS/WIRING BACK TO SOURCE.
3. TELE/COMM VENDOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF EXISTING TEL/DATA WALL OUTLETS AND CABLING BACK TO SOURCE. COORDINATE WITH VERIZON REPRESENTATIVES FOR EXACT REQUIREMENTS PRIOR TO PROCEEDING DEMOLITION WORK. REFER TO ARCHITECTURAL DRAWINGS FOR PATCHING REQUIREMENTS OF ALL EXISTING WALL OPENINGS.
4. ELECTRICAL CONTRACTOR TO COORDINATE WITH FIRE ALARM VENDOR FOR THE DEMOLITION WORK OF DEMOLISHED FIRE ALARM DEVICES.
5. CONTRACTOR TO FIELD VERIFY AND IDENTIFY (E) CIRCUITING FEEDING (E) OUTLETS PRIOR TO PROCEEDING OF DEMOLITION AND/OR RELOCATION WORK.

verizon

1600 Solar Drive
Oxnard, CA 93030

Gensler

1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.

Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

△ Issue	Date & Issue Description	By	Check
01	07/31/12	-	-
	PLAN CHECK		
1	09/10/12	-	-
	ISSUE FOR CONSTRUCTION		
2	09/12/12	-	-
	BULLETIN 1		
3	10/09/12	-	-
	BULLETIN 2		
4	10/23/2012	-	-
	REVISED FOR PLAN CHECK		
5	11/19/12	-	-
	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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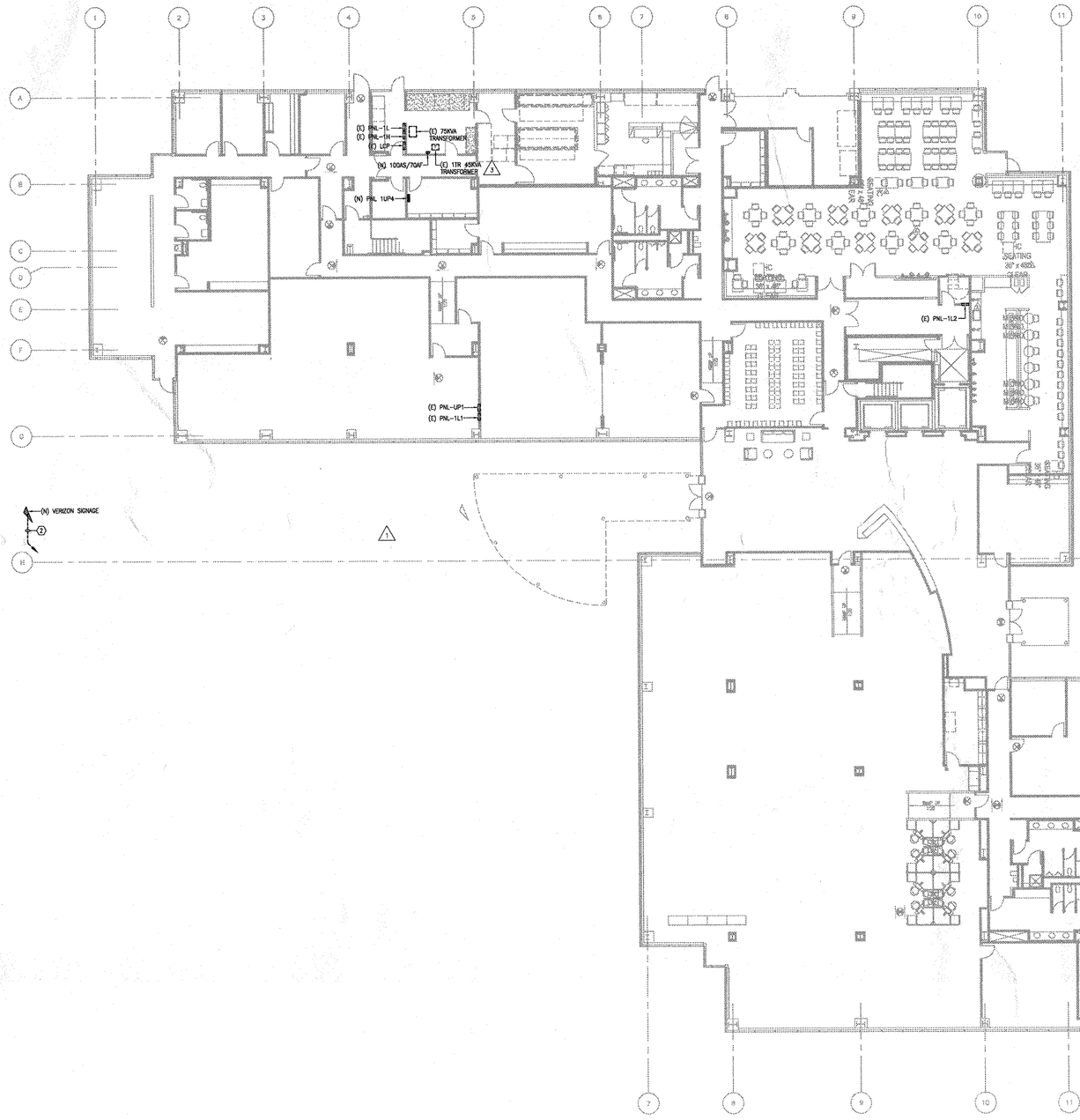
Description
3RD FLOOR PARTIAL POWER DEMOLITION PLAN

Scale
3/16" = 1'-0"

True North
Ref North

EPD-403

The corner tick marks represent the 30"x42" plot area.



SHEET NOTES

1. ALL ELECTRICAL EQUIPMENT (TRANSFORMERS, PANELS) ARE EXISTING TO REMAIN, SHOWN FOR REFERENCE ONLY. UNLESS OTHERWISE NOTED.
2. CONDUIT ROUTING AND LOCATION OF ALL J-BOXES ARE FOR REFERENCE ONLY. ALL OPENING AROUND CONDUITS PASSING THROUGH FIRE RATED WALL, CEILING, FLOORS, ETC. SHALL BE PACKED AND SEALED TO CONFORM WITH FIRE RATING OF THE PENETRATED.
3. ALL J-BOXES, OUTLETS BOXES, PULL BOXES, ETC. SHALL BE LABELED WITH PROPER CIRCUIT AND PANEL DESIGNATION AT THE CONCLUSION OF WORK.

KEY NOTES

1. NOT USED.
2. UNDER GROUND CONDUIT TO NEAREST (E) PARKING LOT POLE LIGHTING, 277V. PROVIDE 2#10+1#10 GND IN MIN. 1" CONDUIT FOR VERIZON SIGNAGE LED LIGHTING CONNECTIONS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION. CONTRACTOR TO COORDINATE WITH SIGNAGE VENDOR AND PROVIDE ALL TRANSFORMER/ COMPONENTS/ PARTS AS REQUIRED.

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
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Culver City, Ca. 90230
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4	10/23/2012	-	-
	REVISED FOR PLAN CHECK		
5	11/19/12	-	-
	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\E-101-VZC0X000.dwg

Description
1ST FLOOR OVERALL PLAN

Scale
3/32" = 1'-0"

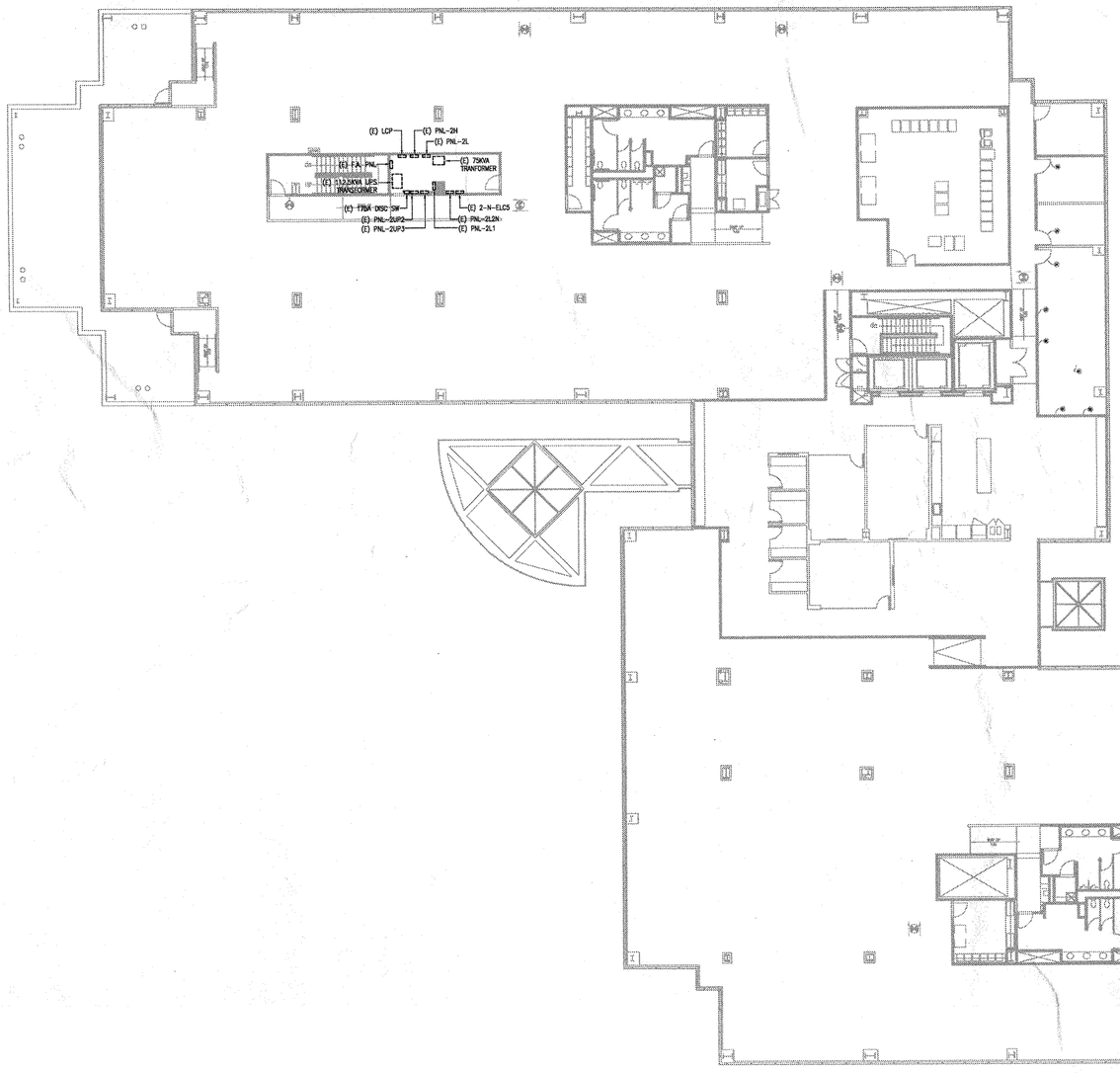
True North
Plot North

E-101

The corner tick marks represent the 30"x42" plot area.

SHEET NOTES

1. ALL ELECTRICAL EQUIPMENT (TRANSFORMERS, PANELS) ARE EXISTING TO REMAIN, SHOWN FOR REFERENCE ONLY. UNLESS OTHERWISE NOTED AS (N).



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1800 Solar Drive
Oxnard, CA 93030

Gensler

1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

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A member company of SH Group, Inc

Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
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	ISSUE FOR CONSTRUCTION		
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	BULLETIN 1		
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	BULLETIN 2		
4	10/23/2012	-	-
	REVISED FOR PLAN CHECK		
5	11/19/12	-	-
	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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Description
2ND FLOOR OVERALL PLAN

Scale
3/32" = 1'-0"

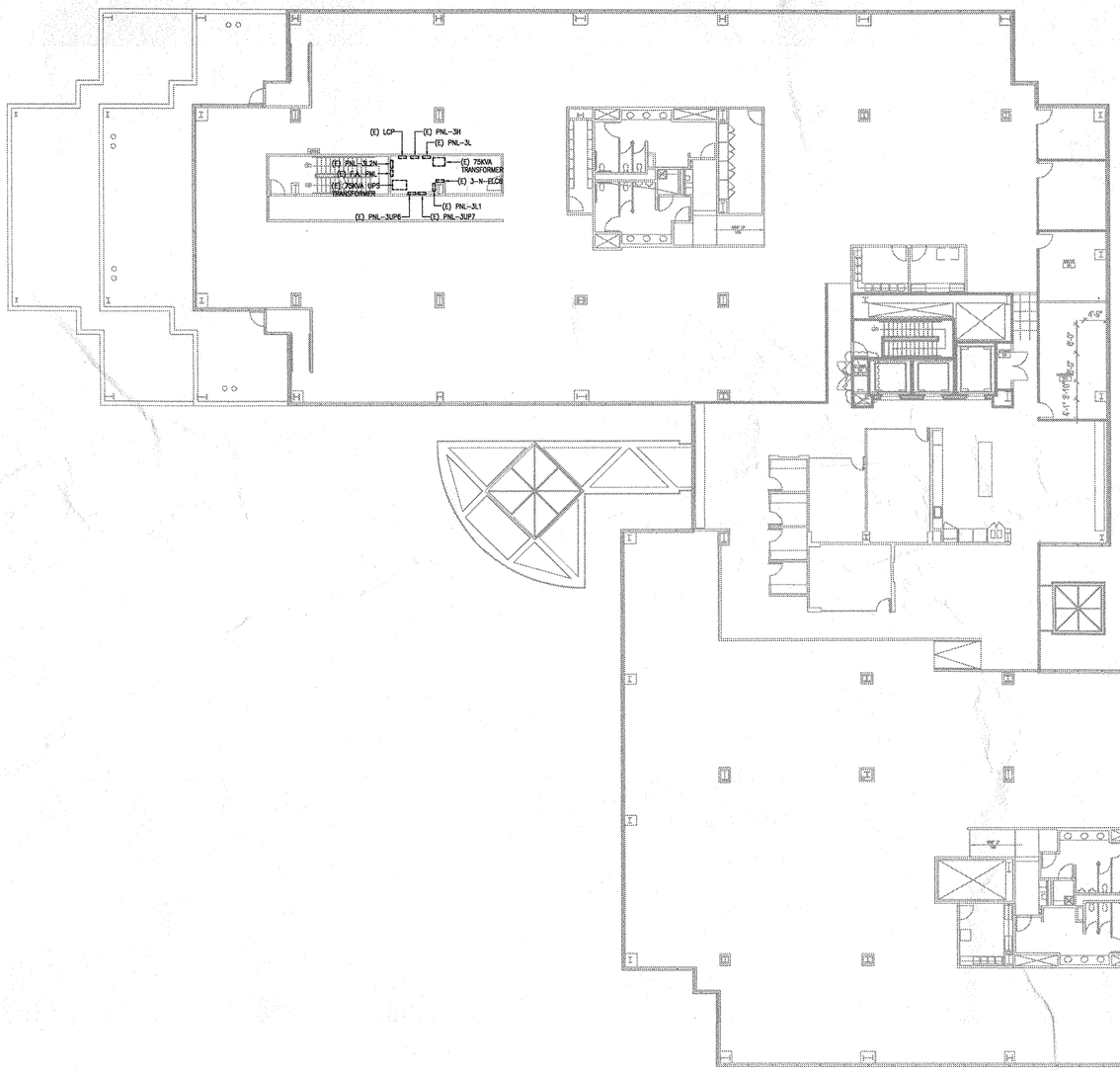
True North
Ref North

E-102

The corner tick marks represent the 30"x42" plot area.

