JPMorganChase

270 PARK AVENUE
NEW YORK, NY 10017
SC2 LEVEL

ISSUED FOR FILING & CONSTRUCTION
2014-01-13

PROJECT NO. : 112162.01

PROJECT TEAM DIRECTORY

ARCHITECT:

TED MOUDIS ASSOCIATES
79 MADISON AVENUE
NEW YORK, NY 10016
PHONE: 212-561-2000
FAX: 212-561-2020
CONTACT:
CESAR ROBLES
GENE MANEZ
MIDORI TAKADA
EMAIL: CRobles@tedmoudis.com
GManez@tedmoudis.com
Mtakada@tedmoudis.com

MEP ENGINEER:

SYSKA HENNESSY GROUP
1515 BROADWAY
NEW YORK, NY 10036

NICK FOX
PHONE: 212-921-2300
FAX: 212-556-3333
EMAIL: NFox@syska.com

FILING CONSULTANT:

MILROSE CONSULTANT
770 BROADWAY
NEW YORK, NEW YORK 10001
CONTACT:
ASHLEY CONFER
PHONE: 212-643-4545
FAX: 212-643-4859
EMAIL: aconfer@milrose.com

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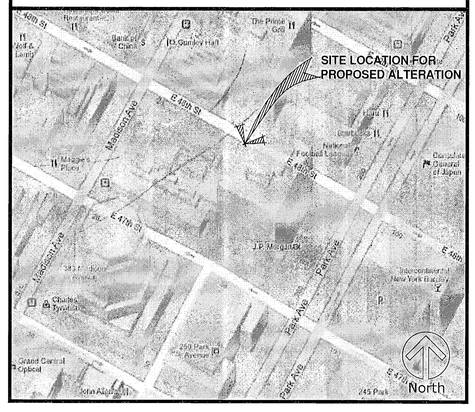
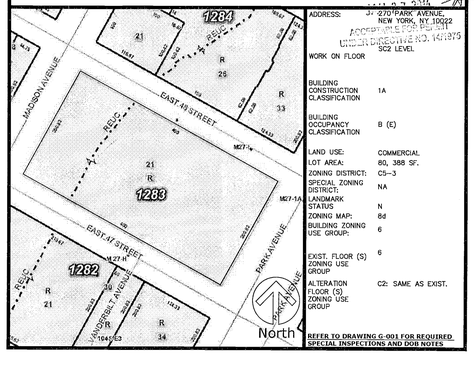
VICINITY MAP



PLOT PLAN



ADDRESS:	J- 270 PARK AVENUE, NEW YORK, NY 10022
WORK ON FLOOR	SC2 LEVEL
BUILDING CONSTRUCTION CLASSIFICATION	1A
BUILDING OCCUPANCY CLASSIFICATION	B (E)
LAND USE:	COMMERCIAL
LOT AREA:	80, 388 SF.
ZONING DISTRICT:	C5-3
SPECIAL ZONING DISTRICT:	NA
LANDMARK STATUS	N
ZONING MAP:	8d
BUILDING ZONING USE GROUP:	6
EXIST. FLOOR (S) ZONING USE GROUP	6
ALTERATION FLOOR (S) ZONING USE GROUP	C2: SAME AS EXIST.

REFER TO DRAWING G-001 FOR REQUIRED SPECIAL INSPECTIONS AND DOB NOTES

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
79 Madison Avenue
New York, NY 10016
Tel/212.561.2000
Fax/212.561.2020

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
Tel/312.924.5000
Fax/312.924.5000
E-Mail: tma @ tedmoudis.com
Web: www.tedmoudis.com

MCM ARCHITECTURE LIMITED
71 Hopton Street
London SE1 9LR
United Kingdom
Tel/020-7902.0900
Fax/020-7922-1233
Web: www.mcm-uk.com

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK CITY ENERGY CONSERVATION CODE.

TITLE SHEET

REGISTERED ARCHITECT TED MOUDIS STATE OF NEW YORK

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1 of 20

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ABBREVIATIONS

A	
ACCES	ACCESSORY
ACOUS	ACOUSTIC(AL)
ACT	ACOUSTIC TILE
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFS	ABOVE FINISHED SLAB
AGGR	AGGREGATE
AL	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
AP	ACCESS PANEL
APPL	APPLIANCE
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
ASB	ASBESTOS
ASPH	ASPHALT
AUTO	AUTOMATIC
AVG	AVERAGE
B	
BD	BOARD
BITUM	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BOT	BOTTOM
BRDLM	BROADLOOM
BTB	BACK TO BACK
BU	BUILT UP
C	
CAB	CABINET
CB	CATCH BASIN
CD	CONSTRUCTION DOCUMENTS
CEM	CEMENT(TITIOUS)
CER	CERAMIC
CI	CAST IRON
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CM	CONSTRUCTION MANAGER
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
COATG	COATING
COILG	COILING
COL	COLUMN
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUOUS(ATION)
CONTR	CONTRACT(OR)
CORR	CORRIDOR
COV	COVER
CPT	CARPET
CTR	CENTER
CTSK	COUNTERSUNK
D	
DBL	DOUBLE
DEPT	DEPARTMENT
DES	DESIGN(ED)
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DR	DOWN
DS DN	DOOR OPENING
DO	DOOR
DSCON	DOWNSPOUT
DSP	DISCONNECT
DW	DRY STANDPIPE
DWG (S)	DISHWASHER
DWR	DRAWING (S)
	DRAWER
E	
E	EAST
EJ	EACH
EL EA	EACH FACE
EF	EXPANSION JOINT
	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMBED	EMBED(ED)(ING)
EMER	EMERGENCY
ENCL	ENCLOSURE
ENG	ENGINEER
ENTR	ENTRANCE
EP	ELECTRICAL PANEL
EQ	EQUAL
EQUIP	EQUIPMENT
EXIST	EXISTING
EXP	EXPANSION
EXP'S	EXPOSE(D)
EXT	EXTERIOR
EWC	ELECTRIC WATER COOLER
F	
F.T.	FIRE TREATED
F&I	FINISH and INSTALL
FA	FIRE ALARM
FAB	FABRICATION
FB	FLAT BAR
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHC	FIRE HOSE CABINET
FIN	FINISH
FLASH	FLASHING
FLDG	FOLDING
FLUOR	FLUORESCENT
FOC	FACE of CONCRETE
FOF	FACE of FINISH
FOS	FACE of STUDS
FP	FIREPROOF
FPLC	FIREPLACE
FR	FIRE RAT(ING)(ED)
FXD	FIXED
FXTR	FIXTURE
FLR	FLOOR(ING)
FRMG	FRAMING
FS	FULL SIZE
FT	FOOT or FEET

F—cont.	
FTG	FOOTING
FURN	FURNITURE
FURR	FURRING
FUT	FUTURE
FWP	FABRIC WRAPPED PANEL
G	
G	GROUND
GA	GAUGE
GB	GRAB BAR
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GFRP	GLASS FIBER REINFORCED PLASTER
GL	GLASS/GLAZING
GR	GRAD(E)(ING)
GYP	GYPSUM
GWB	GYPSUM WALL BOARD
H	
H.C.	HOSE CABINET
HB	HOME BID
HC	HANDICAP
HD	HEAD
HDW	HARDWARE
HDWD	HARDWOOD
HDWE	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
I	
I.D.	INSIDE DIAMETER (DIM.)
INFILTR	INFILTRATION
INFO	INFORMATION
INSTRUM	INSTRUMENT(ATION)
INSUL	INSULATION
INT	INTERIOR
INTLK	INTERLOCK(ING)
J	
JAN	JANITOR
JC	JANITOR'S CLOSET
JT.	JOINT
K	
KIT	KITCHEN
L	
LAB	LABORATORY
LAM	LAMINATED
LAV	LAVATORY
LB	POUND
LKR	LOCKER
LT	LIGHT
LVLG	LEVELING
LVR	LOUVER
LW	LIGHTWEIGHT
M	
MAX	MAXIMUM
MC	MEDICINE CABINET
MDF	MEDIUM DENSITY FIBERBOARD
MECH	MECHANICAL
MEMB	MEMBRANE
MET	METAL
MFD	MANUFACTURED
MFR	MANUFACTURER
MH	MAN-HOLE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MLWK	MILLWORK
MOIST	MOISTURE
MO	MASONRY OPENING
MOT	MOTOR(IZED)
MTD	MOUNTED
MUL	MULLION
N	
N	NEW
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O	
OA	OVERALL
OBS	OBSCURE
OC	ON CENTER
OD	OUTSIDE DIAMETER (DIM.)
OFF	OFFICE
OH	OPPOSITE HAND
OPNG	OPENING(S)
OPP	OPPOSITE
OPR	OPERABLE
ORNA	ORNAMENTAL
OVFL	OVERFLOW
OVHD	OVERHEAD

P	
PBD	PARTICLE BOARD
PC	PRECAST CONCRETE
PEDTR	PEDESTRIAN
PLS	PLASTIC
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLYWD	PLYWOOD
PNL	PANEL
POLYST	POLYSTYRENE
PORT	PORTABLE
PR	PAIR
PRCST	PRECAST
PREFIN	PREFINISHED
PREFAB	PREFABRICATED
PT	POINT
PTD	PAPER TOWEL DISPENSER COMBINATION PAPER TOWEL DISPENSER & RECEPTACLE
PTN	PARTITION
Q	
QUAL	QUALITY
QA	QUALITY ASSURANCE
QC	QUALITY CONTROL
QCR	QUALITY CONTROL
QTY	QUANTITY
QT.	QUARRY TILE
R	
R	RELOCATE
RAD	RADIUS
RD	ROOF DRAIN
RDR	READER
RECES	RECESSED
RECPT	RECEPTACLE
REF	REFER(ENCE)
REFL	REFLECTED
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCE(D)(ING)(MENT)
REQD	REQUIRED
RESIS	RESIST(ANT)(IVE)
RESIL	RESILIENT
RF	RAISED FLOOR
RFG	ROOFING
RM	ROOM
RO	ROUGH OPENING
RWD	REDWOOD
RWL	RAIN WATER LEADER
S	
SC	SOLID CORE
SCD	SEAT COVER DISPENSER
SCHED	SCHEDULE
SCR	SCRIBE
SD	SOAP DISPENSER
SECT	SECTION
SECUR	SECURITY
SF	SQUARE FEET
SGL	SINGLE
SH	SHELF
SHR	SHOWER
SHORG	SHORING
SHT	SHEET
SIM	SIMILAR
SLNT	SEALANT
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SPEC	SPECIFICATION
SQ	SQUARE
SSK	SERVICE SINK
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRFR	STOREFRONT
STRUCT	STRUCTURAL
SURF	SURFACE
SUSP	SUSPENDED
SYS	SYSTEM(S)
T	
T&G	TONGUE AND GROOVE
TEL	TELEPHONE
TELECOM	TELECOMMUNICATION
THK	THICK
T.O.	TOP OF
TOIL	TOILET
TRAF	TRAFFIC
TRANS	TRANSPARENT
TRTD	TREATED
TYP	TYPICAL
U	
UL	UNDERWRITERS LABORATORIES
UNDRLAY	UNDERLAYMENT
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
V	
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VN	VINYL
VT	VINYL TILE
W	
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WPM	WATER PROOFING MEMBRANE
WT	WEIGHT
WTRPRF	WATERPROOFING

SYMBOLS

&	AND
∠	ANGLE
@	AT
℄	CENTERLINE
⌀	DIAMETER
⊥	PERPENDICULAR
⊏	CHANNEL
#	POUND or NUMBER
(E)	EXISTING

REGULATORY INFORMATION

A. THIS IS A SINGLE TENANT OCCUPANCY FLOOR.
B. THERE IS NO CHANGE TO THE USE, EGRESS OR OCCUPANCY AS PART OF THIS ALTERATION WORK DOCUMENTED HEREWITH
C. ENTIRE FLOOR AREA TO BE MECHANICALLY VENTILATED AS PER ART. 12, ART. 13 & RS13.
D. CONSTRUCTION OF HUNG CEILING TO COMPLY WITH SECTIONS. 27-327 AND 27-350.
E. THIS FLOOR IS FULLY SPRINKLERED. SPRINKLER SYSTEM INSTALLATION SHALL BE IN ACCORDANCE W/ RS 17-2 & CONNECTED TO A FIRE DEPARTMENT APPROVED CENTRAL MONITORING STATION. SPRINKLER WORK BE FILED UNDER SEPARATE APPLICATION.
F. THIS WORK COMPLIES WITH LOCAL LAW 5/73, LOCAL LAW 16/84 AND LOCAL LAW 58/87.
G. ALL WORK TO BE PERFORMED UNDER THIS APPLICATION & PERMIT SHALL COMPLY W/ APPLICABLE REGULATIONS NOTED BELOW.

H. APPLICABLE REGULATIONS:
1. UNIFORM FIRE CODE, STATE OF NEW YORK 1997
2. THE 1968 NYC BUILDING CODE
3. 2008 NEW YORK CITY PLUMBING CODE (IPC 2003)
4. 2008 NEW YORK CITY MECHANICAL CODE (IMC 2003)
5. 2007 NEW YORK CITY ELECTRICAL CODE (NEC 2005) WITH NEC 2005 AMENDMENTS.
6. NYC ENERGY CONSERVATION CODE LL66 OF 2010 ADOPTING 2010 NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE AS LOCALLY AMENDED (2011 NYCECC).
7. NEW YORK CITY FIRE/LIFE SAFETY CODE, NEW YORK CITY FIRE CODE AND NEW YORK CITY BUILDING CODE (NFPA 5000)
8. 2008 NEW YORK CITY FUEL GAS CODE.
9. 1986 BUILDING CODE REFERENCE STANDARD 4-6, ANSI A117.1, 1986 AND LOCAL LAW 58-1987
10. SAFETY CODE FOR ELEVATOR AND ESCALATORS ASME A17.1 AS MODIFIED BY APPENDIX K. ACCESSIBILITY FOR PASSENGER ELEVATORS ICC/ANSI A117.3 2003

B. NEW YORK CITY BUILDING CODE REQUIREMENTS:
1. USE AND OCCUPANCY
a. EXISTING BUILDING: (E) (B) (BUSINESS). ZONING USE GROUP 6
b. INTERIOR ALTERATION: LEVEL C2: (E) (B) (BUSINESS). ZONING USE GROUP 6

C. BUILDING LIMITATIONS:
1. BUILDING HEIGHT: 707 FEET, 52 STORIES
2. TOTAL ALL FLOOR GROSS AREA: 20,445 SQ.FT.
a. LEVEL SC2 GROSS AREA: NOT AVAILABLE
b. LEVEL SC2 ALTERATION AREA: 2,105 SQ.FT.

D. BUILDING CONSTRUCTION CLASSIFICATION:
1. EXISTING BUILDING IS CLASSIFIED AS HIGH RISE
2. BUILDING CONSTRUCTION CLASS "1B"-NONCOMBUSTIBLE PROTECTED.
3. AN AUTOMATIC SPRINKLER SYSTEM IS PROVIDED.
4. AN AUTOMATIC FIRE DETECTION SYSTEM IS PROVIDED.
5. AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IS PROVIDED.
6. A FIRE DEPARTMENT COMMUNICATION SYSTEM IS PROVIDED.
7. A FIRE DEPARTMENT COMMAND CENTER IS PROVIDED.

E. FIRE RESISTANCE RATING OF ELEMENTS IN HOURS -CLASS I NONCOMBUSTIBLE (TABLE 3-4) & NOTED SECTIONS:

	ELEMENT TYPE	REQUIRED	PROVIDED
1	EXTERIOR NONBEARING WALLS 3' OR <	1	N/A
	EXTERIOR NONBEARING WALLS > 3' BUT < 15'	1	N/A
	EXTERIOR NONBEARING WALLS 15' OR > BUT < 30'	1	N/A
	EXTERIOR NONBEARING WALLS = OR > 30'	0	N/A
	STRUCTURAL FRAME INCLUDING COLUMNS, GIRDERS, TRUSSES & SPANDRELS	3	N/A
	FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS	2	N/A
	ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS	1	N/A
2	SHAFTS FIRE RESISTANCE IN HOURS (SECTION 27-344)		
	SHAFTS CONNECTING 4 FLOOR OR MORE	2	N/A
	SHAFTS CONNECTING 3 FLOOR OR LESS	2	N/A
3	PUBLIC CORRIDORS (SECTION 27-369]		
	ANY OCCUPANCY	1	N/A
4	EXIT ENCLOSURES (SECTION 27-375)		
	STAIRS CONNECTING 4 FLOORS OR MORE	2	N/A
	STAIRS CONNECTING 3 FLOORS OR LESS	2	N/A
5	DIFFERENT TENANCY (SECTION 27-341 a)		
	OCCUPANCY B, FULLY SPRINKLERED	1	1
6	SEPARATION OF OCCUPANCIES (TABLE 5-1 OR 5-2)		
	B (BUSINESS) / B (BUSINESS) FULLY SPRINKLERED	1	1
7	OPENING PROTECTIVE FIRE PROTECTION RATING: COMPLY WITH REQUIREMENT OF SECTION 27-342 AND TABLE 5-3		
8	GLAZING GENERAL: SUBCHAPTER 10, RS-67 & RS-68. GLAZING IN FIRE RESISTIVE PARTITION: AS PERMITTED BY SECTION 27-342 (a) & BUILDING COMMISSIONER.		

F. MEANS OF EGRESS (SUBCHAPTER 6):
1. DETERMINATION OF OCCUPANT LOAD CAPACITY SHALL COMPLY WITH FLOOR AREA ALLOWANCES IN TABLE 6-2
2. MINIMUM REQUIRED EGRESS WIDTH FOR STAIRWAYS AND OTHER COMPONENTS SHALL BE NO LESS THAN 44 INCHES. ALL CORRIDORS TO BE 3'-8" MIN. CLEAR WIDTH AS PER SECTIONS. 27-369.
3. EGRESS DOORS SHALL SWING IN DIRECTION OF EGRESS EXCEPT IN SPACES AND ROOMS WITH ONE MEANS OF EGRESS PER TABLE 6-3
4. EGRESS DOORS SHALL BE HINGE MOUNTED SWING TYPE. NUMBER OF EGRESS DOORS FROM FLOORS, SPACES AND ROOMS SHALL BE PER TABLE 6-1 EXCEPT SPACES AND ROOMS WITH ONE MEANS OF EGRESS MEETING THE OCCUPANT LOAD REQUIREMENTS IN TABLE 6-3
5. EGRESS DOORS TO STAIRWAYS SHALL BE SELF LATCHING, SELF CLOSING MATCHING THE FIRE RESISTANCE REQUIREMENTS FOR STAIRWAY ENCLOSURES.
6. ALL NEW DOORS SHALL BE 3'-0" WIDE UNLESS OTHERWISE NOTED. ALL HARDWARE TO BE LEVER TYPE.
7. MEANS OF EGRESS POWER OPERATED DOORS SHALL BE FAIL SAFE AND OPERABLE MANUALLY FROM THE EGRESS SIDE WITHOUT SPECIAL KNOWLEDGE OR EFFORT.
8. WHEN MORE THAN ONE EXIT DOORWAYS ARE REQUIRED, EXIT ACCESS DOORWAYS SHALL BE REMOTE FROM EACH OTHER AND SHALL BE PLACED AT A DISTANCE APART EQUAL TO NOT LESS THAN THAN 30 FEET PER SECTION 27-363 (b)(2)).
9. EGRESS PASSING THROUGH ADJACENT TENANT ON ANY ONE FLOOR IS NOT PERMITTED. EACH TENANT SHALL HAVE ACCESS TO THE REQUIRED EXITS WITHOUT PASSING THROUGH THE ADJACENT TENANT SPACE.
10. AISLES SERVING AS PORTION OF THE EXIT ACCESS SHALL BE DETERMINED BY TABLE 6.1 BUT SHALL NOT BE LESS THAN 36 INCHES.
11. EXIT ACCESS RAVEL DISTANCE LIMITATIONS SHALL BE IN ACCORDANCE WITH TABLE 6-1.
12. THE WIDTH OF EXIT ACCESS CORRIDORS SHALL BE DESIGNED TO MEET THE CAPACITY OF THE OCCUPANTS IT SERVES AS PER TABLE 6-1 BUT SHALL NOT BE LESS THAN 44 OMCHES.
13. DEAD END IN EXIT ACCESS SYSTEM SHALL BE 50 FEET PER TABLE 6-1.

G. EXIT SIGNS
1. ILLUMINATION OF MEANS OF EGRESS COMPONENTS SHALL COMPLY W/ SUB-CAHPTER SIX, ARTICLE SIX.
2. ILLUMINATED EXIT SIGNS SHALL BE LOCATED AT ALL EXITS AND SUPPLEMENTAL DIRECTIONAL SIGNS SHALL BE INSTALLED WITHIN LARGE SPACES OR SPACES WITH OBSTRUCTED VIEWS IN ACCORDANCE WITH SECTION 27-385 & SECTION 37-386.
3. THE POWER SOURCE FOR EMERGENCY LIGHTING AND ILLUMINATED EXIT SIGNS SHALL COMPLY W/ SEC. 27-384.

H. FIRE PROTECTION CONSTRUCTION
1. FIRE-RESISTANT RATED PARTITIONS SHALL EXTEND UP TO AND BE SECURED TO THE UNDERSIDE OF THE FLOOR STRUCTURE ABOVE.
2. PENERATIONS THROUGH FIRE-RESISTANT RATED PARTITIONS & FLOORS SHALL BE PROTECTED IN COMPLIANCE WITH SECTIONS 27-343 AND 27-344.
3. ALL OPENING PROTECTIVE DOORS AND FRAMES IN FIRE-RESISTANT RATED EXIT ENCLOSURE, FIRE DIVISIONS, AND FIRE SEPARATIONS SHALL BE SELF-CLOSING, SELF LATCHING, FIRE RATED SWINGING DOORS BEARING THE UNDERWRITERS LABORATORIES LABEL.
4. ALL WOOD TO BE FIRE RETARDANT AS PER SECTIONS. 27-228, 27-1019 (b) (3) AND TABLE 3-5.
5. INTERIOR FINISHES SHALL COMPLY WITH SECTION 27-348 AND RS 5-5 FOR FLAME SPREAD AND SMOKE DEVELOPED AND TABLE 5-4 FOR CLASS REQUIREMENTS:
   - FLAME SPREAD RATING: A: 0 – 25, B: 26 – 75 C: 76 – 225, D: Over 225
   - SMOKE DEVELOPED RATING: EXITS, CORRIDORS – 25, OCCUPANCY GROUPS H-1 AND H-2 – 50, ROOMS IN WHICH THE NET FLOOR AREA PER OCCUPANT IS TEN SQUARE FEET, OR LESS -100.
6. MATERIALS USED AS INTERIOR FINISHES, TRIMS AND DECORATIVE MATERIALS HAVING A THICKNESS OF 0.036 INCHES (1/16 INCHES) AND APPLIED DIRECTLY TO A NON-COMBUSTIBLE OR FIRE RETARDED TREATED WOOD SUBSTRATE SHALL BE EXEMPT FROM COMPLIANCE WITH THE ALLOWABLE FLAME SPREAD AND SMOKE DEVELOPMENT
7. FLOOR FINISHES SHALL COMPLY WITH SECTION 27-351.

I. GLASS AND GLAZING (SUBCHAPTER 10)
1. INDIVIDUAL GLAZED AREAS SUBJECT TO HUMAN IMPACT INCLUDING GLASS MIRRORS, IN HAZARDOUS LOCATIONS SHALL BE OF SAFETY TYPE GLAZING IN COMPLIANCE WITH "ANSI Z97.1"AND SHALL PASS THE TEST REQUIREMENTS OF "CPSC 16 CFR, 1201".
2. GLAZING PANELS IN HANDRAILS AND GUARDS SHALL BE EITHER SINGLE FULLY TEMPERED GLASS, LAMINATED FULLY TEMPERED GLASS OR LAMINATED HEAT THRENGTHENED GLASS. THE GLASS PANELS AND THEIR SUPPORT SYSTEM SHALL BE DESIGNED TO WITHSTAND LOAD SPECIFIED IN SECTION 27-558 (8) WITH A SAFETY FACTOR OF 4.
3. DISTRACTION MARKINGS ON TRANSPARENT GLASS PANELS AND SIDELIGHTS SHALL COMPLY WITH NEW YORK CITY BOARD OF STANDARDS AND APPEALS (BSA) RULE 4-01

REGULATORY INFORMATION-Cont.

J. SPECIAL INSPECTION REQUIRED (2008 BC CHAPTER 17)
–MECHANICAL SYSTEMS PER SECTION BC 1704.15
–SPRINKLER SYSTEMS PER SECTION BC 1704.21
–FIRE ALARM TEST PER SECTION BC 907 AND BC 1704.13
–SPRAYED FIRE-RESISTANT MATERIALS PER SECTION BC 1704.11

K. PROGRESS INSPECTION REQUIRED (2008 BC)
–FINAL INSPECTION SIGN-OFF PER DIRECTIVE 14 OF 1975 & 1 RCNY. 101-10.
–FIRE RESISTANCE RATED CONSTRUCTION INSPECTION PER SECTION BC 109.3.4
–ENERGY CODE COMPLIANCE INSPECTIONS PER SECTION BC 109.3.5

L. NYC ENERGY CONSERVATION CODE (2010 NYSECCC)

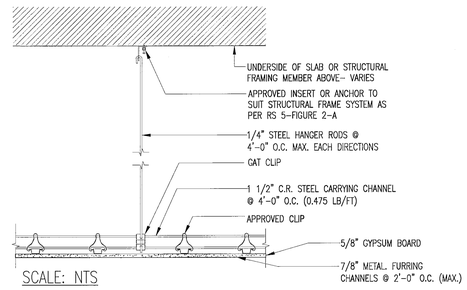
ENERGY ANALYSIS

COMMERCIAL

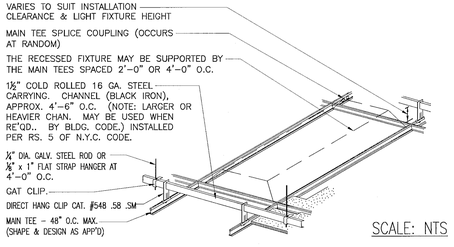
ITEM DESCRIPTION	CODE REQUIRED VALUE AND CITATION	PROPOSED DESIGN VALUE
BUILDING ENVELOPE	N/A–(EXISTING EXTERIOR BUILDING WALL SYSTEM TO REMAIN) – NO EFFECT.	N/A–(EXISTING EXTERIOR BUILDING WALL SYSTEM TO REMAIN) – NO EFFECT.
HVAC/MECHANICAL SYSTEMS	SEE ENGINEERING DRAWINGS	SEE ENGINEERING DRAWINGS
LIGHTING SYSTEMS	SEE ENGINEERING DRAWINGS	SEE ENGINEERING DRAWINGS

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK CITY ENERGY CONSERVATION CONSTRUCTION CO DE

TYP. GYP. BD. CLG. DETAILS



SCALE: NTS



SCALE: NTS

NOTES
1. AT EACH END OF LIGHT FIXTURE AN INTERLOCKING CROSS TEE OR LOCKING BAR MUST BE USED
2. THE TOTAL WEIGHT OF A LIGHT FIXTURE AND OTHER EQUIPMENT (AIR BOXES, ETC.) AND CEILING MATERIAL SUPPORTED BY THE MAIN BEAM MUST NOT EXCEED THE ALLOWABLE DEFLECTION OF 1/360 OF ITS SPAN. DEFLECTION DATA MUST BE FURNISHED AND CERTIFIED BY THE MANUFACTURER.
3. SURFACE OR PENDENT FIXTURES MUST BE INDEPENDENTLY SUPPORTED FROM ½" BLACK IRON OR FROM FLOOR OR ROOF CONSTRUCTION.

2008 TENANT SAFETY NOTES

1. EGRESS.
AT ALL TIMES IN THE COURSE OF CONSTRUCTION PROVISION SHALL BE MADE FOR ADEQUATE EGRESS AS REQUIRED BY THIS CODE AND THE TENANT PROTECTION PLAN SHALL IDENTIFY THE EGRESS THAT WILL BE PROVIDED. REQUIRED EGRESS SHALL NOT BE OBSTRUCTED AT ANY TIME EXCEPT WHERE APPROVED BY THE COMMISSIONER.

2. FIRE SAFETY.
ALL NECESSARY LAWS AND CONTROLS, INCLUDING THOSE WITH RESPECT TO OCCUPIED DWELLINGS, AS WELL AS ADDITIONAL SAFETY MEASURES NECESSITATED BY THE CONSTRUCTION SHALL BE STRICTLY OBSERVED.

3. HEALTH REQUIREMENTS.
SPECIFICATION OF METHODS TO BE USED FOR CONTROL OF DUST, DISPOSAL OF CONSTRUCTION DEBRIS, PEST CONTROL AND MAINTENANCE OF SANITARY FACILITIES, AND LIMITATION OF NOISE TO ACCEPTABLE LEVELS SHALL BE INCLUDED.
3.1. THERE SHALL BE INCLUDED A STATEMENT OF COMPLIANCE WITH APPLICABLE PROVISIONS OF LAW RELATING TO LEAD AND ASBESTOS.

4. COMPLIANCE WITH HOUSING STANDARDS.
THE REQUIREMENTS OF THE NEW YORK CITY HOUSING MAINTENANCE CODE, AND, WHERE APPLICABLE, THE NEW YORK STATE MUL-TIPLE DWELLING LAW SHALL BE STRICTLY OBSERVED.

5. STRUCTURAL SAFETY.
NO STRUCTURAL WORK SHALL BE DONE THAT MAY ENDANGER THE OCCUPANTS.

6. NOISE RESTRICTIONS.
WHERE HOURS OF THE DAY OR THE DAYS OF THE WEEK IN WHICH CONSTRUCTION WORK MAY BE UNDERTAKEN ARE LIMITED PURSUANT TO THE NEW YORK CITY NOISE CONTROL CODE, SUCH LIMITATIONS SHALL BE STATED.

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JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue, 10th Floor, New York, NY 10016, T. 212 561 2000
The LaSalle Wacker, 221 North LaSalle Street, Chicago, IL 60601, T. 312 924 5000
MCM Architecture Limited, 71 Hopton Street, London SE19LR, UK, T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT
DEPT BLDGS 121664662 Job Number
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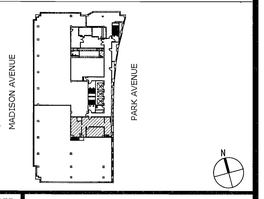
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER EFFECTIVE NO. MAY075

PROJECT NUMBER	112162.01
SCALE	N/A
DATE	08.08.12
PROJECT MANAGER

1.0 GENERAL REQUIREMENTS

1.1 GENERAL CONDITIONS

1.1.1 SUMMARY

A. ALL WORK SHALL COMPLY WITH THE REGULATIONS OF THE GOVERNMENTAL AUTHORITIES HAVING JURISDICTION. THE SPECIFICATIONS SHALL BE SUPPLEMENTAL TO ALL LAWS AND CODES OF GOVERNMENTAL REGULATING BODIES RELATING TO BUILDINGS, AND ALL APPLICABLE REQUIREMENTS SPECIFIED IN THESE REGULATIONS SHALL BE FOLLOWED AS THOUGH SPECIFICALLY NOTED IN THE SPECIFICATIONS OR DRAWINGS. THIS SHALL NOT HOWEVER, BE CONSTRUED TO MEAN THAT ANY REQUIREMENTS SET FORTH IN THE SPECIFICATIONS CAN BE MODIFIED BECAUSE THEY ARE NOT SPECIFICALLY NOTED BY SUCH CODES OR LAWS.

B. ALL TMA DRAWINGS AND CONSTRUCTION NOTES ARE COMPLIMENTARY, AND WHAT IS CALLED FOR BY ONE WILL BE BINDING AS IF CALLED FOR BY ALL.

C. CONTRACTOR SHALL NOTIFY TMA IMMEDIATELY IF HE CANNOT COMPLY WITH ALL NOTES CALLED FOR ON THIS SHEET AND ON ALL OTHER TMA DRAWINGS.

D. THE GENERAL CONTRACTOR SHALL NOTIFY TMA OF ANY DISCREPANCIES BETWEEN THE DRAWINGS, THESE NOTES, AND FIELD CONDITIONS BEFORE SUBMITTING A PROPOSAL OR COMMENCING ANY WORK AND REQUEST CLARIFICATION.

E. BEFORE SUBMITTING A PROPOSAL, ALL CONTRACTORS SHALL VISIT THE PREMISES, FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND SATISFY THEMSELVES AS TO THE NATURE AND THE SCOPE OF THE WORK AND THE DIFFICULTIES THAT ATTEND ITS EXECUTION.

F. THE SUBMISSION OF A BID PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIAL OR FOR DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

1. PRICING AND OR BID PROPOSALS SUBMISSIONS SHALL BE IN A COMPLETE BREAKDOWN FORM, LISTING WORK NOT ONLY BY VARIOUS TRADES, BUT ALSO WITH MAJOR SUB CATEGORIES WITHIN EACH TRADE ITEMIZED.

2. PROOF OF INSURANCE COVERING IN AMOUNTS REQUIRED BY LOCAL LAW, AS STIPULATED BY THE BUILDING, AND AS REQUIRED BY TENANT/OWNER. PROOF OF INSURANCE SHALL BE SUBMITTED TO TENANT/OWNER AND THE BUILDING PRIOR TO CONSTRUCTION. CERTIFICATES, ETC., SHALL BE AVAILABLE AT JOB SITE FOR EXAMINATION ON DEMAND.

3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL CITY AND STATE FILING, PERMITS, APPROVALS, REQUIRED INSPECTIONS AND SIGN-OFFS WITH THE AUTHORITY HAVING JURISDICTION (AHJ) AND FOR PAYMENT OF ALL REQUIRED FEES BY THE ABOVE "AHJ" TO BE INCLUDED IN PRICING AND OR BID PROPOSALS INCLUDING IF REQUIRED THE USE OF BUILDING DEPARTMENT EXPEDITER.

G. THE GENERAL CONTRACTOR SHALL INCLUDE IN HIS ESTIMATE ALL COSTS (INCLUDING OVERTIME WORK) FOR REMOVAL, NEW INSTALLATION AND REINSTALLATION WORK FOR ANY PLUMBING, CEILING (TAKE DOWN AND REINSTALLATION), ELECTRICAL, TELEPHONE COMMUNICATION EQUIPMENT OR HVAC WORK ON FLOOR, ABOVE OR BELOW TENANT SPACE TO COMPLETE WORK ON FLOOR BEING RENOVATED.

H. THE GENERAL CONTRACTOR AGREES TO PAY ALL VERTICAL AND HORIZONTAL TRANSPORTATION CHARGES ON ALL HIS MATERIAL OR EQUIPMENT TO THE POINT OF USE, AND SHALL BE RESPONSIBLE FOR ALL UNLOADING, CHECKING AND STORING OF SAME IN CONNECTION WITH THIS CONTRACT.

I. THE GENERAL CONTRACTOR SHALL, AT THE TENANT'S DISCRETION, UTILIZE THE A.I.A. STANDARD FORM FOR REQUESTS FOR PAYMENT AND FOLLOW ALL GUIDELINES ASSOCIATED THEREWITH.

J. ALL CORRESPONDENCE TO THE TENANT,, BUILDING OWNER OR TO TMA SHALL BE IN WRITING FORWARDED IN COPY TO THE OTHER PARTY.

k. THE GENERAL CONTRACTOR AND OR CONSTRUCTION MANAGER HIS SUBCONTRACTOR, AND ANY OTHER CONTRACTOR INVOLVED IN THIS PROJECT SHALL TAKE NOTE THAT ANY COST CAUSED BY DEFECTIVE OR ILL-TIMED WORK, AS A RESULT OF, BUT NOT LIMITED TO INFERIOR WORKMANSHIP OR MATERIALS, IMPROPER SCHEDULING OR DELINQUENT ORDERING SHALL BE BORNE BY THE PARTY RESPONSIBLE THEREFORE.

1.1.2 RELATED DOCUMENTS

A. THE GENERAL CONDITIONS OF THE CONTRACT FOR THE CONSTRUCTION OF BUILDINGS, STANDARD FORM OF THE AMERICAN INSTITUTE OF ARCHITECTS, CURRENT EDITION, SHALL APPLY TO ALL WORK IN THIS CONTRACT, EXCEPT AS SPECIFICALLY MODIFIED UNDER CONTRACT, EXCEPT AS SPECIFICALLY MODIFIED UNDER SUPPLEMENTARY CONDITIONS AND/OR BY AGREEMENT. WHEREVER THE TERM "ARCHITECT" IS USED IN THIS FORM IT SHALL BE UNDERSTOOD THAT THE TERM "DESIGNER" SHALL BE SUBSTITUTED. WHEREEVER THE TERM "CONTRACTOR" IS USED IT SHALL BE UNDERSTOOD THAT THE TERM "GENERAL CONTRACTOR" OR "CONSTRUCTION MANAGER" SHALL BE SUBSTITUTED.

1.1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. AS PER CONTRACT DOCUMENTS.

1.1.4 SEQUENCE

A. IF ANY MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE UNCOVERED DURING REMOVAL OR CONSTRUCTION WORK, NOTIFY THE OWNER IN WRITING. THE BUILDING OWNER IS RESPONSIBLE TO DETERMINE THE EXTENT OF THE AFFECTED AREA, AND ARRANGE FOR IT TO BE SEALED OFF UNTIL INVESTIGATION, AND ASBESTOS REMOVAL IF NECESSARY, HAS BEEN COMPLETED IN COMPLIANCE WITH EPA REQUIREMENTS. WORK IN OTHER AREAS, DETERMINED BY THE OWNER TO BE ASBESTOS-FREE, SHALL CONTINUE WHILE THIS IS BEING DONE. INVESTIGATION AND ABATEMENT OF ASBESTOS WILL BE DONE UNDER A SEPARATE CONTRACT BY THE OWNER, AND IS NOT INCLUDED IN WORK OF THIS CONTRACT.

B. THE GENERAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF THE TENANT'S CONTRACTOR(S). PROVIDE ON-SITE FACILITIES FOR THE TENANT'S CONTRACTORS ENGAGED BY THE OWNER.

1.1.5 DRAWINGS AND SPECIFICATIONS

A. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.

B. THE GENERAL CONTRACTOR UPON ACCEPTANCE AND APPROVAL OF THE DRAWINGS ASSUMES FULL RESPONSIBILITY FOR THE CONSTRUCTION. MATERIALS AND WORKMANSHIP OF THE WORK DESCRIBED IN THESE NOTES AND DRAWINGS, AND HE WILL BE EXPECTED TO COMPLY WITH THE SPIRIT AS WELL AS THE LETTER IN WHICH THEY WERE WRITTEN.

1.1.6 CONTRACTOR USES OF PREMISES

A. LANDLORD/BUILDING OWNER REQUIREMENTS FOR ALL ALTERATIONS SHALL APPLY TO ALL WORK AS REQUIRED. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO FAMILIARIZE HIMSELF WITH THEM.

B. ALL CONTRACTORS SHALL CONTACT THE BUILDING MANAGEMENT TO DETERMINE THE RULES OF THE BUILDING OWNER FOR CONSTRUCTION, TO DETERMINE WHEN AND HOW DELIVERIES CAN BE MADE, WHAT PHASES OF CONSTRUCTION CAN BE DONE ON REGULAR OR OVERTIME, AND IN GENERAL, ANY SPECIAL BUILDING REQUIREMENTS WHICH WILL AFFECT THEIR WORK. (IF OVER-TIME WORK IS REQUIRED BY ANY TRADE, APPROVAL MUST BE OBTAINED PRIOR TO THE EXECUTION OF ANY WORK, INCLUDING COST). THE GENERAL INTENT IS THAT MOST CONSTRUCTION SHALL BE DONE ON REGULAR TIME.

C. EACH CONTRACTOR SHALL MAKE ALL REQUIRED ARRANGEMENTS FOR DELIVERY OF EQUIPMENT AND/OR MATERIALS. IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO CHECK THE RULES AND REGULATIONS GOVERNING WORK ON THE PREMISES, INCLUDING THE FOLLOWING:

1. DATE AND TIME OF DELIVERY SHALL BE ESTABLISHED IN CONJUNCTION WITH THE PERSON HAVING JURISDICTION OVER THE PREMISES (OVERTIME CHARGES AND/OR ANY NECESSARY EXPENSES SHALL BE PAID BY CONTRACTOR REQUIRING SERVICES).

2. BUILDING CONDITIONS INCLUDING SIZE AND LOADING CAPACITY OF ELEVATORS, SIZE OF DOORWAYS, CORRIDORS, WINDOW OPENINGS, ETC. SHALL BE CHECKED FOR ITEMS BEING DELIVERED BY THE CONTRACTOR REQUESTING DELIVERY.

3. ALL CHARGES INVOLVING THE INSTALLATION AND/OR OPERATION OF A HOIST SYSTEM IF REQUIRED, SHALL BE BORNE BY THE CONTRACTOR USING THE SYSTEM. CHARGES INVOLVING THE TEMPORARY REMOVAL AND REINSTALLATION OF WINDOW SASH AND/OR FIXED PANELS REQUIRED FOR DELIVERY SHALL BE BORNE BY THE CONTRACTOR.

4. ALL SPECIAL "BUILDING STANDARD" METHODS OF CONSTRUCTION SHALL BE CONFIRMED BY THE CONTRACTOR.

D. THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS, BOTH FROM HIS OWN AND ALL OTHER SUBCONTRACTORS' EMPLOYEES, INCLUDING THAT RUBBISH WHICH IS A BY-PRODUCT OF OTHER TENANT CONTRACTORS.

E. THE CONTRACTOR TO PROVIDE ALL NECESSARY PROTECTION FOR FLOORS, WALLS, ETC., AND FOR EXISTING ITEMS TO REMAIN. THE GENERAL CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE INCURRED TO THE SAME BY THE TRADES AND WILL BE OBLIGATED TO REPLACE OR RESTORE TO ITS ORIGINAL CONDITION AS DETERMINED BY TMA.

F. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION AND SECURITY FOR HIS WORK UNTIL TURNED OVER TO THE CLIENT.

G. ALL REQUIRED EXITS, WAY OF APPROACH THERETO, AND WAY OF TRAVEL FROM THE EXIT INTO THE STREET SHALL CONTINUOUSLY BE MAINTAINED FREE FROM ALL OBSTRUCTIONS AND IMPEDIMENTS FOR UNOBSTRUCTED EGRESS IN THE CASE OF FIRE OR OTHER EMERGENCY, FIRE EXTINGUISHERS MUST BE AVAILABLE ON THE SITE DURING CONSTRUCTION.

H. DURING THE ENTIRE PERIOD OF DEMOLITION AND CONSTRUCTION, ALL EXISTING EXITS, EXIT LIGHTING, FIRE PROTECTIVE DEVICES AND ALARMS SHALL BE CONSPICUOUSLY POSTED.

I. DURING THE ENTIRE PERIOD OF CONSTRUCTION, THE TELEPHONE NUMBERS OF THE CLOSEST AVAILABLE PHYSICIANS, HOSPITALS, OR AMBULANCES SHALL BE CONSPICUOUSLY POSTED.

J. ONE TOILET FOR EACH SEX SHALL BE UTILIZED FOR CONSTRUCTION PERSONNEL AND ALL OTHERS LOCKED FOR THE PERIOD OF CONSTRUCTION. THE GENERAL CONTRACTOR TO PROVIDE A THOROUGH CLEANING OF ALL TOILET FACILITIES PRIOR TO RELEASING PREMISES TO THE TENANT.

1.1.7 LABOR AND MATERIALS

A. PROVIDE AND PAY FOR LABOR, MATERIALS, EQUIPMENT, TOOLS, UTILITIES, TRANSPORTATION, HOISTING, ELEVATOR CHARGES, BUILDING MECHANICAL AND ELECTRICAL SHUTDOWNS, TESTING OF NEW OR ALTERED SYSTEMS, FIRE WATCH FOR WELDING, STANDBY BUILDING ENGINEERING SERVICES, SPRINKLER TIE-INS AND OTHER FACILITIES AND SERVICES NECESSARY FOR THE EXECUTIVE AND COMPLETION OF THE WORK.

B. UNLESS OTHERWISE NOTED, ALL MATERIAL, EQUIPMENT, ETC. SHALL BE FURNISHED AND INSTALLED BY THE GENERAL CONTRACTOR.

C. GENERAL PRODUCT REQUIREMENTS: PROVIDE PRODUCTS THAT COMPLY WITH THE CONTRACT DOCUMENTS, THAT ARE UNDAMAGED AND,UNLESS OTHERWISE INDICATED, THAT ARE NEW AT TIME OF INSTALLATION.

D. THE USE OF THE TERM "APPROVED EQUAL" IN CONNECTION WITH ANY ITEM SPECIFIED, IS INTENDED TO MEAN, THAT SUCH SHALL BE OF EQUAL QUALITY, FINISH AND MATERIAL. THE SUBSTITUTIONS SHALL BE SUBMITTED, IN WRITTEN FORM, TO TMA FOR APPROVAL.

E. THE TERMS "PROVIDE", OR "PROVIDED" IN CONNECTION WITH ANY ITEM SPECIFIED, IS INTENDED TO MEAN, THAT SUCH SHALL BE FURNISHED, INSTALLED, AND CONNECTED WHERE SO REQUIRED.

F. MOVE IN AND OCCUPANCY LABOR REQUIREMENTS: THE GENERAL CONTRACTOR AND OR CONSTRUCTION MANAGER SHALL PROVIDE THE COST FOR THE FOLLOWING ADDITIONAL LABOR BROKEN DOWN BY TRADE IN THE PRICING AND OR BID PROPOSALS AS AN "ADD ALTERNATE" A AND IT SHOULD BE INDICATED AS A SEPARATE LINE ITEM.

1. PROCEED WITH THE WORK ONLY IF THE "ADD ALTERNATE" IS ACCEPTED BY TENANT/OWNER AS PART OF THE BASE PRICING/BID PROPOSAL AND AS DIRECTED BY TENANT/OWNER TO FACILITATE MOVE IN AND OCCUPANCY.

   a. ELECTRICIAN: PROVIDE FOR TWO MAN-DAYS, FRIDAY NIGHT AND SATURDAY, ON "STANDBY" TO COORDINATE TELEPHONE AND OTHER EQUIPMENT TESTING AND INSTALLATION OF SYSTEMS FURNITURE.

1.1.8 APPLICABLE CODES

A. CONTRACTOR SHALL SECURE AND PAY FOR THE BUILDING PERMIT AND ALL OTHER PERMITS AND GOVERNMENTAL FEES LICENSES, CONTROLLED INSPECTIONS, SIGNOFFS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK WHICH ARE CUSTOMARILY SECURED AFTER EXECUTION OF THE CONTRACT AND WHICH ARE LEGALLY REQUIRED.

B. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK AND SHALL NOTIFY THE ARCHITECT IN WRITING IF ANY PART OF THE CONTRACT DOCUMENTS IS OBSERVED TO BE AT VARIANCE WITH CODES.

C. THE CONTRACTOR SHALL CONFIRM THAT "VOLATILE ORGANIC COMPOUND" CONTENT OF COATINGS APPLIED UNDER ALL SECTIONS OF THESE SPECIFICATIONS IS LIMITED TO THE PERCENTAGE PRESCRIBED FOR FACTORY OR FOR FIELD APPLICATION BY THE AUTHORITIES HAVING JURISDICTION IN THOSE AREAS.

1.1.9 CONSTRUCTION

A. PRIOR TO BEGINNING ANY WORK, THE GENERAL CONTRACTOR SHALL FURNISH A CONSTRUCTION SCHEDULE SHOWING THE CHRONOLOGICAL PHASES OF HIS WORK, AND ALL RELATED WORK FOR THE COMPLETION OF THE PROJECT. THIS SCHEDULE SHALL INDICATE ALL ORDERING LEAD TIME, LENGTH OF TIME FOR EACH PHASE, ITS START AND COMPLETION, WITH A PROJECTED COMPLETION DATE.

B. THE CONTRACTOR SHALL SUPPLY SAMPLES AND/OR CUTS OF ALL MATERIALS, FIXTURES AND EQUIPMENT CALLED FOR ON TMA DRAWINGS, (I.E., LIGHT FIXTURES, HARDWARE, ETC.) FOR APPROVAL.

C. CONTRACTORS SHALL ASSUME RESPONSIBILITY FOR DISCREPANCIES IN THEIR DRAWINGS. THE CONTRACTOR SHALL PROVIDE TEMPORARY UTILITY SERVICES (LIGHTING, HEATING, POWER, WATER, SECURITY, TELEPHONE, ETC.) INCLUDING A SCHEDULE INDICATING IMPLEMENTATION AND TERMINATION OF EACH TEMPORARY SERVICE.

D. ESTABLISH REFERENCE LINE AND BENCHMARKS FOR USE BY ALL TRADES IN SETTING OUT WORK AND DETERMINING ELEVATIONS.

1.1.10 RECORD DOCUMENT SUBMITTALS

A. RECORD DRAWINGS: MAINTAIN A CLEAN, UNDAMAGED SET OF REPRODUCIBLE PRINTS OF A. CONTRACT DRAWINGS AND SHOP DRAWINGS. MARK THE SET TO SHOW THE ACTUAL INSTALLATION WHERE THE INSTALLATION VARIES SUBSTANTIALLY FROM THE WORK AS ORIGINALLY SHOWN. MARK WHICH DRAWING IS MOST CAPABLE OF SHOWING CONDITIONS FULLY AND ACCURATELY. WHERE SHOP DRAWINGS ARE USED, RECORD A CROSS-REFERENCE AT THE CORRESPONDING LOCATION ON THE CONTRACT DRAWINGS. GIVE PARTICULAR ATTENTION TO CONCEALED ELEMENTS THAT WOULD BE DIFFICULT TO MEASURE AND RECORD AT A LATER DATE.

1. MARK RECORD SETS WITH RED ERASABLE PENCIL. USE OTHER COLORS TO DISTINGUISH BETWEEN VARIATIONS IN SEPARATE CATEGORIES OF THE WORK.

2. MARK NEW INFORMATION THAT IS IMPORTANT TO THE OWNER BUT WAS NOT SHOWN ON CONTRACT DRAWINGS OR SHOP DRAWINGS, INCLUDING EQUIPMENT, DUCTWORK, LIGHTING AND ELECTRICAL CIRCUITRY WORK (INCLUDING NUMBERS, CIRCUIT PANELS AND OTHER UTILITY SERVICE ITEMS.

3. NOTE RELATED CHANGE-ORDER NUMBERS WHERE APPLICABLE.

4. ORGANIZE RECORD DRAWING SHEETS INTO MANAGEABLE SETS. BIND SETS WITH DURABLE- PAPER COVER SHEETS; PRINT SUITABLE TITLES, DATES, AND OTHER IDENTIFICATION ON THE COVER OF EACH SET.

1.1.11 TEMPORARY FACILITIES

A. GENERAL: COST OR USE CHARGES FOR TEMPORARY FACILITIES ARE NOT CHARGEABLE TO OWNER OR ARCHITECT AND SHALL BE INCLUDED IN THE CONTRACT SUM. ALLOW OTHER ENTITIES TO USE TEMPORARY SERVICES AND FACILITIES WITHOUT COST, INCLUDING, BUT NOT LIMITED TO, OWNER'S CONSTRUCTION FORCES, OCCUPANTS OF PROJECT, ARCHITECT, TESTING AND INSPECTING AGENCIES AND PERSONNEL OF AUTHORITIES HAVING JURISDICTION.

1. ERECTED TEMPORARY, PARTITIONS, ENCLOSURES AND BARRICADES SHALL NOT UNDERMINE OR REDUCE THE LIFE SAFETY OF THE OWNER/TENANT OR BUILDING OCCUPANT OR INTERRUPT THE USE OF THE SPACE, FLOOR OR BUILDING. COMPLY WITH REQUIREMENTS OF BUILDING CODES AND OSHA REGULATIONS LATEST CHAPTERS RELATING TO THE PROTECTIONS AND SAFEGUARDS DURING CONSTRUCTION OPERATIONS AS PART OF THIS PROJECT.

2. TEMPORARY PARTITIONS, ENCLOSURES AND BARRICADES DELINEATED ON THE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DEMONSTRATE THE ARCHITECT UNDERSTANDING OF OWNER/TENANT SPACE, FLOOR OR BUILDING OCCUPANCY.

   a. THE CONTRACTOR SHALL SCHEDULE PRE-CONSTRUCTION MEETING WITH THE OWNER/TENANT, OWNER'S REPRESENTATIVE, ARCHITECT AND ANY OTHER PARTY IS IMPACTED BY THE TEMPORARY FACILITIES.

   b. ITEMS COVERED BY THE PRE-CONSTRUCTION MEETING INCLUDES, ASSEMBLY TYPE, LOCATION, FILING WITH AHJ IF REQUIRED, FIRE RATING, LIFE SAFETY TO PROPERTY, PERSONNEL AND OCCUPANCY AND PHASING.

   c. MINUTES OF THE PRE-CONSTRUCTION MEETING SHALL BE BY THE CONTRACTOR AND DOCUMENT ACCEPTED TEMPORARY FACILITIES ITEMS COVERED IN ITEM "b" AND SHALL BE DISTRIBUTED TO ALL PARTIES.

   d. ARCHITECT BASED ON THE PRE-CONSTRUCTION MEETING MINUTES, WILL ISSUE FIELD DIRECTIVE IF LOCATION TEMPORARY PARTITIONS ARE DIFFERENT THAN SHOWN ON THE BID CONSTRUCTION DOCUMENTS. DETAILED CONSTRUCTION DRAWINGS OF BARRICADES, TEMPORARY FACILITIES AND ENCLOSURES OTHER THAN TEMPORARY PARTITIONS, INCLUDING ANY FILING AND PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

B. TEMPORARY PARTITIONS: ERECT AND MAINTAIN DUSTPROOF PARTITIONS AND TEMPORARY ENCLOSURES TO LIMIT DUST AND DIRT MIGRATION AND TO SEPARATE AREAS OCCUPIED BY OWNER/TENANT FROM FUMES AND NOISE.

C. CONSTRUCT DUSTPROOF FLOOR-TO-CEILING PARTITIONS OF NOT LESS THAN 2 1/2-INCHE METAL STUDS OF 20 GAGE THICKNESS PLACED 16 INCHES ON CENTER OR METAL STUDS SIZE USED ON THE PROJECT. METAL STUDS DEFLECTION CRITERIA SHALL BE L/240 WITH 13 FEET AS THE MAXIMUM SPAN ALLOWED FOR 2 1/2-INCHES STUDS. INSTALL 5/8-INCH GYPSUM WALLBOARD WITH JOINTS TAPED ON OCCUPIED SIDE, AND 1/2-INCHES FIRE-RETARDANT PLYWOOD ON CONSTRUCTION SIDE. FOR SPANS MORE THAN 13 FEET LIMITING HEIGHT OF METAL STUDS SHALL BE PER ASTM C754AND PER MANUFACTURER WRITTEN SPECIFICATIONS.

2. AT CONTRACTORS OPTION TO SUBSTITUTE 1/2-INCHE FIRE-RETARDANT PLYWOOD WITH 5/8-INCHES GYPSUM WALL BOARD ON CONSTRUCTION SIDE.
3. TEMPORARY PARTITION CAN REMAIN PART OF THE PROJECT IF CONSTRUCTED AND LOCATED TO MEET FINAL PARTITION FINISH LEVEL AND ASSEMBLY INDICATED ON THE CONSTRUCTION DRAWINGS AND IS ACCEPTABLE TO THE ARCHITECT UPON INSPECTION PRIOR TO APPLICATION OF FINISHED MATERIALS.
4. WHERE DESIGN INTENT DOCUMENTED INDICATE NO CEILINGS, TEMPORARY PARTITION TO BE ERECTED FROM FLOOR-TO UNDERSIDE OF SLAB ABOVE WITH SAME MATERIALS DESCRIBED IN ITEM 1 AND OR 1a ABOVE.

D. WHEN PORTION OF THE FLOOR IS UNOCCUPIED, PUBLIC CORRIDORS AND PATH OF ACCESS TO STAIRS OF OCCUPANTS IN OCCUPIED AREAS OF THE FLOOR SHALL BE SEPARATED FROM THAT UNOCCUPIED PORTIONS OF THE FLOOR BY A TEMPORARY PARTITIONS WITH A MINIMUM OF ONE HOUR FIRE RESISTIVE CONSTRUCTION FLOOR TO UNDERSIDE OF SLAB ABOVE AS PER BUILDING CODE. GYPSUM WALLBOARD FOR FIRE RESISTIVE PARTITION ASSEMBLIES SHALL BE 5/8-INCHES TYPE "X". THE ENTIRE PARTITION ASSEMBLY SHALL CARRY TESTED UL LABEL AND DESIGN NUMBER.

1. UNOCCUPIED PORTION OF A FLOOR IS DEFINED AS UNFINISHED BARE CONSTRUCTION WITH NO HUMAN OCCUPANCY OR USE.

E. SEAL JOINTS AND PERIMETER. EQUIP PARTITIONS WITH DUSTPROOF DOORS AND SECURITY LOCKS.

F. PROTECT AIR-HANDLING EQUIPMENT AND DO NOT UNDERMINE THE PERFORMANCE OF EXISTING AIR HVAC SYSTEM.

G. PROVIDE WALK-OFF MATS AT EACH ENTRANCE THROUGH TEMPORARY PARTITION.

H. WATER SERVICE: USE WATER FROM OWNER'S EXISTING WATER SYSTEM WITHOUT METERING AND WITHOUT PAYMENT OF USE CHARGES.

I. ELECTRIC POWER SERVICE: USE ELECTRIC POWER FROM OWNER'S EXISTING SYSTEM WITH METERING AND WITH PAYMENT OF USE CHARGES. CHARGES OF ELECTRIC USE SAHLL BE BORN BY THE TENANT FOR THE DURATION OF CONSTRUCTION OPERATIONS

J. FIRE EXTINGUISHERS: HAND CARRIED, PORTABLE, UL RATED. PROVIDE CLASS AND EXTINGUISHING AGENT AS INDICATED OR A COMBINATION OF EXTINGUISHERS OF NFPA-RECOMMENDED CLASSES FOR EXPOSURES.

1. DEVELOP AND SUPERVISE AN OVERALL FIRE-PREVENTION AND FIRST-AID FIRE-PROTECTION PROGRAM FOR PERSONNEL AT PROJECT SITE. REVIEW NEEDS WITH LOCAL FIRE DEPARTMENT AND ESTABLISH PROCEDURES TO BE FOLLOWED. INSTRUCT PERSONNEL IN METHODS AND PROCEDURES. POST WARNINGS AND INFORMATION.
2. LOCATE FACILITIES WHERE THEY WILL SERVE PROJECT ADEQUATELY AND RESULT IN MINIMUM INTERFERENCE WITH PERFORMANCE OF THE WORK. RELOCATE AND MODIFY FACILITIES AS REQUIRED.

K. SANITARY FACILITIES: COMPLY WITH LOCAL REGULATIONS AND HEALTH CODES FOR TYPE, NUMBER, LOCATION, OPERATION, AND MAINTENANCE OF FIXTURES AND FACILITIES.

1. DISPOSABLE SUPPLIES: PROVIDE TOILET TISSUE, PAPER TOWELS, PAPER CUPS, AND SIMILAR DISPOSABLE MATERIALS FOR EACH FACILITY. MAINTAIN ADEQUATE SUPPLY. PROVIDE COVERED WASTE CONTAINERS FOR DISPOSAL OF USED MATERIAL.

2. TOILETS: OBTAIN OWNER'S APROVAL FOR USE OF OWNER'S EXISTING TOILET FACILITIES. EXISTING FACILITIES SHALL BE CLEANED AND MAINTAINED IN A CONDITION ACCEPTABLE TO OWNER. AT SUBSTANTIAL COMPLETION, RESTORE THESE FACILITIES TO CONDITION EXISTING BEFORE INITIAL USE.

L. DRINKING-WATER FACILITIES: PROVIDE BOTTLED-WATER, DRINKING-WATER UNITS.

M. HEATING AND COOLING: PROVIDE TEMPORARY HEATING AND COOLING REQUIRED BY CONSTRUCTION ACTIVITIES FOR CURING OR DRYING OF COMPLETED INSTALLATIONS OR FOR PROTECTING INSTALLED CONSTRUCTION FROM ADVERSE EFFECTS OF LOW TEMPERATURES OR HIGH HUMIDITY. SELECT EQUIPMENT FROM THAT SPECIFIED THAT WILL NOT HAVE A HARMFUL EFFECT ON COMPLETED INSTALLATIONS OR ELEMENTS BEING INSTALLED.

N. MAINTAIN A MINIMUM TEMPERATURE OF 50 DEG F IN PERMANENTLY ENCLOSED PORTIONS OF BUILDING FOR NORMAL CONSTRUCTION ACTIVITIES, AND 65 DEG F FOR FINISHING ACTIVITIES AND AREAS WHERE FINISHED WORK HAS BEEN INSTALLED.

O. VENTILATION AND HUMIDITY CONTROL: PROVIDE TEMPORARY VENTILATION REQUIRED BY CONSTRUCTION ACTIVITIES FOR CURING OR DRYING OF COMPLETED INSTALLATIONS OR FOR PROTECTING INSTALLED CONSTRUCTION FROM ADVERSE EFFECTS OF HIGH HUMIDITY. SELECT EQUIPMENT FROM THAT SPECIFIED THAT WILL NOT HAVE A HARMFUL EFFECT ON COMPLETED INSTALLATIONS OR ELEMENTS BEING INSTALLED. COORDINATE VENTILATION REQUIREMENTS TO PRODUCE AMBIENT CONDITION REQUIRED AND MINIMIZE ENERGY CONSUMPTION.

P. LIGHTING: PROVIDE TEMPORARY LIGHTING WITH LOCAL SWITCHING THAT PROVIDES ADEQUATE ILLUMINATION FOR CONSTRUCTION OPERATIONS AND TRAFFIC CONDITIONS. INSTALL AND OPERATE TEMPORARY LIGHTING THAT FULFILLS SECURITY AND PROTECTION REQUIREMENTS WITHOUT OPERATING ENTIRE SYSTEM.

1. PROVIDE ONE 100-W INCANDESCENT LAMP PER 500 SQ. FT. UNIFORMLY DISTRIBUTED, FOR GENERAL LIGHTING, OR EQUIVALENT ILLUMINATION.

2. PROVIDE ONE 100-W INCANDESCENT LAMP EVERY 50 FEET IN TRAFFIC AREAS.

3. PROVIDE ONE 100-W INCANDESCENT LAMP PER STORY IN STAIRWAYS AND LADDER RUNS, LOCATED TO ILLUMINATE EACH LANDING AND FLIGHT.

Q. TELEPHONE SERVICE: PROVIDE TEMPORARY TELEPHONE SERVICE THROUGHOUT CONSTRUCTION PERIOD FOR COMMON-USE FACILITIES USED BY ALL PERSONNEL ENGAGED IN CONSTRUCTION ACTIVITIES. INSTALL SEPARATE TELEPHONE LINE FOR EACH FIELD OFFICE AND FIRST-AID STATION.

1. AT EACH TELEPHONE, POST A LIST OF IMPORTANT TELEPHONE NUMBERS, INCLUDING POLICE AND FIRE DEPARTMENTS, AMBULANCE SERVICE, CONTRACTOR'S HOME OFFICE, ARCHITECT'S OFFICE, ENGINEERS' OFFICES, OWNER'S OFFICE AND PRINCIPAL SUBCONTRACTORS' FIELD AND HOME OFFICES.

2. PROVIDE A PORTABLE CELLULAR TELEPHONE FOR SUPERINTENDENT'S USE IN MAKING AND RECEIVING TELEPHONE CALLS WHEN AWAY FROM FIELD OFFICE.

R. EXISTING ELEVATOR USAGE: USE OF OWNER'S EXISTING DESIGNATED ELEVATOR (S) WILL BE PERMITTED, AS LONG AS ELEVATOR (S) ARE CLEANED AND MAINTAINED IN A CONDITION ACCEPTABLE TO OWNER. AT SUBSTANTIAL COMPLETION, RESTORE ELEVATORS TO CONDITION EXISTING BEFORE INITIAL USE,

1. PROVIDE PROTECTIVE COVERINGS, BARRIERS, DEVICES, SIGNS, OR OTHER PROCEDURES TO PROTECT ELEVATOR CAR AND ENTRANCE DOORS AND FRAME. IF, DESPITE SUCH PROTECTION, ELEVATORS BECOME DAMAGED, ENGAGE ELEVATOR INSTALLER TO RESTORE DAMAGED WORK SO NO EVIDENCE REMAINS OF CORRECTION WORK. RETURN ITEMS THAT CANNOT BE REFINISHED IN FIELD TO THE SHOP, MAKE REQUIRED REPAIRS AND REFINISH ENTIRE UNIT, OR PROVIDE NEW UNITS AS REQUIRED.

S. EXISTING STAIR USAGE: USE OF OWNER'S EXISTING STAIRS WILL BE PERMITTED, AS LONG AS STAIRS ARE CLEANED AND MAINTAINED IN A CONDITION ACCEPTABLE TO OWNER. AT SUBSTANTIAL COMPLETION, RESTORE STAIRS TO CONDITION EXISTING BEFORE INITIAL USE.

1. DO NOT USE STAIRS FOR STORAGE OF ANY MATERIALS. PROVIDE PROTECTIVE COVERINGS, BARRIERS, DEVICES, SIGNS, OR OTHER PROCEDURES TO PROTECT STAIRS AND TO MAINTAIN MEANS OF EGRESS. IF, DESPITE SUCH PROTECTION, STAIRS BECOME DAMAGED, RESTORE DAMAGED AREAS SO NO EVIDENCE REMAINS OF CORRECTION WORK.

1.1.12 MAINTENANCE MANUAL

A. COORDINATE INFORMATION GIVING RECOMMENDATIONS FOR ROUTINE MAINTENANCE OF FINISHED SURFACES.

B. INCLUDE GUARANTEES AND WARRANTIES CALLED FOR AND OPERATING, SEQUENCE OF OPERATION AND MAINTENANCE INSTRUCTIONS SUBMITTED FOR EQUIPMENT.

C. SUBMIT TO OWNER IN DUPLICATE.

1.1.13 APPROVALS

A. THE CONTRACTOR, SUBCONTRACTORS AND TENANT'S CONTRACTORS SHALL SUBMIT CERTIFICATES UPON COMPLETION OF WORK, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. FIREPROOF OR FIRE RETARDANT WOOD TEST REPORT.
2. ELECTRICAL, PLUMBING, AIR CONDITIONING, AND SPRINKLER SIGNOFF ISSUED BY:
   a. DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY (OR APPROPRIATE AGENCY).
   b. BOARD OF FIRE UNDERWRITERS.

1.1.14 PERSONNEL SAFETY

A. THE CONTRACTOR SHALL SUPPLY AND MAINTAIN A CURRENT INVENTORY OF ALL C

1.0 GENERAL REQUIREMENTS

1.2.3 SUBMITTAL PROCEDURES

A. COORDINATION: COORDINATE PREPARATION AND PROCESSING OF SUBMITTALS WITH PERFORMANCE OF CONSTRUCTION ACTIVITIES. TRANSMIT EACH SUBMITTAL SUFFICIENTLY IN ADVANCE OF PERFORMANCE OF RELATED CONSTRUCTION ACTIVITIES TO AVOID DELAY.

1. COORDINATE EACH SUBMITTAL WITH FABRICATION, PURCHASING, TESTING, DELIVERY, OTHER SUBMITTALS, AND RELATED ACTIVITIES THAT REQUIRE SEQUENTIAL ACTIVITY.

2. COORDINATE TRANSMITTAL OF DIFFERENT TYPES OF SUBMITTALS FOR RELATED ELEMENTS OF THE WORK SO PROCESSING WILL NOT BE DELAYED BY THE NEED TO REVIEW SUBMITTALS CONCURRENTLY FOR COORDINATION.

   a. THE ARCHITECT RESERVES THE RIGHT TO WITHHOLD ACTION ON A SUBMITTAL REQUIRING COORDINATION WITH OTHER SUBMITTALS UNTIL ALL RELATED SUBMITTALS ARE RECEIVED.

3. PROCESSING: TO AVOID THE NEED TO DELAY INSTALLATION AS A RESULT OF THE TIME REQUIRED TO PROCESS SUBMITTALS, ALLOW SUFFICIENT TIME FOR SUBMITTAL REVIEW, INCLUDING TIME FOR RESUBMITTALS.

   a. NO EXTENSION OF CONTRACT TIME WILL BE AUTHORIZED BECAUSE OF FAILURE TO TRANSMIT SUBMITTALS TO THE ARCHITECT SUFFICIENTLY IN ADVANCE OF THE WORK TO PERMIT PROCESSING.

B. SUBMITTAL TRANSMITTAL: PACKAGE EACH SUBMITTAL APPROPRIATELY FOR TRANSMITTAL AND HANDLING. TRANSMIT EACH SUBMITTAL FROM THE CONTRACTOR TO THE ARCHITECT USING A TRANSMITTAL FORM. THE ARCHITECT WILL NOT ACCEPT SUBMITTALS RECEIVED FROM SOURCES OTHER THAN THE CONTRACTOR.

C. ON THE TRANSMITTAL, RECORD RELEVANT INFORMATION AND REQUESTS FOR DATA. ON THE FORM, OR SEPARATE SHEET, RECORD DEVIATIONS FROM CONTRACT DOCUMENT REQUIREMENTS, INCLUDING VARIATIONS AND LIMITATIONS. INCLUDE CONTRACTOR'S CERTIFICATION THAT INFORMATION COMPLIES WITH CONTRACT DOCUMENT REQUIREMENTS.

1.2.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. BAR-CHART SCHEDULE: PREPARE A FULLY DEVELOPED, HORIZONTALBAR-CHART-TYPE, CONTRACTOR'S CONSTRUCTION SCHEDULE. SUBMIT WITHIN ONE WEEK AFTER THE DATE ESTABLISHED FOR "COMMENCEMENT OF THE WORK."

1. PROVIDE A SEPARATE TIME BAR FOR EACH SIGNIFICANT CONSTRUCTION ACTIVITY. PROVIDE A CONTINUOUS VERTICAL LINE TO IDENTIFY THE FIRST WORKING DAY OF EACH WEEK.
2. WITHIN EACH TIME BAR, INDICATE ESTIMATED COMPLETION PERCENTAGE IN 10 PERCENT INCREMENTS. AS WORK PROGRESSES, PLACE A CONTRASTING MARK IN EACH BAR TO INDICATE ACTUAL COMPLETION.
3. PREPARE THE SCHEDULE ON A SHEET, OR SERIES OF SHEETS, OF STABLE TRANSPARENCY, OR OTHER REPRODUCIBLE MEDIA, OF SUFFICIENT WIDTH TO SHOW DATA FOR THE ENTIRE CONSTRUCTION PERIOD.
4. SECURE TIME COMMITMENTS FOR PERFORMING CRITICAL ELEMENTS OF THE WORK FROM PARTIES INVOLVED. COORDINATE EACH ELEMENT ON THE SCHEDULE WITH OTHER CONSTRUCTION ACTIVITIES; INCLUDE MINOR ELEMENTS INVOLVED IN THE SEQUENCE OF THE WORK. SHOW EACH ACTIVITY IN PROPER SEQUENCE. INDICATE GRAPHICALLY THE SEQUENCES NECESSARY FOR COMPLETION OF RELATED PORTIONS OF THE WORK.
5. COORDINATE THE CONTRACTOR'S CONSTRUCTION SCHEDULE WITH THE SCHEDULE OF VALUES, LIST OF SUBCONTRACTS, SUBMITTAL SCHEDULE, PROGRESS REPORTS, PAYMENT REQUESTS, AND OTHER SCHEDULES.
6. INDICATE COMPLETION IN ADVANCE OF THE DATE ESTABLISHED FOR SUBSTANTIAL COMPLETION. INDICATE SUBSTANTIAL COMPLETION ON THE SCHEDULE TO ALLOW TIME FOR THE ARCHITECT'S PROCEDURES NECESSARY FOR CERTIFICATION OF SUBSTANTIAL COMPLETION.

B. PHASING: ON THE SCHEDULE, SHOW HOW REQUIREMENTS FOR PHASED COMPLETION TO PERMIT WORK BY SEPARATE CONTRACTORS AND PARTIAL OCCUPANCY BY THE OWNER AFFECT THE SEQUENCE OF WORK.

C. WORK STAGES: INDICATE IMPORTANT STAGES OF CONSTRUCTION FOR EACH MAJOR PORTION OF THE WORK, INCLUDING SUBMITTAL REVIEW, TESTING, AND INSTALLATION.

D. AREA SEPARATIONS: PROVIDE A SEPARATE TIME BAR TO IDENTIFY EACH MAJOR CONSTRUCTION AREA FOR EACH MAJOR PORTION OF THE WORK. INDICATE WHERE EACH ELEMENT IN AN AREA MUST BE SEQUENCED OR INTEGRATED WITH OTHER ACTIVITIES.

E. DISTRIBUTION: FOLLOWING RESPONSE TO THE INITIAL SUBMITTAL, PRINT AND DISTRIBUTE COPIES TO THE ARCHITECT, OWNER, SUBCONTRACTORS, AND OTHER PARTIES REQUIRED TO COMPLY WITH SCHEDULED DATES. POST COPIES IN THE PROJECT MEETING ROOM AND TEMPORARY FIELD OFFICE.

F. WHEN REVISIONS ARE MADE, DISTRIBUTE TO THE SAME PARTIES AND POST IN THE SAME LOCATIONS. DELETE PARTIES FROM DISTRIBUTION WHEN THEY HAVE COMPLETED THEIR ASSIGNED PORTION OF THE WORK AND ARE NO LONGER INVOLVED IN CONSTRUCTION ACTIVITIES.

G. SCHEDULE UPDATING: REVISE THE SCHEDULE AFTER EACH MEETING, EVENT, OR ACTIVITY WHERE REVISIONS HAVE BEEN RECOGNIZED OR MADE. ISSUE THE UPDATED SCHEDULE CONCURRENTLY WITH THE REPORT OF EACH MEETING.

1.2.5 SUBMITTAL SCHEDULE

A. AFTER DEVELOPMENT AND ACCEPTANCE OF THE CONTRACTOR'S CONSTRUCTION SCHEDULE, PREPARE A COMPLETE SCHEDULE OF SUBMITTALS. SUBMIT THE SCHEDULE WITHIN ONE WEEK OF THE DATE REQUIRED FOR SUBMITTAL OF THE CONTRACTOR'S CONSTRUCTION SCHEDULE.

1. COORDINATE SUBMITTAL SCHEDULE WITH THE LIST OF SUBCONTRACTS, SCHEDULE OF VALUES, AND THE LIST OF PRODUCTS AS WELL AS THE CONTRACTOR'S CONSTRUCTION SCHEDULE.

B. DISTRIBUTION: FOLLOWING RESPONSE TO THE INITIAL SUBMITTAL, PRINT AND DISTRIBUTE COPIES TO THE ARCHITECT, OWNER, SUBCONTRACTORS, AND OTHER PARTIES REQUIRED TO COMPLY WITH SUBMITTAL DATES INDICATED. POST COPIES IN THE PROJECT MEETING ROOM AND FIELD OFFICE.

1. WHEN REVISIONS ARE MADE, DISTRIBUTE TO THE SAME PARTIES AND POST IN THE SAME LOCATIONS. DELETE PARTIES FROM DISTRIBUTION WHEN THEY HAVE COMPLETED THEIR ASSIGNED PORTION OF THE WORK AND ARE NO LONGER INVOLVED IN CONSTRUCTION ACTIVITIES.

C. SCHEDULE UPDATING: REVISE THE SCHEDULE AFTER EACH MEETING OR ACTIVITY WHERE REVISIONS HAVE BEEN RECOGNIZED OR MADE. ISSUE THE UPDATED SCHEDULE CONCURRENTLY WITH THE REPORT OF EACH MEETING.

1.2.6 SHOP DRAWINGS

A. SUBMIT NEWLY PREPARED INFORMATION DRAWN ACCURATELY TO SCALE. HIGHLIGHT, ENCIRCLE, OR OTHERWISE INDICATE DEVIATIONS FROM THE CONTRACT DOCUMENTS. DO NOT REPRODUCE CONTRACT DOCUMENTS OR COPY STANDARD INFORMATION AS THE BASIS OF SHOP DRAWINGS. STANDARD INFORMATION PREPARED WITHOUT SPECIFIC REFERENCE TO THE PROJECT IS NOT A SHOP DRAWING.