SHEET NOTES

1. ALL ELECTRICAL EQUIPMENT (TRANSFORMERS, PANELS) ARE EXISTING TO REMAIN, SHOWN FOR REFERENCE ONLY. UNLESS OTHERWISE NOTED AS (N).



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1800 Solar Drive
Oxnard, CA 93030

Gensler

1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.

Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
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6		02/21/13	-	-
		BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\E-103-VZC0X000.dwg

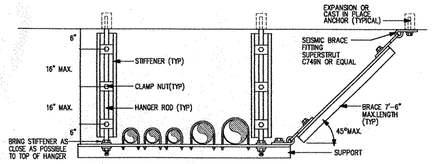
Description
3RD FLOOR OVERALL PLAN

Scale
3/32" = 1'-0"

True North
Ref North

E-103

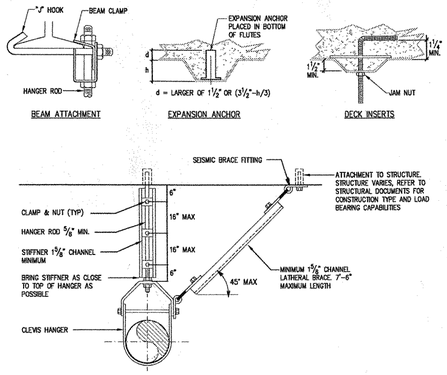
The corner tick marks represent the 30"x42" plot area.



NOTE:

1. REFER TO SMACNA GUIDELINE FOR REQUIRED SIZES OF SUPPORTS, BRACING, AND ANCHORS.
2. DETAIL SHOWN SHALL BE USED FOR GUIDELINE ONLY. SUBMIT SEISMIC RELATED DETAILS AND OBTAIN APPROVAL FROM A REGISTERED STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
3. ALL ANCHORS SHALL BE REVIEWED BY A LICENSED STRUCTURAL ENGINEER PRIOR TO INSTALLATION. DROP-IN ANCHORS ARE NOT ACCEPTABLE.

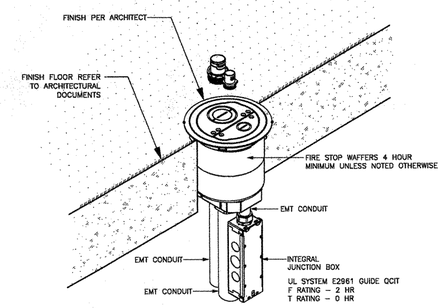
9 CONDUIT TRAPEZE SUPPORT
SCALE: NONE



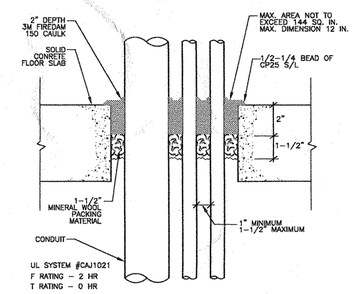
NOTE:

1. MAXIMUM LOADING ON ANY ONE COMPONENT TO BE NO MORE THAN ½ THE MAXIMUM SAFE LOADING FOR THAT COMPONENT.
2. IF GREATER LOADING CAPACITIES ARE REQUIRED, PROVIDE CALCULATIONS SIGNED BY LICENSED STRUCTURAL ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

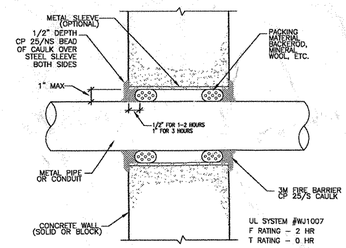
8 SINGLE CONDUIT SUPPORT
SCALE: NONE



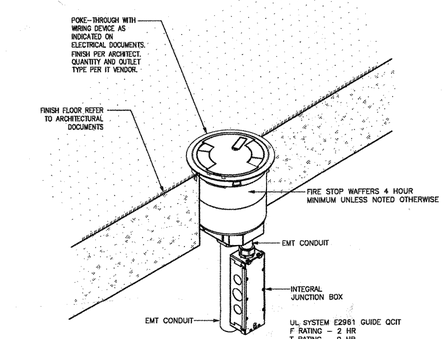
7 FIRE RATED POKE-THROUGH POWER/DAT/TEL FURNITURE CONNECTIONS INSTALLATION
SCALE: NONE



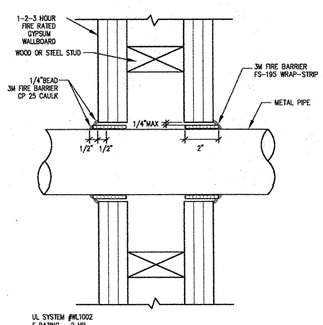
6 FIRE RATED POKE-THROUGH OUTLET INSTALLATION
SCALE: NONE



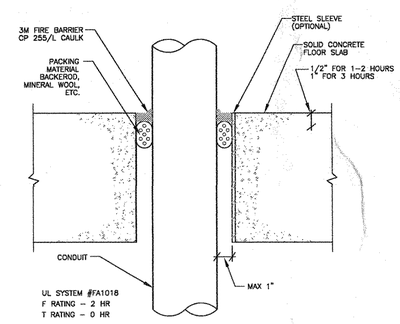
5 FIREPROOFING THROUGH CONCRETE WALL
SCALE: NONE



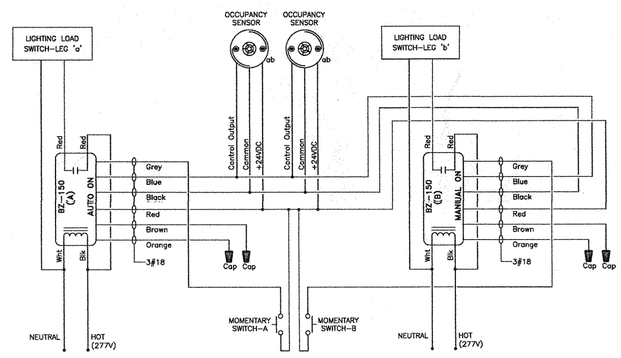
4 FIREPROOFING POKE-THROUGH POWER/DATA/TEL OUTLETS INSTALLATION
SCALE: NONE



3 FIREPROOFING THROUGH GYPSUM WALL
SCALE: NONE



2 FIRESTOPPING CONCRETE SLAB SINGLE CONDUIT
SCALE: NONE



1 OCCUPANCY SENSOR WIRING DIAGRAM
SCALE: NONE

The corner tick marks represent the 30"x42" plot area.

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

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	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

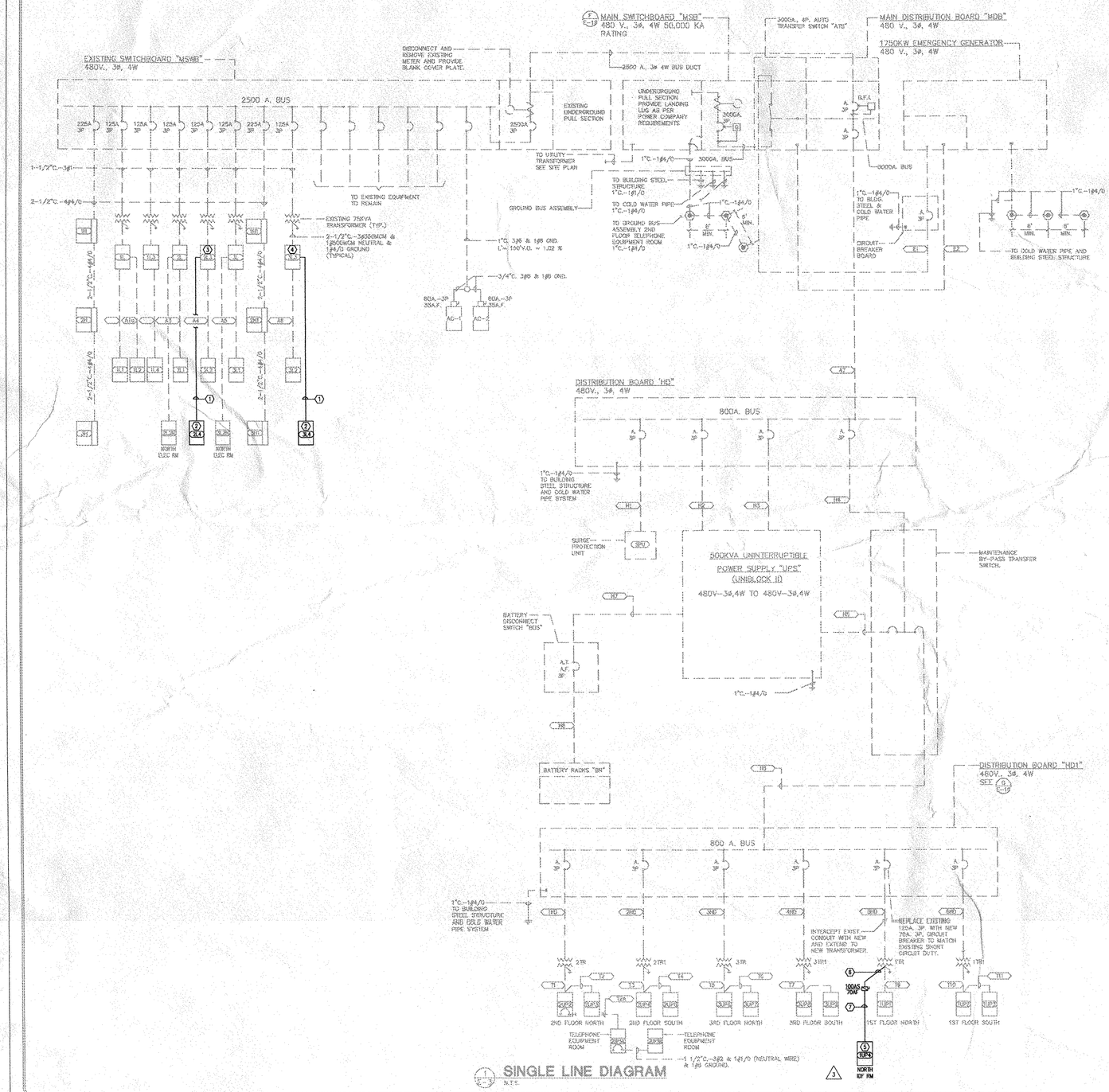
CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\E-501-VZCOX000.dwg

Description
ELECTRICAL DETAILS

Scale
NONE

True North
Ref North

E-501



FEEDER SCHEDULE

FEEDER NO	FEEDER FROM	FEEDER TO	APPROX. LENGTH	AMPS	SET QTY.	CONDUIT & CONDUCTORS	VOLT DROP	% DROP	TOTAL % DROP
S1	GEN.	ATS	60	2057	9	3 1/2"C.-#500MCM THWN & 1#4/0 G.	0.16	--	0.16
S2	GEN.	ATS	90	--	1	1" C.O. (GEN. SET STARTER)	--	--	--
A1	1L	1L1	80	72	1	1 1/2"C.-#4 & 1#6 G.	--	--	0.61
A1a	1L	1L2	150	91	1	1 1/2"C.-#1 & 1#6 G.	--	--	1.41
A2	1L3	1L4	120	95	1	1 1/2"C.-#1 & 1#6 G.	--	--	1.18
A3	2L	2L1	25	97	1	1 1/2"C.-#1 & 1#6 G.	0.26	0.26	0.26
A4	2L3	2L2	25	69	1	1 1/2"C.-#1 & 1#6 G.	0.23	0.23	0.23
A5	3L	3L1	25	65	1	1 1/2"C.-#1 & 1#6 G.	0.22	0.22	0.22
A6	3L3	3L2	25	65	1	1 1/2"C.-#1 & 1#6 G.	0.22	0.22	0.22
A7	MDB	ND	35	300	2	3 1/2"C.-#500THWN &1#4/0 G.	0.08	0.08	0.08
H1	HD	SPU	2	--	1	1"C.-#6 G.	--	--	--
H2	HD	HD1	1	300	2	3 1/2"C.-#500THWN &1#4/0 G.	0.04	0.04	0.04
H3	HD	HD1	1	300	2	3 1/2"C.-#500THWN &1#4/0 G.			
H4	HD	HD1	1	300	2	3 1/2"C.-#500THWN &1#4/0 G.			
H5	HD	HD1	1	300	2	3 1/2"C.-#500THWN &1#4/0 G.			
H6	HD	HD1	1	300	2	3 1/2"C.-#500THWN &1#4/0 G.			
H7	HD	HD1	1	1129	2	6"C.-#500THWN &1#4/0 G.			
H8	BDS	BR	BY MANUFACTURER						
1HD	HD1	2TR	40	84	1	2"C.-3#2/0	0.19	0.04	0.23
T1	2TR	2UP2	2	192	2	2"C.-3#250 &1#350N &1#1/0 G.	0.01	0.04	0.05
T2	2UP2	2UP3	1	51	1	1 1/2"C.-3#2 &1#3/0N &1#4 G.	0.08	0.04	0.1
2HD	HD1	2TR1	367	180	1	2 1/2"C.-3#250MCM	1.0	0.04	1.09
T3	2TR1	2UP4	2	183	1	2"C.-3#250 &1#350N &1#1/0 G.	0.01	0.04	0.05
T4	2UP4	2UP5	1	93	1	1 1/2"C.-3#2 &1#3/0N &1#4 G.	0.01	0.04	0.05
3HD	HD1	3TR	60	90	1	2"C.-3#2	0.21	0.04	0.25
T5	3TR	2UP6	2	138	1	2"C.-3#250 &1#350N &1#1/0 G.	0.09	0.04	0.13
T6	2UP6	2UP7	1	69	1	1 1/2"C.-3#2 &1#3/0N &1#4 G.	0.08	0.04	0.12
T2A	2UP2	2UP3A	100	96	1	2"C.-4#3/0 & 1#4 G.	0.16	0.71	0.87
4HD	HD1	3TR1	377	78	1	2 1/2"C.-3#250MCM	0.44	0.04	0.48
T7	3TR1	3UP8	2	178	1	3"C.-3#250 &1#350N &1#1/0 G.	0.01	0.04	0.05
T8	3UP8	3UP9	1	08	1	1 1/2"C.-3#2 &1#3/0N &1#4 G.	0.08		0.12
5HD	HD1	1TR	22	31	1	2 1/2"C.-3#1	0.04	0.03	0.07
T9	1TR	1UP1	55	70	1	2 1/2"C.-3#1/0 &1#250N &1#2/0 G.	0.04	0.32	0.36
6HD	HD1	1TR1	341	50	1	2 1/2"C.-3#250MCM	0.04	0.31	0.35
T10	1TR1	1UP9	2	137	1	3"C.-3#250 &1#350N &1#1/0 G.	0.18	0.18	0.19
T11	1UP2	1UP3	120	79	1	2"C.-3#1 & 1#3/0 N & 1#2 G.	0.18	1.68	1.86

TRANSFORMER SCHEDULE

XFMR NO.	KVA RATING	PRIMARY VOLTAGE	PRIMARY PH.	PRIMARY WIRE	SECONDARY VOLTAGE	SECONDARY PH.	SECONDARY WIRE	GROUND WIRE	GROUND COND.	TYPE
2TN	112.5	480	3	3	120/208	3	4	2/0	3/4"	THHN
2TR1	75.0	480	3	3	120/208	3	4	1/0	3/4"	THHN
3TN	75.0	480	3	3	120/208	3	4	1/0	3/4"	THHN
3TR1	75.0	480	3	3	120/208	3	4	1/0	3/4"	THHN
* 1TR	45.0	480	3	3	120/208	3	4	2	3/4"	THHN
* 1TR1	75.0	480	3	3	120/208	3	4	1/0	3/4"	THHN

* K-13 RATED
- COPPER WIRING
- ELECTROSTATIC SHIELD
- CLASS 220 INSULATION
- 6-2.5% 2.5-4 TAPS
- REVISED DOHC FLUX TO COMPENSATE FOR HARMONIC VOLTAGE DISTRIBUTION
- DOUBLE SIZE NEUTRAL TERMINAL FOR ADDITIONAL NEUTRAL WIRE
- ADDITIONAL SECONDARY CAPACITY TO COMPENSATE FOR HIGHER STRAY LOSS
- OVERSIZED PRIMARY CONDUCTORS TO COMPENSATE FOR CIRCULATING HARMONIC CURRENTS
- UL LISTED

LOAD SUMMARY

	12 MONTHS PEAK DEMAND LOAD @ 592 kW	X 125% PER NEC	ADDED	TOTAL	
	KVA	KVA	KVA	KVA	AMP
(E) 2500A BUS 480/277V MAIN SWITCHBOARD 'MSB'	**740.0**	**925.0**	**31.0**	**956.0**	**1150.4**
(NEW) PANEL-2A 100A BUS, 208/120V, 3PH-4W, MAIN LUG ONLY, FED FROM (E) PANEL-2J	--	--	9.3		
(NEW) PANEL-3A 100A BUS, 208/120V, 3PH-4W, MAIN LUG ONLY, FED FROM (E) PANEL-3J	--	--	18.5		
(NEW) PANEL-1UP4 100A BUS, 208/120V, 3PH-4W, 70A MCB, FED FROM (E) 45KVA TRANSFORMER 1TR	--	--	3.2		

NOTES:
1. TOTAL AMPERE OF (E) 2500A 100% RATED BUS MAIN SWITCHBOARD IS APPROXIMATELY @ 46.0%.
2. REFER TO PANEL SCHEDULES AND SINGLE LINE DIAGRAM FOR EQUIPMENT LOAD INFO.
3. TOTAL LOAD OF (E) 45KVA TRANSFORMER 1TR = 13.1 KVA(PNL 1UPJ) + 3.2 KVA(PNL 1UP4) = 16.3 KVA

LEGENDS:
- NEW WORK
- EXISTING

SHEET NOTES

1. UNLESS OTHERWISE NOTED ON PLANS, ALL EQUIPMENT, CONDUITS AND CONDUCTORS SHOWN ARE EXISTING TO REMAIN. ALL EXISTING DATA SHOWN FOR REFERENCE ONLY AND ARE OBTAIN FROM EXISTING DOCUMENTS PROVIDED BY VERIZON.

KEY NOTES

1. 3Ø+1ØN+1Ø GND IN 1-1/2" CONDUIT, APPROXIMATE LENGTH = 10', VOLTAGE DROP = 0.1%.
2. PROVIDE NEW 100A BUS, MAIN LUG ONLY, 3PH-4W 42-POLE BRANCH CIRCUIT PANEL BOARD. PANEL TYPE AND KAIC RATING SHALL MATCH THE UPSTREAM PANEL. PANEL MANUFACTURER SHALL MATCH BUILDING STANDARDS. COORDINATE WITH BUILDING ENGINEER FOR EXACT REQUIREMENTS.
3. CONTRACTOR TO FIELD VERIFY FOR POSITION OF (E) CIRCUITS 3,3-28,28,30 CURRENTLY FED 2ND FLOOR VAV BOXES #5, 7 AND 8 SEQUENTIALLY WITH (3) 20A/1P CIRCUIT BREAKERS. COORDINATE WITH FACILITIES MANAGER AND BUILDING ENGINEER TO OBTAIN APPROVAL SCHEDULE TO TEMPORARILY SHUT DOWN OF (E) VAV BOXES FOR INSTALLATION OF A NEW 100A,3P CIRCUIT BREAKER TO PROVIDE POWER FEED TO THE NEW PANEL-2J-4'. EXTEND VAV BOXES CONNECTIONS AFTER SUCCESSFULLY INSTALLATION OF THE NEW PANEL VIA CIRCUITS 2J-4-2,4,6. REFER TO PANEL SCHEDULE FOR BRANCH CIRCUITING INFO.
4. CONTRACTOR TO FIELD VERIFY FOR POSITION OF (E) CIRCUITS 3J,3-31,33,35 CURRENTLY FED 3RD FLOOR VAV BOXES #7,8 AND 9 SEQUENTIALLY WITH (3) 20A/1P CIRCUIT BREAKERS. COORDINATE WITH FACILITIES MANAGER AND BUILDING ENGINEER TO OBTAIN APPROVAL SCHEDULE TO TEMPORARILY SHUT DOWN OF (E) VAV BOXES FOR INSTALLATION OF A NEW 100A,3P CIRCUIT BREAKER TO PROVIDE POWER FEED TO THE NEW PANEL-3J-4'. EXTEND VAV BOXES CONNECTIONS AFTER SUCCESSFULLY INSTALLATION OF THE NEW PANEL VIA CIRCUITS 3J-4-2,4,6. REFER TO PANEL SCHEDULE FOR BRANCH CIRCUITING INFO.
5. PROVIDE NEW 100A BUS, 3PH-4W 30-POLE BRANCH CIRCUIT PANEL BOARD WITH 70A MAIN CIRCUIT BREAKER, 10KAIC PANEL TYPE TO MATCH BUILDING STANDARDS. COORDINATE WITH BUILDING ENGINEER FOR EXACT REQUIREMENTS.
6. 3Ø/0+1Ø/0N+1Ø GND IN 2" CONDUIT, APPROXIMATE LENGTH = 8'.
7. 3Ø+1ØN+1Ø GND IN 1-1/2" CONDUIT, APPROXIMATE LENGTH = 25'.

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

Issue	Date & Issue Description	By	Check
01	07/31/12	-	-
	PLAN CHECK		
1	08/10/12	-	-
	ISSUE FOR CONSTRUCTION		
2	09/12/12	-	-
	BULLETIN 1		
3	10/09/12	-	-
	BULLETIN 2		
4	10/23/2012	-	-
	REVISED FOR PLAN CHECK		
5	11/19/12	-	-
	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\ACAD\PJ\VZCOX000\Drawings\Sheets\E-601-VZCOX000.dwg

Description
SINGLE LINE DIAGRAM

Scale
NONE

E-601

This corner tick marks represent the 30"x42" plot area.

1H (EXISTING)

SITE: Verizon Call Center
1800 Solar Drive, Oxnard, CA FL 93030

DESIGNATION:	1H (EXISTING)	BUS RATING:	100A
TYPE:		BREAKER SIZE:	100A MCB
SUPPLY VOLTAGE:	480/277V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%):	100%
NORMAL SUPPLY ORIGIN:	FED FROM MSB	BRACING (AMPS):	
EMERGENCY SUPPLY ORIGIN:	-	SHORT CIRCUIT AVAILABLE:	-
LOCATION OF ORIGIN:	-	DERATED FACTOR:	-
FEEDER SIZE (WIRE):	4#4/0+GND, 2-1/2"C	REVISION DATE:	07/26/12
TRANSFORMR SIZE (KVA):	-	VERIFICATION DATE:	-

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					L		(E) LOAD	1400			20	1	1	2	20	1	1800			(E) TRAINING RM 1&2 LTG		L					U
U					L		(E) LOAD		1400		20	1	3	4	20	1		1940		(E) OFFICE, CONF LTG		L					U
U					L		(E) LOAD			1400	20	1	5	6	20	1			2120	(E) CORRIDOR LTG		L					U
U					L		(E) NIGHT LTG	800			25	1	7	8	20	1	1400			(E) LOAD		N					U
U					L		(E) EXIT SIGN		400		20	1	9	10	20	1		1400		(E) LOAD		N					U
U					L	32	(N) CAFETERIA+(E) LTG			1944	20	1	11	12	20	1			1400	(E) LOAD		N					U
U					L	49	(N) CAFETERIA+(E) LTG	2146			20	1	13	14	20	1	1400			(E) LOAD		N					U
U					N		(E) LOAD		1450		20	1	15	16	20	1		1400		(E) LOAD		N					U
U					N		(E) LOAD			1400	25	1	17	18	20	1			1400	(E) LOAD		N					U
U					N		(E) LOAD	1400			30	1	19	20	20	1	1400			(E) LOAD		N					U
U					N		(E) LOAD		1400		20	1	21	22	20	1		1400		(E) LOAD		N					U
U					N		(E) LOAD			1400	20	1	23	24	20	1			1400	(E) LOAD		N					U
U					N		(E) LOAD	1400			20	1	25	26	20	1	1400			SPACE		N					SP
U					N		(E) LOAD		1400		20	1	27	28	20	1		1400		(E) LOAD		N					U
U					N		(E) LOAD			1400	20	1	29	30	20	1			1400	(E) LOAD		N					U
U					N		(E) LOAD	1400			20	1	31	32	20	3	1500			(E) LOAD		N					U
U					N		(E) LOAD		1400		20	1	33	34	-	-		1500		W/ CKT #32		N					U
U					N		(E) LOAD			1400	20	1	35	36	-	-			1500	W/ CKT #32		N					U
U					N		(E) LOAD	1400			20	1	37	38	20	1	1800			(E) LOAD							U
U					N		(E) LOAD		1400		20	1	39	40	20	1				SPARE							S
SP							SPACE						41	42						SPACE							SP

PHASE A	PHASE B	PHASE C		9946	8850	8944	1	SPACE (SP)	2	10700	9040	9220	MEASURED LOAD (AMPS) PHASE A:	0
20646	17890	18164	CONNECTED (KVA)	56.7			0	SPARE (S)	1				MEASURED LOAD (AMPS) PHASE B:	0
6146	3740	5464	CONN.KVA (CODE L)	15.4			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C:	0
12700	14150	12700	CONN.KVA (CODE N)	39.6			20	USED (U)	0				DATE LAST MEASURED:	-
0	0	0	CONN.KVA (CODE R)	0.0			21	TOTAL	3					
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT	0						
			SPARE (DECIMAL)				SPARE KVA	0.0						
			FEEDER DEMAND KVA & AMP	56.7	70.7		X'FMR. KVA	54.9						

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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2H (EXISTING)

SITE: Verizon Call Center
1800 Solar Drive, Oxnard, CA FL 93030

DESIGNATION:	2H (EXISTING)	BUS RATING:	100A
TYPE:		BREAKER SIZE:	100A MCB
SUPPLY VOLTAGE:	480/277V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%):	100%
NORMAL SUPPLY ORIGIN:	FED FROM MSB	BRACING (AMPS):	
EMERGENCY SUPPLY ORIGIN:	-	SHORT CIRCUIT AVAILABLE:	-
LOCATION OF ORIGIN:	-	DERATED FACTOR:	-
FEEDER SIZE (WIRE):	4#4/0+GND, 2-1/2"C	REVISION DATE:	07/26/12
TRANSFORMR SIZE (KVA):	-	VERIFICATION DATE:	-