B. SHOP DRAWINGS INCLUDE FABRICATION AND INSTALLATION DRAWINGS, SETTING DIAGRAMS, SCHEDULES, PATTERNS, TEMPLATES AND SIMILAR DRAWINGS. INCLUDE THE FOLLOWING INFORMATION:

1. DIMENSIONS.
2. IDENTIFICATION OF PRODUCTS AND MATERIALS INCLUDED BY SHEET AND DETAIL NUMBER.
3. COMPLIANCE WITH SPECIFIED STANDARDS.
4. NOTATION OF COORDINATION REQUIREMENTS.
5. NOTATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT.

C. CEILING CAVITY: ALL WORK CONTAINED IN ALL CEILING CAVITIES SHALL BE SIMULTANEOUSLY REPRESENTED ON A SINGLE DRAWING TO CONFIRM THAT ALL TRADES "FIT" WITHIN THE ALLOTTED SPACE AND ALL CONFLICTS SHALL BE RESOLVED PRIOR TO SUBMITTING SHOP DRAWINGS FOR ARCHITECT/ENGINEER REVIEW AND PRIOR TO EXECUTING ANY WORK WITHIN THE CEILING CAVITY. WITH LIGHTING FIXTURES AND OTHER CEILING MOUNTED DEVICES SHALL BE RESOLVED PRIOR TO SUBMITTING SHOP DRAWINGS FOR ARCHITECT/ENGINEER REVIEW AND PRIOR TO EXECUTING ANY WORK WITHIN THE CEILING CAVITY. SUBMIT COMPOSITE COORDINATION DRAWINGS NOT LESS THAN THE SCALE OF 1/2" = 1'-0". REPRODUCE AND DISTRIBUTE REVIEWED COPIES TO ALL CONCERNED PARTIES.

D. TECHNOLOGY ROOMS: COMPUTER INFORMATION ROOMS RAISED ACCESS FLOOR CAVITY: ALL WORK CONTAINED IN RAISED ACCESS FLOOR CAVITIES SHALL BE SIMULTANEOUSLY REPRESENTED ON A SINGLE DRAWING TO CONFIRM THAT ALL TRADES "FIT" WITHIN THE ALLOTTED SPACE AND ALL CONFLICTS SHALL BE RESOLVED PRIOR TO SUBMITTING SHOP DRAWINGS FOR ARCHITECT/ENGINEER REVIEW AND PRIOR TO EXECUTING ANY WORK WITHIN THE RAISED ACCESS FLOOR CAVITY. SUBMIT COMPOSITE COORDINATION DRAWINGS NOT LESS THAN THE SCALE OF 1/2" = 1'-0". REPRODUCE AND DISTRIBUTE REVIEWED COPIES TO ALL CONCERNED PARTIES.

E. SUBMITTAL: SUBMIT ONE CORRECTABLE, TRANSLUCENT, REPRODUCIBLE PRINT AND ONE BLUE- OR BLACK-LINE PRINT FOR THE ARCHITECT'S REVIEW. THE ARCHITECT WILL RETURN THE REPRODUCIBLE PRINT.

1. WHEN AGREED TO BY ALL PARTIES, ALTERNATE ELECTRONIC FORMAT SUBMITTAL AS A PDF FILE IS ACCEPTABLE IN ADDITION TO BLACK LINE PRINT. THE ARCHITECT WILL RETURN MARKED-UP SUBMITTAL IN ELECTRONIC PDF FORMAT ONLY.

F. ALL APPROVALS SHALL BE FOR DESIGN APPEARANCE ONLY. CONTACTOR(S) SHALL BE RESPONSIBLE FOR QUANTITIES, DIMENSIONS AND COMPLIANCE WITH CONTRACT DOCUMENTS, AND FOR INFORMATION PERTAINING TO FABRICATION PROCESS OR TECHNIQUES OF FIRST CLASS CONSTRUCTION AND FOR COORDINATION WITH OTHER TRADES.

1.2.7 PRODUCT DATA

A. COLLECT PRODUCT DATA INTO A SINGLE SUBMITTAL FOR EACH ELEMENT OF CONSTRUCTION OR SYSTEM. PRODUCT DATA INCLUDES PRINTED INFORMATION, SUCH AS MANUFACTURER'S INSTALLATION INSTRUCTIONS, CATALOG CUTS, STANDARD COLOR CHARTS, ROUGHING-IN DIAGRAMS AND TEMPLATES, STANDARD WIRING DIAGRAMS, AND PERFORMANCE CURVES.

1. MARK EACH COPY TO SHOW APPLICABLE CHOICES AND OPTIONS. WHERE PRINTED PRODUCT DATA INCLUDES INFORMATION ON SEVERAL PRODUCTS THAT ARE NOT REQUIRED, MARK COPIES TO INDICATE THE APPLICABLE INFORMATION. INCLUDE THE FOLLOWING INFORMATION:

   a. MANUFACTURER'S PRINTED RECOMMENDATIONS.

   b. COMPLIANCE WITH TRADE ASSOCIATION STANDARDS.

   c. COMPLIANCE WITH RECOGNIZED TESTING AGENCY STANDARDS.

   d. APPLICATION OF TESTING AGENCY LABELS AND SEALS.

   e. NOTATION OF DIMENSIONS VERIFIED BY FIELD MEASUREMENT.

   f. NOTATION OF COORDINATION REQUIREMENTS.

2. DO NOT SUBMIT PRODUCT DATA UNTIL COMPLIANCE WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS HAS BE CONFIRMED.

3. DISTRIBUTION: FURNISH COPIES OF FINAL SUBMITTAL TO INSTALLERS, SUBCONTRACTORS, SUPPLIERS, MANUFACTURERS, FABRICATORS, AND OTHERS REQUIRED FOR PERFORMANCE OF CONSTRUCTION ACTIVITIES. SHOW DISTRIBUTION ON TRANSMITTAL FORMS.

   a. DO NOT PROCEED WITH INSTALLATION UNTIL A COPY OF PRODUCT DATA IS IN THE INSTALLER'S POSSESSION.

   b. DO NOT PERMIT USE OF UNMARKED COPIES OF PRODUCT DATA IN CONNECTION WITH CONSTRUCTION.

1.2.8 SAMPLES

A. WHERE PRODUCTS ARE ACCOMPANIED BY THE TERM "MATCH SAMPLE,"SAMPLE TO BE MATCHED IS ARCHITECT'S.

B. SUBMIT FULL-SIZE, FULLY FABRICATED SAMPLES CURED AND FINISHED AS SPECIFIED AND PHYSICALLY IDENTICAL WITH THE MATERIAL OR PRODUCT PROPOSED. SAMPLES INCLUDE PARTIAL SECTIONS OF MANUFACTURED OR FABRICATED COMPONENTS, CUTS OR CONTAINERS OF MATERIALS, COLOR RANGE SETS, AND SWATCHES SHOWING COLOR, TEXTURE, AND PATTERN.

1. MOUNT OR DISPLAY SAMPLES IN THE MANNER TO FACILITATE REVIEW OF QUALITIES INDICATED. PREPARE SAMPLES TO MATCH THE ARCHITECT'S SAMPLE. INCLUDE THE FOLLOWING:

   a. SPECIFICATION SECTION NUMBER AND REFERENCE.

   b. GENERIC DESCRIPTION OF THE SAMPLE.

   c. SAMPLE SOURCE.

   d. PRODUCT NAME OR NAME OF THE MANUFACTURER.

   e. COMPLIANCE WITH RECOGNIZED STANDARDS.

   f. AVAILABILITY AND DELIVERY TIME.

2. SUBMIT SAMPLES FOR REVIEW OF SIZE, KIND, COLOR, PATTERN, AND TEXTURE. SUBMIT SAMPLES FOR A FINAL CHECK OF THESE CHARACTERISTICS WITH OTHER ELEMENTS AND A COMPARISON OF THESE CHARACTERISTICS BETWEEN THE FINAL SUBMITTAL AND THE ACTUAL COMPONENT AS DELIVERED AND INSTALLED.

   a. WHERE VARIATION IN COLOR, PATTERN, TEXTURE, OR OTHER CHARACTERISTIC IS INHERENT IN THE MATERIAL OR PRODUCT REPRESENTED, SUBMIT AT LEAST 3 MULTIPLE UNITS THAT SHOW APPROXIMATE LIMITS OF THE VARIATIONS.

   b. SAMPLES THAT ILLUSTRATE WORKMANSHIP, FABRICATION TECHNIQUES, DETAILS OF ASSEMBLY, CONNECTIONS, OPERATION, AND SIMILAR CONSTRUCTION CHARACTERISTICS.

   c. SAMPLES TO BE RETURNED TO THE CONTRACTOR FOR INCORPORATION IN THE WORK. SUCH SAMPLES MUST BE UNDAMAGED AT TIME OF USE. ON THE TRANSMITTAL, INDICATE SPECIAL REQUESTS REGARDING DISPOSITION OF SAMPLE SUBMITTALS.

   d. SAMPLES NOT INCORPORATED INTO THE WORK, OR OTHERWISE DESIGNATED AS THE OWNER'S PROPERTY, ARE THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE PRIOR TO SUBSTANTIAL COMPLETION.

3. PRELIMINARY SUBMITTALS: SUBMIT A FULL SET OF CHOICES WHERE SAMPLES ARE SUBMITTED FOR SELECTION OF COLOR, PATTERN, TEXTURE, OR SIMILAR CHARACTERISTICS FROM A RANGE OF STANDARD CHOICES.

   a. THE ARCHITECT WILL REVIEW AND RETURN PRELIMINARY SUBMITTALS WITH THE ARCHITECT'S NOTATION, INDICATION SELECTION AND OTHER ACTION.

4. SUBMITTALS: EXCEPT FOR SAMPLES ILLUSTRATING ASSEMBLY DETAILS, WORKMANSHIP, FABRICATION TECHNIQUES, CONNECTIONS, OPERATION, AND SIMILAR CHARACTERISTICS, SUBMIT 3 SETS. THE ARCHITECT WILL RETURN ONE SET MARKED WITH THE ACTION TAKEN.

5. MAINTAIN SETS OF SAMPLES, AS RETURNED, AT THE PROJECT SITE, FOR QUALITY COMPARISONS THROUGHOUT THE COURSE OF CONSTRUCTION.

   a. UNLESS NONCOMPLIANCE WITH CONTRACT DOCUMENT PROVISIONS IS OBSERVED, THE SUBMITTAL MAY SERVE AS THE FINAL SUBMITTAL.

   b. SAMPLE SETS MAY BE USED TO OBTAIN FINAL ACCEPTANCE OF THE CONSTRUCTION ASSOCIATED WITH EACH SET.

6. DISTRIBUTION OF SAMPLES: PREPARE AND DISTRIBUTE ADDITIONAL SETS TO SUBCONTRACTORS, MANUFACTURERS, FABRICATORS, SUPPLIERS, INSTALLERS, AND OTHERS AS REQUIRED FOR PERFORMANCE OF THE WORK. SHOW DISTRIBUTION ON TRANSMITTAL FORMS.

   a. FIELD SAMPLES ARE FULL-SIZE EXAMPLES ERECTED ON-SITE TO ILLUSTRATE FINISHES, COATINGS, OR FINISH MATERIALS AND TO ESTABLISH THE PROJECT STANDARD.

   b. COMPLY WITH SUBMITTAL REQUIREMENTS TO THE FULLEST EXTENT POSSIBLE. PROCESS TRANSMITTAL FORMS TO PROVIDE A RECORD OF ACTIVITY.

1.2.9 QUALITY ASSURANCE SUBMITTALS

A. SUBMIT QUALITY-CONTROL SUBMITTALS, INCLUDING DESIGN DATA, CERTIFICATIONS, MANUFACTURER'S INSTRUCTIONS, MANUFACTURER'S FIELD REPORTS, AND OTHER QUALITY-CONTROL SUBMITTALS AS REQUIRED UNDER OTHER SECTIONS OF THE SPECIFICATIONS.

B. CERTIFICATIONS: WHERE OTHER SECTIONS OF THE SPECIFICATIONS REQUIRE CERTIFICATION THAT A PRODUCT, MATERIAL, OR INSTALLATION COMPLIES WITH SPECIFIED REQUIREMENTS, SUBMIT A NOTARIZED CERTIFICATION FROM THE MANUFACTURER CERTIFYING COMPLIANCE WITH SPECIFIED REQUIREMENTS.

C. SIGNATURE: CERTIFICATION SHALL BE SIGNED BY AN OFFICER OF THE MANUFACTURER OR OTHER INDIVIDUAL AUTHORIZED TO SIGN DOCUMENTS ON BEHALF OF THE COMPANY.

D. INSPECTION AND TEST REPORTS: REQUIREMENTS FOR SUBMITTAL OF INSPECTION AND TEST REPORTS FROM INDEPENDENT TESTING AGENCIES ARE INDICATED ON SHEET G-001 UNDER "REGULATORY INFORMATION".

1.2.10 PRODUCT WARRANTIES

A. WARRANTIES: MANUFACTURER'S DISCLAIMERS AND LIMITATIONS ON PRODUCT WARRANTIES DO NOT RELIEVE CONTRACTOR OF OBLIGATIONS UNDER REQUIREMENTS OF THE CONTRACT DOCUMENTS.

1. MANUFACTURER'S WARRANTY: PREPRINTED WRITTEN WARRANTY PUBLISHED BY INDIVIDUAL MANUFACTURER FOR A PARTICULAR PRODUCT AND SPECIFICALLY ENDORSED BY MANUFACTURER TO OWNER FOR A PERIOD OF 1 YEAR.

B. SUBMITTAL TIME: SUBMIT WRITTEN WARRANTIES ON REQUEST OF ARCHITECT FOR DESIGNATED PORTIONS OF THE WORK WHERE COMMENCEMENT OF WARRANTIES OTHER THAN DATE OF SUBSTANTIAL COMPLETION IS INDICATED.

C. PARTIAL OCCUPANCY: SUBMIT PROPERLY EXECUTED WARRANTIES WITHIN 15 DAYS OF COMPLETION OF DESIGNATED PORTIONS OF THE WORK THAT ARE COMPLETED AND OCCUPIED OR USED BY OWNER DURING CONSTRUCTION PERIOD BY SEPARATE AGREEMENT WITH CONTRACTOR.

D. ORGANIZE WARRANTY DOCUMENTS INTO AN ORDERLY SEQUENCE BASED ON THE TABLE OF CONTENTS OF THE PROJECT MANUAL.

1. PROVIDE HEAVY PAPER DIVIDERS WITH PLASTIC-COVERED TABS FOR EACH SEPARATE WARRANTY. MARK TAB TO IDENTIFY THE PRODUCT OR INSTALLATION. PROVIDE A TYPED DESCRIPTION OF THE PRODUCT OR INSTALLATION, INCLUDING THE NAME OF THE PRODUCT AND THE NAME, ADDRESS, AND TELEPHONE NUMBER OF INSTALLER.

E. PROVIDE ADDITIONAL COPIES OF EACH WARRANTY TO INCLUDE IN OPERATION AND MAINTENANCE MANUALS.

1.2.11 ARCHITECT'S ACTION

A. EXCEPT FOR SUBMITTALS FOR THE RECORD OR INFORMATION, WHERE ACTION AND RETURN IS REQUIRED, THE ARCHITECT WILL REVIEW EACH SUBMITTAL, MARK TO INDICATE ACTION TAKEN, AND RETURN PROMPTLY.

1. COMPLIANCE WITH SPECIFIED CHARACTERISTICS IS THE CONTRACTOR'S RESPONSIBILITY.

B. ACTION STAMP: THE ARCHITECT WILL STAMP EACH SUBMITTAL WITH A UNIFORM, ACTION STAMP. THE ARCHITECT WILL MARK THE STAMP APPROPRIATELY TO INDICATE THE ACTION TAKEN, AS FOLLOWS:

1. FINAL UNRESTRICTED RELEASE: WHEN THE ARCHITECT MARKS A SUBMITTAL "A" ACTION -"APPROVED", THE WORK COVERED BY THE SUBMITTAL MAY PROCEED PROVIDED IT COMPLIES WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.

2. FINAL-BUT-RESTRICTED RELEASE: WHEN THE ARCHITECT MARKS A SUBMITTAL "B" ACTION - "APPROVED AS NOTED", THE WORK COVERED BY THE SUBMITTAL MAY PROCEED PROVIDED IT COMPLIES WITH NOTATIONS OR CORRECTIONS ON THE SUBMITTAL AND REQUIREMENTS OF THE CONTRACT DOCUMENTS. NO RESUBMITTAL FOR RECORD REQUIRED UNLESS "REVISE AND RESUBMIT FOR RECORD ONLY" ACTION IS MARKED. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.

3. RETURNED FOR RESUBMITTAL: WHEN THE ARCHITECT MARKS A SUBMITTAL "C" ACTION - "REVISE AND RESUBMIT," DO NOT PROCEED WITH WORK COVERED BY THE SUBMITTAL, INCLUDING PURCHASING, FABRICATION, DELIVERY, OR OTHER ACTIVITY. REVISE OR PREPARE A NEW SUBMITTAL ACCORDING TO THE NOTATIONS; RESUBMIT WITHOUT DELAY. REPEAT IF NECESSARY TO OBTAIN DIFFERENT ACTION MARK. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.

   a. DO NOT USE, OR ALLOW OTHERS TO USE, SUBMITTALS MARKED "REVISE AND RESUBMIT" AT THE PROJECT SITE OR ELSEWHERE WHERE WORK IS IN PROGRESS.

4. FINAL-BUT-RESTRICTED RELEASE: WHEN THE ARCHITECT MARKS A SUBMITTAL "D" ACTION - "REVISE AND RESUBMIT FOR RECORD ONLY," THE WORK COVERED BY THE SUBMITTAL MAY PROCEED PROVIDED IT COMPLIES WITH NOTATIONS OR CORRECTIONS ON THE SUBMITTAL AND REQUIREMENTS OF THE CONTRACT DOCUMENTS. RECORD SUBMITTAL IS REQUIRED OF CORRECTED AND NOTED ITEMS. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.

5. RETURNED FOR RESUBMITTAL: WHEN THE ARCHITECT MARKS A SUBMITTAL "E" ACTION – "SUBMIT SPECIFIED ITEM," THE PRODUCT SUBMITTED OR PART OF THE SUBMITTAL IS A SUBSTITUTION. DO NOT PROCEED WITH WORK OR PART OF THE WORK NOTED AS SUCH BY THE SUBMITTAL INCLUDING PURCHASING, FABRICATION, DELIVERY, OR OTHER ACTIVITY. REVISE OR PREPARE A NEW SUBMITTAL WITH THE PRODUCT SPECIFIED IN THE CONTRACT DOCUMENTS; RESUBMIT WITHOUT DELAY. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.

   a. DO NOT USE, OR ALLOW OTHERS TO USE, SUBMITTALS MARKED "SUBMIT SPECIFIED ITEM" AT THE PROJECT SITE OR ELSEWHERE WHERE WORK IS IN PROGRESS.

6. RETURNED FOR RESUBMITTAL: WHEN THE ARCHITECT MARKS A SUBMITTAL "F" ACTION - "REJECTED", THE WORK COVERED BY THE SUBMITTAL IS NOT IN COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS. THE SUBMITTAL WILL BE RETURN WITH ACTION "SUBMIT SPECIFIED ITEM" MARKED AS WELL. CONTRACTOR TO PREPARE A NEW SUBMITTAL. NO COMMENTS OR NOTATIONS MADE. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.

   a. DO NOT USE, OR ALLOW OTHERS TO USE, SUBMITTALS MARKED "REJECTED" AT THE PROJECT SITE OR ELSEWHERE WHERE WORK IS IN PROGRESS.

7. OTHER ACTION: WHEN THE ARCHITECT MARKS A SUBMITTAL "G" ACTION - "REVIEWED FOR ARCHITECTURAL COORDINATION ONLY", THE ENGINEER/ CONSULTANT IS THE PRIMARY REVIEWER OF THE SUBMITTAL. THE ARCHITECT'S COMMENTS ARE ONLY FOR THE PURPOSE OF COORDINATION OF THE ARCHITECTURAL CONTRACT DOCUMENTS.

C. UNSOLICITED SUBMITTALS: THE ARCHITECT WILL RETURN UNSOLICITED SUBMITTALS TO THE SENDER WITHOUT ACTION.

1.3 CUTTING AND PATCHING

1.3.1 SUBMITTALS

A. CUTTING AND PATCHING PROPOSAL: SUBMIT A PROPOSAL DESCRIBING PROCEDURES WELL IN ADVANCE OF THE TIME CUTTING AND PATCHING WILL BE PERFORMED IF THE OWNER REQUIRES APPROVAL OF THESE PROCEDURES BEFORE PROCEEDING. REQUEST APPROVAL TO PROCEED. INCLUDE THE FOLLOWING INFORMATION, AS APPLICABLE, IN THE PROPOSAL:

1. DESCRIBE THE EXTENT OF CUTTING AND PATCHING REQUIRED. SHOW HOW IT WILL BE PERFORMED AND INDICATE WHY IT CANNOT BE AVOIDED.
2. DESCRIBE ANTICIPATED RESULTS IN TERMS OF CHANGES TO EXISTING CONSTRUCTION. INCLUDE CHANGES TO STRUCTURAL ELEMENTS AND OPERATING COMPONENTS AS WELL AS CHANGES IN THE BUILDING'S APPEARANCE AND OTHER SIGNIFICANT VISUAL ELEMENTS.
3. UTILITIES: LIST UTILITIES THAT CUTTING AND PATCHING PROCEDURES WILL DISTURB OR AFFECT. LIST UTILITIES THAT WILL BE RELOCATED AND THOSE THAT WILL BE TEMPORARILY OUT-OF-SERVICE. INDICATE HOW LONG SERVICE WILL BE DISRUPTED.
4. WHERE CUTTING AND PATCHING INVOLVES ADDING REINFORCEMENT TO STRUCTURAL ELEMENTS, SUBMIT DETAILS AND ENGINEERING CALCULATIONS SHOWING INTEGRATION OF REINFORCEMENT WITH THE ORIGINAL STRUCTURE.
5. THE ARCHITECT'S REVIEW OF AREAS TO BE CUT AND PATCHED IS FOR VISUAL IMPACT ONLY. THE ARCHITECT'S REVIEW OF THESE AREAS DOES NOT WAIVE THE ARCHITECT'S RIGHT TO LATER REQUIRE COMPLETE REMOVAL AND REPLACEMENT OR A PART OF THE WORK FOUND TO BE UNSATISFACTORY.

1.3.2 QUALITY ASSURANCE

A. REQUIREMENTS FOR STRUCTURAL WORK: DO NOT CUT AND PATCH STRUCTURAL ELEMENTS IN A MANNER THAT WOULD CHANGE THEIR LOAD-CARRYING CAPACITY OR LOAD-DEFLECTION RATIO.

B. OPERATIONAL LIMITATIONS: DO NOT CUT AND PATCH OPERATING ELEMENTS OR RELATED COMPONENTS IN A MANNER THAT WOULD RESULT IN REDUCING THEIR CAPACITY TO PERFORM AS INTENDED. DO NOT CUT AND PATCH OPERATING ELEMENTS OR RELATED COMPONENTS IN A MANNER THAT WOULD RESULT IN INCREASED MAINTENANCE OR DECREASED OPERATIONAL LIFE OR SAFETY.

C. VISUAL REQUIREMENTS: DO NOT CUT AND PATCH CONSTRUCTION EXPOSED ON THE EXTERIOR OR IN OCCUPIED SPACES IN A MANNER THAT WOULD, IN THE ARCHITECT'S OPINION, REDUCE THE BUILDING'S AESTHETIC QUALITIES. DO NOT CUT AND PATCH CONSTRUCTION IN A MANNER THAT WOULD RESULT IN VISUAL EVIDENCE OF CUTTING AND PATCHING. REMOVE AND REPLACE CONSTRUCTION CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER.

1.3.3 WARRANTY

A. EXISTING WARRANTIES: REPLACE, PATCH, AND REPAIR MATERIAL AND SURFACES CUT OR DAMAGED BY METHODS AND WITH MATERIALS IN SUCH A MANNER AS NOT TO VOID ANY WARRANTIES REQUIRED OR EXISTING.

1.3.4 MATERIALS, GENERAL

A. USE MATERIALS IDENTICAL TO EXISTING MATERIALS. FOR EXPOSED SURFACES, USE MATERIALS THAT VISUALLY MATCH EXISTING ADJACENT SURFACES TO THE FULLEST EXTENT POSSIBLE IF IDENTICAL MATERIALS ARE UNAVAILABLE OR CANNOT BE USED. USE MATERIALS WHOSE INSTALLED PERFORMANCE WILL EQUAL OR SURPASSES THAT OF EXISTING MATERIALS.

1.3.5 INSPECTION

A. EXAMINE SURFACES TO BE CUT AND PATCHED AND CONDITIONS UNDER WHICH CUTTING AND PATCHING IS TO BE PERFORMED BEFORE CUTTING. IF UNSAFE OR UNSATISFACTORY CONDITIONS ARE ENCOUNTERED, TAKE CORRECTIVE ACTION BEFORE PROCEEDING.

1. BEFORE PROCEEDING, MEET AT THE PROJECT SITE WITH PARTIES INVOLVED IN CUTTING AND PATCHING, INCLUDING MECHANICAL AND ELECTRICAL TRADES. REVIEW AREAS OF POTENTIAL INTERFERENCE AND CONFLICT. COORDINATE PROCEDURES AND RESOLVE POTENTIAL CONFLICTS BEFORE PROCEEDING.

1.3.6 PREPARATION

A. TEMPORARY SUPPORT: PROVIDE TEMPORARY SUPPORT OF WORK TO BE CUT.

B. PROTECTION: PROTECT EXISTING CONSTRUCTION DURING CUTTING AND PATCHING TO PREVENT DAMAGE. PROVIDE PROTECTION FROM ADVERSE WEATHER CONDITIONS FOR PORTIONS OF THE PROJECT THAT MIGHT BE EXPOSED DURING CUTTING AND PATCHING OPERATIONS.

C. AVOID INTERFERENCE WITH USE OF ADJOINING AREAS OR INTERRUPTION OF FREE PASSAGE TO ADJOINING.

D. AVOID CUTTING EXISTING PIPE, CONDUIT, OR DUCTWORK SERVING THE BUILDING BUT SCHEDULED TO BE REMOVED OR RELOCATED UNTIL PROVISIONS HAVE BEEN MADE TO BYPASS THOSE AREAS.

1.3.7 PERFORMANCE

A. GENERAL: EMPLOY SKILLED WORKMEN TO PERFORM CUTTING AND PATCHING. PROCEED WITH CUTTING AND PATCHING AT THE EARLIEST FEASIBLE TIME AND COMPLETE WITHOUT DELAY.

1. CUT EXISTING CONSTRUCTION TO PROVIDE FOR INSTALLATION OF OTHER COMPONENTS OR PERFORMANCE OF OTHER CONSTRUCTION ACTIVITIES AND THE SUBSEQUENT FITTING AND PATCHING REQUIRED TO RESTORE SURFACES TO THEIR Original CONDITION.

B. CUTTING: CUT EXISTING CONSTRUCTION USING METHODS LEAST LIKELY TO DAMAGE ELEMENTS RETAINED OR ADJOINING CONSTRUCTION. WHERE POSSIBLE, REVIEW PROPOSED PROCEDURES WITH THE ORIGINAL INSTALLER; COMPLY WITH THE ORIGINAL INSTALLER'S RECOMMENDATIONS.

C. IN GENERAL, WHERE CUTTING, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING WHERE POSSIBLE, NEATLY TO SIZE REQUIRED, AND WITH MINIMUM DISTURBANCE OF ADJACENT SURFACES. TEMPORARILY COVER OPENINGS WHEN NOT IN USE.

D. WHERE SERVICES ARE REQUIRED TO BE REMOVED, RELOCATED, OR ABANDONED, BY-PASS UTILITY SERVICES, SUCH AS PIPE OR CONDUIT, BEFORE CUTTING. CUT-OFF PIP

2.0 CONSTRUCTION DRAWINGS

2.0.1 GENERAL

A. DRAWINGS AND GENERAL CONDITIONS OF THE CONTRACT ON SHEET G-002 APPLY TO ALL SECTIONS ON THIS SHEET AND THE ENTIRE CONSTRUCTION DOCUMENT SHEETS LISTED ON SHEET G-001.

B. REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS: IMMEDIATELY ON DISCOVERY OF THE NEED FOR CLARIFICATION OF THE CONTRACT DOCUMENTS, SUBMIT A REQUEST FOR INTERPRETATION TO ARCHITECT. INCLUDE A DETAILED DESCRIPTION OF PROBLEM ENCOUNTERED, TOGETHER WITH RECOMMENDATIONS FOR CHANGING THE CONTRACT DOCUMENTS. SUBMIT REQUESTS ON CSI FORM 13.2A, "REQUEST FOR INTERPRETATION." OR CONTRACTOR'S OWN TEMPLATE WITH COMPANY LETTERHEAD, ENTITLED "REQUEST FOR INTERPRETATION," AND INCLUDES THE PROJECT NAME AND LOCATION, TRADES REQUESTING INTERPRETATION, DATE OF REQUEST AND EXPECTED DATE OF INTERPRETATION FROM ARCHITEC/ENGINEER.

C. ARCHITECTURAL CONSTRUCTION DOCUMENTS ARE DIAGRAMMATIC IN NATURE AND DIMENSIONS SHALL BE FIGURED, DO NOT SCALE DRAWINGS. VERIFY SPACE REQUIREMENTS AND DIMENSIONS OF ITEMS SHOWN DIAGRAMMATICALLY ON DRAWINGS.

D. IN THE EVENT OF CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM OR BULLETINS, THE BETTER QUALITY QUALITY OR GREATER QUANTITY OF WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.

E. ALL DIMENSIONS SHOWN ARE TO ROUGH WALL AND PARTITION SURFACES UNLESS SPECIFICALLY OTHERWISE NOTED. ROUGH MEANS UNFINISHED SURFACES OF WALLS AND PARTITIONS PRIOR TO APPLICATION OR CLADDING OF FINISHED MATERIAL OR SHOP ASSEMBLED PRODUCT.

F. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATION. LARGE SCALE VIEWS TAKE PRECEDENT OVER SMALL SCALE VIEWS, DIMENSIONS ON DETAIL TAKE PRECEDENCE OVER DIMENSIONS ON SMALL SCALE PLAN.

2.0.2 SITE EXAMINATION

A. EXISTING CONDITIONS: THE EXISTENCE AND LOCATION OF SITE IMPROVEMENTS, UTILITIES, AND OTHER CONSTRUCTION INDICATED AS EXISTING ARE NOT GUARANTEED. BEFORE BEGINNING WORK, INVESTIGATE AND VERIFY THE EXISTENCE AND LOCATION OF MECHANICAL AND ELECTRICAL SYSTEMS AND OTHER CONSTRUCTION AFFECTING THE WORK.

1. BEFORE CONSTRUCTION, VERIFY THE LOCATION AND POINTS OF CONNECTION OF UTILITY SERVICES.

B. EXISTING UTILITIES: THE EXISTENCE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AND CONSTRUCTION INDICATED AS EXISTING ARE NOT GUARANTEED. BEFORE BEGINNING SITEWORK, INVESTIGATE AND VERIFY THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND OTHER CONSTRUCTION AFFECTING THE WORK.

1. BEFORE CONSTRUCTION, VERIFY THE LOCATION AND INVERT ELEVATION AT POINTS OF CONNECTION OF SANITARY SEWER, STORM SEWER, AND WATER-SERVICE PIPING; AND UNDERGROUND ELECTRICAL SERVICES.
2. FURNISH LOCATION DATA FOR WORK RELATED TO PROJECT THAT MUST BE PERFORMED BY PUBLIC UTILITIES SERVING PROJECT SITE.

C. ACCEPTANCE OF CONDITIONS: EXAMINE SUBSTRATES, AREAS, AND CONDITIONS, WITH INSTALLER OR APPLICATOR PRESENT WHERE INDICATED, FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE. RECORD OBSERVATIONS.

1. WRITTEN REPORT: PROVIDE A WRITTEN REPORT LISTING CONDITIONS DETRIMENTAL TO PERFORMANCE OF THE WORK, INCLUDE THE FOLLOWING:
   a. DESCRIPTION OF THE WORK.
   b. LIST OF DETRIMENTAL CONDITIONS, INCLUDING SUBSTRATES.
   c. LIST OF UNACCEPTABLE INSTALLATION TOLERANCES.
   d. RECOMMENDED CORRECTIONS.
2. VERIFY COMPATIBILITY WITH AND SUITABILITY OF SUBSTRATES, INCLUDING COMPATIBILITY WITH EXISTING FINISHES OR PRIMERS.
3. EXAMINE ROUGHING-IN FOR MECHANICAL AND ELECTRICAL SYSTEMS TO VERIFY ACTUAL LOCATIONS OF CONNECTIONS BEFORE EQUIPMENT AND FIXTURE INSTALLATION.
4. EXAMINE WALLS, FLOORS, AND ROOFS FOR SUITABLE CONDITIONS WHERE PRODUCTS AND SYSTEMS ARE TO BE INSTALLED.
5. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. PROCEEDING WITH THE WORK INDICATES ACCEPTANCE OF SURFACES AND CONDITIONS.

2.0.3 LAYOUT VERIFICATION

A. CONSTRUCTION LAYOUT:

1. VERIFICATION: BEFORE PROCEEDING TO LAY OUT THE WORK, VERIFY LAYOUT INFORMATION SHOWN ON DRAWINGS, IN RELATION TO THE BUILDING FOOTPRINT AND ANY EXISTING BENCHMARKS. IF DISCREPANCIES ARE DISCOVERED, NOTIFY ARCHITECT PROMPTLY.
   a. ESTABLISH BENCHMARKS AND CONTROL POINTS TO SET LINES AND LEVELS AT EACH STORY OF CONSTRUCTION AND ELSEWHERE AS NEEDED TO LOCATE EACH ELEMENT OF PROJECT.
   b. ESTABLISH DIMENSIONS WITHIN TOLERANCES INDICATED. DO NOT SCALE DRAWINGS TO OBTAIN REQUIRED DIMENSIONS.
   c. INFORM INSTALLERS OF LINES AND LEVELS TO WHICH THEY MUST COMPLY.
   d. CHECK THE LOCATION, LEVEL AND PLUMB, OF EVERY MAJOR ELEMENT AS THE WORK PROGRESSES.
   e. NOTIFY ARCHITECT WHEN DEVIATIONS FROM REQUIRED LINES AND LEVELS EXCEED ALLOWABLE TOLERANCES.
   f. BUILDING LINES AND LEVELS: LOCATE AND LAY OUT CONTROL LINES AND LEVELS FOR STRUCTURES, PARTITIONS, COLUMN GRIDS, AND FLOOR LEVELS, INCLUDING THOSE REQUIRED FOR MECHANICAL AND ELECTRICAL WORK. TRANSFER SURVEY MARKINGS AND ELEVATIONS FOR USE WITH CONTROL LINES AND LEVELS. LEVEL FOUNDATIONS AND PIERS FROM TWO OR MORE LOCATIONS.
2. RECORD LOG: MAINTAIN A LOG OF LAYOUT CONTROL WORK. RECORD DEVIATIONS FROM REQUIRED LINES AND LEVELS. INCLUDE BEGINNING AND ENDING DATES AND TIMES OF SURVEYS, WEATHER CONDITIONS, NAME AND DUTY OF EACH SURVEY PARTY MEMBER, AND TYPES OF INSTRUMENTS AND TAPES USED. MAKE THE LOG AVAILABLE FOR REFERENCE BY ARCHITECT.
3. REFERENCE POINTS: LOCATE EXISTING PERMANENT BENCHMARKS, CONTROL POINTS, AND SIMILAR REFERENCE POINTS BEFORE BEGINNING THE WORK. PRESERVE AND PROTECT PERMANENT BENCHMARKS AND CONTROL POINTS DURING CONSTRUCTION OPERATIONS.
   a. REPLACE LOST OR DESTROYED PERMANENT BENCHMARKS AND CONTROL POINTS PROMPTLY. BASE REPLACEMENTS ON THE ORIGINAL SURVEY CONTROL POINTS.
4. BENCHMARKS: ESTABLISH AND MAINTAIN A MINIMUM OF TWO PERMANENT BENCHMARKS ON PROJECT SITE, REFERENCED TO DATA ESTABLISHED BY SURVEY CONTROL POINTS.
   a. RECORD BENCHMARK LOCATIONS, WITH HORIZONTAL AND VERTICAL DATA, ON PROJECT RECORD DOCUMENTS.
   b. WHERE THE ACTUAL LOCATION OR ELEVATION OF LAYOUT POINTS CANNOT BE MARKED, PROVIDE TEMPORARY REFERENCE POINTS SUFFICIENT TO LOCATE THE WORK.
   c. REMOVE TEMPORARY REFERENCE POINTS WHEN NO LONGER NEEDED. RESTORE MARKED CONSTRUCTION TO ITS ORIGINAL CONDITION.

2.0.4 INSTALLATION GENERAL

A. GENERAL: LOCATE THE WORK AND COMPONENTS OF THE WORK ACCURATELY, IN CORRECT ALIGNMENT AND ELEVATION, AS INDICATED.

1. MAKE VERTICAL WORK PLUMB AND MAKE HORIZONTAL WORK LEVEL.
2. WHERE SPACE IS LIMITED, INSTALL COMPONENTS TO MAXIMIZE SPACE AVAILABLE FOR MAINTENANCE AND EASE OF REMOVAL FOR REPLACEMENT.
3. CONCEAL PIPES, DUCTS, AND WIRING IN FINISHED AREAS, UNLESS OTHERWISE INDICATED.
4. MAINTAIN MINIMUM HEADROOM CLEARANCE OF 8 FEET IN SPACES WITHOUT A SUSPENDED CEILING UNLESS SPECIFICALLY INDICATED ON DRAWINGS.
5. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS FOR INSTALLING PRODUCTS IN APPLICATIONS INDICATED.SHOULD MANUFACTURER'S INSTRUCTIONS CONFLICT WITH THE CONTRACT DOCUMENTS, REQUEST CLARIFICATION FROM ARCHITECT BEFORE PROCEEDING.
6. INSTALL PRODUCTS AT THE TIME AND UNDER CONDITIONS THAT WILL ENSURE THE BEST POSSIBLE RESULTS. MAINTAIN CONDITIONS REQUIRED FOR PRODUCT PERFORMANCE UNTIL SUBSTANTIAL COMPLETION.
7. CONDUCT CONSTRUCTION OPERATIONS SO NO PART OF THE WORK IS SUBJECTED TO DAMAGING OPERATIONS OR LOADING IN EXCESS OF THAT EXPECTED DURING NORMAL CONDITIONS OF OCCUPANCY.
8. DO NOT USE TOOLS OR EQUIPMENT THAT PRODUCE HARMFUL NOISE LEVELS.

2.0.5 TEMPLATES

A. OBTAIN AND DISTRIBUTE TO THE PARTIES INVOLVED TEMPLATES FOR WORK SPECIFIED TO BE FACTORY PREPARED AND FIELD INSTALLED. CHECK SHOP DRAWINGS OF OTHER WORK TO CONFIRM THAT ADEQUATE PROVISIONS ARE MADE FOR LOCATING AND INSTALLING PRODUCTS TO COMPLY WITH INDICATED REQUIREMENTS.

B. ANCHORS AND FASTENERS: PROVIDE ANCHORS AND FASTENERS AS REQUIRED TO ANCHOR EACH COMPONENT SECURELY IN PLACE, ACCURATELY LOCATED AND ALIGNED WITH OTHER PORTIONS OF THE WORK.

C. MOUNTING HEIGHTS: WHERE MOUNTING HEIGHTS ARE NOT INDICATED ON DRAWING ENTITLED "STANDARD DEVICES AND EQUIPMENT LOCATION," MOUNT COMPONENTS AT HEIGHTS DIRECTED BY ARCHITECT.

D. ALLOW FOR BUILDING MOVEMENT, INCLUDING THERMAL EXPANSION AND CONTRACTION.

E. COORDINATE INSTALLATION OF ANCHORAGES. FURNISH SETTING DRAWINGS, TEMPLATES, AND DIRECTIONS FOR INSTALLING ANCHORAGES, INCLUDING SLEEVES, CONCRETE INSERTS, ANCHOR BOLTS, AND ITEMS WITH INTEGRAL ANCHORS, THAT ARE TO BE EMBEDDED IN CONCRETE OR MASONRY. DELIVER SUCH ITEMS TO PROJECT SITE IN TIME FOR INSTALLATION.

F. JOINTS: MAKE JOINTS OF UNIFORM WIDTH. WHERE JOINT LOCATIONS IN EXPOSED WORK ARE NOT INDICATED, ARRANGE JOINTS FOR THE BEST VISUAL EFFECT. FIT EXPOSED CONNECTIONS TOGETHER TO FORM HAIRLINE JOINTS.

G. HAZARDOUS MATERIALS: USE PRODUCTS, CLEANERS, AND INSTALLATION MATERIALS THAT ARE NOT CONSIDERED HAZARDOUS.

2.1 CONSTRUCTION PLAN

2.1.1 GENERAL

A. FORMAL REVIEW AND APPROVAL REQUEST OF PARTITION LAYOUT SNAPPED LINES PRIOR TO INSTALLATION OF ANY TRACK AND STUD FRAMING AND FURNITURE SYSTEM IN OPEN AREAS HOLD MEASUREMENTS AND CLEARANCES IS REQUIRED. IF CORRECTIONS TO SNAPPED LINES AND FURNITURE SYSTEM OVERALL CLEARANCES ARE RAISED, PROMPTLY MAKE THE CORRECTIONS AS DIRECTED BY ARCHITECT WHILE AT THE PROJECT SITE OR SCHEDULE ANOTHER FORMAL REVIEW. SEQUENCE WILL BE REPEATED UNTIL FINAL APPROVAL OF SNAPPED LINES IS OBTAINED.

1. FURNITURE SYSTEM INSTALLER SHALL BE PRESENT ON SITE AND PROVIDE CONTRACTOR WITH THE REQUIRE FURNITURE SYSTEM CLEARANCES FOR THE CONTRATOR TO SNAP TRACK AND STUD FRAMING AFFECTED BY FURNITURE SYSTEM LAYOUT.
2. CONTRACTOR SHALL MARK UP THE PARTITION LAYOUT PLAN AND DOCUMENT ALL AGREED TO DIMENSIONS AND DESCRIPENCIES FROM COSTRUCTION DOCUMENTS BASED ON FIELD MEASUREMENTS AND CONDITIONS ENCOUNTERED. THE MARK-UP PARTITION LAYOUT PLAN SHOULD INCLUDE ADVERALL MEASUREMENTS OF OPEN AREAS WHERE FURNITURE SYSTEMS ARE TO BE INSTALLED. ELECTRONIC COPIES TO BE FORWARDED TO THE ARCHITECT FOR FORMAT WRITTEN APPROVAL.
3. UPON RECEIPT OF THE CONTRACTOR'S FIELD MEASURED PARTITION LAYOUT PLAN, THE ARCHITECT WILL ISSUE APPROVAL OF APPROVED PARTITION LAYOUT IN WRITING WITHIN 24 HOURS
4. THE ARCHITECT WILL DISTRIBUTE THE FIELD MEASURED AND APPROVED PARTITION LAYOUT PLAN TO ALL PROJECT TEAM AND OWNER FOR RECORD AND COORDINATION.

B. THE CONTRACTOR IS TO PROVIDE ALL SHORING, BARRICADES, AND TEMPORARY PARTITIONS TO ACCOMPLISH ALL WORK IN AN APPROVED AND SAFE MANNER AS PER AUTHORITY HAVING JURISDICTION CURRENT RULES, CODES AND REGULATIONS.

C. COORDINATE SPACE REQUIREMENTS AND INSTALLATION OF MECHANICAL AND ELECTRICAL WORK INDICATED ON THE DRAWINGS. FOLLOW ROUTING SHOWN ON THE DRAWINGS FOR PIPES, DUCTS, AND CONDUITS AS CLOSELY AS PRACTICABLE. PLACE RUNS PARALLEL WITH THE LINE OF THE BUILDING. UTILIZE SPACES EFFICIENTLY TO MAXIMIZE ACCESSIBILITY FOR OTHER INSTALLATIONS, MAINTENANCE, AND REPAIRS.

D. GENERAL CONTRACTOR OR CONSTRUCTION MANAGER SHALL PROVIDE GENERAL CARPENTRY AS REQUIRED FOR WORK WHICH MAY NOT FALL INTO JURISDICTION OF A SPECIFIC TRADE, BUT IS REQUIRED FOR PROPER JOB EXECUTION & COMPLETION OF CONSTRUCTION WORK DOCUMENTED HEREWITH.

E. IN FINISHED AREAS, CONCEAL PIPES, DUCTS, AND WIRING WITHIN THE CONSTRUCTION. COORDINATE LOCATIONS OF FIXTURES AND OUTLETS WITHIN FINISHED ASSEMBLIES. FINISHED AREAS MEANS OCCUPIED SPACES AND ROOMS INCLUDING PANTRIES, COPY ROOMS, STORAGE ROOMS, TECHNOLOGY ROOMS, COAT AND STORAGE CLOSETS AND SIMILAR SUPPORT SPACES. UNOCCUPIED AREA SUCH AS UTILITY SPACES INCLUDING MECHANICAL, ELECTRICAL AND TELEPHONE AND SIMILAR FUNCTION TYPE ROOMS AND SPACES.

F. DO NOT USE MATERIALS AND EQUIPMENT REMOVED FROM EXISTING PREMISES, EXCEPT AS SPECIFICALLY PERMITTED.

G. ITEMS NOTED "N.I.C." (NOT IN CONTRACT) WILL BE FURNISHED AND INSTALLED BY TENANT.

H. FIRE SAFETY EQUIPMENT AND THEIR ASSOCIATED CONDUIT AND WIRING SYSTEMS SHALL NOT BE MARRED DURING CONSTRUCTION AND SHALL BE PROTECTED FROM ANY PHYSICAL DAMAGE BY THE GENERAL CONTRACTOR AND OR CONSTRUCTION MANAGER AND THEIR SUBCONTRACTORS FOR THE DURATION OF THE PROJECT.

2.1.2 STRUCTURAL FLOOR SLAB

A. FLOOR SLAB X-RAY OR GROUND PENETRATING RADAR: THIS METHOD SHALL BE USED FOR POST TENSIONED AND ONE AND TWO-WAY CONCRETES SLABS; PRIOR TO CORING; OBTAIN BUILDING APPROVAL AND FOLLOW ALL BUILDING REGULATIONS & REQUIREMENTS FOR FLOOR CORES. REFER TO DRAWING G-003 SECTION 3 CUTTING AND PATCHING.

B. EXISTING ABANDONED FLOOR CORE DRILLS TO BE FILLED WITH CONCRETE MIX IN THICKNESS MATCHING CONCRETE SLAB AND FIRE RATING.

C. EXISTING EMPTY THROUGH FLOOR SLAB PENETRATIONS OR EXISTING PENETRATIONS WITH PIPING AND DUCT PENETRANTS THAT ARE IN USE BUT ARE NOT FIRESTOPPED AND ALL PENETRATIONS NEW CAUSED BY THE SCOPE OF THE NEW CONSTRUCTION ACTIVITIES SHALL BE FIRESTOPPED WITH APPROVED UL TESTED SYSTEM FOR PENETRATE TYPE AND FIRE RATING MATCHING STRUCTURAL FLOOR SLAB, REFER TO ARTICLE

D. WHEN NEW SCOPE CALLS FOR NEW STRUCTURAL CONCRETE SLAB IN-FILL, IN-FILL SHALL BE COMPATIBLE WITH EXISTING ADJACENT STRUCTURAL CONCRETE SLAB SCHEDULED TO REMAIN INCLUDING FIRE RATING, CONCRETE MIX AND REINFORCEMENT UNLESS OTHERWISE DIRECTED BY A PROFESSIONAL ENGINEER.

E. TRENCHING OR CHOPPING OF STRUCTURAL CONCRETE SLAB MAY UNDERMINE STRUCTURAL STABILITY AND FIRE RATING. DO NOT TRENCH OR CHOP EXISTING STRUCTURAL CONCRETE SLAB UNLESS INDICATED ON THE DRAWINGS OR DIRECTED BY THE ARCHITECT.

F. EXISTING CRACKS IN FLOOR SLAB 1/8 INCHES TO 1/4 INCHES WIDE THAT ARE NOT DEEMED STRUCTURAL BY A STRUCTURAL ENGINEER SHALL BE FILLED/REPARED AND THE SURFACE PATCHED SMOOTH AND LEVEL WITH ADJACENT FLOOR SLAB. CRACK FILLER SHALL BE REZI-WELD FLEX BY W.R. MEADOWS OR APPROVED EQUAL.

1. SCOPE OF FLOOR SLAB CRACK FILLER SHALL BE INCLUDED IN THE BID PROPOSAL. NO CHANGE ORDER WILL BE ACCEPTED FOR ANY CRACK FILLER WORK. REFER TO "GENERAL CONDITIONS" ARTICLE 1.1.1-SUMMARY, PARAGRAPH "C", "D", "E", "F" AND "K".

G. VARIATIONS IN FLOOR LEVEL IN EXCESS OF 1/4" FOR EVERY 10'-0" IN ANY DIRECTION SHALL BE LEVELED WITH ADJACENT FLOOR SLAB.

1. SCOPE OF FLOOR SLAB LEVELING SHALL BE INCLUDED IN THE BID PROPOSAL. NO CHANGE ORDER WILL BE ACCEPTED FOR ANY FLOOR LEVELING WORK. REFER TO "GENERAL CONDITIONS" ARTICLE 1.1.1-SUMMARY, PARAGRAPH "C", "D", "E", "F" AND "K".
2. IN THE ABSENCE OF ANY SPECIFIC NOTES ON THE CONSTRUCTION DRAWINGS FOR FLOOR LEVELING MATERIAL, ACCEPTABLE LEVELING MATERIAL SHALL BE LATICRETE 816 LATIPATCH OR ARDEX GPS GENERAL PATCH & SKIMCOAT.

2.1.3 WATERPROOFING

A. UNLESS SPECIFICALLY CALLED FOR AND INDICATED ON THE DRAWINGS OR IN THE ABSENCE OF SUCH SPECIFICATIONS PROVIDE ONE OF THE THE FOLLOWING WATERPROOFING PRODUCTS:

1. LATICRETE 9235 COMPLYING WITH ASTM C-672 WITH LATICRETE 125 SOUND AND CRACK ADHESIVE.
2. LATICRETE HYDROBAN WATERPROOFING AND ANTIFRACTURE MEMBRANE.

B. APPLICATION: APPLY WATERPROOFING ACCORDING TO ASTM C 898 AND MANUFACTURER'S WRITTEN INSTRUCTIONS TO HORIZONTAL AND VERTICAL SURFACES.

1. VERTICAL APPLICATION SHALL BE LIMITED TO A MINIMUM OF 4 INCHES THROUGH-OUT.

C. PROTECTION:

1. DO NOT PERMIT FOOT OR VEHICULAR TRAFFIC ON UNPROTECTED MEMBRANE.
2. PROTECT WATERPROOFING FROM DAMAGE AND WEAR DURING REMAINDER OF CONSTRUCTION PERIOD.

D. SCHEDULE: INSTALL WATERPROOFING PRODUCT BELOW:

1. RESILIENT TILE (STANDARD, CONDUCTIVE OR ANTISTATIC).
2. RESILIENT SHEETS (STANDARD, CONDUCTIVE OR ANTISTATIC).
3. CERAMIC TILE.
4. PORCELAIN TILE.
5. QUARRY TILE.
6. GLASS AND GLASS MOSAIC TILES.
7. PLASTIC AND METAL TILES.
8. STONE TILE AND DIMENSIONED STONE PANELS.
9. POURED TYPE TERRAZZO, TERRAZZO TILE OR PANELS.
10. PAVERS.

E. LOCATION: WHERE THE ABOVE LISTED MATERIALS IS SCHEDULED IN ROOMS AN SPACES NOT LIMITED TO THE FOLLOWING:

1. PANTRY ROOMS AND FOOD SERVICE TYPE ROOMS OR SPACES.
2. TOILET ROOMS-UNISEX, EXECUTIVE OR CORE TOILETS.
3. SHOWER ROOMS.
4. SPRINKLER ROOMS AND SPRINKLER PREACTION CLOSETS.
5. TECHNOLOGY ROOMS WITH FLOOR FINISH DIRECTLY APPLIED TO CONCRETE SUBSTRATE.

F. UNLESS SPECIFICALLY CALLED FOR AND INDICATED ON THE DRAWINGS OR IN THE ABSENCE OF SUCH SPECIFICATIONS PROVIDE WATERPROOFING/SEALER FOR EXPOSED CONCRETE FLOORS OF NEW MECHANICAL ROOMS.

1. ACCEPTABLE PRODUCTS:
   a. VULKEM 360 NF, ONE_PART POLYURETHANE COATING MANUFACTURED BY TREMCO, INC.

G. UNLESS SPECIFICALLY CALLED FOR AND INDICATED ON THE DRAWINGS OR IN THE ABSENCE OF SUCH SPECIFICATIONS PROVIDE SEALER FOR EXPOSED CONCRETE FLOORS UNDER RAISED ACESS FLOOR SYSTEM.

1. ACCEPTABLE PRODUCTS:
   a. CONSOLIDECK-SINGLESTEP BY PROSOCO.
   b. SEAL KRETE CLEAR FLOOR SEALER BY SEAL KRETE.

2.1.4 SPRAYED AND INTUMESCENT FIREPROOFING

A. WHERE FIRE-PROOFING OF EXISTING COLUMNS OR BEAMS IS DISTURBED BY NEW WORK, THE FIRE-PROOFING SHALL BE RESTORED TO PROVIDE A MINIMUM RESISTANCE RATING AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION BUILDING CODE.

B. FIRE PROTECTION OF STRUCTURAL STEEL MEMBERS SPRAYED ON FIREPROOFING NOT INDICATED ELSEWHERE ON THE CONSTRUCTION DRAWINGS SHALL BE "MONOCOTE MK 6" BY "GRACE CONSTRUCTION PRODUCTS" OR APPROVED EQUAL.

C. WHERE NO SUSPENDED CEILINGS ARE INDICATED IN ROOMS, OPEN AREAS OR SPACES, EXPOSED, SPRAYED FIREPROOFING MATERIAL ON EXISTING OR NEW STRUCTURAL STEEL MEMBERS PROVIDE SPRAY APPLIED SEALER BY "AD FIRE PROTECTION SYSTEMS, AD TC-55"; COLOR TO BE SELECTED BY ARCHITECT.

D. INTUMESCENT FIREPROOFING OF EXPOSED STRUCTURAL STEEL MEMBERS NOT SPECIFIED ELSEWHERE ON THE CONSTRUCTION DRAWINGS SHALL BE "CARBOLINE-A/D FIREFILM III" BY A/D FIRE PROTECTION SYSTEMS, INC.

1. SURFACE PREPARATION AND PRIMERS SHALL BE ACCEPTABLE TO CARBOLINE-A/D FIRE PROTECTION SYSTEMS, INC., IN WRITING.
2. FINAL FINISH COAT SHALL BE AS SECLECTED BY ARCHITECT FROM CARBOLINE-A/D FIRE PROTECTION SYSTEMS, INC. "CARBOLINE A/D COLORCOAT"

2.1.5 FIRESTOPPING, THROUGH-PENETRATION FIRE STOP AND FIRE RESISTIVE JOINT SYSTEM

A. SCOPE OFNON-COMPLYING OR MISSING FIRESTOPPING, THROUGH-PENETRATION FIRE STOP AND FIRE RESISTIVE JOINT SYSTEM SHALL BE INCLUDED IN THE BID PROPOSAL. NO CHANGE ORDER WILL BE ACCEPTED FOR THIS WORK AFTER AWARD. REFER TO "GENERAL CONDITIONS" ARTICLE 1.1.1-SUMMARY, PARAGRAPH "C", "D", "E", "F" AND "K".

B. FOR FIRE RATED WALL, NEW FIRESTOPPING, THROUGH-PENETRATION FIRE STOP AND FIRE RESISTIVE JOINT SYSTEM APPLICATION TO NEW AND EXISTING FIRE RATED ELEMENTS, PROVIDE SYSTEMS IN COMPLIANCE WITH:

1. FIRE STOOPING AND THROUGH-PENETRATION FIRESTOP AS DETERMINED PER ASTM E 814 FOR:
   a. FLOORS.
   b. ROOFS.
   c. WALLS AND PARTITIONS.
   d. SMOKE BARRIERS.
   e. CONSTRUCTION ENCLOSING COMPARTMENTALIZED AREAS.
2. FIRE RESISTIVE JOINT SYSTEMS AS DETERMINED PER NFPA 285 AND UL 2079.
   a. FLOOR-TO-FLOOR JOINTS.
   b. FLOOR-TO-WALL JOINTS.
   c. HEAD-OF-WALL JOINTS.
   d. WALL-TO-WALL JOINTS.
   e. JOINTS BETWEEN PERIMETER EDGE OF FIRE-RESISTANCE-RATED FLOOR ASSEMBLIES AND BACK OF NON-FIRE-RESISTANCE-RATED, EXTERIOR, GLAZED ALUMINUM CURTAIN WALLS.

C. DETAILS INDICATED ON DRAWINGS SERIES A700 ARE SELECTIVE OF TYPICAL APPLICATIONS AND DO NOT REFLECT THE FULL UL TESTS IN VOLUMES 2A AND 2B. CONTRACTOR TO SUBMIT APPLICABLE TESTS FOR SPECIFIC INSTALLATION FOR REVIEW AND APPROVAL AS REQUIRED BY GENERAL CONDITIONS OF THE CONTRACT, ARTICLE 1.2- SUBMITTAL PROCEDURES ON SHEET G-002.

2.1.6 ACCESS PANELS/DOORS

A. ACCESS PANELS OR DOORS IN PARTITIONS AND CEILINGS REQUIRED TO GAIN ACCESS TO CONCEALED VALVES, CONTROLS, ELECTRICAL CONNECTION, MECHANICAL, PLUMBING OR OTHER CONCEALED WORK AND MEP SYSTEMS, DEVICES AND EQUIPMENTS SHALL NOT BE INSTALLED WITHOUT PRIOR COORDINATION WITH THE ARCHITECT/ENGINEER.

B. SUBMIT PRODUCT DATA AND SHOP DRAWINGS OF ACCESS DOOR AND FRAME FOR EACH TYPE SHOWING FIRE RATING, MATERIALS, INDIVIDUAL COMPONENTS AND PROFILES, FINISHES AND INSTALLATION DETAILS AND ATTACHMENT TO OTHER WORK. SUBMIT REFLECTED CEILING PLAN SHOWING CEILING-MOUNTED ITEMS INCLUDING ACCESS DOORS AND FRAMES, LIGHTING FIXTURES, DIFFUSERS, GRILLES, SPEAKERS, SPRINKLERS, AND SPECIAL TRIM ARE SHOWN AND COORDINATED WITH EACH OTHER.

C. FIRE-RATED ACCESS DOORS AND FRAMES UNITS COMPLYING WITH NFPA 80 THAT ARE IDENTICAL TO ACCESS DOOR AND FRAME ASSEMBLIES TESTED FOR FIRE-TEST-RESPONSE CHARACTERISTICS PER THE FOLLOWING TEST METHOD AND THAT ARE LISTED AND LABELED BY UL OR ANOTHER TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION:
1. NFPA 252 OR UL 10B)FOR VERTICAL ACCESS DOORS AND FRAMES.
2. ASTM E 119 OR UL 263 FOR HORIZONTAL ACCESS DOORS AND FRAMES

D. ACCEPTABLE MANUFACTURERS FOR VERTICAL INSTALLATION (PARTITIONS) AND FIRE RATED HORIZONTAL INSTALLATION (CEILINGS) PROVIDE ACCESS DOORS AND FRAMES:

1. ACUDOR PRODUCTS, INC.
2. J. L. INDUSTRIES, INC.
3. KARP ASSOCIATES, INC.
4. LARSEN'S MANUFACTURING COMPANY.
   a. MATERIAL: STEEL UNLESS OTHERWISE INDICATED ON DRAWINGS.
   b. INSTALLATION: FLUSH TRIMLESS FRAME
   c. FINISH: PAINT
   d. COLOR: AS SELECTED BY ARCHITECT TO MATCH ADJACENT PARTITION AND CEILING COLOR
   e. TEXTURE: AS SELECTED BY ARCHITECT

E. ACCEPTABLE MANUFACTURERS FOR NONE FIRE RATED HORIZONTAL INSTALLATION (CEILINGS), PROVIDE ACCESS DOORS AND FRAMES:

1. WIND-LOCK1055 LEISCZ'S BRIDGE ROAD, PA 19533, 1-800-872-5625
2. PRODUCT: STEALTH GFRG.
3. INSTALLATION: FLUSH TRIMLESS FRAME.
4. FINISH: PAINT
5. COLOR: AS SELECTED BY ARCHITECT
6. TEXTURE: AS SELECTED BY ARCHITECT AND INDICATED ON DRAWINGS

2.1.7 GYPSUM BOARD ASSEMBLIES

1- GENERAL

A. COMPLY WITH ASTM C 840 AND GA 216 FOR GYPSUM BOARD PRODUCT INSTALLATION.

B. COMPLY WITH ASTM C 36/C 36M OR ASTM C 1396/C 1396M, AS APPLICABLE TO TYPE OF GYPSUM BOARD INDICATED AND WHICHEVER IS MORE STRINGENT.

C. SIZE: PROVIDE IN MAXIMUM LENGTHS AND WIDTHS AVAILABLE THAT WILL MINIMIZE JOINTS IN EACH AREA AND THAT CORRESPOND WITH SUPPORT SYSTEM INDICATED.

D. FIRE-TEST-RESPONSE CHARACTERISTICS: FOR GYPSUM BOARD ASSEMBLIES WITH FIRE-RESISTANCE RATINGS, PROVIDE MATERIALS AND CONSTRUCTION IDENTICAL TO THOSE TESTED IN ASSEMBLY INDICATED ACCORDING TO ASTM E 119 BY AN INDEPENDENT TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.

E. SOUND TRANSMISSION CHARACTERISTICS: FOR GYPSUM BOARD ASSEMBLIES WITH STC RATINGS, PROVIDE MATERIALS AND CONSTRUCTION IDENTICAL TO THOSE TESTED IN ASSEMBLY INDICATED ACCORDING TO ASTM E 90 AND CLASSIFIED ACCORDING TO ASTM E 413 BY A QUALIFIED INDEPENDENT TESTING AGENCY.

F. REFER TO SCHEDULE OF MATERIALS AND FINISHES ON FINISH PLAN (S) SHEETS FOR SPECIFIED APPLIED AND FLUSH TYPE WALL BASE AND OTHER APPLIED FINISH MATERIALS.

G. FOR STANDARD PARTITION ASSEMBLIES, GYPSUM WALLBOARD PANELS SHALL BE REGULAR TYPE, 5/8 THICK WITH TAPERED LONG EDGE UNLESS OTHERWISE INDICATED ON PARTITION ASSEMBLIES ON PARTITION TYPE SHEETS.

H. FOR FIRE RATED PARTITION ASSEMBLIES, GYPSUM WALLBOARD PANELS SHALL BE TYPE "X" OR AS TESTED BY MANUFACTURER FOR REQUIRED FIRE RATING, 5/8 INCHES THICK, WITH TAPERED LONG EDGE UNLESS OTHERWISE INDICATED ON PARTITION ASSEMBLIES ON PARTITION TYPE SHEETS.

I. ALL ACOUSTICAL STC/MTC RATED PARTITION CONSTRUCTION SHALL EXTEND TO THE BOTTOM OF STRUCTURE AND HAVE BOUNDARY TERMINATION SEALED AIR TIGHT WITH ACOUSTICAL SEALANT. FIRE RATED SEALANT SHALL BE USED AT FIRE RATED PARTITIONS.

J. ISOLATE PERIMETER OF GYPSUM BOARD APPLIED TO NON-LOAD-BEARING PARTITIONS AT STRUCTURAL ABUTMENTS, BUILDING CORE WALLS, EXCEPT FLOORS. PROVIDE 1/4-TO 1/2-INCH WIDE SPACES AT THESE LOCATIONS, AND TRIM EDGES WITH EDGE TRIMS WHERE EDGES OF PANELS ARE EXPOSED. SEAL JOINTS BETWEEN EDGES AND ABUTTING STRUCTURAL SURFACES WITH ACOUSTICAL OR FIRE RESISTIVE JOINT SEALANT AS APPLICABLE.

K. DO NOT MECHANICALLY SECURE NEW PARTITIONS TO EXISTING BUILDING WINDOW MULLION, WINDOW SILLS OR PERIMETER BUILDING CLIMATE CONTROL UNIT ENCLOSURE. SUBMIT PROPOSED METHOD OF ATTACHMENT FOR REVIEW AND APPROVAL IF NOT SPECIFICALLY DETAILED IN THIS CONSTRUCTION DOCUMENTS SET.

1. ISOLATE STUDS INSTALLED DIRECTLY AGAINST BUILDING EXT

2.0 CONSTRUCTION DRAWINGS- Continued

4- NON-LOAD BEARING STEEL FRAMING

A. STRUCTURAL PROPERTIES AND LIMITING HEIGHT OF METAL STUD SHALL BE PER ASTM C754 AND PER MANUFACTURER SPECIFICATION FOR BUT NOT LESS THAN THE FOLLOWING:

1. METAL STUDS ARE TO BE PLACED 16 INCHES ON CENTER UNLESS OTHERWISE NOTED ON PARTITION TYPE SHEETS.
2. METAL TRACK AND STUDS ARE 20 GAGE UNLESS OTHERWISE NOTED ON PARTITION TYPE SHEETS.
3. DEFLECTION CRITERIA FOR METAL STUDS INSTALLED FROM TOP OF SLAB TO UNDERSIDE OF SLAB ABOVE, REGARDLESS OF THE NUMBER OF LAYERS OF GYPSUM WALL BOARD PANELS IS L/240 UNLESS OTHERWISE INDICATED.
4. STEEL DRILL SCREWS: ASTM C 1002, UNLESS OTHERWISE INDICATED.
5. USE SCREWS COMPLYING WITH ASTM C 954 FOR FASTENING PANELS TO STEEL MEMBERS FROM 0.033 TO 0.112 INCH THICK.
6. FOR FASTENING CEMENTITIOUS BACKER UNITS, USE SCREWS OF TYPE AND SIZE RECOMMENDED BY PANEL MANUFACTURER.

B. SPECIFIED METAL TRACK FASTENERS ASSUMES SLAB IS NOT POST TENSIONED. ALTERNATE FASTENERS MAY CONSIST OF ONE OF THE FOLLOWING:

1. 3/16" DIAM. TAPCON ANCHORS W/1 1/4" EMBED. @24" O.C. STAGGERED AND AT FREE ENDS OF TRACK.
2. 2" LONG X 5/16" INSIDE DIAM. HILTI HY-150 ADHESIVE SLEEVE ANCHORS W/REMOVABLE RODS USING HILTI HY-20 ADHESIVE AND 1 3/4" MIN. EMBEDDED 4'-0" O.C. AND AT FREE ENDS OF TRACK.
3. 3/8" DIAM. HILTI KB-11 EXPANSION ANCHORS W/1 1/2" EMBED. @ 4'-0" O.C. AND AT FREE ENDS OF TRACK. NOT TO BE FASTENED TO LIGHTWEIGHT CONCRETE.

C. DEFLECTION TRACK: PROVIDE WHERE EXISTING FLOOR OR ROOF FRAMING MEMBERS IS OF LIGHT STEEL OR WOOD JOIST FRAMING SYSTEM. STEEL SHEET TOP RUNNER MANUFACTURED TO PREVENT CRACKING OF FINISHES APPLIED TO INTERIOR PARTITION FRAMING RESULTING FROM DEFLECTION OF STRUCTURE ABOVE; IN THICKNESS NOT LESS THAN INDICATED FOR STUDS AND IN WIDTH TO ACCOMMODATE DEPTH OF STUDS.

1. AVAILABLE PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   a. STEEL NETWORK INC. VERTITRACK VTD SERIES.
   b. SUPERIOR METAL TRIM; SUPERIOR FLEX TRACK SYSTEM (SFT).

D. METAL STUDS SHALL BE INSTALLED A MINIMUM OF 1/2 INCHES BELOW TOP TRACK AT ALL TIMES TO ALLOW FOR EXISTING FLOOR OR ROOF DEFLECTION UNLESS ROOF AND FLOOR SLAB CONSTRUCTION IS OF LIGHT STEEL OR WOOD JOIST FRAMING SYSTEM.

E. DOUBLE STUDS ARE REQUIRED AT BOTH JAMBS OF DOOR FRAMES AND HEADER.

F. STUDS AT DOOR JAMBS AND ON TOPS OF DOOR FRAMES MUST BE SCREWED TO RUNNERS AT TOP, BOTTOMS AND BOTH SIDES.

G. PARTITIONS SHALL NOT BE FASTENED OR BRACED TO DUCTWORK, CONDUIT OR ANY OVERHEAD PIPING.

H. PROVIDE FLAT STRAP PLATE SECURED TO METAL DECK FOR TOP TRACK ATTACHMENT WHERE PARTITION RUN IS PARALLEL TO METAL DECK FLUTES. METAL PLATE SHALL ENGAGE AT LEAST 3 DECK FLUTES.

1. WIDTH: 4" MINIMUM.
2. LENGTH: 12" OR 3 DECK FLUTES WHICHEVER IS GREATER.
3. THICKNESS: 0.0625 MINIMUM.

5- ROUGH CARPENTRY

A. INTERIORS ROUGH CARPENTRY WOOD PRODUCTS USED FOR EXPOSED OR CONCEALED BLOCKING APPLICATION SHALL BE "TYPE A", FIRE RETARDANT TREATED TYPE COMPLYING WITH "AWPA C20" FOR LUMBER AND "AWPA C27 FOR PLYWOOD.

1. FIRE RETARDANT TREATED PLYWOOD BACKING PANELS SHALL BE TYPE "A" NOT LESS THAN 3/4 INCHES NOMINAL THICKNESS.
2. FOR EXPOSED FIRE RETARDANT TREATED LUMBER OR PLYWOOD INDICATED TO RECEIVE A STAINED OR NATURAL FINISH, USE CHEMICAL FORMULATIONS THAT DO NOT BLEED THROUGH, CONTAIN COLORANTS, OR OTHERWISE ADVERSELY AFFECT FINISHES.
3. USE FIRE RETARDANT TREATED CONCEALED BLOCKING FOR ITEMS INDICATED ON THE DRAWINGS AND NOT LIMITED TO THE FOLLOWING APPLICATION:
   a. FRAMING FOR RAISED PLATFORMS.
   b. UNDERLAYMENT FOR WOOD FLOORS.
   c. NAILING STRIPS.
   d. FURRING STRIPS.
   e. FRAMING FOR NON-LOAD-BEARING INTERIOR PARTITIONS WHERE INDICATED.
   f. ROOF CONSTRUCTION.
   g. PLYWOOD BACKING PANELS FOR TECHNOLOGY ROOMS, ELECTRICAL AND TELEPHONE PANELS, DOC PS 1, EXPOSURE 1, C-D PLUGGED NOT LESS THAN 3/4 INCHES NOMINAL THICKNESS.
   h. PLYWOOD BLOCKING FOR AV VISUAL DISPLAY, ART WORK AND OTHER EQUIPMENT MOUNTED ON PARTITIONS, COLUMNS AND GYPSUM BOARD CONSTRUCTION.
   i. PLYWOOD BACKING PANELS CONCEALED IN WALL CAVITY BEHIND OVERHEAD FURNITURE BINS, UPPER MILLWORK CABINET AND AS REQUIRED BY THE AMERICAN WOODWORK INSTITUTE FOR SUPPORT OF ARCHITECTURAL WOODWORK.

6- TRIM ACCESSORIES

A. FOR TRIM WITH BACK FLANGES INTENDED FOR FASTENERS, ATTACH TO FRAMING WITH SAME FASTENERS USED FOR PANELS. OTHERWISE, ATTACH TRIM ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

B. CONTROL JOINTS: INSTALL CONTROL JOINTS AT LOCATIONS IN ACCORDING TO ASTM C 840 FOR PLACING CONTROL AND EXPANSION JOINTS AND IN SPECIFIC LOCATIONS APPROVED BY ARCHITECT FOR VISUAL EFFECT. CONTROL JOINTS SHALL BE PROVIDED AT PARTITIONS WHERE THE UNINTERRUPTED SPAN IS 30 FEET IN ANY DIRECTION. EXPANSION JOINTS SHALL BE PROVIDED TO COINCIDE WITH BUILDING EXPANSION JOINTS.

C. ON ALL FIRE RATED PARTITIONS – ALL PENETRATIONS AND JOINTS ARE TO BE TAPED AND SPACKLED SLAB TO SLAB.

D. CORNER BEADS ARE TO BE INSTALLED ON ALL CORNERS AND TO BE SPACKLED SMOOTH WITH ADJACENT AREA.

E. TRIM ACCESSORIES.

1. INTERIOR TRIM: ASTM C 1047.
2. MATERIAL: GALVANIZED OR ALUMINUM-COATED STEEL SHEET.
3. SHAPES:
   a. CORNERBEAD.
   b. BULLNOSE BEAD.
   c. LC-BEAD: J-SHAPED; EXPOSED LONG FLANGE RECEIVES JOINT COMPOUND.
   d. L-BEAD: L-SHAPED; EXPOSED LONG FLANGE RECEIVES JOINT COMPOUND.
   e. U-BEAD: J-SHAPED; EXPOSED SHORT FLANGE DOES NOT RECEIVE JOINT COMPOUND.
   f. EXPANSION (CONTROL) JOINT.
   g. CURVED-EDGE CORNERBEAD: WITH NOTCHED OR FLEXIBLE FLANGES.

7- INSULATION

A. PROVIDE INSULATION AND RELATED MATERIALS WITH THE FIRE-TEST-RESPONSE CHARACTERISTICS INDICATED, AS DETERMINED BY TESTING IDENTICAL PRODUCTS PER TEST METHOD INDICATED BELOW BY UL OR ANOTHER TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. IDENTIFY MATERIALS WITH APPROPRIATE MARKINGS OF APPLICABLE TESTING AND INSPECTING AGENCY.

1. SURFACE-BURNING CHARACTERISTICS: ASTM E 84.
2. FIRE-RESISTANCE RATINGS: ASTM E 119.
3. COMBUSTION CHARACTERISTICS: ASTM E 136.

B. UNLESS OTHERWISE INDICATED ON THE CONSTRUCTION DRAWINGS, OR IN THE ABSENCE OF SPECIFICATION, PROVIDE BATT OR ROLL TYPE INSULATION PRODUCTS AS FOLLOWS:

1. FOR NON-RATED GYPSUM BOARD PARTITION ASSEMBLIES, UNFACED GLASS-FIBER SOUND ATTENUATION BLANKET INSULATION ASTM C 665, TYPE I (BLANKETS WITHOUT MEMBRANE FACING); CONSISTING OF FIBERS; WITH MAXIMUM FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES OF 25 AND 50, RESPECTIVELY.
2. FOR FIRE RATED GYPSUM BOARD PARTITION ASSEMBLIES, UNFACED, SLAG-WOOL-FIBER/ROCK-WOOL-FIBER BLANKET INSULATION: ASTM C 665, TYPE I (BLANKETS WITHOUT MEMBRANE FACING); CONSISTING OF FIBERS; WITH MAXIMUM FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES OF 25 AND 50, RESPECTIVELY.
   a. THICKNESS: AS INDICATED ON PARTITION TYPES DRAWING (S) BUT NO LESS THAN 2 INCHES WHEN 2 1/2 INCHES STUD ARE INDICATED FOR UNFACED GLASS-FIBER SOUND ATTENUATION BLANKET AND NO LESS THAN 1 1/2 INCHES WHEN 2 1/2 INCHES SHAFT WALL STUD ARE INDICATED FOR UNFACED, SLAG-WOOL-FIBER/ROCK-WOOL-FIBER BLANKET INSULATION.
   b. WIDTH: TO SUIT METAL STUD FRAMING SPACING INDICATED ON PARTITION TYPES DRAWING (S)
   c. DENSITY: 3.0 PCF MINIMUM FOR AN STC RATING OF 45 MINIMUM.
   d. INSTALLATION: PLACE INSULATION IN CAVITIES FORMED BY FRAMING MEMBERS TO PRODUCE A FRICTION FIT BETWEEN EDGES OF INSULATION AND ADJOINING FRAMING MEMBERS.
   e. LOCATION: MECHANICAL ROOMS, DATA CENTERS, UPS, SWITCHGEAR, BATTERY STORAGE ROOMS AND ANY ROOM WITH ELECTRICAL EQUIPMENT SUCH AS POWER DISTRIBUTION UNITS, TRANSFORMERS AND TECHNOLOGY ROOMS (ALSO KNOWN AS IDF, MDF, TR, LAN), AREA SEPARATION, CORRIDOR WALLS, TENANT SEPARATION, FIRE AREA SEPARATIONS, FIRE BARRIERS, SMOKE BARRIERS, SHAFT WALLS OF ELEVATORS, ELECTRICAL AND MECHANICAL SHAFTS AND WHERE INDICATED ON THE CONSTRUCTION DOCUMENTS
2. FOR METAL-FRAMED WALL CAVITIES WHERE CAVITY HEIGHTS EXCEED 8 FEET SUPPORT UNFACED BLANKETS MECHANICALLY.
3. FOR PARTITIONS NOT EXTENDING THROUGH SUSPENDED CEILING SYSTEM, INSTALL, 3 INCHES THICK, UNFACED FIBER SOUND ATTENUATION BLANKET INSULATION OVER SUSPENDED CEILINGS GRID AT PARTITIONS IN A WIDTH THAT EXTENDS 48 INCHES ON CENTER.
   a. PLACE ON EITHER SIDE OF PARTITION FOR THE ENTIRE RUN OF THE PARTITION WITHIN THE ROOM OR SPACE.
4. WHEN NEW PARTITION OR MILLWORK (DEMOUNTABLE PARTITION SYSTEM) INTERSECTS BUILDING EXTERIOR AT PERIMETER WALL CLIMATE CONTROL UNIT ENCLOSURES (CONVECTORS, INDUCTION UNIT, ETC..) PROVIDE ACOUSTIC PILLOWS BY "CONTROLLED ACOUSTICS CORPORATION" OR APPROVED EQUAL WITHIN CAVITY OF THE CLIMATE CONTROL UNIT ENCLOSURES COINCIDING WITH THE PARTITION SYSTEM INSTALLED TO MAINTAIN STC RATING AND ELIMINATE FLANKING NOISE BETWEEN ADJACENT ROOMS OR SPACES.
   a. WHERE EXISTING PARTITIONS ARE SCHEDULED TO REMAIN, PROVIDE SAME ACOUSTIC PILLOWS.

8- VAPOR RETARDERS

A. UNLESS OTHERWISE INDICATED ON THE CONSTRUCTION DRAWINGS, OR IN THE ABSENCE OF SPECIFICATION, PROVIDE VAPOR RETARDERS TYPE PRODUCTS AS FOLLOWS:

B. LOCATION: ON NON-FIRE RATED GYPSUM BOARD PARTITION ASSEMBLIES, PROVIDE REINFORCED-POLYETHYLENE VAPOR RETARDERS; 2 OUTER LAYERS OF POLYETHYLENE FILM LAMINATED TO AN INNER REINFORCING LAYER CONSISTING OF EITHER NYLON CORD OR POLYESTER SCRIM AND WEIGHING NOT LESS THAN 25 LB/1000 SQ. FT., WITH MAXIMUM PERMEANCE RATING OF 0.0507 PERM.

1. PRODUCTS:
   a. RAVEN INDUSTRIES INC.; DURA-SKRIM 6MW.
   b. REEF INDUSTRIES, INC.; GRIFFOLYN T-65.
2. LOCATION: ON FIRE RATED GYPSUM BOARD PARTITION ASSEMBLIES PROVIDE FIRE-RETARDANT, REINFORCED-POLYETHYLENE VAPOR RETARDERS: 2 OUTER LAYERS OF POLYETHYLENE FILM LAMINATED TO AN INNER REINFORCING LAYER CONSISTING OF EITHER NONWOVEN GRID OF NYLON CORD OR POLYESTER SCRIM AND WEIGHING NOT LESS THAN 22 LB/1000 SQ. FT., WITH MAXIMUM PERMEANCE RATING OF 0.1317 PERM AND WITH FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES OF NOT MORE THAN 5 AND 60, RESPECTIVELY.
1. PRODUCTS:
   a. RAVEN INDUSTRIES INC.; DURA-SKRIM 27R.
   b. REEF INDUSTRIES, INC.; GRIFFOLYN T-55 FR.
   c. LOCATION: MECHANICAL ROOMS, DATA CENTERS, UPS, SWITCHGEAR, BATTERY STORAGE ROOMS, AND ANY ROOM WITH ELECTRICAL EQUIPMENTS SUCH AS POWER DISTRIBUTION UNITS, TRANSFORMERS AND TECHNOLOGY ROOMS (ALSO KNOWN AS IDF, MDF, TR, LAN).

C. VAPOR-RETARDER TAPE: PRESSURE-SENSITIVE TAPE OF TYPE RECOMMENDED BY INSULATION MANUFACTURERS FOR SEALING JOINTS AND PENETRATIONS IN VAPOR-RETARDER FACINGS.

9- GYPSUM BOARD FINISHING

A. UNLESS OTHER WISE INDICATED, LEVEL 4 GYPSUM BOARD FINISH SHALL BE THE FINISH LEVEL FOR THIS PROJECT DOCUMENTED HEREWITH.

B. GENERAL: TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR APPLIED FINISHED MATERIALS SPECIFIED ON . PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES.

C. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS.

D. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.

E. GYPSUM BOARD FINISH LEVELS: REFER TO SCHEDULE OF FINISHES ON FINISH PLAN AND COORDINATE GYPSUM FINISH PANELS TO LEVELS INDICATED BELOW:

1. LEVEL 1: CEILING PLENUM AREAS, CONCEALED AREAS, AND WHERE INDICATED.
2. LEVEL 2: PANELS THAT ARE SUBSTRATE FOR TILE AND PANELS THAT ARE SUBSTRATE FOR ACOUSTICAL TILE.
3. LEVEL 3: SURFACES RECEIVING MEDIUM OR HEAVY TEXTURED FINISH BEFORE PAINTING OR HEAVY WALL COVERING AND WHERE LIGHTING IS NOT CRITICAL.
4. LEVEL 4: THIS IS THIS PROJECT STANDARD LEVEL FOR ALL EXPOSED GYPSUM BOARD PARTITIONS SURFACES AND SURFACES RECEIVING LIGHT TEXTURED FINISH, WALL COVERING AND FLAT PAINTS. APPLY REQUIRED DRYWALL PRIMERS TO ROUGH DRYWALL PARTITION SURFACES BEFORE FINAL FINISHES PER ASTM C840 AND AS RECOMMENDED BY APPLIED FINISHED MATERIAL MANUFACTURER.
5. LEVEL 5: FOR SURFACES RECEIVING GLOSS AND SEMIGLOSS ENAMELS, SPECIAL THIN VENEER FINISHES, WRITABLE SURFACE WALL COVERING AND SURFACES SUBJECT TO SEVERE LIGHTING.
   a. EMBED TAPE AND APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES, AND APPLY SKIM COAT OF JOINT COMPOUND OVER ENTIRE SURFACE WHERE INDICATED.

2.1.8 FIRE EXTINGUISHER & CABINET

A. PORTABLE FIRE EXTINGUISHERS PLACEMENT & INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 10.

B. FIRE EXTINGUISHER CABINET: BASIS-OF-DESIGN PRODUCT: PROVIDE IN QUANTITIES INDICATED ON THE DRAWINGS ARCHITECTURAL SERIES, VERTICAL DUO, MODEL NUMBER 2409-R2 AND FS-2409-R2 BY LARSEN OR A COMPARABLE PRODUCT BY ONE OF THE FOLLOWING:

1. JL INDUSTRIES, INC.
2. KIDDE FYRNETICS.
3. POTTER ROEMER; DIV. OF SMITH INDUSTRIES, INC.

C. WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF PORTABLE FIRE EXTINGUISHERS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.

1. FAILURES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   a. FAILURE OF HYDROSTATIC TEST ACCORDING TO NFPA 10.
   b. FAULTY OPERATION OF VALVES OR RELEASE LEVERS.
   c. WARRANTY PERIOD: SIX YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

1. MATERIAL: PROVIDE FOR THE ENTIRE PROJECT COLD-ROLLED STEEL SHEET; ASTM A 1008/A 1008M, COMMERCIAL STEEL(CS), TYPE B UNLESS OTHERWISE OTHER INDICATED ON THE DRAWINGS. OTHER MATERIALS SUCH AS STAINLESS STEEL, ANODIZED ALUMINUM OR BRONZE ANODIZED ALUMINUM MAY BE INDICATED ELSEWHERE ON THE DRAWINGS.
2. CABINET TYPE: SUITABLE FOR SPECIFIED FIRE EXTINGUISHER
3. CABINET CONSTRUCTION: NONRATED AND FIRE RATED NO LESS THAN RATING OF ADJACENT WALLS INDICATED.
4. CABINET MATERIAL: ENAMELED-STEEL SHEET UNLESS SPECIFIED ON DRAWINGS.
5. RECESSED CABINET: CABINET BOX RECESSED IN WALLS OF SUFFICIENT DEPTH TO SUIT STYLE OF TRIM INDICATED.
6. EXPOSED FLAT TRIM: ONE-PIECE COMBINATION TRIM AND PERIMETER DOOR FRAME OVERLAPPING SURROUNDING WALL SURFACE WITH EXPOSED TRIM FACE AND WALL RETURN AT OUTER EDGE (BACKBEND) OF 1/4 TO 5/16 INCH.
7. CABINET TRIM MATERIAL: SAME MATERIAL AND FINISH AS DOOR.
8. DOOR MATERIAL: STEEL SHEET.
9. DOOR STYLE: VERTICAL DUO PANEL WITH FRAME.
10. DOOR GLAZING: ACRYLIC SHEET.
11. ACRYLIC SHEET COLOR: CLEAR TRANSPARENT.
12. DOOR HARDWARE: MANUFACTURER'S STANDARD DOOR-OPERATING HARDWARE OF PROPER TYPE FOR CABINET TYPE, TRIM STYLE, AND DOOR MATERIAL AND STYLE INDICATED.
    a. PROVIDE PROJECTING LEVER HANDLE WITH CAM-ACTION LATCH IN CLEAR ANODIZED FINISH. WHERE STAINLESS STEEL RECESSED CABINETS ARE INDICATED, LEVER FINISH SHALL BE # 4 STAINLESS STEEL. WHERE BRONZE ANODIZED ALUMINUM FIRE EXTINGUISHER CABINETS ARE INDICATED, LEVER FINISH SHALL BE SATIN BRONZE.
    b. PROVIDE CONCEALED HINGE PERMITTING DOOR TO OPEN 180 DEGREES.
14. MOUNTING BRACKET: MANUFACTURER'S STANDARD STEEL, DESIGNED TO SECURE FIRE EXTINGUISHER TO FIRE-PROTECTION CABINET, OF SIZES REQUIRED FOR TYPES AND CAPACITIES OF FIRE EXTINGUISHERS INDICATED, WITH BAKED-ENAMEL FINISH IN RED COLOR.
15. FINISHES: FACTORY PRIMED FOR FIELD PAINTING UNLESS OTHERWISE INDICATED AND SPECIFIED ELSEWHERE ON THE DRAWINGS.
    a. COLOR AND TEXTURE: MATCH COLOR OF ADJACENT WALL IN SEMI GLOSS FINISH.
    b. PAINT SCHEDULE: PAINT INTERIOR AND EXTERIOR OF FIRE EXTINGUISHER CABINET. DO NOT PAINT LEVER.
15. MOUNTING HEIGHT: INSTALL FIRE EXTINGUISHER CABINET WITH TOP AT 4-FEET, 6-INCHES ABOVE CONCRETE SLAB.
16. RECESSED CABINETS AND FIRE EXTINGUISHER SCHEDULE: PROVIDE FOR ENTIRE PROJECT EXCEPT AS INDICATED IN SECTION C4 BELOW.

C. FIRE EXTINGUISHERS

1. GENERAL REQUIREMENTS: PROVIDE INSTRUCTION LABELS, INCLUDE PICTORIAL MARKING SYSTEM COMPLYING WITH NFPA 10, APPENDIX B AND BAR CODING FOR DOCUMENTING FIRE EXTINGUISHER LOCATION, INSPECTIONS, MAINTENANCE, AND RECHARGING
2. FOR RECESSED CABINETS: PROVIDE MULTIPURPOSE DRY-CHEMICAL TYPE IN STEEL CONTAINER, MODEL # MP10, UL-RATED 4A-80BC, 10-LB NOMINAL CAPACITY, WITH MONOAMMONIUM PHOSPHATE-BASED DRY CHEMICAL IN ENAMELED-STEEL CONTAINER.
3. FOR SURFACE WALL MOUNT: PROVIDE CARBON DIOXIDE TYPE IN STEEL CONTAINER MODEL # CD10, UL-RATED 10:B:C.
4. SCHEDULE: PROVIDE SPECIFIED CARBON DIOXIDE TYPE FIRE EXTINGUISHER IN QUANTITIES INDICATED ON DRAWINGS BUT NOT LESS THAN 1 IN THE FOLLOWING ROOMS OR SPACES IDENTIFIED FOR THAT USE AS PART OF THE FITOUT AND IN EXISTING ROOMS THAT A ARE PART OF THE BUILDING CORE OR BUILDING SPACES ON THE FLOOR(S):
   a. MECHANICAL ROOMS.
   b. UPS AND BATTERY ROOMS
   c. INFORMATION TECHNOLOGY ROOMS AKA DATA CENTERS, IDF, MDF, TR, LAN ETC...
   d. ELECTRICAL, SWITCH AND SWITCH GEAR ROOMS.
   e. TELEPHONE CLOSETS, PBX ROOMS, OR SIMILAR USE ROOMS.
5. MOUNTING BRACKETS: MANUFACTURER'S STANDARD STEEL # 575 DESIGNED TO SECURE FIRE EXTINGUISHER TO WALL OR STRUCTURE, OF SIZES REQUIRED FOR TYPES AND CAPACITIES OF FIRE EXTINGUISHERS INDICATED, WITH BAKED-ENAME FINISH.
   a. COLOR: RED
   b. MOUNTING HEIGHT: INSTALL FIRE EXTINGUISHER WITH FLAT BRACKET LEG AT 3-FEET, 2-INCHES ABOVE CONCRETE SLAB.
6. IDENTIFICATION: PICTOGRAM SIGN OR LETTERING COMPLYING WITH AUTHORITIES HAVING JURISDICTION FOR LETTER STYLE, SIZE, SPACING, AND LOCATION. LOCATE AS INDICATED BY ARCHITECT.
   a. IDENTIFY BRACKET-MOUNTED FIRE EXTINGUISHERS WITH THE WORDS "FIRE EXTINGUISHER" IN RED LETTER DECALS APPLIED TO MOUNTING SURFACE.
   b. ORIENTATION: VERTICAL

E. ADJUSTING AND CLEANING:

1. TOUCH UP MARRED FINISHES, OR REPLACE FIRE-PROTECTION CABINETS THAT CANNOT BE RESTORED TO FACTORY-FINISHED APPEARANCE. USE ONLY MATERIALS AND PROCEDURES RECOMMENDED OR FURNISHED BY FIRE-PROTECTION CABINET MANUFACTURER.
2. REPLACE FIRE-PROTECTION CABINETS THAT HAVE BEEN DAMAGED OR HAVE DETERIORATED BEYOND SUCCESSFUL REPAIR BY FINISH TOUCH-UP OR SIMILAR MINOR REPAIR PROCEDURES

F. SIGNAGE:

1. PROVIDE WALL MOUNTED FIRE EXTINGUISHER LOCATION SIGN ABOVE WALL MOUNTED FIRE EXTINGUISHERS AND FIRE EXTINGUISHERS WITHIN CABINETS.
   a. SIZE: 4" X 6" (LONG DIMENSION VERTICAL)
   b. THICKNESS: 1/8"
   c. BRACKET: EITHER (2) 1" X 1" ALUMINUM ANGLES OR SINGLE "U" FORMING "I" (I) TYPE 6" LONG.
   d. MATERIAL: BASE OF DESIGN: FOR BRACKETS AND SIGN, SATIN ALUMINUM WITH ALL EDGES SANDBLASTED.
      • ALTERNATE: STAINLESS STEEL # 4 FINISH.
   e. GRAPHICS: FIRE EXTINGUISHER PICTORIAL, ENGRAVED AND FILLED WITH MATT RED PAINT.
   f. MOUNTING: MOUNT SIGN WITH BOTTOM AT 80 INCHES CENTERED ON WALL MOUNTED FIRE EXTINGUISHER OR FIRE EXTINGUISHER CABINET.
   g. FOR ITEM (d) SUBMIT LABOR AND MATERIAL FOR ALUMINUM AND STAINLESS STEEL FINISH FOR REVIEW AND APPROVAL.

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JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue, 10th Floor, New York, NY 10016, T. 212 561 2000
The LaSalle Wacker, 221 North LaSalle Street, Chicago, IL 60601, T. 312 924 5000
MCM Architecture Limited, 71 Hopton Street, London SE19LR, UK, T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPT# 815708 121684662 Job Number
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2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
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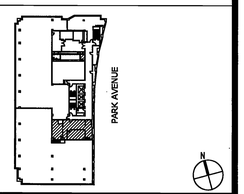
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



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DATE	08.08.12
PROJECT MANAGER	CR
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DRAWN BY	XX
CHECKED BY	XX
CADD FILE	112162.01-A-005GN.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

PROJECT GENERAL NOTES
SHEET 4 OF 4

REGISTERED ARCHITECT TED MOUDIS 016196 STATE OF NEW YORK

G-005.00
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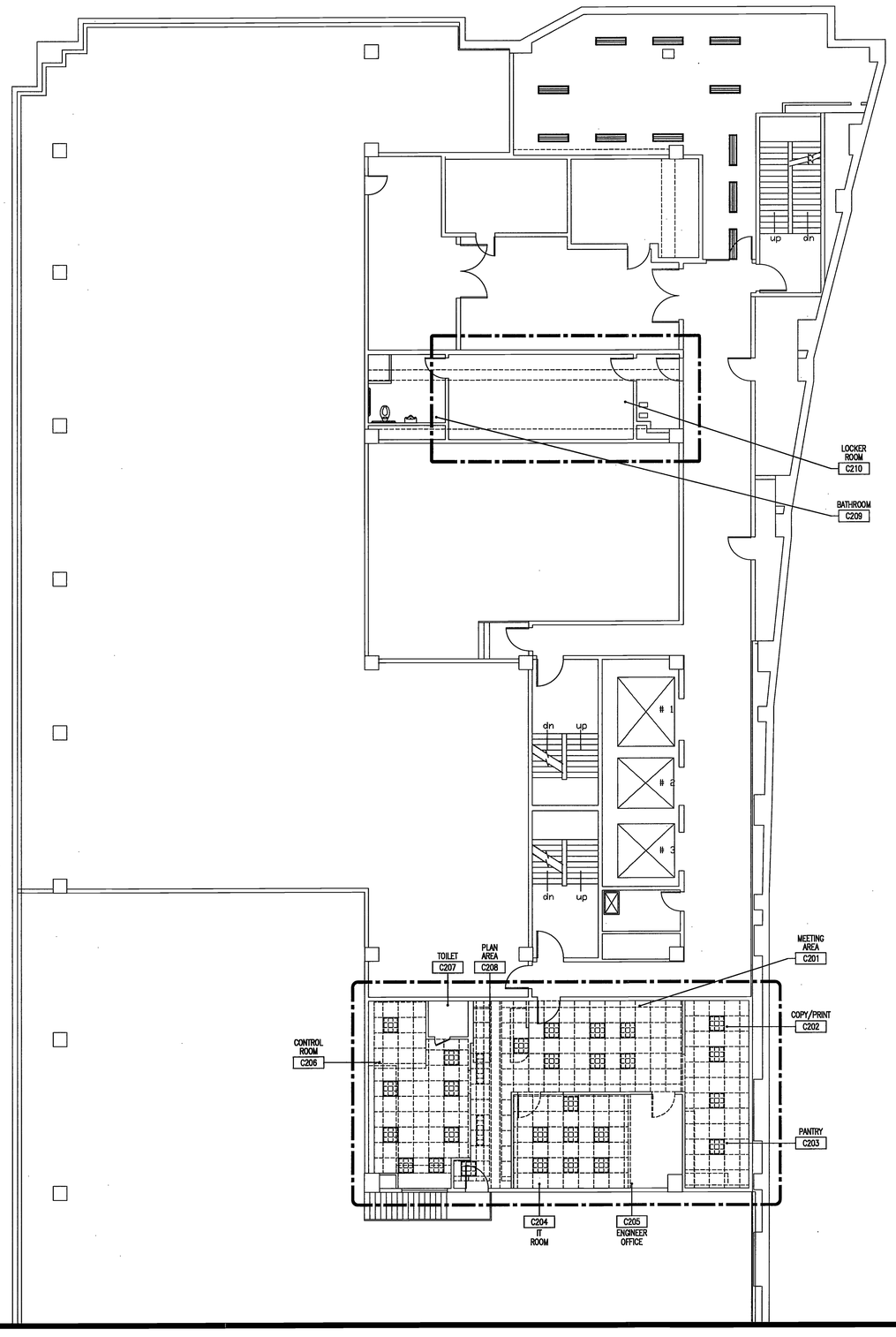

DEMOLITION LEGEND

SYMBOL	DESCRIPTION
	EXISTING BLDG. CORE, PARTITION AND MILLWORK TO REMAIN
	EXISTING CONSTRUCTION TO BE DEMOLISHED

DEMOLITION NOTES

CONSTRUCTION

1. REMOVE ALL EXISTING CONSTRUCTION AS INDICATED ON THESE PLANS INCLUDING DOORS, FRAMES, ALL HANGING CLIPS, STRAPS, HANGERS ETC. FROM SLAB ABOVE.
2. KEEP GYPSUM BOARD FURRING AND WALL FINISH ON COLUMNS, CORE AND PERIMETER CONSTRUCTION, UNO.
3. AREAS OF WORK INTENDED TO REMAIN BUT INADVERTENDLY DAMAGED SHALL BE REPAIRED TO A PRE-DEMOLITION CONDITION AT THE CONTRACTORS EXPENSE.
4. COORDINATE WITH BUILDING MANAGEMENT AND BUILDING RULES & REGULATIONS FOR DOCK PROCEDURES, INCLUDING ELEVATOR TIMES AND NOISE RESTRICTIONS.

FLOOR

5. REMOVE ALL FLOOR FINISHES INCLUDING BUILDING MATERIALS, ADHESIVES, TACKLESS STRIPS, ETC. LEAVE BASE BUILDING FLOOR SLAB AND/OR RAISED FLOOR CLEAN AND LEVEL FOR NEW FINISH APPLICATION.
6. PLUG/FILL ALL UNUSED FLOOR CORES WITH SIMILAR MATERIAL TO MATCH EXISTING ADJACENT CONDITION.

CEILING

7. REMOVE ALL EXISTING CEILING CONSTRUCTION INCLUDING, BUT NOT LIMITED TO: GRID FOR ACCOUSTICAL CEILING SYSTEM AND GYPSUM BOARD CEILING AND SUPPORT SYSTEMS.

RECYCLING

8. CEILING TILES WILL BE RECYCLED; COORDINATE REQUIREMENTS WITH NEW CEILING TILE MANUFACTURER.
9. CARPET WILL BE RECYCLED; COORDINATE REQUIREMENTS WITH NEW CARPET TILE MANUFACTURER.
10. IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO REMOVE, TRANSPORT AND DISPOSE OF DEBRIS. MINIMUM 50% OF ALL DEBRIS CREATED ON JOB SITE SHOULD BE RECYCLED ACCORDING TO CHICAGO CODE.

ELECTRICAL / TELEPHONE / DATA

11. REMOVE ALL EXISTING TELEPHONE AND POWER FLOOR OUTLETS, WALL OUTLETS, JUNCTION BOXES, SWITCHES, WIRING AND CONNECTING CONDUIT BACK TO ELECTRICAL PANEL. PLUG HOLES WITH LIGHTWEIGHT CONCRETE.
12. CM/ G.C. WILL BE RESPONSIBLE TO TRACE, PROTECT & MAINTAIN EXISTING VOICE/ DATA & SECURITY CABLES ETC. FOR DURATION OF CONSTRUCTION THAT MAY SERVE OUTSIDE SCOPE OF WORK.
13. TEMPORARY LIGHTING IS TO BE PROVIDED, AS PER CODE, DURING AND AFTER DEMOLITION WORK IS COMPLETED.

GENERAL

14. asdfCC TO COORDINATE DEMOLITION AS REQUIRED IN ORDER TO MEET DESIGN INTENT FOR THE ENTIRE SCOPE OF THE PROJECT (ARCHITECTURAL, STRUCTURAL, MEP, ETC.)
15. GC SHALL COORDINATE & CONFIRM ALL ACTIVITIES IN CONNECTION WITH WHEN AND HOW WORK IS TO BE PERFORMED WITH OWNER & INCLUDED THIS SERVICE UNDER BASE CONTRACT.
16. THE GENERAL CONTRACTOR SHALL ASCERTAIN THAT THE AREA OF DEMOLITION HAS BEEN CLEARED BY OTHERS OF ALL MOVEABLE EQUIPMENT IN ORDER TO ALLOW FOR DEMOLITION TO PROCEED. GC/CM SHALL NOTIFY OWNER IMMEDIATELY OF ANY SUCH CONDITIONS THAT PREVENTS PROCEEDING WITH DEMOLITION.
17. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND SERVICES FOR ALL DEMOLITION OF WORK, INCLUDING REMOVAL FROM THE BUILDING AS NOTED ON THE DRAWINGS. THE WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
18.
    a. TENANT PARTITIONS OF MASONRY, METAL, DRYWALL AND GLASS, INCLUDING EXCESS COLUMN FURRING. DOORS & HARDWARE AS NOTED ON PLAN.
    b. CEILING, LIGHT FIXTURES, DIFFUSERS, GRILLES, ETC...
    c. UNNECESSARY MECHANICAL EQUIPMENT, STRUCTURAL SUPPORTS, AND ASSOCIATED PIPING. (SEE ENGINEERING DRAWINGS)
    d. UNNECESSARY CONDUITS, WIRING, THERMOSTATS, CONTROL DEVICES, LIGHT SWITCHES AND JUNCTION BOXES. (SEE ENGINEERING DRAWINGS)
    e. ALL OTHER ITEMS AS DEFINED ON DRAWINGS.
    f. REFER TO ENGINEERING DRAWINGS FOR COORDINATION OF ALL DEMOLITION/ RELOCATION OF SMOKE DETECTORS, DIFFUSERS, DUCTWORK, FIRE PROTECTION DEVICES AND ELECTRICAL OUTLETS.
19. PROTECTION OF ADJACENT SURFACES & FINISHES ARE REQUIRED, INCLUDING WINDOW BLINDS.
20. ALL BUILDING STANDARD CONVECTORS TO BE PROTECTED & SEALED DURING DEMOLITION.
21. G.C. TO COORDINATE DEMOLITION AS REQUIRED IN ORDER TO MEET DESIGN INTENT IN THE ENTIRE SCOPE OF THE PROJECT (ARCHITECTURAL, STRUCTURAL, MEP ETC. VIF BEFORE PLACING BID AND MAKE THIS SCOPE OF WORK PART OF THE BASE CONTRACT. NO EXCLUSIONS ACCEPTED)
22. G.C. MUST NOTIFY BUILDING MANAGER OR CHIEF ENGINEER OF ALL WORK WHICH MAY AFFECT THE BASE BUILDING SYSTEMS AND OBTAIN ALL APPROVALS PRIOR TO COMMENCEMENT OF THIS WORK.
23. ALL REMOVAL OF DUCTWORK, EQUIPMENT & CABLING, SHUTDOWN OF ANY SYSTEM INCLUDING PLUMBING, HEATING, ELECTRICAL, AIR CONDITIONING, ETC., SHALL BE COORDINATED WITH THE BUILDING MANAGEMENT & OWNER.
24. G.C. SHALL BE RESPONSIBLE FOR FIELD VERIFICATION & WALK THROUGH WITH SUBCONTRACTORS TO DOCUMENT CONDITIONS & SCOPE OF WORK BEFORE STARTING DEMOLITION WORK. (NO EXCLUSIONS ACCEPTED)
25. ALL DEMOLITION WORK REGARDING "FIRE SAFETY EQUIPMENT" MUST BE COORDINATED WITH BUILDING MANAGEMENT (SEE COVER SHEET) FOR THE DISCONNECT OF THE APPROPRIATE FIRE ALARM EQUIPMENT. ALL NECESSARY FIRE SAFETY EQUIPMENT AND ASSOCIATED CONDUIT & WIRING SHALL BE PROTECTED DURING DEMOLITION. ALL FIRE SAFETY EQUIPMENT SHALL BE KEPT IN FULL OPERATING ORDER AT ALL THE TIMES. FLOOR & ELEVATOR LOBBY TO HAVE ADEQUATE COVERAGE.
26. G.C. IS TO PROTECT ACCESS AREAS TO THE FLOOR DURING DEMOLITION TO AVOID DAMAGING ADJACENT AREAS (FINISH FLOOR SLAB, WINDOWS, WALLS, A/C ENCLOSURES, ETC.) CONTRACTOR IS RESPONSIBLE, AT HIS OWN EXPENSE, FOR REPAIRING OR REPLACING ANY DAMAGED ITEM TO THE SATISFACTION OF BUILDING OWNER/ MANAGER.
27. G.C. TO INSTALL A TEMPORARY FILTER ON THE RETURN AIR DUCT SOURCE BEFORE STARTING DEMOLITION. SEE BUILDING ENGINEER FOR ADEQUATE LOCATION.
28. G.C. SHALL PROVIDE FOR DAILY REMOVAL OF ALL DEMOLITION DEBRIS. AFTER COMPLETION OF DEMOLITION WORK ALL AREAS ARE TO BE LEFT "BROOM CLEAN."
29. ALL TRADES SHALL STAND BY FOR DEMOLITION WHEN REQUIRED. G.C. SHALL INCLUDE IN PRICING IF IT IS OVERTIME WORK.
30. ALL EXISTING FURNITURE REMOVAL IS TO BE BY OWNER.
31. ALL DEMOLITION SUBCONTRACTORS TO REVIEW THE AMOUNT OF DEBRIS REQUIRED FOR REMOVAL DURING WALK THROUGH.
32. DEMOLITION WORK ALL AREAS ARE TO BE LEFT "BROOM CLEAN."

DEMOLITION KEY NOTES

1 —

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JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

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SC110162004 Scan Code

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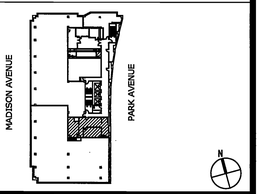
KEY PLAN — - AREA OF WORK



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PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-102DP-SC2.dw

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

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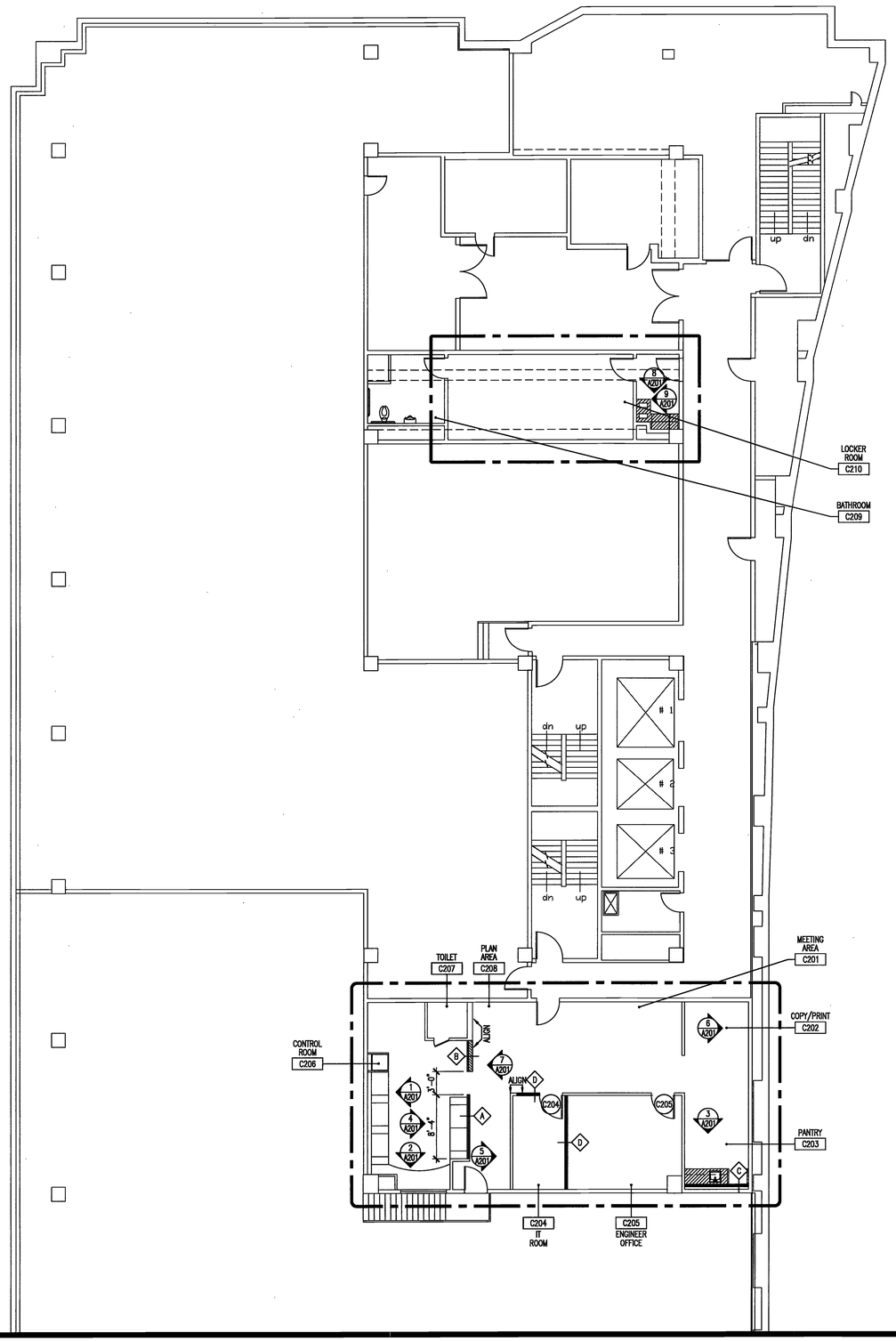
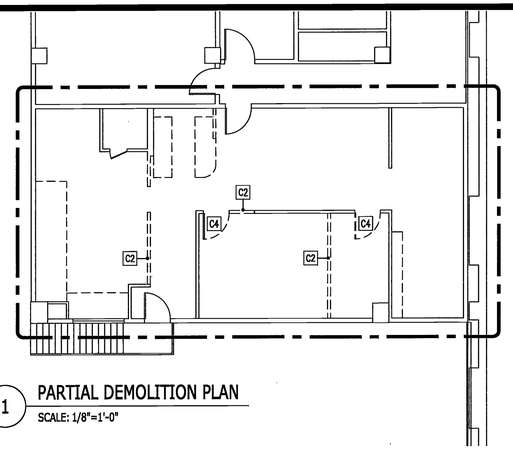
CEILING DEMOLITION PLAN

REGISTERED ARCHITECT TED MOUDIS 016182 STATE OF NEW YORK

DM-102.00

7 OF 20





1 PARTIAL DEMOLITION PLAN

SCALE: 1/8"=1'-0"

CONSTRUCTION LEGEND

SYMBOL	DESCRIPTION
	EXISTING BLDG. CORE AND PARTITION TO REMAIN
	NEW DRYWALL PARTITION
	NEW WIRED PARTITION BY WIRE CRAFTERS OR APPROVED EQUAL
XXXX	NEW DOOR & DOOR NUMBER
A	FLAG INDICATES SYMBOL FOR PARTITION TYPE LETTER INDICATE PARTITION TYPES
	NEW MILLWORK. SEE KEY PLAN FOR DETAILS

CONSTRUCTION NOTES

REFER TO GENERAL NOTES G-002.00, G-003.00 AND G-003.00.

CONSTRUCTION KEY NOTES

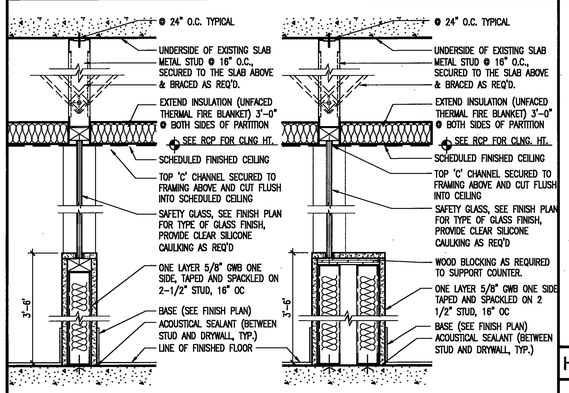
C1 GC TO PROVIDE ACCESS PANEL FOR ELECTRICAL CLOSET AND TO COST INTO BID. NO EXCEPTIONS.

C2 EXISTING PARTITION TO BE DEMOLISHED. PATCH/REPAIR FLOOR AS REQUIRED.

C3 FINISH TO MATCH EXISTING ADJACENT. PATCH AND REPAIR AS REQUIRED.

C4 EXISTING DOOR, FRAME & HARDWARE TO BE DEMOLISHED. PATCH/REPAIR ANY AREA OF WALL AFFECTED BY DEMOLITION AS REQUIRED.

PARTITION TYPES

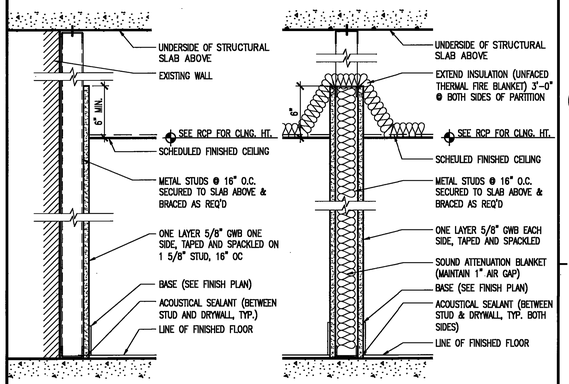


A STUD FRAMELESS GLAZED PARTITION 6" ABOVE FINISH CEILING

SCALE: NOT TO SCALE

B STUD FRAMELESS GLAZED PARTITION 6" ABOVE FINISH CEILING

SCALE: NOT TO SCALE



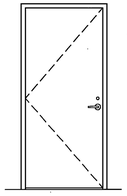
C NON-RATED PARTITION EXTENDED 6" ABOVE CEILING

SCALE: NOT TO SCALE

D NON-RATED PARTITION EXTENDED 6" ABOVE CEILING

SCALE: NOT TO SCALE

DOOR SCHEDULE



DOOR SCHEDULE

HOLLOW METAL DOOR & FRAME W/ 3/4" UNDERCUT

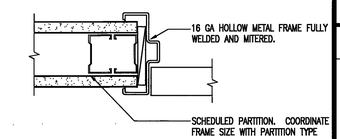
LEVER: SCHLAGE MORTISE L-SERIES;
C204 – STOREROOM FUNCTION
C205 – OFFICE FUNCTION
LEVER MANHATTAN; 626 FINISH

HINGES: 1-1/2 PAIRS-STANLEY #FBB179; 4-1/2"X4-1/2", 626 FINISH
SILENCERS: IVES # SR 65 (3 FOR EACH DOOR)
CLOSER: SURFACE MOUNTED OVER HEAD DOOR CLOSER BY LCN
DOOR STOP: FLOOR STOP BY FSB #3816; 626 FINISH

[FOR DOOR C204 ONLY, ADD]
CARD READER: ALL CONDUITS, JUNCTION BOXES BY GC, SEE ENGG DWGS FOR WIRING & SPECS
ELECTRIC STRIKE: BY VON DUPRIN; TIE TO BLDG CLASS 'E' FIRE ALARM SYSTEM

DOOR SCHEDULE DOOR #C204 & C205

HEAD & JAMB DETAILS



J1 JAMB @ HOLLOW METAL FRAME

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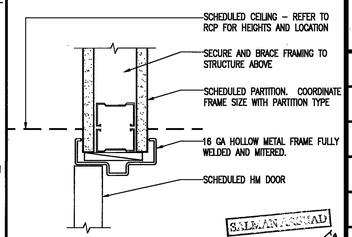

H1 HEAD @ HOLLOW METAL FRAME

SCALE: N.T.S.

SALEANNEAD

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JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212.561.2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312.924.5000

MCM Architecture Limited
71 Hopton Street
London SE1 9LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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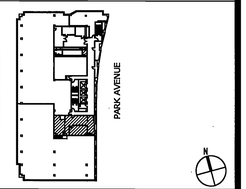
KEY PLAN

▨ - AREA OF WORK



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SCALE	1/8"=1'-0"
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	MT
CHECKED BY	GM
CADD FILE	112162.01-A-111CP-SC2.DW

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL CONSTRUCTION PLAN

REGISTERED ARCHITECT TED MOUDIS No. 016182 STATE OF NEW YORK

A-111.00

8 OF 20

Jan 13, 2014 - 2:44pm
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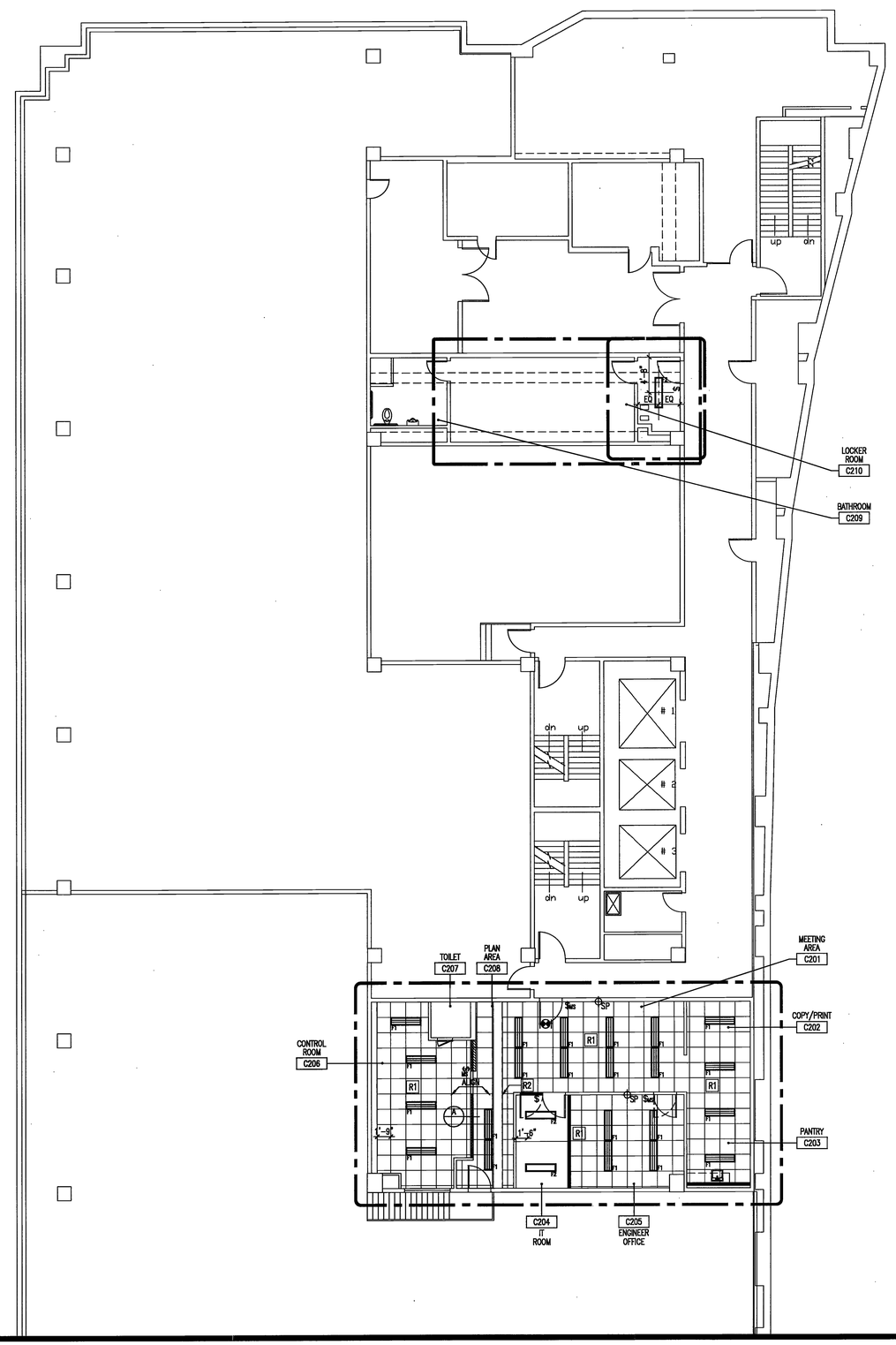

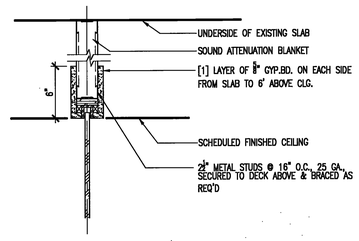

A SECTION DETAIL
SCALE: 1-1/2"=1'-0"

REFLECTED CEILING LEGEND

SYMBOL	DESCRIPTION
	TYPE F1: 1'X4' FLOURESCENT LIGHT FIXTURE BY LITHONIA LIGHTING #RTBB- -1-32WTB-MVOLT-BIHP-L835HTB-PWS1836-NYC
	TYPE F2: 1'X4' FLOURESCENT PENDANT LIGHT FIXTURE BY LEGION LIGHTING, #2800-232 EBO-DL-A10. LAMPING: F32T8/ADV835/ALTO BY PHILIP OR APPROVED EQUAL BY SYLVANIA. FIXTURE ON STEM AND WIREGUARD
$	WALL LIGHT SWITCH TO MATCH BLDG. STANDARD
$os	WALL OCCUPANCY SENSOR LIGHT SWITCH
	EXISTING ACOUSTICAL CEILING & GRID SYSTEM
	NEW ACOUSTICAL CEILING TILES TO MATCH EXISTING

REFLECTED CEILING NOTES

LIGHTING

1. COORDINATE ALL LIGHT SWITCHES AND CIRCUITS OF ALL LIGHTING FIXTURES WITH ARCHITECT, ENGINEER AND TENANT PRIOR TO INSTALLATION.
2. NIGHT LIGHTS, EXIT LIGHTS AND ALARMS SHALL BE PROVIDED BY G.C. AS REQUIRED BY APPLICABLE CODE.
3. ENGINEER TO CHECK AND/OR RECOMMEND BULB WATTAGE AND ADJUSTMENT IN FIXTURE SWITCHING PLACEMENT AS NECESSARY.
4. ALL LIGHTING SHALL BE INSTALLED IN CONFORMANCE WITH ELECTRICAL CODES.
5. SOME LIGHTING FIXTURES MAY REQUIRE LONGER LEAD TIME. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALLOWING SUFFICIENT TIME FOR ORDER PLACEMENT, SUBMITTAL REVIEW, & ORDER RELEASE.
6. SUBSTITUTIONS FOR SPECIFIED LIGHTING PRODUCTS ARE NOT ACCEPTABLE & WILL NOT BE CONSIDERED. FAILURE TO INCLUDE ONE OF SPECIFIED PRODUCTS AS A PART OF BASE BID MAY, AT DISCRETION OF OWNER, INVALIDATE THE ENTIRE LIGHTING PRODUCT BID & EXCLUDE CONTRACTOR FROM FURTHER CONSIDERATION.
7. UNIT PRICING SHOULD BE MADE AVAILABLE ON ALL SPECIFIED LIGHTIN FIXTURES.
8. DISTRIBUTOR NET PRICING HAS BEEN SECURED FROM MANUFACTURER OR MANUFACTURER'S REPRESENTATIVE & HAS BEEN USED IN PREPARATION OF PRELIMINARY OPINIONS OF PROBABLE COSTS. A RECORD OF SPECIFIC UNIT COSTS HAS BEEN SHARED WITH OWNER TO ASSIST IN ANALYSIS OF BID SUBMITTALS.
9. U.N.O. LIGHT SWITCH COVER PLATE FINISH TO MATCH BUILDING STANDARD. GANG ALL SWITCHES TOGETHER.
10. LIGHTS WILL BE CONTROLLED VIA WALL MOUNTED MOTION SENSORS. REFER TO ENGINEERING DRAWINGS.

LIFE SAFETY

11. NEW SMOKE DETECTORS AND/OR FIRE ALARM STROBES & SPEAKERS, ETC. SHALL BE FURNISHED AND INSTALLED AS REQUIRED. LOCATION TO BE DETERMINED IN THE FIELD. COORDINATE WITH BUILDING MANAGEMENT AND ARCHITECT. REFER TO ENGINEERING DRAWINGS.
12. GENERAL CONTRACTOR SHALL INSTALL NEW EXIT SIGNS AS REQUIRED BY LOCAL BUILDING CODE. SEE MEP DRAWINGS FOR LOCATIONS.
13. REFER TO ENGINEERING DRAWINGS FOR EMERGENCY LIGHT SPECIFICATIONS AND LOCAL LAW REQUIREMENTS.

HVAC

14. HVAC CONTRACTOR TO PROVIDE BALANCING REPORT & SUBMIT TO BUILDING MANAGEMENT. HVAC CONTRACTOR TO NOTIFY BUILDING CHIEF ENGINEER OF DATE & TIME OF BALANCING FOR WITNESS.
15. LOCATION OF THERMOSTATS TO BE ACCEPTED BY ARCHITECT PRIOR TO INSTALLATION. DO NOT INSTALL ON PANELED, FEATURE WALLS OR BEHIND FURNITURE PANELS. COORDINATE WITH FURNITURE INSTALLER.

FINISHES

16. PROVIDE SMOOTH FINISH @ ALL GYPSUM BOARD CEILINGS IF REQUIRED TO RECEIVE NEW FINISH.
17. GENERAL CONTRACTOR TO CLEAN/ WIPE DUST FROM TOPS OF EXPOSED MECHANICAL DUCTS AND LIGHT FIXTURES PRIOR TO FURNITURE INSTALLATION.
18. REFER TO FINISH PLAN FOR GYPSUM BOARD CEILING PAINT.

COORDINATION

19. GENERAL CONTRACTOR SHALL COORDINATE ALL TRADES AFFECTED BY HUNG CEILING CONSTRUCTION (HVAC, SPRINKLER, LIGHTING, POWER, ETC).
20. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COMPATIBILITY BETWEEN FIXTURE TRIMS & CEILING GRID.
21. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING SHOP DRAWINGS FOR SPECIFIED EQUIPMENT FOR APPROVAL TO ARCHITECT ON TIMELY BASIS.

REFLECTED CEILING KEY NOTES

R1 GC TO PROVIDE THE MAXIMUM CEILING HEIGHT ACHIEVABLE ON THE SPACE. COORDINATE WITH ALL TRADES.

R2 EXISTING PIPE LOWER THAT THE CEILING LINE. GC TO TERMINATE THE CEILING TIGHT TO THE EXISTING PIPING.

DEPARTMENT OF BUILDINGS
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

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79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE1 9LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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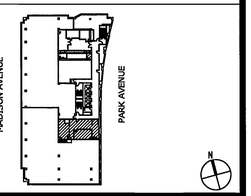
DEPT.BLDGS 121864662 Job Number
SC110162027 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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SCALE	1/8"=1'-0"
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-121RP-SC2.DWG

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL
REFLECTED CEILING PLAN

REGISTERED ARCHITECT TED MOUDIS No. 018108-1 STATE OF NEW YORK

A-121.00

9 OF 20

Jan 13, 2014 - 2:44pm
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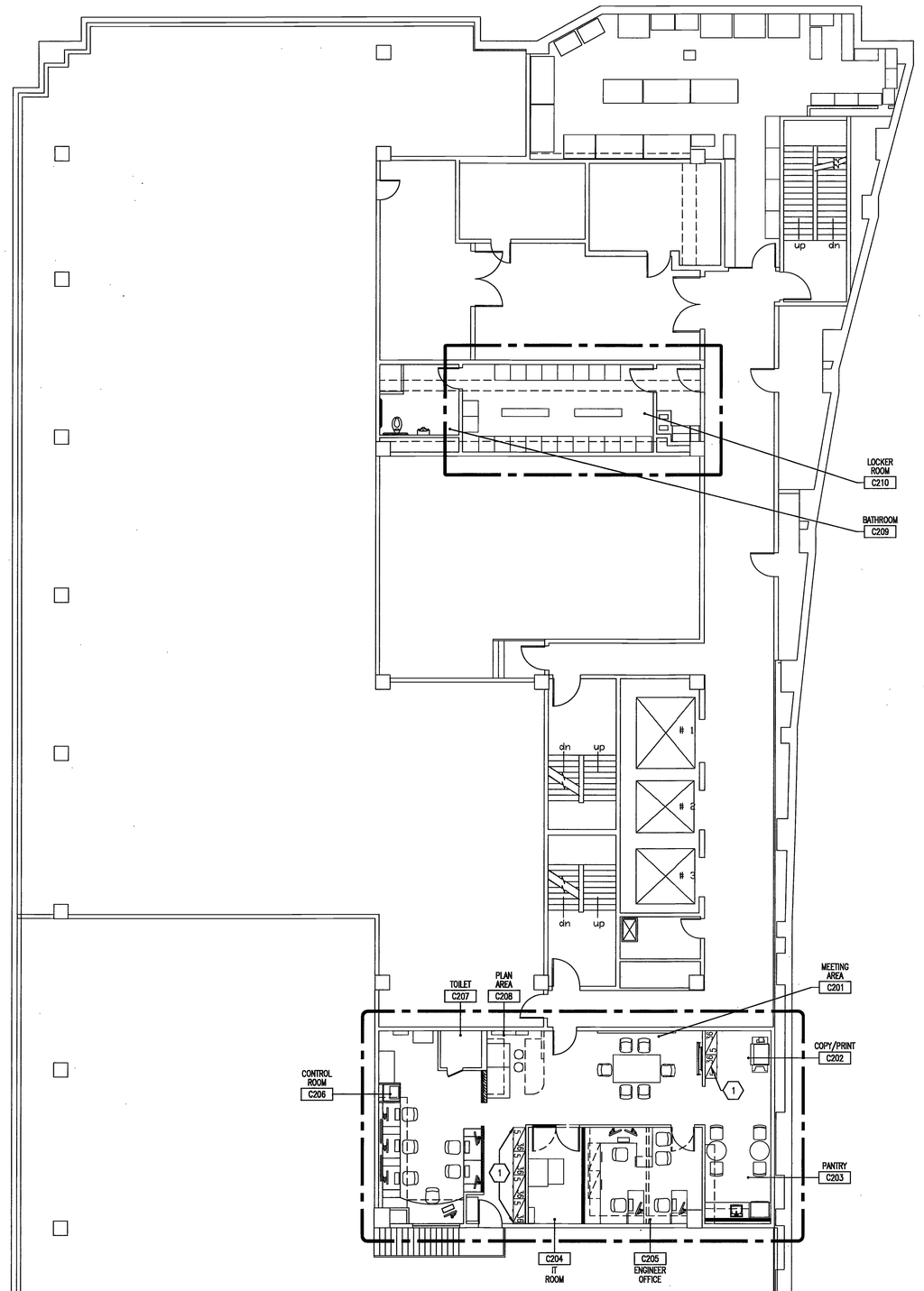


FURNITURE LEGEND

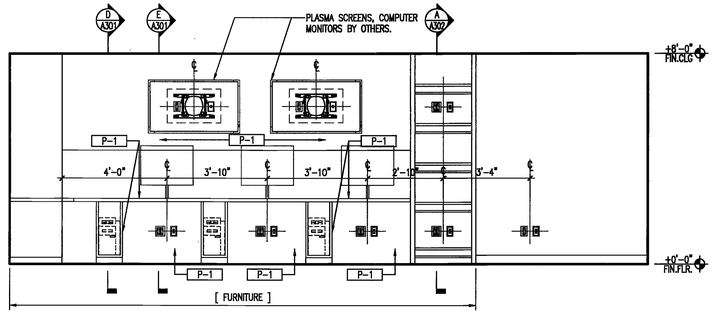
SYMBOL	DESCRIPTION
CH-x	CHAIR AND SEATING
CR-x	CREDENZA
F-x	FILING
PO-x	PRIVATE OFFICE CASEGOOD CONFIGURATION
SH-x	SHELVING
T-x	TABLE
WS-x	WORKSTATION CONFIGURATION
	NEW MILLWORK BY G.C.

EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION
PC	DESKTOP COMPUTER [BY OTHERS]
TV	FLATSCREEN TV W/ BRACKET [BY OTHERS]
TV	DESKTOP TV [BY OTHERS]
C	COPIER
PT	PRINTER
SK	SINK
F	FAUCET
HWH	HOT WATER HEATER TANK
MW	MICROWAVE [BY OTHERS]
CM	COFFEEMAKER [BY OTHERS]
CS	CHARGING STATION
RF	REFRIGERATOR [BY OTHERS]

FURNITURE SCHEDULE

SYM BOL	ITEM	MANUFACTURER	MODEL NO.	FINISHES	REMARKS	CONTACT



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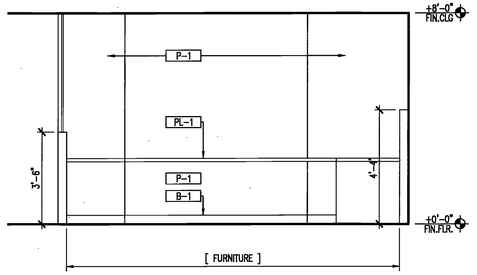

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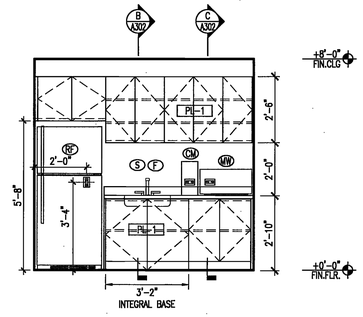

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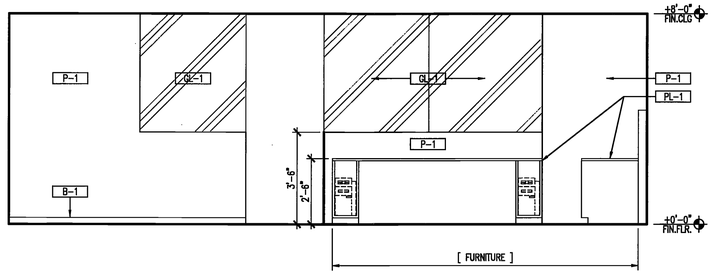

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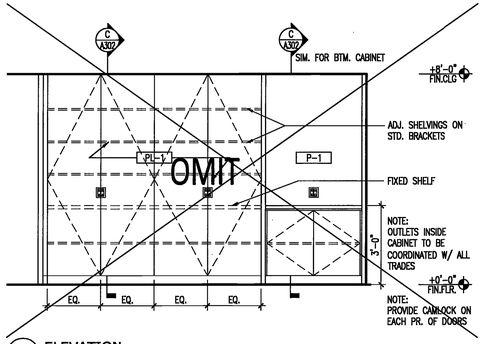

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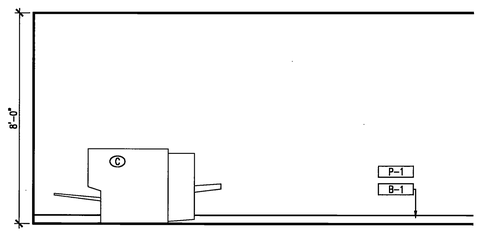

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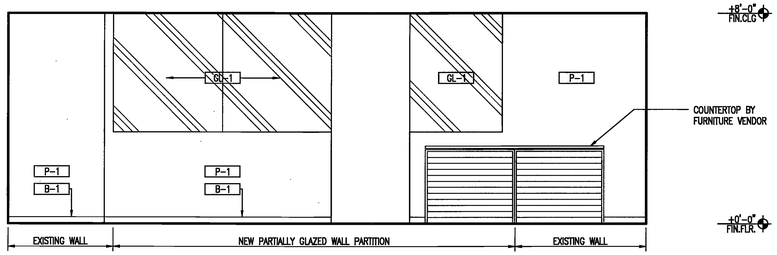

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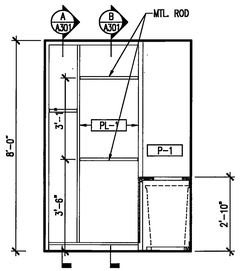

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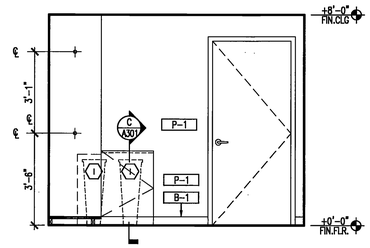

9 ELEVATION
SCALE: 3/8"=1'-0"

EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER/MODEL NO/DIMENSION.	VOLTAGE	AMP	WATTAGE	REMARKS
(S)	SINK & FITTINGS	ELKAY CELEBRITY #GECR25212 SERIE				
(F)	FAUCET	ELKAY ALLURE #LK6175 SERIES				
(CM)	COFFEEMAKER	EXISTING				PROVIDE WATER LINE
(MW)	MICROWAVE	EXISTING				
(REF)	REFRIGERATOR	EXISTING				
(C)	COPIER	EXISTING				

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10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
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T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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DEPT BLDGS 121664662 Job Number
SC110162021 Scan Code

NO.	DATE	DESCRIPTIONS
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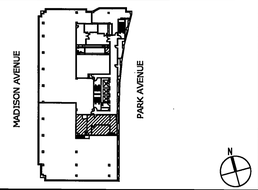
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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SCALE	AS NOTED
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-201EL.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

ELEVATIONS

REGISTERED ARCHITECT
TED MOUDIS
No. 016196
STATE OF NEW YORK

A-201.00
11 OF 20

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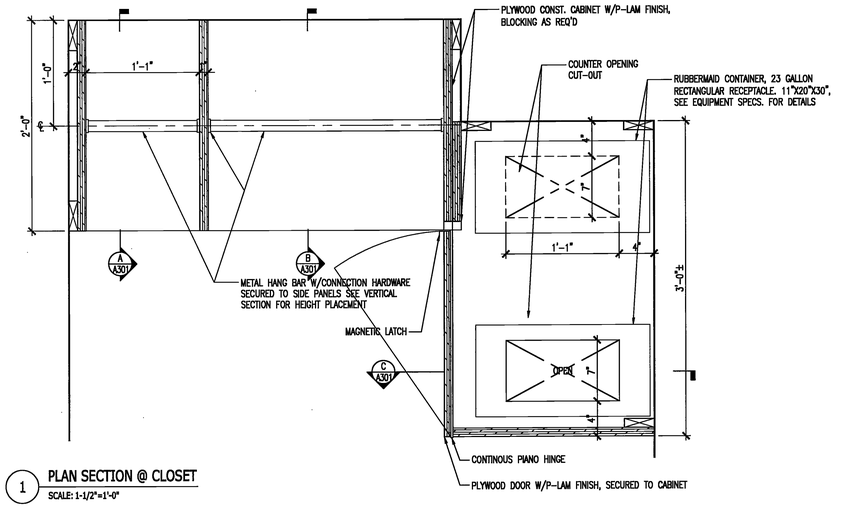

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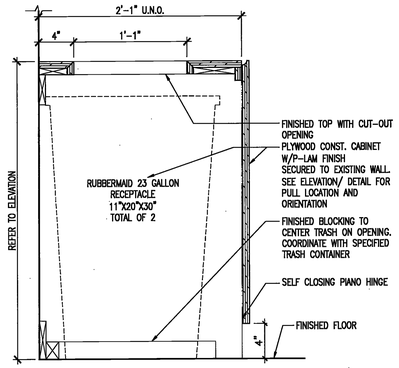

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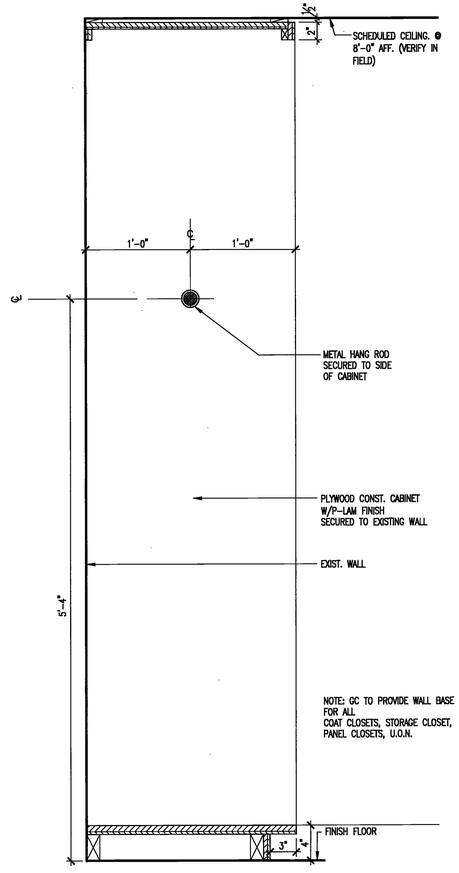

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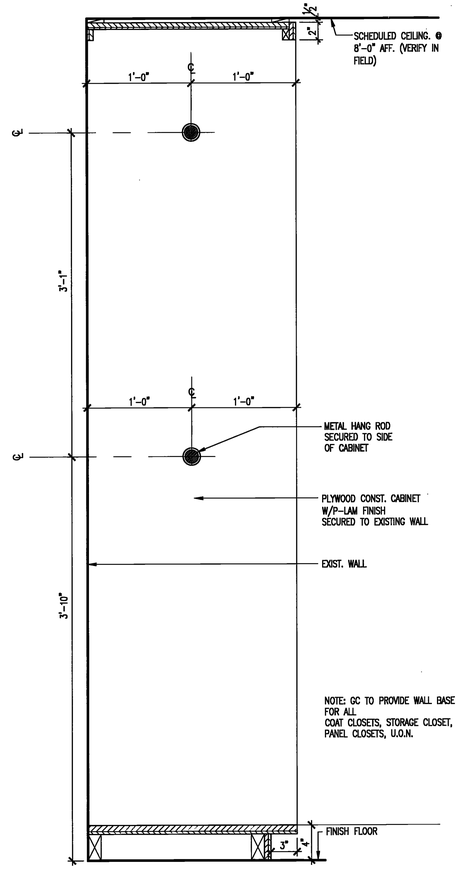

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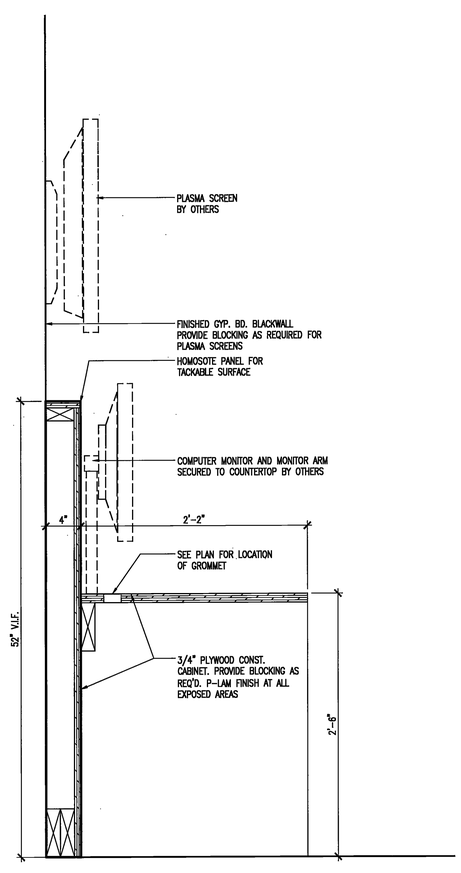

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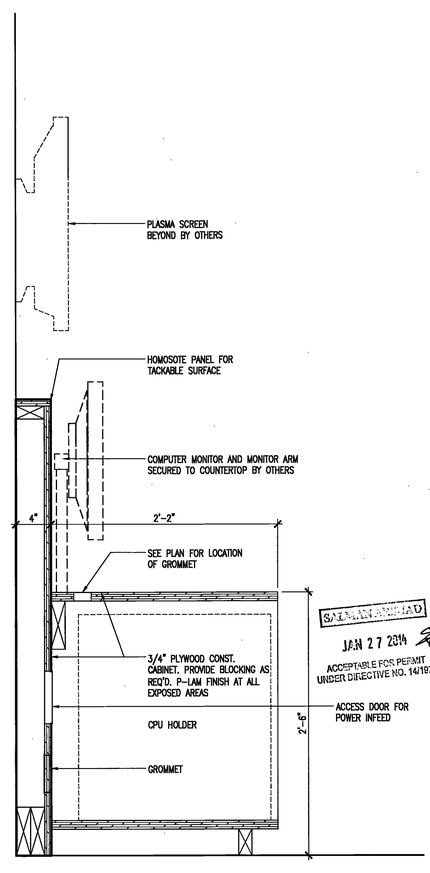

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SCALE: 1-1/2"=1'-0"

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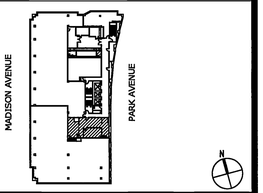
SC110162018 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



PROJECT NUMBER	112162.01
SCALE	AS NOTED
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PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-301SE.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SECTION & DETAILS

REGISTERED ARCHITECT TED MOUDIS No. 016?? STATE OF NEW

A-301.00
12 OF 20

Jan 13, 2014 - 2:44pm
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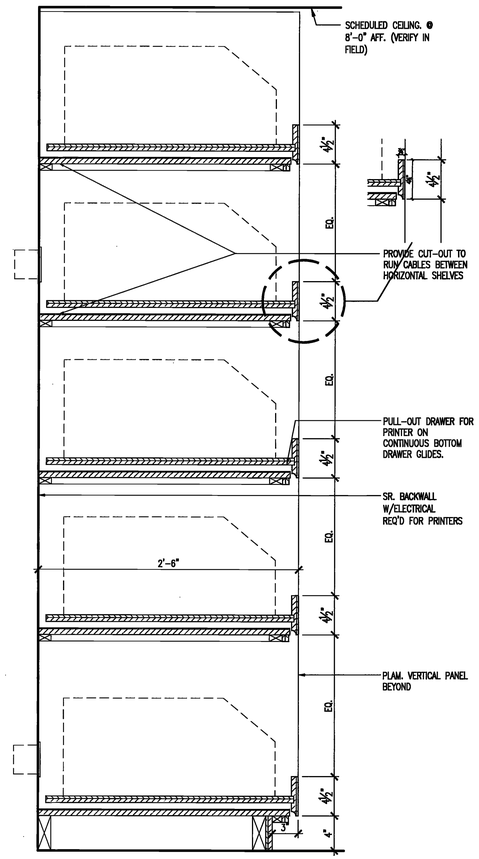

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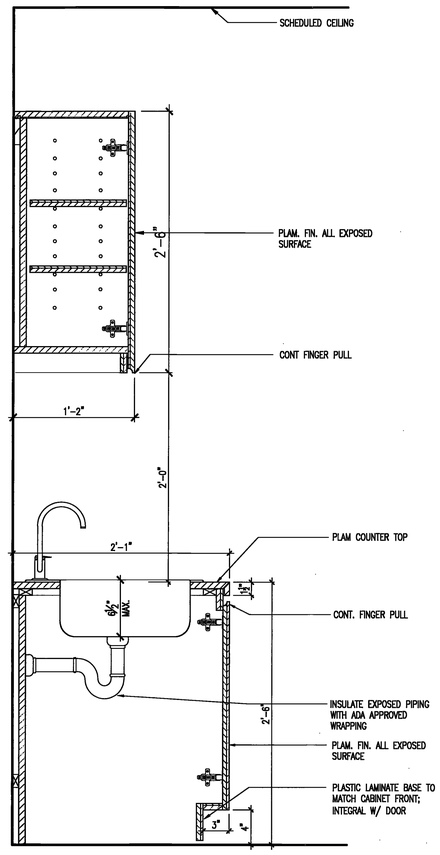

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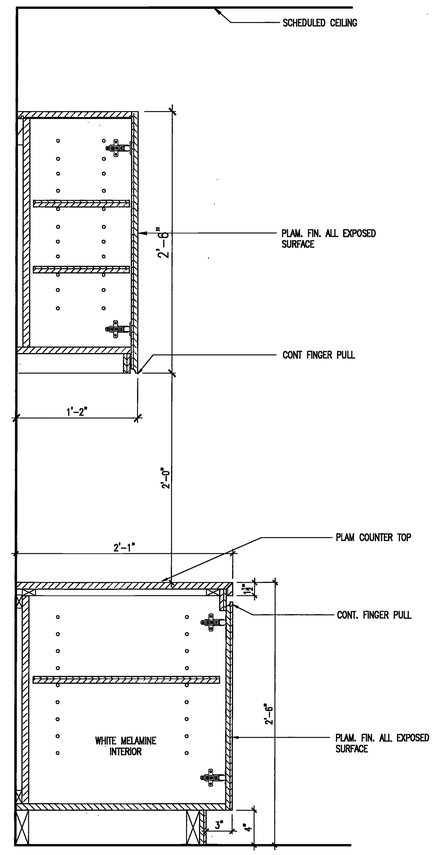

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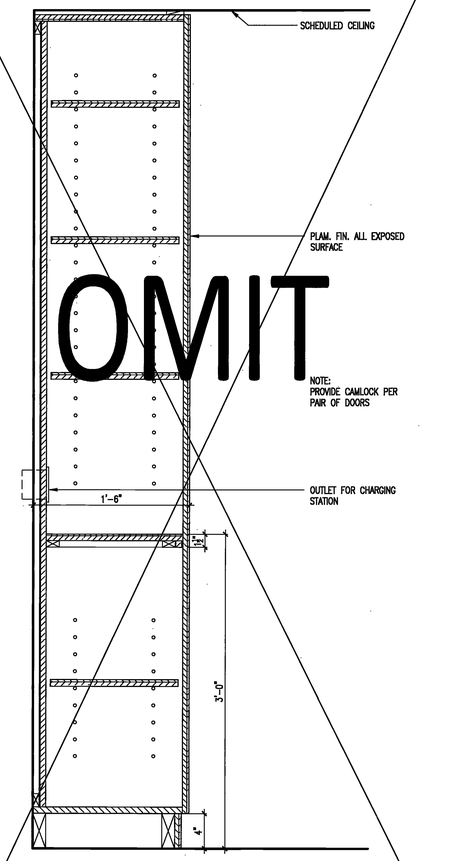

D SECTION
SCALE: 1-1/2"=1'-0"

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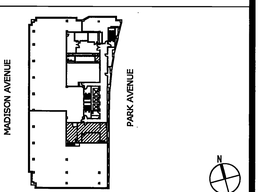
ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



STEVEN J. MOUDIS
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

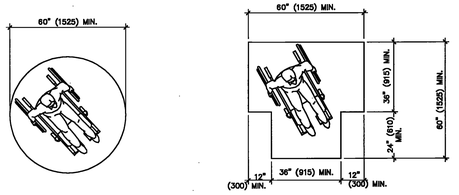
PROJECT NUMBER 112162.01	JP MORGAN CHASE 270 PARK AVENUE NEW YORK, NY SC2 LEVEL
SCALE AS NOTED	SECTION & DETAILS
DATE 08.08.12	
PROJECT MANAGER CR	
PROJECT ARCHITECT MT	
DRAWN BY GM	
CHECKED BY GM	
CADD FILE 112162.01-A-302SE.dwg	

REGISTERED ARCHITECT STEVEN J. MOUDIS 010191 STATE OF NEW

A-302.00
13 OF 20

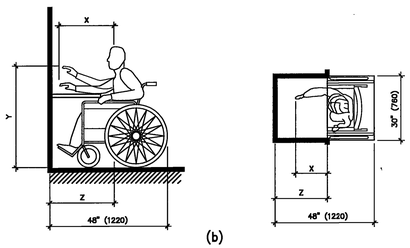
Jan 13, 2014 - 2:44pm
MTokoro R:\2012\JPMorgan Chase\112162.01 - 270 Park Ave, Level SC2\02-Drawings\03-CD\CD set\112162.01-A-302SE.dwg

LOCAL LAW 58 OF 87 & ANSI A117.1-1986 ACCESSIBILITY DIAGRAMS



CIRCULAR T–SHAPED

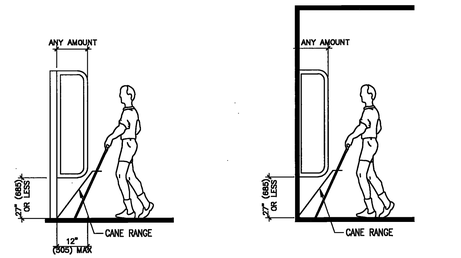
WHEELCHAIR TURNING SPACE



(b)

MAXIMUM FORWARD REACH OVER AN OBSTRUCTION

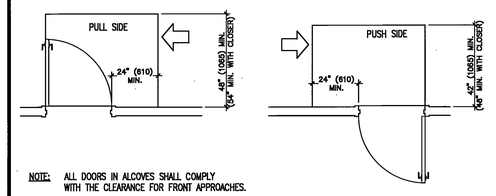
NOTES:
1. X SHALL BE ≤ 25 IN (635); Z SHALL BE ≥ X.
2. WHEN X < 20 IN (510), THEN Y SHALL BE 48IN (1220) MAXIMUM.
3. WHEN X 1S 20 ITO 25 IN (510 TO 635), THEN Y SHALL BE 44 IN (1120) MAXIMUM.