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					L		(E) LTG-ELECTRIC, TELE TOIL	1800			20	1	1	2	20	1	300			(E) ADMIN		L					U
U					L		(E) LTG-CORE, LOBBY		1800		20	1	3	4	20	1		1800		(E) EXISTING		L					U
U					L		(E) EXISING			1800	20	1	5	6	20	1			1800	(E) EXISTING		L					U
U					L		(E) OFFICE NW/STELE ELEC	2040			25	1	7	8	20	1	1250			(E) ADMIN		L					U
U					L		(E) OFFICE NW		1570		20	1	9	10	20	1		1310		(E) OFFICE N-STOR PRINTER		L					U
U					L		(E) EXISING			1800	20	1	11	12	20	1			980	(E) ADMIN		L					U
U					L		(E) OFFICE NORTH EAST	540			20	1	13	14	20	1	1800			(E) EXISTING		L					U
U					L		(E) OFFICE NORTH EAST		1450		20	1	15	16	20	1		600		EMER. LIGHT W/ BATT.PACK	32	L					U
U					L		CENTRAL AREA LIGHTING			1960	25	1	17	18	20	1			1100	(E) NIGHT LIGHT							U
U					L		(E) AWARD CAFÉ NEWS BAR	2520			30	1	19	20	20	1				(E) ADMIN		L					U
U					L		(E) EXISING		1800		20	1	21	22	20	1				(E) EXISTING		L					U
U					L		(E) EXISING			1800	20	1	23	24	20	1				(E) EXISTING		L					U
U					L	1	EWH-1	8300			40	1	25	26						SPACE							SP
SP							SPACE						27	28						SPACE							SP
SP							SPACE						29	30						SPACE							SP
SP							SPACE						31	32						SPACE							SP
SP							SPACE						33	34						SPACE							SP
SP							SPACE						35	36						SPACE							SP
SP							SPACE						37	38						SPACE							SP
SP							SPACE						39	40						SPACE							SP
SP							SPACE						41	42						SPACE							SP

PHASE A	PHASE B	PHASE C		15200	6920	7360	8	SPACE (SP)	9	3350	3710	3880	MEASURED LOAD (AMPS) PHASE A:	0
18550	10630	11240	CONNECTED (KVA)	40.4			0	SPARE (S)	0				MEASURED LOAD (AMPS) PHASE B:	0
18550	10630	11240	CONN.KVA (CODE L)	40.4			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C:	0
0	0	0	CONN.KVA (CODE N)	0.0			13	USED (U)	0				DATE LAST MEASURED:	-
0	0	0	CONN.KVA (CODE R)	0.0			21	TOTAL	9					
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT	0						
			SPARE (DECIMAL)				SPARE KVA	0.0						
			FEEDER DEMAND KVA & AMP	50.5	60.8		X'FMR. KVA	40.4						

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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3H (EXISTING)

SITE: Verizon Call Center
1800 Solar Drive, Oxnard, CA FL 93030

DESIGNATION:	3H (EXISTING)	BUS RATING:	100A
TYPE:		BREAKER SIZE:	100A MCB
SUPPLY VOLTAGE:	480/277V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%):	100%
NORMAL SUPPLY ORIGIN:	FED FROM MSB	BRACING (AMPS):	
EMERGENCY SUPPLY ORIGIN:	-	SHORT CIRCUIT AVAILABLE:	-
LOCATION OF ORIGIN:	-	DERATED FACTOR:	-
FEEDER SIZE (WIRE):	4#4/0+GND, 2-1/2"C	REVISION DATE:	07/26/12
TRANSFORMR SIZE (KVA):	-	VERIFICATION DATE:	-

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					L		(E) EXISTING	1500			20	1	1	2	20	1	2080			(E) PENTHOUSE		L					U
U					L		(E) OFFICE N.E		1140		20	1	3	4	20	1		420		(E) NIGHT LIGHT		L					U
U					L		(E) OFFICE N.E.			1140	20	1	5	6	20	1			580	EMER. LIGHT W/ BATT.PACK	28	L					U
U					L		(E) OFFICE NORTH	1250			20	1	7	8	20	1	500			(E) OFFICE N.E.		L					U
U					L		(E) TOILET		1250		20	1	9	10	20	1		1500		(E) NORTH EAST		L					U
U					L		(E) OFFICE NORTH			860	20	1	11	12	20	1			1088	(E) CONF. RM. LIGHTING		L					U
U					L	40	CENTRAL AREA	2056			20	1	13	14	20	1	1800			(E) EXISTING		L					U
U					L		(E) EXISTING		1800		20	1	15	16	20	1		1800		(E) EXISTING		L					U
U					L	1	EWH-1			8300	40	1	17	18	20	1			1800	(E) EXISTING		L					U
SP							SPACE						19	20						SPACE							SP
SP							SPACE						21	22						SPACE							SP
SP							SPACE						23	24						SPACE							SP
SP							SPACE						25	26						SPACE							SP
SP							SPACE						27	28						SPACE							SP
SP							SPACE						29	30						SPACE							SP
SP							SPACE						31	32						SPACE							SP
SP							SPACE						33	34						SPACE							SP
SP							SPACE						35	36						SPACE							SP
SP							SPACE						37	38						SPACE							SP
SP							SPACE						39	40						SPACE							SP
SP							SPACE						41	42						SPACE							SP

PHASE A	PHASE B	PHASE C		4806	4190	10300	12	SPACE (SP)	12	4380	3720	3448	MEASURED LOAD (AMPS) PHASE A:	0
9186	7910	13748	CONNECTED (KVA)	30.8			0	SPARE (S)	0				MEASURED LOAD (AMPS) PHASE B:	0
9186	7910	13748	CONN.KVA (CODE L)	30.8			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C:	0
0	0	0	CONN.KVA (CODE N)	0.0			9	USED (U)	8				DATE LAST MEASURED:	-
0	0	0	CONN.KVA (CODE R)	0.0			21	TOTAL	20					
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT	0						
			SPARE (DECIMAL)				SPARE KVA	0.0						
			FEEDER DEMAND KVA & AMP	38.6	46.4		X'FMR. KVA	30.8						

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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2UP5 (EXISTING)

SITE: Verizon Call Center
1800 Solar Drive, Oxnard, CA FL 93030

DESIGNATION:	2UP5 (EXISTING)	BUS RATING:	225A
TYPE:		BREAKER SIZE:	100A MCB
SUPPLY VOLTAGE:	208/120V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%):	100%
NORMAL SUPPLY ORIGIN:	FED FROM PANEL-2UP4	BRACING (AMPS):	
EMERGENCY SUPPLY ORIGIN:	-	SHORT CIRCUIT AVAILABLE:	-
LOCATION OF ORIGIN:	-	DERATED FACTOR:	-
FEEDER SIZE (WIRE):	3#2+ 1#3/0N+1#4GND,1-1/2"C	REVISION DATE:	07/26/12
TRANSFORMR SIZE (KVA):	75KVA	VERIFICATION DATE:	-

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R		(E) WORK STATION	540			20	1	1	2	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	3	4	20	1		540		(E) WORK STATION		R					U
U					R		(E) EXISTING			540	20	1	5	6	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	7	8	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	9	10	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	11	12	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	13	14	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	15	16	20	1		540		(E) WORK STATION		R					U
U					R	1	IDF RM L-20 RECEPT			1200	20	1	17	18	20	1			540	(E) WORK STATION		R					U
U					R		↓	1200			20	1	19	20	20	1	540			(E) WORK STATION		R					U
S							SPARE				20	1	21	22	20	2		1200		IDF RM L-20 RECEPT	1	R					U
U					R		(E) WORK STATION			540	20	1	23	24	↓	↓			1200	↓		R					U
U					R		(E) WORK STATION	540			20	1	25	26	20	1	540			(E) WORK STATION		R					U
U					N		LOCAL TELE CLOSET		540		20	1	27	28	20	1		540		(E) WORK STATION		R					U
U					R		(E) EXISTING			540	20	1	29	30	20	1			540	(E) WORK STATION		R					U
S							SPARE				20	1	31	32	20	1	540			(E) EXISTING		R					U
S							SPARE				20	1	33	34						SPACE							SP
S							SPARE				20	1	35	36						SPACE							SP
U					N		(E) EXISTING	600			20	2	37	38	20	2	600			(E) EXISTING		N					U
U					N		↓		600		↓	↓	39	40	↓	↓		600		↓		N					U
U					R		(E) EXISTING			540	20	1	41	42						SPACE							SP

PHASE A	PHASE B	PHASE C		3960	2760	3900	0	SPACE (SP)	3	3840	3960	3360	MEASURED LOAD (AMPS) PHASE A:	0
7800	6720	7260	CONNECTED (KVA)	21.8			4	SPARE (S)	0				MEASURED LOAD (AMPS) PHASE B:	0
0	0	0	CONN.KVA (CODE L)	0.0			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C:	0
1200	1740	0	CONN.KVA (CODE N)	2.9			17	USED (U)	18				DATE LAST MEASURED:	-
6600	4980	7260	CONN.KVA (CODE R)	18.8			21	TOTAL	21					
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT	0						
			SPARE (DECIMAL)				SPARE KVA	0.0						
			FEEDER DEMAND KVA & AMP	17.4	48.2		X'FMR. KVA	17.4						

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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3UP8 (EXISTING)

SITE: Verizon Call Center
1800 Solar Drive, Oxnard, CA FL 93030

DESIGNATION:	3UP8 (EXISTING)	BUS RATING:	225A
TYPE:		BREAKER SIZE:	100A MCB
SUPPLY VOLTAGE:	208/120V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%):	100%
NORMAL SUPPLY ORIGIN:	FED FROM PANEL-2UP4	BRACING (AMPS):	
EMERGENCY SUPPLY ORIGIN:	-	SHORT CIRCUIT AVAILABLE:	-
LOCATION OF ORIGIN:	-	DERATED FACTOR:	-
FEEDER SIZE (WIRE):	3#250MCM+1#500MCM N+1#1/0GND,3"	REVISION DATE:	07/26/12
TRANSFORMR SIZE (KVA):	75KVA	VERIFICATION DATE:	-

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R		(E) WORK STATION	540			20	1	1	2	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	3	4	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	5	6	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	7	8	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	9	10	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	11	12	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	13	14	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	15	16	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	17	18	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	19	20	20	1				SPARE							S
U					R		(E) WORK STATION		540		20	1	21	22	20	1				SPARE							S
U					R		(E) WORK STATION			540	20	1	23	24	20	1				SPARE							S
S							SPARE				20	1	25	26	20	1	540			(E) WORK STATION		R					U
S							SPARE				20	1	27	28	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	29	30	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	31	32	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	33	34	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	35	36	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	600			20	2	37	38	70	3	7560			(E) PANEL 3UP9		N					U
U					R		(E) WORK STATION		600		–	–	39	40	–	–		7200		W/ CKT #38		N					U
U					R		(E) WORK STATION			540	20	1	41	42	–	–			4320	W/ CKT #38		N					U

PHASE A	PHASE B	PHASE C		3300	3300	3780	0	SPACE (SP)	0	10260	9900	7020	MEASURED LOAD (AMPS) PHASE A:	0
13560	13200	10800	CONNECTED (KVA)	37.6			2	SPARE (S)	3				MEASURED LOAD (AMPS) PHASE B:	0
0	0	0	CONN.KVA (CODE L)	0.0			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C:	0
7560	7200	4320	CONN.KVA (CODE N)	19.1			19	USED (U)	18				DATE LAST MEASURED:	-
6000	6000	6480	CONN.KVA (CODE R)	18.5			21	TOTAL	21					
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT	0						
			SPARE (DECIMAL)				SPARE KVA	0.0						
			FEEDER DEMAND KVA & AMP	33.3	92.5		X'FMR. KVA	33.3						

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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1L2 (EXISTING)

SITE: Verizon Call Center
1800 Solar Drive, Oxnard, CA FL 93030

DESIGNATION:	1L2 (EXISTING)	BUS RATING:	225A
TYPE:		BREAKER SIZE:	100A MCB
SUPPLY VOLTAGE:	208/120V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%):	100%
NORMAL SUPPLY ORIGIN:	FED FROM PANEL-1L	BRACING (AMPS):	
EMERGENCY SUPPLY ORIGIN:	-	SHORT CIRCUIT AVAILABLE:	-
LOCATION OF ORIGIN:	-	DERATED FACTOR:	-
FEEDER SIZE (WIRE):	4#2 + 1#6GND, 1-1/2"C.	REVISION DATE:	01/28/13
TRANSFORMR SIZE (KVA):	75KVA	VERIFICATION DATE:	-

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					K	1	MICROWAVE	600			30	1	1	2	20	1	600			MICROWAVE	1	K					U
U					K	1	MICROWAVE		600		20	1	3	4	20	1		600		MICROWAVE	1	K					U
U					K	1	MICROWAVE			600	20	1	5	6	20	1			600	MICROWAVE	1	K					U
U					N	2	PAY MACHINE/RECEPT	480			20	1	7	8	20	1	800			(E) VENDING MACHINE		N					U
U					N	1	GEN I / II PYMT CTR		624		20	1	9	10	20	1		600		TV RECEPT	2	N					U
U					K	1	ICE/WATER MACHINE			1000	20	1	11	12	20	1			600	TV RECEPT	2	N					U
U					N		(E) RECEPT	540			20	1	13	14	20	1	800			COOLER	1	N					U
U					N	1	IDF RM AC-1N		100		15	2	15	16	20	1		800		COOLER	1	N					U
U					N		W/ CKT #15			100	-	-	17	18	20	1			800	COOLER	1	N					U
S							SPARE				20	1	19	20	20	1	600			COFFEE MACHINE	1	K					U
U					R		(E) LUNCH RM RECEPT		540		20	1	21	22	30	2		1000		(E) XEROX MACHINE		N					U
U					R		(E) LUNCH RM/UB. RECEPT			540	20	1	23	24	-	-			1000	W/ CKT #22		N					U
S							SPARE				20	1	25	26	20	1	400			(E) EF-4		N					U
U					N		(E) ATM RECEPT		800		20	1	27	28	20	1		400		(E) VAV-4, VAV-5		N					U
U					N		(E) ATM RECEPT			800	20	1	29	30	20	1			600	(E) VAV-7, VAV-8, VAV-9		N					U
U					N		(E) HP-1	900			20	2	31	32	20	1	540			(E) LOAD		R					U
U					N		W/ CKT #31		900		-	-	33	34	20	1		540		(E) LOAD		R					U
SP							SPACE						35	36	20	1			540	(E) LOAD		R					U
U					R		(E) LOAD	540			20	1	37	38	20	2	1200			IDF RM L-20 RECEPT	1	R					U
U					R	1	IDF RM L-20 RECEPT		1200		20	2	39	40	-	-		1200		W/ CKT #38		R					U
U					R		W/ CKT #39			1200	-	-	41	42	20	1			540	(E) LOAD		R					U

PHASE A	PHASE B	PHASE C		3060	4764	4240	1	SPACE (SP)	0	4940	5140	4680	MEASURED LOAD (AMPS) PHASE A:	0
8000	9904	8920	CONNECTED (KVA)	26.8			2	SPARE (S)	0				MEASURED LOAD (AMPS) PHASE B:	0
0	0	0	CONN.KVA (CODE L)	0.0			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C:	0
3920	5224	3900	CONN.KVA (CODE N)	13.0			18	USED (U)	21				DATE LAST MEASURED:	-
2280	3480	2820	CONN.KVA (CODE R)	8.6			21	TOTAL	21					
1800	1200	2200	CONN.KVA (CODE K)	5.2			NO. OF KITCHEN EQUIPMENT	0						
			SPARE (DECIMAL)				SPARE KVA	0.0						
			FEEDER DEMAND KVA & AMP	24.7	68.7		X'FMR. KVA	24.7						

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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PANEL SCHEDULE INDEX		
1H	2H	3H
2UP5	3UP8	1L2

The corner tick marks represent the 30"x48" plot area.