WALKING PERPENDICULAR TO OBJECTS MOUNTED ON POSTS OR PYLONL

WALKING PERPENDICULAR TO A WALL

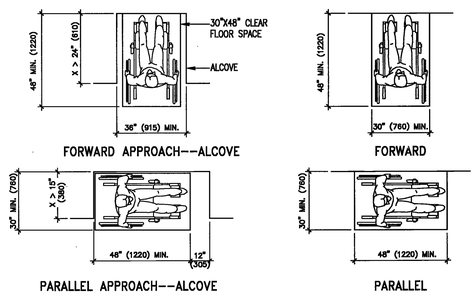
PROTRUDING OBJECTS



NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCE FOR FRONT APPROACHES.

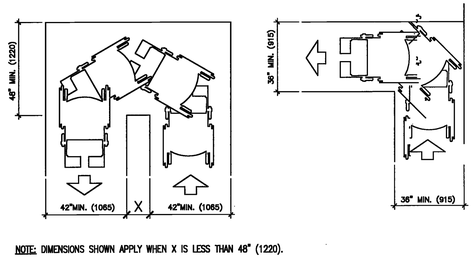
(C)

LATCH SIDE APPROACHES–SWINGING DOORS



PARALLEL APPROACH--ALCOVE PARALLEL

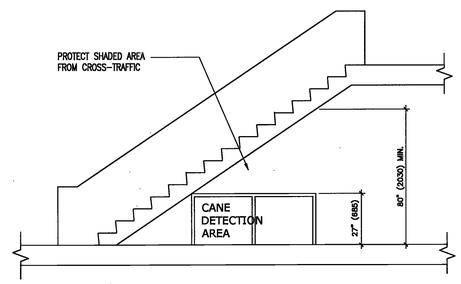
MANEUVERING CLEARANCE IN ALCOVES



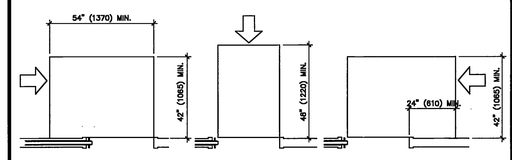
NOTE: DIMENSIONS SHOWN APPLY WHEN X IS LESS THAN 48" (1220).

U–TURN AROUND AN OBSTRUCTION 90° TURN

WHEELCHAIR TURNS



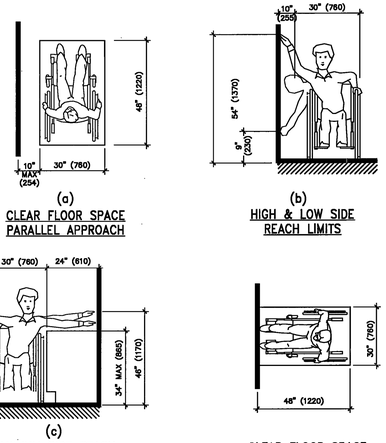
OVERHEAD HAZARDS



(d) POCKET OR HINGE APPROACH (e) FRONT APPROACH (f) STOP OR LATCH APPROACH

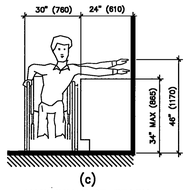
NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCE FOR FRONT APPROACHES.

MANEUVERING CLEARANCE AT SLIDING AND FOLDING DOORS



(a) CLEAR FLOOR SPACE PARALLEL APPROACH

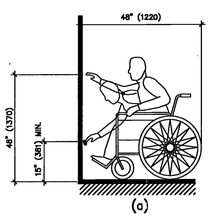
(b) HIGH & LOW SIDE REACH LIMITS



(c) MAXIMUM SIDE REACH OVER OBSTRUCTION

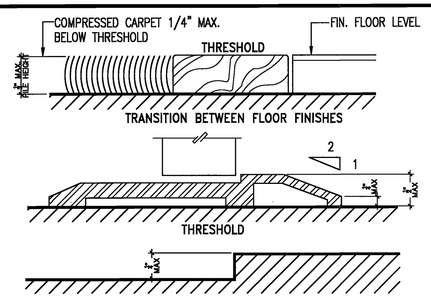
SIDE REACH

CLEAR FLOOR SPACE PARALLEL APPROACH



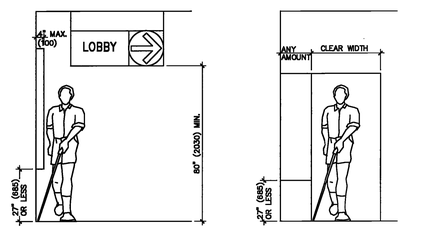
(a)

HIGH FORWARD REACH LIMIT



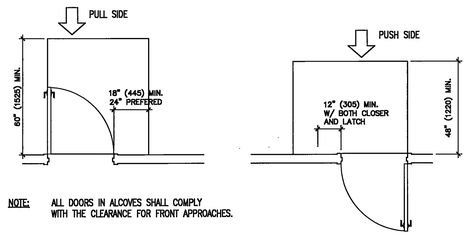
1. 1/2" MAXIMUM TOTAL HEIGHT WITH 1/4" MAXIMUM VERTICAL CHANGE AT EDGE.
2. 1 : 2 SLOPED BEVEL REQUIRED IF LEVEL CHANGE IS OVER 1/4" VERITCAL LEVEL CHANGE.
3. 1/4" MAXIMUM VERTICAL LEVEL CHANGE.

ACCESSIBLE ROUTE



WALKING PARALLEL TO A WALL WALKING PARALLEL TO A WALL

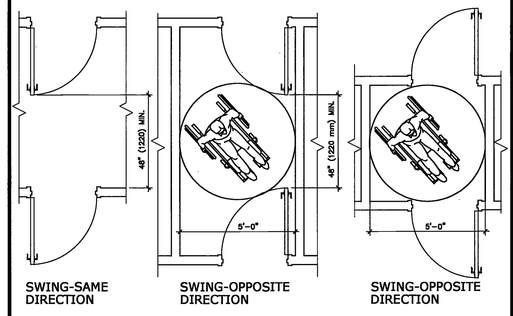
PROTRUDING OBJECTS



NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCE FOR FRONT APPROACHES.

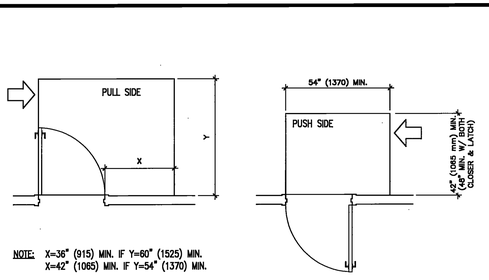
(a)

FRONT APPROACHES–SWINGING DOORS



SWING-SAME DIRECTION SWING-OPPOSITE DIRECTION SWING-OPPOSITE DIRECTION

TWO HINGED DOORS IN SERIES

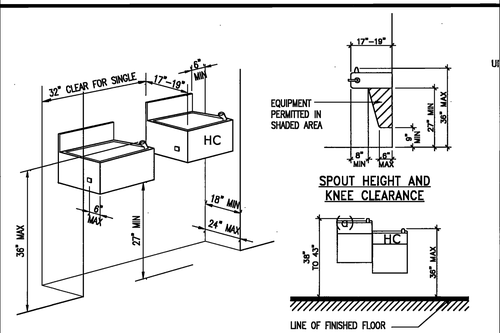


NOTE: X=36" (915) MIN. IF Y=60" (1525) MIN.
X=42" (1065) MIN. IF Y=54" (1370) MIN.

NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCE FOR FRONT APPROACHES.

(b)

HINGE SIDE APPROACHES–SWINGING DOORS



RECESSED DRINKING FOUNTAIN MOUNTING HEIGHT

SPOUT HEIGHT AND KNEE CLEARANCE

DRINKING FOUNTAIN MOUNTING HEIGHT

JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

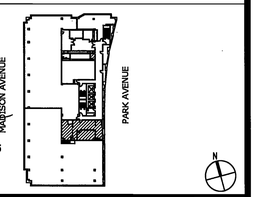
CONSULTANT

DEPT BLDGS 121664662 Job Number
SC110162012 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



JAN 27 2014
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CHECKED BY	GM
CADD FILE	112162.01-A-702-HC-1986-NYC-LL 58 OF 87-1986.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

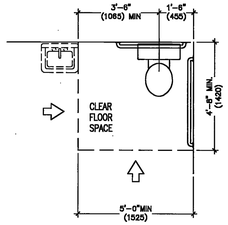
ACCESSIBILITY DIAGRAMS
SHEET 1 OF 2

REGISTERED ARCHITECT TED MOUDIS No. 016196-1 STATE OF NEW YORK

A-702.00

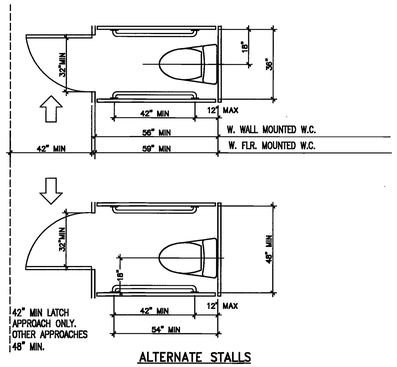
14 OF 20

LOCAL LAW 58 OF 87 & ANSI A117.1-1986 ACCESSIBILITY DIAGRAMS-Continued

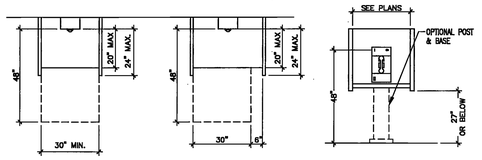


EITHER APPROACH

CLEAR FLOOR SPACE AT WATER CLOSETS

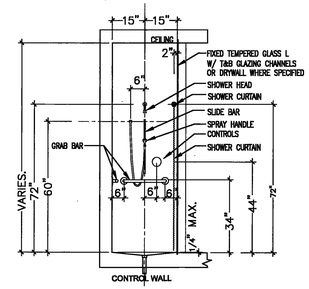


ALTERNATE STALLS

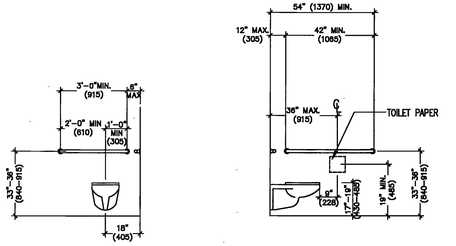


PLANS; FORWARD REACH REQUIRED ELEVATION

MOUNTING HEIGHT & CLEARANCE FOR TELEPHONES
HEIGHT TO HIGHEST OPERABLE PARTS WHICH ARE ESSENTIAL TO BASIC OPERATION OF TELEPHONE.

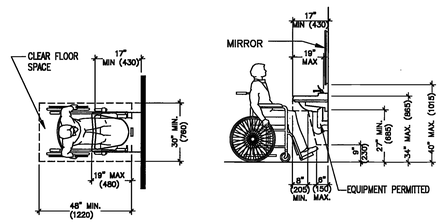


ROLL IN SHOWER–ACCESSORY MOUNTING HEIGHTS @ LOCATION DIMENSIONS ABOVE ARE BASED ON MIN. 30"X60" SHOWER STALL



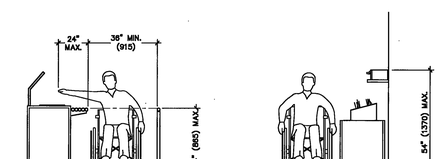
REAR WALL ELEVATION SIDE WALL ELEVATION

GRAB BARS AT WATER CLOSETS



CLEAR FLOOR SPACE AT LAVATORIES

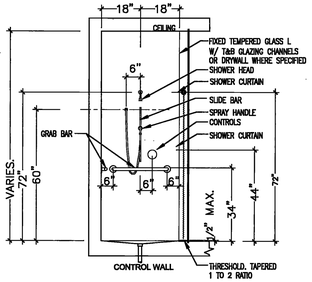
LAVATORY CLEARANCE



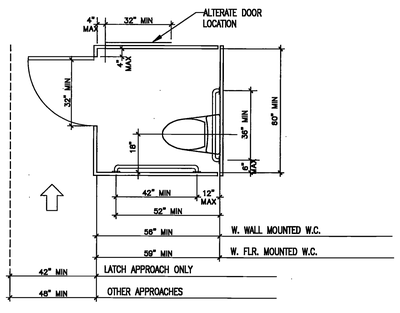
FOOD SERVICE LINES

TABLEWARE AND CONDIMENT TABLE

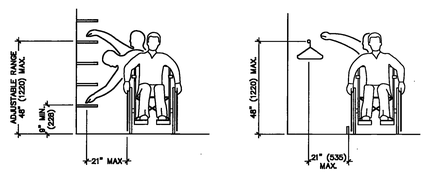
RESTAURANTS AND CAFETERIAS



TRANSFER SHOWER–ACCESSORY MOUNTING HEIGHTS @ LOCATION DIMENSIONS ABOVE ARE BASED ON MIN. 36"X36" SHOWER STALL

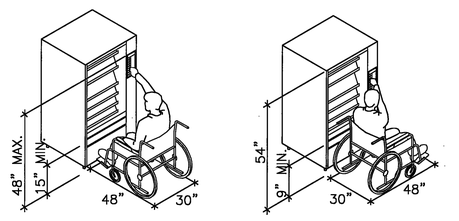


STANDARD STALL



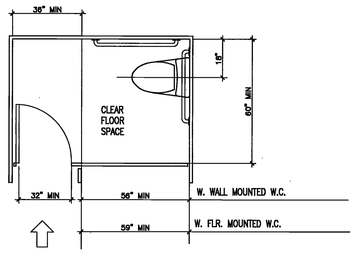
SHELVES CLOSET

PARALLEL/SIDE REACH LIMITS

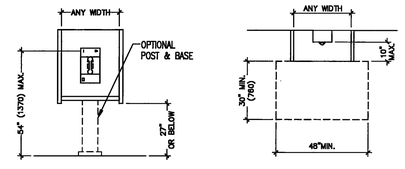


FRONT REACH (ADA) SIDE REACH (ADA)

VENDING MACHINES AND OTHER EQUIPMENT



STANDARD STALL (END OF ROW)



ELEVATION PLAN; SIDE REACH POSSIBLE

MOUNTING HEIGHT & CLEARANCE FOR TELEPHONES

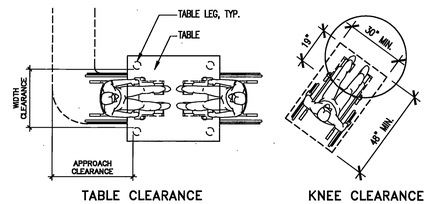


TABLE CLEARANCE KNEE CLEARANCE

FOR KNEE SPACE BELOW A TABLE TOP WITH A MINIMUM WIDTH OF 2'-6" BETWEEN OBSTRUCTIONS (e.g., TABLE LEGS), THE APPROACH CLEARANCE SHOULD BE 3'-6". A KNEE SPACE WIDTH OF 3'-0" OR MORE SHOULD HAVE AN APPROACH CLEARANCE OF 3'-0".

SEATING AND KNEE CLEARANCE

ACCESSIBILITY NOTES

1. FACILITIES FOR PEOPLE WITH PHYSICAL DISABILITIES SHALL BE IN COMPLIANCE WITH NEW YORK CITY BUILDING CODE TITLE 27, SUB–CHAPTER 4, SUB–ARTICLE 2 AND REFERENCE STANDARD RS4–6.
2. WALKWAYS, HALLS, CORRIDORS, AISLES AND OTHER SPACES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL COMPLY WITH SECTIONS 4.2 AND 4.3.
3. GROUND AND FLOOR SURFACES ALONG ACCESS ROUTES IN RAMPS & SPACES INCLUDING FLOORS, WALKWAYS, RAMPS, CORRIDORS, STAIRS, AND CURB RAMPS SHALL BE STABLE, FIRM AND SLIP RESISTANT IN COMPLIANCE W/ SEC 4.5.1
4. SPACE ALLOWANCES AND REACH RANGES AT ALL ROOMS & SPACES SHALL COMPLY WITH REFERENCE STANDARD 4–6 4.2; REACH RANGES SHALL BE: FORWARD REACH HEIGHT: 9 INCHES MINIMUM AND 54 INCHES MAXIMUM.
5. ANY PART OF AN ACCESSIBLE ROUTE WITH A SLOPE GREATER THAN 1:20 SHALL BE CONSIDERED A RAMP & SHALL COMPLY WITH SECTION 4.8.1
6. DOOR WIDTHS SHALL BE A MINIMUM OF 34" IN COMPLIANCE W/ SEC. 4.13.5
7. THRESHOLDS AT DOORWAYS WILL NOT EXCEED ½" IN HEIGHT AS PER SEC. 4.13.8
8. HANDLES, PULLS, LATHCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL BE MADE TO COMPLY W/ SEC. 4.13.9
9. ACCESSIBLE STORAGE FACILITIES, SUCH AS CABINETS AND CLOSETS, SHALL COMPLY WITH SECTION 4.25.1
10. CONTROLS AND OPERATING MECHANISMS FOR LIGHT SWITCHES AND ALARMS SHALL BE ACCESSIBLE IN COMPLIANCE WITH SECTION 4.27.
11. CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING OF THE WRIST IN COMPLIANCE WITH SECTION 4.27
12. EMERGENCY WARNING SIGNAGE, CIRCULATION DIRECTIONAL SIGNAGE SHALL COMPLY WITH SECTION4.28.
13. EXIT SIGNS, EMERGENCY SIGNAGE, CIRCULATION DIRECTIONAL SIGNAGE SHALL COMPLY WITH SECTION 4.30.
14. ALL BATHROOMS, ASIDE FROM THOSE WHERE FIXTURES ARE REPLACED IN EXISTING ROUGHING, SHALL BE HANDICAPPED ACCESSIBLE IN COMPLIANCE W/ LL 58/87.
15. ANSI/A.D.A. ACCESSIBILITY STANDARDS AND MINIMUM CLEARANCES ARE INCLUSIVE OF, BUT NOT LIMITED TO, FIGURES SHOWN. GENERAL CONTRACTOR AND ALL SUB–CONTRACTORS SHALL REFER TO APPLICABLE LITERATURE (FEDERAL REGISTER, ADAAG).

ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212.561.2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312.924.5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPT.BLDGS 121664662 Job Number
SC110162008 Scan Code

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ISSUE/REVISIONS

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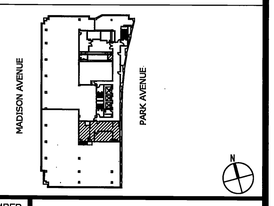

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PROJECT ARCHITECT	MT
DRAWN BY	XX
CHECKED BY	XX
CADD FILE	112162.01–A–703–HC–1986 NYC–LL 58 OF 87–1986.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

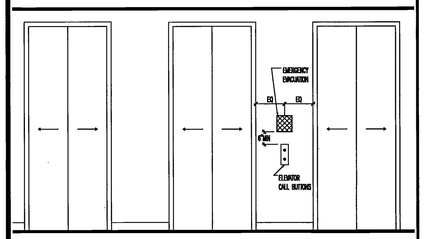
ACCESSIBILITY DIAGRAMS
SHEET 2 OF 2

REGISTERED ARCHITECT TED MOUDIS 016198 STATE OF NEW YORK

A-703.00
X OF 20

SIGNAGE- Contin.

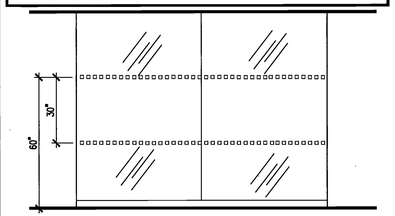
DEVICES AND HARDWARE



ELEVATOR LOBBY

9 ELEVATION OF TYP SIGNAGE @ PASSENGER ELEVATOR LOBBY DRS.
SCALE: NOT TO SCALE

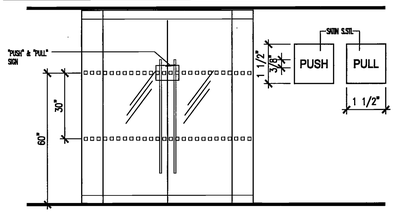
NOTE:
DIGRAMS SHOWN HERE ARE GENERAL AND INDICATE PLACEMENT OF DISTRACTION MARKINGS VERTICALLY. OTHER PLAN WILL INDICATED ACTUAL GEMETRIC DESIGN AND SPACING.



GLASS PARTITION

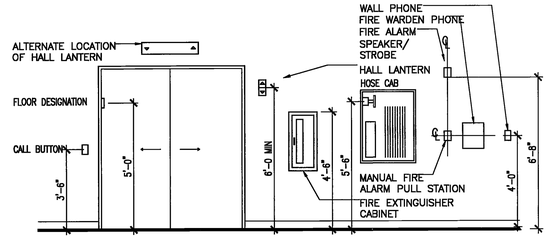
10 ELEVATION OF TYP DISTRACTION MARKINGS AT GLASS FRONTS
SCALE: NOT TO SCALE

NOTE:
DIGRAMS SHOWN HERE ARE GENERAL AND INDICATE PLACEMENT OF DISTRACTION MARKINGS VERTICALLY. OTHER PLAN WILL INDICATED ACTUAL GEMETRIC DESIGN AND SPACING.



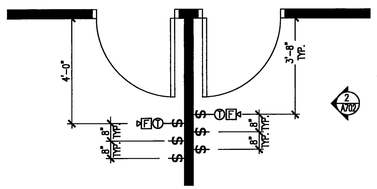
GLASS DOORS & SIDELIGHTS

11 ELEVATION OF TYP DISTRACTION MARKINGS AT GLASS FRONTS
SCALE: NOT TO SCALE

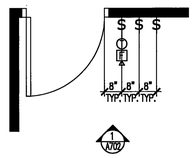


PASSENGER & FREIGHT ELEVATOR DOOR

5 ELEVATION OF FIRE PROTECTION DEVICES & DEVICES AT ELEVATOR DOOR LANDING
SCALE: NOT TO SCALE



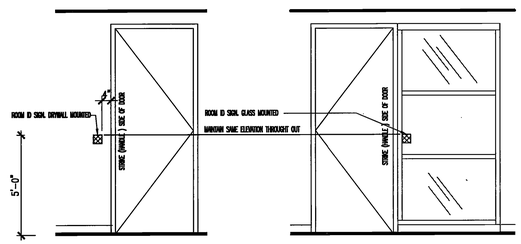
BACK TO BACK DEVICES- SPACES WITH GLASS FRONTS



BACK TO BACK DEVICES- SPACES WITHOUT GLASS FRONTS

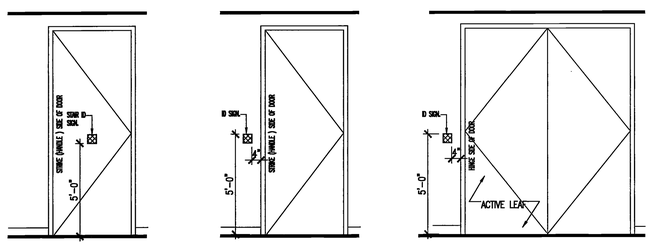
6 PLAN OF TYPICAL DEVICES AT DOORS
SCALE: NOT TO SCALE

SIGNAGE



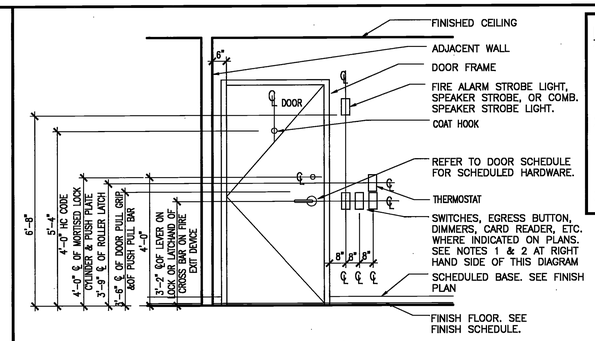
WALL MOUNT GLASS MOUNT

7 ELEVATION OF TYPICAL SIGNAGE AT DOORS AND GLASS OFFICE FRONTS
SCALE: NOT TO SCALE



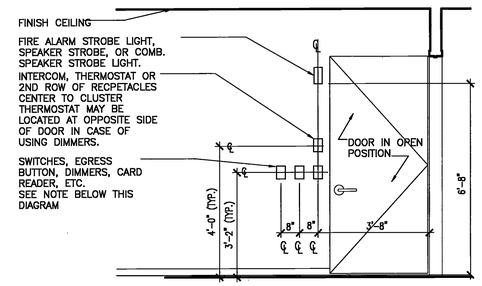
STAIR DOOR TOILET ROOMS FREIGHT ENTRANCE

8 ELEVATION OF TYPICAL SIGNAGE AT DOORS
SCALE: NOT TO SCALE



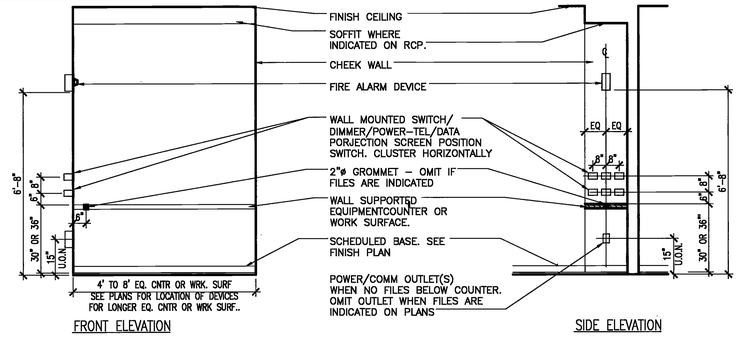
NOTES:
1. WHERE MORE THAN ONE SWITCH EXISTS IN THE SAME LOCATION, NSTALL IN GANG TYPE BOX UNDER ONE COVER PLATE.
2. INTERCOM, THERMOSTAT OR 2ND ROW OF RECPETACLES CLUSTER MAY BE LOCATED AT OPPOSITE SIDE OF DOOR IN CASE OF USING DIMMERS.
3. SEE PLAN VIEW # 6 BELOW

1 ELEVATION OF TYPICAL HARDWARE AND DEVICES AT DOORS - SPACES WITHOUT GLASS FRONTS
SCALE: NOT TO SCALE



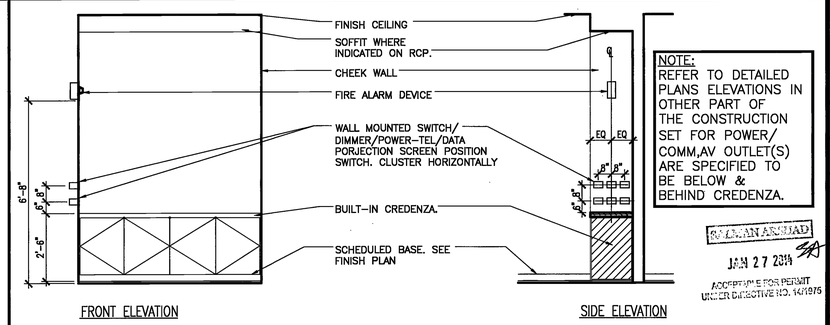
NOTES:
1. WHERE MORE THAN ONE SWITCH EXISTS IN THE SAME LOCATION, NSTALL IN GANG TYPE BOX UNDER ONE COVER PLATE.
2. INTERCOM, THERMOSTAT OR 2ND ROW OF RECPETACLES CLUSTER MAY BE LOCATED AT OPPOSITE SIDE OF DOOR IN CASE OF USING DIMMERS.
3. SEE PLAN VIEW # 6 BELOW

2 ELEVATION OF TYPICAL DEVICES LOCATION AT DOORS - SPACES WITH GLASS FRONTS
SCALE: NOT TO SCALE



FRONT ELEVATION SIDE ELEVATION

3 ELEVATION OF FIRE PROTECTION, POWER, LIGHTING CONTROLS & FIRE ALARM @ EQUIPMENT COUNTER
SCALE: NOT TO SCALE



NOTE:
REFER TO DETAILED PLANS ELEVATIONS IN OTHER PART OF THE CONSTRUCTION SET FOR POWER/ COMM,AV OUTLET(S) ARE SPECIFIED TO BE BELOW & BEHIND CREDENZA.

RAYMAN ARSHAD
JAN 27 2014
ACCEPTANCE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

FRONT ELEVATION SIDE ELEVATION

4 ELEVATION OF FIRE PROTECTION, POWER, LIGHTING CONTROLS & FIRE ALARM - CONF. RM BUILT-IN CREDENZA
SCALE: NOT TO SCALE

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE1 9LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPT BLDGS 121664662 Job Number
SC110162006 Scan Code

NO.	DATE	DESCRIPTIONS
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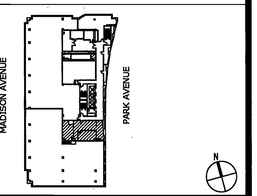
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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SCALE	NA
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	XX
CADD FILE	112162.01-A-704-STD-TYP.DEVICE LOC.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

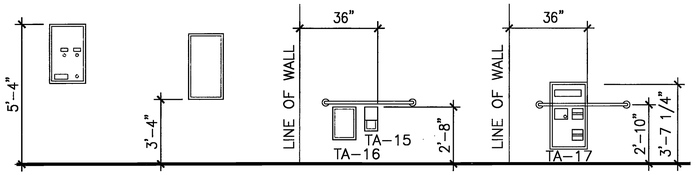
TYP. MOUNTING HEIGHTS & LOCATION OF ARCH. MEP DEVICES & FIXTURES

REGISTERED ARCHITECT TED MOUDIS 016192-1 STATE OF NEW YORK

A-704.00

16 OF 20

PLUMBING FIXTURES & ACCESSORIES



TA-13
SANITARY NAPKIN DISPENSER

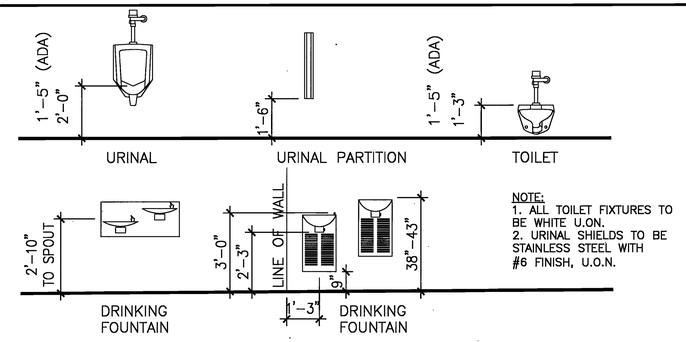
TA-14
MIRROR

TA-15
MULTI-ROLL TOILET PAPER DISPENSER

TA-16
SANITARY NAPKIN DISPOSAL UNIT

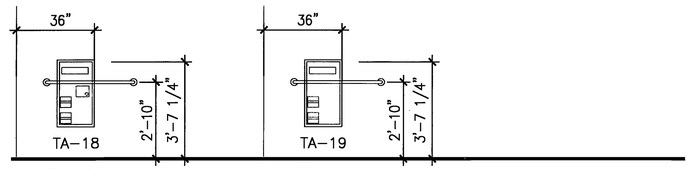
TA-17
RECESSED MULTI-ROLL TOILET PAPER DISPENSER, TOILET SEAT COVER, SANITARY NAPKIN DISPOSAL UNIT

5 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES- 4
SCALE: NOT TO SCALE



NOTE:
1. ALL TOILET FIXTURES TO BE WHITE U.ON.
2. URINAL SHIELDS TO BE STAINLESS STEEL WITH #6 FINISH, U.O.N.

1 ELAVATION OF TYPICAL TOILET ROOM PLUMBING FIXTURES
SCALE: NOT TO SCALE

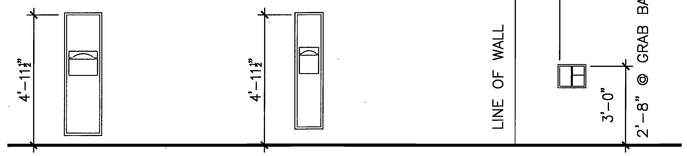


TA-18
TOILET PARTITION MULTI-ROLL TOILET PAPER DISPENSER, TOILET SEAT COVER, SANITARY NAPKIN DISPOSAL UNIT

TA-19
TOILET PARTITION MOUNTED MULTI-ROLL TOILET PAPER DISPENSER, TOILET SEAT COVER,

6 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES - 5
SCALE: NOT TO SCALE

NOTE:
1. FOR ALL TOILET ROOM ACCESSORIES SHOWN IN ELEVATION 12 TO 15 BELOW, MATERIAL SHALL BE STAINLESS STEEL WITH #6 FINISH, U.O.N.

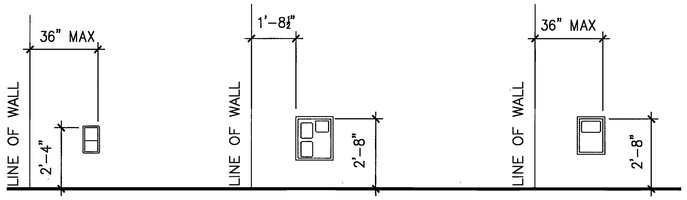


TA-1
PAPER TOWEL DISPENSER & DISPOSAL UNIT

TA-2
PAPER TOWEL DISPENSER & DISPOSAL UNIT

TA-3
MULTI-ROLL TOILET PAPER DISPENSER

2 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES- 1
SCALE: NOT TO SCALE



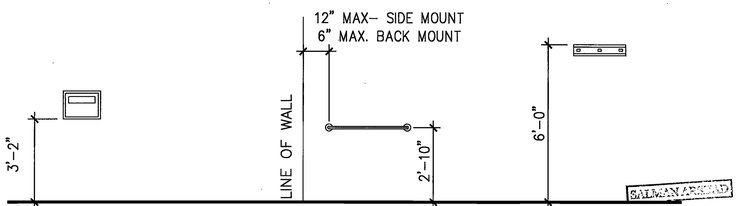
TA-4
MULTI-ROLL TOILET PAPER DISPENSER

TA-5
SANITARY NAPKIN DISPOSAL & DUAL ROLL TOILET PAPER DISPENSER UNIT

TA-7
SANITARY NAPKIN DISPOSAL UNIT

X XX
SCALE: NOT TO SCALE

3 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES- 2
SCALE: NOT TO SCALE



TA-9
RECESSED TOILET SEAT-COVER DISPENSER

TA-11
GRAB BARS
TA-11A 36" LONG
TA-11B 40" LONG
TA-11C 42" LONG

TA-12 JAN 27 2014
MOP & BROOM HOLDER

X XX
SCALE: NOT TO SCALE

4 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES- 3
SCALE: NOT TO SCALE

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue, 10th Floor, New York, NY 10016, T. 212 561 2000
The LaSalle Wacker, 221 North LaSalle Street, Chicago, IL 60601, T. 312 924 5000
MCM Architecture Limited, 71 Hopton Street, London SE19LR, UK, T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT
DEPT BLDGS 121664662 Job Number
SC110162003 Scan Code

NO.	DATE	DESCRIPTIONS
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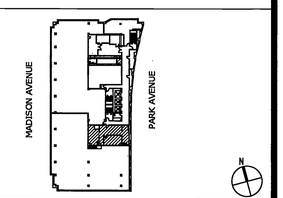
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



PROJECT NUMBER	112162.01
SCALE	AS NOTED
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-705-DLOC.dwg

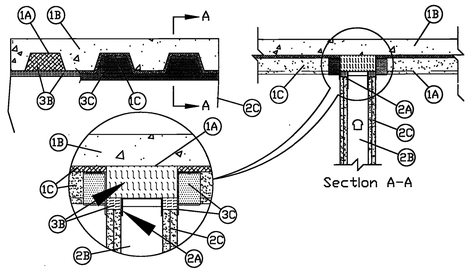
JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

TYP. MOUNTING HEIGHTS & LOCATION OF ARCH. MEP. DEVICES & FIXTURES

REGISTERED ARCHITECT FRED MOUDIS 016191-1 STATE OF NEW YORK

A-705.00
17 OF 20

System No. HW-D-0088
Assembly Rating - 1 and 2 Hr (See Item 2)
Nominal Joint Width - 1 in.
Class II Movement Capabilities - 18.75% Compression or Extension



1.0 GENERAL NOTES AND CONDITIONS

System No. HW-D-0088

November 18, 2003
Assembly Ratings -- 1 and 2 Hr (See Item 2)
Nominal Joint Width -- 1 in.
Class II Movement Capabilities -- 18.75% Compression and Extension

1. **Floor Assembly** -- The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 or D800 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Steel Floor and Form Units*** -- Max 3 in. (76 mm) deep galv steel fluted floor units.
   B. **Concrete** -- Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.
   C. **Spray-Applied Fire Resistive Material*** -- After installation of the ceiling runner (Item 2A) or deflection track (Item 3A, if used), steel floor units to be sprayed with a min 5/16 in. (8 mm) to max 11/16 in. (18 mm) thickness of material in accordance with the specifications in the individual D700 or D800 Series Design. Material is to be excluded from the steel deck in the area immediately above the wall as well as from the flanges of the ceiling runner or deflection track.
   ISOLATEK INTERNATIONAL -- Type 300

   W R GRACE & CO - CONN
   CONSTRUCTION PRODUCTS DIV -- Type MK-6/HY

1A. Roof Assembly -- (Not Shown) -- As an alternate to the floor assembly (Item 1), a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P700 or P800 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:
   A. **Steel Roof Deck** -- Max 3 in. (76 mm) deep galv steel fluted roof deck.
   B. **Roof Insulation -- Mineral and Fiber Board*** -- Min 3/4 in. (19 mm) thick boards applied in one or more layers directly over steel roof deck or over gypsum board sheathing laid atop steel roof deck.
   C. **Roof Covering*** -- Hot-mopped or cold-application materials compatible with mineral and fiber board insulation.
   D. **Spray-Applied Fire Resistive Material*** -- After installation of the ceiling runner (Item 2A) or deflection track (Item 3A, if used), steel roof deck to be sprayed with a max 3/4 in. (19 mm) thickness of spray applied fire resistive material as specified in the individual P700 or P800 Series Roof-Ceiling design. Material is to be excluded from the steel deck in the area immediately above the wall as well as from the flanges of the ceiling runner or deflection track.
   ISOLATEK INTERNATIONAL -- Type 300

   W R GRACE & CO - CONN
   CONSTRUCTION PRODUCTS DIV -- Type MK-6/HY

2. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Steel Floor and Ceiling Runners** -- Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs . Ceiling runner to be provided with min 1-1/4 in. (32 mm) to max 2 in. (51 mm) flanges. When deflection channel (Item 3A) is used, flange height of ceiling runner is to be equal to or greater than flange height of deflection channel and the ceiling runner is to nest within the deflection channel with a 1/2 in. (13 mm) to 3/4 in. (19 mm) gap maintained between the top of the ceiling runner and the top of the deflection channel. When deflection channel is not used, ceiling runner is secured to steel floor or roof deck with steel fasteners or welds spaced max 24 in. (610 mm) OC.

   A1. **Light Gauge Framing* -- Slotted Ceiling Runner** -- As an alternate to the ceiling runner in Item 2A, ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Items 2B). Ceiling runner installed perpendicular to direction of fluted steel floor or roof deck and secured to valleys with steel fasteners spaced max 24 in. (610 mm) OC. When slotted ceiling runner is used, deflection channel (Item 3A) shall not be used.
   SLIPTRACK SYSTEMS INC -- SLP-TRK

   A2. **Light Gauge Framing* -- Clipped Ceiling Runner** -- As an alternate to the ceiling runner in Items 2A and 2A1, clipped runner to consist of galv steel channel with clips preformed in track flanges which positively engage the inside flange of the steel studs (Item 2B). Track sized to accommodate steel studs (Item 2B). Track flanges to be min 2-1/2 in. (64 mm). Clipped ceiling runner installed perpendicular to direction of fluted steel floor units and secured to valleys with steel fasteners spaced max 24 in. (610 mm) OC. When clipped ceiling runner is used, deflection channel (Item 3A) shall not be used.
   TOTAL STEEL SOLUTIONS L L C -- Snap Trak

   B. **Studs** -- Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 in. (13 mm) to 3/4 in. (19 mm) less in length than assembly height with bottom nesting in and secured to floor runner. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long wafer head steel screws at midheight of slot on each side of wall. When deflection channel (Item 3A) is used, steel studs attached to ceiling runner with sheet metal screws located 1/2 in. (13 mm) below the bottom of the deflection channel. When deflection channel is not used, studs to nest in ceiling runner without attachment. Stud spacing not to exceed 24 in. (610 mm) OC.

C. **Gypsum Board*** -- Gypsum board sheets installed to a min total 5/8 in. (16 mm) or 1-1/4 in. (32 mm) thickness on each side of wall for 1 and 2 hr fire rated assemblies, respectively. Wall to be constructed in the individual U400 Series Design in the UL Fire Resistance Directory, except that a max 1 in. (25 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the steel floor or roof deck. The screws attaching the gypsum board to the studs along the top of the wall shall be located 1 in. (25 mm) below the bottom of the ceiling runner. No gypsum board attachment screws shall be driven into the ceiling runner or into the optional deflection channel.
The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. **Joint System -- Max separation between bottom of floor or roof deck and top of gypsum board (at time of installation of joint system) is 1 in. (25 mm). The joint system is designed to accomodate a max 18.75 percent compression or extension from its installed width.** The joint system shall consist of forming and fill materials, with or without a deflection channel (Item 2A), as follows:

   A. **Deflection Channel** -- (Optional, Not Shown) - Max 2 in. (51 mm) deep min 24 gauge galv steel channel sized to accommodated ceiling runner (Item 2A). Deflection channel secured to steel floor or roof deck with steel fasteners or welds spaced max 24 in. (610 mm) OC. The ceiling runner is installed within the deflection channel to maintain a 1/2 in. (13 mm) to 3/4 in. (19 mm) gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner nests inside the deflection channel without attachment.

   B. **Forming Material*** -- Min 5-5/8 in. (143 mm) or 7 in. (178 mm) thickness of 6 pcf (96 kg/m3) mineral wool batt insulation for 1 and 2 hr fire rated assemblies, respectively, cut to the shape of the fluted deck and installed into the flutes of the steel floor or roof deck between the top of the deflection channel and the steel floor or roof deck. The mineral wool batt insulation is to be compressed min 14.3 percent in thickness such that it is flush with the gypsum board surface on both sides of the wall. Additional sections of mineral wool batt insulation are compressed 50 percent in thickness and installed cut edge first to completely fill the gap above the top of the gypsum board. The forming material shall be installed flush with both surfaces of wall.
   FIBREX INSULATIONS INC -- FBX Safing Insulation

   IIG MINWOOL L L C -- Safing Insulation/MW

   ROCK WOOL MANUFACTURING CO -- Delta Board

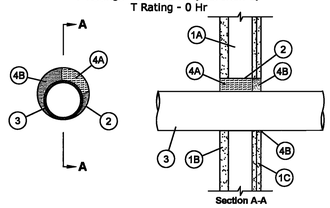
   THERMAFIBER L L C -- Type SAF

   C. **Fill, Void or Cavity Material*-Sealant** -- Min 1/8 in. (3.2 mm) wet thickness or 1/16 in. (1.6 mm) dry thickness of fill material spray applied on each side of the wall in the flutes of the steel floor or roof deck and between the top of the wall and the bottom of the steel floor or roof deck and overlap a min 1/2 in. (13 mm) onto gypsum board and a min 2 in. (51 mm) onto the spray applied material on both sides of wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal AS200 Elastomeric Spray

*Bearing the UL Classification Mark

UL SYSTEM NO. HW-D-0088-Cont.

System No. W-L-1251
F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 0 Hr



Guide XHEZ
Through - penetration Firestop Systems

(W-L-1251 - B Card)
(Cont'd from W-L-1251 - A Card)

System No. W-L-1251

July 24, 2001
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 0 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum board/stud shaft wall assembly shall be constructed of the materials and in the manner specified in the individual U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall incorporate the following construction features:
   A. **Steel Studs** -- "C-H" or "C-T" shaped studs, min 2-1/2 in. wide by 1-1/2 in. deep, fabricated from min No. 25 gauge galv steel, spaced max 24 in. OC.

   B. **Gypsum Board*** -- 1 in. thick, 24 in. wide gypsum liner panels installed vertically. Max diam of circular cutout in gypsum liner panel is 10 in.

   C. **Gypsum Board*** -- 1/2 in. or 5/8 in. thick, 48 in. wide gypsum boards. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of circular cutout in gypsum board is 10 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Metallic Sleeve** -- Cylindrical sleeve fabricated from min No. 30 gauge galv sheet steel and having a min 2 in. lap along the longitudinal seam. Length of the sleeve to be equal to the thickness of the wall. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the opening and releasing the coil to let it uncoil against the circular cutouts in the gypsum board layers. The ends of the steel sleeve shall be flush with each surface of the wall.

3. **Through Penetrant** -- One metallic pipe, tube or conduit installed concentrically or eccentrically within the firestop system. The annular space between the pipe, tube or conduit and the periphery of the sleeved opening to be min 0 in. (point contact) to max 2in. Pipe, tube or conduit to be rigidly supported on both sides of wall assembly. One of the following types and sizes of pipe, tube or conduit may be used:

   D. **Steel Pipe** -- Nom 8 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.

   E. **Iron Pipe** -- Nom 8 in. diam (or smaller) cast or ductile iron pipe.

   F. **Conduit** -- Nom 4 in. diam (or smaller) rigid steel conduit, steel electrical metallic tubing (EMT) or flexible steel conduit.

   G. **Copper Pipe or Tube** -- Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe or Type L (or heavier) copper tube.

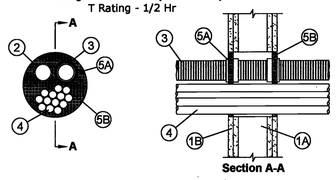
4. **Firestop System** -- The firestop system consists of the following items:

   H. **Packing Material** -- Min 4 pcf mineral wool batt insulation firmly packed into sleeved opening as a permanent form. Packing material to extend throughout thickness of wall except for a 1 in. deep recess on the finished side of wall to accommodate the fill material.

   I. **Fill, Void or Cavity Material*** -- **Sealant** -- Min 1 in. thickness of fill material applied within sleeve, flush with finished surface of wall. At the point contact location, a min 3/8 in. diam bead of fill material shall be applied at the penetrant/gypsum board interface.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

*Bearing the UL Classification Marking



Guide XHEZ
Through-Penetration Firestop Systems

System No. W-L-8056

F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 1/2 Hr

1. Wall Assembly -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. Studs -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.

   B. Gypsum Board* -- Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 8 in. (203 mm).

2. Metallic Penetrants -- One or more metallic pipes, conduits or tubing installed concentrically or eccentrically within the opening. Annular space between metallic penetrants and periphery of opening to be min 0 in. (0 mm, point contact) to max 2 in. (51 mm). Annular space between metallic penetrants and nonmetallic penetrants or cables to be min 1/2 in. (13 mm) to max 1-1/2 in. (38 mm). Metallic pipes, conduits or tubing to be rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of metallic pipes, conduits or tubing may be installed within the opening:

   C. Steel Pipe -- Nom 2 In. (51 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.

   D. Iron Pipe -- Nom 2 in. (51 mm) diam (or smaller) cast or ductile iron pipe.

   E. Conduit -- Nom 2 In. (51 mm) diam (or smaller) rigid steel conduits, electrical metallic tubing (EMT) or flexible steel or aluminum conduit.

2. Electrical Nonmetallic Tubing (ENT)+ -- Nom 2 In. (51 mm) diam (or smaller) ENT formed of PVC, installed in accordance with Article 331 of the National Electrical Code (NFPA No. 70). One or more ENT installed concentrically or eccentrically within the opening. Annular space between ENT and periphery of opening to be min 0 in. (0 mm, point contact) to max 2 in. (51 mm). Annular space between ENT and metallic penetrants or cables to be min 1/2 in. (13 mm) to max 1_1/2 in. (38 mm). ENT to be rigidly supported on both sides of the wall assembly.

   See Electrical Nonmetallic Tubing (FKHU) in UL Electrical Construction Materials Directory for names of manufacturers.

4. Cables -- Nom 4 in. (102 mm) diam (or smaller) tight bundle of cables. Cable bundle spaced min 1/2 in. (13 mm) to max 1-1/2 in. (38 mm) from metallic and nonmetallic penetrants. Cable bundle spaced 0 in. (0 mm, point contact) to 2 in. (51 mm) from periphery of opening. Cable bundle to be rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of cables may be used:

   F. Max 100 pair No. 24 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacket materials.

   B. Max 1/C No. 500 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.

   C. Max 7/C No. 12 AWG (or smaller) copper conductor power and control cables with XLPE or PVC insulation with XLPE or PVC jacket.

   G. Max 4/C No. 4/0 AWG (or smaller) copper or aluminum conductor SER cables with PVC insulation and jacket.

   H. Max 3/C No. 2/0 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TEK cable.

   I. Max 110/125 fiber optic (F.O.) cable with PVC insulation and jacket.

   J. Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable (Romex) with PVC insulation and jacket.

   H. Max RG/U coaxial cable with fluorinated ethylene insulation and jacket.

   I. Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with PVC jacket and insulation.

   K. Max 4/C with ground No. 2/0 (or smaller) aluminum or copper conductor Metal-Clad+ or Armored-Clad+ cable with steel or aluminum jacketing.

   AFC CABLE SYSTEMS INC

3. Firestop System - The firestop system shall consist of the following:

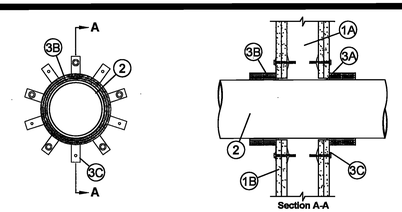
   L. Fill, Void or Cavity Material* - Wrap Strip -- Nom 1/8 or 3/16 in. (3.2 or 4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 2 in. (51 mm) wide strips, or nom 1/4 in. (6 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. (38 mm) wide strips. Single layer wrapped around each individual ENT and secured with a single layer of foil tape. Wrap strip recessed within opening such that ends project a max 1/4 in. (6 mm) on each surface of the wall.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal RED Wrap Strip, SpecSeal BLU Wrap Strip or SpecSeal BLU2 Wrap Strip

   M. Fill, Void or Cavity Material* - Sealant -- Min 5/8 in. (16 mm) thickness of fill material applied flush with both surfaces of wall. At point contact locations, apply a min 3/8 in. (10 mm) diam bead of fill material at the penetrant/gypsum board interface.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

*Bearing the UL Classification Mark
+Bearing the UL Listing Mark



System No. W-L-2074

October 14, 2003
F Ratings -- 1 and 2 Hr (See Item 1)
T Ratings -- 3/4, 1 and 2 Hr (See Items 1 and 2)
L Rating At Ambient -- Less Than 1 CFM/sq ft
L Rating At 400 F -- Less Than 1 CFM/sq ft

1. **Wall Assembly** -- The 1 or 2 h fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 and U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced 24 in. (610 mm) OC.

   B. **Gypsum Board*** -- 5/8 in. (16 mm) thick, 4 ft (1219 mm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 7 in. (178 mm).
   Except as noted in Item 2, the hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through-Penetrants** -- One nonmetallic pipe or conduit to be centered within the firestop system. A nom annular space of 3/16 in. (4.8 mm) is required within the firestop system. Pipe or conduit to be rigidly supported on both sides of wall assembly. The following types and sizes of nonmetallic pipes or conduit may be used:

   A. **Polyvinyl Chloride (PVC) Pipe** -- Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid core or cellular PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

   B. **Flame Retardant Polypropylene (FRPP) Pipe** -- Nom 6 in. (152 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

   C. **Rigid Nonmetallic Conduit+** -- Nom 6 in. (152 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70.)

   D. **Chlorinated Polyvinyl Chloride (CPVC)Pipe** -- Nom 6 in. (152 mm) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.

   E. **Fiberglass Reinforced Pipe (FRP)** -- Nom 6 in. (152 mm) diam (or smaller) glass fiber reinforced thermosetting resin pipe for use in closed (process or control) or vented (drain, waste or vent) piping systems. **When FRP pipe is used, T Rating is 3/4 hr.**

3. **Firestop System** -- The firestop system shall consist of the following:
   A. **Fill, Void or Cavity Material* -- Sealant** -- Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

   B. **Fill, Void or Cavity Material* -- Wrap Strip** -- Nom 1/8 or 3/16 in. (3.2 or 4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 2 in. (51 mm) wide strips or nom 1/4 in. (6 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. (38 mm) wide strips. Two stacks of wrap strips, each consisting of three wrap strip layers, are individually wrapped around the through-penetrant with the ends butted and held in place with masking tape. Butted ends in successive layers shall be aligned. Wrap strips are installed on each side of wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal BLU Wrap Strip, SpecSeal BLU2 Wrap Strip or SpecSeal RED Wrap Strip

   C. **Steel Collar** -- Collar fabricated from coils of precut 0.022 in. (0.6 mm) thick (No. 26 MSG) galv sheet steel available from wrap strip manufacturer. Collar shall be min 3 in. (76 mm) deep with min six 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs. Retainer tabs, 3/4 in. (19 mm) wide tapering down to 3/8 in. (10 mm) wide and located opposite the anchor tabs, are folded 90 degrees toward through-penetrant surface to maintain the annular space around the through-penetrant and to retain the wrap strips. Steel collar wrapped around wrap strips and through-penetrant with a 1 in. (25 mm) wide overlap along its perimeter joint and secured together by means of three No. 8 by 3/8 in. (10 mm) long steel screws. Wrap strip/steel collar assembly is slid along the through-penetrant until it abuts the surface of the wall. Steel collar tightened around wrap strips and through-penetrant using min 1/2 in. (13 mm) wide by 0.028 in. (0.7 mm) thick stainless steel hose clamp spaced 2 in. (51 mm) OC. Collar secured to wall by a min of six 1/8 in. (3.2 mm) diam by min 1-3/4 in. (45 mm) long molly bolts in conjunction with min 1/4 in. (6 mm) by 1-1/2 in. (38 mm) diam steel fender washers. Steel collar installed on each side of wall.

4. **Firestop Device*** -- As an alternate to the wrap strip and the steel collar (Item Nos. 3B and 3C), a firestop device consisting of steel collar lined with an intumescent material sized to fit the specific diam of the nonmetallic through penetrant may be used. Device shall be installed in accordance with the installation instructions supplied with the product. The device shall be installed on the each side of the wall and secured to the wall with 1/8 in. (3.2 mm) diam by min 1-3/4 in. (45 mm) long steel molly bolts in conjunction with min 1-1/4 in. (32 mm) diam steel fender washers.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal Firestop Collar

*Bearing the UL Classification Marking
+Bearing the UL Listing Mark

ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

1. UL SYSTEM NO. HW-D-0088
2. UL SYSTEM NO. W-L- 1251
3. UL SYSTEM NO. W-L- 8056
4. UL SYSTEM NO. W-L- 2074

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

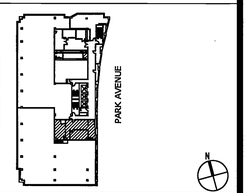
CONSULTANT

DEPT BLDGS 121664662 Job Number
SC110162000 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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DATE	08.08.12
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PROJECT ARCHITECT	MT
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CHECKED BY	GM
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JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

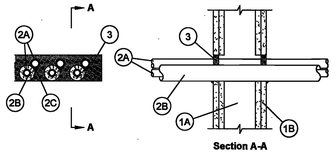
FIRE STOPPING & JOINT SYSTEM DIAGRAMS SHEET 1 OF 3

REGISTERED ARCHITECT TED MOUDIS No. 012... STATE OF NEW YORK

A-706.00

18 OF 20

System No. W-L-8027
F Rating - 1 and 2 Hr (See Item 1)
T Rating - 1/4 Hr



Guide XHEZ
Through-Penetration Firestop Systems

(W-L-8027 - B Card)
(Cont'd from W-L-8027 - A Card)

System No. W-L-8027

October 11, 2000
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 1/4 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be 3-5/8 in. wide and spaced max 24 in. OC.

   B. **Gypsum Board*** -- Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max area of opening is 30 in. with a max dimension of 10 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Air Conditioning (AC) Line Set** -- One or more AC line sets installed eccentrically or concentrically within opening. Each AC line set consists of two pipes or tubes (Item 2A), tubing insulation (Item 2B) and a thermostat cable (Item 2C). The space between the AC line sets shall be in 1/2 in. to max 3/4 in. The space between the AC line sets and the periphery of the opening shall be min 0 in. (point contact) to max 1 in.

2A. **Through Penetrant** -- A max of two pipes or tubes to be installed in each AC line set. Of the two pipes or tubes, only one may have a nom diam greater than 1/2 in. Annular space between pipes or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. Pipes or tubing to be rigidly supported on both sides of the wall assembly. The following types and sizes of through penetrants may be used:
A. **Steel Pipe** -- Nom 1 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
B. **Iron Pipe** -- Nom. 1 in. diam (or smaller) cast or ductile iron pipe.
C. **Copper Pipe** -- Nom 1 in. diam (or smaller) Regular (or heavier) copper pipe.
D. **Copper Tube** -- Nom. 1 in. diam (or smaller) Type L (or heavier) copper tube.

2B. **Tube Insulation -- Plastics#** -- Nom 3/4 in. thich acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The tube insulation may be installed on one max 1/2 in. diam pipe or tube in each AC line set. The annular space between the penetrating item and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. The space between the pipes or tubing within each AC line set shall be 0 in. (point contact).
See **Plastics** (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

2C. **Cable** -- One 4 pair No. 18 AWG (or smaller) thermostat cable with polyvinyl chloride (PVC) insulation and jacket materials may be installed with each AC line set. Cable to be spaced min 0 in (point contact) to max 1/2 in. from the other penetrants in each line set. The space between the cable and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. Cable to be rigidly supported on both sides of wall assembly.

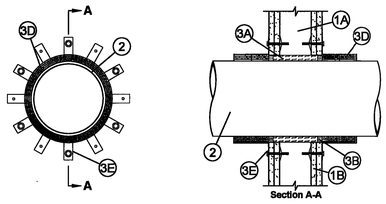
3. **Fill, Void or Cavity Material*** -- **Sealant** -- Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. diam bead fo fill material applied at through penetrant/gypsum board interface on both surfaces of wall. Additional fill material forced into grouped penetrant interstices to max extent possible.

SPECIFIED TECHNOLOGIES INC -- SpecSeal LCI Sealant

*Bearing the UL Classification Marking
Bearing the UL Recognized Component Marking

5. UL SYSTEM NO. W-L- 8027

System No. W-L-2079
F-Rating - 1 and 2 Hr (See Item 1B)
T-Rating - 0 Hr
L Rating At Ambient - 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft



System No. W-L-2079

October 14, 2003
F Ratings -- 1 and 2 Hr (See Item 1B)
T Rating -- 0 Hr
L Rating At Ambient -- 1 CFM/sq ft
L Rating At 400 F -- Less Than 1 CFM/sq ft

1. **Wall Assembly --** The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs --** Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. OC (406 mm) with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.

   B. **Gypsum Board* --** 5/8 in. (16 mm) thick, 4 ft (1219 mm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 10 in. (254 mm).
   The hourly F rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through Penetrant --** One nonmetallic pipe to be centered within the firestop system. A nom annular space of 11/16 in. (18 mm) is required within the firestop system. Pipe to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipes may be used:

   A. **Polyvinyl Chloride (PVC) Pipe --** Nom 8 in. (203 mm) diam (or smaller) Schedule 40 PVC pipe for use in closed (process or supply) vented (drain, waste, or vent) piping systems.

   B. **Flame Retardant Polypropylene (FRPP) Pipe --** Nom 8 in. (203 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

   C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe --** Nom 8 in. (203 mm) diam (or smaller) SDR 17 13.5 CPVC pipe for use in closed (process or supply) piping systems.

3. **Firestop System --** The firestop system shall consist of the following:

   A. **Packing Material --** Min 4 pcf (64 kg/m3) mineral wool insulation cut to size to fill the annulus within the opening and stud cavity. Mineral wool insulation wrapped around the outer circumferance of the through penetrant and secured together by means of No. 24 AWG steel tie wire. Mineral wool insulation slid into annulus of opening and recessed from both surfaces of wall to accommodate the required thickness of fill material.

   B. **Fill, Void or Cavity Material* -- Sealant --** Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

   C. **Aluminum Foil Tape --** (Not Shown) -- Nom 3 mil (0.8 mm) thick pressure sensitive aluminum foil tape wrapped around the outer circumference of the through penetrant with a 1 in. (25 mm) wide overlap along its perimeter joint. Foil tape shall abut against both surfaces of the wall and extend a min 5 in. (127 mm) beyond both surfaces of the wall.

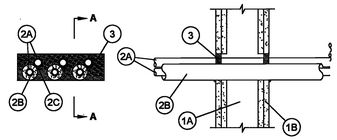
   D. **Fill, Void or Cavity Material* -- Wrap Strip --** Nom 1/8 or 3/16 in. (3.2 or 4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 2 in. (51 mm) wide strips. Two stacks of wrap strips, each consisting of four wrap strips are individually wrapped around the through penetrant with ends butted and held in place with masking tape. Butted ends in successive layers may be aligned or offset. The edge of the wrap strips shall abut each surface of the wall. Two stacks of wrap strips are installed on each side of the wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal BLU Wrap Strip or SpecSeal BLU2 Wrap Strip

   E. **Steel Collar --** Collar fabricated from coils of precut 0.029 in. (0.7 mm) thick (No. 22 MSG) galv sheet steel available from wrap strip manufacturer. Collar shall be nom 4 in. (102 mm) deep with min six 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs for securement to the wall. Retainer tabs, 3/4 in. (19 mm) wide tapering down to 3/8 in. (10 mm) wide and located opposite the anchor tabs, are folded 90 degrees toward through penetrant surface to maintain the annular space around the pipe and to retain the wrap strips. Steel collar wrapped around wrap strips and through penetrant with 1 in. (25 mm) wide overlap along its perimeter joint. Steel collar tightened around wrap strips and through penetrant using min 1/2 in. (13 mm) wide by 0.028 in. (0.7 mm) thick stainless steel hose clamp spaced 2 in. (51 mm) OC. Collar secured to wall with 1/8 in. (3.2 mm) diam by min 1-3/4 in. (45 mm) long steel molly bolts in conjunction with min 1/4 in. (6 mm) by 1-1/4 in. (32 mm) diam steel fender washers. Steel collars are installed on each side of wall.

*Bearing the UL Classification Mark

6. UL SYSTEM NO. W-L- 2079

System No. W-L-8027
F Rating - 1 and 2 Hr (See Item 1)
T Rating - 1/4 Hr



Guide XHEZ
Through-Penetration Firestop Systems

(W-L-8027 - B Card)
(Cont'd from W-L-8027 - A Card)

System No. W-L-8027

October 11, 2000
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 1/4 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be 3-5/8 in. wide and spaced max 24 in. OC.

   B. **Gypsum Board*** -- Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max area of opening is 30 in. with a max dimension of 10 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Air Conditioning (AC) Line Set** -- One or more AC line sets installed eccentrically or concentrically within opening. Each AC line set consists of two pipes or tubes (Item 2A), tubing insulation (Item 2B) and a thermostat cable (Item 2C). The space between the AC line sets shall be in 1/2 in. to max 3/4 in. The space between the AC line sets and the periphery of the opening shall be min 0 in. (point contact) to max 1 in.

2A. **Through Penetrant** -- A max of two pipes or tubes to be installed in each AC line set. Of the two pipes or tubes, only one may have a nom diam greater than 1/2 in. Annular space between pipes or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. Pipes or tubing to be rigidly supported on both sides of the wall assembly. The following types and sizes of through penetrants may be used:
A. **Steel Pipe** -- Nom 1 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
B. **Iron Pipe** -- Nom. 1 in. diam (or smaller) cast or ductile iron pipe.
C. **Copper Pipe** -- Nom 1 in. diam (or smaller) Regular (or heavier) copper pipe.
D. **Copper Tube** -- Nom. 1 in. diam (or smaller) Type L (or heavier) copper tube.

2B. **Tube Insulation -- Plastics#** -- Nom 3/4 in. thich acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The tube insulation may be installed on one max 1/2 in. diam pipe or tube in each AC line set. The annular space between the penetrating item and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. The space between the pipes or tubing within each AC line set shall be 0 in. (point contact).
See **Plastics** (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

2C. **Cable** -- One 4 pair No. 18 AWG (or smaller) thermostat cable with polyvinyl chloride (PVC) insulation and jacket materials may be installed with each AC line set. Cable to be spaced min 0 in (point contact) to max 1/2 in. from the other penetrants in each line set. The space between the cable and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. Cable to be rigidly supported on both sides of wall assembly.

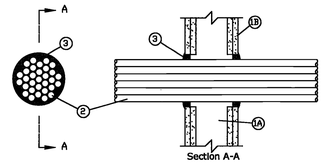
3. **Fill, Void or Cavity Material* -- Sealant** -- Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. diam bead fo fill material applied at through penetrant/gypsum board interface on both surfaces of wall. Additional fill material forced into grouped penetrant interstices to max extent possible.

SPECIFIED TECHNOLOGIES INC -- SpecSeal LCI Sealant

*Bearing the UL Classification Marking
Bearing the UL Recognized Component Marking

7. UL SYSTEM NO. W-L- 8027

System No. W-L-3076
F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 0 Hr



Guide XHEZ
Through-Penetration Firestop Systems

(W-L-3076 - B Card)
(Cont'd from W-L-3076 - A Card)

System No. W-L-3076

August 07, 2000
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 0 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.

   B. **Gypsum Board *** -- The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Diam of circular cutout in gypsum board layers in each side of wall to be 1/2 in. larger than diam of tight cable bundle (Item 2 or 2A). Max diam of opening is 4-1/2 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Cables** -- Max 4 in. diam tight bundle of cables to be installed either concentrically or eccentricity in circular cutouts in gypsum wallboard opening. Cables to be rigidly supported on both sides of wall assembly. The annular space within the firestop system shall be a min 0 in. (point contact) to a max 1/2 in. Any combination of the following types and sizes of cables may be used.

   A. Max 150 pair No. 24 AWG (or smaller) copper conductor cable with polyvinyl chloride (PVC) insulation and jacket.

   B. Max 1/C - 350 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.

   C. Max 2/0 AWG (or smaller) copper conductor cable with a XLPE insulation and PVC jacket.

   D. Max 3/C (with ground) No. 8 AWG nonmetallic sheathed (Romex) cable (or smaller) with copper conductor, polyvinyl chloride (PVC) insulation and jacket materials.

   E. Max 3/C (with ground) No. 2/0 AWG (or smaller) aluminum or copper conductor service entrance cable with PVC insulation and jacket materials.

   F. Max 4 pair No. 18 AWG (or smaller) copper conductor thermostat cable with PVC insulation and jacket materials.

   G. Max RG/U Type 11 (or smaller) coaxial cable with fluorinated ethylene insulation and jacket materials.

   H. Max 62.5/125 micron fiber optic cable with PVC insulation and jacket materials.

2A. **Through penetrating Product*** -- As an alternate to the Item 2, a max 4 in. diam tight bundle of max 4 /C (with ground) - No. 2/0 AWG (or smaller) aluminum or steel jacketed **Armored Cable+** or **Metal-Clad Cable+** with aluminum or copper conductors may be used. The annular space between the cable bundle and the periphery of the opening shall be a min of 0 in. (point contact) to a max of 1 in. Through penetrating products may also be used in conjunction with the cables specified in Item 2. The through penetrating products are to be spaced min 1/2 in. from the cable bundle in Item 2. Cables to be rigidly supported on both sides of wall assembly.
AFC CABLE SYSTEMS INC

3. **Fill, Void or Cavity Material* -- Sealant** -- Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall. Fill material to be forced into interstices of cable group to max extent possible. At point contact location, apply min 1/4 in. diam bead of fill material at cable/gypsum board interface on both sides of wall.

SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102 or 105 Sealant

*Bearing the UL Classification Marking
+ Bearing the UL Listing Mark

SEAL AN AMJAD
JAN 27 2014
ACCEPTABLE FOR PERMIT
UNDER DIRECTIVE NO. 14/1975

8. UL SYSTEM NO. W-L- 3076

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE1 9LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPT BLDGS 121664662 Job Number
SC110162029 Scan Code

NO.	DATE	DESCRIPTIONS
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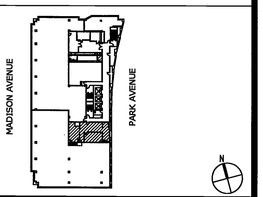
1	08.05.13	ISSUE FOR BID, FILING & LL REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	XX
CHECKED BY	XX
CADD FILE	112162.01-A-707-FS.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

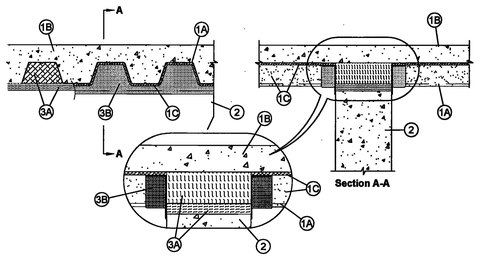
FIRE STOPPING & JOINT SYSTEM DIAGRAMS
SHEET 2 OF 3

REGISTERED ARCHITECT
TED MOUDIS
No. 016402
STATE OF NEW YORK

A-707.00

19 OF 20

System No. HW-D-0139
Assembly Rating - 3 Hr
Nominal Joint Width - 1 in.
Class II Movement Capabilities - 18.75% Compression or Extension



System No. HW-D-0139

November 18, 2003
Assembly Rating - 3 Hr
Nominal Joint Width - 1 In
Class II Movement Capabilities - 18.75% Compression or Extension

1. **Floor Assembly** -- The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Steel Floor and Form Units*** -- Max 3 in. (76 mm) deep galv steel fluted floor units.

   B. **Concrete** -- Min 2-1/2 in. ((64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

   C. **Spray-Applied Fire Resistive Material*** -- - Prior to installation of the forming material (Item 3A) and sealant (Item 3B), steel floor units to be sprayed with a min 5/16 in. (8 mm) to max 11/16 in. (18 mm) thickness of material in accordance with the specifications in the individual D700 Series Design. Material is to be excluded from the steel deck in the area immediately above the wall. The spray applied fire resistive material is mixed with water in accordance with the mixing instructions on the bag. The min average density of the spray applied fire resistive material shall be 15 pcf (240 kg/m3) with a min individual density of 14 pcf (224 kg/m3). See Design Information Section in Volume 1 of the Fire Resistance Directory for method of density determination.
   W R GRACE & CO - CONN
   CONSTRUCTION PRODUCTS DIV -- Type MK-6/HY

1A **Roof Assembly** -- (Not Shown) -- As an alternate to the floor assembly (Item 1), a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P700 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:

   A. **Steel Roof Deck** -- Max 3 in. (76 mm) deep galv steel fluted roof deck.

   B. **Roof Insulation -- Mineral and Fiber Board*** -- Min 3/4 in. (19 mm) thick boards applied in one or more layers directly over steel roof deck or over gypsum board sheathing laid atop steel roof deck.

   C. **Roof Covering*** -- Hot-mopped or cold-application materials compatible with mineral and fiber board insulation.

   D. **Spray-Applied Fire Resistive Material*** -- Steel roof deck to be sprayed with a max 3/4 in. (19 mm) thickness of spray applied fire resistive material as specified in the individual P700 Series Roof-Ceiling design. Material is to be excluded from the steel deck in the area immediately above the wall. The spray applied fire resistive material is mixed with water in accordance with the mixing instructions on the bag. The min average density of the spray applied fire resistive material shall be 15 pcf (240 kg/m3) with a min individual density of 14 pcf (224 kg/m3). See Design Information Section in Volume 1 of the Fire Resistance Directory for method of density determination.
   W R GRACE & CO - CONN
   CONSTRUCTION PRODUCTS DIV -- Type MK-6/HY

2. **Wall Assembly** -- Min 8 in. (203 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Wall may also be constructed of any UL Classified **Concrete Block*** .
   See **Concrete Block** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

3. **Joint System -- Max separation between bottom of floor or roof deck and top of concrete wall (at time of installation of joint system) is 1 in. (25 mm). The joint system is designed to accommodate a max 18.75 percent compression or extension from it's installed width.** The joint system shall consist of forming and fill materials, as follows:

   A. **Forming Material*** -- Sections of min 6 pcf (96 kg/m3) mineral wool batt insulation with a width equal to the thickness of the wall compressed 50 percent in thickness and installed cut edge first to completely fill the gap between the bottom of the steel deck and the top of the concrete wall. Min 9 in. (229 mm) thickness of min 6 pcf (96 kg/m3) mineral wool batt insulation cut to the shape of the fluted deck installed into the flutes of the steel floor above the compressed mineral wool batt insulation atop the concrete wall. The mineral wool batt insulation is to be compressed min 14 percent in thickness such that it is flush with both sides of the wall.

   FIBREX INSULATIONS INC -- FBX Safing Insulation

   IIG MINWOOL L L C -- Safing Insulation/MW

   ROCK WOOL MANUFACTURING CO -- Delta Board

   ROXUL INC -- SAFE

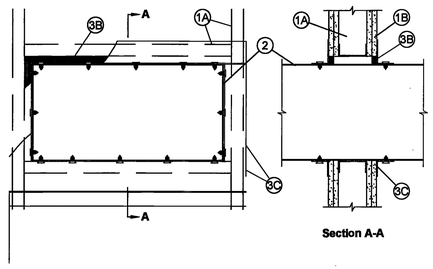
   THERMAFIBER L L C -- Type SAF

   B. **Fill, Void or Cavity Material* - Sealant** -- Min 1/8 in. (3.2 mm) wet thickness or 1/16 in. (1.6 mm) dry thickness of fill material spray applied on each side of the wall in the flutes of the steel floor or roof deck and between the top of the wall and the bottom of the steel floor or roof deck and overlap a min 1/2 in. (13 mm) onto concrete and a min 2 in. (51 mm) onto the spray applied material (Item 1C) on both sides of wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal AS200 Elastomeric Spray

*Bearing the UL Classification Mark

9. UL SYSTEM NO. HW-D 0139

System No. W-L-7060
F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 1/2 Hr



System No. W-L-7060

December 04, 2002
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 1/2 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC. Additional horizontal framing members installed to form a rectangular box around the steel duct (Item 2).

   B. **Gypsum Board*** -- Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. When wood studs are used, interior of through opening to be lined with sheets of gypsum board around entire periphery to a total thickness of 5/8 in. (16 mm) or 1-1/4 in. (32 mm) for 1 or 2 hr wall assemblies, respectively. Max area of opening is 952 sq in. (0.61 m2) with a max dim of 32 in. (813 mm).

   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Steel Duct** -- Max 24 by 30 in. (610 by 762 mm) No. 26 gauge (or heavier) galv steel duct installed eccentrically or concentrically within opening. Annular space between duct and periphery of opening to be min 0 in. (0 mm, point contact) to max 2 in. (51 mm). Duct to be rigidly supported on both sides of the wall assembly.

3. **Firestop System** -- The firestop system shall consist of the following:
   A. **Packing Material** -- (Optional, Not Shown) Mineral wool batt insulation, foam backer rod or glass fiber insulation installed as a permanent form to facilitate installation of fill material (Item 3B).

   B. **Fill, Void or Cavity Material* -- Sealant** -- Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. (6 mm) diam bead of fill material applied at steel duct/gypsum board interface on both surfaces of wall.

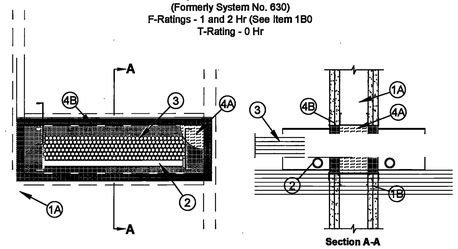
   SPECIFIED TECHNOLOGIES INC -- SpecSeal LCI Sealant

   C. **Retaining Angles** -- Min 16 gauge galv steel angles sized to lap onto duct a min of 2 in. (51 mm) and to lap onto wall around periphery of opening a min of 1 in. (25 mm). Angles attached to all four sides of steel duct on both surfaces of wall with No. 10 (or larger) steel sheet metal screws located 1 in. (25 mm) from each end and spaced max 4 in. (102 mm) OC.

*Bearing the UL Classification Mark
Subscriber ID: 650692002
Directory: FIRERES

10. UL SYSTEM NO. W-L- 7060

System No. W-L-4005
(Formerly System No. 630)
F-Ratings - 1 and 2 Hr (See Item 1B0
T-Rating - 0 Hr



Guide XHEZ
Through-Penetration Firestop Systems

(W-L-4005 - B Card)
(Cont'd from W-L-4005 - A Card)

System No. W-L-4005

January 13, 1994
(Formerly System No. 630)
F Ratings -- 1 and 2 Hr (See Item 1B)
T Rating -- 0 Hr

1. **Wall Assembly** -- The 1 or 2 h fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. In 2 h fire rated assemblies steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. In 1 h fire-rated assemblies, steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC. Additional framing members shall be installed in stud cavity containing through-penetrating item to form a rectangular box around the penetrant.

   B. **Gypsum Board*** -- 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max width of opening in wood stud walls is limited 14-1/2 in. Additional framing members shall be installed in stud cavity containing through-penetrating item to form a rectangular box around the penetrant. If the cable tray is installed in a steel stud/gypsum wallboard assembly, the max. area of opening is 136.5 sq in. with max dimension of 22-3/4 in. If the cable tray is installed in a wood stud/gypsum wallboard assembly, the max. width of the cable tray and max. width of the opening is 12 and 14-1/2 in. respectively.
   The hourly F rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Cable Tray*** -- Max 18 in. wide by max 5 in. deep open ladder cable tray with channel-shaped side rails formed of min 0.069 in. thick aluminum and with 1 in. wide by 7/8 in. deep rungs spaced 9 in. OC. One cable tray to be installed in the opening. The annular space between the cable tray and the periphery of the opening shall be min 3/8 in. to max 1-9/16 in. Cable tray to be rigidly supported on both sides of wall assembly.

3. **Cables** -- Aggregate cross-sectional area of cables in cable tray to be max 20 percent of the cross-sectional area of the cable tray based on a max 3 in. cable loading depth within the cable tray. Any combination of the following types and sizes of copper conductor cables may be used:
   A. Max 1/C - 350 kcmil cable with a cross-linked polyethylene jacket (XLPE).
   B. Max 3/C - No. 2 AWG cable XLPE insulation and polyvinyl chloride (PVC) jacket.
   C. Max 7/C - No. 12 AWG cable with PVC insulation and jacket.
   D. Max 2/C - No. 16 AWG cable with PVC insulation and jacket.

4. **Firestop System** -- The firestop system shall consist of the following:

   A. **Packing Material** -- In 2 h fire rated assemblies, min 2-1/2 in. thickness of min 6 pcf mineral wool batt insulation firmly packed into opening as a permanent form. In 1 h fire rated assemblies, min 2-1/4 in. thickness of min 6 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.

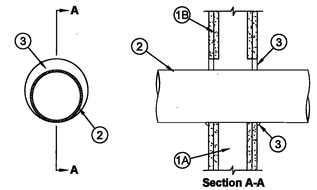
   B. **Fill, Void or Cavity Material* -- Caulk** -- Min 1-1/4 in. thickness of fill material applied within the annulus, on both surfaces of wall. Caulk to be forced into interstices of cable group to max extent possible. Additional caulk to be installed such that a min 1 in. is lapping beyond the periphery of the opening.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101 or 105 Sealant

*Bearing the UL Classification Marking

11. UL SYSTEM NO. W-L- 4005

System No. W-L-1062
F Ratings - 1 and 2 Hr
T Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft



Guide XHEZ
Through-penetration Firestop Systems

(W-L-1062 - B Card)
(Cont'd from W-L-1062 - A Card)

System No. W-L-1062

F Ratings -- 1 and 2 Hr
T Rating -- 0 Hr
L Rating At Ambient -- Less Than 1 CFM/sq ft
L Rating At 400 F -- Less Than 1 CFM/sq ft

1. **Wall Assembly** -- The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.

   B. **Gypsum Board*** -- Thickness, type, number of layers and fasteners as required in the individual Wall and Partition Design. Max diam of opening in wood stud walls is 8 in. Max diam of opening in steel stud walls is 14 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through Penetrants** -- One metallic pipe, conduit or tubing to be installed within the firestop system. The space between pipe, conduit or tubing and periphery of opening shall be a min 0 in. (point contact) to a max 2 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

   A. **Steel Pipe** -- Nom 12 in. diam (or smaller) Schedule 5 (or heavier steel pipe.

   B. **Iron Pipe** -- Nom 12 in. diam (or smaller) cast or ductile iron pipe.

   C. **Conduit** -- Nom 4 in. diam (or smaller) electrical metallic tubing, nom 6 in. diam (or smaller) steel conduit or nom 1 in. diam (or smaller) flexible steel conduit.

   D. **Copper Tubing** -- Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.

   E. **Copper Pipe** -- Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

3. **Fill, Void or Cavity Material* -- Caulk** -- Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. Min 3/8 in. diam bead of fill material applied at point contact location at the penetrant/gypsum board interface on both sides of wall.
   GENERAL ELECTRIC CO
   SILICONE PRODUCTS DIV -- Pensil 100 Caulk.
   SPECIFIED TECHNOLOGIES INC -- Pensil 100 Sealant and Pensil 300 Sealant.

*Bearing the UL Classification Mark

SAEED AHMAD
JAN 27 2014
ACCEPTABLE FOR PERMIT
UNDER DIRECTIVE NO. 14/1975

12. UL SYSTEM NO. W-L- 1062

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.566.3333
www.syska.com

CONSULTANT

DEPT BLDG3 121684662 Job Number
SC110162026 Scan Code

NO.	DATE	DESCRIPTIONS
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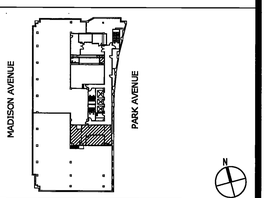
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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DATE	08.08.12
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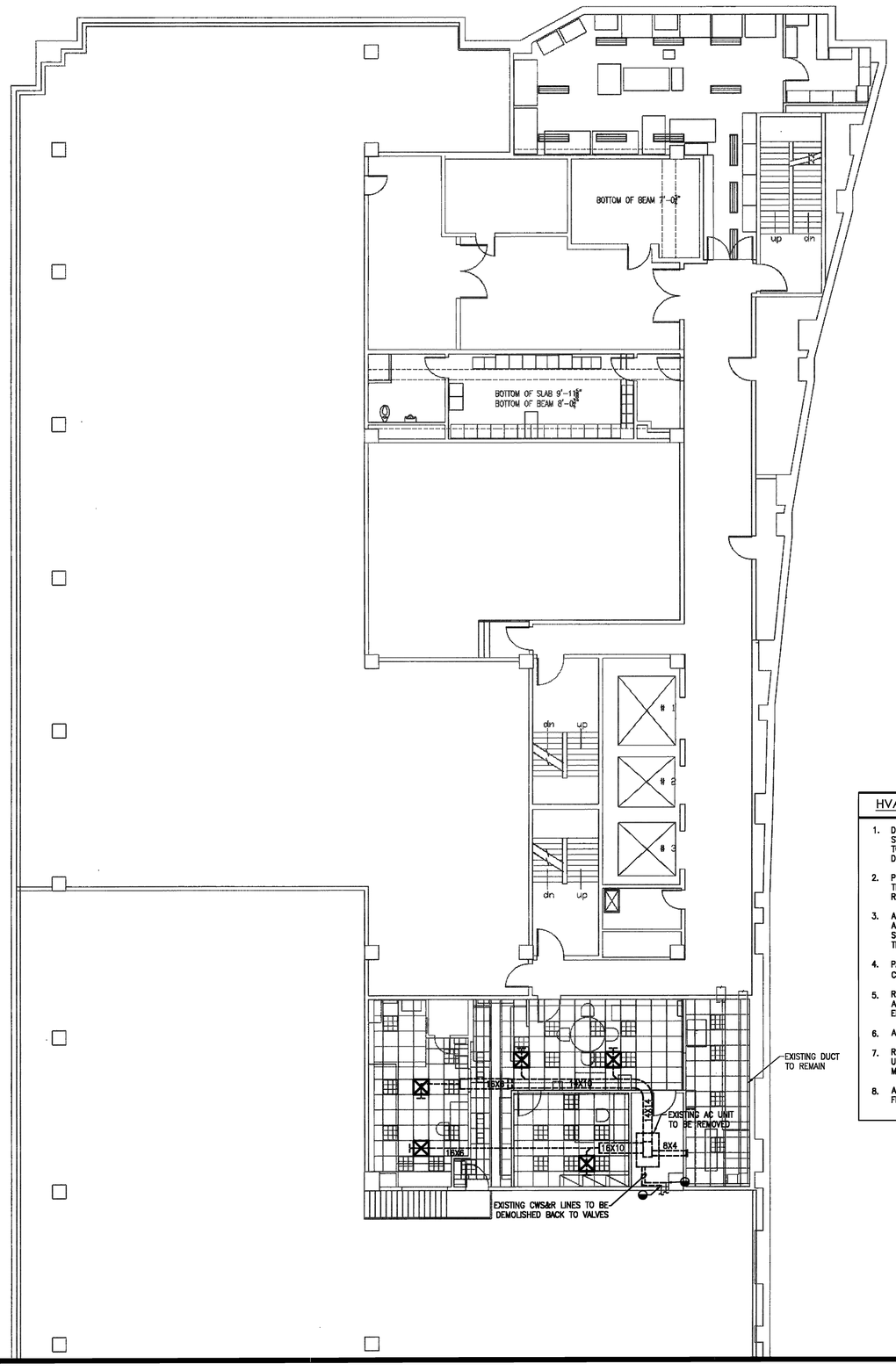
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-708-FS.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

FIRE STOPPING & JOINT SYSTEM DIAGRAMS
SHEET 3 OF 3

REGISTERED ARCHITECT TED MOUDIS 016198-1 STATE OF NEW YORK

A-708.00
20 OF 20



HVAC DEMOLITION WORK NOTES

1. DEMOLITION CONTRACTOR SHALL INVESTIGATE THE SPACE BEFORE STARTING TO DEMOLISH THE WORK, AND BE FAMILIAR WITH THE SYSTEM TO BE REMOVED. HE SHALL REPORT TO ARCHITECT AND ENGINEER ANY DEVIATION FROM SCOPE OF WORK TO BE DEMOLISHED.
2. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THE SPACE AS REQUIRED BY THE REMOVAL OF PIPES, DUCTS, CONDUIT, AND EQUIPMENT.
3. ALL EQUIPMENT SHALL BE REMOVED IN A CAREFULLY PLANNED MANNER. ALL CEILING HUNG EQUIPMENT SHALL BE REMOVED BY PROVIDING SUPPORTS FROM BELOW. NO DROPPING OF EXISTING EQUIPMENT ONTO THE FLOOR SLAB WILL BE ALLOWED.
4. PATCHING OF EXISTING WALL OR SLAB OPENINGS SHALL BE BY GENERAL CONTRACTOR(G.C.). HVAC CONTRACTOR TO COORDINATE WITH G.C.
5. REMOVE CONTROLS, THERMOSTATS, AC UNITS AND CONTROL WIRING ASSOCIATED WITH EQUIPMENT BEING REMOVED. COORDINATE WITH ELECTRICAL CONTRACTOR AS REQUIRED.
6. ALL EXISTING WORK IN HATCHED AREAS SHALL REMAIN.
7. REMOVE ALL SUPPLY MAIN AND BRANCH DUCTWORK BACK TO EXISTING UNIT. REMOVE INCLUDING BUT NOT LIMITED TO, AIR OUTLETS, MISCELLANEOUS ACCESSORIES, ETC.
8. ALL DEMOLITION WORK SHALL STRICTLY COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND STANDARDS.
9. ALL DEMOLITION AND CONNECTION OF NEW WORK SHALL BE COORDINATED WITH THE OWNER AS NOT TO DISRUPT BUILDING OPERATIONS AND SERVICES. IF TEMPORARY SHUT-DOWNS ARE REQUIRED THEY SHALL BE COORDINATED WITH THE OWNER AND SCHEDULED AS REQUIRED. ALL LABOR REQUIRED ON AN OVERTIME BASIS SHALL BE CONFIRMED WITH THE OWNER PRIOR TO SUBMISSION OF BIDS. ALL REQUIRED OVERTIME LABOR SHALL BE INCLUDED IN THE BASE BID AND PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
10. ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH BUILDING RULES AND REGULATIONS OR AS DIRECTED BY THE OWNER.
11. ALL DEMOLISHED WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE OWNER. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF OFF SITE ALL DEMOLISHED WORK IN AN ACCEPTABLE AND SAFE MANNER AND SHALL KEEP ALL PUBLIC AREAS CLEAR AND SAFE.
12. PROVIDE FILTERS ON MAIN RETURN DUCTS DURING DEMOLITION TO STOP THE FLOW OF DUST AND OTHER AIRBORN MATERIALS.

S.T.A. IN ASSOC.
JAN 27 2014
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JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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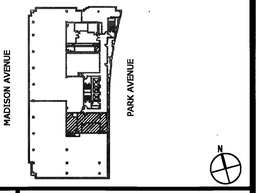

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SC2 LEVEL MECHANICAL DEMOLITION PLAN

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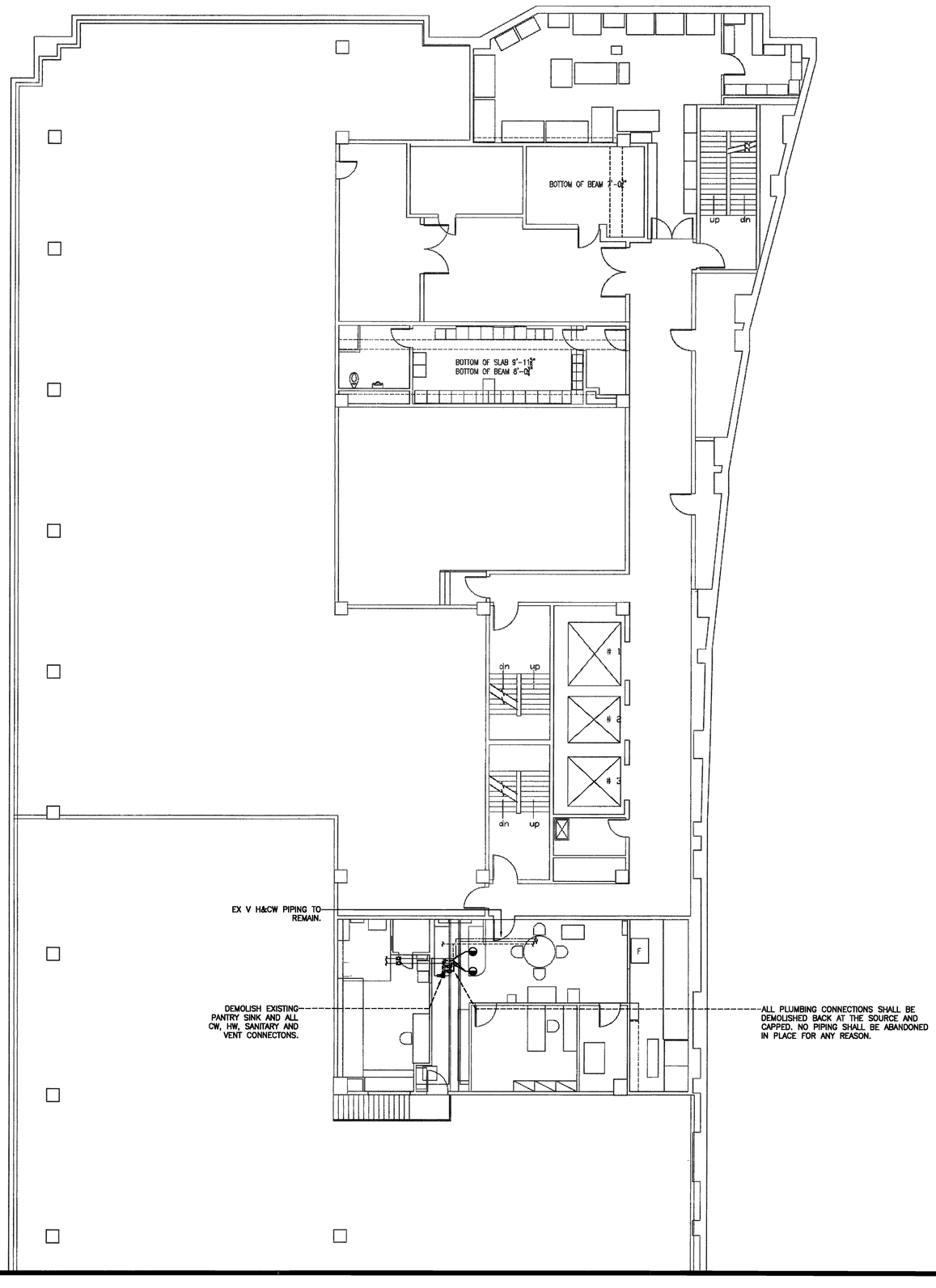

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ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
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London SE19LR, UK
T. 020 7902 0900

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SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.568.3333
www.syska.com

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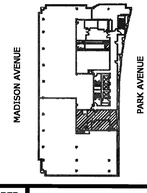
KEY PLAN - AREA OF WORK



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JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL PLUMBING DEMOLITION PLAN

STATE OF NEW YORK ROBERT J. NAMM 082974 LICENSED PROFESSIONAL ENGINEER

DMP-100.00

MECHANICAL SYMBOLS

- NEW DIFFUSER
- NEW RETURN\EXHAUST
- EXISTING DIFFUSER
- EXISTING RETURN\EXHAUST TO BE REMOVED
- SUPPLY DUCTWORK, NEW
- SUPPLY DUCTWORK, EXISTING
- SUPPLY DUCTWORK, TO BE REMOVED
- RETURN DUCTWORK, NEW
- RETURN DUCTWORK, EXISTING
- RETURN DUCTWORK, TO BE REMOVED
- VOLUME DAMPER, NEW
- VOLUME DAMPER, EXISTING
- FIRE DAMPER, NEW
- FIRE DAMPER, EXISTING
- FIRE DAMPER, TO BE REMOVED
- FIRE AND SMOKE DAMPER, NEW
- FIRE AND SMOKE DAMPER, EXISTING
- TRANSFER DUCT WITH SOUND LINING, NEW
- DUCTWORK WITH ACOUSTIC LINING
- DUCT UNDER PRESSURE (SUPPLY AIR OR FAN DISCHARGE)
- DUCT UNDER NEGATIVE PRESSURE (RETURN, EXHAUST OR OUTSIDE AIR)
- R — RISE IN DUCTWORK (IN DIRECTION OF AIR FLOW)
- D — DROP IN DUCTWORK (IN DIRECTION OF AIR FLOW)
- ℄ OR CFM — CUBIC FEET PER MINUTE
- VANED ELBOW (SEE DETAIL)
- VERTICAL DUCT DROP
- VERTICAL DUCT RISE
- ∅ — DIAMETER
- POINT OF CONNECTION
- POINT OF CONNECTION
- T — THERMOSTAT, NEW
- T — THERMOSTAT, EXISTING
- NEW FAN COIL UNIT

HVAC ABBREVIATIONS

AC	AIR CONDITIONING
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
A L	ACOUSTIC LINING
AHU	AIR HANDLING UNIT
CAC	COMPUTER AIR CONDITIONING UNIT
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
COD	CABLE OPERATED VOLUME DAMPER
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
D	DROP
CLG	CEILING
DN	DOWN
DWG	DRAWING
EF	EXHAUST FAN
EDH	ELECTRIC DUCT HEATER
ES	EQUAL SPLIT
(E)	EXISTING
EXH	EXHAUST
EWT	ENTERING WATER TEMPERATURE
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FPB	FAN POWERED BOX
F	FAN
FT	FEET
HV	HEATING AND VENTILATING
IN	INCH OR INCHES
L	LENGTH
LWT	LEAVING WATER TEMPERATURE
LIN FT	LINEAR FEET
MAX	MAXIMUM
MER	MECHANICAL EQUIPMENT ROOM
MIN	MINIMUM
MO	MASONRY / SHEET ROCK OPENING
NC	NORMALLY CLOSED
(N)	NEW
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
R	RISE
RA	RETURN AIR
REL	RELOCATE
REFR	REFRIGERANT
RLD	RETURN LINEAR DIFFUSER
RM	ROOM
SLD	SUPPLY LINEAR DIFFUSER
SP	STATIC PRESSURE
SPEC	SPECIFICATION
TEMP	TEMPERATURE
TD	TRANSFER DUCT
T'STAT	THERMOSTAT
TV	TURNING VANES
TYP	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
VAV	VARIABLE AIR VOLUME UNIT
W	WIDTH
W/	WITH
W/O	WITHOUT
WMS	WIRE MESH SCREEN
UFT	UNDER FLOOR TERMINAL UNIT
UON	UNLESS OTHERWISE NOTED
NSF	NET SQUARE FEET
NSI	NET SQUARE INCHES
RAO	RETURN AIR OPENING

PIPING SYMBOLS

- BALL VALVE
- GATE VALVE
- GLOBE VALVE
- ANGLE GLOBE VALVE
- SILENT CHECK VALVE
- SWING CHECK VALVE
- BUTTERFLY VALVE
- LUBRICATED PLUG VALVE
- "Y" TYPE STRAINER W/BLOWOFF VALVE
- THERMOWELL
- PRESSURE TAP
- EXISTING PIPING OR EQUIPMENT (UNLESS NOTED OTHERWISE)
- NEW PIPING OR EQUIPMENT (UNLESS NOTED OTHERWISE)
- PIPE DROP
- PIPE RISE
- PITCH UP IN DIRECTION OF FLOW
- FLOOR DRAIN
- PITCH DOWN IN DIRECTION OF FLOW
- UNION
- REDUCER
- FLANGED CONNECTION
- FLANGED END
- DEAD END – WELDED CAP
- PIPE ALIGNMENT GUIDE
- FE — FLOW ELEMENT
- FS — FLOW SWITCH
- TEMPORARY STRAINER
- M — MOTORIZED VALVE
- AUTOMATIC CONTROL VALVE
- RELIEF VALVE

PIPING ABBREVIATIONS

AAV	AUTOMATIC AIR VENT
ATM	ATMOSPHERE
AFF	ABOVE FINISHED FLOOR
BD	BLOWDOWN
BFP	BACK FLOW PREVENTOR
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT ELEVATION
CF	CHEMICAL FEED
COD	CORD OPERATED DAMPER
COV	WITH CHAIN OPERATOR VALVE
CW	COLD WATER / CITY WATER
DW	DOMESTIC WATER
DN	DOWN
DWG	DRAWING
EL	ELEVATION
ELEC	ELECTRIC
EXP	EXPANSION
F	FAHRENHEIT
FC	FLEXIBLE CONNECTION
FIN FL	FINISHED FLOOR
FT	FEET
GAL	GALLON
GCHWS	GLYCOL CHILLED WATER SUPPLY
GCHWR	GLYCOL CHILLED WATER RETURN
GPM	GALLONS PER MINUTE
HDR	HEADER
IN	INCH OR INCHES
LBS	POUNDS
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MOV	MOTORIZED VALVE
MU	MAKE-UP WATER
MWP	MAXIMUM WORKING PRESSURE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NO.	NUMBER
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PSIG	PSI GAUGE
RRV	REFRIGERANT RELIEF VENT
S.R.	SHORT RADIUS
SPEC	SPECIFICATION
TEMP	TEMPERATURE
TYP	TYPICAL
VFD	VARIABLE FREQUENCY DEVICE
VTR	VENT TO ROOF
W/	WITH
W/O	WITHOUT

CONSTRUCTION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL FLOORING, WALL AND CEILING ALONG THE EQUIPMENT RIGGING PATH AND FOR PROVIDING ALL MATERIALS TO ENSURE THEIR PROTECTION, SUCH AS FIRE RATED PLYWOOD.
2. MECHANICAL EQUIPMENT TO BE FURNISHED AS PER SCHEDULE ON DWG. M-001 MECHANICAL CONTRACTOR TO PROVIDE A COORDINATED WIRING DIAGRAM FOR REVIEW AND APPROVAL BY THE ENGINEER BEFORE WORK IS STARTED. PROVIDE LAMINATED AS BUILT WIRING DIAGRAM AT COMPLETION OF CONSTRUCTION.
3. COORDINATE ALL WORK ASSOCIATED WITH THE EQUIPMENT MANUFACTURERS AND ALL POWER SOURCE WIRING AND INTERFACING WITH ELECTRICAL CONTRACTOR. CONTROL AND INTERLOCK WIRING SHALL BE DONE BY AUTOMATIC TEMPERATURE CONTROL CONTRACTOR AND ELECTRICAL CONTRACTOR SHALL PROVIDE POWER.
4. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE PRIOR TO STARTING HIS WORK. CONTRACTOR SHALL VERIFY IN THE FIELD THE SIZES AND LOCATION OF EXISTING PIPING THAT AFFECTS HIS WORK.
5. ALL TEMPORARILY REMOVED PIPING, DUCTWORK, ELECTRICAL SYSTEMS, CEILING SUPPORTS TO ALLOW RIGGING AND INSTALLATION OF EQUIPMENT AND PIPING SHALL BE RE-CONNECTED AND OR RELOCATED, PAINTED, AND INSULATED TO MATCH EXISTING.
6. PIPING THROUGH WALLS, FLOORS AND BUILDING CONSTRUCTIONS SHALL BE PROVIDED PIPE SLEEVES AND SPACE BETWEEN SLEEVE AND PIPE FILLED WITH FIRE RATED MATERIAL. SLEEVES SHALL EXTEND THE FULL DEPTH OF THE CONSTRUCTION PENETRATED (SEE DETAIL).
7. ALL WATER PIPING SHALL BE INSTALLED WITH SUFFICIENT PITCH TO INSURE PROPER DRAINGING AND VENTING OF ENTIRE PIPING SYSTEM.
8. ALL DIMENSIONS AND ELEVATIONS FOR NEW AND EXISTING EQUIPMENT, PIPING AND APPARATUS ARE APPROXIMATE AND ARE ONLY FOR CONTRACTOR'S GUIDANCE. CONTRACTOR SHALL EXECUTE SHOP DRAWINGS SHOWING ALL DIMENSIONS AND ELEVATIONS VERIFIED IN THE FIELD.
9. UNLESS NOTED OTHERWISE, ALL BUILDING STRUCTURES INCLUDING CEILING AND WALLS THAT THE CONTRACTOR REMOVES TO FACILITATE THE RIGGING AND INSTALLATION OF EQUIPMENT AND PIPING SHALL BE RE-BUILT TO TO ORIGINAL CONDITIONS.
10. ALL REMOVED EQUIPMENT AND MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR.
11. COORDINATE WITH CONSTRUCTION MANAGER SO THAT LATEST COPY OF BASE BUILDING STANDARDS, RULES AND REGULATIONS ARE ISSUED AND POSTED ON PROJECT SITE.
12. REFER TO STRUCTURAL ENGINEER'S DRAWINGS FOR ADDITIONAL EQUIPMENT AND PIPING SUPPORT REQUIREMENTS AND DETAILS.

"REVIEW DOCUMENTS, VERIFY DIMENSIONS AND FIELD CONDITIONS AND CONFIRM THAT WORK IS BUILDABLE AS SHOWN. THE CONTRACTOR SHALL REPORT ANY CONFLICTS AND/OR OMISSIONS TO THE ENGINEER PRIOR TO PERFORMING ANY WORK IN QUESTION. OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO COMPLETE THE WORK STATED IN ON THE CONTRACT DOCUMENTS BASED UPON THE OPTIMAL ESTABLISHED QUALITY STANDARD."

MECHANICAL CONTRACTOR SHALL COORDINATE & CONFIRM WITH GENERAL CONTRACTOR, PRIOR TO BID, ALL WORK TO BE PERFORMED ON PREMIUM TIME.

MECHANICAL DRAWING LIST

M-001	MECHANICAL SYMBOLS, NOTES, ABBREVIATIONS AND SCHEDULES
M-002	MECHANICAL SPECIFICATIONS
M-003	MECHANICAL SPECIFICATIONS
DMM-100	SC-2 LEVEL MECHANICAL DEMOLITION PLAN
M-100	SC-2 LEVEL MECHANICAL CONSTRUCTION PLAN
M-501	MECHANICAL DETAILS
M-701	MECHANICAL SCHEDULES

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Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
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Chicago, IL 60601
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CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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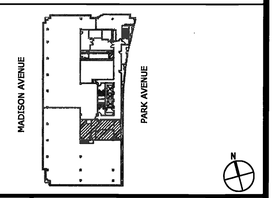
KEY PLAN — ▨ - AREA OF WORK



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270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

MECHANICAL SYMBOLS LIST, ABBREVIATIONS AND NOTES

STATE OF NEW YORK — MODERN ART FOUNDATION — REGISTERED ARCHITECT

M-001.00

PAGE NO: 1 of 7

SPECIFICATIONS FOR HVAC WORK

1) GENERAL

A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", AIA DOCUMENT A201, 14TH EDITION, 1987, AND THIS SPECIFICATION AS APPLICABLE ARE PART OF THIS CONTRACT.

B. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.

C. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM BUILDING OWNER AND TENANT AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.

D. ALL DUCTWORK AND PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICES FOR ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS SUBJECT TO APPROVAL OF ARCHITECT.

E. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL STEEL FRAMING.

F. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

G. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES IN MAKING UP WORK PROPOSAL.

H. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING OWNER. INSTALL ISOLATION VALVES AT POINT OF CONNECTION TO THE EXISTING PIPING. PROVIDE TEMPORARY DUCT CAPS AND/OR CONNECTIONS TO MINIMIZE SHUTDOWN TIME.

I. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ARCHITECT AND ENGINEER.

J. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT, AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.

K. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.

L. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS (NOT IN SHAFTS) WITH MINERAL WOOL OR OTHER NON-COMBUSTIBLE MATERIAL.

M. PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, CONDUIT, AND EQUIPMENT.

N. ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED UNDER THIS CONTRACT WILL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THIS CONTRACTOR AS DIRECTED BY THE OWNER.

O. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED.

P. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.

Q. INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.

R. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT.

T. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED.

U. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC, WHICH AFFECT THIS WORK AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION.

2) SCOPE OF WORK

A. PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR A COMPLETE AND SAFE INSTALLATION OF HVAC IN FULL CONFORMITY WITH REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION; ALL AS INDICATED ON DRAWINGS AND/OR HEREIN SPECIFIED FOR THE SYSTEMS INCLUDED. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER. INCLUDE ALL COSTS FOR PERMITS, LICENSES, CERTIFICATES, FILING AND INSPECTIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION.

B. PERIODIC AND SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED AGENCY.
MECHANICAL – AS PER 1704.15
ENERGY CODE – AS PER BC-109.3.5
FIRE STOP – AS PER BC-1704.25

3) GUARANTEE

A. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF ACCEPTANCE BY OWNER. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

4) SHEET METAL WORK

A. EXCEPT AS OTHERWISE SHOWN OR NOTED, ALL DUCTWORK AND OTHER SHEET METAL WORK SHALL BE GALVANIZED SHEET STEEL AND SHALL BE IN ACCORDANCE WITH MOST RECENT EDITION OF SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. DUCT CONSTRUCTION STANDARDS EXCEPT AS NOTED.

B. DUCTWORK STATIC PRESSURE CLASSIFICATIONS

PRESSURE CLASS	OPERATING CLASS
2 IN. W.G.	UP TO 2 IN. W.G.
6 IN. W.G.	UP TO 6 IN. W.G.

DUCTWORK SEALING REQUIREMENT SHALL BE SEAL CLASS A.

C. UNEQUAL ELBOWS ARE NOT ACCEPTABLE, EXCEPT RADIUS BRANCH DUCTWORK WITH THROAT.

D. VOLUME DAMPERS: SAME MATERIAL AS DUCTWORK, PER SMACNA CONSTRUCTION STANDARDS, EXCEPT PROVIDE BEARING AT ONE END OF DAMPER ROD AND QUADRANT, WITH LEVER AND LOCKSCREW AT OTHER END. FOR INSULATED DUCTS, QUADRANTS MOUNTED ON COLLAR TO CLEAR INSULATION. LEVERS MUST BE

E. FLEXIBLE CONNECTIONS: NEOPRENE-COATED GLASS FABRIC, 30 OZ. PER SQ YD WITH SEWED AND CEMENTED SEAMS, SIMILAR TO VENT FABRICS. PROVIDE WITH METAL COLLARS. ALLOW MINIMUM MOVEMENT OF 1".

F. TURNING VANES: SAME MATERIAL AS DUCTWORK, SMALL DOUBLE-THICKNESS VANES.

G. ALL DUCT DIMENSIONS INDICATED ON PLANS ARE INSIDE CLEAR DIMENSIONS.

5) AIR DISTRIBUTION SYSTEM

A. GENERAL

1. SUITABLE FOR OPERATION AT 5% EXCESS AND 25% LESS THAN NOTED CAPACITY. MANUFACTURER SHALL BE RESPONSIBLE FOR EXAMINING APPLICATION OF EACH OUTLET AND SHALL GUARANTEE THAT EACH WILL PROVIDE REQUIRED NC LEVELS AND COMFORT SPACE CONDITIONS WITHOUT DRAFTS THROUGHOUT OPERATING RANGE.
2. FINISH AND COLOR AS DIRECTED BY ARCHITECT.
3. AIR OUTLETS AND FRAME TYPE SUITABLE FOR MOUNTING IN CEILING TYPES SHALL BE COORDINATED WITH THE ARCHITECT.
4. FOR EXACT LOCATIONS OF ALL AIR OUTLETS SEE ARCHITECTURAL PLANS.
5. PROVIDE BLANK OFF PLATES FOR INACTIVE PORTIONS.

B. AIR DIFFUSERS

1. DIFFUSERS SHALL BE WITH VOLUME DAMPER ADJUSTABLE FROM DIFFUSER FACE EXCEPT AS NOTED, WITHOUT REMOVAL OF FACE LOUVERS OR PANEL. PROVIDE SUPPLY AIR DIFFUSERS WITH AIR-EQUALIZING DEFLECTORS. DIFFUSERS IN SAME ROOM SHALL BE THE SAME SIZE AND TYPE, EXCEPT AS OTHERWISE APPROVED. DIFFUSERS SHALL HAVE REMOVABLE CORE, UNLESS OTHERWISE NOTED. SUPPLY PLASTER FRAMES FOR DIFFUSERS WITHOUT REMOVABLE CORES INSTALLED IN PLASTER FOR SETTING UNDER GENERAL CONSTRUCTION WORK.
   A) PROVIDE DIFFUSERS SUITABLE FOR THE FOLLOWING CEILING CONSTRUCTION, AS REQUIRED.
      (1) LAY-IN ACOUSTICAL TILE CEILING WITH INVERTED TEE-BAR SHALL HAVE LAY-IN TYPE FRAME FOR SETTING ON TEE-BARS.
      (2) PLASTER CEILINGS SHALL BE FLANGED FOR SURFACE MOUNTING, OR PLASTER FRAMES AS INDICATED.
   B) NOISE LEVEL AT NOTED CAPACITIES SHALL NOT EXCEED CRITERIA SPECIFIED IN SECTION NOISE CONTROL. DIFFUSERS SHALL BE SUITABLE FOR OPERATION AT 5 PERCENT EXCESS AND 25 PERCENT LESS THAN NOTED CAPACITY. PROVIDE BLANKING FOR PROPER COVERAGE AND BLOW WITHOUT PRODUCING OBJECTIONABLE NOISE OR AIR MOTION AT OCCUPIED LEVEL. FINISH SHALL MATCH COLOR SAMPLE AS APPROVED. BY ARCHITECT.
      (1) BAKED ENAMEL. (COORDINATE WITH ARCHITECT).
2. SQUARE CEILING DIFFUSERS

A. THE DIFFUSERS SHALL BE CONSTRUCTED OF STEEL AND SHALL BE DESIGNED TO INTEGRATE WITH THE SPECIFIED CEILING SYSTEM TYPE. THE DIFFUSER SHALL CONSIST OF A BACK PAN AND A REMOVABLE, HEAVY GAUGE APPEARANCE PANEL ATTACHED TO THE BACK PAN VIA (4) POSITIVE LOCKING POSTS. THE APPEARANCE PANEL SHALL HAVE AERODYNAMIC, RIGID, HEMMED EDGES AROUND THE PERIMETER AND SHALL BE A SINGLE PIECE CONSTRUCTION. THE PANEL SHALL BE FLAT, SMOOTH, AND SHALL BE FREE OF ANY WELDING OR FORMING BLEMISHES.

THE HORIZONTAL AIR DISCHARGE PATTERN SHALL BE 360° TYPE. BLANK-OFF BAFFLES SHALL BE PROVIDED TO OBTAIN 1,2,OR 3 WAY BLOW PATTERNS AS SCHEDULED. THE SIZE AND ELEVATION OF THE APPEARANCE PANEL SHALL BE AS SCHEDULED FOR ANEMOSTAT'S TYPE A OR C MODELS.

PROVIDE VOLUME CONTROL, MODEL VD OPPOSED BLADE TYPE DAMPERS AS SCHEDULED. DAMPERS SHALL BE ADJUSTABLE FROM THE FACE.

DIFFUSER FINISH SHALL BE COLOR AS SELECTED BY THE ARCHITECT).

DIFFUSER SIMILAR TO ANEMOSTAT PG.

B. CEILING GRILLES
1. GRILLES AND TRANSFER GRILLES: SAME AS REGISTERS BUT WITHOUT VOLUME DAMPER. SIMILAR TO ANEMOSTAT AC3L.

6) NOISE CONTROL

A. UNLESS OTHERWISE NOTED, ALL ROOM NC LEVELS SHALL BE 35 OR LESS.

B. PROVIDE MIN. 1" THICK, MIN. 1-1/2 LB. DENSITY SOUNDLINING (SIMILAR TO JOHNS-MANVILLE MICRO-COUSTIC) FOR THE FOLLOWING DUCTWORK:
1. AIR TRANSFER DUCTS.
2. A MINIMUM OF 10 FT, DOWNSTREAM OF VAV BOXES SUPPLY.
3. A MINIMUM OF 20 FT, DOWNSTREAM OF AC UNIT SUPPLY FAN.

7) TESTING AND BALANCING

A. AIR BALANCING SHALL BE ACCOMPLISHED BY ADJUSTMENT OF FANS AND BRANCH DAMPERS FOR MAJOR ADJUSTMENTS. ADJUSTMENT OF TERMINAL DAMPERS AND DEVICES SHALL BE FOR TRIM OR MINOR ADJUSTMENT ONLY. THIS SHALL BE DONE TO PERMIT THE LEAST NOISE GENERATION IN THE TERMINAL AREAS AND UTILIZE MINIMUM FAN ENERGY. TESTING, ADJUSTING AND BALANCING (TAB) SHALL BE DONE IN ACCORDANCE WITH THE AABC NATIONAL STANDARD FOR TOTAL SYSTEM BALANCE.

B. UPON COMPLETION OF THE INSTALLATION, THE CONTRACTOR SHALL REBALANCE ANY EXISTING PORTION OF AIR DISTRIBUTION SYSTEM AFFECTED BY THE RENOVATION AND ALSO BALANCE ALL NEW WORK.

C. PIPING BALANCING SHALL BE MADE BY ADJUSTING VALVES TO REQUIRED GPM TO EACH EQUIPMENT.

D. THE CONTRACTOR SHALL PROVIDE ALL LABOR, ADDITIONAL SHEAVES AND BELTS REQUIRED TO BALANCE SYSTEMS.

E. BALANCING REPORT SHALL BE PROVIDED ON AABC-TYPE FORMS.

F. AIR HANDLING SYSTEMS AND WATER DISTRIBUTION SYSTEMS SHALL BE BALANCED TO WITHIN +5 PERCENT OF THEIR DESIGN CAPACITIES.

G. CLEANING OF PIPING SYSTEM: PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO FLUSH INTERIOR OF NEW PIPING WITH CLEAN WATER PRIOR TO CONNECTION OF EQUIPMENT AND CONTROL VALVES. THE ENTIRE SYSTEM SHALL BE EXAMINED FOR CLEANLINESS.

H. BALANCING AND TESTING SHALL BE PERFORMED AND SUPERVISED BY TSSM OR ONE OF THE FOLLOWING INDEPENDENT CERTIFIED FIRMS SPECIALIZING IN TESTING AND BALANCING FOR AIR AND WATER SYSTEMS, WITH A MINIMUM OF FIVE YEARS EXPERIENCE AND AABC CERTIFICATION.
1. MERENDINO ASSOCIATES
2. INTERNATIONAL TESTING.
3. AFTER OCCUPANCY OF THE SPACE AND APPROVAL OF THE BALANCING REPORTS, AIR BALANCING 'COMFORT BALANCE' SERVICE. AIR BALANCE COMPANY SHALL ADJUST VOLUME DAMPERS, AND VAV TERMINAL UNIT MINIMUM AND MAXIMUM SETTINGS AS REQUIRED IN RESPONSE TO OCCUPANTS REQUIREMENTS. ALLOW UP TO TWO DAYS ON SITE FOR COMFORT BALANCE SERVICES.
4. SUBMIT COPY OF FINAL AIR AND WATER BALANCE REPORT TO BUILDING FOR THEIR RECORDS.

8) SHOP DRAWINGS

A. INDICATE ON EACH SUBMISSION
1. PROJECT NAME AND LOCATION.
2. ARCHITECT AND ENGINEER
3. ITEM IDENTIFICATION.
4. APPROVAL STAMP OF PRIME CONTRACTOR.

B. SUBMISSIONS
1. SUBMISSIONS 8 1/2 IN. X 14 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT ONE ORIGINAL AND TWO COPIES. OTHERWISE, HE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL FORWARD THE ORIGINAL AND ONE COPY (TWO COPIES WHEN NO ORIGINAL IS RECEIVED) TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE.
2. SUBMISSIONS LARGER THAN 8 1/2 IN. X 14 IN.: SUBMIT TWO PRINTS AND ONE PAPER SEPIA TO THE ARCHITECT. THE ARCHITECT WILL FORWARD ONE PRINT AND THE PAPER SEPIA TO THE ENGINEER.
3. ALL PIPING AND DUCTWORK SHOP DRAWINGS SHALL BE SUBMITTED ON 3/8 IN SCALE DRAWINGS AND SHALL INCLUDE HANGERS, SUPPORTS, EXPANSION JOINTS, GUIDES, ANCHORS AND ANCHOR LOADS.

C. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:
LOCATIONS AND SIZES OF EXISTING EQUIPMENT ALONG WITH NEW WORK. DRAWING SHALL INDICATE LOCATIONS OF
1. DUCTWORK LAYOUT AND SHEET METAL DETAILS.
2. AIR OUTLETS.
3. AIR BALANCING REPORTS.
4. SCHEDULE OF INSULATION.
5. TERMINAL UNITS
6. AC UNITS
7. GAUGES AND THERMOMETERS
8. PIPING LAYOUT
9. OPERATING SEQUENCES
10. VIBRATION ISOLATION
11. AUTOMATIC CONTROL DIAGRAMS.
12. SCHEDULE OF PIPE, VALVES, FITTINGS.

9) INSULATION – GENERAL REQUIREMENTS

A. ALL INSULATION MATERIALS, INCLUDING JACKETS, FACING, ADHESIVE, COATINGS, AND ACCESSORIES SHALL BE FIRE HAZARD RATED AND LISTED BY UNDERWRITERS LABORATORIES, INC., USING STEINER TUNNEL TEST METHOD FOR FIRE HAZARD CLASSIFICATION OF BUILDING MATERIALS, STANDARD UL 723 (ASTM E-84), (ASA A.25-1963). FLAMESPREAD: MAXIMUM 25. FUEL CONTRIBUTED AND SMOKE DEVELOPED: MAXIMUM 50. FLAMEPROOFING TREATMENTS SUBJECT TO DETERIORATION FROM MOISTURE OR HUMIDITY ARE NOT ACCEPTABLE.

10) DUCTWORK INSULATION

A. INSULATE ALL NEW DUCTWORK IN ACCORDANCE WITH INSULATION NOTED HEREIN EXCEPT AS OTHERWISE NOTED.

B. NON-INSULATED DUCTWORK
1. WHERE SOUNDLINING IS OF MINIMUM THICKNESS SPECIFIED FOR INSULATION.

C. DUCTWORK INSULATION AND ACOUSTICAL LINING
INDOOR DUCT INSULATION: 1-INCH THICK, 3/4 LB DENSITY, GLASS FIBER INSULATION, WITH ALUMINNUM FOIL FACING. MANVILLE R-SERIES MICROLITE.
1. INSULATE ALL SUPPLY DUCTWORK
2. DUCT LINING: UNLESS NOTED, 1-INCH THICK 1-1/2 LB. DENSITY COATED ON AIR SIDE WITH FIRE RESISTANT BLACK NEOPRENE COATING. MANVILLE LINACOUSTIC. FOR THE FOLLOWING DUCTWORK:
   A. ALL DUCTWORK NOT LESS THAN 25 FEET FROM FAN FOR SUPPLY AND 20 FEET FROM FAN FOR RETURN DUCTWORK.
   B. AIR TRANSFER DUCTS.
   C. DOWNSTREAM OF ALL VARIABLE AIR VOLUME AND CONSTANT VOLUME BOXES FOR A MINIMUM OF 5 FEET
   D. ALL DUCTWORK ABOVE CONFERENCE ROOMS.

D. MATERIAL
1. TYPE D-1: MINIMUM 3/4-LB DENSITY FIBERGLASS BLANKET, MAXIMUM 0.28 K-FACTOR AT 75 DEG F MEAN TEMPERATURE WITH FACTORY-APPLIED FOIL-SCRIM-KRAFT FACING. SIMILAR TO MANVILLE MICRO-LITE.
2. BLANKET THICKNESS: MINIMUM 1 INCH.

E. INSTALLATION
1. TYPE "D-1" FIBERGLASS BLANKET: 2 IN. LAP STRIPS AT ALL SEAMS. SECURE BOTTOM OF ALL DUCTS OVER 24" WIDE WITH MINIMUM 2 ROWS OF WELD PINS 12" ON CENTER. SECURE ALL SEAMS WITH FOIL VAPOR BARRIER TYPE AND VAPORSEAL ADHESIVE.

11) PIPING INSULATION

A. ALL PIPING LINES EXCEPT WHERE NOTED OTHERWISE SHALL BE INSULATED.

FLAME SPREAD:	25
FUEL CONTRIBUTED:	50
SMOKE DEVELOPED:	50

B. INSULATE ALL INDOOR CONDENSATE DRAIN PIPING IN ACCORDANCE WITH INSULATION SPECIFIED EXCEPT AS OTHERWISE NOTED.

C. PIPE INSULATION MATERIAL
1. TYPE P-1: MOLDED FIBERGLASS, MAXIMUM 0.23 K-FACTOR AT 75 DEG F MEAN TEMPERATURE, MINIMUM 4 LB DENSITY. SIMILAR TO OWENS CORNING FIBERGLASS MODEL 650 ASJ.
2. TYPE P-3: FOR VALVES, FLANGES AND FITTINGS, MOLDED FIBERGLASS FITTING, MAXIMUM 0.23 K-FACTOR AT 75 DEG F MEAN TEMPERATURE, MINIMUM 4 LB DENSITY. SIMILAR TO EPOLUX HAMFAB MOLDED FITTINGS.

D. THICKNESS
1. DRAINAGE PIPING: 1/2 INCH.
2. ALL CONDENSER WATER PIPING SUPPLY AND RETURN INSULATION SHALL BE 1" AS PER THE BUILDING STANDARD.

E. INSTALLATION
1. BEFORE APPLYING INSULATION ALL PRESSURE AND LEAK TESTS SHALL BE COMPLETED AND APPROVED.
2. ALL INSULATION SHALL BE BUTTED FIRMLY TOGETHER. PROVIDE 2" LAP STRIPS AT ALL SEAMS, SECURED WITH ADHESIVE USE VAPOR BARRIER TAPE AND VAPORSEAL ADHESIVE WHERE REQUIRED.
3. ALL INSULATION AND VAPOR BARRIERS SHALL BE CONTINUOUS PASSING THROUGH SLEEVES, HANGERS, ETC. OR OTHER OPENINGS. PROVIDE SADDLES OR SHIELDS FOR PROTECTION.
4. INSULATION FOR STRAINERS OR OTHER FITTINGS OR ACCESSORIES REQUIRING SERVICING OR INSPECTION SHALL HAVE INSULATION REMOVABLE AND REPLACEABLE WITHOUT DAMAGE.
5. PROVIDE FLOW ARROWS AND CONTENTS CLEAR ON OUTSIDE JACKETING OF INSULATION. PROVIDE EVERY 20 FT.

12) THERMOMETERS AND GAUGES

A. THERMOMETERS: INDUSTRIAL TYPE, MERCURY FILLED, AND 4-INCH STEM. SIMILAR TO MOELLER INSTRUMENTS CO. MODEL 903AJ.

B. PRESSURE GAUGE: 6-INCH DIAMETER, 0-130 PSIG DISCHARGE AND SUCTION. SIMILAR TO WEKSLER MODEL AA44-A.

C. PULSATION DAMPERS AT PUMPS: SIMILAR TO WEKSLER TYPE RS7.

D. BAR STOCK NEEDLE COCK VALVE: SIMILAR TO WEKSLER AV-44.

13) VIBRATION ISOLATION

A. GENERAL
1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE LEVELING DEVICES AND APPROVED RESILIENT RESTRAINING DEVICES AS REQUIRED TO LIMIT EQUIPMENT AND PIPING MOTION IN EXCESS OF 1/4 IN.
3. ACCEPTABLE MANUFACTURERS:
   A) MASON INDUSTRIES, INC.
   B) VIBRATION ELIMINATOR CO.
   C) KORFUND DYNAMICS CORP.

B. CEILING HUNG EQUIPMENT
1. SIMILAR TO MASON TYPE 30N.
2. 1 INCH MINIMUM STATIC DEFLECTION 1/2 IN. MINIMUM RESERVE DEFLECTION. FACTORY-PRELOADED TO 75% OF RATED LOAD.
3. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE EQUIPMENT OR STRUCTURE CANNOT SUPPORT POINT LOADS.

14) PIPING – GENERAL REQUIREMENTS

A. COMPLETE WITH: PIPE, FITTINGS, VALVES, COUPLINGS, STRAINERS, HANGERS, ANCHORS, SUPPORTS, GUIDES, SLEEVES, AND ACCESSORIES.

B. ALL ITEMS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING CODES AND STANDARDS:
1. AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).
2. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).
3. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
4. MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY (MSS).

C. FOR JOINTS OF DISSIMILAR METALS, PROVIDE FLANGE CONNECTION WITH ISOLATING GASKETS, SLEEVES AND WASHERS BETWEEN FLANGES, BOLTS, AND NUTS. GASKETS SIMILAR TO DUPONT TEFLON.

D. ALL PRESSURIZED PIPING TO BE TESTED HYDROSTATICALLY TO 175 PSI OR 150% OF OPERATING PRESSURE, WHICHEVER IS GREATER. TEST DURATION TO BE 2 HOURS WITH NO PRESSURE CHANGE, CORRECTED FOR TEMPERATURE CHANGE. REPAIR OR REPLACE LEAKS OR DEFECTS WITHOUT ADDITIONAL COST. COORDINATE TEST WITH BUILDING AND SUBMIT REPORT TO BUILDING UPON COMPLETION.

E. PIPE SUPPORTS
1. PROVIDE ADEQUATE SUPPORT FOR PIPE AND CONTENTS TO PREVENT SAGGING, VIBRATION OR SWAYING AND ALLOW FOR EXPANSION AND CONTRACTION. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE STRUCTURE CANNOT SUPPORT POINT LOADS.
2. HORIZONTAL PIPING TO BE SUPPORTED BY FORGED STEEL ADJUSTABLE CLEVIS TYPE HANGER. MAXIMUM SPACING AS FOLLOWS:
   A) STEEL 1 IN. AND SMALLER: 7 FT.
   B) STEEL 1-1/4 IN. AND LARGER: 10 FT.
   C) COPPER 3 IN. AND SMALLER: 7 FT.
   D) COPPER 4 IN. AND LARGER: 10 FT.
   E) ADDITIONAL SUPPORTS AT CHANGES IN DIRECTION, RUNOUTS, AND CONCENTRATED LOADS DUE TO VALVES, ETC.
3. VERTICAL PIPING:
   A) BASE ELBOW SUPPORT WITH BEARING PLATE ON STRUCTURAL SUPPORT.
   B) GUIDES AT EVERY SECOND FLOOR (SPACING NOT TO EXCEED 25 FEET).
   C) TOP SUPPORT HANGER OR SADDLE IN HORIZONTAL CONNECTION WITH PROVISIONS FOR EXPANSION.
   D) INTERMEDIATE STEEL RISER CLAMP SUPPORT BOLTED AND WELDED TO PIPE BEARING ON STRUCTURAL STEEL OR BEARING PLATE AT FLOOR.

15) DRAIN PIPING AND MAKEUP WATER PIPING

A. PIPE: ASTM B88, HARD DRAWN COPPER TUBING TYPE "K".

B. FITTINGS: BRAZED JOINT FOR DOMESTIC WATER AND FOR DRAINS SOLDERED JOINT FITTINGS, 95/5 SOLDER.

C. PITCH, EXCEPT AS NOTED. ALL DRAIN PIPING PITCHING SHALL BE OF 1 IN. IN 8 FT. MINIMUM.

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue, 10th Floor, New York, NY 10016, T. 212 561 2000
The LaSalle Wacker, 221 North LaSalle Street, Chicago, IL 60601, T. 312 924 5000
MCM Architecture Limited, 71 Hopton Street, London SE1 9LR, UK, T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT
DEPT BLDGS 121664662 Job Number
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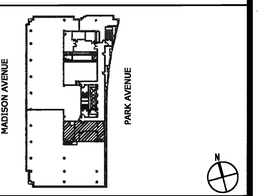
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



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JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

MECHANICAL SPECIFICATIONS

ROBERT MICHAEL DISALVO, P.E. — NEW YORK LICENSED PROFESSIONAL ENGINEER

M-002.00

16) PIPING

A. ALL CHILLED WATER PIPING AND A/C CONDENSATE DRAIN PIPING UP TO 2½" SHALL BE HARD DRAWN TYPE 'K' COPPER TUBING WITH WROUGHT COPPER FITTINGS. ALL JUNCTIONS OF DISIMILAR METALS SHALL BE ISOLATED USING DIELECTRIC FITTINGS.

B. PIPE SMALLER THAN 1½" IN DIAMETER SHALL BE CONNNECTED WITH SCREWED GROUND JOINT UNIONS. INSTALL LINE SIZE MANUAL VALVES AT EACH INLET AND OUTLET OF EACH PIECE OF EQUIPMENT.

C. ALL PIPES SHALL BE SUPPORTED AT PROPER INTERVAL SO THAT DETECTION WILL NOT EXCEED 1/8" ON ALL CONDENSER AND COLD WATER LINES. THE HANGER SHALL BE INSTALLED ON THE PIPE SURFACE. WHERE THE HANGER IS INSTALLED OUTSIDE OF THE INSULATIONS, A METAL SHEILD SHALLED BE INSTALLED TO PROTECT INSULATION.

D. UNLESS OTHERWISE NOTED PIPE FITTINGS SHALL HAVE THE SAME RATING AS THE PIPING TO WHICH THEY ARE CONNECTED.

E. ALL CHILLED WATER VALVES SHALL BE SIZED FOR A MINIMUM OF 175 PSI.

F. GATE VALVES–2½" AND SMALLER, 300 PSI, ALL BRONZE SOLID WEDGE, INSIDE SCREW, NRS, SCREW ENDS, NIBCO FIG. T–133 BALL VALVES MAY BE USED IN LIEU OF GATE VALVES IN THESE SIZES.

G. BALL VALVES–BRONZE BODY, IFE SEATS AND SEALS, LEVER HANDLE, NIBCO FIGT–5880, SIZED FOR 175 PSI.

H. CIRCUIT SETTERS–PROVIDE BELL AND GOSSET MODEL CB CIRCUIT SETTERS WHERE SHOWN ON DRAWINGS AR WHERE REQUIRED FOR ADEQUATE FLOW BALANCING. PROVIDE ONE BELL AND GOSSET RO–4 METER. TURN OVER TO OWNER AFTER COMPLETION OF FLOW BALANCING. SIZED FOR 175 PSI.

I. FITTINGS

1. 2½" AND SMALLER: 175–LB WSP FITTINGS.
2. PROVIDE THREE SWING ELBOWS AT ALL EQUIPMENT CONNECTION POINTS.

17) VALVE TAGS, CHARTS, PIPE LABELING AND STENCILING

A. TAGS

1. MINIMUM 2" DIAMETER.
2. NO. 18 GAUGE ALUMINUM WITH STAMPED NUMBERS AND LETTERS FILLED IN WITH BLACK PAINT.
3. IDENTIFYING NUMBER AND SYSTEM LETTER.
4. FASTENED BY HEAVY ALUMINUM HOOK OR CHAIN.
5. DIFFERENT PATTERN THAN THOSE USED FOR PLUMBING AND SPRINKLER WORK.
6. PROVIDE ON AC UNIT.

B. STENCILING

1. BY HVAC CONTRACTOR.
2. MARK PIPING WITH SIZE, PURPOSE AND DIRECTION OF FLOW FOR CORRECT LABEL STENCILING.

C. PIPE LABELING: ALL LABELS SHALL BE WEATHER–PROOFED WITH FLOW DIRECTION INDICATOR, LABEL SIZES TO FIT PIPE SIZES. PROVIDE ON MAIN PIPES ONLY; ONE EVERY 50 FEET OF STRAIGHT RUN. SIMILAR TO SETTON OR APPROVED EQUAL.

18) COMMISSIONING

CONTRACTOR SHALL VALIDATE THAT THE BUILDING SYSTEM WILL COMPLY WITH ALL DESIGN AND OPERATIONAL REQUIREMENTS AS WELL AS ENVIRONMENTAL CONDITIONS (E.G. TEST AUTOMATIC CONTROL).

1. CONTRACTOR SHALL TEST THE EQUIPMENT INDIVIDUALLY IN ALL MODES, INCLUDING:
   A. AUTOMATIC
   B. MANUAL
   C. EMERGENCY
2. CONTRACTOR SHALL TEST THE OPERATION OF THE EQUIPMENT ON A SYSTEM LEVEL INCLUDING INTERFACING WITH OTHER SYSTEMS. THE CONTRACTOR SHALL COORDINATE WITH THE BUILDING AND OPERATIONS ENGINEER AND VERIFY THAT THE SYSTEM PERFORMS AS DESIGNED WITH NEW OR MODIFIED COMPONENTS BEFORE PROJECT SIGN–OFF.

A. TRAINING OF OWNER'S PERSONNEL
THE CONTRACTOR SHALL VERIFY THAT THE NEW OR MODIFIED EQUIPMENT, CONTROLS, ETC. ARE FULLY UNDERSTOOD BY THE BUILDING AND OPERATIONS ENGINEERING PERSONNEL. APPLICABLE TRAINING (MANUFACTURER'S SITE REPRESENTATIVE, VIDEO INSTRUCTION, ETC.) SHOULD BE IDENTIFIED AT TIME OF BID AND IMPLEMENTED BEFORE PROJECT SIGN–OFF. QUALIFIED INSTRUCTORS SHALL BE PROVIDED BY THE CONTRACTOR IN ORDER TO TRAIN BUILDING AND OPERATIONS ENGINEERS ON THE SPECIFIC OPERATION & MAINTENANCE APPLICATION REQUIREMENTS FOR ALL EQUIPMENT. THE FOLLOWING TRAINING TECHNIQUES SHALL BE USED:

1. THE CONTRACTOR SHALL PROVIDE WALK–THROUGHS WITH THE BUILDING AND OPERATIONS ENGINEER TO UNDERSTAND THE EQUIPMENT LAYOUT.
2. THE CONTRACTOR SHALL TRAIN THE BUILDING AND OPERATIONS ENGINEER SO THAT THE ENGINEERS HAVE A FULL UNDERSTANDING OF THE MODES OF OPERATION:
   A. MANUAL
   B. AUTOMATIC
   C. EMERGENCY
3. THE CONTRACTOR SHALL PROVIDE EQUIPMENT MAINTENANCE REQUIREMENTS TO THE BUILDING AND OPERATIONS ENGINEER. THE FOLLOWING REQUIREMENTS SHALL BE INCLUDED:
   A. PROCEDURES
   B. FREQUENCIES
   C. SPECIAL TOOLS AND INSTRUMENTS NEEDED
   D. DELEGATION OF RESPONSIBILITIES TO ASSIGNED PERSONNEL (SPECIALTY CONTRACTORS OR BUILDING AND OPERATIONS ENGINEERS)
   E. TESTING AND NON–INVASIVE MAINTENANCE OF NEW OR MODIFIED EQUIPMENT, CONTROLS, ETC. SHOULD BE UNDERSTOOD BY BUILDING AND OPERATIONS ENGINEERS
4. THE CONTRACTOR SHALL TRAIN THE BUILDING AND OPERATIONS ENGINEER AS TO APPLICABLE SAFETY PROCEDURES/OPERATIONS.
5. THE CONTRACTOR SHALL LIST ANY SPECIALTY GROUPS REQUIRED.

B. THE CONTRACTOR SHALL IDENTIFY THE CONDITIONS OR INTERVALS FOR WHEN A SPECIALIZED GROUP(S) IS REQUIRED.

C. OPERATIONAL AND MAINTENANCE SPARE PARTS, MATERIALS AND TESTING EQUIPMENT THE CONTRACTOR SHALL ENSURE THAT SPARE PARTS, MATERIALS AND EQUIPMENT ARE INCLUDED IN THE CONTRACT, SUCH AS:

1. SPARE PARTS
2. MATERIALS
3. MAINTENANCE /TESTING EQUIPMENT

20) THE FOLLOWING ARE THE CLOSE OUT REQUIREMENTS FOR THIS PROJECT.

A. DOCUMENTATION/TECHNICAL DATA DELIVERABLES
THE CONTRACTORS ARE RESPONSIBLE FOR KEEPING THE LATEST REVISIONS OF ALL DOCUMENTATION, AND PROVIDING THE FOLLOWING:

1. AS–BUILT DRAWINGS (REPRODUCIBLES, PRINTS & COMPUTER DRAWING FILES IN AUTOCADD R14 FORMAT OR LATEST VERSION)
   A. CONTRACT DRAWINGS AND SPECIFICATIONS (LATEST REVISIONS)
   B. SHOP DRAWINGS
   C. CONTROL DIAGRAMS
2. PERMIT/CERTIFICATION DOCUMENTS
   A. ALL APPLICABLE PERMITS AND CERTIFICATIONS.
3. EQUIPMENT SPECIFICATION DATA
   A. PERMANENT NAMEPLATES IDENTIFYING EQUIPMENT, SYSTEM ACCESSORIES AND CONTROLS
   B. AUTOMATIC CONTROL DIAGRAMS AND OPERATIONS SEQUENCES OF THE BUILDING SYSTEMS READY FOR WALL–MOUNTING AND IN BINDERS (2 COPIES)
   C. SYSTEM AND EQUIPMENT DESCRIPTIVE DATA AND SCHEMATIC DIAGRAMS (2 COPIES)
4. IDENTIFICATION OF EQUIPMENT
   A. VALVE IDENTIFICATION TAGGING AND WALL–MOUNTED LOCATION CHARTS
   B. PERMANENTLY AFFIXED LABELS FOR MAJOR EQUIPMENT
5. SOFTWARE USER MANUAL/ ELECTRONIC BACKUPS
6. OPERATION & MAINTENANCE MANUALS (3 SETS)
   A. SITE SPECIFIC CUSTOMIZED O&M INSTRUCTIONS
   B. MANUFACTURER'S O&M INSTRUCTIONS
7. PREVENTIVE MAINTENANCE PROCEDURES (3 SETS)
   A. MANUFACTURER'S EQUIPMENT PM PROCEDURES
   B. SITE SPECIFIC CUSTOMIZED PM
8. SPARE PARTS LIST (3 SETS)
   A. ALL APPLICABLE MAINTENANCE PARTS AND ACCESSORIES OR MATERIALS
9. WARRANTY INFORMATION
   A. EQUIPMENT START–UP
   B. EQUIPMENT OPERATION
   C. AUTHORIZED REPAIRS

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79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.656.3333
www.syska.com

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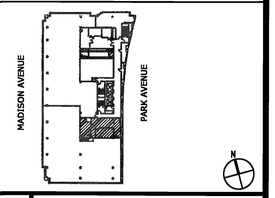
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



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CADD FILE	M–003.dwg

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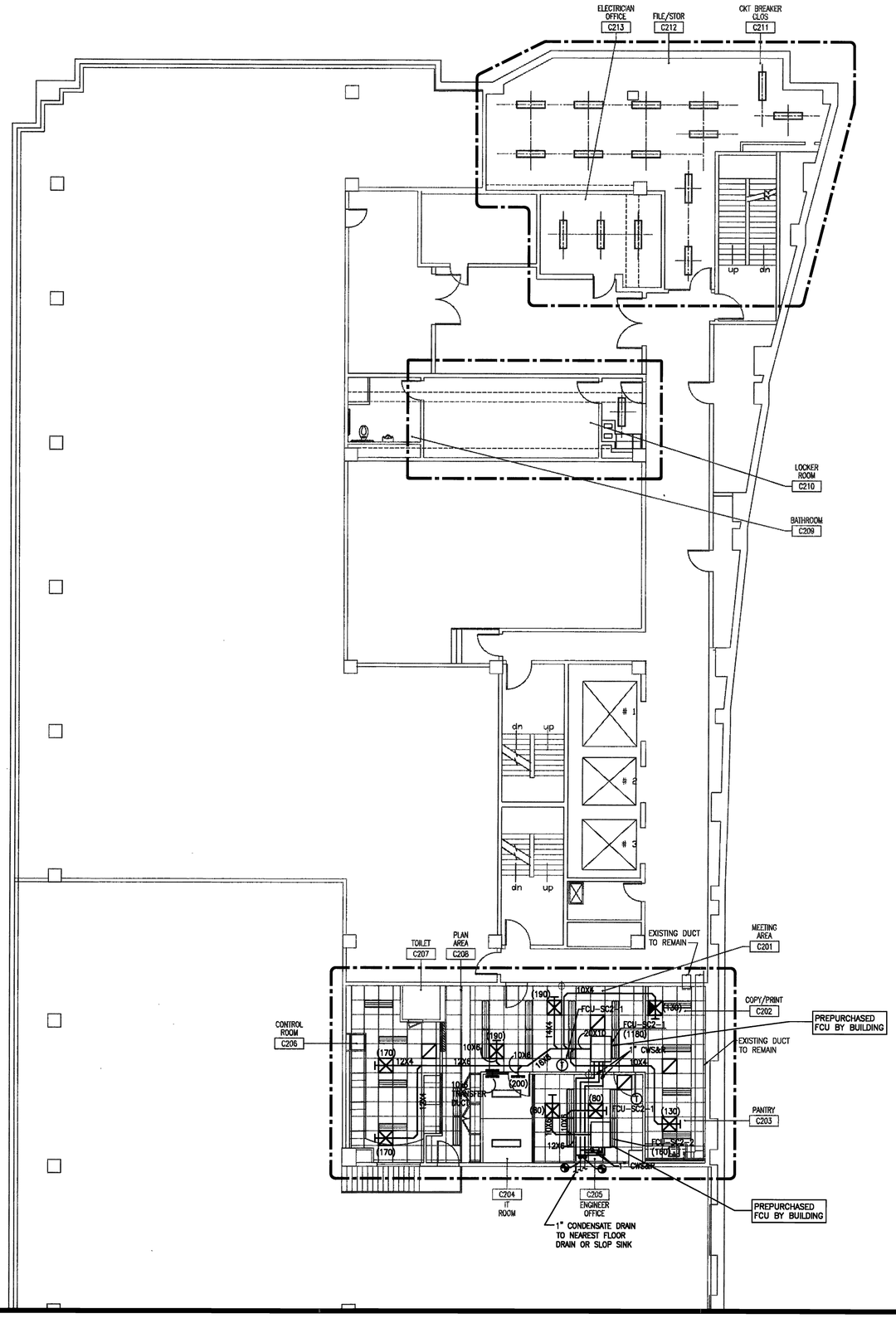
SC2 LEVEL

MECHANICAL SPECIFICATIONS

ROBERT ANTHONY MARINO 082 PROFESSIONAL ENGINEER

M-003.00



NOTES:

1. FOR ABBREVIATIONS AND NOTES SEE DRAWING M001.
2. CONTRACTOR TO COORDINATE DUCT ROUTING THROUGH BEAM CUTS WITH STRUCTURAL DRAWINGS
3. CONTRACTOR SHALL LOCATE ON SHOP DRAWINGS ALL ACCESS DOOR LOCATIONS REQUIRED TO SERVICE EQUIPMENT FOR THE ARCHITECTS & ENGINEER'S APPROVAL.
4. ALL DUCT SPLITS AND TAKEOFFS SHALL BE PROVIDED WITH VOLUME DAMPERS. SPLITTER DAMPERS. AIR EXTRACTORS ARE NOT ACCEPTABLE.
5. VOLUME DAMPERS IN BRANCH DUCTS SHALL BE LOCATED AS FAR AS POSSIBLE FROM AIR OUTLET OR INLET IN ORDER TO REDUCE NOISE AND TURBULENCE.
6. ALL ACTIVE OPEN ENDED DUCTWORK SHALL BE PROVIDED WITH WIRE MESH SCREEN.
7. SEALANT SHALL BE APPLIED TO LONGITUDINAL SEAMS IN THE SHOP DURING FABRICATION. FIELD APPLY SEALANT TO TRANSVERSE SEAMS AND CONNECTIONS TO DUCTS.
8. RADIUS ELBOWS SHALL BE USED IN ALL DUCT OFFSETS (HORIZONTAL OR VERTICAL). MITERED ELBOWS WITHOUT TURNING VANES ARE NOT ACCEPTABLE.
9. DUCTWORK SHOWN IS DIAGRAMMATIC AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISERS OF RUNS. CONTRACTOR SHALL ALLOW IN HIS PRICE, THE ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS ARE SUBJECT TO APPROVAL. FULL COORDINATION BETWEEN ALL TRADES IS REQUIRED TO AVOID CONFLICTS DURING CONSTRUCTION.
10. CEILING SUPPLY AND RETURN DEVICES SHALL BE COMPATIBLE WITH CEILING SYSTEM, UNLESS OTHERWISE NOTED.
11. CONDITIONS MAY DEVIATE THIS DRAWING. CONTRACTOR SHALL VISIT THE SITE TO UNDERSTAND THE EXISTING FIELD CONDITIONS AND DETERMINE HIS SCOPE OF WORK PRIOR TO SUBMITTING HIS BID. NO ALLOWANCES WILL BE MADE AFTER CONTRACT IS APPROVED. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DUCTWORK AND PIPING EXACT LOCATION AND EXACT SIZES. CONTRACTOR SHALL ROUTE NEW DUCTWORK
12. ALL NEW SUPPLY DUCTS SHALL BE INSULATED PER BUILDING STANDARD.
13. NEW BRANCH DUCT CONNECTIONS SHALL BE SEALED AND CAULKED AIR TIGHT. WHERE EXISTING DUCTS ARE LEAKING, PROVIDE CAULKING AT DUCT JOINTS AND CONNECTIONS.
14. ALL EXISTING EQUIPMENT IN AREA OF WORK MAY NOT BE SHOWN. CONTRACTOR TO SURVEY BEFOREHAND IN ORDER TO LOCATE ANY AND ALL EXISTING EQUIPMENT, PIPING AND DUCTWORK.
15. DUCTWORK A MAXIMUM OF 15 FT DOWNSTREAM OF TERMINAL UNITS TO BE PROVIDED WITH 1" THICK ACOUSTICAL LINING.
16. ALL DUCTWORK, NEW, OVER CONFERENCE ROOMS AND MEETING ROOM SHALL BE ACOUSTICALLY LINED.
17. MECHANICAL CONTRACTOR SHALL BALANCE ALL DIFFUSERS, VARIABLE AIR VOLUME BOXES, AND EXHAUST FANS ON FLOOR IN AREA OF SCOPE TO DESIGN AIR QUANTITIES SHOWN ON DRAWING. INCLUDE SUBMISSION OF BALANCING REPORT.
18. PROVIDE TRANSFER DUCTS PER OUR DETAIL ON M-502 SIZED AT 500FPM FOR ALL ROOMS CONTAINED COMPLETELY BY FULL PARTITIONS.
19. BMS CONTRACTOR TO PROVIDE SUPPORT IF NECESSARY TO RECALIBRATE VAV BOXES TO THE NEW VALUES SPECIFIED ON DRAWING AND TO CONNECT NEW AC UNIT TO THE SYSTEM.