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

Issue	Date & Issue Description	By	Check
01	07/31/12	-	-
	PLAN CHECK		
1	08/10/12	-	-
	ISSUE FOR CONSTRUCTION		
2	09/12/12	-	-
	BULLETIN 1		
3	10/09/12	-	-
	BULLETIN 2		
4	10/23/2012	-	-
	REVISED FOR PLAN CHECK		
5	11/19/12	-	-
	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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Description
PANEL SCHEDULES

Scale
NONE

E-701

2L1 (EXISTING)

DESIGNATION:	2L1 (EXISTING)
TYPE:	
SUPPLY VOLTAGE:	208/120V 3 PH., 4 WIRE
NORMAL SUPPLY ORIGIN:	FED FROM PANEL-2L
EMERGENCY SUPPLY ORIGIN:	-
LOCATION OF ORIGIN:	
FEEDER SIZE (WIRE):	4#1 + 1#6GND, 1-1/2"C.
TRANSFORMR SIZE (KVA):	75KVA
BUS RATING:	225A
BREAKER SIZE:	125A MCB
NEUTRAL BUS (100/150/200%):	100%
BRACING (AMPS):	
SHORT CIRCUIT AVAILABLE:	-
DERATED FACTOR:	-
REVISION DATE:	01/28/13
VERIFICATION DATE:	-

SITE: **Verizon Call Center**
1800 Solar Drive, Oxnard, CA FL 93030

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	A	B	C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	A	B	C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R		(E) WORK STATION	540			20	1	1	2	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	3	4	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	5	6	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	7	8	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	9	10	20	1		720		PLUG MOLD	4	R					U
U					R		(E) WORK STATION			540	20	1	11	12	20	1			300	(E) FAX MACHINE		N					U
U					R		(E) WORK STATION	540			20	1	13	14	20	1	800			(E) COPY MACHINE		N					U
U					R		(E) WORK STATION		540		20	1	15	16	20	1		400		(E) VAV-18		N					U
U					R		(E) LOAD			540	20	1	17	18	20	1			400	(E) VAV-12		N					U
U					N		(E) VAV-6	400			20	1	19	20	20	1	400			(E) VAV-9		N					U
U					N		(E) VAV-7		400		20	1	21	22	20	1		400		(E) VAV-10		N					U
U					N		(E) VAV-8			400	20	1	23	24	20	1			400	(E) VAV-11		N					U
U					N		(E) TV MONITOR	300			20	1	25	26	20	1	540			(E) LOAD		R					U
U					N		(E) TV MONITOR		300		20	1	27	28	20	1		540		(E) LOAD		R					U
U					N		(E) TV MONITOR			300	20	1	29	30	20	1			400	(E) PRE ACTION MOTOR		N					U
U					N		(E) DIGITAL BOARD	200			20	1	31	32	20	1	600			MICROWAVE	1	N					U
U					N		(E) EF-1 PREACTION PNL		400		20	1	33	34	20	1		600		MICROWAVE	1	N					U
U					N		(E) PRE ACTION PNL			400	20	1	35	36	20	1			540	RECEPT	3	R					U
U					N	2	ICE MAKER/CONV RECEPT	1180			20	1	37	38	20	1	720			TRNG RM 215 FLR QUAD REC	2	R					U
U					R	1	PLUG MOLD		720		20	1	39	40	20	1		720		TRNG RM 215 FLR/WALL REC	2	R					U
U					N	1	VENDING MACHINE			800	20	1	41	42	20	1			600	(E) TELE BOOTH/AWARD		N					U
								3700	3440	3520							4140	3920	3180								

PHASE A	PHASE B	PHASE C						
7840	7360	6700	CONNECTED (KVA)	21.9	0	SPACE (SP)	0	MEASURED LOAD (AMPS) PHASE A: 0
0	0	0	CONN.KVA (CODE L)	0.0	0	SPARE (S)	0	MEASURED LOAD (AMPS) PHASE B: 0
3880	2500	4000	CONN.KVA (CODE N)	10.4	0	N.I.U. (N)	0	MEASURED LOAD (AMPS) PHASE C: 0
3960	4860	2700	CONN.KVA (CODE R)	11.5	21	USED (U)	21	DATE LAST MEASURED: -
0	0	0	CONN.KVA (CODE K)	0.0	NO. OF KITCHEN EQUIPMENT		0	
			SPARE (DECIMAL)		SPARE KVA		0.0	
			FEEDER DEMAND KVA & AMP	21.1 58.7	XFMR. KVA		21.1	

TOTAL: 21 / 21

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L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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2L2 (EXISTING)

DESIGNATION:	2L2 (EXISTING)
TYPE:	
SUPPLY VOLTAGE:	208/120V 3 PH., 4 WIRE
NORMAL SUPPLY ORIGIN:	FED FROM PANEL-2L3
EMERGENCY SUPPLY ORIGIN:	-
LOCATION OF ORIGIN:	-
FEEDER SIZE (WIRE):	4#1 + 1#6GND, 1-1/2"C.
TRANSFORMR SIZE (KVA):	75KVA
BUS RATING:	225A
BREAKER SIZE:	100A MCB
NEUTRAL BUS (100/150/200%):	100%
BRACING (AMPS):	
SHORT CIRCUIT AVAILABLE:	-
DERATED FACTOR:	-
REVISION DATE:	10/09/12
VERIFICATION DATE:	-

SITE: **Verizon Call Center**
1800 Solar Drive, Oxnard, CA FL 93030

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	A	B	C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	A	B	C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R		(E) WORKSTATION	540			20	1	1	2	20	1	540			(E) WORKSTATION		R					U
U					R		(E) WORKSTATION		540		20	1	3	4	20	1		540		(E) WORKSTATION		R					U
U					R		(E) WORKSTATION			540	20	1	5	6	20	1			540	(E) WORKSTATION		R					U
U					R		(E) WORKSTATION	540			20	1	7	8	20	1	540			(E) WORKSTATION		R					U
U					R		(E) WORKSTATION		540		20	1	9	10	20	1		360		RECEPT	2	R					U
U					R		(E) WORKSTATION			540	20	1	11	12	20	1			360	FLR RECEPT	2	R					U
U					R		(E) WORKSTATION	540			20	1	13	14	20	1	540			(E) WORKSTATION		R					U
U					R		(E) WORKSTATION		540		20	1	15	16	20	1		540		(E) WORKSTATION		R					U
U					R		(E) WORKSTATION			540	20	1	17	18	20	1			540	(E) WORKSTATION		R					U
U					R		(E) WORKSTATION	540			20	1	19	20	20	1	540			(E) WORKSTATION		R					U
U					R		(E) WORKSTATION		540		20	1	21	22	20	1		540		(E) WORKSTATION		R					U
U					R		(E) WORKSTATION			540	20	1	23	24	20	1			300	(E) TV MONITOR		N					U
U					R		(E) WORKSTATION	540			20	1	25	26	20	1	540			(E) WORKSTATION		R					U
U					R	6	RECEPT		1080		20	1	27	28	20	1		540		(E) WORKSTATION		R					U
U					R	5	RECEPT			900	20	1	29	30	20	1			540	(E) WORKSTATION		R					U
U					N		(E) PRIMITURE	400			20	1	31	32	20	1	400			(E) PRIMITURE		N					U
U					N		(E) PRIMITURE		400		20	1	33	34	20	1		400		(E) PRIMITURE		N					U
U					N		(E) TV MONITOR			300	20	1	35	36	20	1			300	(E) TV MONITOR		N					U
U					N		(E) VAV-5	400			20	1	37	38	20	1	400			(E) VAV-1		N					U
U					N		(E) VAV-4		400		20	1	39	40	20	1		400		(E) VAV-2		N					U
U					N		(E) VAV-3			400	20	1	41	42	20	1			400	(E) VAV-15		N					U
								3500	4040	3760							3500	3320	2980								

PHASE A	PHASE B	PHASE C						
7000	7360	6740	CONNECTED (KVA)	21.1	0	SPACE (SP)	0	MEASURED LOAD (AMPS) PHASE A: 0
0	0	0	CONN.KVA (CODE L)	0.0	0	SPARE (S)	0	MEASURED LOAD (AMPS) PHASE B: 0
1600	1600	1700	CONN.KVA (CODE N)	4.9	0	N.I.U. (N)	0	MEASURED LOAD (AMPS) PHASE C: 0
5400	5760	5040	CONN.KVA (CODE R)	16.2	21	USED (U)	21	DATE LAST MEASURED: -
0	0	0	CONN.KVA (CODE K)	0.0	NO. OF KITCHEN EQUIPMENT		0	
			SPARE (DECIMAL)		SPARE KVA		0.0	
			FEEDER DEMAND KVA & AMP	18.0 50.0	XFMR. KVA		18.0	

TOTAL: 21 / 21

SYSKA HENNESSY GROUP

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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2L3 (EXISTING)

DESIGNATION:	2L3 (EXISTING)
TYPE:	
SUPPLY VOLTAGE:	208/120V 3 PH., 4 WIRE
NORMAL SUPPLY ORIGIN:	FED FROM (E) XFMER
EMERGENCY SUPPLY ORIGIN:	-
LOCATION OF ORIGIN:	-
FEEDER SIZE (WIRE):	3#350MCM+1#500MCM N+1#4/0 GND, 2
TRANSFORMR SIZE (KVA):	75KVA
BUS RATING:	400A
BREAKER SIZE:	300A MCB
NEUTRAL BUS (100/150/200%):	100%
BRACING (AMPS):	
SHORT CIRCUIT AVAILABLE:	-
DERATED FACTOR:	-
REVISION DATE:	07/26/12
VERIFICATION DATE:	-

SITE: **Verizon Call Center**
1800 Solar Drive, Oxnard, CA FL 93030

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	A	B	C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	A	B	C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R		(E) LOAD	540			20	1	1	2	20	1	540			(E) WORK STATION		R					U
U					R		(E) LOAD		540		20	1	3	4	20	1		540		(E) WORK STATION		R					U
U					R		(E) LOAD			360	20	1	5	6	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	7	8	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	9	10	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	11	12	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	13	14	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	15	16	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	17	18	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	19	20	20	1	540			(E) WORK STATION		R					U
U					N		(E) PRIMITURE		400		20	1	21	22	20	1		540		(E) WORK STATION		R					U
U					N		(E) PRIMITURE			400	20	1	23	24	20	1			300	(E) DIGITAL BOARD		N					U
U					N	1	(E) PANEL 2L5	1120			70	3	25	26	100	3	2260			(N) PANEL 2L4	1	N					U
U					N	|	|		1120		|	|	27	28	|	|		2460		|	|	N					U
U					N	↓	↓			400	↓	↓	29	30	↓	↓			1840	↓	↓	N					U
U					N		(E) VAV-13	400			20	1	31	32	20	1	300			(E) TV MONITOR		N					U
U					N		(E) VAV-12		400		20	1	33	34	20	1		300		(E) TV MONITOR		N					U
U					N		(E) VAV-14			800	30	2	35	36	20	1			300	(E) EF-2		R					U
U					N		↓	800			↓	↓	37	38	100	3	7000			(E) PANEL 2L2	1	N					U
U					N		(E) PRINTER		600		20	1	39	40	|	|		7140		|	|	N					U
U					N		(E) FAX MACHINE			400	20	1	41	42	↓	↓			6920	↓	↓	N					U
								4480	4140	3440							11720	12060	10980								

PHASE A	PHASE B	PHASE C						
16200	16200	14420	CONNECTED (KVA)	46.8	0	SPACE (SP)	0	MEASURED LOAD (AMPS) PHASE A: 0
0	0	0	CONN.KVA (CODE L)	0.0	0	SPARE (S)	0	MEASURED LOAD (AMPS) PHASE B: 0
11880	12420	11060	CONN.KVA (CODE N)	35.4	0	N.I.U. (N)	0	MEASURED LOAD (AMPS) PHASE C: 0
4320	3780	3360	CONN.KVA (CODE R)	11.5	21	USED (U)	21	DATE LAST MEASURED: -
0	0	0	CONN.KVA (CODE K)	0.0	NO. OF KITCHEN EQUIPMENT		0	
			SPARE (DECIMAL)		SPARE KVA		0.0	
			FEEDER DEMAND KVA & AMP	46.1 127.9	XFMR. KVA		46.1	

TOTAL: 21 / 21

SYSKA HENNESSY GROUP

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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2L4 (NEW)

DESIGNATION:	2L4 (NEW)
TYPE:	
SUPPLY VOLTAGE:	208/120V 3 PH., 4 WIRE
NORMAL SUPPLY ORIGIN:	FED FROM PANEL-2L3
EMERGENCY SUPPLY ORIGIN:	-
LOCATION OF ORIGIN:	-
FEEDER SIZE (WIRE):	4#1 + 1#6GND, 1-1/2"C.
TRANSFORMR SIZE (KVA):	75KVA
BUS RATING:	100A
BREAKER SIZE:	MLO
NEUTRAL BUS (100/150/200%):	100%
BRACING (AMPS):	
SHORT CIRCUIT AVAILABLE:	-
DERATED FACTOR:	-
REVISION DATE:	10/09/12
VERIFICATION DATE:	-

SITE: **Verizon Call Center**
1800 Solar Drive, Oxnard, CA FL 93030

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	A	B	C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	A	B	C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R	4	CONF RM FLR RECEPT	720			20	1	1	2	20	1	400			VAV-12	1	N					U
U					R	4	CONF RM FLR RECEPT		720		20	1	3	4	20	1		400		VAV-13	1	N					U
U					R	4	CONF RM FLR RECEPT			720	20	1	5	6	20	1			400	VAV-14	1	N					U
U					R	4	CONF RM RECEPT	720			20	1	7	8	20	1	600			VENDING MACHINE	1	N					U
U					R	3	CONF RM RECEPT		540		20	1	9	10	20	1		800		REFRIGERATOR	1	N					U
U					R	4	CONF RM RECEPT			720	20	1	11	12	20	2			1200	IDF RM L-20 RECEPT	1	R					U
U					R	4	CONF RM FLR RECEPT	720			20	1	13	14	↓	↓	1200			↓		R					U
U					R	1	IDF RM L-20 RECEPT		1200		20	2	15	16	15	2		100		IDF RM AC-2S	1	N					U
U					R		↓			1200	↓	↓	17	18	↓	↓			100	↓		N					U
S							SPARE				20	1	19	20	20	1				SPARE							S
S							SPARE				20	1	21	22	20	1				SPARE							S
S							SPARE				20	1	23	24	20	1				SPARE							S
SP							SPACE						25	26						SPACE							SP
SP							SPACE						27	28						SPACE							SP
SP							SPACE						29	30						SPACE							SP
SP							SPACE						31	32						SPACE							SP
SP							SPACE						33	34						SPACE							SP
SP							SPACE						35	36						SPACE							SP
SP							SPACE						37	38						SPACE							SP
SP							SPACE						39	40						SPACE							SP
SP							SPACE						41	42						SPACE							SP
								2160	2460	2640							2200	1300	1700								

PHASE A	PHASE B	PHASE C						
4360	3760	4340	CONNECTED (KVA)	12.5	9	SPACE (SP)	9	MEASURED LOAD (AMPS) PHASE A: 0
0	0	0	CONN.KVA (CODE L)	0.0	3	SPARE (S)	3	MEASURED LOAD (AMPS) PHASE B: 0
1000	1300	500	CONN.KVA (CODE N)	2.8	0	N.I.U. (N)	0	MEASURED LOAD (AMPS) PHASE C: 0
3360	2460	3840	CONN.KVA (CODE R)	9.7	9	USED (U)	9	DATE LAST MEASURED: -
0	0	0	CONN.KVA (CODE K)	0.0	NO. OF KITCHEN EQUIPMENT		0	
			SPARE (DECIMAL)		SPARE KVA		0.0	
			FEEDER DEMAND KVA & AMP	12.5 34.6	XFMR. KVA		12.5	

TOTAL: 21 / 21

SYSKA HENNESSY GROUP

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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3L (EXISTING)

DESIGNATION:	3L (EXISTING)
TYPE:	
SUPPLY VOLTAGE:	208/120V 3 PH., 4 WIRE
NORMAL SUPPLY ORIGIN:	FED FROM (E) XFMER
EMERGENCY SUPPLY ORIGIN:	-
LOCATION OF ORIGIN:	-
FEEDER SIZE (WIRE):	3#350MCM+1#500MCM N+1#4/0 GND, 2
TRANSFORMR SIZE (KVA):	75KVA
BUS RATING:	400A
BREAKER SIZE:	300A MCB
NEUTRAL BUS (100/150/200%):	100%
BRACING (AMPS):	
SHORT CIRCUIT AVAILABLE:	-
DERATED FACTOR:	-
REVISION DATE:	02/20/13
VERIFICATION DATE:	-

SITE: **Verizon Call Center**
1800 Solar Drive, Oxnard, CA FL 93030

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	A	B	C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	A	B	C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R		(E) EXISTING	540			20	1	1	2	20	1	540			(E) LOAD		R					U
U					R		(E)VIDEO LAB RECEPT		540		20	1	3	4	20	1		540		(E) LOAD		R					U
U					R		(E) ROOF OUTLETS			360	20	1	5	6	20	1			540	(E) LOAD		R					U
U					R		(E) LOAD	540			20	1	7	8	20	1	540			(E) LOAD		R					U
U					N		(E) PRIMITURE		400		20	1	9	10	20	1		540		(E) LOAD		R					U
U					R		(E)VIDEO LAB RECEPT			540	20	1	11	12	20	1			540	(E) LOAD		R					U
U					R		(E) WORK STATION	540			20	1	13	14	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	15	16	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	17	18	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	19	20	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	21	22	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	23	24	20	1			540	(E) WORK STATION		R					U
U					R		(E) SECTION MANAGER	540			20	1	25	26	70	3	1120			(E) PANEL 3L2N		N					U
U					R	5	CONF RM 313 DUPLEX REC		900		20	1	27	28	|	|		1120		|		N					U
U					R	3	RM 313&314 WALL/FLR REC			720	20	1	29	30	↓	↓			400	↓		N					U
U					R		(E) LOAD	540			20	1	31	32	20	1	720			CONF RM 313 FLR QUAD REC	2	R					U
U					R		(E) LOAD		540		20	1	33	34	20	1		720		CONF RM 313 FLR QUAD REC	2	R					U
U					R		(E) LOAD			540	20	1	35	36	20	1			540	(E) VIDEO LAB RECEPT		R					U
U					N		(E) PANEL 3L1	7060			100	3	37	38	20	1	540			(E) VIDEO LAB RECEPT		R					U
U					N		|		6820		|	|	39	40	20	1		540		(E) LOAD		R					U
U					N		↓			7460	↓	↓	41	42	20	1			540	(E) LOAD		R					U
								10300	10280	10700							4540	4540	3640								

PHASE A	PHASE B	PHASE C						
14840	14820	14340	CONNECTED (KVA)	44.0	0	SPACE (SP)	0	MEASURED LOAD (AMPS) PHASE A: 0
0	0	0	CONN.KVA (CODE L)	0.0	0	SPARE (S)	0	MEASURED LOAD (AMPS) PHASE B: 0
8180	8340	7860	CONN.KVA (CODE N)	24.4	0	N.I.U. (N)	0	MEASURED LOAD (AMPS) PHASE C: 0
6660	6480	6480	CONN.KVA (CODE R)	19.6	21	USED (U)	21	DATE LAST MEASURED: -
0	0	0	CONN.KVA (CODE K)	0.0	NO. OF KITCHEN EQUIPMENT		0	
			SPARE (DECIMAL)		SPARE KVA		0.0	
			FEEDER DEMAND KVA & AMP	39.2 108.8	XFMR. KVA		39.2	

TOTAL: 21 / 21

SYSKA HENNESSY GROUP

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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3L1 (EXISTING)

DESIGNATION:	3L1 (EXISTING)
TYPE:	
SUPPLY VOLTAGE:	208/120V 3 PH., 4 WIRE
NORMAL SUPPLY ORIGIN:	FED FROM PANEL-3L
EMERGENCY SUPPLY ORIGIN:	-
LOCATION OF ORIGIN:	-
FEEDER SIZE (WIRE):	4#1 + 1#6GND, 1-1/2"C.
TRANSFORMR SIZE (KVA):	75KVA
BUS RATING:	225A
BREAKER SIZE:	100A MCB
NEUTRAL BUS (100/150/200%):	100%
BRACING (AMPS):	
SHORT CIRCUIT AVAILABLE:	-
DERATED FACTOR:	-
REVISION DATE:	07/26/12
VERIFICATION DATE:	-

SITE: **Verizon Call Center**
1800 Solar Drive, Oxnard, CA FL 93030

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	A	B	C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	A	B	C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R		(E) WORK STATION	540			20	1	1	2	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	3	4	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	5	6	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	7	8	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	9	10	20	1		400		(E) PRIMITURE		N					U
U					R		(E) WORK STATION			540	20	1	11	12	20	1			900	(E) PRIMITURE		N					U
U					R		(E) WORK STATION	540			20	1	13	14	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	15	16	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	17	18	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	19	20	20	1	400			(E) VAV-13		N					U
U					N		(E) VAV-12		400		20	1	21	22	20	1		400		(E) VAV-14		N					U
U					N		(E) VAV-11			400	20	1	23	24	20	1			400	(E) VAV-15		N					U
U					N		(E) VAV-5	400			20	1	25	26	20	1	400			(E) VAV-8		N					U
U					N		(E) VAV-6		400		20	1	27	28	20	1		400		(E) VAV-9		N					U
U					N		(E) VAV-7			400	20	1	29	30	20	1			400	(E) VAV-10		N					U
U					N		(E) VAV-3	400			20	1	31	32	20	1	600			(E) STORAGE/PRINTER		N					U
U					N		(E) VAV-4		400		20	1	33	34	20	1		400		(E) VAV-3		N					U
U					R		(E) WORK STATION			540	20	1	35	36	20	1			500	(E) T.V./VCR		N					U
U					R		RECEPT	720			20	1	37	38	20	1	600			MICROWAVE		N					U
U					R		RECEPT		720		20	1	39	40	20	1		600		MICROWAVE		N					U
U					N		(E) VENDING MACHINE			800	20	1	41	42	20	1			800	ICE MAKER		N					U
								3680	3540	3760							3820	3280	4080								

PHASE A	PHASE B	PHASE C						
7300	6820	7840	CONNECTED (KVA)	22.0	0	SPACE (SP)	0	MEASURED LOAD (AMPS) PHASE A: 0
0	0	0	CONN.KVA (CODE L)	0.0	0	SPARE (S)	0	MEASURED LOAD (AMPS) PHASE B: 0
2800	3400	4600	CONN.KVA (CODE N)	10.8	0	N.I.U. (N)	0	MEASURED LOAD (AMPS) PHASE C: 0
4500	3420	3240	CONN.KVA (CODE R)	11.2	21	USED (U)	21	DATE LAST MEASURED: -
0	0	0	CONN.KVA (CODE K)	0.0	NO. OF KITCHEN EQUIPMENT		0	
			SPARE (DECIMAL)		SPARE KVA		0.0	
			FEEDER DEMAND KVA & AMP	21.4 59.3	XFMR. KVA		21.4	

TOTAL: 21 / 21

SYSKA HENNESSY GROUP

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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PANEL SCHEDULE INDEX		
2L1	2L2	2L3
2L4	3L	3L1

The corner tick marks represent the 30"x48" plot area.

verizon
1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

Issue	Date & Issue Description	By	Check
01	07/31/12 PLAN CHECK	-	-
1	08/10/12 ISSUE FOR CONSTRUCTION	-	-
2	09/12/12 BULLETIN 1	-	-
3	10/09/12 BULLETIN 2	-	-
4	10/23/2012 REVISED FOR PLAN CHECK	-	-
5	11/19/12 BULLETIN 3	-	-
6	02/21/13 BULLETIN 4	-	-

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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Description
PANEL SCHEDULES

Scale
NONE

E-702

Panel 3L2 (EXISTING)

verizon

SITE:	Verizon Call Center 1800 Solar Drive, Oxnard, CA FL 93030	DESIGNATION: 3L2 (EXISTING)	BUS RATING: 225A
		TYPE:	BREAKER SIZE: 100A MCB
		SUPPLY VOLTAGE: 208/120V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%): 100%
		NORMAL SUPPLY ORIGIN: FED FROM PANEL-3L3	BRACING (AMPS):
		EMERGENCY SUPPLY ORIGIN: -	SHORT CIRCUIT AVAILABLE: -
		LOCATION OF ORIGIN: -	DERATED FACTOR: -
		FEEDER SIZE (WIRE): 4#1 + 1#6GND, 1-1/2"C.	REVISION DATE: 10/09/12
		TRANSFORMR SIZE (KVA): 75KVA	VERIFICATION DATE: -

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R		(E) WORKSTATION	540			20	1	1	2	20	1	540			(E) WORKSTATION		R					U
U					R		(E) WORKSTATION		540		20	1	3	4	20	1		540		(E) WORKSTATION		R					U
U					R		(E) WORKSTATION			540	20	1	5	6	20	1			540	(E) WORKSTATION		R					U
U					R		(E) WORKSTATION	540			20	1	7	8	20	1	540			(E) WORKSTATION		R					U
U					R		(E) WORKSTATION		540		20	1	9	10	20	1		540		(E) WORKSTATION		R					U
U					R		(E) WORKSTATION			540	20	1	11	12	20	1			540	(E) WORKSTATION		R					U
U					R		(E) WORKSTATION	540			20	1	13	14	20	1	540			(E) WORKSTATION		R					U
U					R		(E) WORKSTATION		540		20	1	15	16	20	1		540		(E) WORKSTATION		R					U
U					R		(E) WORKSTATION			540	20	1	17	18	20	1			540	(E) WORKSTATION		R					U
U					R		(E) WORKSTATION	540			20	1	19	20	20	1	540			(E) WORKSTATION		R					U
U					N		(E) PRIMITURE		400		20	1	21	22	20	1		200		(E) DIGITAL DISPLAY		N					U
U					N		(E) PRIMITURE			400	20	1	23	24	20	1			600	(E) EF-4		N					U
U					R		(E) WORKSTATION	540			20	1	25	26	20	1	540			(E) WORKSTATION		R					U
U					R	6	RECEPT		1080		20	1	27	28	20	1		360		RECEPT	2	R					U
U					R	5	RECEPT			900	20	1	29	30	20	1			360	FLR RECEPT	2	R					U
U					N		(E) VAV-5	400			20	1	31	32	20	1	400			(E) VAV-15		N					U
U					N		(E) VAV-4		400		20	1	33	34	20	1		400		(E) VAV-1		N					U
U					N		(E) VAV-3			400	20	1	35	36	20	1			400	(E) VAV-2		N					U
U					N		(E) VAV-6	400			20	1	37	38	20	1	400			(E) XEROX MACHINE		N					U
U					N		(E) TV MONITOR		300		20	1	39	40	20	1		400		(E) PRINTER		N					U
U					N		(E) TV MONITOR			300	20	1	41	42	20	1			400	(E) FAX MACHINE		N					U