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Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

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10th Floor
New York, NY 10016
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221 North LaSalle Street
Chicago, IL 60601
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London SE19LR, UK
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CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.596.3333
www.syska.com

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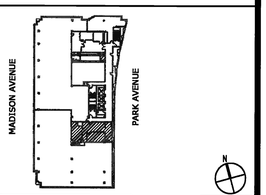

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SC2 LEVEL MECHANICAL HVAC PLAN

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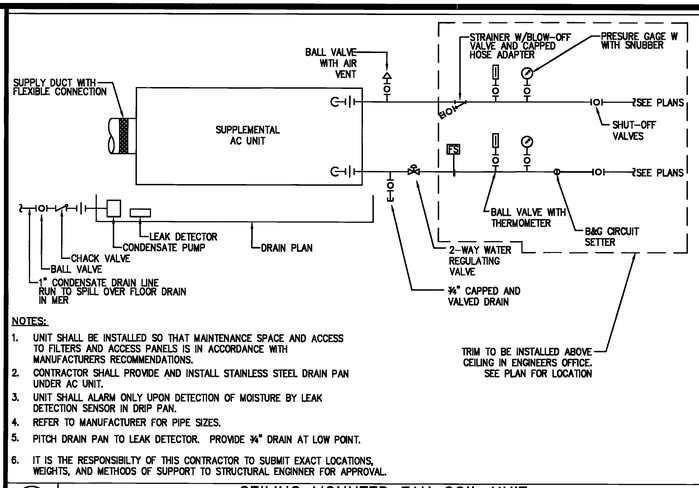
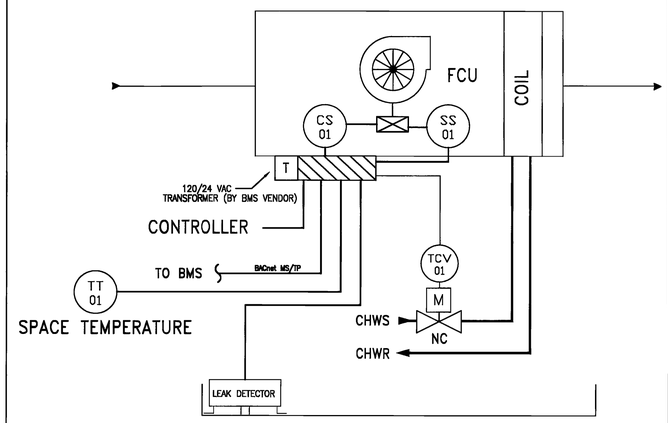
PAGE NO: 05 of 07



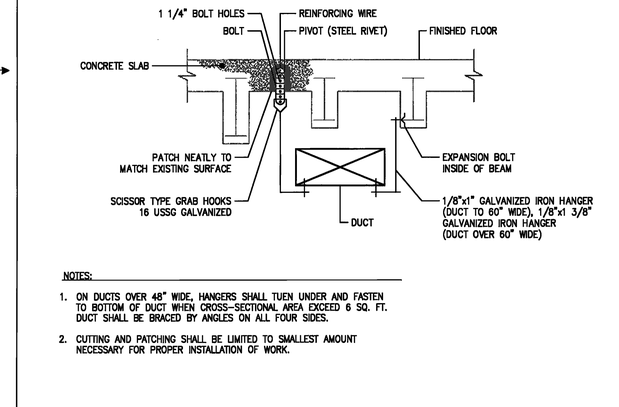
NOTES:

1. UNIT SHALL BE INSTALLED SO THAT MAINTENANCE SPACE AND ACCESS TO FILTERS AND ACCESS PANELS IS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
2. CONTRACTOR SHALL PROVIDE AND INSTALL STAINLESS STEEL DRAIN PAN UNDER AC UNIT.
3. UNIT SHALL ALARM ONLY UPON DETECTION OF MOISTURE BY LEAK DETECTION SENSOR IN DRIP PAN.
4. REFER TO MANUFACTURER FOR PIPE SIZES.
5. PITCH DRAIN PAN TO LEAK DETECTOR. PROVIDE ¾" DRAIN AT LOW POINT.
6. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO SUBMIT EXACT LOCATIONS, WEIGHTS, AND METHODS OF SUPPORT TO STRUCTURAL ENGINNER FOR APPROVAL.

(1) CEILING MOUNTED FAN COIL UNIT INSTALLATION DETAIL



(2) FAN COIL UNIT CONTOLS (COOLING ONLY)



NOTES:

1. ON DUCTS OVER 48" WIDE, HANGERS SHALL TUEN UNDER AND FASTEN TO BOTTOM OF DUCT WHEN CROSS-SECTIONAL AREA EXCEED 6 SQ. FT. DUCT SHALL BE BRACED BY ANGLES ON ALL FOUR SIDES.
2. CUTTING AND PATCHING SHALL BE LIMITED TO SMALLEST AMOUNT NECESSARY FOR PROPER INSTALLATION OF WORK.

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(3) DUCT SUPPORT FROM EXISTING CONCRETE SLAB

NOTES:

1. USE FOR SYMBOL, L WHERE BRANCH DUCT AIR QUANTITY IS LESS THAN 1000 CFM.
2. NOT TO BE USED AS SUBSITUTE FOR ELBOW.

(4) RECTANGULAR DUCT ANGULAR TAP WITH VOLUME DAMPER

WITHOUT INCOMPRESSIBLE INSULATING BLOCK AT HANGER		
PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS USSG
UP TO 3"	12"	18

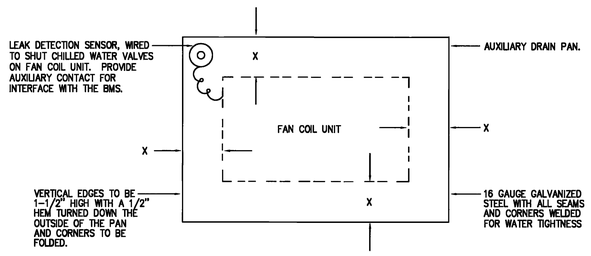
WITH INCOMPRESSIBLE INSULATING BLOCK AT HANGER		
PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS USSG
UP TO 3"	6"	18

NOTES:

1. HANGER AND ROD SHALL BE DIPPED IN ZINC CHROMATE PRIMER PRIOR TO INSTALLATION.
2. CONTRACTOR TO REPAIR ANY DAMAGED OR REMOVED FIREPROOFING DUE TO HANGER INSTALLATION.

(5) TYPICAL INSULATED PIPE SUPPORT– UP TO 3"

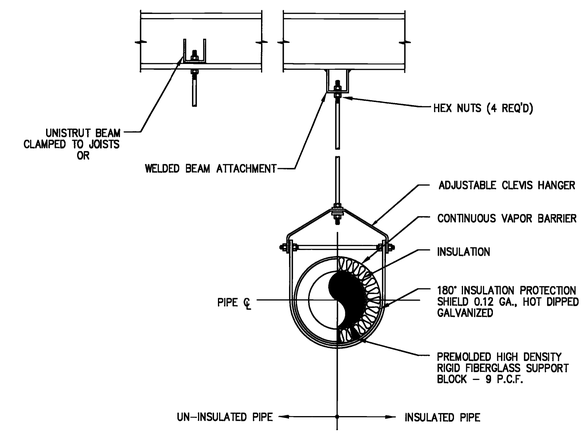
(6) TYPICAL PIPE PAN HANGER DETAILS



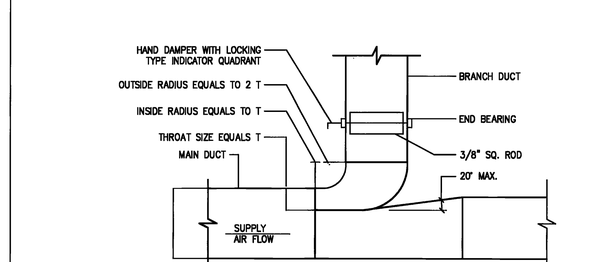
NOTES:

1. THIS DETAIL APPLIES TO –
   – FLOOR MOUNTED OR CEILING HUNG AC UNITS WITH INTEGRAL CONDENSATE DISCHARGE PUMPS.
2. PITCH DRAIN PAN TO LIQUID DETECTOR. PROVIDE 3/4" PLUGGED DRAIN AT LOW POINT.
3. TRAC UNITS DO NOT REQUIRE AUXILLARY DRAIN PAN.

(7) TYPICAL DETAIL OF AUXILIARY DRAIN PAN



(8) CLEVIS HANGER



NOTES:

1. FURNISH THIS TYPE CONNECTION WHERE NOTED AND WHEN SINGLE LINE DUCTWORK IS INDICATED AS THIS FOR BRANCHES WITH MORE THAN 1000 CFM.
2. FURNISH THIS TYPE CONNECTION WITHOUT HAND DAMPERS FOR ALL HIGH PRESSURE DUCTWORK BRANCHES
3. MUST BE USED WHEN W ≥ 36"
4. MINIMUM T = 4"

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(9) RECTANGULAR DUCT BRANCH WITH THROAT AND VOLUME DAMPER

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The LaSalle Wacker, 221 North LaSalle Street, Chicago, IL 60601, T. 312 924 5000
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CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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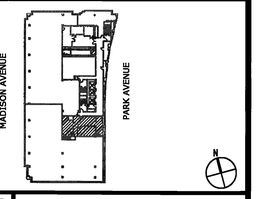
KEY PLAN — ▨ - AREA OF WORK



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270 PARK AVENUE
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SC2 LEVEL

MECHANICAL DETAILS

STATE OF NEW YORK — DEPARTMENT OF BUILDINGS — EXAMINED

M-501.00

PAGE NO: 6 of 7

FAN COIL UNIT SCHEDULE (FOR REFERENCE ONLY)

(UNITS HAVE BEEN PRE-PURCHASED AND INSTALLED BY CLIENT)

TAG #	LOCATION	AREA SERVED	S.A. CFM	EXTERNAL STATIC IN. W.C.	TOTAL STATIC IN. W.C.	SUPPLY FAN					CHILLED WATER COIL						REHEAT		HUMIDIFICATION		FILTER			
						VOLTAGE	MHP	FLA	TOTAL COOL CAP BTUH	SENS CAP BTUH	EAT (°F)	LAT (°F)	EWT / LWT (°F)	FLOW (GPM)	WATER P.D. (FT. W.C.)	ROW	KW	TYPE	LBS	TYPE		MODEL	DIMENSION (H X W X L)	WEIGHT (LB.)
FCU-SC2-1	CEILING	SC-2 ENGINEERS OFFICE	1180	0.3	–	208/1/60	–	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	HPY14	–	–
FCU-SC2-2	CEILING	SC-2 ENGINEERS OFFICE	160	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

NOTES:

1. PROVIDE DRAIN PAN
2. PROVIDE SUPPORTS AND VIBRATION ISOLATION AS REQUIRED
3. PROVIDE WITH FIELD INSTALLED CONDENSATE PUMP, (SIMILAR TO LITTLE GIANT VCMA-20ULS), 120V/1PH, UNLESS OTHERWISE NOTED.
4. PROVIDE BASIC MOTOR CONTROL
5. PROVIDE COMMON ALARM DRY CONTACT FOR CONNECTION TO BMS.

DIFFUSER SCHEDULE (BASED ON ANEMOSTAT)

TAG	CFM RANGE*	SERVICE	TYPE	NECK (IN)	FACE OVERALL DIMENSIONS WxL (IN)	NUMBER OF SLOTS	REMARKS
CD-A	0-250	SUPPLY	PLAQUE	8	24x24	–	MODEL 'PG'
CD-B	251-380	SUPPLY	PLAQUE	10	24x24	–	MODEL 'PG'
CD-C	381-560	SUPPLY	PLAQUE	12	24x24	–	MODEL 'PG'
CD-D	561-750	SUPPLY	PLAQUE	14	24x24	–	MODEL 'PG'
RG-A	0-350	RETURN	PLAQUE	10	12x12	–	MODEL 'PG'
RG-B	0-550	RETURN	PLAQUE	12	24x24	–	MODEL 'PG'

NOTES:

1. SEE PLAN FOR CFM NUMBERS AND DIFFUSER TYPE.
2. NOISE CRITERIA FOR ALL CEILING DIFFUSERS SHALL NOT EXCEED 35

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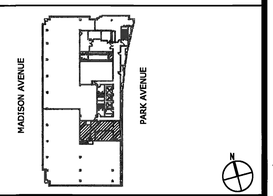

PROJECT NUMBER JMA37000-DAY-2	JP MORGAN CHASE 270 PARK AVENUE NEW YORK, NY SC2 LEVEL
SCALE	
DATE 08.08.12	MECHANICAL SCHEDULES
PROJECT MANAGER NF	
PROJECT ARCHITECT GM	
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CHECKED BY	
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COMcheck Software Version 3.9.2

Interior Lighting and Power Compliance Certificate

2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard)

Section 1: Project Information

Project Type: **New Construction**
Project Title :

Construction Site: Owner/Agent: Designer/Contractor:

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B x C)
Meeting/Planning Area (Common Space Types:Conference/Meeting/Multipurpose)	407	1.3	529
Engineers Office (Common Space Types:Office - Enclosed)	194	1.1	213
Copy/IT/Control Room (Common Space Types:Workshop)	529	1.9	1005
Pantry (Common Space Types:Dining Area - General)	117	0.9	106
		Total Allowed Watts =	1853

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Meeting/Planning Area (Common Space Types:Conference/Meeting/Multipurpose 407 sq.ft.)				
Linear Fluorescent 1: F1: LITHONIA RT4B 48" T8 32W (Super T8): Electronic:	1	10	32	320
Engineers Office (Common Space Types:Office - Enclosed 194 sq.ft.)				
Linear Fluorescent 2: F1: LITHONIA RT8B 48" T8 32W (Super T8): Electronic:	1	4	32	128
Copy/IT/Control Room (Common Space Types:Workshop 529 sq.ft.)				
Linear Fluorescent 3: F1: LITHONIA RT8B 48" T8 32W (Super T8): Electronic:	1	2	32	64
Linear Fluorescent 5: F2: LEGION SERIES 2600: 48" T8 32W (Super T8): Electronic:	2	2	32	64
Pantry (Common Space Types:Dining Area - General 117 sq.ft.)				
Linear Fluorescent 4: F1: LITHONIA RT8B 48" T8 32W (Super T8): Electronic:	1	2	32	64
		Total Proposed Watts =		640

Design Lighting 34.5% better than code

Section 4: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard) requirements in COMcheck Version 3.9.2 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title Signature Date

Section 5: Post Construction Compliance Statement

Record Drawings and Operating and Maintenance Manuals:

☐ 1. Construction documents with record drawings and operating and maintenance manuals provided to the owner.

Lighting Designer or Contractor Name Signature Date

COMcheck Software Version 3.9.2

Mechanical Compliance Certificate

2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard)

Section 1: Project Information

Project Type: **New Construction**
Project Title :

Construction Site: Owner/Agent: Designer/Contractor:

Section 2: General Information

Building Location (for weather data): **New York, New York**
Climate Zone: **4a**

Section 3: Mechanical Systems List

Quantity System Type & Description

Section 5: Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard) requirements in COMcheck Version 3.9.2 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title Signature Date

Section 6: Post Construction Compliance Statement

☐ HVAC record drawings of the actual installation and performance data for each equipment provided to the owner within 90 days after system acceptance.
☐ HVAC O&M documents for all mechanical equipment and system provided to the owner within 90 days after system acceptance.
☐ Written HVAC balancing report provided to the owner.

The above post construction requirements have been completed.

Principal Mechanical Designer-Name Signature Date

COMcheck Software Version 3.9.2

Inspection Checklist

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

90.1 (2007) Standard	Plan Review	Complies?	Comments/Assumptions
4.2.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
8.4.1.1, 8.4.1.2 [PR6][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 3%.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

90.1 (2007) Standard	Rough-in Electrical Inspection	Complies?	Comments/Assumptions
9.4.1.1 [EL1][1]	Automatic controls to shut off all building lighting installed in buildings >5,000 ft2.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.4.1.2 [EL2][1]	Indipendent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.4.1.4 [EL4][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.4.2 [EL6][1]	Ballasted one and three lamp fixtures with >30 W lamp have two lamp tandem wired ballasts when >=2 fixtures in same space on same control.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.4.3 [EL4][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.6.2 [EL8][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

90.1 (2007) Standard	Final Inspection	Complies?	Comments/Assumptions
8.7.1 [FI15][1]	Furnished as-built drawings for electric power systems within 30 days of system acceptance.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
8.7.2 [FI17][1]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.2.2.3 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

MECHANICAL

JAN 27 2014 SA

ACCEPTABLE FOR PERMIT
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JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

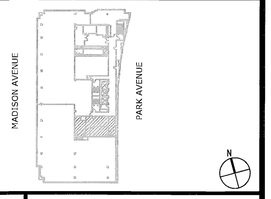
CONSULTANT

DEPT BLDGS 121664662 Job Number
SCT1016197I Scan Code

NO.	DATE	DESCRIPTIONS
2	08.30.13	ISSUE FOR CONSTRUCTION
1	08.05.13	ISSUE FOR BID & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



PROJECT NUMBER	JMA37000-DAY-2
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DATE	08.08.12
PROJECT MANAGER	NF
PROJECT ARCHITECT	GM
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JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

ENERGY COMCHECK COMPLIANCE REPORT

REGISTERED ARCHITECT GREGORY MOUDIS No. 022675 STATE OF NEW YORK PROFESSIONAL ENGINEER

EN-701.00

PAGE NO: 01 OF 01

PLUMBING SYMBOL LIST

- CLEAN OUT
- CLEAN OUT DECK PLATE
- CLEAN OUT UP TO DECK PLATE
- FLOOR DRAIN
- ROOF DRAIN
- HOSE BIBB
- HUB DRAIN
- TRAP
- WALL HYDRANT
- CAPPED OUTLET
- CAPPED OUTLET – FLANGED
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- NEW CONNECTION
- PIPING CONNECTION – BOTTOM
- PIPING CONNECTION – DOWN
- PIPING CONNECTION – UP
- UNION
- STRAINER
- ANGLE VALVE
- CHECK VALVE
- GLOBE VALVE
- HOSE VALVE (HV)
- MASTER GAS CONTROL VALVE (MGVC)
- PLUG VALVE
- PRESSURE REDUCING VALVE
- SHUT–OFF VALVE
- TEMPERATURE & PRESSURE RELIEF VALVE
- THERMOSTATIC MIXING VALVE
- AQUASTAT
- BACK FLOW PREVENTER
- BASKET STRAINER
- CIRCULATOR PUMP
- PRESSURE SWITCH
- BALL VALVE
- BALL VALVE

NOTE: NOT ALL SYMBOLS SHOWN ARE APPLICABLE. SOME SYMBOLS ARE SHOWN TO FACILIATE REVISIONS AND CHANGES IN THE SCOPE OF WORK.

PLUMBING ABBREVIATIONS

(NOT ALL ABBREV. ARE NECESSARILY USED ON THIS PROJECT)

CO	CLEANOUT
CODP	CLEANOUT DECK PLATE
CM	COFFEE MAKER
CV	CHECK VALVE
CVO	CAPPED AND VALVED OUTLET
CW	COLD WATER
CLG	CEILING
CONT	CONTINUATION
DIA	DIAMETER
DN	DOWN (PENETRATES FLOOR SLAB)
DWG	DRAWING
(E)	EXISTING
(ER)	EXISTING TO BE REMOVED
(ERR)	EXISTING TO BE REMOVED & RELOCATED
EJ DIS	EJECTOR DISCHARGE
FD	FLOOR DRAIN
FL	FLOOR
FT	FEET
GAL	GALLONS
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HW	HOT WATER
HWR	HOT WATER RETURN
IW	INDIRECT WASTE
IN	INCH
MAX	MAXIMUM
MIN	MINIMUM
(N)	NEW
NC	NORMALLY CLOSED
NIC	NOT IN THIS CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
PD	PUMP DISCHARGE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH (GAUGE)
RD	ROOF DRAIN
(RE)	RELOCATED EXISTING
SAN	SANITARY
SD	SUMP PUMP DISCHARGE
SK	SINK
SQ FT	SQUARE FOOT
TYP	TYPICAL
UP	UP (PENETRATES FLOOR SLAB)
UR	URINAL
V	VENT
VB	VACUUM BREAKER
W	WASTE
WCO	WALL CLEANOUT

GENERAL NOTES FOR DEMOLITION WORK

1. ALL EQUIPMENT, PIPING, ETC., TO BE REMOVED, SHALL BE DISPOSED OF, TURNED OVER TO OR SALVAGE AS DIRECTED. THEY SHALL NOT BE REMOVED FROM THE PREMISES WITHOUT APPROVAL.
2. EXISTING EXPOSED PIPING NOT TO BE REUSED AND NOT SPECIFICALLY NOTED OR SHOWN ON DRAWING TO BE ABANDONED SHALL BE COMPLETELY REMOVED.
3. THE EXISTING SYSTEM TO REMAIN SHALL BE LEFT IN PERFECT WORKING ORDER AT COMPLETION OF DEMOLITION WORK.
4. LOCATIONS AND SIZES OF EXISTING PIPING ARE APPROXIMATE. EXACT SIZES AND LOCATIONS OF ALL EXISTING PIPING SHALL BE VERIFIED ON THE JOB.
5. NO REMOVED EXISTING PIPING SHALL BE REUSED.
6. ALL EXISTING EXPOSED, UNNECESSARY PIPING RELATED TO WORK BEING REMOVED SHALL BE COMPLETELY REMOVED.
7. DO NOT INTERRUPT ANY OF THE SERVICES OF THE EXISTING BUILDING, NOR INTERFERE WITH THE SERVICES IN ANY WAY WITHOUT EXPRESSED PERMISSION. SUCH INTERRUPTIONS AND INTERFERENCE SHALL BE MADE AS BRIEF AS POSSIBLE AND ONLY AT THE DESIGNATED TIMES.
8. WHEN DEMOLITION WORK REQUIRES THE SHUTDOWN OF EXISTING OPERATING SYSTEMS, THE DEMOLITION WORK SHALL BE PERFORMED ONLY AFTER NOTIFYING OWNER AT LEAST 2 WEEKS BEFORE START AND OBTAINING WRITTEN AUTHORIZATION.
9. ALL PIPING REMOVAL SHALL INCLUDE REMOVAL OF ALL APPURTENANCES CONTAINED THEREIN SUCH AS VALVES, HANGERS, SUPPORTS, ETC. COMPLETE. CAPS SHALL BE INSTALLED AT ALL OPEN ENDS OF PIPING TO REMAIN AND SHALL BE OF SAME MATERIAL AND PRESSURE RATING AS EXISTING.
10. REMOVE EXISTING PIPING AS INDICATED ON DRAWING OR AS MAY BE REQUIRED. REMOVE RUBBISH FROM PREMISES AND SITE AT THE END OF EACH WORK DAY AND AS DIRECTED.
11. TORCH CUTTING; BEFORE PROCEEDING WITH WORK, SUBMIT CERTIFICATE OF COMPLIANCE AND NOTIFY BUILDING FIRE WARDEN.
12. PLUMBING DEMOLITION WORK SHALL BE IN STRICT CONFORMITY WITH THE NEW YORK CITY BUILDING CODE AND OTHER AUTHORITIES HAVING JURISDICTION.

MATERIAL SCHEDULE

SYSTEM	PIPE									FITTINGS				JOINTS	
	REQUIRED	CAST IRON NO-HUB PIPE	CAST IRON WATER PIPE	STEEL SCHEDULE 40	TYPE "L" COPPER TUBING	TYPE "K" COPPER TUBING	GALVANIZED	CAST IRON – SERVICE WEIGHT	CAST IRON – NO-HUB	CAST IRON HUB & SPIGOT	WROUGHT COPPER	PLASTIC	GALVANIZED	THREADED	SOLDERED 95–5	MECH. JOINT – NO HUB	MECH. JOINT – GASKET
VENTS	●	●							●							●	
SANITARY STACKS	●	●							●							●	
SANITARY BRANCHES	●	●							●							●	
C.W.	●				●						●				●		
H.W.	●				●						●				●		

N.Y.C. BUILDING DEPARTMENT PLUMBING NOTES

1. THE PLUMBING SYSTEMS (SANITARY, VENT AND WATER DISTRIBUTION) AND ALL ASSOCIATED EQUIPMENT WILL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE FULL REQUIREMENTS OF THE 2008 NEW YORK CITY PLUMBING CODE (NYCPC).
2. ALL PLUMBING WORK SHALL COMPLY WITH CHAPTER 4 OF THE 2008 NEW YORK CITY PLUMBING CODE AND CHAPTERS 1 THROUGH 13 OF THE NEW YORK CITY PLUMBING CODE.
3. THE SANITARY SYSTEM SHALL BE PROVIDED IN FULL ACCORDANCE WITH THE GENERAL PROVISIONS PC305.
4. THE MATERIALS USED IN THE PLUMBING SYSTEM SHALL BE PROVIDED IN FULL ACCORDANCE WITH SECTION PC303.
5. THE INSTALLATION OF FIXTURES SHALL BE IN FULL ACCORDANCE WITH PC401.
6. VERTICAL AND HORIZONTAL PIPING SHALL BE HUNG AND SUPPORTED AS DIRECTED IN SPECIFICATIONS AND IN FULL ACCORDANCE WITH SECTION PC308.
7. CLEANOUTS SHALL BE INSTALLED AS PER SECTION PC708.
8. TRAPS FOR FIXTURES SHALL BE INSTALLED IN FULL ACCORDANCE WITH SECTION PC1002.
9. THE WATER SUPPLY SHALL BE INSTALLED AND MAINTAINED IN FULL ACCORDANCE WITH PC601 THROUGH PC613. VALVES SHALL PROVIDED AS PER SECTION PC606.
10. THE SANITARY DRAINAGE SYSTEM SHALL BE SIZED AND INSTALLED IN FULL ACCORDANCE WITH SECTIONS PC701 THROUGH PC715.
11. THE VENT PIPING FOR THE SANITARY DRAINAGE SYSTEM SHALL BE PROVIDED IN FULL ACCORDANCE WITH SECTION PC901 THROUGH PC919.
12. SANITARY TEES AND QUARTER BENDS SHALL BE USED IN DRAINAGE LINES ONLY WHERE THE DIRECTION OF FLOW IS FROM THE HORIZONTAL TO THE VERTICAL.
13. SHORT SWEEPS SHALL BE PERMITTED IN DRAINAGE PIPING 3 INCHES IN DIAMETER OR LARGER FOR OFFSETS EITHER HORIZONTAL OR VERTICAL.
14. SPECIAL AND MISCELLANIOUS PIPING SHALL BE AS DIRECTED IN SECTION PC1201 THROUGH PC1203.
15. STORM DRAINAGE PIPING SHALL BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTSOF PC1100 THROUGH PC1108.

GENERAL PLUMBING NOTES:

1. ALL PLUMBING WORK SHALL BE IN STRICT ACCORDANCE WITH THE RULES AND REGULATIONS GOVERNING PLUMBING AND DRAINAGE WORK; SHALL CONFORM TO ALL OTHER APPLICABLE REGULATIONS AND SHALL MEET REQUIREMENTS OF THE A.H.J.
2. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS. EXACT LOCATION SHALL BE COORDINATED WITH ALL TRADES, ARCHITECTURAL DRAWINGS, GENERAL CONTRACTOR AND PRIME CONTRACTOR.
3. VERIFY THE LOCATIONS AND SIZES OF EXISTING PIPING IN THE FIELD AND IF ANY DISCREPANCIES OCCUR WITH CONTRACT DRAWINGS, NOTIFY ENGINEER PRIOR TO COMMENCEMENT OF NEW WORK.
4. ALL EXPOSED PIPING PENETRATIONS THROUGH WALLS OR CEILINGS SHALL BE PROVIDED WITH APPROVED FIRE RETARDANT SEALANT AND ESCUTCHEONS.
5. ALL FIXTURES TO BE SEALED WHERE FIXTURE COMES IN CONTACT WITH WALLS OR FLOOR WITH CLEAR SEALANT.
6. COORDINATE ALL WORK WITH ALL OTHER CONTRACTORS PERTAINING TO THE LOCATIONS OF PLUMBING AND DRAINAGE PIPING, HVAC WORK, LIGHTING FIXTURES, ELECTRICAL, SPRINKLER PIPING AND SPRINKLER HEADS, PROVIDE ALL NECESSARY PIPING OFFSETS AND CHANGES IN DIRECTION TO ACCOMPLISH A COMPLETE INSTALLATION.
7. SUBMISSION OF A PROPOSAL SHALL BE EVIDENCE THAT A CAREFUL EXAMINATION OF THE SITE, DRAWINGS & SPECIFICATIONS HAS BEEN MADE AND THE CONTRACTOR IS FAMILIAR WITH THOSE ITEMS AND AREAS THAT WILL PRESENT DIFFICULTY TO THE PERFORMANCE OF THIS CONTRACT. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT, ETC..., NECESSARY TO COMPLETE ALL WORK AS A RESULT OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN.
- A. CONTRACTOR TO VERIFY THE EXISTING CONDITIONS BEFORE CONSTRUCTION, CONFIRM SIZES AND LOCATIONS OF ALL EXISTING PIPING PRIOR TO START OF WORK.
- B. ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR AT THIS SITE BEFORE PROCEEDING WITH ANY WORK.
- C. PRIOR TO STARTING CONSTRUCTION. DETERMINE EXACT INVERT ELEVATION, SIZE, DEPTH AND LOCATION OF EXISTING CONDITIONS.
- D. THE PLUMBING CONTRACTOR SHALL: PAY FEES, GIVE NOTICE, FILE NECESSARY DRAWINGS AND OBTAIN PERMITS AND CERTIFICATES OF APPROVAL, REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT. HE SHALL COMPLY WITH NEW YORK CITY CODE, ORDINANCES, NEW YORK STATE CODE AND THE NEW YORK ENERGY CODE.
- E. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR OR HIS WORKMEN BE PERMITTED TO USE ANY PART OF THE BUILDING AS A SHOP EXCEPT PARTS AS DESIGNATED FOR SUCH USE. BY THE OWNER.
- F. ANY EXISTING INSULATION DISTURBED & ALL EXISTING PIPING WHICH REQUIRES REINSULATION, SUCH AS COLD WATER, HOT WATER, ETC., SHALL BE INSULATED AS PER THE SPECIFICATION.
- G. PLUMBING CONTRACTOR SHALL COORDINATE ALL TIE–INS, PLUS REMOVALS WITH GENERAL CONTRACTOR AND OWNER'S SCHEDULE.
- H. COORDINATE WITH GENERAL CONTRACTOR FOR ACCESS DOOR REQUIREMENTS.
- I. REFER TO ARCHITECTURAL DRAWINGS FOR FINAL LOCATION OF ALL EQUIPMENT.
- J. PROVIDE STAINLESS STEEL ACCESS DOORS FOR SHOCK ABSORBERS.
- K. STORE MATERIALS IN DESIGNATED SPACES.
- L. LOCATIONS AND SIZES OF EXISTING PIPING ARE APPROXIMATE, VERIFY IN FIELD.
- M. UNNECESSARY NOISE SHALL BE AVOIDED AT ALL TIMES AND NECESSARY NOISE SHALL BE REDUCED TO A MINIMUM.
- N. NEW WORK AND EQUIPMENT SHALL BE THOROUGHLY CLEANED AND MADE READY FOR USE.
- O. SANITARY DRAINAGE SHALL HAVE A UNIFORM GRADE OF 1/4" PER FOOT, FOR 2 1/2" AND SMALLER AND AN 1/8" PER FOOT FOR 3" OR LARGER, U.O.N.
- P. INSTALL SHOCK ABSORBERS ON EACH FIXTURE BRANCH HAVING A FLUSH VALVE AND QUICK CLOSING VALVES. INSTALL SHOCK ABSORBERS IN ACCORDANCE WITH THE PLUMBING AND DRAINAGE INSTITUTE STANDARDS WITH REGARDS TO SIZE AND LOCATION.
- Q. COORDINATE ALL FLOOR CORING, FLOOR PENETRATIONS, SLEEVES & FLOOR OPENINGS WITH EXISTING STRUCTURAL.
- R. PROVIDE CLEANOUTS AT OR NEAR THE BASE OF EACH VERTICAL STACK, CLEANOUTS SHALL BE SAME SIZE AS THE PIPES THEY SERVE UP TO 4 INCHES, AND NOT LESS THAN 4 INCHES FOR LARGER PIPING.
- S. PROVIDE CLEANOUTS FOR CHANGES IN DIRECTION FOR ALL SANITARY PIPING.
- T. REFER TO ARCHITECTURAL DRAWINGS FOR AREA OF DEMOLITION & CONSTRUCTION.
- U. ALL FLOOR DRAINS SHALL BE 3 INCH MINIMUM WITH 1½ INCH VENTS.
- V. PROVIDE FLOOR DRAIN IN TOILET ROOM. PROVIDE HOSE BIBB IN TOILET ROOM. ALL HOT WATER RETURN LINES ARE 1/2" U.O.N. EACH MAIN, RISER AND BRANCH TO A GROUP OF PLUMBING FIXTURES SHALL BE VALVED.
- W. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.
- X. SUPPORT ALL PLUMBING WORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL STEEL FRAMING.
- Y. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.
- Z. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES IN MAKING UP WORK PROPOSAL.
- AA. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ENGINEER.
- AB. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT, AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.
- AC. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.
- AD. SEAL OPENINGS AROUND PLUMBING WORK AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS (NOT IN SHAFTS) WITH NON–COMBUSTIBLE MATERIAL.
- AE. PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, PLUMBING WORK, AND EQUIPMENT.
- AF. ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED UNDER THIS CONTRACT WILL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THIS CONTRACTOR AS DIRECTED BY THE OWNER.
- AG. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE ARCHITECT/ ENGINEER.
- AH. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES,
- AI. PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR A COMPLETE AND SAFE INSTALLATION IN FULL ACCORDANCE WITH REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION; ALL AS INDICATED ON DRAWINGS AND/OR HEREIN SPECIFIED FOR THE SYSTEMS INCLUDED. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER.
- AJ. INCLUDE ALL COSTS FOR PERMITS, LICENSES, CERTIFICATES, FILING AND INSPECTIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
- AK. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF ACCEPTANCE BY OWNER, THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.
- AL. ALL REQUIRED TEMPORARY SHUTDOWNS IN BUILDING SERVICES SHALL BE MINIMIZED AND SHALL BE APPROVED BY AND COORDINATED WITH THE OWNER A MINIMUM OF ONE WEEK IN ADVANCE OF SHUTDOWN. ALL SERVICE CONNECTIONS TO EXISTING BUILDINGS SHALL BE PERFORMED AFTER COORDINATION WITH OWNER & ENGINEER.
- AM. CONTRACTOR TO COORDINATE ALL DIMENSIONS, ELEVATIONS AND CONNECTION REQUIREMENTS FOR FINAL CONNECTIONS.
- AN. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED DURING CONSTRUCTION.

PLUMBING FIXTURE & PIPE CONNECTION SCHEDULE					
TAG	DESCRIPTION	CONNECTION SIZE			
		CW	HW	WASTE	VENT
		INCHES	INCHES	INCHES	INCHES
S–1	PANTRY SINK	½"	½"	2"	2"

REVIEW DOCUMENTS, VERIFY DIMENSIONS AND FIELD CONDITIONS AND CONFIRM THAT WORK IS BUILDABLE AS SHOWN. THE CONTRACTOR SHALL REPORT ANY CONFLICTS AND/OR OMISSIONS TO THE ENGINEER PRIOR TO PERFORMING ANY WORK IN QUESTION. OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO COMPLETE THE WORK STATED IN ON THE CONTRACT DOCUMENTS BASED UPON THE OPTIMAL ESTABLISHED QUALITY STANDARD.

DRAWING LIST

P–001.00	PLUMBING LEGEND,NOTES AND ABBREVIATIONS
P–002.00	PLUMBING SPECIFICATIONS
DMP–100.00	SC2 LEVEL PLUMBING DEMOLITION PLAN
P–100.00	SC2 LEVEL PLUMBING PLAN
P–501.00	PLUMBING DETAILS

BUILDING DEPARTMENT

JAN 27 2014

ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

FILING NOTE

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING OR IN ACCORDANCE WITH APPLICABLE CODES.

THIS DRAWING FILED FOR PLUMBING SYSTEM ONLY

JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

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2	08.30.13	ISSUE FOR CONSTRUCTION
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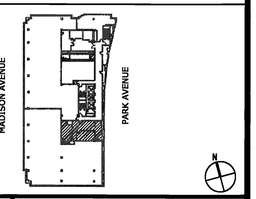
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



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PROJECT ARCHITECT	GM
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CADD FILE	P–001.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

PLUMBING SYMBOLS LIST, ABBREVIATIONS AND NOTES

STATE OF NEW YORK — LICENSED PROFESSIONAL ENGINEER

P–001.00

PAGE NO: 1 of 5

PLUMBING SPECIFICATION

1.00 GENERAL

1.01 GENERAL REQUIREMENTS

A. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS, 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 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 INTERFERENCE 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. ALL PIPING PASSING OVER ELECTRICAL OR TELEPHONE EQUIPMENT SHALL BE PROVIDED WITH DRIP PANS.

1.04 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 MANUFACTURER 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. SLEEVES.
2. ACCESS DOORS.
3. VALVES.
4. SUPPORTS.
5. PIPE, FITTINGS AND JOINTS.
6. THERMOMETERS.
7. PRESSURE GAGES.
8. TRAP PRIMERS.
9. CLEANOUTS.
10. INSULATION.
11. PLUMBING FIXTURES, TRIM, TRAPS, ETC.
12. WATER FILTERS.
13. HOT WATER DISPENSERS.
14. LOCAL DRAINAGE PUMPS.
15. SOLDER.
16. AIR GAPS.
17. VACUUM BREAKERS.
18. BACKFLOW PREVENTERS.

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. STORM WATER SYSTEM, INCLUDING CONNECTIONS TO EXISTING ROOF DRAINS AND PIPING.
3. DOMESTIC WATER SUPPLY SYSTEM, INCLUDING CONNECTIONS TO EXISTING PIPING, VALVES, PLUMBING FIXTURES AND EQUIPMENT.
5. PLUMBING FIXTURES.
6. INSULATION
7. CORE DRILLING, ROUGH CUTTING AND PATCHING.
8. SHOP DRAWINGS.
9. TESTING, FILING AND FEES.
10. CADD AS-BUILT DRAWINGS
11. DISINFECTION OF DOMESTIC WATER SYSTEM.
12. CONTROL AND ALARM WIRING.

1.06 DEMOLITION

A. IN DEMOLITION WORK, UNUSED PIPING SHALL NOT BE ABANDONED 'IN PLACE'. PIPING SHALL BE REMOVED BACK TO SOURCE OR POINT OF DISCHARGE, AND THE RESULTING OPENINGS PLUGGED AS INDICATED ON THE DRAWINGS.

B. DISCONNECT, REMOVE AND CAP OR PLUG EXISTING UNUSED PIPING AS NOTED OR REQUIRED TO PERMIT NEW INSTALLATION.

C. ALL EXISTING PLUMBING FIXTURES, PIPING AND EQUIPMENT TO BE REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE DISPOSED OF BY THIS CONTRACTOR AS DIRECTED BY THE OWNER.

D. THE CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING UNUSED PIPING AND FIXTURES WITHOUT INTERRUPTING EXISTING REQUIRED FUNCTIONING SYSTEMS.

E. ALL PIPING FROM FIXTURES TO BE REMOVED AND REPLACED SHALL BE PROPERLY PLUGGED OR CAPPED, AT WALL OR FLOOR, TO AWAIT INSTALLATION OF NEW FIXTURES.

F. ALL UNUSED PIPING AND RELATED ITEMS CONCEALED IN WALLS, FLOORS AND CEILING WITHIN THE STRUCTURE SHALL BE ABANDONED AND REMOVED WHERE EXPOSED TO VIEW.

G. ALL WASTE AND SANITARY DRAINAGE PIPING NOT TO BE USED SHALL BE REMOVED AND PLUGGED AT ACTIVE MAIN OR RISER. NO DEADENDS SHALL REMAIN LONGER THAN TWO (2) FT.

1.07 WORK NOT INCLUDED

A. FINISHED PATCHING AND PAINTING.

B. TOILET ROOM ACCESSORIES, INCLUDING MEDICINE CABINETS, MIRRORS, GRAB BARS, ETC.

C. INSTALLATION OF ACCESS DOORS.

1.08 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. PLUMBING FIXTURES: ELJER CO., AMERICAN STANDARD, INC., CRANE CO., KOHLER CO., SLOAN, POWERS, FIAT AND LAWLER.
2. STAINLESS STEEL SINKS: JUST MFG. CO., ELKAY MFG. CO., RELIANCE, AND STERLING.
3. BRASSWARE TRIM: CHICAGO FAUCET CO., MCGUIRE, JAMCO, AND BRASSCRAFT.
4. FAUCETS: ELKAY MFG. CO., SYMMONS, DELTA FAUCET CO., SPEAKMAN, T&S BRASS, CHICAGO FAUCET AND SLOAN.
5. FLUSHOMETERS: SLOAN VALVE CO. (OPTIMA), COYNE AND DELANY CO. (FLUSHBOY) AND ZURN.
8. ELECTRIC WATER COOLERS: HALSEY TAYLOR CO., ELKAY MFG. CO. AND FILTRINE.
9. BALL AND CHECK VALVES (INSIDE): CONBRACO "APOLLO," STOCKHAM VALVES AND FITTINGS, WALWORTH CO., CRANE CO., WM. POWEL VALVE CO., NIBCO (USA), AND MILWAUKEE VALVE CO.
10. PLUG VALVES (GAS COCKS): WALWORTH CO., FLOWSERVE (NORDSTROM), HEALY, DEZURIK, AND CRANE CO.
11. PRESSURE GAUGES AND THERMOMETERS: ASHCROFT AMER. GAUGE CO., U.S. GAUGE CO., ASHTON VALVE CO., WEKSLER INSTRUMENTS CORP., AND H.O. TRERICE CO.
12. BACKFLOW PREVENTERS: WATTS REGULATOR CO., CLA-VAL CO., HERSEY PRODUCTS, INC., AND WILKINS.

2.02 GENERAL ITEMS

A. AIR CHAMBERS: 12 IN. HIGH, PROVIDE ON INDIVIDUAL HOT AND COLD WATER BRANCHES TO FIXTURES.

B. ESCUTCHEONS: PROVIDE EXPOSED PIPING BOTH BARE AND COVERED, WITH CP CAST BRASS ESCUTCHEONS ON BOTH SIDES WHERE PASSING THROUGH CEILINGS, WALLS OR PARTITIONS.

C. VALVE TAGS AND CHARTS: PROVIDE 2 IN. SQUARE, 18 GAUGE ALUMINUM WITH STAMPED NUMBERED TAGS, FILL IN WITH BLACK PAINT. PROVIDE ON CONTROL VALVES EXCEPT THOSE CONTROLLING A SINGLE FIXTURE AND LOCATED ADJACENT TO FIXTURES. FASTEN WITH BRASS HOOKS. PROVIDE FRAMED CHART LISTING OPERATION, LOCATION AND PURPOSE OF VALVES. COORDINATE WITH EXISTING BUILDING VALVE CHART.

D. SLEEVES: PROVIDE NO. 22 USSG GALVANIZED STEEL SLEEVES EXTENDED THROUGH CONSTRUCTION IN CEILINGS, WALLS AND PARTITIONS. FOR INSULATED PIPING, SIZED TO ALLOW INSULATION TO PASS THROUGH SLEEVE. PROVIDE 1/2 IN. SPACE BETWEEN PIPE AND/OR INSULATION AND SLEEVE. FIREPROOF BY SEALING ALL SLEEVES IN ACCORDANCE WITH BUILDING CODE AND FIRE DEPARTMENT REQUIREMENTS.

E. HANGER AND PIPING SUPPORTS

1. SUPPORT MATERIALS: GALVANIZED, EXCEPT ON GAS OR MEDICAL GASES, SAME AS PIPING MATERIAL.
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, ANVIL INTERNATIONAL SWIVEL RING FIG. 69.
5. FOR HORIZONTAL PIPING 3 IN. AND LARGER, PROVIDE GALVANIZED "CLEVIS" HANGERS, ANVIL INTERNATIONAL FIG. 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. SUSPEND TRAPEZE AND/OR HANGERS FROM EXPANSION ANCHORS IN SOLID CONCRETE SLABS, SIMILAR TO HILTI HDI OR FROM EXISTING STRUCTURAL STEEL WITH BEAM CLAMPS SIMILAR TO ANVIL INTERNATIONAL FIG. 95 W/ RETAINING CLIP FIG. 89. PROVIDE RODS SIZED FOR PIPE SUPPORTED AND LOCK HANGER IN PLACE WITH DOUBLE NUTS. PROVIDE GALVANIZED METAL PROTECTION SHIELDS ON INSULATED PIPING. INSTALL HANGERS OVER INSULATION AND SHIELDS.
9. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING HANGER RODS IN REQUIRED LOCATIONS, PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND REVIEWED.

F. ACCESS DOORS:

1. 12 IN. X 12 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. KARP STYLE DSC 214M OR KRP-150-FR IN FIRE RATED CONSTRUCTION.

G. LABELING:

1. PROVIDE ON ALL PIPING IN OR AT CEILING, 10 FT. ON CENTERS, INDICATING SYSTEM, SIZE AND DIRECTION OF FLOW.

H. DISSIMILAR METALS:

1. PROVIDE BRASS OR COPPER WATER PIPING CONNECTED TO GALVANIZED PIPE AND FOR ANY OTHER DISSIMILAR METALS WITH DIELECTRIC FITTINGS.

2.03 PIPING AND FITTINGS

A. SANITARY DRAINAGE AND VENT PIPING:

1. SERVICE WEIGHT CAST IRON HUB AND SPIGOT SOIL PIPE AND DRAINAGE FITTINGS, OR GALVANIZED STEEL PIPE WITH GALVANIZED THREADED CAST IRON DRAINAGE FITTINGS, WITH GALVANIZED THREADED MALLEABLE IRON VENT 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. BRASS PIPE IN COMPLIANCE WITH NSF 61 WITH THREADED CAST BRASS FITTINGS OR TYPE 'L' COPPER TUBING WITH WROUGHT COPPER OR CAST BRONZE FITTINGS WITH 95-5 SOLDERED JOINTS.
2. ALL EXPOSED WATER PIPING AT PLUMBING FIXTURES SHALL BE CHROME PLATED.

2.04 VALVES

A. SHUT-OFF OR THROTTLING VALVES (WATER): BRONZE BODY BALL VALVE WITH STAINLESS STEEL BALL AND STEM, VIRGIN TFE SEATS AND SEALS, 600 PSI W.O.G., THREADED ENDS CONBRACO 'APOLLO' 70-100 SERIES, SOLDER JOINT ENDS CONBRACO 'APOLLO' 70-200 SERIES.

B. CHECK VALVES (WATER): BRONZE SWING TYPE, 125 PSI WSP, THREADED ENDS, STOCKHAM NO. B-319. SOLDER JOINT ENDS, STOCKHAM NO. B-309.

2.05 PLUMBING EQUIPMENT

A. FIXED AIR GAP:

1. CHROME PLATED CAST BRONZE.
2. CONFORMING TO ANSI A112.1.2.
3. J. R. SMITH NO. 3950 FOR UNDERCOUNTER DISHWASHERS.

B. VACUUM BREAKERS:

1. NON-CONTINUOUS PRESSURE USE WITH BACK PRESSURE.
   A) CAST BRASS BODY, WITH FULL SIZE ORIFICE
   B) ATMOSPHERIC TYPE, WATTS NO 288A.

C. BACKFLOW PREVENTERS:

1. BRONZE BODY, STAINLESS STEEL INTERNAL PARTS.
   A) LOW FLOW, LOW HEAD LOSS TYPE.
   B) WATTS NO. 9D.
2. SPILL DRAIN TO SERVICE SINK OR FLOOR DRAIN.
   A) PROVIDE AIR GAP, WATTS 909-AG-C.

D. 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 45° 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.

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°F MEAN.

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. VAPOR SEAL INSULATION ON CW PIPING. THICKNESS SAME AS REQUIRED ON PIPING.

D. CW PIPING: 1 IN. THICK FIBERGLASS SECTIONAL PIPE COVERING WITH VAPOR BARRIER JACKET. NO STAPLES PERMITTED.

E. HW (AND HWR) PIPING: 1 IN. FIBERGLASS SECTIONAL PIPE COVERING.

F. PROVIDE SWEATPROOFING ON DRAINAGE PIPING, AS NOTED FOR INSULATION ON CW PIPING, USING THE NEXT LARGER DIAMETER COVERING OVER HUBS FOR HORIZONTAL STORM WATER DRAINS AND FOR DRAINAGE PIPING FROM ICE MAKER FLOOR DRAINS, PROVIDE BETWEEN FIXTURE AND STACK.

2.07 PLUMBING FIXTURES:

A. STAINLESS STEEL PANTRY SINKS:

1. STOPS: PROVIDE 1/2" CHROME PLATED COPPER WITH HEAVY DUTY NPS 1/2" I.P.S. x 1/2" O.D. LOCKSHIELD ANGLE TYPE STOPS WITH STUFFING BOX AND LOOSE KEY. C.P. CAST BRASS 1/2"x3" NIPPLE AND SET SCREW ESCUTCHEON.
   A) STOPS, McGUIRE NO. H2167LK.
   B) SUPPLY NIPLE AND ESCUTCHEON McGUIRE NO. N0318030 AND NO. 127050.
   C) HANDICAP STOP, McGUIRE NO. 158WC.
2. PROVIDE TYPE 316 STAINLESS STEEL STRAINER WASTE WITH 1-1/2" 17 GAUGE COPPER TUBING TAILPICE, SIMILAR TO ELKAY NO. LK-18B. 1¼ IN. X 2 IN., CAST BRASS P-TRAP WITH CLEANOUT, MCGUIRE NO. 204 WITH 17 GAUGE COPPER TUBING. CONNECT TO CONCEALED WASTE PIPING USING CP. CAST BRASS WALL OUTLET NIPPLE WITH CP BRASS SET SCREW AND ESCUTCHEON, MCGUIRE NO. 3127.
3. FOR HANDICAP SINKS: TRAP, SUPPLIES AND STRAIGHT STOPS SHALL RUN CLOSE TO WALL TO CLEAR KNEES (IF MORE THAN 6 IN. OFF THE WALL, PROVIDE 1 IN. INSULATION ON EXPOSED HOT WATER AND DRAIN). PROVIDE OPEN STRAINER WASTE, MCGUIRE NO.1151WC.
4. TYPE SK:
   A) DOUBLE COMPARTMENT, IN THE COUNTER TYPE 22 IN. X 33 IN. X 6½ IN. DEEP SELF RIMMING TYPE, 3 FAUCET HOLES, 4 IN. ON CENTERS, SIMILAR TO JUST NO. VDL-2233-A-GR WITH JUST NO. J35GS316, 316 STAINLESS STEEL STRAINER.
   B) SINGLE COMPARTMENT PANTRY SINK, SATIN FINISH THROUGHOUT 25 IN. ACROSS X 22 IN. FRONT TO BACK X 6½ IN. DEEP, CENTER OUTLET DRAIN 20 GAUGE, SOUND DEAD-ENDED, 4 HOLES, 25 YEAR WARRANTY. SIMILAR TO STERLING PLUMBING GROUP, INC., BANNER NO. B258.
   C) SINK SHALL BE NO. 18 USSG 18-8 SOLID STAINLESS STEEL TYPE 302 AND SHALL BE SEAMLESSLY DRAWN. EXPOSED SURFACE SHALL HAVE A SATIN FINISH. UNDERSIDE SHALL BE SOUND DEADENED.
   D) HORIZONTAL AND VERTICAL CORNERS OF BOWLS SHALL BE ROUNDED TO 1s IN. OUTLET AND DRILLED FOR TRIM AS REQUIRED. PROVIDE WOOD STRIPS FOR FASTENING TOP TO CABINETS.
5. SINK TYPE HSK:
   A) SINGLE COMPARTMENT, MOUNTED IN THE COUNTER NO GREATER THAN 34 IN. FROM THE FLOOR, 22 IN. X 25 IN. X 6½ IN. DEEP WITH 3 FAUCET HOLES, 4 IN. ON CENTERS. NO. 18 USSG 302 STAINLESS STEEL, SINGLE COMPARTMENT, FLAT RIM TYPE. JUST RADIUS. JOINTS SHALL BE WELDED AND GROUND SMOOTH. BOTTOM SHALL BE PITCHED TO DRAIN NO. VSL-2225-A-GR WITH AN ELKAY NO. 35L, 316 STAINLESS STEEL STRAINER. DOUBLE COMPARTMENT PANTRY SINK, SATIN FINISH THROUGHOUT, 33 IN. ACROSS, 22 IN. FRONT TO BACK, 6½ IN. DEEP, OUTLETS 16 IN. ON CENTERS, 20 GAUGE, SOUND DEADENED, 4 HOLES, 25 YEAR WARRANTY. SIMILAR TO STERLING PLUMBING GROUP, INC., BANNER NO. B338.
6. FAUCETS:
   A) TYPE SK AND HSK, DECK MOUNTED, 8 IN. GOOSENECK SWING SPOUT WITH LAMINAR FLOW OUTLET, WRISTBLADE HANDLES, MAXIMUM FLOW 1.5 GPM VANDAL PROOF. CHICAGO NO. 786-GNBA SERIES.
7. PIPE SIZES: DRAIN: 2 IN.; VENT: 1¼ IN.; CW: ¾ IN.; HW: ¾ IN.

B. SHOWERS:

1. SHOWER RECEPTORS:
   A) TYPE SH, BLACK AND WHITE MARBLE CHIPS IN WHITE CEMENT BASE. 36 IN. X 36 IN., NON-SLIP, REINFORCED TERRAZZO RECEPTOR BASE FOR TILE WALLS WITH 2 IN. STAINLESS STEEL BOTTOM OUTLET DRAIN WITH REMOVABLE STRAINER CAST INTEGRAL. FIAT MONTERY MFT.
   B) TYPE SH, PROVIDE 36 IN. X 36 IN. NONSLIP REINFORCED PRECAST TERRAZZO RECEPTOR WITH 2 IN. STAINLESS STEEL DRAIN WITH VANDAL PROOF STRAINER CAST INTEGRAL AND GALVANIZED FLANGES FOR WALL ATTACHMENT. FIAT SIERRA NO. 36FT.

C. WATER FILTERS:

1. VALVE IN HEAD DESIGN WITH AUTOMATIC SHUT OFF WHEN THE CARTRIDGE IS REMOVED FOR REPLACEMENT INCORPORATING CELLULOSE FILTER SHEET AND ACTIVATED CARBON, 5 MICRON FILTRATION, UNDER COUNTER TYPE. PROVIDE TWO DOZEN SPARE REPLACEMENT CARTRIDGES.
2. PROVIDE ON WATER SUPPLY TO ICE AND COFFEE MAKERS: MAXIMUM TEMPERATURE 100°F, MAXIMUM PRESSURE 125 PSI, FLOW RATE ¼ GPM. CUNO 'AQUA PURE' NO. AP717.
3. PIPE SIZE: CW: ½ IN.
4. PROVIDE ON WATER SUPPLY TO ELECTRIC WATER COOLERS: MAXIMUM TEMPERATURE 100°F, MAXIMUM PRESSURE 125 PSI, FLOW RATE 2 GPM. CUNO 'AQUA PURE' NO. AP500 GOLD.
5. PIPE SIZE: CW: 3/8 IN.

D. ICE AND COFFEE MAKERS (BY OTHERS):

1. PROVIDE VALVED CW CONNECTION WITH CHECK VALVE AND VACUUM BREAKER. PROVIDE FLOOR DRAIN FOR ICE MAKER. SPILL INDIRECT WASTE FROM ICE MAKER TO FLOOR DRAIN.
2. PIPE SIZE: DRAIN ⅜ IN. IW; CW: ¼ IN.

E. UNDERCOUNTER DISHWASHERS (BY OTHERS):

1. PROVIDE VALVED WATER CONNECTION WITH CHECK VALVE AND VACUUM BREAKER.
2. PROVIDE WASTE WITH AIR GAP WHERE WASTE DOES NOT RISE ABOVE RIM OF SINK.
3. PIPE SIZE: DRAIN: ⅜ IN.; HW: ¾ IN.

F. HOT WATER DISPENSERS:

1. DISPENSER WITH TANK. ELKAY NO. LK-H-180.
2. PROVIDE VALVED CONNECTION.
3. PIPE SIZE: ½ IN. CW.

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. LAG PLUMBING FIXTURE CARRIER BASE PLATES OR FEET TO SLAB WITH LEAD EXPANSION SHIELDS AND INSERT BOLTS IN ALL BOLT HOLES.
2. WHERE WALL HUNG WATER CLOSETS ARE SUPPORTED ADJACENT TO STUD WALLS, PROVIDE REAR ANCHOR FOOT ASSEMBLY BOLTED TO SLAB.
3. SEAL ALL SPACES BETWEEN FIXTURES, AND WALLS OR FLOORS, WITH A NON YELLOWING OR SHRINKING FLEXIBLE WATER SEALANT.
4. WHERE PLUMBING FIXTURES ARE REMOVED AND REPLACED PROVIDE NEW ROUGHING AS REQUIRED FOR PROPER INSTALLATION.
5. ALL EXPOSED PIPING SHALL BE CHROME PLATED.

3.02 TESTS

A. TEST ALL SYSTEMS AS REQUIRED BY BUILDING CODE.

3.03 DISINFECTION

A. DISINFECT DOMESTIC WATER PIPING SYSTEMS AS REQUIRED BY BUILDING CODE.

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

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JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue, 10th Floor, New York, NY 10016, T. 212 561 2000
The LaSalle Wacker, 221 North LaSalle Street, Chicago, IL 60601, T. 312 924 5000
MCM Architecture Limited, 71 Hopton Street, London SE1 9LB, UK, T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPT BLDGS 1210840662 Job Number
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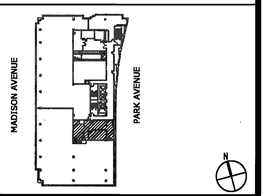
NO.	DATE	DESCRIPTIONS
2	08.30.13	ISSUE FOR CONSTRUCTION
1	08.05.13	ISSUE FOR BID & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



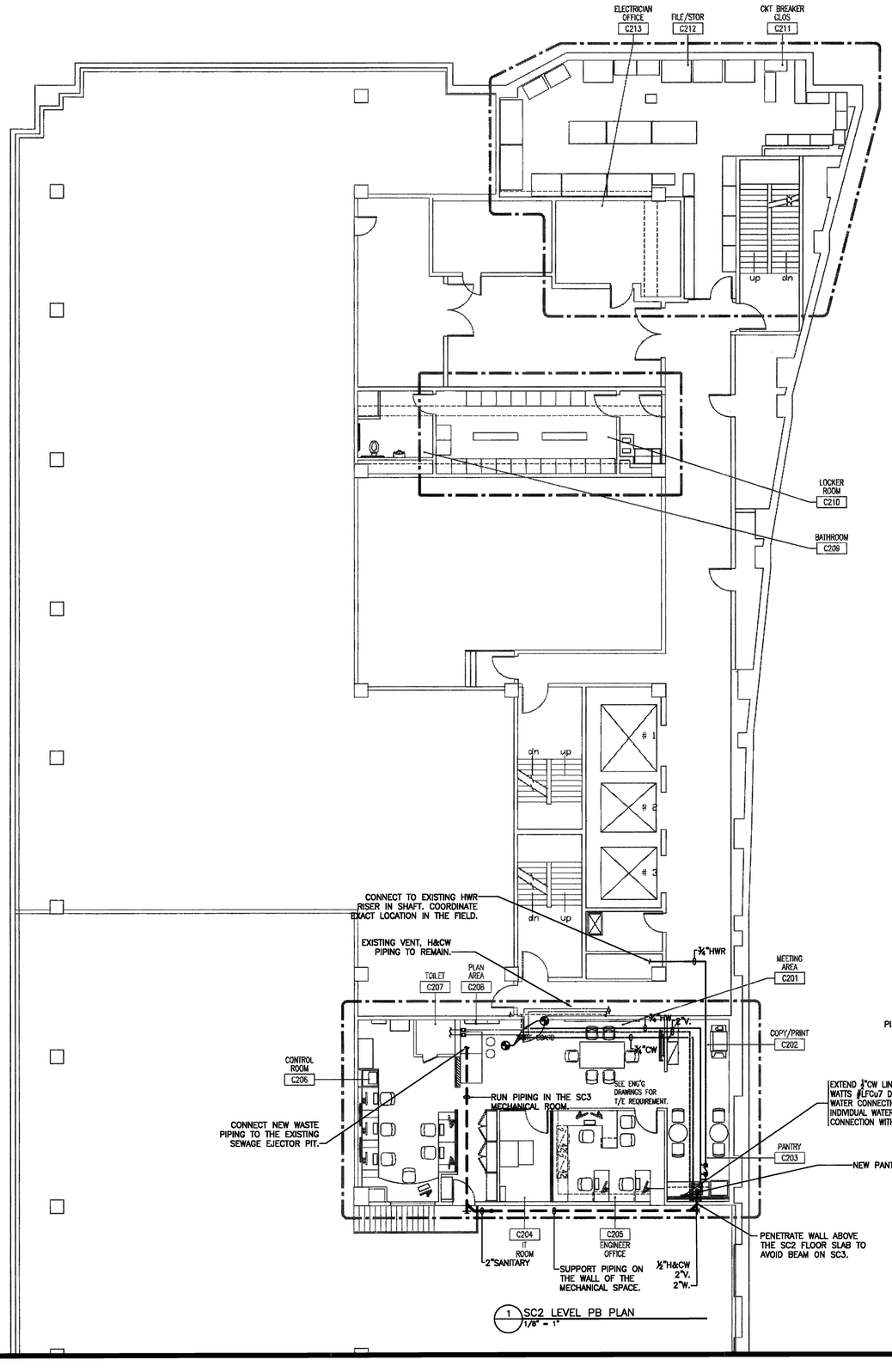
PROJECT NUMBER	JMA37000-DAY-2
SCALE	
DATE	08.08.12
PROJECT MANAGER	NF
PROJECT ARCHITECT	GM
DRAWN BY	
CHECKED BY	
CADD FILE	P-002.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

PLUMBING SPECIFICATIONS

P-002.00

PAGE NO: 2 of 5



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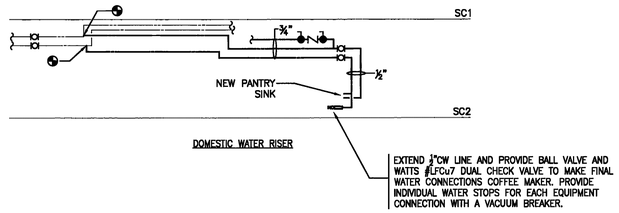
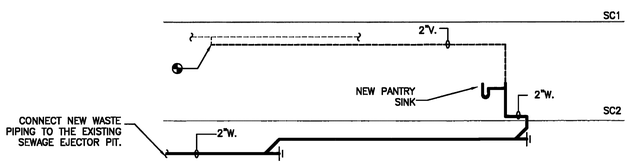
1/8" = 1'



DOMESTIC WATER RISER

EXTEND ¾"CW LINE AND PROVIDE BALL VALVE AND WATTS LFCu7 DUAL CHECK VALVE TO MAKE FINAL WATER CONNECTIONS COFFEE MAKER. PROVIDE INDIVIDUAL WATER STOPS FOR EACH EQUIPMENT CONNECTION WITH A VACUUM BREAKER.



SANITARY RISER

2 PLUMBING RISER DIAGRAMS
N.T.S.

SALMAN
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

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JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

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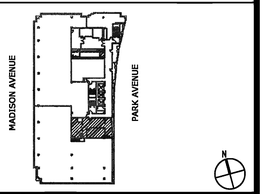

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CADD FILE	P-100.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

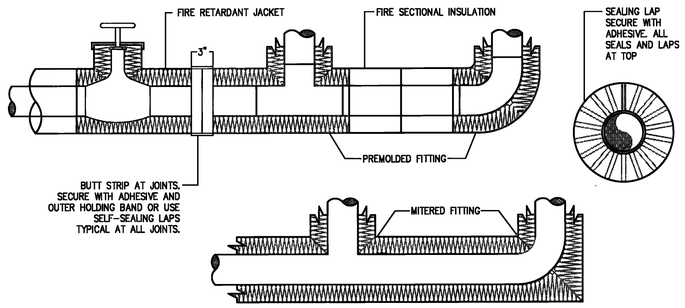
SC2 LEVEL PLUMBING PLAN

P-100.00

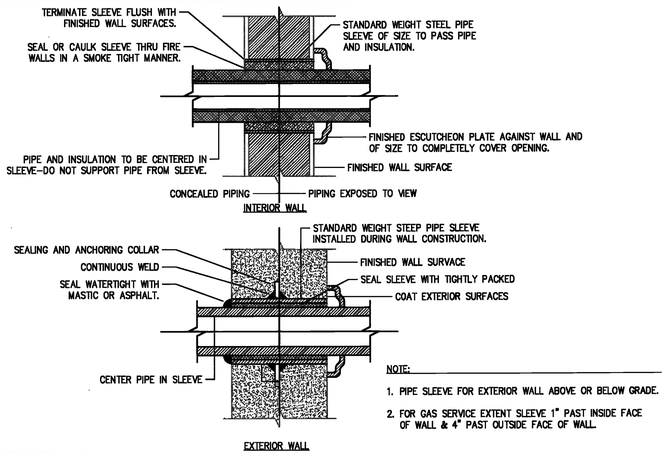
PAGE NO: 4 of 5

CONCEALED VALVES AND FITTINGS
- WRAP WITH 1 INCH THICK, 1 POUND DENSITY TO REQUIRED PIPE INSULATION THICKNESS.
- SECURE WITH WIRE OR TAPE.
- VAPOR SEAL COLD WATER, CHILLED WATER AND STORM WATER PIPING.

EXPOSED VALVES AND FITTINGS
- PREMOLDED FIBERGLASS OR RADIAL MITERED PIPE INSULATION.
- SKIM COAT OF INSULATION CEMENT.
- COAT OF MASTIC.
- WRAP WITH FIBERLASS REINFORCING CLOTH.
- FINISH COAT OF MASTIC.
- OVERLAP 2 INCHES ON PIPE INSULATION.

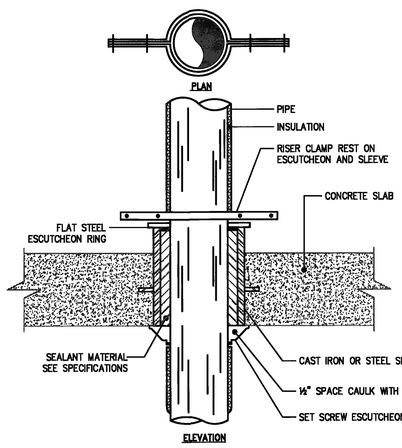


INSULATION OF PIPING, VALVES AND FITTINGS FOR EXPOSED AND CONCEALED LOCATIONS — 1

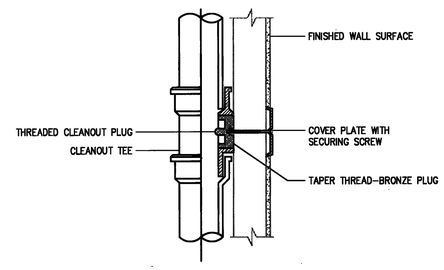


NOTE:
1. PIPE SLEEVE FOR EXTERIOR WALL ABOVE OR BELOW GRADE.
2. FOR GAS SERVICE EXTENT SLEEVE 1" PAST INSIDE FACE OF WALL & 4" PAST OUTSIDE FACE OF WALL.

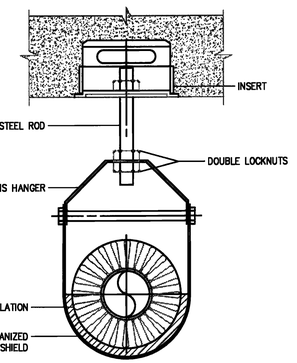
PIPE SLEEVE THRU WALL — 2



RISER CLAMP — 3



CLEANOUT FOR DRAINAGE PIPING CONCEALED BEHIND WALLS — 4

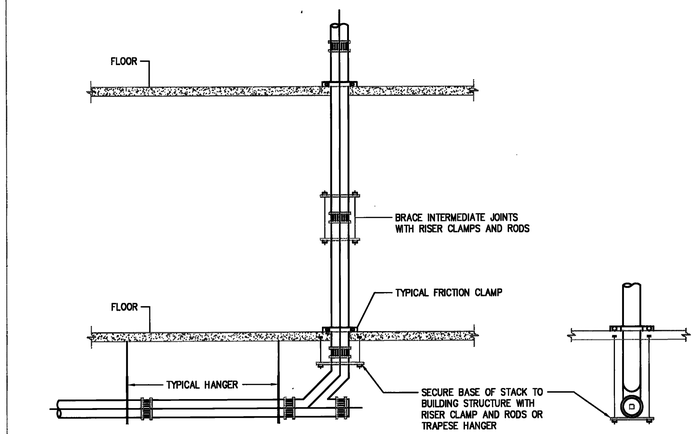


WITH INCOMPRESSIBLE INSULATING BLOCK AT HANGER		
PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS USSG
UP TO 3"	6"	18
4" UP TO 6"	8"	16
8" AND LARGER	12"	16

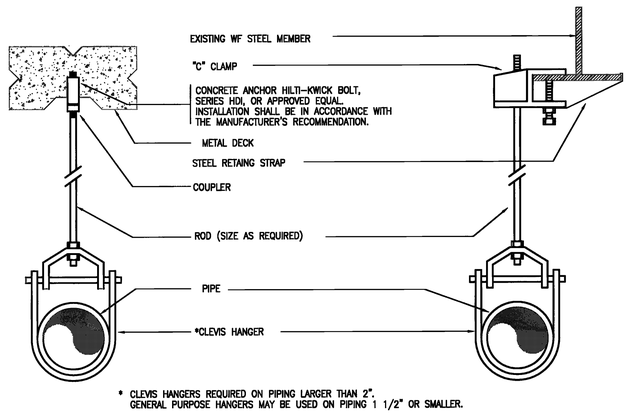
WITHOUT INCOMPRESSIBLE INSULATING BLOCK AT HANGER		
PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS USSG
UP TO 3"	12"	18
UP TO 4"	15"	16
UP TO 5"	18"	16
UP TO 6"	21"	16
8" AND LARGER	24"	14

NOTE:
HANGER, ROD AND INSERT SHALL BE DIPPED IN RED OXIDE PRIMER PRIOR TO INSTALLATION.

INSULATED PIPE SUPPORT — 5



HUBLESS PIPE BRACING FOR VERTICAL PIPING — 6



* CLEVIS HANGERS REQUIRED ON PIPING LARGER THAN 2". GENERAL PURPOSE HANGERS MAY BE USED ON PIPING 1 1/2" OR SMALLER.

TYPICAL HANGER DETAIL — 7

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

FILING NOTE

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JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921.2300
Fax: 212.566.3333
www.syska.com

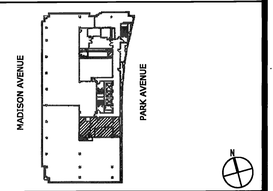
CONSULTANT

DEPT.BLDG5 : 121664662 Job Number
BC1101019B3 Scan Code

NO.	DATE	DESCRIPTIONS
2	08.30.13	ISSUE FOR CONSTRUCTION
1	08.05.13	ISSUE FOR BID & L.L. REVIEW

ISSUE/REVISIONS

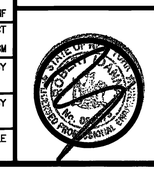
KEY PLAN — ▨ - AREA OF WORK



PROJECT NUMBER	JMA37000-DAY-2
SCALE	
DATE	08.08.12
PROJECT MANAGER	NF
PROJECT ARCHITECT	GM
DRAWN BY	
CHECKED BY	
CADD FILE	P-501.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

PLUMBING DETAILS



P-501.00

PAGE NO: 5 of 5

JPMorganChase

270 PARK AVENUE
NEW YORK, NY 10017
SC2 LEVEL

ISSUED FOR FILING & CONSTRUCTION
2014-01-13

PROJECT NO. : 112162.01

PROJECT TEAM DIRECTORY

ARCHITECT:

TED MOUDIS ASSOCIATES
79 MADISON AVENUE
NEW YORK, NY 10016
PHONE: 212-561-2000
FAX: 212-561-2020
CONTACT:
CESAR ROBLES
GENE MANEZ
MIDORI TAKADA
EMAIL: CRobles@tedmoudis.com
GManez@tedmoudis.com
Mtakada@tedmoudis.com

MEP ENGINEER:

SYSKA HENNESSY GROUP
1515 BROADWAY
NEW YORK, NY 10036

NICK FOX
PHONE: 212-921-2300
FAX: 212-556-3333
EMAIL: NFox@syska.com

FILING CONSULTANT:

MILROSE CONSULTANT
770 BROADWAY
NEW YORK, NEW YORK 10001
CONTACT:
ASHLEY CONFER
PHONE: 212-643-4545
FAX: 212-643-4859
EMAIL: aconfer@milrose.com

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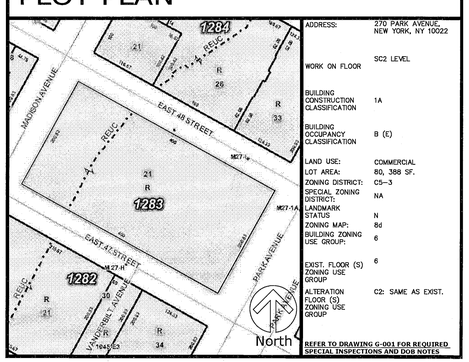
VICINITY MAP

PLOT PLAN



ADDRESS:	270 PARK AVENUE, NEW YORK, NY 10022
WORK ON FLOOR	SC2 LEVEL
BUILDING CONSTRUCTION CLASSIFICATION	1A
BUILDING OCCUPANCY CLASSIFICATION	B (E)
LAND USE:	COMMERCIAL
LOT AREA:	80, 386 SF.
ZONING DISTRICT:	C5-3
SPECIAL ZONING DISTRICT:	NA
LANDMARK STATUS	N
ZONING MAP:	8d
BUILDING ZONING USE GROUP:	6
EXIST. FLOOR (S) ZONING USE GROUP	6
ALTERATION FLOOR (S) ZONING USE GROUP	C2: SAME AS EXIST.

REFER TO DRAWING G-001 FOR REQUIRED SPECIAL INSPECTIONS AND DOB NOTES

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN

79 Madison Avenue
New York, NY 10016
Tel/212.561.2000
Fax/212.561.2020

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
Tel/312.924.5000
Fax/312.924.5000
E-Mail: tma @ tedmoudis.com
Web: www.tedmoudis.com

ALDAN ARENAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

MCM ARCHITECTURE LIMITED
71 Hopton Street
London SE1 9LR
United Kingdom
Tel/020-7902.0900
Fax/020-7922-1233
Web: www.mcm-uk.com

DEP BLDGS 121564662 Job Number
SC130430019 Scan Code

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK CITY ENERGY CONSERVATION CODE.

TITLE SHEET

T-000.00
1 OF 20

Jan 13, 2014 - 2:43pm MTakada R:\2012\JPMorgan Chase\112162.01 - 270 Park Ave, Level SC2\02-Drawings\03-CD\CD set\112162.01-A-000TS.dwg

ABBREVIATIONS

ACCES	ACCESSORY
ACOUS	ACOUSTIC(AL)
ACT	ACOUSTIC TILE
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFS	ABOVE FINISHED SLAB
AGGR	AGGREGATE
AL	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
AP	ACCESS PANEL
APPL	APPLIANCE
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
ASB	ASBESTOS
ASPH	ASPHALT
AUTO	AUTOMATIC
AVG	AVERAGE
BD	BOARD
BITUM	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BOT	BOTTOM
BRDLM	BROADLOOM
BTB	BACK TO BACK
BU	BUILT UP
CAB	CABINET
CB	CATCH BASIN
CD	CONSTRUCTION DOCUMENTS
CEM	CEMENT(ITIOUS)
CER	CERAMIC
CI	CAST IRON
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CM	CONSTRUCTION MANAGER
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
COATG	COATING
COLG	COILING
COL	COLUMN
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUOUS(ATION)
CONTR	CONTRACT(OR)
CORR	CORRIDOR
COV	COVER
CPT	CARPET
CTR	CENTER
CTSK	COUNTERSUNK
DBL	DOUBLE
DEPT	DEPARTMENT
DES	DESIGN(ED)
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DR	DOWN
DS	DOOR OPENING
DN	DOOR
DO	DOWNSPOUT
DSCON	DISCONNECT
DSP	DRY STANDPIPE
DW	DISHWASHER
DWG (S)	DRAWING (S)
DWR	DRAWER
E	EAST
EJ	EACH
EL	EACH FACE
EA	EXPANSION JOINT
EF	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMBED	EMBED(DED)(ING)
EMER	EMERGENCY
ENCL	ENCLOSURE
ENG	ENGINEER
ENTR	ENTRANCE
EP	ELECTRICAL PANEL
EQ	EQUAL
EQUIP	EQUIPMENT
EXIST	EXISTING
EXP	EXPANSION
EXPS	EXPOSE(D)
EXT	EXTERIOR
EWC	ELECTRIC WATER COOLER
F.T.	FIRE TREATED
F&I	FINISH and INSTALL
FA	FIRE ALARM
FAB	FABRICATION
FB	FLAT BAR
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHC	FIRE HOSE CABINET
FIN	FINISH
FLASH	FLASHING
FLDG	FOLDING
FLUOR	FLUORESCENT
FOC	FACE of CONCRETE
FOF	FACE of FINISH
FOS	FACE of STUDS
FP	FIREPROOF
FPLC	FIREPLACE
FR	FIRE RAT(ING)(ED)
FXD	FIXED
FXTR	FIXTURE
FLR	FLOOR(ING)
FRMG	FRAMING
FS	FULL SIZE
FT	FOOT or FEET

F-cont.