PHASE A	PHASE B	PHASE C		A	B	C				A	B	C	
				3500	3800	3620	0	SPACE (SP)	0	3500	2980	3380	MEASURED LOAD (AMPS) PHASE A: 0
7000	6780	7000	CONNECTED (KVA)	20.8			0	SPARE (S)	0				MEASURED LOAD (AMPS) PHASE B: 0
0	0	0	CONN.KVA (CODE L)	0.0			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C: 0
1600	2100	2500	CONN.KVA (CODE N)	6.2			21	USED (U)	21				DATE LAST MEASURED: -
5400	4680	4500	CONN.KVA (CODE R)	14.6			21	TOTAL	21				
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT		0				SYSKA HENNESSY GROUP
			SPARE (DECIMAL)				SPARE KVA		0.0				
			FEEDER DEMAND KVA & AMP	18.5	51.3		XFMR. KVA		18.5				

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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Panel 3L3 (EXISTING)

verizon

SITE:	Verizon Call Center 1800 Solar Drive, Oxnard, CA FL 93030	DESIGNATION: 3L3 (EXISTING)	BUS RATING: 400A
		TYPE:	BREAKER SIZE: 300A MCB
		SUPPLY VOLTAGE: 208/120V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%): 100%
		NORMAL SUPPLY ORIGIN: FED FROM (E) XFMER	BRACING (AMPS):
		EMERGENCY SUPPLY ORIGIN: -	SHORT CIRCUIT AVAILABLE: -
		LOCATION OF ORIGIN: -	DERATED FACTOR: -
		FEEDER SIZE (WIRE): 3#350MCM+1#500MCM N+1#4/0 GND, 2	REVISION DATE: 07/26/12
		TRANSFORMR SIZE (KVA): 75KVA	VERIFICATION DATE: -

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R		(E) LOAD	540			20	1	1	2	20	1	540			(E) LOAD		R					U
U					R		(E) LOAD		540		20	1	3	4	20	1		540		(E) LOAD		R					U
U					R		(E) LOAD			360	20	1	5	6	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	7	8	20	1	540			(E) WORK STATION		R					U
U					N		(E) WORK STATION		400		20	1	9	10	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	11	12	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	13	14	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	15	16	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	17	18	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	19	20	20	1	540			(E) WORK STATION		R					U
U					N		(E) PRIMITURE		400		20	1	21	22	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	23	24	20	1			540	(E) WORK STATION		R					U
U					N		(E) VAV-11	540			20	1	25	26	20	1	400			(E) VAV-12		N					U
U					N		(E) VAV-10		540		20	1	27	28	20	1		400		(E) VAV-13		N					U
U					R		(E) LOAD			540	20	1	29	30	20	1			400	(E) VAV-14		N					U
U					N	1	(N) PANEL 3L4	2460			100	3	31	32	20	1	540			(E) LOAD		R					U
U					N	-	W/ CKT #31		2720		-	-	33	34	20	1		540		(E) LOAD		R					U
U					N	-	W/ CKT #31			2720	-	-	35	36	20	1			540	(E) LOAD		R					U
U					N		(E) TV MONITOR	300			20	1	37	38	100	3	7000			(E) PANEL 3L2		N					U
U					N		(E) TV MONITOR		300		20	1	39	40	-	-		7140		W/ CKT #38		N					U
U					N		(E) TV MONITOR			300	20	1	41	42	-	-			7180	W/ CKT #38		N					U

PHASE A	PHASE B	PHASE C		A	B	C				A	B	C	
				5460	5440	5540	0	SPACE (SP)	0	10100	10240	10280	MEASURED LOAD (AMPS) PHASE A: 0
15560	15680	15820	CONNECTED (KVA)	47.1			0	SPARE (S)	0				MEASURED LOAD (AMPS) PHASE B: 0
0	0	0	CONN.KVA (CODE L)	0.0			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C: 0
10700	11900	10600	CONN.KVA (CODE N)	33.2			21	USED (U)	21				DATE LAST MEASURED: -
4860	3780	5220	CONN.KVA (CODE R)	13.9			21	TOTAL	21				
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT		0				SYSKA HENNESSY GROUP
			SPARE (DECIMAL)				SPARE KVA		0.0				
			FEEDER DEMAND KVA & AMP	45.1	125.3		XFMR. KVA		45.1				

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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Panel 3L4 (NEW)

verizon

SITE:	Verizon Call Center 1800 Solar Drive, Oxnard, CA FL 93030	DESIGNATION: 3L4 (NEW)	BUS RATING: 100A
		TYPE:	BREAKER SIZE: MLO
		SUPPLY VOLTAGE: 208/120V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%): 100%
		NORMAL SUPPLY ORIGIN: FED FROM PANEL-3L3	BRACING (AMPS):
		EMERGENCY SUPPLY ORIGIN: -	SHORT CIRCUIT AVAILABLE: -
		LOCATION OF ORIGIN: -	DERATED FACTOR: -
		FEEDER SIZE (WIRE): 4#1 + 1#6GND, 1-1/2"C.	REVISION DATE: 01/28/13
		TRANSFORMR SIZE (KVA): 75KVA	VERIFICATION DATE: -

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R	4	CONF RM FLR RECEPT	720			20	1	1	2	20	1	400			VAV-7	1	N					U
U					R	4	CONF RM FLR RECEPT		720		20	1	3	4	20	1		400		VAV-8	1	N					U
U					R	4	CONF RM FLR RECEPT			720	20	1	5	6	20	1			400	VAV-9	1	N					U
U					R	3	CONF RM RECEPT	540			20	1	7	8	20	1	800			REFRIGERATOR	1	N					U
U					R	1	PLUG MOLD		720		20	1	9	10	20	1		800		VENDING MACHINE	1	N					U
U					N	2	ICE MAKER/CONV RECEPT			1180	20	1	11	12	20	1			800	VENDING MACHINE	1	N					U
S							SPARE				20	1	13	14	40	2	2600			ROOF MTD-IDF RM CU-2S	1	N					U
S							SPARE				20	1	15	16	↓	↓		2600		↓		N					U
S							SPARE				20	1	17	18	40	2			2600	ROOF MTD-IDF RM CU-2N	1	N					U
S							SPACE						19	20	↓	↓	2600			↓		N					U
SP							SPACE						21	22	20	1		180		ROOF MTD RECEPT	1	R					U
SP							SPACE						23	24						SPACE							SP
SP							SPACE						25	26						SPACE							SP
SP							SPACE						27	28						SPACE							SP
SP							SPACE						29	30						SPACE							SP
SP							SPACE						31	32						SPACE							SP
SP							SPACE						33	34						SPACE							SP
SP							SPACE						35	36						SPACE							SP
SPS							SPACE						37	38						SPACE							SP
SP							SPACE						39	40						SPACE							SP
SP							SPACE						41	42						SPACE							SP

PHASE A	PHASE B	PHASE C		A	B	C				A	B	C	
				1260	1440	1900	10	SPACE (SP)	10	6400	3980	3800	MEASURED LOAD (AMPS) PHASE A: 0
7660	5420	5700	CONNECTED (KVA)	18.8			4	SPARE (S)	0				MEASURED LOAD (AMPS) PHASE B: 0
0	0	0	CONN.KVA (CODE L)	0.0			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C: 0
6400	3800	4980	CONN.KVA (CODE N)	15.2			6	USED (U)	11				DATE LAST MEASURED: -
1260	1620	720	CONN.KVA (CODE R)	3.6			20	TOTAL	21				
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT		0				SYSKA HENNESSY GROUP
			SPARE (DECIMAL)				SPARE KVA		0.0				
			FEEDER DEMAND KVA & AMP	18.8	52.1		XFMR. KVA		18.8				

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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Panel 2L2N (EXISTING)

verizon

SITE:	Verizon Call Center 1800 Solar Drive, Oxnard, CA FL 93030	DESIGNATION: 2L2N (EXISTING)	BUS RATING: 225A
		TYPE:	BREAKER SIZE: MLO
		SUPPLY VOLTAGE: 208/120V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%): 100%
		NORMAL SUPPLY ORIGIN: FED FROM PANEL-2L	BRACING (AMPS):
		EMERGENCY SUPPLY ORIGIN: -	SHORT CIRCUIT AVAILABLE: -
		LOCATION OF ORIGIN: -	DERATED FACTOR: -
		FEEDER SIZE (WIRE): 4#1 + 1#6GND, 1-1/2"C.	REVISION DATE: 10/09/12
		TRANSFORMR SIZE (KVA): 75KVA	VERIFICATION DATE: -

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					N		(E) LAN RECEPT	600			20	2	1	2	20	2	600			(E) LAN EQUIPMENT		R					U
U					N		↓		600		↓	↓	3	4	↓	↓		600		↓		R					U
U					N		(E) LAN RECEPT			600	20	2	5	6	20	2			1200	IDF RM L-20 RECEPT	1	R					U
U					N		↓	600			↓	↓	7	8	↓	↓	1200			↓		R					U
U					R		(E) LAN EQUIPMENT		400		20	1	9	10	15	2		100		IDF RM AC-2N	1	N					U
U					R		(E) LAN EQUIPMENT			400	20	1	11	12	↓	↓			100	↓		N					U
S							SPARE				20	1	13	14	20	2	1200			IDF RM L-20 RECEPT	1	R					U
S							SPARE				20	1	15	16	↓	↓		1200		↓		R					U
S							SPARE				20	1	17	18	20	1				SPARE							S
S							SPARE				20	1	19	20	20	1				SPARE							S
S							SPARE				20	1	21	22	20	1				SPARE							S
U					R		(E) RECEPT			540	20	1	23	24	20	1				SPARE							S
SP							SPACE						25	26						SPACE							SP
SP							SPACE						27	28						SPACE							SP
SP							SPACE						29	30						SPACE							SP
SP							SPACE						31	32						SPACE							SP
SP							SPACE						33	34						SPACE							SP
SP							SPACE						35	36						SPACE							SP
SP							SPACE						37	38						SPACE							SP
SP							SPACE						39	40						SPACE							SP
SP							SPACE						41	42						SPACE							SP

PHASE A	PHASE B	PHASE C		A	B	C				A	B	C	
				1200	1000	1540	9	SPACE (SP)	9	3000	1900	1300	MEASURED LOAD (AMPS) PHASE A: 0
4200	2800	2840	CONNECTED (KVA)	9.9			5	SPARE (S)	4				MEASURED LOAD (AMPS) PHASE B: 0
0	0	0	CONN.KVA (CODE L)	0.0			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C: 0
1200	700	700	CONN.KVA (CODE N)	2.6			7	USED (U)	8				DATE LAST MEASURED: -
3000	2200	2140	CONN.KVA (CODE R)	7.3			21	TOTAL	21				
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT		0				SYSKA HENNESSY GROUP
			SPARE (DECIMAL)				SPARE KVA		0.0				
			FEEDER DEMAND KVA & AMP	9.9	27.6		XFMR. KVA		9.9				

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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Panel 2UP3 (EXISTING)

verizon

SITE:	Verizon Call Center 1800 Solar Drive, Oxnard, CA FL 93030	DESIGNATION: 2UP3 (EXISTING)	BUS RATING: 225A
		TYPE:	BREAKER SIZE: 125A MCB
		SUPPLY VOLTAGE: 208/120V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%): 100%
		NORMAL SUPPLY ORIGIN: FED FROM PANEL-2UP2	BRACING (AMPS):
		EMERGENCY SUPPLY ORIGIN: -	SHORT CIRCUIT AVAILABLE: 10KAIC
		LOCATION OF ORIGIN: -	DERATED FACTOR: -
		FEEDER SIZE (WIRE): 3#2+ 1#3/0N+1#4GND,1-1/2"C	REVISION DATE: 10/09/12
		TRANSFORMR SIZE (KVA): 75KVA	VERIFICATION DATE: -

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R		(E) WORK STATION	540			20	1	1	2	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	3	4	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	5	6	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	7	8	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	9	10	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	11	12	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	13	14	20	1	540			(E) TELE CLOSET		R					U
U					R		(E) WORK STATION		540		20	1	15	16	20	1		540		(E) LOAD		R					U
U					R		(E) WORK STATION			540	20	1	17	18	20	2			1200	IDF RM L-20 RECEPT	1	R					U
U					R		(E) WORK STATION	540			20	1	19	20	↓	↓	1200			↓		R					U
U					R		(E) WORK STATION		540		20	1	21	22	20	2		1200		IDF RM L-20 RECEPT	1	R					U
U					R		(E) WORK STATION			540	20	1	23	24	↓	↓			1200	↓		R					U
U					N		(E) LOAD	800			30	3	25	26						SPACE							SP
U					N		|		800		|	|	27	28						SPACE							SP
U					N		↓			800	↓	↓	29	30						SPACE							SP
U					N		(E) LOAD	800			20	2	31	32						SPACE							SP
U					N		↓		800		↓	↓	33	34						SPACE							SP
U					N		(E) LOAD			800	20	2	35	36						SPACE							SP
U					N		↓	800			↓	↓	37	38						SPACE							SP
SP							SPACE						39	40						SPACE							SP
SP							SPACE						41	42						SPACE							SP

PHASE A	PHASE B	PHASE C		A	B	C				A	B	C	
				4560	3760	3760	2	SPACE (SP)	9	2820	2820	3480	MEASURED LOAD (AMPS) PHASE A: 0
7380	6580	7240	CONNECTED (KVA)	21.2			0	SPARE (S)	0				MEASURED LOAD (AMPS) PHASE B: 0
0	0	0	CONN.KVA (CODE L)	0.0			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C: 0
2400	1600	1600	CONN.KVA (CODE N)	5.6			19	USED (U)	12				DATE LAST MEASURED: -
4980	4980	5640	CONN.KVA (CODE R)	15.6			21	TOTAL	21				
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT		0				SYSKA HENNESSY GROUP
			SPARE (DECIMAL)				SPARE KVA		0.0				
			FEEDER DEMAND KVA & AMP	18.4	51.1		XFMR. KVA		18.4				

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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Panel 3L2N (EXISTING)

verizon

SITE:	Verizon Call Center 1800 Solar Drive, Oxnard, CA FL 93030	DESIGNATION: 3L2N (EXISTING)	BUS RATING: 100A
		TYPE:	BREAKER SIZE: MLO
		SUPPLY VOLTAGE: 208/120V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%): 100%
		NORMAL SUPPLY ORIGIN: FED FROM PANEL-3L	BRACING (AMPS):
		EMERGENCY SUPPLY ORIGIN: -	SHORT CIRCUIT AVAILABLE: -
		LOCATION OF ORIGIN: -	DERATED FACTOR: -
		FEEDER SIZE (WIRE): 4#1 + 1#6GND, 1-1/2"C.	REVISION DATE: 10/09/12
		TRANSFORMR SIZE (KVA): 75KVA	VERIFICATION DATE: -

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
SP							SPACE						1	2	20	2	600			(E) LAN EQUIPMENT		R					U
SP							SPACE						3	4	-	-		600		W/ CKT #2		R					U
SP							SPACE						5	6	20	1			200	(E) VAV-16		N					U
SP							SPACE						7	8	20	1	200			(E) VAV-2		N					U
SP							SPACE						9	10	20	1		200		(E) VAV-16		N					U
SP							SPACE						11	12	30	2			1872	ROOF MTD IDF RM CU-1N	1	N					U
SP							SPACE						13	14	-	-	1872			W/ CKT #12		N					U
SP							SPACE						15	16	20	1		180		ROOF MTD RECEPT	1	R					U
SP							SPACE						17	18						SPACE							SP

PHASE A	PHASE B	PHASE C		A	B	C				A	B	C	
				0	0	0	9	SPACE (SP)	1	2672	980	2072	MEASURED LOAD (AMPS) PHASE A: 0
2672	980	2072	CONNECTED (KVA)	5.7			0	SPARE (S)	0				MEASURED LOAD (AMPS) PHASE B: 0
0	0	0	CONN.KVA (CODE L)	0.0			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C: 0
2072	200	2072	CONN.KVA (CODE N)	4.3			0	USED (U)	8				DATE LAST MEASURED: -
600	780	0	CONN.KVA (CODE R)	1.4			9	TOTAL	9				
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT		0				SYSKA HENNESSY GROUP
			SPARE (DECIMAL)				SPARE KVA		0.0				
			FEEDER DEMAND KVA & AMP	5.7	15.9		XFMR. KVA		5.7				

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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PANEL SCHEDULE INDEX		
3L2	3L3	3L4 (6)
2L2N (3)	2UP3 (5)	3L2N

(1)

The corner tick marks represent the 30"x48" plot area.

verizon

1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

Issue	Date & Issue Description	By	Check
01	07/31/12 PLAN CHECK	-	-
1	08/10/12 ISSUE FOR CONSTRUCTION	-	-
2	09/12/12 BULLETIN 1	-	-
3	10/09/12 BULLETIN 2	-	-
4	10/23/2012 REVISED FOR PLAN CHECK	-	-
5	11/19/12 BULLETIN 3	-	-
6	02/21/13 BULLETIN 4	-	-

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
P:\LAO\CF\VZCOX000\Drawings\Sheets\E-703-VZCOX000.dwg

Description
PANEL SCHEDULES

Scale
NONE

E-703

1UP1 (EXISTING)

SITE: Verizon Call Center, 1800 Solar Drive, Oxnard, CA FL 93030			
DESIGNATION:	1UP1 (EXISTING)	BUS RATING:	100A
TYPE:		BREAKER SIZE:	70A MCB
SUPPLY VOLTAGE:	208/120V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%):	100%
NORMAL SUPPLY ORIGIN:	FED FROM XFRMER 1TR	BRACING (AMPS):	
EMERGENCY SUPPLY ORIGIN:	-	SHORT CIRCUIT AVAILABLE:	10KAIC
LOCATION OF ORIGIN:	-	DERATED FACTOR:	-
FEEDER SIZE (WIRE):	3#1/0+ 1#250MCMN+1#2GND,2-1/2"C	REVISION DATE:	10/09/12
TRANSFORMR SIZE (KVA):	45KVA	VERIFICATION DATE:	-

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R		(E) WORK STATION	540			20	1	1	2	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	3	4	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	5	6	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	7	8	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	9	10	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	11	12	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	13	14	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	15	16	20	1		540		(E) TELE RECEPT		R					U
U					R		(E) WORK STATION			540	20	1	17	18	20	1			540	(E) LOAD		R					U
U					R		(E) LOAD	540			20	1	19	20	20	1	540			(E) LOAD		R					U
U					R		SPACE		540		20	1	21	22	20	1		540		(E) LOAD		R					U
U					R		SPACE			540	20	1	23	24	20	1			540	(E) LOAD		R					U
U					R		SPACE	540			20	1	25	26	20	1	540			(E) LOAD		R					U
U					R		SPACE		540		20	1	27	28	20	1		540		(E) LOAD		R					U
U					R		SPACE			540	20	1	29	30	20	1			540	(E) LOAD		R					U

PHASE A	PHASE B	PHASE C												
				2700	2700	2700	0	SPACE (SP)	0	2700	2700	2700	MEASURED LOAD (AMPS) PHASE A:	0
5400	5400	5400	CONNECTED (KVA)	16.2			0	SPARE (S)	0				MEASURED LOAD (AMPS) PHASE B:	0
0	0	0	CONN.KVA (CODE L)	0.0			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C:	0
0	0	0	CONN.KVA (CODE N)	0.0			15	USED (U)	15				DATE LAST MEASURED:	-
5400	5400	5400	CONN.KVA (CODE R)	16.2			15	TOTAL	15					
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT	0						
			SPARE (DECIMAL)				SPARE KVA	0.0						
			FEEDER DEMAND KVA & AMP	13.1	36.4		X'FMR. KVA	13.1						

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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1UP4 (NEW)

SITE: Verizon Call Center, 1800 Solar Drive, Oxnard, CA FL 93030			
DESIGNATION:	1UP4 (NEW)	BUS RATING:	100A
TYPE:		BREAKER SIZE:	70A MCB
SUPPLY VOLTAGE:	208/120V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%):	100%
NORMAL SUPPLY ORIGIN:	FED FROM XFRMER 1TR	BRACING (AMPS):	
EMERGENCY SUPPLY ORIGIN:	-	SHORT CIRCUIT AVAILABLE:	10KAIC
LOCATION OF ORIGIN:	-	DERATED FACTOR:	-
FEEDER SIZE (WIRE):	3#1/0+ 1#1/0N+1#4GND,2"C	REVISION DATE:	10/09/12
TRANSFORMR SIZE (KVA):	45KVA	VERIFICATION DATE:	-

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
SP							SPACE						1	2	20	2	1200			IDF RM L-20 RECEPT	1	R					U
SP							SPACE						3	4	-	-		1200		W/ CKT #2		R					U
SP							SPACE						5	6	20	2			1200	IDF RM L-20 RECEPT	1	R					U
SP							SPACE						7	8	-	-	1200			W/ CKT #6		R					U
SP							SPACE						9	10	20	1				SPARE							S
SP							SPACE						11	12	20	1				SPARE							S
SP							SPACE						13	14						SPACE							SP
SP							SPACE						15	16						SPACE							SP
SP							SPACE						17	18						SPACE							SP
SP							SPACE						19	20						SPACE							SP
SP							SPACE						21	22						SPACE							SP
SP							SPACE						23	24						SPACE							SP
SP							SPACE						25	26						SPACE							SP
SP							SPACE						27	28						SPACE							SP
SP							SPACE						29	30						SPACE							SP

PHASE A	PHASE B	PHASE C												
				0	0	0	15	SPACE (SP)	9	2400	1200	1200	MEASURED LOAD (AMPS) PHASE A:	0
2400	1200	1200	CONNECTED (KVA)	4.8			0	SPARE (S)	2				MEASURED LOAD (AMPS) PHASE B:	0
0	0	0	CONN.KVA (CODE L)	0.0			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C:	0
0	0	0	CONN.KVA (CODE N)	0.0			0	USED (U)	4				DATE LAST MEASURED:	-
2400	1200	1200	CONN.KVA (CODE R)	4.8			15	TOTAL	15					
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT	0						
			SPARE (DECIMAL)				SPARE KVA	0.0						
			FEEDER DEMAND KVA & AMP	4.8	13.3		X'FMR. KVA	4.8						

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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2L (EXISTING)

SITE: Verizon Call Center, 1800 Solar Drive, Oxnard, CA FL 93030			
DESIGNATION:	2L (EXISTING)	BUS RATING:	400A
TYPE:		BREAKER SIZE:	300A MCB
SUPPLY VOLTAGE:	208/120V 3 PH., 4 WIRE	NEUTRAL BUS (100/150/200%):	100%
NORMAL SUPPLY ORIGIN:	FED FROM PANEL-2L	BRACING (AMPS):	
EMERGENCY SUPPLY ORIGIN:	-	SHORT CIRCUIT AVAILABLE:	-
LOCATION OF ORIGIN:	-	DERATED FACTOR:	-
FEEDER SIZE (WIRE):	4#1 + 1#6GND, 1-1/2"C.	REVISION DATE:	11/14/12
TRANSFORMR SIZE (KVA):	75KVA	VERIFICATION DATE:	11/14/12

STATUS	VERIFIED (Y/N)	OUTLET TYPE	WIRE SIZE	LOCATION	TYPE	QTY.	EQUIPMENT DESCRIPTION	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	TRIP	POLE	CKT. NO.	CKT. NO.	TRIP	POLE	CONN. (VA) A	CONN. (VA) B	CONN. (VA) C	EQUIPMENT DESCRIPTION	QTY.	TYPE	LOCATION	WIRE SIZE	OUTLET TYPE	VERIFIED (Y/N)	STATUS
U					R		(E) LOAD	540			20	1	1	2	20	1	540			(E) WORK STATION		R					U
U					R		(E) LOAD		540		20	1	3	4	20	1		540		(E) WORK STATION		R					U
U					R		(E) LOAD			540	20	1	5	6	20	1			540	(E) WORK STATION		R					U
U					R		(E) LOAD	540			20	1	7	8	20	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	9	10	20	1		540		(E) WORK STATION		R					U
U					R		(E) WORK STATION			540	20	1	11	12	20	1			540	(E) WORK STATION		R					U
U					R		(E) WORK STATION	540			20	1	13	14	15	1	540			(E) WORK STATION		R					U
U					R		(E) WORK STATION		540		20	1	15	16	20	1		400		(E) PRIMITURE		R					U
U					R		(E) WORK STATION			540	20	1	17	18	20	1			400	(E) PRIMITURE		R					U
U					R	5	COACHING OFC/(E) MGR RM	1260			20	1	19	20	20	1	540			(E) WORK STATION		R					U
U					R	2	TRNG RM 215 FLR QUAD REC		720		20	1	21	22	20	1		540		(E) WORK STATION		R					U
U					R	5	COACHING OFC/TRNG RM			1080	20	1	23	24	20	1			540	(E) WORK STATION		R					U
U					N		(E) VAV-2	400			20	1	25	26	20	1	540			(E) WORK STATION		R					U
U					N		(E) VAV-3		400		20	1	27	28	20	1		400		(E) VAV-17		N					U
U					N		(E) VAV-1			400	20	1	29	30	20	1			400	(E) VAV-16		N					U
U					N		(E) VAV-20	400			20	1	31	32	100	3	4200			(E) PANEL '2L2N'	1	N					U
U					N		(E) VAV-4		400		20	1	33	34				2900				N					U
U					N		(E) VAV-5			400	20	1	35	36	↓	↓			2840	↓	↓	N					U
U					R		(E) LOAD	540			20	1	37	38	100	3	7100			(E) PANEL '2L1'	1	N					U
U					R		(E) WORK STATION		540		20	1	39	40				7440				N					U
U					R		(E) WORK STATION			540	20	1	41	42	↓	↓			6700	↓	↓	N					U

PHASE A	PHASE B	PHASE C												
				4220	3680	4040	0	SPACE (SP)	0	14000	12760	11960	MEASURED LOAD (AMPS) PHASE A:	0
18220	16440	16000	CONNECTED (KVA)	50.7			0	SPARE (S)	0				MEASURED LOAD (AMPS) PHASE B:	0
0	0	0	CONN.KVA (CODE L)	0.0			0	N.I.U. (N)	0				MEASURED LOAD (AMPS) PHASE C:	0
12100	11540	10740	CONN.KVA (CODE N)	34.4			21	USED (U)	21				DATE LAST MEASURED:	-
6120	4900	5260	CONN.KVA (CODE R)	16.3			21	TOTAL	21					
0	0	0	CONN.KVA (CODE K)	0.0			NO. OF KITCHEN EQUIPMENT	0						
			SPARE (DECIMAL)				SPARE KVA	0.0						
			FEEDER DEMAND KVA & AMP	47.5	131.9		X'FMR. KVA	47.5						

L: LONG CONTINUOUS LOAD R: RECEPTACLE N: NON-CONTINUOUS K: KITCHEN | D.F.: DEMAND FACTOR

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The corner tick marks represent the 30"x48" plot size.

PANEL SCHEDULE INDEX

1UP1	1UP4	2L
—	—	—

1800 Solar Drive
Oxnard, CA 93030

Gensler
1230 Avenue of the Americas
Suite 1500
New York, NY 10020
Telephone 212.492.1400
Facsimile 212.492.1472

SYSKA HENNESSY GROUP
A member company of SH Group, Inc.
Syska Hennessy Group, Inc.
800 Corporate Pointe
Suite 200
Culver City, Ca. 90230
Tel: 310.312.0200
Fax: 310.473.7468
www.syska.com

Issue	Date & Issue Description	By	Check
01	07/31/12	-	-
	PLAN CHECK		
1	08/10/12	-	-
	ISSUE FOR CONSTRUCTION		
2	09/12/12	-	-
	BULLETIN 1		
3	10/09/12	-	-
	BULLETIN 2		
4	10/23/2012	-	-
	REVISED FOR PLAN CHECK		
5	11/19/12	-	-
	BULLETIN 3		
6	02/21/13	-	-
	BULLETIN 4		

Seal/Signature

Project Name
VERIZON V.I.P.

Project Number
VZCOX000

CAD File Name
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Description
PANEL SCHEDULES

Scale
NONE

E-704