FTG	FOOTING
FURN	FURNITURE
FURR	FURRING
FUT	FUTURE
FWP	FABRIC WRAPPED PANEL
G	GROUND
GA	GAUGE
GB	GRAB BAR
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GFRP	GLASS FIBER REINFORCED PLASTER
GL	GLASS/GLAZING
GR	GRAD(E)(ING)
GYP	GYPSUM
GWB	GYPSUM WALL BOARD
H.C.	HOSE CABINET
HB	HOME BID
HC	HANDICAP
HD	HEAD
HDW	HARDWARE
HDWD	HARDWOOD
HDWE	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
I.D.	INSIDE DIAMETER (DIM.)
INFILTR	INFILTRATION
INFO	INFORMATION
INSTRUM	INSTRUMENT(ATION)
INSUL	INSULATION
INT	INTERIOR
INTLK	INTERLOCK(ING)
JAN	JANITOR
JC	JANITOR'S CLOSET
JT.	JOINT
KIT	KITCHEN
LAB	LABORATORY
LAM	LAMINATED
LAV	LAVATORY
LB	POUND
LKR	LOCKER
LT	LIGHT
LVLG	LEVELING
LVR	LOUVER
LW	LIGHTWEIGHT
MAX	MAXIMUM
MC	MEDICINE CABINET
MDF	MEDIUM DENSITY FIBERBOARD
MECH	MECHANICAL
MEMB	MEMBRANE
MET	METAL
MFD	MANUFACTURED
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MLWK	MILLWORK
MOIST	MOISTURE
MO	MASONRY OPENING
MOT	MOTOR(IZED)
MTD	MOUNTED
MUL	MULLION
N	NEW
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OBS	OBSCURE
OC	ON CENTER
OD	OUTSIDE DIAMETER (DIM.)
OFF	OFFICE
OH	OPPOSITE HAND
OPNG	OPENING(S)
OPP	OPPOSITE
OPR	OPERABLE
ORNA	ORNAMENTAL
OVFL	OVERFLOW
OVHD	OVERHEAD
PBD	PARTICLE BOARD
PC	PRECAST CONCRETE
PEDTR	PEDESTRIAN
PLS	PLASTIC
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLYWD	PLYWOOD
PNL	PANEL
POLYST	POLYSTYRENE
PORT	PORTABLE
PR	PAIR
PRCST	PRECAST
PREFIN	PREFINISHED
PREFAB	PREFABRICATED
PT	POINT
PTD	PAPER TOWEL DISPENSER COMBINATION PAPER TOWEL DISPENSER & RECEPTACLE
PTN	PARTITION
QUAL	QUALITY
QA	QUALITY ASSURANCE
QC	QUALITY CONTROL
QCR	QUALITY CONTROL
QTY	QUANTITY
QT.	QUARRY TILE
R	RELOCATE
RAD	RADIUS
RD	ROOF DRAIN
RDR	READER
RECES	RECESSED
RECPT	RECEPTACLE
REF	REFER(ENCE)
REFL	REFLECTED
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCED(D)(NG)(MENT)
REQD	REQUIRED
RESIS	RESIST(ANT)(IVE)
RESIL	RESILIENT
RF	RAISED FLOOR
RFG	ROOFING
RM	ROOM
RO	ROUGH OPENING
RWD	REDWOOD
RWL	RAIN WATER LEADER
SC	SOLID CORE
SCD	SEAT COVER DISPENSER
SCHED	SCHEDULE
SCR	SCRIBE
SD	SOAP DISPENSER
SECT	SECTION
SECUR	SECURITY
SF	SQUARE FEET
SGL	SINGLE
SH	SHELF
SHR	SHOWER
SHORG	SHORING
SHT	SHEET
SIM	SIMILAR
SLNT	SEALANT
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SPEC	SPECIFICATION
SQ	SQUARE
SSK	SERVICE SINK
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRFR	STOREFRONT
STRUCT	STRUCTURAL
SURF	SURFACE
SUSP	SUSPENDED
SYS	SYSTEM(S)
T&G	TONGUE and GROOVE
TEL	TELEPHONE
TELECOM	TELECOMMUNICATION
THK	THICK
T.O.	TOP OF
TOIL	TOILET
TRAF	TRAFFIC
TRANS	TRANSPARENT
TRTD	TREATED
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UNDRLAY	UNDERLAYMENT
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VIN	VINYL
VT	VINYL TILE
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WPM	WATER PROOFING MEMBRANE
WT	WEIGHT
WTRPRF	WATERPROOFING

SYMBOLS

&	AND
∠	ANGLE
@	AT
℄	CENTERLINE
ø	DIAMETER
⊥	PERPENDICULAR
⊏	CHANNEL
#	POUND or NUMBER
(E)	EXISTING

REGULATORY INFORMATION

A. THIS IS A SINGLE TENANT OCCUPANCY FLOOR.
B. THERE IS NO CHANGE TO THE USE, EGRESS OR OCCUPANCY AS PART OF THIS ALTERATION WORK DOCUMENTED HEREWITH
C. ENTIRE FLOOR AREA TO BE MECHANICALLY VENTILATED AS PER ART. 12, ART. 13 & RS13.
D. CONSTRUCTION OF HUNG CEILING TO COMPLY WITH SECTIONS. 27-327 AND 27-350.
E. THIS FLOOR IS FULLY SPRINKLERED. SPRINKLER SYSTEM INSTALLATION SHALL BE IN ACCORDANCE W/ RS 17-2 & CONNECTED TO A FIRE DEPARTMENT APPROVED CENTRAL MONITORING STATION. SPRINKLER WORK BE FILED UNDER SEPARATE APPLICATION.
F. THIS WORK COMPLIES WITH LOCAL LAW 5/73, LOCAL LAW 16/84 AND LOCAL LAW 58/87.
G. ALL WORK TO BE PERFORMED UNDER THIS APPLICATION & PERMIT SHALL COMPLY W/ APPLICABLE REGULATIONS NOTED BELOW.

H. APPLICABLE REGULATIONS:
1. UNIFORM FIRE CODE, STATE OF NEW YORK 1997
2. THE 1968 NYC BUILDING CODE
3. 2008 NEW YORK CITY PLUMBING CODE (IPC 2003)
4. 2008 NEW YORK CITY MECHANICAL CODE (IMC 2003)
5. 2007 NEW YORK CITY ELECTRICAL CODE (NEC 2005) WITH NEC 2005 AMENDMENTS.
6. NYC ENERGY CONSERVATION CODE LL66 OF 2010 ADOPTING 2010 NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE AS LOCALLY AMENDED (2011 NYCECC).
7. NEW YORK CITY FIRE/LIFE SAFETY CODE, NEW YORK CITY FIRE CODE AND NEW YORK CITY BUILDING CODE (NFPA 5000)
8. 2008 NEW YORK CITY FUEL GAS CODE.
9. 1998 BUILDING CODE REFERENCE STANDARD 4-6, ANSI A117.1, 1986 AND LOCAL LAW 58-1987
10. SAFETY CODE FOR ELEVATOR AND ESCALATORS ASME A17.1 AS MODIFIED BY APPENDIX K. ACCESSIBILITY FOR PASSENGER ELEVATORS ICC/ANSI A117.3 2003

B. NEW YORK CITY BUILDING CODE REQUIREMENTS:
1. USE AND OCCUPANCY
a. EXISTING BUILDING: (E) (B) (BUSINESS). ZONING USE GROUP 6
b. INTERIOR ALTERATION: LEVEL CZ: (E) (B) (BUSINESS). ZONING USE GROUP 6

C. BUILDING LIMITATIONS:
1. BUILDING HEIGHT: 707 FEET, 52 STORIES
2. TOTAL ALL FLOOR GROSS AREA: 20,445 SQ.FT.
a. LEVEL SC2 GROSS AREA: NOT AVAILABLE
b. LEVEL SC2 ALTERATION AREA: 2,105 SQ.FT.

D. BUILDING CONSTRUCTION CLASSIFICATION:
1. EXISTING BUILDING IS CLASSIFIED AS HIGH RISE
2. BUILDING CONSTRUCTION CLASS "IB"-NONCOMBUSTIBLE PROTECTED.
3. AN AUTOMATIC SPRINKLER SYSTEM IS PROVIDED.
4. AN AUTOMATIC FIRE DETECTION SYSTEM IS PROVIDED.
5. AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IS PROVIDED.
6. A FIRE DEPARTMENT COMMUNICATION SYSTEM IS PROVIDED.
7. A FIRE DEPARTMENT COMMAND CENTER IS PROVIDED.

E. FIRE RESISTANCE RATING OF ELEMENTS IN HOURS -CLASS I NONCOMBUSTIBLE (TABLE 3-4) & NOTED SECTIONS:

	ELEMENT TYPE	REQUIRED	PROVIDED
1	EXTERIOR NONBEARING WALLS 3' OR <	1	N/A
	EXTERIOR NONBEARING WALLS > 3' BUT < 15'	1	N/A
	EXTERIOR NONBEARING WALLS 15' OR > BUT < 30'	1	N/A
	EXTERIOR NONBEARING WALLS = OR > 30'	0	N/A
	STRUCTURAL FRAME INCLUDING COLUMNS, GIRDERS, TRUSSES & SPANDRELS	3	N/A
	FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS	2	N/A
	ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS	1	N/A
2	SHAFTS FIRE RESISTANCE IN HOURS (SECTION 27-344)		
	SHAFTS CONNECTING 4 FLOOR OR MORE	2	N/A
	SHAFTS CONNECTING 3 FLOOR OR LESS	2	N/A
3	PUBLIC CORRIDORS (SECTION 27-369]		
	ANY OCCUPANCY	1	N/A
4	EXIT ENCLOSURES (SECTION 27-375)		
	STAIRS CONNECTING 4 FLOORS OR MORE	2	N/A
	STAIRS CONNECTING 3 FLOORS OR LESS	2	N/A
5	DIFFERENT TENANCY (SECTION 27-341 a)		
	OCCUPANCY B, FULLY SPRINKLERED	1	1
6	SEPARATION OF OCCUPANCIES (TABLE 5-1 OR 5-2)		
	B (BUSINESS) / B (BUSINESS) FULLY SPRINKLERED	1	1
7	OPENING PROTECTIVE FIRE PROTECTION RATING: COMPLY WITH REQUIREMENT OF SECTION 27-342 AND TABLE 5-3		
8	GLAZING GENERAL: SUBCHAPTER 10, RS-67 & RS-68. GLAZING IN FIRE RESISTIVE PARTITION: AS PERMITTED BY SECTION 27-342 (a) & BUILDING COMMISSIONER.		

F. MEANS OF EGRESS (SUBCHAPTER 6):
1. DETERMINATION OF OCCUPANT LOAD CAPACITY SHALL COMPLY WITH FLOOR AREA ALLOWANCES IN TABLE 6-2
2. MINIMUM REQUIRED EGRESS WIDTH FOR STAIRWAYS AND OTHER COMPONENTS SHALL BE NO LESS THAN 44 INCHES. ALL CORRIDORS TO BE 3'-8" MIN. CLEAR WIDTH AS PER SECTIONS. 27-369.
3. EGRESS DOORS SHALL SWING IN DIRECTION OF EGRESS EXCEPT IN SPACES AND ROOMS WITH ONE MEANS OF EGRESS PER TABLE 6-3
4. EGRESS DOORS SHALL BE HINGE MOUNTED SWING TYPE. NUMBER OF EGRESS DOORS FROM FLOORS, SPACES AND ROOMS SHALL BE PER TABLE 6-1 EXCEPT SPACES AND ROOMS WITH ONE MEANS OF EGRESS MEETING THE OCCUPANT LOAD REQUIREMENTS IN TABLE 6-3
5. EGRESS DOORS TO STAIRWAYS SHALL BE SELF LATCHING, SELF CLOSING MATCHING THE FIRE RESISTANCE REQUIREMENTS FOR STAIRWAY ENCLOSURES.
6. ALL NEW DOORS SHALL BE 3'-0" WIDE UNLESS OTHERWISE NOTED. ALL HARDWARE TO BE LEVER TYPE.
7. MEANS OF EGRESS POWER OPERATED DOORS SHALL BE FAIL SAFE AND OPERABLE MANUALLY FROM THE EGRESS SIDE WITHOUT SPECIAL KNOWLEDGE OR EFFORT.
8. WHEN MORE THAN ONE EXIT DOORWAYS ARE REQUIRED, EXIT ACCESS DOORWAYS SHALL BE REMOTE FROM EACH OTHER AND SHALL BE PLACED AT A DISTANCE APART EQUAL TO NOT LESS THAN THAN 30 FEET PER SECTION 27-363 (b)(2)).
9. EGRESS PASSING THROUGH ADJACENT TENANT ON ANY ONE FLOOR IS NOT PERMITTED. EACH TENANT SHALL HAVE ACCESS TO THE REQUIRED EXITS WITHOUT PASSING THROUGH THE ADJACENT TENANT SPACE.
10. AISLES SERVING AS PORTION OF THE EXIT ACCESS SHALL BE DETERMINED BY TABLE 6.1 BUT SHALL NOT BE LESS THAN 36 INCHES.
11. EXIT ACCESS RAVEL DISTANCE LIMITATIONS SHALL BE IN ACCORDANCE WITH TABLE 6-1.
12. THE WIDTH OF EXIT ACCESS CORRIDORS SHALL BE DESIGNED TO MEET THE CAPACITY OF THE OCCUPANTS IT SERVES AS PER TABLE 6-1 BUT SHALL NOT BE LESS THAN 44 INCHES.
13. DEAD END IN EXIT ACCESS SYSTEM SHALL BE 50 FEET PER TABLE 6-1.

G. EXIT SIGNS
1. ILLUMINATION OF MEANS OF EGRESS COMPONENTS SHALL COMPLY W/ SUB-CHAPTER SIX, ARTICLE SIX.
2. ILLUMINATED EXIT SIGNS SHALL BE LOCATED AT ALL EXITS AND SUPPLEMENTAL DIRECTIONAL SIGNS SHALL BE INSTALLED WITHIN LARGE SPACES OR SPACES WITH OBSTRUCTED VIEWS IN ACCORDANCE WITH SECTION 27-385 & SECTION 37-386.
3. THE POWER SOURCE FOR EMERGENCY LIGHTING AND ILLUMINATED EXIT SIGNS SHALL COMPLY W/ SEC. 27-384.

H. FIRE PROTECTION CONSTRUCTION
1. FIRE-RESISTANT RATED PARTITIONS SHALL EXTEND UP TO AND BE SECURED TO THE UNDERSIDE OF THE FLOOR STRUCTURE ABOVE.
2. PENETRATIONS THROUGH FIRE-RESISTANT RATED PARTITIONS & FLOORS SHALL BE PROTECTED IN COMPLIANCE WITH SECTIONS 27-343 AND 27-344.
3. ALL OPENING PROTECTIVE DOORS AND FRAMES IN FIRE-RESISTANT RATED EXIT ENCLOSURE, FIRE DIVISIONS, AND FIRE SEPARATIONS SHALL BE SELF-CLOSING, SELF LATCHING, FIRE RATED SWINGING DOORS BEARING THE UNDERWRITERS LABORATORIES LABEL.
4. ALL WOOD TO BE FIRE RETARDANT AS PER SECTIONS. 27-228, 27-1019 (b) (3) AND TABLE 3-5.
5. INTERIOR FINISHES SHALL COMPLY WITH SECTION 27-348 AND RS 5-5 FOR FLAME SPREAD AND SMOKE DEVELOPED AND TABLE 5-4 FOR CLASS REQUIREMENTS:
   - FLAME SPREAD RATING: A: 0 – 25, B: 26 – 75 C: 76 – 225, D: Over 225
   - SMOKE DEVELOPED RATING: EXITS, CORRIDORS – 25, OCCUPANCY GROUPS H-1 AND H-2 – 50, ROOMS IN WHICH THE NET FLOOR AREA PER OCCUPANT IS TEN SQUARE FEET, OR LESS –100.
6. MATERIALS USED AS INTERIOR FINISHES, TRIMS AND DECORATIVE MATERALS HAVING A THICKNESS OF 0.036 INCHES (1/16 INCHES) AND APPLIED DIRECTLY TO A NON-COMBUSTIBLE OR FIRE RETARDED TREATED WOOD SUBSTRATE SHALL BE EXEMPT FROM COMPLIANCE WITH THE ALLOWABLE FLAME SPREAD AND SMOKE DEVELOPMENT
7. FLOOR FINISHES SHALL COMPLY WITH SECTION 27-351.

I. GLASS AND GLAZING (SUBCHAPTER 10)
1. INDIVIDUAL GLAZED AREAS SUBJECT TO HUMAN IMPACT INCLUDING GLASS MIRRORS, IN HAZARDOUS LOCATIONS SHALL BE OF SAFETY TYPE GLAZING IN COMPLIANCE WITH "ANSI Z97.1"AND SHALL PASS THE TEST REQUIREMENTS OF "CPSC 16 CFR, 1201".
2. GLAZING PANELS IN HANDRAILS AND GUARDS SHALL BE EITHER SINGLE FULLY TEMPERED GLASS, LAMINATED FULLY TEMPERED GLASS OR LAMINATED HEAT THRENGTHENED GLASS. THE GLASS PANELS AND THEIR SUPPORT SYSTEM SHALL BE DESIGNED TO WITHSTAND LOAD SPECIFIED IN SECTION 27-558 (8) WITH A SAFETY FACTOR OF 4.
3. DISTRACTION MARKINGS ON TRANSPARENT GLASS PANELS AND SIDELIGHTS SHALL COMPLY WITH NEW YORK CITY BOARD OF STANDARDS AND APPEALS (BSA) RULE 4-01

REGULATORY INFORMATION-Cont.

J. SPECIAL INSPECTION REQUIRED (2008 BC CHAPTER 17)
-MECHANICAL SYSTEMS PER SECTION BC 1704.15
-SPRINKLER SYSTEMS PER SECTION BC 1704.21
-FIRE ALARM TEST PER SECTION BC 907 AND BC 1704.13
-SPRAYED FIRE-RESISTANT MATERIALS PER SECTION BC 1704.11

K. PROGRESS INSPECTION REQUIRED (2008 BC)
-FINAL INSPECTION SIGN-OFF PER DIRECTIVE 14 OF 1975 & 1 RCNY 101-10.
-FIRE RESISTANCE RATED CONSTRUCTION INSPECTION PER SECTION BC 109.3.4
-ENERGY CODE COMPLIANCE INSPECTIONS PER SECTION BC 109.3.5

L. NYC ENERGY CONSERVATION CODE (2010 NYSECCC)

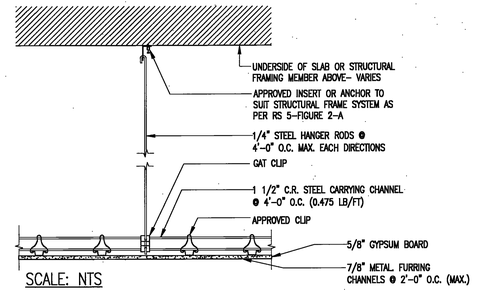
ENERGY ANALYSIS

COMMERCIAL

ITEM DESCRIPTION	CODE REQUIRED VALUE AND CITATION	PROPOSED DESIGN VALUE
BUILDING ENVELOPE	N/A-(EXISTING EXTERIOR BUILDING WALL SYSTEM TO REMAIN) - NO EFFECT.	N/A-(EXISTING EXTERIOR BUILDING WALL SYSTEM TO REMAIN) - NO EFFECT.
HVAC/MECHANICAL SYSTEMS	SEE ENGINEERING DRAWINGS	SEE ENGINEERING DRAWINGS
LIGHTING SYSTEMS	SEE ENGINEERING DRAWINGS	SEE ENGINEERING DRAWINGS

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK CITY ENERGY CONSERVATION CONSTRUCTION CO DE.

TYP. GYP. BD. CLG. DETAILS



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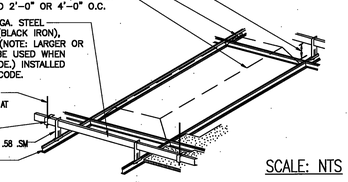


SCALE: NTS

NOTES
1. AT EACH END OF LIGHT FIXTURE AN INTERLOCKING CROSS TEE OR LOCKING BAR MUST BE USED
2. THE TOTAL WEIGHT OF A LIGHT FIXTURE AND OTHER EQUIPMENT (AIR BOXES, ETC.) AND CEILING MATERIAL SUPPORTED BY THE MAIN BEAM MUST NOT EXCEED THE ALLOWABLE DEFLECTION OF 1/360 OF ITS SPAN. DEFLECTION DATA MUST BE FURNISHED AND CERTIFIED BY THE MANUFACTURER.
3. SURFACE OR PENDENT FIXTURES MUST BE INDEPENDENTLY SUPPORTED FROM 1½" BLACK IRON OR FROM FLOOR OR ROOF CONSTRUCTION.

2008 TENANT SAFETY NOTES

1. EGRESS.
AT ALL TIMES IN THE COURSE OF CONSTRUCTION PROVISION SHALL BE MADE FOR ADEQUATE EGRESS AS REQUIRED BY THIS CODE AND THE TENANT PROTECTION PLAN SHALL IDENTIFY THE EGRESS THAT WILL BE PROVIDED. REQUIRED EGRESS SHALL NOT BE OBSTRUCTED AT ANY TIME EXCEPT WHERE APPROVED BY THE COMMISSIONER.

2. FIRE SAFETY.
ALL NECESSARY LAWS AND CONTROLS, INCLUDING THOSE WITH RESPECT TO OCCUPIED DWELLINGS, AS WELL AS ADDITIONAL SAFETY MEASURES NECESSITATED BY THE CONSTRUCTION SHALL BE STRICTLY OBSERVED.

3. HEALTH REQUIREMENTS.
SPECIFICATION OF METHODS TO BE USED FOR CONTROL OF DUST, DISPOSAL OF CONSTRUCTION DEBRIS, PEST CONTROL AND MAINTENANCE OF SANITARY FACILITIES, AND LIMITATION OF NOISE TO ACCEPTABLE LEVELS SHALL BE INCLUDED.
3.1. THERE SHALL BE INCLUDED A STATEMENT OF COMPLIANCE WITH APPLICABLE PROVISIONS OF LAW RELATING TO LEAD AND ASBESTOS.

4. COMPLIANCE WITH HOUSING STANDARDS.
THE REQUIREMENTS OF THE NEW YORK CITY HOUSING MAINTENANCE CODE, AND, WHERE APPLICABLE, THE NEW YORK STATE MUL-TIPLE DWELLING LAW SHALL BE STRICTLY OBSERVED.

5. STRUCTURAL SAFETY.
NO STRUCTURAL WORK SHALL BE DONE THAT MAY ENDANGER THE OCCUPANTS.

6. NOISE RESTRICTIONS.
WHERE HOURS OF THE DAY OR THE DAYS OF THE WEEK IN WHICH CONSTRUCTION WORK MAY BE UNDERTAKEN ARE LIMITED PURSUANT TO THE NEW YORK CITY NOISE CONTROL CODE, SUCH LIMITATIONS SHALL BE STATED.

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

DRAWING INDEX

NO.	DESCRIPTION	8/20/12 ISSUED FOR BID, FILING & L.L. REVIEW	01/13/14 ISSUED FOR FILING & CONSTRUCTION
	ARCHITECTURAL DRAWINGS.		
T-001.00	TITLE SHEET	•	•
G-001.00	ABBRV. CODE INFO, DRWGS INDEX & TYP. CLG.DTLS	•	•
G-002.00	GENERAL NOTES-SHEET 1 OF 4	•	•
G-003.00	GENERAL NOTES-SHEET 2 OF 4	•	•
G-004.00	GENERAL NOTES-SHEET 3 OF 4	•	•
G-005.00	GENERAL NOTES-SHEET 4 OF 4	•	•
A-102.00	SC2 LEVEL CEILING DEMOLITION PLAN	•	•
A-111.00	SC2 LEVEL CONSTRUCTION PLAN	•	•
A-121.00	SC2 LEVEL REFLECTED CEILING PLAN	•	•
A-131.00	SC2 LEVEL POWER & COMMUICATION PLAN	•	
A-141.00	SC2 LEVEL FINISH PLAN	•	
A-151.00	SC2 LEVEL FURNITURE PLAN	•	•
A-201.00	ELEVATIONS & SECTIONS	•	•
A-301.00	SECTION & DETAILS	•	•
A-302.00	SECTION & DETAILS	•	•
A-702.00	ACCESSIBILITY DIAGRAMS SHEET 1 OF 2	•	•
A-703.00	ACCESSIBILITY DIAGRAMS SHEET 2 OF 2	•	•
A-704.00	TYP.MTG. HTS. & LOCATIONS OF ARCH/MEP DEVICES & FIXTURES	•	•
A-705.00	TYP.MTG. HTS. & LOCATIONS OF ARCH/MEP DEVICES & FIXTURES	•	•
A-706.00	FIRE STOPPING & JOINT SYSTEM DIAGRAMS SHEET 1 OF 3	•	•
A-707.00	FIRE STOPPING & JOINT SYSTEM DIAGRAMS SHEET 2 OF 3	•	•
A-708.00	FIRE STOPPING & JOINT SYSTEM DIAGRAMS SHEET 3 OF 3	•	•
	ELECTRICAL DRAWINGS		
E-001.00	ELECTRICAL SYMBOLS, NOTES & ABBREVIATIONS	•	•
E-002.00	ELECTRICAL SPECIFICATIONS	•	•
E-601.00	ELECTRICAL RISER DIAGRAM	•	•
DME-100.00	SC2 LEVEL ELECTRICAL DEMOLITION PLAN	•	•
EL-100.00	SC1 LEVEL ELECTRICAL LIGHTING PLAN	•	•
EP-100.00	SC1 LEVEL ELECTRICAL POWER PLAN	•	•
EN-701.00	ELECTRICAL LIGHTING COMPLIANCE		•
EN-702.00	MECHANICAL COMPLIANCE		•
	MECHANICAL DRAWINGS		
M-001.00	MECHANICAL SYMBOLS LIST, ABBREVIATIONS &NOTES	•	•
M-002.00	MECHANICAL SPECIFICATIONS	•	•
M-003.00	MECHANICAL SPECIFICATIONS CONT.	•	•
M-100.00	SC2 LEVEL MECHANICAL HVAC PLAN	•	•
M-501.00	MECHANICAL DETAILS	•	•
M-701.00	MECHANICAL SCHEDULES	•	•
DMM-100.00	SC2 LEVEL MECHANICAL DEMOLITION PLAN	•	•
	PLUMBING DRAWINGS		
P-001.00	PLUMBING SYMBOLS LIST, ABBREVIATIONS & NOTES	•	•
P-002.00	PLUMBING SPECIFICATIONS	•	•
P-100.00	SC2 LEVEL PLUMBING PLAN	•	•
P-501.00	PLUMBING DETAILS	•	•
DMP-100.00	SC2 LEVEL PLUMBING DEMOLITION PLAN	•	•
	SPRINKLER DRAWINGS		
PD-100.00	SC2 LEVEL SPRINKLER DEMOLITION PLAN	•	•
SP-001.00	SPRINKLER SYMBOLS LIST, ABBREVIATIONS & NOTES	•	•
SP-002.00	SPRINKLER SPECIFICATIONS	•	•
SP-100.00	C2 LEVEL SPRINKLER PLAN	•	•
SP-501.00	SPRINKLER DETAILS	•	•
SP-601.00	SPRINKLER RISER DIAGRAM	•	•

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

JPMorganChase

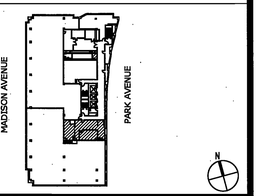
Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue, 10th Floor, New York, NY 10016, T. 212 561 2000
The LaSalle Wacker, 221 North LaSalle Street, Chicago, IL 60601, T. 312 924 5000
MCM Architecture Limited, 71 Hopton Street, London SE19LR, UK, T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

KEY PLAN - AREA OF WORK



PROJECT NUMBER	112162.01
SCALE	N/A
DATE	08.08.12
PROJECT MANAGER	OR
PROJECT ARCHITECT	MT
DRAWN BY	MT
CHECKED BY	NK
CADD FILE	112162.01-A-001GN-NYC-1968-new.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

ABBREVIATIONS, CODE IN

1.0 GENERAL REQUIREMENTS

1.1 GENERAL CONDITIONS

1.1.1 SUMMARY

A. ALL WORK SHALL COMPLY WITH THE REGULATIONS OF THE GOVERNMENTAL AUTHORITIES HAVING JURISDICTION. THE SPECIFICATIONS SHALL BE SUPPLEMENTAL TO ALL LAWS AND CODES OF GOVERNMENTAL REGULATING BODIES RELATING TO BUILDINGS, AND ALL APPLICABLE REQUIREMENTS SPECIFIED IN THESE REGULATIONS SHALL BE FOLLOWED AS THOUGH SPECIFICALLY NOTED IN THE SPECIFICATIONS OR DRAWINGS. THIS SHALL NOT HOWEVER, BE CONSTRUED TO MEAN THAT ANY REQUIREMENTS SET FORTH IN THE SPECIFICATIONS CAN BE MODIFIED BECAUSE THEY ARE NOT SPECIFICALLY NOTED BY SUCH CODES OR LAWS.

B. ALL TMA DRAWINGS AND CONSTRUCTION NOTES ARE COMPLIMENTARY, AND WHAT IS CALLED FOR BY ONE WILL BE BINDING AS IF CALLED FOR BY ALL.

C. CONTRACTOR SHALL NOTIFY TMA IMMEDIATELY IF HE CANNOT COMPLY WITH ALL NOTES CALLED FOR ON THIS SHEET AND ON ALL OTHER TMA DRAWINGS.

D. THE GENERAL CONTRACTOR SHALL NOTIFY TMA OF ANY DISCREPANCIES BETWEEN THE DRAWINGS, THESE NOTES, AND FIELD CONDITIONS BEFORE SUBMITTING A PROPOSAL OR COMMENCING ANY WORK AND REQUEST CLARIFICATION.

E. BEFORE SUBMITTING A PROPOSAL, ALL CONTRACTORS SHALL VISIT THE PREMISES, FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND SATISFY THEMSELVES AS TO THE NATURE AND THE SCOPE OF THE WORK AND THE DIFFICULTIES THAT ATTEND ITS EXECUTION.

F. THE SUBMISSION OF A BID PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIAL OR FOR DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

1. PRICING AND OR BID PROPOSALS SUBMISSIONS SHALL BE IN A COMPLETE BREAKDOWN FORM, LISTING WORK NOT ONLY BY VARIOUS TRADES, BUT ALSO WITH MAJOR SUB CATEGORIES WITHIN EACH TRADE ITEMIZED.

2. PROOF OF INSURANCE COVERING IN AMOUNTS REQUIRED BY LOCAL LAW, AS STIPULATED BY THE BUILDING, AND AS REQUIRED BY TENANT/OWNER. PROOF OF INSURANCE SHALL BE SUBMITTED TO TENANT/OWNER AND THE BUILDING PRIOR TO CONSTRUCTION. CERTIFICATES, ETC., SHALL BE AVAILABLE AT JOB SITE FOR EXAMINATION ON DEMAND.

3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL CITY AND STATE FILING, PERMITS, APPROVALS, REQUIRED INSPECTIONS AND SIGN-OFFS WITH THE AUTHORITY HAVING JURISDICTION (AHJ) AND FOR PAYMENT OF ALL REQUIRED FEES BY THE ABOVE "AHJ" TO BE INCLUDED IN PRICING AND OR BID PROPOSALS INCLUDING IF REQUIRED THE USE OF BUILDING DEPARTMENT EXPEDITER.

G. THE GENERAL CONTRACTOR SHALL INCLUDE IN HIS ESTIMATE ALL COSTS (INCLUDING OVERTIME WORK) FOR REMOVAL, NEW INSTALLATION AND REINSTALLATION WORK FOR ANY PLUMBING, CEILING (TAKE DOWN AND REINSTALLATION), ELECTRICAL, TELEPHONE COMMUNICATION EQUIPMENT OR HVAC WORK ON FLOOR, ABOVE OR BELOW TENANT SPACE TO COMPLETE WORK ON FLOOR BEING RENOVATED.

H. THE GENERAL CONTRACTOR AGREES TO PAY ALL VERTICAL AND HORIZONTAL TRANSPORTATION CHARGES ON ALL HIS MATERIAL OR EQUIPMENT TO THE POINT OF USE, AND SHALL BE RESPONSIBLE FOR ALL UNLOADING, CHECKING AND STORING OF SAME IN CONNECTION WITH THIS CONTRACT.

I. THE GENERAL CONTRACTOR SHALL, AT THE TENANT'S DISCRETION, UTILIZE THE A.I.A. STANDARD FORM FOR REQUESTS FOR PAYMENT AND FOLLOW ALL GUIDELINES ASSOCIATED THEREWITH.

J. ALL CORRESPONDENCE TO THE TENANT,, BUILDING OWNER OR TO TMA SHALL BE IN WRITING FORWARDED IN COPY TO THE OTHER PARTY.

K. THE GENERAL CONTRACTOR AND OR CONSTRUCTION MANAGER HIS SUBCONTRACTOR, AND ANY OTHER CONTRACTOR INVOLVED IN THIS PROJECT SHALL TAKE NOTE THAT ANY COST CAUSED BY DEFECTIVE OR ILL-TIMED WORK, AS A RESULT OF, BUT NOT LIMITED TO INFERIOR WORKMANSHIP OR MATERIALS, IMPROPER SCHEDULING OR DELINQUENT ORDERING SHALL BE BORNE BY THE PARTY RESPONSIBLE THEREFORE.

1.1.2 RELATED DOCUMENTS

A. THE GENERAL CONDITIONS OF THE CONTRACT FOR THE CONSTRUCTION OF BUILDINGS, STANDARD FORM OF THE AMERICAN INSTITUTE OF ARCHITECTS, CURRENT EDITION, SHALL APPLY TO ALL WORK IN THIS CONTRACT, EXCEPT AS SPECIFICALLY MODIFIED UNDER CONTRACT, EXCEPT AS SPECIFICALLY MODIFIED UNDER SUPPLEMENTARY CONDITIONS AND/OR BY AGREEMENT. WHEREVER THE TERM "ARCHITECT" IS USED IN THIS FORM IT SHALL BE UNDERSTOOD THAT THE TERM "DESIGNER" SHALL BE SUBSTITUTED. WHEREVER THE TERM "CONTRACTOR" IS USED IT SHALL BE UNDERSTOOD THAT THE TERM "GENERAL CONTRACTOR" OR "CONSTRUCTION MANAGER" SHALL BE SUBSTITUTED.

1.1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. AS PER CONTRACT DOCUMENTS.

1.1.4 SEQUENCE

A. IF ANY MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE UNCOVERED DURING REMOVAL OR CONSTRUCTION WORK, NOTIFY THE OWNER IN WRITING. THE BUILDING OWNER IS RESPONSIBLE TO DETERMINE THE EXTENT OF THE AFFECTED AREA, AND ARRANGE FOR IT TO BE SEALED OFF UNTIL INVESTIGATION, AND ASBESTOS REMOVAL IF NECESSARY, HAS BEEN COMPLETED IN COMPLIANCE WITH EPA REQUIREMENTS. WORK IN OTHER AREAS, DETERMINED BY THE OWNER TO BE ASBESTOS-FREE, SHALL CONTINUE WHILE THIS IS BEING DONE. INVESTIGATION AND ABATEMENT OF ASBESTOS WILL BE DONE UNDER A SEPARATE CONTRACT BY THE OWNER, AND IS NOT INCLUDED IN WORK OF THIS CONTRACT.

B. THE GENERAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF THE TENANT'S CONTRACTOR(S). PROVIDE ON-SITE FACILITIES FOR THE TENANT'S CONTRACTORS ENGAGED BY THE OWNER.

1.1.5 DRAWINGS AND SPECIFICATIONS

A. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.

B. THE GENERAL CONTRACTOR UPON ACCEPTANCE AND APPROVAL OF THE DRAWINGS ASSUMES FULL RESPONSIBILITY FOR THE CONSTRUCTION. MATERIALS AND WORKMANSHIP OF THE WORK DESCRIBED IN THESE NOTES AND DRAWINGS, AND HE WILL BE EXPECTED TO COMPLY WITH THE SPIRIT AS WELL AS THE LETTER IN WHICH THEY WERE WRITTEN.

1.1.6 CONTRACTOR USES OF PREMISES

A. LANDLORD/BUILDING OWNER REQUIREMENTS FOR ALL ALTERATIONS SHALL APPLY TO ALL WORK AS REQUIRED. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO FAMILIARIZE HIMSELF WITH THEM.

B. ALL CONTRACTORS SHALL CONTACT THE BUILDING MANAGEMENT TO DETERMINE THE RULES OF THE BUILDING OWNER FOR CONSTRUCTION, TO DETERMINE WHEN AND HOW DELIVERIES CAN BE MADE, WHAT PHASES OF CONSTRUCTION CAN BE DONE ON REGULAR OR OVERTIME, AND IN GENERAL, ANY SPECIAL BUILDING REQUIREMENTS WHICH WILL AFFECT THEIR WORK. (IF OVER-TIME WORK IS REQUIRED BY ANY TRADE, APPROVAL MUST BE OBTAINED PRIOR TO THE EXECUTION OF ANY WORK, INCLUDING COST). THE GENERAL INTENT IS THAT MOST CONSTRUCTION SHALL BE DONE ON REGULAR TIME.

C. EACH CONTRACTOR SHALL MAKE ALL REQUIRED ARRANGEMENTS FOR DELIVERY OF EQUIPMENT AND/OR MATERIALS. IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO CHECK THE RULES AND REGULATIONS GOVERNING WORK ON THE PREMISES, INCLUDING THE FOLLOWING:

1. DATE AND TIME OF DELIVERY SHALL BE ESTABLISHED IN CONJUNCTION WITH THE PERSON HAVING JURISDICTION OVER THE PREMISES (OVERTIME CHARGES AND/OR ANY NECESSARY EXPENSES SHALL BE PAID BY CONTRACTOR REQUIRING SERVICES).

2. BUILDING CONDITIONS INCLUDING SIZE AND LOADING CAPACITY OF ELEVATORS, SIZE OF DOORWAYS, CORRIDORS, WINDOW OPENINGS, ETC. SHALL BE CHECKED FOR ITEMS BEING DELIVERED BY THE CONTRACTOR REQUESTING DELIVERY.

3. ALL CHARGES INVOLVING THE INSTALLATION AND/OR OPERATION OF A HOIST SYSTEM IF REQUIRED, SHALL BE BORNE BY THE CONTRACTOR USING THE SYSTEM. CHARGES INVOLVING THE TEMPORARY REMOVAL AND REINSTALLATION OF WINDOW SASH AND/OR FIXED PANELS REQUIRED FOR DELIVERY SHALL BE BORNE BY THE CONTRACTOR.

4. ALL SPECIAL "BUILDING STANDARD" METHODS OF CONSTRUCTION SHALL BE CONFIRMED BY THE CONTRACTOR.

D. THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS, BOTH FROM HIS OWN AND ALL OTHER SUBCONTRACTORS' EMPLOYEES, INCLUDING THAT RUBBISH WHICH IS A BY-PRODUCT OF OTHER TENANT CONTRACTORS.

E. THE CONTRACTOR TO PROVIDE ALL NECESSARY PROTECTION FOR FLOORS, WALLS, ETC., AND FOR EXISTING ITEMS TO REMAIN. THE GENERAL CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE INCURRED TO THE SAME BY THE TRADES AND WILL BE OBLIGATED TO REPLACE OR RESTORE TO ITS ORIGINAL CONDITION AS DETERMINED BY TMA.

F. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION AND SECURITY FOR HIS WORK UNTIL TURNED OVER TO THE CLIENT.

G. ALL REQUIRED EXITS, WAY OF APPROACH THERETO, AND WAY OF TRAVEL FROM THE EXIT INTO THE STREET SHALL CONTINUOUSLY BE MAINTAINED FREE FROM ALL OBSTRUCTIONS AND IMPEDIMENTS FOR UNOBSTRUCTED EGRESS IN THE CASE OF FIRE OR OTHER EMERGENCY, FIRE EXTINGUISHERS MUST BE AVAILABLE ON THE SITE DURING CONSTRUCTION.

H. DURING THE ENTIRE PERIOD OF DEMOLITION AND CONSTRUCTION, ALL EXISTING EXITS, EXIT LIGHTING, FIRE PROTECTIVE DEVICES AND ALARMS SHALL BE CONSPICUOUSLY POSTED.

I. DURING THE ENTIRE PERIOD OF CONSTRUCTION, THE TELEPHONE NUMBERS OF THE CLOSEST AVAILABLE PHYSICIANS, HOSPITALS, OR AMBULANCES SHALL BE CONSPICUOUSLY POSTED.

J. ONE TOILET FOR EACH SEX SHALL BE UTILIZED FOR CONSTRUCTION PERSONNEL AND ALL OTHERS LOCKED FOR THE PERIOD OF CONSTRUCTION. THE GENERAL CONTRACTOR TO PROVIDE A THOROUGH CLEANING OF ALL TOILET FACILITIES PRIOR TO RELEASING PREMISES TO THE TENANT.

1.1.7 LABOR AND MATERIALS

A. PROVIDE AND PAY FOR LABOR, MATERIALS, EQUIPMENT, TOOLS, UTILITIES, TRANSPORTATION, HOISTING, ELEVATOR CHARGES, BUILDING MECHANICAL AND ELECTRICAL SHUTDOWNS, TESTING OF NEW OR ALTERED SYSTEMS, FIRE WATCH FOR WELDING, STANDBY BUILDING ENGINEERING SERVICES, SPRINKLER TIE-INS AND OTHER FACILITIES AND SERVICES NECESSARY FOR THE EXECUTIVE AND COMPLETION OF THE WORK.

B. UNLESS OTHERWISE NOTED, ALL MATERIAL, EQUIPMENT, ETC. SHALL BE FURNISHED AND INSTALLED BY THE GENERAL CONTRACTOR.

C. GENERAL PRODUCT REQUIREMENTS: PROVIDE PRODUCTS THAT COMPLY WITH THE CONTRACT DOCUMENTS, THAT ARE UNDAMAGED AND,UNLESS OTHERWISE INDICATED, THAT ARE NEW AT TIME OF INSTALLATION.

D. THE USE OF THE TERM "APPROVED EQUAL" IN CONNECTION WITH ANY ITEM SPECIFIED, IS INTENDED TO MEAN, THAT SUCH SHALL BE OF EQUAL QUALITY, FINISH AND MATERIAL. THE SUBSTITUTIONS SHALL BE SUBMITTED, IN WRITTEN FORM, TO TMA FOR APPROVAL.

E. THE TERMS "PROVIDE", OR "PROVIDED" IN CONNECTION WITH ANY ITEM SPECIFIED, IS INTENDED TO MEAN, THAT SUCH SHALL BE FURNISHED, INSTALLED, AND CONNECTED WHERE SO REQUIRED.

F. MOVE IN AND OCCUPANCY LABOR REQUIREMENTS: THE GENERAL CONTRACTOR AND OR CONSTRUCTION MANAGER SHALL PROVIDE THE COST FOR THE FOLLOWING ADDITIONAL LABOR BROKEN DOWN BY TRADE IN THE PRICING AND OR BID PROPOSALS AS AN "ADD ALTERNATE" A AND IT SHOULD BE INDICATED AS A SEPARATE LINE ITEM.

1. PROCEED WITH THE WORK ONLY IF THE "ADD ALTERNATE" IS ACCEPTED BY TENANT/OWNER AS PART OF THE BASE PRICING/BID PROPOSAL AND AS DIRECTED BY TENANT/OWNER TO FACILITATE MOVE IN AND OCCUPANCY.

   a. ELECTRICIAN: PROVIDE FOR TWO MAN-DAYS, FRIDAY NIGHT AND SATURDAY, ON "STANDBY" TO COORDINATE TELEPHONE AND OTHER EQUIPMENT TESTING AND INSTALLATION OF SYSTEMS FURNITURE.

1.1.8 APPLICABLE CODES

A. CONTRACTOR SHALL SECURE AND PAY FOR THE BUILDING PERMIT AND ALL OTHER PERMITS AND GOVERNMENTAL FEES LICENSES, CONTROLLED INSPECTIONS, SIGNOFFS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK WHICH ARE CUSTOMARILY SECURED AFTER EXECUTION OF THE CONTRACT AND WHICH ARE LEGALLY REQUIRED.

B. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK AND SHALL NOTIFY THE ARCHITECT IN WRITING IF ANY PART OF THE CONTRACT DOCUMENTS IS OBSERVED TO BE AT VARIANCE WITH CODES.

C. THE CONTRACTOR SHALL CONFIRM THAT "VOLATILE ORGANIC COMPOUND" CONTENT OF COATINGS APPLIED UNDER ALL SECTIONS OF THESE SPECIFICATIONS IS LIMITED TO THE PERCENTAGE PRESCRIBED FOR FACTORY OR FOR FIELD APPLICATION BY THE AUTHORITIES HAVING JURISDICTION IN THOSE AREAS.

1.1.9 CONSTRUCTION

A. PRIOR TO BEGINNING ANY WORK, THE GENERAL CONTRACTOR SHALL FURNISH A CONSTRUCTION SCHEDULE SHOWING THE CHRONOLOGICAL PHASES OF HIS WORK, AND ALL RELATED WORK FOR THE COMPLETION OF THE PROJECT. THIS SCHEDULE SHALL INDICATE ALL ORDERING LEAD TIME, LENGTH OF TIME FOR EACH PHASE, ITS START AND COMPLETION, WITH A PROJECTED COMPLETION DATE.

B. THE CONTRACTOR SHALL SUPPLY SAMPLES AND/OR CUTS OF ALL MATERIALS, FIXTURES AND EQUIPMENT CALLED FOR ON TMA DRAWINGS, (I.E., LIGHT FIXTURES, HARDWARE, ETC.) FOR APPROVAL.

C. CONTRACTORS SHALL ASSUME RESPONSIBILITY FOR DISCREPANCIES IN THEIR DRAWINGS. THE CONTRACTOR SHALL PROVIDE TEMPORARY UTILITY SERVICES (LIGHTING, HEATING, POWER, WATER, SECURITY, TELEPHONE, ETC.) INCLUDING A SCHEDULE INDICATING IMPLEMENTATION AND TERMINATION OF EACH TEMPORARY SERVICE.

D. ESTABLISH REFERENCE LINE AND BENCHMARKS FOR USE BY ALL TRADES IN SETTING OUT WORK AND DETERMINING ELEVATIONS.

1.1.10 RECORD DOCUMENT SUBMITTALS

A. RECORD DRAWINGS: MAINTAIN A CLEAN, UNDAMAGED SET OF REPRODUCIBLE PRINTS OF A. CONTRACT DRAWINGS AND SHOP DRAWINGS. MARK THE SET TO SHOW THE ACTUAL INSTALLATION WHERE THE INSTALLATION VARIES SUBSTANTIALLY FROM THE WORK AS ORIGINALLY SHOWN. MARK WHICH DRAWING IS MOST CAPABLE OF SHOWING CONDITIONS FULLY AND ACCURATELY. WHERE SHOP DRAWINGS ARE USED, RECORD A CROSS-REFERENCE AT THE CORRESPONDING LOCATION ON THE CONTRACT DRAWINGS. GIVE PARTICULAR ATTENTION TO CONCEALED ELEMENTS THAT WOULD BE DIFFICULT TO MEASURE AND RECORD AT A LATER DATE.

1. MARK RECORD SETS WITH RED ERASABLE PENCIL. USE OTHER COLORS TO DISTINGUISH BETWEEN VARIATIONS IN SEPARATE CATEGORIES OF THE WORK.

2. MARK NEW INFORMATION THAT IS IMPORTANT TO THE OWNER BUT WAS NOT SHOWN ON CONTRACT DRAWINGS OR SHOP DRAWINGS, INCLUDING EQUIPMENT, DUCTWORK, LIGHTING AND ELECTRICAL CIRCUITRY WORK (INCLUDING NUMBERS, CIRCUIT PANELS AND OTHER UTILITY SERVICE ITEMS.

3. NOTE RELATED CHANGE-ORDER NUMBERS WHERE APPLICABLE.

4. ORGANIZE RECORD DRAWING SHEETS INTO MANAGEABLE SETS. BIND SETS WITH DURABLE- PAPER COVER SHEETS; PRINT SUITABLE TITLES, DATES, AND OTHER IDENTIFICATION ON THE COVER OF EACH SET.

1.1.11 TEMPORARY FACILITIES

A. GENERAL: COST OR USE CHARGES FOR TEMPORARY FACILITIES ARE NOT CHARGEABLE TO OWNER OR ARCHITECT AND SHALL BE INCLUDED IN THE CONTRACT SUM. ALLOW OTHER ENTITIES TO USE TEMPORARY SERVICES AND FACILITIES WITHOUT COST, INCLUDING, BUT NOT LIMITED TO, OWNER'S CONSTRUCTION FORCES, OCCUPANTS OF PROJECT, ARCHITECT, TESTING AND INSPECTING AGENCIES AND PERSONNEL OF AUTHORITIES HAVING JURISDICTION.

1. ERECTED TEMPORARY, PARTITIONS, ENCLOSURES AND BARRICADES SHALL NOT UNDERMINE OR REDUCE THE LIFE SAFETY OF THE OWNER/TENANT OR BUILDING OCCUPANT OR INTERRUPT THE USE OF THE SPACE, FLOOR OR BUILDING. COMPLY WITH REQUIREMENTS OF BUILDING CODES AND OSHA REGULATIONS LATEST CHAPTERS RELATING TO THE PROTECTIONS AND SAFEGUARDS DURING CONSTRUCTION OPERATIONS AS PART OF THIS PROJECT.

2. TEMPORARY PARTITIONS, ENCLOSURES AND BARRICADES DELINEATED ON THE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DEMONSTRATE THE ARCHITECT UNDERSTANDING OF OWNER/TENANT SPACE, FLOOR OR BUILDING OCCUPANCY.

   a. THE CONTRACTOR SHALL SCHEDULE PRE-CONSTRUCTION MEETING WITH THE OWNER/TENANT, OWNER'S REPRESENTATIVE, ARCHITECT AND ANY OTHER PARTY IS IMPACTED BY THE TEMPORARY FACILITIES.

   b. ITEMS COVERED BY THE PRE-CONSTRUCTION MEETING INCLUDES, ASSEMBLY TYPE, LOCATION, FILING WITH AHJ IF REQUIRED, FIRE RATING, LIFE SAFETY TO PROPERTY, PERSONNEL AND OCCUPANCY AND PHASING.

   c. MINUTES OF THE PRE-CONSTRUCTION MEETING SHALL BE BY THE CONTRACTOR AND DOCUMENT ACCEPTED TEMPORARY FACILITIES ITEMS COVERED IN ITEM "b" AND SHALL BE DISTRIBUTED TO ALL PARTIES.

   d. ARCHITECT BASED ON THE PRE-CONSTRUCTION MEETING MINUTES, WILL ISSUE FIELD DIRECTIVE IF LOCATION TEMPORARY PARTITIONS ARE DIFFERENT THAN SHOWN ON THE BID CONSTRUCTION DOCUMENTS. DETAILED CONSTRUCTION DRAWINGS OF BARRICADES, TEMPORARY FACILITIES AND ENCLOSURES OTHER THAN TEMPORARY PARTITIONS, INCLUDING ANY FILING AND PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

B. TEMPORARY PARTITIONS: ERECT AND MAINTAIN DUSTPROOF PARTITIONS AND TEMPORARY ENCLOSURES TO LIMIT DUST AND DIRT MIGRATION AND TO SEPARATE AREAS OCCUPIED BY OWNER/TENANT FROM FUMES AND NOISE.

C. CONSTRUCT DUSTPROOF FLOOR-TO-CEILING PARTITIONS OF NOT LESS THAN 2 1/2-INCHE METAL STUDS OF 20 GAGE THICKNESS PLACED 16 INCHES ON CENTER OR METAL STUDS SIZE USED ON THE PROJECT. METAL STUDS DEFLECTION CRITERIA SHALL BE L/240 WITH 13 FEET AS THE MAXIMUM SPAN ALLOWED FOR 2 1/2-INCHES STUDS. INSTALL 5/8-INCH GYPSUM WALLBOARD WITH JOINTS TAPED ON OCCUPIED SIDE, AND 1/2-INCHES FIRE-RETARDANT PLYWOOD ON CONSTRUCTION SIDE. FOR SPANS MORE THAN 13 FEET LIMITING HEIGHT OF METAL STUDS SHALL BE PER ASTM C754AND PER MANUFACTURER WRITTEN SPECIFICATIONS.

2. AT CONTRACTORS OPTION TO SUBSTITUTE 1/2-INCHE FIRE-RETARDANT PLYWOOD WITH 5/8-INCHES GYPSUM WALL BOARD ON CONSTRUCTION SIDE.
3. TEMPORARY PARTITION CAN REMAIN PART OF THE PROJECT IF CONSTRUCTED AND LOCATED TO MEET FINAL PARTITION FINISH LEVEL AND ASSEMBLY INDICATED ON THE CONSTRUCTION DRAWINGS AND IS ACCEPTABLE TO THE ARCHITECT UPON INSPECTION PRIOR TO APPLICATION OF FINISHED MATERIALS.
4. WHERE DESIGN INTENT DOCUMENTED INDICATE NO CEILINGS, TEMPORARY PARTITION TO BE ERECTED FROM FLOOR-TO UNDERSIDE OF SLAB ABOVE WITH SAME MATERIALS DESCRIBED IN ITEM 1 AND OR 1a ABOVE.

D. WHEN PORTION OF THE FLOOR IS UNOCCUPIED, PUBLIC CORRIDORS AND PATH OF ACCESS TO STAIRS OF OCCUPANTS IN OCCUPIED AREAS OF THE FLOOR SHALL BE SEPARATED FROM THAT UNOCCUPIED PORTIONS OF THE FLOOR BY A TEMPORARY PARTITIONS WITH A MINIMUM OF ONE HOUR FIRE RESISTIVE CONSTRUCTION FLOOR TO UNDERSIDE OF SLAB ABOVE AS PER BUILDING CODE. GYPSUM WALLBOARD FOR FIRE RESISTIVE PARTITION ASSEMBLIES SHALL BE 5/8-INCHES TYPE "X". THE ENTIRE PARTITION ASSEMBLY SHALL CARRY TESTED UL LABEL AND DESIGN NUMBER.

1. UNOCCUPIED PORTION OF A FLOOR IS DEFINED AS UNFINISHED BARE CONSTRUCTION WITH NO HUMAN OCCUPANCY OR USE.

E. SEAL JOINTS AND PERIMETER. EQUIP PARTITIONS WITH DUSTPROOF DOORS AND SECURITY LOCKS.

F. PROTECT AIR-HANDLING EQUIPMENT AND DO NOT UNDERMINE THE PERFORMANCE OF EXISTING AIR HVAC SYSTEM.

G. PROVIDE WALK-OFF MATS AT EACH ENTRANCE THROUGH TEMPORARY PARTITION.

H. WATER SERVICE: USE WATER FROM OWNER'S EXISTING WATER SYSTEM WITHOUT METERING AND WITHOUT PAYMENT OF USE CHARGES.

I. ELECTRIC POWER SERVICE: USE ELECTRIC POWER FROM OWNER'S EXISTING SYSTEM WITH METERING AND WITH PAYMENT OF USE CHARGES. CHARGES OF ELECTRIC USE SAHLL BE BORN BY THE TENANT FOR THE DURATION OF CONSTRUCTION OPERATIONS

J. FIRE EXTINGUISHERS: HAND CARRIED, PORTABLE, UL RATED. PROVIDE CLASS AND EXTINGUISHING AGENT AS INDICATED OR A COMBINATION OF EXTINGUISHERS OF NFPA-RECOMMENDED CLASSES FOR EXPOSURES.

1. DEVELOP AND SUPERVISE AN OVERALL FIRE-PREVENTION AND FIRST-AID FIRE-PROTECTION PROGRAM FOR PERSONNEL AT PROJECT SITE. REVIEW NEEDS WITH LOCAL FIRE DEPARTMENT AND ESTABLISH PROCEDURES TO BE FOLLOWED. INSTRUCT PERSONNEL IN METHODS AND PROCEDURES. POST WARNINGS AND INFORMATION.
2. LOCATE FACILITIES WHERE THEY WILL SERVE PROJECT ADEQUATELY AND RESULT IN MINIMUM INTERFERENCE WITH PERFORMANCE OF THE WORK. RELOCATE AND MODIFY FACILITIES AS REQUIRED.

K. SANITARY FACILITIES: COMPLY WITH LOCAL REGULATIONS AND HEALTH CODES FOR TYPE, NUMBER, LOCATION, OPERATION, AND MAINTENANCE OF FIXTURES AND FACILITIES.

1. DISPOSABLE SUPPLIES: PROVIDE TOILET TISSUE, PAPER TOWELS, PAPER CUPS, AND SIMILAR DISPOSABLE MATERIALS FOR EACH FACILITY. MAINTAIN ADEQUATE SUPPLY. PROVIDE COVERED WASTE CONTAINERS FOR DISPOSAL OF USED MATERIAL.

2. TOILETS: OBTAIN OWNER'S APROVAL FOR USE OF OWNER'S EXISTING TOILET FACILITIES. EXISTING FACILITIES SHALL BE CLEANED AND MAINTAINED IN A CONDITION ACCEPTABLE TO OWNER. AT SUBSTANTIAL COMPLETION, RESTORE THESE FACILITIES TO CONDITION EXISTING BEFORE INITIAL USE.

L. DRINKING-WATER FACILITIES: PROVIDE BOTTLED-WATER, DRINKING-WATER UNITS.

M. HEATING AND COOLING: PROVIDE TEMPORARY HEATING AND COOLING REQUIRED BY CONSTRUCTION ACTIVITIES FOR CURING OR DRYING OF COMPLETED INSTALLATIONS OR FOR PROTECTING INSTALLED CONSTRUCTION FROM ADVERSE EFFECTS OF LOW TEMPERATURES OR HIGH HUMIDITY. SELECT EQUIPMENT FROM THAT SPECIFIED THAT WILL NOT HAVE A HARMFUL EFFECT ON COMPLETED INSTALLATIONS OR ELEMENTS BEING INSTALLED.

N. MAINTAIN A MINIMUM TEMPERATURE OF 50 DEG F IN PERMANENTLY ENCLOSED PORTIONS OF BUILDING FOR NORMAL CONSTRUCTION ACTIVITIES, AND 65 DEG F FOR FINISHING ACTIVITIES AND AREAS WHERE FINISHED WORK HAS BEEN INSTALLED.

O. VENTILATION AND HUMIDITY CONTROL: PROVIDE TEMPORARY VENTILATION REQUIRED BY CONSTRUCTION ACTIVITIES FOR CURING OR DRYING OF COMPLETED INSTALLATIONS OR FOR PROTECTING INSTALLED CONSTRUCTION FROM ADVERSE EFFECTS OF HIGH HUMIDITY. SELECT EQUIPMENT FROM THAT SPECIFIED THAT WILL NOT HAVE A HARMFUL EFFECT ON COMPLETED INSTALLATIONS OR ELEMENTS BEING INSTALLED. COORDINATE VENTILATION REQUIREMENTS TO PRODUCE AMBIENT CONDITION REQUIRED AND MINIMIZE ENERGY CONSUMPTION.

P. LIGHTING: PROVIDE TEMPORARY LIGHTING WITH LOCAL SWITCHING THAT PROVIDES ADEQUATE ILLUMINATION FOR CONSTRUCTION OPERATIONS AND TRAFFIC CONDITIONS. INSTALL AND OPERATE TEMPORARY LIGHTING THAT FULFILLS SECURITY AND PROTECTION REQUIREMENTS WITHOUT OPERATING ENTIRE SYSTEM.

1. PROVIDE ONE 100-W INCANDESCENT LAMP PER 500 SQ. FT. UNIFORMLY DISTRIBUTED, FOR GENERAL LIGHTING, OR EQUIVALENT ILLUMINATION.

2. PROVIDE ONE 100-W INCANDESCENT LAMP EVERY 50 FEET IN TRAFFIC AREAS.

3. PROVIDE ONE 100-W INCANDESCENT LAMP PER STORY IN STAIRWAYS AND LADDER RUNS, LOCATED TO ILLUMINATE EACH LANDING AND FLIGHT.

Q. TELEPHONE SERVICE: PROVIDE TEMPORARY TELEPHONE SERVICE THROUGHOUT CONSTRUCTION PERIOD FOR COMMON-USE FACILITIES USED BY ALL PERSONNEL ENGAGED IN CONSTRUCTION ACTIVITIES. INSTALL SEPARATE TELEPHONE LINE FOR EACH FIELD OFFICE AND FIRST-AID STATION.

1. AT EACH TELEPHONE, POST A LIST OF IMPORTANT TELEPHONE NUMBERS, INCLUDING POLICE AND FIRE DEPARTMENTS, AMBULANCE SERVICE, CONTRACTOR'S HOME OFFICE, ARCHITECT'S OFFICE, ENGINEERS' OFFICES, OWNER'S OFFICE AND PRINCIPAL SUBCONTRACTORS' FIELD AND HOME OFFICES.

2. PROVIDE A PORTABLE CELLULAR TELEPHONE FOR SUPERINTENDENT'S USE IN MAKING AND RECEIVING TELEPHONE CALLS WHEN AWAY FROM FIELD OFFICE.

R. EXISTING ELEVATOR USAGE: USE OF OWNER'S EXISTING DESIGNATED ELEVATOR (S) WILL BE PERMITTED, AS LONG AS ELEVATOR (S) ARE CLEANED AND MAINTAINED IN A CONDITION ACCEPTABLE TO OWNER. AT SUBSTANTIAL COMPLETION, RESTORE ELEVATORS TO CONDITION EXISTING BEFORE INITIAL USE,

1. PROVIDE PROTECTIVE COVERINGS, BARRIERS, DEVICES, SIGNS, OR OTHER PROCEDURES TO PROTECT ELEVATOR CAR AND ENTRANCE DOORS AND FRAME. IF, DESPITE SUCH PROTECTION, ELEVATORS BECOME DAMAGED, ENGAGE ELEVATOR INSTALLER TO RESTORE DAMAGED WORK SO NO EVIDENCE REMAINS OF CORRECTION WORK. RETURN ITEMS THAT CANNOT BE REFINISHED IN FIELD TO THE SHOP, MAKE REQUIRED REPAIRS AND REFINISH ENTIRE UNIT, OR PROVIDE NEW UNITS AS REQUIRED.

S. EXISTING STAIR USAGE: USE OF OWNER'S EXISTING STAIRS WILL BE PERMITTED, AS LONG AS STAIRS ARE CLEANED AND MAINTAINED IN A CONDITION ACCEPTABLE TO OWNER. AT SUBSTANTIAL COMPLETION, RESTORE STAIRS TO CONDITION EXISTING BEFORE INITIAL USE.

1. DO NOT USE STAIRS FOR STORAGE OF ANY MATERIALS. PROVIDE PROTECTIVE COVERINGS, BARRIERS, DEVICES, SIGNS, OR OTHER PROCEDURES TO PROTECT STAIRS AND TO MAINTAIN MEANS OF EGRESS. IF, DESPITE SUCH PROTECTION, STAIRS BECOME DAMAGED, RESTORE DAMAGED AREAS SO NO EVIDENCE REMAINS OF CORRECTION WORK.

1.1.12 MAINTENANCE MANUAL

A. COORDINATE INFORMATION GIVING RECOMMENDATIONS FOR ROUTINE MAINTENANCE OF FINISHED SURFACES.

B. INCLUDE GUARANTEES AND WARRANTIES CALLED FOR AND OPERATING, SEQUENCE OF OPERATION AND MAINTENANCE INSTRUCTIONS SUBMITTED FOR EQUIPMENT.

C. SUBMIT TO OWNER IN DUPLICATE.

1.1.13 APPROVALS

A. THE CONTRACTOR, SUBCONTRACTORS AND TENANT'S CONTRACTORS SHALL SUBMIT CERTIFICATES UPON COMPLETION OF WORK, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. FIREPROOF OR FIRE RETARDANT WOOD TEST REPORT.
2. ELECTRICAL, PLUMBING, AIR CONDITIONING, AND SPRINKLER SIGNOFF ISSUED BY:
   a. DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY (OR APPROPRIATE AGENCY).
   b. BOARD OF FIRE UNDERWRITERS.

1.1.14 PERSONNEL SAFETY

A. THE CONTRACTOR SHALL SUPPLY AND MAINTAIN A CURRENT INVENTORY OF ALL CH

1.0 GENERAL REQUIREMENTS

1.2.3 SUBMITTAL PROCEDURES

A. COORDINATION: COORDINATE PREPARATION AND PROCESSING OF SUBMITTALS WITH PERFORMANCE OF CONSTRUCTION ACTIVITIES. TRANSMIT EACH SUBMITTAL SUFFICIENTLY IN ADVANCE OF PERFORMANCE OF RELATED CONSTRUCTION ACTIVITIES TO AVOID DELAY.

1. COORDINATE EACH SUBMITTAL WITH FABRICATION, PURCHASING, TESTING, DELIVERY, OTHER SUBMITTALS, AND RELATED ACTIVITIES THAT REQUIRE SEQUENTIAL ACTIVITY.

2. COORDINATE TRANSMITTAL OF DIFFERENT TYPES OF SUBMITTALS FOR RELATED ELEMENTS OF THE WORK SO PROCESSING WILL NOT BE DELAYED BY THE NEED TO REVIEW SUBMITTALS CONCURRENTLY FOR COORDINATION.

   a. THE ARCHITECT RESERVES THE RIGHT TO WITHHOLD ACTION ON A SUBMITTAL REQUIRING COORDINATION WITH OTHER SUBMITTALS UNTIL ALL RELATED SUBMITTALS ARE RECEIVED.

3. PROCESSING: TO AVOID THE NEED TO DELAY INSTALLATION AS A RESULT OF THE TIME REQUIRED TO PROCESS SUBMITTALS, ALLOW SUFFICIENT TIME FOR SUBMITTAL REVIEW, INCLUDING TIME FOR RESUBMITTALS.

   a. NO EXTENSION OF CONTRACT TIME WILL BE AUTHORIZED BECAUSE OF FAILURE TO TRANSMIT SUBMITTALS TO THE ARCHITECT SUFFICIENTLY IN ADVANCE OF THE WORK TO PERMIT PROCESSING.

B. SUBMITTAL TRANSMITTAL: PACKAGE EACH SUBMITTAL APPROPRIATELY FOR TRANSMITTAL AND HANDLING. TRANSMIT EACH SUBMITTAL FROM THE CONTRACTOR TO THE ARCHITECT USING A TRANSMITTAL FORM. THE ARCHITECT WILL NOT ACCEPT SUBMITTALS RECEIVED FROM SOURCES OTHER THAN THE CONTRACTOR.

C. ON THE TRANSMITTAL, RECORD RELEVANT INFORMATION AND REQUESTS FOR DATA. ON THE FORM, OR SEPARATE SHEET, RECORD DEVIATIONS FROM CONTRACT DOCUMENT REQUIREMENTS, INCLUDING VARIATIONS AND LIMITATIONS. INCLUDE CONTRACTOR'S CERTIFICATION THAT INFORMATION COMPLIES WITH CONTRACT DOCUMENT REQUIREMENTS.

1.2.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. BAR-CHART SCHEDULE: PREPARE A FULLY DEVELOPED, HORIZONTALBAR-CHART-TYPE, CONTRACTOR'S CONSTRUCTION SCHEDULE. SUBMIT WITHIN ONE WEEK AFTER THE DATE ESTABLISHED FOR "COMMENCEMENT OF THE WORK."

1. PROVIDE A SEPARATE TIME BAR FOR EACH SIGNIFICANT CONSTRUCTION ACTIVITY. PROVIDE A CONTINUOUS VERTICAL LINE TO IDENTIFY THE FIRST WORKING DAY OF EACH WEEK.
2. WITHIN EACH TIME BAR, INDICATE ESTIMATED COMPLETION PERCENTAGE IN 10 PERCENT INCREMENTS. AS WORK PROGRESSES, PLACE A CONTRASTING MARK IN EACH BAR TO INDICATE ACTUAL COMPLETION.
3. PREPARE THE SCHEDULE ON A SHEET, OR SERIES OF SHEETS, OF STABLE TRANSPARENCY OR OTHER REPRODUCIBLE MEDIA, OF SUFFICIENT WIDTH TO SHOW DATA FOR THE ENTIRE CONSTRUCTION PERIOD.
4. SECURE TIME COMMITMENTS FOR PERFORMING CRITICAL ELEMENTS OF THE WORK FROM PARTIES INVOLVED. COORDINATE EACH ELEMENT ON THE SCHEDULE WITH OTHER CONSTRUCTION ACTIVITIES. INCLUDE MINOR ELEMENTS INVOLVED IN THE SEQUENCE OF THE WORK. SHOW EACH ACTIVITY IN PROPER SEQUENCE. INDICATE GRAPHICALLY THE SEQUENCES NECESSARY FOR COMPLETION OF RELATED PORTIONS OF THE WORK.
5. COORDINATE THE CONTRACTOR'S CONSTRUCTION SCHEDULE WITH THE SCHEDULE OF VALUES, LIST OF SUBCONTRACTS, SUBMITTAL SCHEDULE, PROGRESS REPORTS, PAYMENT REQUESTS, AND OTHER SCHEDULES.
6. INDICATE COMPLETION IN ADVANCE OF THE DATE ESTABLISHED FOR SUBSTANTIAL COMPLETION. INDICATE SUBSTANTIAL COMPLETION ON THE SCHEDULE TO ALLOW TIME FOR THE ARCHITECT'S PROCEDURES NECESSARY FOR CERTIFICATION OF SUBSTANTIAL COMPLETION.

B. PHASING: ON THE SCHEDULE, SHOW HOW REQUIREMENTS FOR PHASED COMPLETION TO PERMIT WORK BY SEPARATE CONTRACTORS AND PARTIAL OCCUPANCY BY THE OWNER AFFECT THE SEQUENCE OF WORK.

C. WORK STAGES: INDICATE IMPORTANT STAGES OF CONSTRUCTION FOR EACH MAJOR PORTION OF THE WORK, INCLUDING SUBMITTAL REVIEW, TESTING, AND INSTALLATION.

D. AREA SEPARATIONS: PROVIDE A SEPARATE TIME BAR TO IDENTIFY EACH MAJOR CONSTRUCTION AREA FOR EACH MAJOR PORTION OF THE WORK. INDICATE WHERE EACH ELEMENT IN AN AREA MUST BE SEQUENCED OR INTEGRATED WITH OTHER ACTIVITIES.

E. DISTRIBUTION: FOLLOWING RESPONSE TO THE INITIAL SUBMITTAL, PRINT AND DISTRIBUTE COPIES TO THE ARCHITECT, OWNER, SUBCONTRACTORS, AND OTHER PARTIES REQUIRED TO COMPLY WITH SCHEDULED DATES. POST COPIES IN THE PROJECT MEETING ROOM AND TEMPORARY FIELD OFFICE.

F. WHEN REVISIONS ARE MADE, DISTRIBUTE TO THE SAME PARTIES AND POST IN THE SAME LOCATIONS. DELETE PARTIES FROM DISTRIBUTION WHEN THEY HAVE COMPLETED THEIR ASSIGNED PORTION OF THE WORK AND ARE NO LONGER INVOLVED IN CONSTRUCTION ACTIVITIES.

G. SCHEDULE UPDATING: REVISE THE SCHEDULE AFTER EACH MEETING, EVENT, OR ACTIVITY WHERE REVISIONS HAVE BEEN RECOGNIZED OR MADE. ISSUE THE UPDATED SCHEDULE CONCURRENTLY WITH THE REPORT OF EACH MEETING.

1.2.5 SUBMITTAL SCHEDULE

A. AFTER DEVELOPMENT AND ACCEPTANCE OF THE CONTRACTOR'S CONSTRUCTION SCHEDULE, PREPARE A COMPLETE SCHEDULE OF SUBMITTALS. SUBMIT THE SCHEDULE WITHIN ONE WEEK OF THE DATE REQUIRED FOR SUBMITTAL OF THE CONTRACTOR'S CONSTRUCTION SCHEDULE.

1. COORDINATE SUBMITTAL SCHEDULE WITH THE LIST OF SUBCONTRACTS, SCHEDULE OF VALUES, AND THE LIST OF PRODUCTS AS WELL AS THE CONTRACTOR'S CONSTRUCTION SCHEDULE.

B. DISTRIBUTION: FOLLOWING RESPONSE TO THE INITIAL SUBMITTAL, PRINT AND DISTRIBUTE COPIES TO THE ARCHITECT, OWNER, SUBCONTRACTORS, AND OTHER PARTIES REQUIRED TO COMPLY WITH SUBMITTAL DATES INDICATED. POST COPIES IN THE PROJECT MEETING ROOM AND FIELD OFFICE.

1. WHEN REVISIONS ARE MADE, DISTRIBUTE TO THE SAME PARTIES AND POST IN THE SAME LOCATIONS. DELETE PARTIES FROM DISTRIBUTION WHEN THEY HAVE COMPLETED THEIR ASSIGNED PORTION OF THE WORK AND ARE NO LONGER INVOLVED IN CONSTRUCTION ACTIVITIES.

C. SCHEDULE UPDATING: REVISE THE SCHEDULE AFTER EACH MEETING OR ACTIVITY WHERE REVISIONS HAVE BEEN RECOGNIZED OR MADE. ISSUE THE UPDATED SCHEDULE CONCURRENTLY WITH THE REPORT OF EACH MEETING.

1.2.6 SHOP DRAWINGS

A. SUBMIT NEWLY PREPARED INFORMATION DRAWN ACCURATELY TO SCALE. HIGHLIGHT, ENCIRCLE, OR OTHERWISE INDICATE DEVIATIONS FROM THE CONTRACT DOCUMENTS. DO NOT REPRODUCE CONTRACT DOCUMENTS OR COPY STANDARD INFORMATION AS THE BASIS OF SHOP DRAWINGS. STANDARD INFORMATION PREPARED WITHOUT SPECIFIC REFERENCE TO THE PROJECT IS NOT A SHOP DRAWING.

B. SHOP DRAWINGS INCLUDE FABRICATION AND INSTALLATION DRAWINGS, SETTING DIAGRAMS, SCHEDULES, PATTERNS, TEMPLATES AND SIMILAR DRAWINGS. INCLUDE THE FOLLOWING INFORMATION:

1. DIMENSIONS.
2. IDENTIFICATION OF PRODUCTS AND MATERIALS INCLUDED BY SHEET AND DETAIL NUMBER.
3. COMPLIANCE WITH SPECIFIED STANDARDS.
4. NOTATION OF COORDINATION REQUIREMENTS.
5. NOTATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT.

C. CEILING CAVITY: ALL WORK CONTAINED IN ALL CEILING CAVITIES SHALL BE SIMULTANEOUSLY REPRESENTED ON A SINGLE DRAWING TO CONFIRM THAT ALL TRADES "FIT" WITHIN THE ALLOTTED SPACE AND ALL CONFLICTS SHALL BE RESOLVED PRIOR TO SUBMITTING SHOP DRAWINGS FOR ARCHITECT/ENGINEER REVIEW AND PRIOR TO EXECUTING ANY WORK WITHIN THE CEILING CAVITY. SUBMIT COMPOSITE COORDINATION DRAWINGS NOT LESS THAN THE SCALE OF 1/2" = 1'-0". REPRODUCE AND DISTRIBUTE REVIEWED COPIES TO ALL CONCERNED PARTIES.

D. TECHNOLOGY ROOMS: COMPUTER INFORMATION ROOMS RAISED ACCESS FLOOR CAVITY: ALL WORK CONTAINED IN RAISED ACCESS FLOOR CAVITIES SHALL BE SIMULTANEOUSLY REPRESENTED ON A SINGLE DRAWING TO CONFIRM THAT ALL TRADES "FIT" WITHIN THE ALLOTTED SPACE AND ALL CONFLICTS SHALL BE RESOLVED PRIOR TO SUBMITTING SHOP DRAWINGS FOR ARCHITECT/ENGINEER REVIEW AND PRIOR TO EXECUTING ANY WORK WITHIN THE RAISED ACCESS FLOOR CAVITY. SUBMIT COMPOSITE COORDINATION DRAWINGS NOT LESS THAN THE SCALE OF 1/2" = 1'-0". REPRODUCE AND DISTRIBUTE REVIEWED COPIES TO ALL CONCERNED PARTIES.

E. SUBMITTAL: SUBMIT ONE CORRECTABLE, TRANSLUCENT, REPRODUCIBLE PRINT AND ONE BLUE- OR BLACK-LINE PRINT FOR THE ARCHITECT'S REVIEW. THE ARCHITECT WILL RETURN THE REPRODUCIBLE PRINT.

1. WHEN AGREED TO BY ALL PARTIES, ALTERNATE ELECTRONIC FORMAT SUBMITTAL AS A PDF FILE IS ACCEPTABLE IN ADDITION TO BLACK LINE PRINT. THE ARCHITECT WILL RETURN MARKED-UP SUBMITTAL IN ELECTRONIC PDF FORMAT ONLY.

F. ALL APPROVALS SHALL BE FOR DESIGN APPEARANCE ONLY. CONTACTOR(S) SHALL BE RESPONSIBLE FOR QUANTITIES, DIMENSIONS AND COMPLIANCE WITH CONTRACT DOCUMENTS, AND FOR INFORMATION PERTAINING TO FABRICATION PROCESS OR TECHNIQUES OF FIRST CLASS CONSTRUCTION AND FOR COORDINATION WITH OTHER TRADES.

1.2.7 PRODUCT DATA

A. COLLECT PRODUCT DATA INTO A SINGLE SUBMITTAL FOR EACH ELEMENT OF CONSTRUCTION OR SYSTEM. PRODUCT DATA INCLUDES PRINTED INFORMATION, SUCH AS MANUFACTURER'S INSTALLATION INSTRUCTIONS, CATALOG CUTS, STANDARD COLOR CHARTS, ROUGHING-IN DIAGRAMS AND TEMPLATES, STANDARD WIRING DIAGRAMS, AND PERFORMANCE CURVES.

1. MARK EACH COPY TO SHOW APPLICABLE CHOICES AND OPTIONS. WHERE PRINTED PRODUCT DATA INCLUDES INFORMATION ON SEVERAL PRODUCTS THAT ARE NOT REQUIRED, MARK COPIES TO INDICATE THE APPLICABLE INFORMATION. INCLUDE THE FOLLOWING INFORMATION:

   a. MANUFACTURER'S PRINTED RECOMMENDATIONS.
   b. COMPLIANCE WITH TRADE ASSOCIATION STANDARDS.
   c. COMPLIANCE WITH RECOGNIZED TESTING AGENCY STANDARDS.
   d. APPLICATION OF TESTING AGENCY LABELS AND SEALS.
   e. NOTATION OF DIMENSIONS VERIFIED BY FIELD MEASUREMENT.
   f. NOTATION OF COORDINATION REQUIREMENTS.

2. DO NOT SUBMIT PRODUCT DATA UNTIL COMPLIANCE WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS HAS BE CONFIRMED.

3. DISTRIBUTION: FURNISH COPIES OF FINAL SUBMITTAL TO INSTALLERS, SUBCONTRACTORS, SUPPLIERS, MANUFACTURERS, FABRICATORS, AND OTHERS REQUIRED FOR PERFORMANCE OF CONSTRUCTION ACTIVITIES. SHOW DISTRIBUTION ON TRANSMITTAL FORMS.

   a. DO NOT PROCEED WITH INSTALLATION UNTIL A COPY OF PRODUCT DATA IS IN THE INSTALLER'S POSSESSION.
   b. DO NOT PERMIT USE OF UNMARKED COPIES OF PRODUCT DATA IN CONNECTION WITH CONSTRUCTION.

1.2.8 SAMPLES

A. WHERE PRODUCTS ARE ACCOMPANIED BY THE TERM "MATCH SAMPLE,"SAMPLE TO BE MATCHED IS ARCHITECT'S.

B. SUBMIT FULL-SIZE, FULLY FABRICATED SAMPLES CURED AND FINISHED AS SPECIFIED AND PHYSICALLY IDENTICAL WITH THE MATERIAL OR PRODUCT PROPOSED. SAMPLES INCLUDE PARTIAL SECTIONS OF MANUFACTURED OR FABRICATED COMPONENTS, CUTS OR CONTAINERS OF MATERIALS, COLOR RANGE SETS, AND SWATCHES SHOWING COLOR, TEXTURE, AND PATTERN.

1. MOUNT OR DISPLAY SAMPLES IN THE MANNER TO FACILITATE REVIEW OF QUALITIES INDICATED. PREPARE SAMPLES TO MATCH THE ARCHITECT'S SAMPLE. INCLUDE THE FOLLOWING:

   a. SPECIFICATION SECTION NUMBER AND REFERENCE.
   b. GENERIC DESCRIPTION OF THE SAMPLE.
   c. SAMPLE SOURCE.
   d. PRODUCT NAME OR NAME OF THE MANUFACTURER.
   e. COMPLIANCE WITH RECOGNIZED STANDARDS.
   f. AVAILABILITY AND DELIVERY TIME.

2. SUBMIT SAMPLES FOR REVIEW OF SIZE, KIND, COLOR, PATTERN, AND TEXTURE. SUBMIT SAMPLES FOR A FINAL CHECK OF THESE CHARACTERISTICS WITH OTHER ELEMENTS AND A COMPARISON OF THESE CHARACTERISTICS BETWEEN THE FINAL SUBMITTAL AND THE ACTUAL COMPONENT AS DELIVERED AND INSTALLED.

   a. WHERE VARIATION IN COLOR, PATTERN, TEXTURE, OR OTHER CHARACTERISTIC IS INHERENT IN THE MATERIAL OR PRODUCT REPRESENTED, SUBMIT AT LEAST 3 MULTIPLE UNITS THAT SHOW APPROXIMATE LIMITS OF THE VARIATIONS.

   b. SAMPLES THAT ILLUSTRATE WORKMANSHIP, FABRICATION TECHNIQUES, DETAILS OF ASSEMBLY, CONNECTIONS, OPERATION, AND SIMILAR CONSTRUCTION CHARACTERISTICS.

   c. SAMPLES TO BE RETURNED TO THE CONTRACTOR FOR INCORPORATION IN THE WORK. SUCH SAMPLES MUST BE UNDAMAGED AT TIME OF USE. ON THE TRANSMITTAL, INDICATE SPECIAL REQUESTS REGARDING DISPOSITION OF SAMPLE SUBMITTALS.

   d. SAMPLES NOT INCORPORATED INTO THE WORK, OR OTHERWISE DESIGNATED AS THE OWNER'S PROPERTY, ARE THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE PRIOR TO SUBSTANTIAL COMPLETION.

3. PRELIMINARY SUBMITTALS: SUBMIT A FULL SET OF CHOICES WHERE SAMPLES ARE SUBMITTED FOR SELECTION OF COLOR, PATTERN, TEXTURE, OR SIMILAR CHARACTERISTICS FROM A RANGE OF STANDARD CHOICES.

   a. THE ARCHITECT WILL REVIEW AND RETURN PRELIMINARY SUBMITTALS WITH THE ARCHITECT'S NOTATION, INDICATION SELECTION AND OTHER ACTION.

4. SUBMITTALS: EXCEPT FOR SAMPLES ILLUSTRATING ASSEMBLY DETAILS, WORKMANSHIP, FABRICATION TECHNIQUES, CONNECTIONS, OPERATION, AND SIMILAR CHARACTERISTICS, SUBMIT 3 SETS. THE ARCHITECT WILL RETURN ONE SET MARKED WITH THE ACTION TAKEN.

5. MAINTAIN SETS OF SAMPLES, AS RETURNED, AT THE PROJECT SITE, FOR QUALITY COMPARISONS THROUGHOUT THE COURSE OF CONSTRUCTION.

   a. UNLESS NONCOMPLIANCE WITH CONTRACT DOCUMENT PROVISIONS IS OBSERVED, THE SUBMITTAL MAY SERVE AS THE FINAL SUBMITTAL.

   b. SAMPLE SETS MAY BE USED TO OBTAIN FINAL ACCEPTANCE OF THE CONSTRUCTION ASSOCIATED WITH EACH SET.

6. DISTRIBUTION OF SAMPLES: PREPARE AND DISTRIBUTE ADDITIONAL SETS TO SUBCONTRACTORS, MANUFACTURERS, FABRICATORS, SUPPLIERS, INSTALLERS, AND OTHERS AS REQUIRED FOR PERFORMANCE OF THE WORK. SHOW DISTRIBUTION ON TRANSMITTAL FORMS.

   a. FIELD SAMPLES ARE FULL-SIZE EXAMPLES ERECTED ON-SITE TO ILLUSTRATE FINISHES, COATINGS, OR FINISH MATERIALS AND TO ESTABLISH THE PROJECT STANDARD.

   b. COMPLY WITH SUBMITTAL REQUIREMENTS TO THE FULLEST EXTENT POSSIBLE. PROCESS TRANSMITTAL FORMS TO PROVIDE A RECORD OF ACTIVITY.

1.2.9 QUALITY ASSURANCE SUBMITTALS

A. SUBMIT QUALITY-CONTROL SUBMITTALS, INCLUDING DESIGN DATA, CERTIFICATIONS, MANUFACTURER'S INSTRUCTIONS, MANUFACTURER'S FIELD REPORTS, AND OTHER QUALITY-CONTROL SUBMITTALS AS REQUIRED UNDER OTHER SECTIONS OF THE SPECIFICATIONS.

B. CERTIFICATIONS: WHERE OTHER SECTIONS OF THE SPECIFICATIONS REQUIRE CERTIFICATION THAT A PRODUCT, MATERIAL, OR INSTALLATION COMPLIES WITH SPECIFIED REQUIREMENTS, SUBMIT A NOTARIZED CERTIFICATION FROM THE MANUFACTURER CERTIFYING COMPLIANCE WITH SPECIFIED REQUIREMENTS.

C. SIGNATURE: CERTIFICATION SHALL BE SIGNED BY AN OFFICER OF THE MANUFACTURER OR OTHER INDIVIDUAL AUTHORIZED TO SIGN DOCUMENTS ON BEHALF OF THE COMPANY.

D. INSPECTION AND TEST REPORTS: REQUIREMENTS FOR SUBMITTAL OF INSPECTION AND TEST REPORTS FROM INDEPENDENT TESTING AGENCIES ARE INDICATED ON SHEET G-001 UNDER "REGULATORY INFORMATION".

1.2.10 PRODUCT WARRANTIES

A. WARRANTIES: MANUFACTURER'S DISCLAIMERS AND LIMITATIONS ON PRODUCT WARRANTIES DO NOT RELIEVE CONTRACTOR OF OBLIGATIONS UNDER REQUIREMENTS OF THE CONTRACT DOCUMENTS.

1. MANUFACTURER'S WARRANTY: PREPRINTED WRITTEN WARRANTY PUBLISHED BY INDIVIDUAL MANUFACTURER FOR A PARTICULAR PRODUCT AND SPECIFICALLY ENDORSED BY MANUFACTURER TO OWNER FOR A PERIOD OF 1 YEAR.

B. SUBMITTAL TIME: SUBMIT WRITTEN WARRANTIES ON REQUEST OF ARCHITECT FOR DESIGNATED PORTIONS OF THE WORK WHERE COMMENCEMENT OF WARRANTIES OTHER THAN DATE OF SUBSTANTIAL COMPLETION IS INDICATED.

C. PARTIAL OCCUPANCY: SUBMIT PROPERLY EXECUTED WARRANTIES WITHIN 15 DAYS OF COMPLETION OF DESIGNATED PORTIONS OF THE WORK THAT ARE COMPLETED AND OCCUPIED OR USED BY OWNER DURING CONSTRUCTION PERIOD BY SEPARATE AGREEMENT WITH CONTRACTOR.

D. ORGANIZE WARRANTY DOCUMENTS INTO AN ORDERLY SEQUENCE BASED ON THE TABLE OF CONTENTS OF THE PROJECT MANUAL.

1. PROVIDE HEAVY PAPER DIVIDERS WITH PLASTIC-COVERED TABS FOR EACH SEPARATE WARRANTY. MARK TAB TO IDENTIFY THE PRODUCT OR INSTALLATION. PROVIDE A TYPED DESCRIPTION OF THE PRODUCT OR INSTALLATION, INCLUDING THE NAME OF THE PRODUCT AND THE NAME, ADDRESS, AND TELEPHONE NUMBER OF INSTALLER.

E. PROVIDE ADDITIONAL COPIES OF EACH WARRANTY TO INCLUDE IN OPERATION AND MAINTENANCE MANUALS.

1.2.11 ARCHITECT'S ACTION

A. EXCEPT FOR SUBMITTALS FOR THE RECORD OR INFORMATION, WHERE ACTION AND RETURN IS REQUIRED, THE ARCHITECT WILL REVIEW EACH SUBMITTAL, MARK TO INDICATE ACTION TAKEN, AND RETURN PROMPTLY.

1. COMPLIANCE WITH SPECIFIED CHARACTERISTICS IS THE CONTRACTOR'S RESPONSIBILITY.

B. ACTION STAMP: THE ARCHITECT WILL STAMP EACH SUBMITTAL WITH A UNIFORM, ACTION STAMP. THE ARCHITECT WILL MARK THE STAMP APPROPRIATELY TO INDICATE THE ACTION TAKEN, AS FOLLOWS:

1. FINAL UNRESTRICTED RELEASE: WHEN THE ARCHITECT MARKS A SUBMITTAL "A" ACTION -"APPROVED", THE WORK COVERED BY THE SUBMITTAL MAY PROCEED PROVIDED IT COMPLIES WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.

2. FINAL-BUT-RESTRICTED RELEASE: WHEN THE ARCHITECT MARKS A SUBMITTAL "B" ACTION - "APPROVED AS NOTED", THE WORK COVERED BY THE SUBMITTAL MAY PROCEED PROVIDED IT COMPLIES WITH NOTATIONS OR CORRECTIONS ON THE SUBMITTAL AND REQUIREMENTS OF THE CONTRACT DOCUMENTS. NO RESUBMITTAL FOR RECORD REQUIRED UNLESS "REVISE AND RESUBMIT FOR RECORD ONLY" ACTION IS MARKED. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.

3. RETURNED FOR RESUBMITTAL: WHEN THE ARCHITECT MARKS A SUBMITTAL "C" ACTION - "REVISE AND RESUBMIT," DO NOT PROCEED WITH WORK COVERED BY THE SUBMITTAL, INCLUDING PURCHASING, FABRICATION, DELIVERY, OR OTHER ACTIVITY. REVISE OR PREPARE A NEW SUBMITTAL ACCORDING TO THE NOTATIONS; RESUBMIT WITHOUT DELAY. REPEAT IF NECESSARY TO OBTAIN DIFFERENT ACTION MARK. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.

   a. DO NOT USE, OR ALLOW OTHERS TO USE, SUBMITTALS MARKED "REVISE AND RESUBMIT" AT THE PROJECT SITE OR ELSEWHERE WHERE WORK IS IN PROGRESS.

4. FINAL-BUT-RESTRICTED RELEASE: WHEN THE ARCHITECT MARKS A SUBMITTAL "D" ACTION - "REVISE AND RESUBMIT FOR RECORD ONLY" THE WORK COVERED BY THE SUBMITTAL MAY PROCEED PROVIDED IT COMPLIES WITH NOTATIONS OR CORRECTIONS ON THE SUBMITTAL AND REQUIREMENTS OF THE CONTRACT DOCUMENTS. RECORD SUBMITTAL IS REQUIRED OF CORRECTED AND NOTED ITEMS. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.

5. RETURNED FOR RESUBMITTAL: WHEN THE ARCHITECT MARKS A SUBMITTAL "E" ACTION – "SUBMIT SPECIFIED ITEM," THE PRODUCT SUBMITTED OR PART OF THE SUBMITTAL IS A SUBSTITUTION. DO NOT PROCEED WITH WORK OR PART OF THE WORK NOTED AS SUCH BY THE SUBMITTAL INCLUDING PURCHASING, FABRICATION, DELIVERY, OR OTHER ACTIVITY. REVISE OR PREPARE A NEW SUBMITTAL WITH THE PRODUCT SPECIFIED IN THE CONTRACT DOCUMENTS; RESUBMIT WITHOUT DELAY. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.

   a. DO NOT USE, OR ALLOW OTHERS TO USE, SUBMITTALS MARKED "SUBMIT SPECIFIED ITEM" AT THE PROJECT SITE OR ELSEWHERE WHERE WORK IS IN PROGRESS.

6. RETURNED FOR RESUBMITTAL: WHEN THE ARCHITECT MARKS A SUBMITTAL "F" ACTION - "REJECTED", THE WORK COVERED BY THE SUBMITTAL IS NOT IN COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS. THE SUBMITTAL WILL BE RETURN WITH ACTION "SUBMIT SPECIFIED ITEM" MARKED AS WELL. CONTRACTOR TO PREPARE A NEW SUBMITTAL. NO COMMENTS OR NOTATIONS MADE. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.

   a. DO NOT USE, OR ALLOW OTHERS TO USE, SUBMITTALS MARKED "REJECTED" AT THE PROJECT SITE OR ELSEWHERE WHERE WORK IS IN PROGRESS.

7. OTHER ACTION: WHEN THE ARCHITECT MARKS A SUBMITTAL "G" ACTION - "REVIEWED FOR ARCHITECTURAL COORDINATION ONLY" THE ENGINEER/ CONSULTANT IS THE PRIMARY REVIEWER OF THE SUBMITTAL. THE ARCHITECT'S COMMENTS ARE ONLY FOR THE PURPOSE OF COORDINATION OF THE ARCHITECTURAL CONTRACT DOCUMENTS.

C. UNSOLICITED SUBMITTALS: THE ARCHITECT WILL RETURN UNSOLICITED SUBMITTALS TO THE SENDER WITHOUT ACTION.

1.3 CUTTING AND PATCHING

1.3.1 SUBMITTALS

A. CUTTING AND PATCHING PROPOSAL: SUBMIT A PROPOSAL DESCRIBING PROCEDURES WELL IN ADVANCE OF THE TIME CUTTING AND PATCHING WILL BE PERFORMED IF THE OWNER REQUIRES APPROVAL OF THESE PROCEDURES BEFORE PROCEEDING. REQUEST APPROVAL TO PROCEED. INCLUDE THE FOLLOWING INFORMATION, AS APPLICABLE, IN THE PROPOSAL:

1. DESCRIBE THE EXTENT OF CUTTING AND PATCHING REQUIRED. SHOW HOW IT WILL BE PERFORMED AND INDICATE WHY IT CANNOT BE AVOIDED.
2. DESCRIBE ANTICIPATED RESULTS IN TERMS OF CHANGES TO EXISTING CONSTRUCTION. INCLUDE CHANGES TO STRUCTURAL ELEMENTS AND OPERATING COMPONENTS AS WELL AS CHANGES IN THE BUILDING'S APPEARANCE AND OTHER SIGNIFICANT VISUAL ELEMENTS.
3. UTILITIES: LIST UTILITIES THAT CUTTING AND PATCHING PROCEDURES WILL DISTURB OR AFFECT. LIST UTILITIES THAT WILL BE RELOCATED AND THOSE THAT WILL BE TEMPORARILY OUT-OF-SERVICE. INDICATE HOW LONG SERVICE WILL BE DISRUPTED.
4. WHERE CUTTING AND PATCHING INVOLVES ADDING REINFORCEMENT TO STRUCTURAL ELEMENTS, SUBMIT DETAILS AND ENGINEERING CALCULATIONS SHOWING INTEGRATION OF REINFORCEMENT WITH THE ORIGINAL STRUCTURE.
5. THE ARCHITECT'S REVIEW OF AREAS TO BE CUT AND PATCHED IS FOR VISUAL IMPACT ONLY. THE ARCHITECT'S REVIEW OF THESE AREAS DOES NOT WAIVE THE ARCHITECT'S RIGHT TO LATER REQUIRE COMPLETE REMOVAL AND REPLACEMENT OR A PART OF THE WORK FOUND TO BE UNSATISFACTORY.

1.3.2 QUALITY ASSURANCE

A. REQUIREMENTS FOR STRUCTURAL WORK: DO NOT CUT AND PATCH STRUCTURAL ELEMENTS IN A MANNER THAT WOULD CHANGE THEIR LOAD-CARRYING CAPACITY OR LOAD-DEFLECTION RATIO.

B. OPERATIONAL LIMITATIONS: DO NOT CUT AND PATCH OPERATING ELEMENTS OR RELATED COMPONENTS IN A MANNER THAT WOULD RESULT IN REDUCING THEIR CAPACITY TO PERFORM AS INTENDED. DO NOT CUT AND PATCH OPERATING ELEMENTS OR RELATED COMPONENTS IN A MANNER THAT WOULD RESULT IN INCREASED MAINTENANCE OR DECREASED OPERATIONAL LIFE OR SAFETY.

C. VISUAL REQUIREMENTS: DO NOT CUT AND PATCH CONSTRUCTION EXPOSED ON THE EXTERIOR OR IN OCCUPIED SPACES IN A MANNER THAT WOULD, IN THE ARCHITECT'S OPINION, REDUCE THE BUILDING'S AESTHETIC QUALITIES. DO NOT CUT AND PATCH CONSTRUCTION IN A MANNER THAT WOULD RESULT IN VISUAL EVIDENCE OF CUTTING AND PATCHING. REMOVE AND REPLACE CONSTRUCTION CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER.

1.3.3 WARRANTY

A. EXISTING WARRANTIES: REPLACE, PATCH, AND REPAIR MATERIAL AND SURFACES CUT OR DAMAGED BY METHODS AND WITH MATERIALS IN SUCH A MANNER AS NOT TO VOID ANY WARRANTIES REQUIRED OR EXISTING.

1.3.4 MATERIALS, GENERAL

A. USE MATERIALS IDENTICAL TO EXISTING MATERIALS. FOR EXPOSED SURFACES, USE MATERIALS THAT VISUALLY MATCH EXISTING ADJACENT SURFACES TO THE FULLEST EXTENT POSSIBLE IF IDENTICAL MATERIALS ARE UNAVAILABLE OR CANNOT BE USED. USE MATERIALS WHOSE INSTALLED PERFORMANCE WILL EQUAL OR SURPASSES THAT OF EXISTING MATERIALS.

1.3.5 INSPECTION

A. EXAMINE SURFACES TO BE CUT AND PATCHED AND CONDITIONS UNDER WHICH CUTTING AND PATCHING IS TO BE PERFORMED BEFORE CUTTING. IF UNSAFE OR UNSATISFACTORY CONDITIONS ARE ENCOUNTERED, TAKE CORRECTIVE ACTION BEFORE PROCEEDING.

1. BEFORE PROCEEDING, MEET AT THE PROJECT SITE WITH PARTIES INVOLVED IN CUTTING AND PATCHING, INCLUDING MECHANICAL AND ELECTRICAL TRADES. REVIEW AREAS OF POTENTIAL INTERFERENCE AND CONFLICT. COORDINATE PROCEDURES AND RESOLVE POTENTIAL CONFLICTS BEFORE PROCEEDING.

1.3.6 PREPARATION

A. TEMPORARY SUPPORT: PROVIDE TEMPORARY SUPPORT OF WORK TO BE CUT.
B. PROTECTION: PROTECT EXISTING CONSTRUCTION DURING CUTTING AND PATCHING TO PREVENT DAMAGE. PROVIDE PROTECTION FROM ADVERSE WEATHER CONDITIONS FOR PORTIONS OF THE PROJECT THAT MIGHT BE EXPOSED DURING CUTTING AND PATCHING OPERATIONS.
C. AVOID INTERFERENCE WITH USE OF ADJOINING AREAS OR INTERRUPTION OF FREE PASSAGE TO ADJOINING.
D. AVOID CUTTING EXISTING PIPE, CONDUIT, OR DUCTWORK SERVING THE BUILDING BUT SCHEDULED TO BE REMOVED OR RELOCATED UNTIL PROVISIONS HAVE BEEN MADE TO BYPASS THOSE AREAS.

1.3.7 PERFORMANCE

A. GENERAL: EMPLOY SKILLED WORKMEN TO PERFORM CUTTING AND PATCHING. PROCEED WITH CUTTING AND PATCHING AT THE EARLIEST FEASIBLE TIME AND COMPLETE WITHOUT DELAY.

1. CUT EXISTING CONSTRUCTION TO PROVIDE FOR INSTALLATION OF OTHER COMPONENTS OR PERFORMANCE OF OTHER CONSTRUCTION ACTIVITIES AND THE SUBSEQUENT FITTING AND PATCHING REQUIRED TO RESTORE SURFACES TO THEIR Original CONDITION.

B. CUTTING: CUT EXISTING CONSTRUCTION USING METHODS LEAST LIKELY TO DAMAGE ELEMENTS RETAINED OR ADJOINING CONSTRUCTION. WHERE POSSIBLE, REVIEW PROPOSED PROCEDURES WITH THE ORIGINAL INSTALLER; COMPLY WITH THE ORIGINAL INSTALLER'S RECOMMENDATIONS.
C. IN GENERAL, WHERE CUTTING, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING WHERE POSSIBLE, NEATLY TO SIZE REQUIRED, AND WITH MINIMUM DISTURBANCE OF ADJACENT SURFACES. TEMPORARILY COVER OPENINGS WHEN NOT IN USE.
D. WHERE SERVICES ARE REQUIRED TO BE REMOVED, RELOCATED, OR ABANDONED, BY-PASS UTILITY SERVICES, SUCH AS PIPE OR CONDUIT, BEFORE CUTTING. CUT-OFF PIPE OR CONDUIT IN WALLS OR PARTITIONS TO BE REMOVED. CAP, VALVE, OR PLUG AND SEAL THE REMAINING PORTION OF PIPE OR CONDUIT TO PREVENT ENTRANCE OF MOISTURE OR OTHER FOREIGN MATTER AFTER BY-PASSING AND CUT

2.0 CONSTRUCTION DRAWINGS

2.0.1 GENERAL

A. DRAWINGS AND GENERAL CONDITIONS OF THE CONTRACT ON SHEET G-002 APPLY TO ALL SECTIONS ON THIS SHEET AND THE ENTIRE CONSTRUCTION DOCUMENT SHEETS LISTED ON SHEET G-001.

B. REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS: IMMEDIATELY ON DISCOVERY OF THE NEED FOR CLARIFICATION OF THE CONTRACT DOCUMENTS, SUBMIT A REQUEST FOR INTERPRETATION TO ARCHITECT. INCLUDE A DETAILED DESCRIPTION OF PROBLEM ENCOUNTERED, TOGETHER WITH RECOMMENDATIONS FOR CHANGING THE CONTRACT DOCUMENTS. SUBMIT REQUESTS ON CSI FORM 13.2A, "REQUEST FOR INTERPRETATION." OR CONTRACTOR'S OWN TEMPLATE WITH COMPANY LETTERHEAD, ENTITLED "REQUEST FOR INTERPRETATION," AND INCLUDES THE PROJECT NAME AND LOCATION, TRADES REQUESTING INTERPRETATION, DATE OF REQUEST AND EXPECTED DATE OF INTERPRETATION FROM ARCHITEC/ENGINEER.

C. ARCHITECTURAL CONSTRUCTION DOCUMENTS ARE DIAGRAMMATIC IN NATURE AND DIMENSIONS SHALL BE FIGURED, DO NOT SCALE DRAWINGS. VERIFY SPACE REQUIREMENTS AND DIMENSIONS OF ITEMS SHOWN DIAGRAMMATICALLY ON DRAWINGS.

D. IN THE EVENT OF CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM OR BULLETINS, THE BETTER QUALITY QUALITY OR GREATER QUANTITY OF WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.

E. ALL DIMENSIONS SHOWN ARE TO ROUGH WALL AND PARTITION SURFACES UNLESS SPECIFICALLY OTHERWISE NOTED. ROUGH MEANS UNFINISHED SURFACES OF WALLS AND PARTITIONS PRIOR TO APPLICATION OR CLADDING OF FINISHED MATERIAL OR SHOP ASSEMBLED PRODUCT.

F. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATION. LARGE SCALE VIEWS TAKE PRECEDENT OVER SMALL SCALE VIEWS, DIMENSIONS ON DETAIL TAKE PRECEDENCE OVER DIMENSIONS ON SMALL SCALE PLAN.

2.0.2 SITE EXAMINATION

A. EXISTING CONDITIONS: THE EXISTENCE AND LOCATION OF SITE IMPROVEMENTS, UTILITIES, AND OTHER CONSTRUCTION INDICATED AS EXISTING ARE NOT GUARANTEED. BEFORE BEGINNING WORK, INVESTIGATE AND VERIFY THE EXISTENCE AND LOCATION OF MECHANICAL AND ELECTRICAL SYSTEMS AND OTHER CONSTRUCTION AFFECTING THE WORK.

1. BEFORE CONSTRUCTION, VERIFY THE LOCATION AND POINTS OF CONNECTION OF UTILITY SERVICES.

B. EXISTING UTILITIES: THE EXISTENCE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AND CONSTRUCTION INDICATED AS EXISTING ARE NOT GUARANTEED. BEFORE BEGINNING SITEWORK, INVESTIGATE AND VERIFY THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND OTHER CONSTRUCTION AFFECTING THE WORK.

1. BEFORE CONSTRUCTION, VERIFY THE LOCATION AND INVERT ELEVATION AT POINTS OF CONNECTION OF SANITARY SEWER, STORM SEWER, AND WATER-SERVICE PIPING; AND UNDERGROUND ELECTRICAL SERVICES.
2. FURNISH LOCATION DATA FOR WORK RELATED TO PROJECT THAT MUST BE PERFORMED BY PUBLIC UTILITIES SERVING PROJECT SITE.

C. ACCEPTANCE OF CONDITIONS: EXAMINE SUBSTRATES, AREAS, AND CONDITIONS, WITH INSTALLER OR APPLICATOR PRESENT WHERE INDICATED, FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE. RECORD OBSERVATIONS.

1. WRITTEN REPORT: PROVIDE A WRITTEN REPORT LISTING CONDITIONS DETRIMENTAL TO PERFORMANCE OF THE WORK, INCLUDE THE FOLLOWING:
   a. DESCRIPTION OF THE WORK.
   b. LIST OF DETRIMENTAL CONDITIONS, INCLUDING SUBSTRATES.
   c. LIST OF UNACCEPTABLE INSTALLATION TOLERANCES.
   d. RECOMMENDED CORRECTIONS.
2. VERIFY COMPATIBILITY WITH AND SUITABILITY OF SUBSTRATES, INCLUDING COMPATIBILITY WITH EXISTING FINISHES OR PRIMERS.
3. EXAMINE ROUGHING-IN FOR MECHANICAL AND ELECTRICAL SYSTEMS TO VERIFY ACTUAL LOCATIONS OF CONNECTIONS BEFORE EQUIPMENT AND FIXTURE INSTALLATION.
4. EXAMINE WALLS, FLOORS, AND ROOFS FOR SUITABLE CONDITIONS WHERE PRODUCTS AND SYSTEMS ARE TO BE INSTALLED.
5. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. PROCEEDING WITH THE WORK INDICATES ACCEPTANCE OF SURFACES AND CONDITIONS.

2.0.3 LAYOUT VERIFICATION

A. CONSTRUCTION LAYOUT:

1. VERIFICATION: BEFORE PROCEEDING TO LAY OUT THE WORK, VERIFY LAYOUT INFORMATION SHOWN ON DRAWINGS, IN RELATION TO THE BUILDING FOOTPRINT AND ANY EXISTING BENCHMARKS. IF DISCREPANCIES ARE DISCOVERED, NOTIFY ARCHITECT PROMPTLY.
   a. ESTABLISH BENCHMARKS AND CONTROL POINTS TO SET LINES AND LEVELS AT EACH STORY OF CONSTRUCTION AND ELSEWHERE AS NEEDED TO LOCATE EACH ELEMENT OF PROJECT.
   b. ESTABLISH DIMENSIONS WITHIN TOLERANCES INDICATED. DO NOT SCALE DRAWINGS TO OBTAIN REQUIRED DIMENSIONS.
   c. INFORM INSTALLERS OF LINES AND LEVELS TO WHICH THEY MUST COMPLY.
   d. CHECK THE LOCATION, LEVEL AND PLUMB, OF EVERY MAJOR ELEMENT AS THE WORK PROGRESSES.
   e. NOTIFY ARCHITECT WHEN DEVIATIONS FROM REQUIRED LINES AND LEVELS EXCEED ALLOWABLE TOLERANCES.
   f. BUILDING LINES AND LEVELS: LOCATE AND LAY OUT CONTROL LINES AND LEVELS FOR STRUCTURES, PARTITIONS, COLUMN GRIDS, AND FLOOR LEVELS, INCLUDING THOSE REQUIRED FOR MECHANICAL AND ELECTRICAL WORK. TRANSFER SURVEY MARKINGS AND ELEVATIONS FOR USE WITH CONTROL LINES AND LEVELS. LEVEL FOUNDATIONS AND PIERS FROM TWO OR MORE LOCATIONS.
2. RECORD LOG: MAINTAIN A LOG OF LAYOUT CONTROL WORK. RECORD DEVIATIONS FROM REQUIRED LINES AND LEVELS. INCLUDE BEGINNING AND ENDING DATES AND TIMES OF SURVEYS, WEATHER CONDITIONS, NAME AND DUTY OF EACH SURVEY PARTY MEMBER, AND TYPES OF INSTRUMENTS AND TAPES USED. MAKE THE LOG AVAILABLE FOR REFERENCE BY ARCHITECT.
3. REFERENCE POINTS: LOCATE EXISTING PERMANENT BENCHMARKS, CONTROL POINTS, AND SIMILAR REFERENCE POINTS BEFORE BEGINNING THE WORK. PRESERVE AND PROTECT PERMANENT BENCHMARKS AND CONTROL POINTS DURING CONSTRUCTION OPERATIONS.
   a. REPLACE LOST OR DESTROYED PERMANENT BENCHMARKS AND CONTROL POINTS PROMPTLY. BASE REPLACEMENTS ON THE ORIGINAL SURVEY CONTROL POINTS.
4. BENCHMARKS: ESTABLISH AND MAINTAIN A MINIMUM OF TWO PERMANENT BENCHMARKS ON PROJECT SITE, REFERENCED TO DATA ESTABLISHED BY SURVEY CONTROL POINTS.
   a. RECORD BENCHMARK LOCATIONS, WITH HORIZONTAL AND VERTICAL DATA, ON PROJECT RECORD DOCUMENTS.
   b. WHERE THE ACTUAL LOCATION OR ELEVATION OF LAYOUT POINTS CANNOT BE MARKED, PROVIDE TEMPORARY REFERENCE POINTS SUFFICIENT TO LOCATE THE WORK.
   c. REMOVE TEMPORARY REFERENCE POINTS WHEN NO LONGER NEEDED. RESTORE MARKED CONSTRUCTION TO ITS ORIGINAL CONDITION.

2.0.4 INSTALLATION GENERAL

A. GENERAL: LOCATE THE WORK AND COMPONENTS OF THE WORK ACCURATELY, IN CORRECT ALIGNMENT AND ELEVATION, AS INDICATED.

1. MAKE VERTICAL WORK PLUMB AND MAKE HORIZONTAL WORK LEVEL.
2. WHERE SPACE IS LIMITED, INSTALL COMPONENTS TO MAXIMIZE SPACE AVAILABLE FOR MAINTENANCE AND EASE OF REMOVAL FOR REPLACEMENT.
3. CONCEAL PIPES, DUCTS, AND WIRING IN FINISHED AREAS, UNLESS OTHERWISE INDICATED.
4. MAINTAIN MINIMUM HEADROOM CLEARANCE OF 8 FEET IN SPACES WITHOUT A SUSPENDED CEILING UNLESS SPECIFICALLY INDICATED ON DRAWINGS.
5. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS FOR INSTALLING PRODUCTS IN APPLICATIONS INDICATED.SHOULD MANUFACTURER'S INSTRUCTIONS CONFLICT WITH THE CONTRACT DOCUMENTS, REQUEST CLARIFICATION FROM ARCHITECT BEFORE PROCEEDING.
6. INSTALL PRODUCTS AT THE TIME AND UNDER CONDITIONS THAT WILL ENSURE THE BEST POSSIBLE RESULTS. MAINTAIN CONDITIONS REQUIRED FOR PRODUCT PERFORMANCE UNTIL SUBSTANTIAL COMPLETION.
7. CONDUCT CONSTRUCTION OPERATIONS SO NO PART OF THE WORK IS SUBJECTED TO DAMAGING OPERATIONS OR LOADING IN EXCESS OF THAT EXPECTED DURING NORMAL CONDITIONS OF OCCUPANCY.
8. DO NOT USE TOOLS OR EQUIPMENT THAT PRODUCE HARMFUL NOISE LEVELS.

2.0.5 TEMPLATES

A. OBTAIN AND DISTRIBUTE TO THE PARTIES INVOLVED TEMPLATES FOR WORK SPECIFIED TO BE FACTORY PREPARED AND FIELD INSTALLED. CHECK SHOP DRAWINGS OF OTHER WORK TO CONFIRM THAT ADEQUATE PROVISIONS ARE MADE FOR LOCATING AND INSTALLING PRODUCTS TO COMPLY WITH INDICATED REQUIREMENTS.

B. ANCHORS AND FASTENERS: PROVIDE ANCHORS AND FASTENERS AS REQUIRED TO ANCHOR EACH COMPONENT SECURELY IN PLACE, ACCURATELY LOCATED AND ALIGNED WITH OTHER PORTIONS OF THE WORK.

C. MOUNTING HEIGHTS: WHERE MOUNTING HEIGHTS ARE NOT INDICATED ON DRAWING ENTITLED "STANDARD DEVICES AND EQUIPMENT LOCATION," MOUNT COMPONENTS AT HEIGHTS DIRECTED BY ARCHITECT.

D. ALLOW FOR BUILDING MOVEMENT, INCLUDING THERMAL EXPANSION AND CONTRACTION.

E. COORDINATE INSTALLATION OF ANCHORAGES. FURNISH SETTING DRAWINGS, TEMPLATES, AND DIRECTIONS FOR INSTALLING ANCHORAGES, INCLUDING SLEEVES, CONCRETE INSERTS, ANCHOR BOLTS, AND ITEMS WITH INTEGRAL ANCHORS, THAT ARE TO BE EMBEDDED IN CONCRETE OR MASONRY. DELIVER SUCH ITEMS TO PROJECT SITE IN TIME FOR INSTALLATION.

F. JOINTS: MAKE JOINTS OF UNIFORM WIDTH. WHERE JOINT LOCATIONS IN EXPOSED WORK ARE NOT INDICATED, ARRANGE JOINTS FOR THE BEST VISUAL EFFECT. FIT EXPOSED CONNECTIONS TOGETHER TO FORM HAIRLINE JOINTS.

G. HAZARDOUS MATERIALS: USE PRODUCTS, CLEANERS, AND INSTALLATION MATERIALS THAT ARE NOT CONSIDERED HAZARDOUS.

2.1 CONSTRUCTION PLAN

2.1.1 GENERAL

A. FORMAL REVIEW AND APPROVAL REQUEST OF PARTITION LAYOUT SNAPPED LINES PRIOR TO INSTALLATION OF ANY TRACK AND STUD FRAMING AND FURNITURE SYSTEM IN OPEN AREAS HOLD MEASUREMENTS AND CLEARANCES IS REQUIRED. IF CORRECTIONS TO SNAPPED LINES AND FURNITURE SYSTEM OVERALL CLEARANCES ARE RAISED, PROMPTLY MAKE THE CORRECTIONS AS DIRECTED BY ARCHITECT WHILE AT THE PROJECT SITE OR SCHEDULE ANOTHER FORMAL REVIEW. SEQUENCE WILL BE REPEATED UNTIL FINAL APPROVAL OF SNAPPED LINES IS OBTAINED.

1. FURNITURE SYSTEM INSTALLER SHALL BE PRESENT ON SITE AND PROVIDE CONTRACTOR WITH THE REQUIRE FURNITURE SYSTEM CLEARANCES FOR THE CONTRATOR TO SNAP TRACK AND STUD FRAMING AFFECTED BY FURNITURE SYSTEM LAYOUT.
2. CONTRACTOR SHALL MARK UP THE PARTITION LAYOUT PLAN AND DOCUMENT ALL AGREED TO DIMENSIONS AND DESCRIPENCIES FROM CONSTRUCTION DOCUMENTS BASED ON FIELD MEASUREMENTS AND CONDITIONS ENCOUNTERED. THE MARK-UP PARTITION LAYOUT PLAN SHOULD INCLUDE ADVERALL MEASUREMENTS OF OPEN AREAS WHERE FURNITURE SYSTEMS ARE TO BE INSTALLED. ELECTRONIC COPIES TO BE FORWARDED TO THE ARCHITECT FOR FORMAT WRITTEN APPROVAL.
3. UPON RECEIPT OF THE CONTRACTOR'S FIELD MEASURED PARTITION LAYOUT PLAN, THE ARCHITECT WILL ISSUE APPROVAL OF APPROVED PARTITION LAYOUT IN WRITING WITHIN 24 HOURS
4. THE ARCHITECT WILL DISTRIBUTE THE FIELD MEASURED AND APPROVED PARTITION LAYOUT PLAN TO ALL PROJECT TEAM AND OWNER FOR RECORD AND COORDINATION.

B. THE CONTRACTOR IS TO PROVIDE ALL SHORING, BARRICADES, AND TEMPORARY PARTITIONS TO ACCOMPLISH ALL WORK IN AN APPROVED AND SAFE MANNER AS PER AUTHORITY HAVING JURISDICTION CURRENT RULES, CODES AND REGULATIONS.

C. COORDINATE SPACE REQUIREMENTS AND INSTALLATION OF MECHANICAL AND ELECTRICAL WORK INDICATED ON THE DRAWINGS. FOLLOW ROUTING SHOWN ON THE DRAWINGS FOR PIPES, DUCTS, AND CONDUITS AS CLOSELY AS PRACTICABLE. PLACE RUNS PARALLEL WITH THE LINE OF THE BUILDING. UTILIZE SPACES EFFICIENTLY TO MAXIMIZE ACCESSIBILITY FOR OTHER INSTALLATIONS, MAINTENANCE, AND REPAIRS.

D. GENERAL CONTRACTOR OR CONSTRUCTION MANAGER SHALL PROVIDE GENERAL CARPENTRY AS REQUIRED FOR WORK WHICH MAY NOT FALL INTO JURISDICTION OF A SPECIFIC TRADE, BUT IS REQUIRED FOR PROPER JOB EXECUTION & COMPLETION OF CONSTRUCTION WORK DOCUMENTED HEREWITH.

E. IN FINISHED AREAS, CONCEAL PIPES, DUCTS, AND WIRING WITHIN THE CONSTRUCTION. COORDINATE LOCATIONS OF FIXTURES AND OUTLETS WITHIN FINISHED ASSEMBLIES. FINISHED AREAS MEANS OCCUPIED SPACES AND ROOMS INCLUDING PANTRIES, COPY ROOMS, STORAGE ROOMS, TECHNOLOGY ROOMS, COAT AND STORAGE CLOSETS AND SIMILAR SUPPORT SPACES. UNOCCUPIED AREA SUCH AS UTILITY SPACES INCLUDING MECHANICAL, ELECTRICAL AND TELEPHONE AND SIMILAR FUNCTION TYPE ROOMS AND SPACES.

F. DO NOT USE MATERIALS AND EQUIPMENT REMOVED FROM EXISTING PREMISES, EXCEPT AS SPECIFICALLY PERMITTED.

G. ITEMS NOTED "N.I.C." (NOT IN CONTRACT) WILL BE FURNISHED AND INSTALLED BY TENANT.

H. FIRE SAFETY EQUIPMENT AND THEIR ASSOCIATED CONDUIT AND WIRING SYSTEMS SHALL NOT BE MARRED DURING CONSTRUCTION AND SHALL BE PROTECTED FROM ANY PHYSICAL DAMAGE BY THE GENERAL CONTRACTOR AND OR CONSTRUCTION MANAGER AND THEIR SUBCONTRACTORS FOR THE DURATION OF THE PROJECT.

2.1.2 STRUCTURAL FLOOR SLAB

A. FLOOR SLAB X-RAY OR GROUND PENETRATING RADAR: THIS METHOD SHALL BE USED FOR POST TENSIONED AND ONE AND TWO-WAY CONCRETES SLABS; PRIOR TO CORING; OBTAIN BUILDING APPROVAL AND FOLLOW ALL BUILDING REGULATIONS & REQUIREMENTS FOR FLOOR CORES. REFER TO DRAWING G-003 SECTION 3 CUTTING AND PATCHING.

B. EXISTING ABANDONED FLOOR CORE DRILLS TO BE FILLED WITH CONCRETE MIX IN THICKNESS MATCHING CONCRETE SLAB AND FIRE RATING.

C. EXISTING EMPTY THROUGH FLOOR SLAB PENETRATIONS OR EXISTING PENETRATIONS WITH PIPING AND DUCT PENETRANTS THAT ARE IN USE BUT ARE NOT FIRESTOPPED AND ALL PENETRATIONS NEW CAUSED BY THE SCOPE OF THE NEW CONSTRUCTION ACTIVITIES SHALL BE FIRESTOPPED WITH APPROVED UL TESTED SYSTEM FOR PENETRATE TYPE AND FIRE RATING MATCHING STRUCTURAL FLOOR SLAB, REFER TO ARTICLE

D. WHEN NEW SCOPE CALLS FOR NEW STRUCTURAL CONCRETE SLAB IN-FILL, IN-FILL SHALL BE COMPATIBLE WITH EXISTING ADJACENT STRUCTURAL CONCRETE SLAB SCHEDULED TO REMAIN INCLUDING FIRE RATING, CONCRETE MIX AND REINFORCEMENT UNLESS OTHERWISE DIRECTED BY A PROFESSIONAL ENGINEER.

E. TRENCHING OR CHOPPING OF STRUCTURAL CONCRETE SLAB MAY UNDERMINE STRUCTURAL STABILITY AND FIRE RATING. DO NOT TRENCH OR CHOP EXISTING STRUCTURAL CONCRETE SLAB UNLESS INDICATED ON THE DRAWINGS OR DIRECTED BY THE ARCHITECT.

F. EXISTING CRACKS IN FLOOR SLAB 1/8 INCHES TO 1/4 INCHES WIDE THAT ARE NOT DEEMED STRUCTURAL BY A STRUCTURAL ENGINEER SHALL BE FILLED/REPAIRED AND THE SURFACE PATCHED SMOOTH AND LEVEL WITH ADJACENT FLOOR SLAB. CRACK FILLER SHALL BE REZI-WELD FLEX BY W.R. MEADOWS OR APPROVED EQUAL.

1. SCOPE OF FLOOR SLAB CRACK FILLER SHALL BE INCLUDED IN THE BID PROPOSAL. NO CHANGE ORDER WILL BE ACCEPTED FOR ANY CRACK FILLER WORK. REFER TO "GENERAL CONDITIONS" ARTICLE 1.1.1-SUMMARY, PARAGRAPH "C", "D", "E", "F" AND "K".

G. VARIATIONS IN FLOOR LEVEL IN EXCESS OF 1/4" FOR EVERY 10'-0" IN ANY DIRECTION SHALL BE LEVELED WITH ADJACENT FLOOR SLAB.

1. SCOPE OF FLOOR SLAB LEVELING SHALL BE INCLUDED IN THE BID PROPOSAL. NO CHANGE ORDER WILL BE ACCEPTED FOR ANY FLOOR LEVELING WORK. REFER TO "GENERAL CONDITIONS" ARTICLE 1.1.1-SUMMARY, PARAGRAPH "C", "D", "E", "F" AND "K".
2. IN THE ABSENCE OF ANY SPECIFIC NOTES ON THE CONSTRUCTION DRAWINGS FOR FLOOR LEVELING MATERIAL, ACCEPTABLE LEVELING MATERIAL SHALL BE LATICRETE 816 LATIPATCH OR ARDEX GPS GENERAL PATCH & SKIMCOAT.

2.1.3 WATERPROOFING

A. UNLESS SPECIFICALLY CALLED FOR AND INDICATED ON THE DRAWINGS OR IN THE ABSENCE OF SUCH SPECIFICATIONS PROVIDE ONE OF THE THE FOLLOWING WATERPROOFING PRODUCTS:

1. LATICRETE 9235 COMPLYING WITH ASTM C-672 WITH LATICRETE 125 SOUND AND CRACK ADHESIVE.
2. LATICRETE HYDROBAN WATERPROOFING AND ANTIFRACTURE MEMBRANE.

B. APPLICATION: APPLY WATERPROOFING ACCORDING TO ASTM C 898 AND MANUFACTURER'S WRITTEN INSTRUCTIONS TO HORIZONTAL AND VERTICAL SURFACES.

1. VERTICAL APPLICATION SHALL BE LIMITED TO A MINIMUM OF 4 INCHES THROUGH-OUT.

C. PROTECTION:

1. DO NOT PERMIT FOOT OR VEHICULAR TRAFFIC ON UNPROTECTED MEMBRANE.
2. PROTECT WATERPROOFING FROM DAMAGE AND WEAR DURING REMAINDER OF CONSTRUCTION PERIOD.

D. SCHEDULE: INSTALL WATERPROOFING PRODUCT BELOW:

1. RESILIENT TILE (STANDARD, CONDUCTIVE OR ANTISTATIC).
2. RESILIENT SHEETS (STANDARD, CONDUCTIVE OR ANTISTATIC).
3. CERAMIC TILE.
4. PORCELAIN TILE.
5. QUARRY TILE.
6. GLASS AND GLASS MOSAIC TILES.
7. PLASTIC AND METAL TILES.
8. STONE TILE AND DIMENSIONED STONE PANELS.
9. POURED TYPE TERRAZZO, TERRAZZO TILE OR PANELS.
10. PAVERS.

E. LOCATION: WHERE THE ABOVE LISTED MATERIALS IS SCHEDULED IN ROOMS AN SPACES NOT LIMITED TO THE FOLLOWING:

1. PANTRY ROOMS AND FOOD SERVICE TYPE ROOMS OR SPACES.
2. TOILET ROOMS-UNISEX, EXECUTIVE OR CORE TOILETS.
3. SHOWER ROOMS.
4. SPRINKLER ROOMS AND SPRINKLER PREACTION CLOSETS.
5. TECHNOLOGY ROOMS WITH FLOOR FINISH DIRECTLY APPLIED TO CONCRETE SUBSTRATE.

F. UNLESS SPECIFICALLY CALLED FOR AND INDICATED ON THE DRAWINGS OR IN THE ABSENCE OF SUCH SPECIFICATIONS PROVIDE WATERPROOFING/SEALER FOR EXPOSED CONCRETE FLOORS OF NEW MECHANICAL ROOMS.

1. ACCEPTABLE PRODUCTS:
   a. VULKEM 360 NF, ONE_PART POLYURETHANE COATING MANUFACTURED BY TREMCO, INC.

G. UNLESS SPECIFICALLY CALLED FOR AND INDICATED ON THE DRAWINGS OR IN THE ABSENCE OF SUCH SPECIFICATIONS PROVIDE SEALER FOR EXPOSED CONCRETE FLOORS UNDER RAISED ACESS FLOOR SYSTEM.

1. ACCEPTABLE PRODUCTS:
   a. CONSOLIDECK-SINGLESTEP BY PROSOCO.
   b. SEAL KRETE CLEAR FLOOR SEALER BY SEAL KRETE.

2.1.4 SPRAYED AND INTUMESCENT FIREPROOFING

A. WHERE FIRE-PROOFING OF EXISTING COLUMNS OR BEAMS IS DISTURBED BY NEW WORK, THE FIRE-PROOFING SHALL BE RESTORED TO PROVIDE A MINIMUM RESISTANCE RATING AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION BUILDING CODE.

B. FIRE PROTECTION OF STRUCTURAL STEEL MEMBERS SPRAYED ON FIREPROOFING NOT INDICATED ELSEWHERE ON THE CONSTRUCTION DRAWINGS SHALL BE "MONOCOTE MK 6" BY "GRACE CONSTRUCTION PRODUCTS" OR APPROVED EQUAL.

C. WHERE NO SUSPENDED CEILINGS ARE INDICATED IN ROOMS, OPEN AREAS OR SPACES, EXPOSED, SPRAYED FIREPROOFING MATERIAL ON EXISTING OR NEW STRUCTURAL STEEL MEMBERS PROVIDE SPRAY APPLIED SEALER BY "AD FIRE PROTECTION SYSTEMS, AD TC-55"; COLOR TO BE SELECTED BY ARCHITECT.

D. INTUMESCENT FIREPROOFING OF EXPOSED STRUCTURAL STEEL MEMBERS NOT SPECIFIED ELSEWHERE ON THE CONSTRUCTION DRAWINGS SHALL BE "CARBOLINE-A/D FIREFILM III" BY A/D FIRE PROTECTION SYSTEMS, INC.

1. SURFACE PREPARATION AND PRIMERS SHALL BE ACCEPTABLE TO CARBOLINE-A/D FIRE PROTECTION SYSTEMS, INC., IN WRITING.
2. FINAL FINISH COAT SHALL BE AS SECLECTED BY ARCHITECT FROM CARBOLINE-A/D FIRE PROTECTION SYSTEMS, INC. "CARBOLINE A/D COLORCOAT"

2.1.5 FIRESTOPPING, THROUGH-PENETRATION FIRE STOP AND FIRE RESISTIVE JOINT SYSTEM

A. SCOPE GENON-COMPLYING OR MISSING FIRESTOPPING, THROUGH-PENETRATION FIRE STOP AND FIRE RESISTIVE JOINT SYSTEM SHALL BE INCLUDED IN THE BID PROPOSAL. NO CHANGE ORDER WILL BE ACCEPTED FOR THIS WORK AFTER AWARD. REFER TO "GENERAL CONDITIONS" ARTICLE 1.1.1-SUMMARY, PARAGRAPH "C", "D", "E", "F" AND "K".

B. FOR FIRE RATED WALL, NEW FIRESTOPPING, THROUGH-PENETRATION FIRE STOP AND FIRE RESISTIVE JOINT SYSTEM APPLICATION TO NEW AND EXISTING FIRE RATED ELEMENTS, PROVIDE SYSTEMS IN COMPLIANCE WITH:

1. FIRE STOOPING AND THROUGH-PENETRATION FIRESTOP AS DETERMINED PER ASTM E 814 FOR:
   a. FLOORS.
   b. ROOFS.
   c. WALLS AND PARTITIONS.
   d. SMOKE BARRIERS.
   e. CONSTRUCTION ENCLOSING COMPARTMENTALIZED AREAS.
2. FIRE RESISTIVE JOINT SYSTEMS AS DETERMINED PER NFPA 285 AND UL 2079.
   a. FLOOR-TO-FLOOR JOINTS.
   b. FLOOR-TO-WALL JOINTS.
   c. HEAD-OF-WALL JOINTS.
   d. WALL-TO-WALL JOINTS.
   e. JOINTS BETWEEN PERIMETER EDGE OF FIRE-RESISTANCE-RATED FLOOR ASSEMBLIES AND BACK OF NON-FIRE-RESISTANCE-RATED, EXTERIOR, GLAZED ALUMINUM CURTAIN WALLS.

C. DETAILS INDICATED ON DRAWINGS SERIES A700 ARE SELECTIVE OF TYPICAL APPLICATIONS AND DO NOT REFLECT THE FULL UL TESTS IN VOLUMES 2A AND 2B. CONTRACTOR TO SUBMIT APPLICABLE TESTS FOR SPECIFIC INSTALLATION FOR REVIEW AND APPROVAL AS REQUIRED BY GENERAL CONDITIONS OF THE CONTRACT, ARTICLE 1.2- SUBMITTAL PROCEDURES ON SHEET G-002.

2.1.6 ACCESS PANELS/DOORS

A. ACCESS PANELS OR DOORS IN PARTITIONS AND CEILINGS REQUIRED TO GAIN ACCESS TO CONCEALED VALVES, CONTROLS, ELECTRICAL CONNECTION, MECHANICAL, PLUMBING OR OTHER CONCEALED WORK AND MEP SYSTEMS, DEVICES AND EQUIPMENTS SHALL NOT BE INSTALLED WITHOUT PRIOR COORDINATION WITH THE ARCHITECT/ENGINEER.

B. SUBMIT PRODUCT DATA AND SHOP DRAWINGS OF ACCESS DOOR AND FRAME FOR EACH TYPE SHOWING FIRE RATING, MATERIALS, INDIVIDUAL COMPONENTS AND PROFILES, FINISHES AND INSTALLATION DETAILS AND ATTACHMENT TO OTHER WORK. SUBMIT REFLECTED CEILING PLAN SHOWING CEILING-MOUNTED ITEMS INCLUDING ACCESS DOORS AND FRAMES, LIGHTING FIXTURES, DIFFUSERS, GRILLES, SPEAKERS, SPRINKLERS, AND SPECIAL TRIM ARE SHOWN AND COORDINATED WITH EACH OTHER.

C. FIRE-RATED ACCESS DOORS AND FRAMES UNITS COMPLYING WITH NFPA 80 THAT ARE IDENTICAL TO ACCESS DOOR AND FRAME ASSEMBLIES TESTED FOR FIRE-TEST-RESPONSE CHARACTERISTICS PER THE FOLLOWING TEST METHOD AND THAT ARE LISTED AND LABELED BY UL OR ANOTHER TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION:
1. NFPA 252 OR UL 10B)FOR VERTICAL ACCESS DOORS AND FRAMES.
2. ASTM E 119 OR UL 263 FOR HORIZONTAL ACCESS DOORS AND FRAMES

D. ACCEPTABLE MANUFACTURERS FOR VERTICAL INSTALLATION (PARTITIONS) AND FIRE RATED HORIZONTAL INSTALLATION (CEILINGS) PROVIDE ACCESS DOORS AND FRAMES:

1. ACUDOR PRODUCTS, INC.
2. J. L. INDUSTRIES, INC.
3. KARP ASSOCIATES, INC.
4. LARSEN'S MANUFACTURING COMPANY.
   a. MATERIAL: STEEL UNLESS OTHERWISE INDICATED ON DRAWINGS.
   b. INSTALLATION: FLUSH TRIMLESS FRAME
   c. FINISH: PAINT
   d. COLOR: AS SELECTED BY ARCHITECT TO MATCH ADJACENT PARTITION AND CEILING COLOR
   e. TEXTURE: AS SELECTED BY ARCHITECT

E. ACCEPTABLE MANUFACTURERS FOR NONE FIRE RATED HORIZONTAL INSTALLATION (CEILINGS), PROVIDE ACCESS DOORS AND FRAMES:

1. WIND-LOCK1055 LEISCZ'S BRIDGE ROAD, PA 19533, 1-800-872-5625
2. PRODUCT: STEALTH GFRG.
3. INSTALLATION: FLUSH TRIMLESS FRAME.
4. FINISH: PAINT
5. COLOR: AS SELECTED BY ARCHITECT
6. TEXTURE: AS SELECTED BY ARCHITECT AND INDICATED ON DRAWINGS

2.1.7 GYPSUM BOARD ASSEMBLIES

1- GENERAL

A. COMPLY WITH ASTM C 840 AND GA 216 FOR GYPSUM BOARD PRODUCT INSTALLATION.

B. COMPLY WITH ASTM C 36/C 36M OR ASTM C 1396/C 1396M, AS APPLICABLE TO TYPE OF GYPSUM BOARD INDICATED AND WHICHEVER IS MORE STRINGENT.

C. SIZE: PROVIDE IN MAXIMUM LENGTHS AND WIDTHS AVAILABLE THAT WILL MINIMIZE JOINTS IN EACH AREA AND THAT CORRESPOND WITH SUPPORT SYSTEM INDICATED.

D. FIRE-TEST-RESPONSE CHARACTERISTICS: FOR GYPSUM BOARD ASSEMBLIES WITH FIRE-RESISTANCE RATINGS, PROVIDE MATERIALS AND CONSTRUCTION IDENTICAL TO THOSE TESTED IN ASSEMBLY INDICATED ACCORDING TO ASTM E 119 BY AN INDEPENDENT TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.

E. SOUND TRANSMISSION CHARACTERISTICS: FOR GYPSUM BOARD ASSEMBLIES WITH STC RATINGS, PROVIDE MATERIALS AND CONSTRUCTION IDENTICAL TO THOSE TESTED IN ASSEMBLY INDICATED ACCORDING TO ASTM E 90 AND CLASSIFIED ACCORDING TO ASTM E 413 BY A QUALIFIED INDEPENDENT TESTING AGENCY.

F. REFER TO SCHEDULE OF MATERIALS AND FINISHES ON FINISH PLAN (S) SHEETS FOR SPECIFIED APPLIED AND FLUSH TYPE WALL BASE AND OTHER APPLIED FINISH MATERIALS.

G. FOR STANDARD PARTITION ASSEMBLIES, GYPSUM WALLBOARD PANELS SHALL BE REGULAR TYPE, 5/8 THICK WITH TAPERED LONG EDGE UNLESS OTHERWISE INDICATED ON PARTITION ASSEMBLIES ON PARTITION TYPE SHEETS.

H. FOR FIRE RATED PARTITION ASSEMBLIES, GYPSUM WALLBOARD PANELS SHALL BE TYPE "X" OR AS TESTED BY MANUFACTURER FOR REQUIRED FIRE RATING, 5/8 INCHES THICK, WITH TAPERED LONG EDGE UNLESS OTHERWISE INDICATED ON PARTITION ASSEMBLIES ON PARTITION TYPE SHEETS.

I. ALL ACOUSTICAL STC/MTC RATED PARTITION CONSTRUCTION SHALL EXTEND TO THE BOTTOM OF STRUCTURE AND HAVE BOUNDARY TERMINATION SEALED AIR TIGHT WITH ACOUSTICAL SEALANT. FIRE RATED SEALANT SHALL BE USED AT FIRE RATED PARTITIONS.

J. ISOLATE PERIMETER OF GYPSUM BOARD APPLIED TO NON-LOAD-BEARING PARTITIONS AT STRUCTURAL ABUTMENTS, BUILDING CORE WALLS, EXCEPT FLOORS. PROVIDE 1/4-TO 1/2-INCH WIDE SPACES AT THESE LOCATIONS, AND TRIM EDGES WITH EDGE TRIM WHERE EDGES OF PANELS ARE EXPOSED. SEAL JOINTS BETWEEN EDGES AND ABUTTING STRUCTURAL SURFACES WITH ACOUSTICAL OR FIRE RESISTIVE JOINT SEALANT AS APPLICABLE.

K. DO NOT MECHANICALLY SECURE NEW PARTITIONS TO EXISTING BUILDING WINDOW MULLION, WINDOW SILLS OR PERIMETER BUILDING CLIMATE CONTROL UNIT ENCLOSURE. SUBMIT PROPOSED METHOD OF ATTACHMENT FOR REVIEW AND APPROVAL IF NOT SPECIFICALLY DETAILED IN THIS CONSTRUCTION DOCUMENTS SET.

1. ISOLATE STUDS INSTALLED DIRECTLY AGAINST BUILDING EX

2.0 CONSTRUCTION DRAWINGS- Continued

4- NON-LOAD BEARING STEEL FRAMING

A. STRUCTURAL PROPERTIES AND LIMITING HEIGHT OF METAL STUD SHALL BE PER ASTM C754 AND PER MANUFACTURER SPECIFICATION FOR BUT NOT LESS THAN THE FOLLOWING:

1. METAL STUDS ARE TO BE PLACED 16 INCHES ON CENTER UNLESS OTHERWISE NOTED ON PARTITION TYPE SHEETS.
2. METAL TRACK AND STUDS ARE 20 GAGE UNLESS OTHERWISE NOTED ON PARTITION TYPE SHEETS.
3. DEFLECTION CRITERIA FOR METAL STUDS INSTALLED FROM TOP OF SLAB TO UNDERSIDE OF SLAB ABOVE, REGARDLESS OF THE NUMBER OF LAYERS OF GYPSUM WALL BOARD PANELS IS L/240 UNLESS OTHERWISE INDICATED.
4. STEEL DRILL SCREWS: ASTM C 1002, UNLESS OTHERWISE INDICATED.
5. USE SCREWS COMPLYING WITH ASTM C 954 FOR FASTENING PANELS TO STEEL MEMBERS FROM 0.033 TO 0.112 INCH THICK.
6. FOR FASTENING CEMENTITIOUS BACKER UNITS, USE SCREWS OF TYPE AND SIZE RECOMMENDED BY PANEL MANUFACTURER.

B. SPECIFIED METAL TRACK FASTENERS ASSUMES SLAB IS NOT POST TENSIONED. ALTERNATE FASTENERS MAY CONSIST OF ONE OF THE FOLLOWING:

1. 3/16" DIAM. TAPCON ANCHORS W/1 1/4" EMBED. @24" O.C. STAGGERED AND AT FREE ENDS OF TRACK.
2. 2" LONG X 5/16" INSIDE DIAM. HILTI HY-150 ADHESIVE SLEEVE ANCHORS W/REMOVABLE RODS USING HILTI HY-20 ADHESIVE AND 1 3/4" MIN. EMBEDDED 4'-0" O.C. AND AT FREE ENDS OF TRACK.
3. 3/8" DIAM. HILTI KB-11 EXPANSION ANCHORS W/1 1/2" EMBED. @ 4'-0" O.C. AND AT FREE ENDS OF TRACK. NOT TO BE FASTENED TO LIGHTWEIGHT CONCRETE.

C. DEFLECTION TRACK: PROVIDE WHERE EXISTING FLOOR OR ROOF FRAMING MEMBERS IS OF LIGHT STEEL OR WOOD JOIST FRAMING SYSTEM. STEEL SHEET TOP RUNNER MANUFACTURED TO PREVENT CRACKING OF FINISHES APPLIED TO INTERIOR PARTITION FRAMING RESULTING FROM DEFLECTION OF STRUCTURE ABOVE; IN THICKNESS NOT LESS THAN INDICATED FOR STUDS AND IN WIDTH TO ACCOMMODATE DEPTH OF STUDS.

1. AVAILABLE PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   a. STEEL NETWORK INC. VERTITRACK VTD SERIES.
   b. SUPERIOR METAL TRIM; SUPERIOR FLEX TRACK SYSTEM (SFT).

D. METAL STUDS SHALL BE INSTALLED A MINIMUM OF 1/2 INCHES BELOW TOP TRACK AT ALL TIMES TO ALLOW FOR EXISTING FLOOR OR ROOF DEFLECTION UNLESS ROOF AND FLOOR SLAB CONSTRUCTION IS OF LIGHT STEEL OR WOOD JOIST FRAMING SYSTEM.

E. DOUBLE STUDS ARE REQUIRED AT BOTH JAMBS OF DOOR FRAMES AND HEADER.

F. STUDS AT DOOR JAMBS AND ON TOPS OF DOOR FRAMES MUST BE SCREWED TO RUNNERS AT TOP, BOTTOMS AND BOTH SIDES.

G. PARTITIONS SHALL NOT BE FASTENED OR BRACED TO DUCTWORK, CONDUIT OR ANY OVERHEAD PIPING.

H. PROVIDE FLAT STRAP PLATE SECURED TO METAL DECK FOR TOP TRACK ATTACHMENT WHERE PARTITION RUN IS PARALLEL TO METAL DECK FLUTES. METAL PLATE SHALL ENGAGE AT LEAST 3 DECK FLUTES.

1. WIDTH: 4" MINIMUM.
2. LENGTH: 12" OR 3 DECK FLUTES WHICHEVER IS GREATER.
3. THICKNESS: 0.0625 MINIMUM.

5- ROUGH CARPENTRY

A. INTERIORS ROUGH CARPENTRY WOOD PRODUCTS USED FOR EXPOSED OR CONCEALED BLOCKING APPLICATION SHALL BE "TYPE A", FIRE RETARDANT TREATED TYPE COMPLYING WITH "AWPA C20" FOR LUMBER AND "AWPA C27 FOR PLYWOOD.

1. FIRE RETARDANT TREATED PLYWOOD BACKING PANELS SHALL BE TYPE "A" NOT LESS THAN 3/4 INCHES NOMINAL THICKNESS.
2. FOR EXPOSED FIRE RETARDANT TREATED LUMBER OR PLYWOOD INDICATED TO RECEIVE A STAINED OR NATURAL FINISH, USE CHEMICAL FORMULATIONS THAT DO NOT BLEED THROUGH, CONTAIN COLORANTS, OR OTHERWISE ADVERSELY AFFECT FINISHES.
3. USE FIRE RETARDANT TREATED CONCEALED BLOCKING FOR ITEMS INDICATED ON THE DRAWINGS AND NOT LIMITED TO THE FOLLOWING APPLICATION:
   a. FRAMING FOR RAISED PLATFORMS.
   b. UNDERLAYMENT FOR WOOD FLOORS.
   c. NAILING STRIPS.
   d. FURRING STRIPS.
   e. FRAMING FOR NON-LOAD-BEARING INTERIOR PARTITIONS WHERE INDICATED.
   f. ROOF CONSTRUCTION.
   g. PLYWOOD BACKING PANELS FOR TECHNOLOGY ROOMS, ELECTRICAL AND TELEPHONE PANELS, DOC PS 1, EXPOSURE 1, C-D PLUGGED NOT LESS THAN 3/4 INCHES NOMINAL THICKNESS.
   h. PLYWOOD BLOCKING FOR AV VISUAL DISPLAY, ART WORK AND OTHER EQUIPMENT MOUNTED ON PARTITIONS, COLUMNS AND GYPSUM BOARD CONSTRUCTION.
   i. PLYWOOD BACKING PANELS CONCEALED IN WALL CAVITY BEHIND OVERHEAD FURNITURE BINS, UPPER MILLWORK CABINET AND AS REQUIRED BY THE AMERICAN WOODWORK INSTITUTE FOR SUPPORT OF ARCHITECTURAL WOODWORK.

6- TRIM ACCESSORIES

A. FOR TRIM WITH BACK FLANGES INTENDED FOR FASTENERS, ATTACH TO FRAMING WITH SAME FASTENERS USED FOR PANELS. OTHERWISE, ATTACH TRIM ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

B. CONTROL JOINTS: INSTALL CONTROL JOINTS AT LOCATIONS IN ACCORDING TO ASTM C 840 FOR PLACING CONTROL AND EXPANSION JOINTS AND IN SPECIFIC LOCATIONS APPROVED BY ARCHITECT FOR VISUAL EFFECT. CONTROL JOINTS SHALL BE PROVIDED AT PARTITIONS WHERE THE UNINTERRUPTED SPAN IS 30 FEET IN ANY DIRECTION. EXPANSION JOINTS SHALL BE PROVIDED TO COINCIDE WITH BUILDING EXPANSION JOINTS.

C. ON ALL FIRE RATED PARTITIONS – ALL PENETRATIONS AND JOINTS ARE TO BE TAPED AND SPACKLED SLAB TO SLAB.

D. CORNER BEADS ARE TO BE INSTALLED ON ALL CORNERS AND TO BE SPACKLED SMOOTH WITH ADJACENT AREA.

E. TRIM ACCESSORIES.

1. INTERIOR TRIM: ASTM C 1047.
2. MATERIAL: GALVANIZED OR ALUMINUM-COATED STEEL SHEET.
3. SHAPES:
   a. CORNERBEAD.
   b. BULLNOSE BEAD.
   c. LC-BEAD: J-SHAPED; EXPOSED LONG FLANGE RECEIVES JOINT COMPOUND.
   d. L-BEAD: L-SHAPED; EXPOSED LONG FLANGE RECEIVES JOINT COMPOUND.
   e. U-BEAD: J-SHAPED; EXPOSED SHORT FLANGE DOES NOT RECEIVE JOINT COMPOUND.
   f. EXPANSION (CONTROL) JOINT.
   g. CURVED-EDGE CORNERBEAD: WITH NOTCHED OR FLEXIBLE FLANGES.

7- INSULATION

A. PROVIDE INSULATION AND RELATED MATERIALS WITH THE FIRE-TEST-RESPONSE CHARACTERISTICS INDICATED, AS DETERMINED BY TESTING IDENTICAL PRODUCTS PER TEST METHOD INDICATED BELOW BY UL OR ANOTHER TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. IDENTIFY MATERIALS WITH APPROPRIATE MARKINGS OF APPLICABLE TESTING AND INSPECTING AGENCY.

1. SURFACE-BURNING CHARACTERISTICS: ASTM E 84.
2. FIRE-RESISTANCE RATINGS: ASTM E 119.
3. COMBUSTION CHARACTERISTICS: ASTM E 136.

B. UNLESS OTHERWISE INDICATED ON THE CONSTRUCTION DRAWINGS, OR IN THE ABSENCE OF SPECIFICATION, PROVIDE BATT OR ROLL TYPE INSULATION PRODUCTS AS FOLLOWS:

1. FOR NON-RATED GYPSUM BOARD PARTITION ASSEMBLIES, UNFACED GLASS-FIBER SOUND ATTENUATION BLANKET INSULATION ASTM C 665, TYPE I (BLANKETS WITHOUT MEMBRANE FACING); CONSISTING OF FIBERS; WITH MAXIMUM FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES OF 25 AND 50, RESPECTIVELY.
2. FOR FIRE RATED GYPSUM BOARD PARTITION ASSEMBLIES, UNFACED, SLAG-WOOL-FIBER/ROCK-WOOL-FIBER BLANKET INSULATION: ASTM C 665, TYPE I (BLANKETS WITHOUT MEMBRANE FACING); CONSISTING OF FIBERS; WITH MAXIMUM FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES OF 25 AND 50, RESPECTIVELY.
   a. THICKNESS: AS INDICATED ON PARTITION TYPES DRAWING (S) BUT NO LESS THAN 2 INCHES WHEN 2 1/2 INCHES STUD ARE INDICATED FOR UNFACED GLASS-FIBER SOUND ATTENUATION BLANKET AND NO LESS THAN 1 1/2 INCHES WHEN 2 1/2 INCHES SHAFT WALL STUD ARE INDICATED FOR UNFACED, SLAG-WOOL-FIBER/ROCK-WOOL-FIBER BLANKET INSULATION.
   b. WIDTH: TO SUIT METAL STUD FRAMING SPACING INDICATED ON PARTITION TYPES DRAWING (S)
   c. DENSITY: 3.0 PCF MINIMUM FOR AN STC RATING OF 45 MINIMUM.
   d. INSTALLATION: PLACE INSULATION IN CAVITIES FORMED BY FRAMING MEMBERS TO PRODUCE A FRICTION FIT BETWEEN EDGES OF INSULATION AND ADJOINING FRAMING MEMBERS.
   e. LOCATION: MECHANICAL ROOMS, DATA CENTERS, UPS, SWITCHGEAR, BATTERY STORAGE ROOMS AND ANY ROOM WITH ELECTRICAL EQUIPMENT SUCH AS POWER DISTRIBUTION UNITS, TRANSFORMERS AND TECHNOLOGY ROOMS (ALSO KNOWN AS IDF, MDF, TR, LAN), AREA SEPARATION, CORRIDOR WALLS, TENANT SEPARATION, FIRE AREA SEPARATIONS, FIRE BARRIERS, SMOKE BARRIERS, SHAFT WALLS OF ELEVATORS, ELECTRICAL AND MECHANICAL SHAFTS AND WHERE INDICATED ON THE CONSTRUCTION DOCUMENTS
3. FOR METAL-FRAMED WALL CAVITIES WHERE CAVITY HEIGHTS EXCEED 8 FEET SUPPORT UNFACED BLANKETS MECHANICALLY.
4. FOR PARTITIONS NOT EXTENDING THROUGH SUSPENDED CEILING SYSTEM, INSTALL, 3 INCHES THICK, UNFACED FIBER SOUND ATTENUATION BLANKET INSULATION OVER SUSPENDED CEILINGS GRID AT PARTITIONS IN A WIDTH THAT EXTENDS 48 INCHES ON CENTER.
   a. PLACE ON EITHER SIDE OF PARTITION FOR THE ENTIRE RUN OF THE PARTITION WITHIN THE ROOM OR SPACE.
5. WHEN NEW PARTITION OR MILLWORK (DEMOUNTABLE PARTITION SYSTEM) INTERSECTS BUILDING EXTERIOR AT PERIMETER WALL CLIMATE CONTROL UNIT ENCLOSURES (CONVECTORS, INDUCTION UNIT, ETC..) PROVIDE ACOUSTIC PILLOWS BY "CONTROLLED ACOUSTICS CORPORATION" OR APPROVED EQUAL WITHIN CAVITY OF THE CLIMATE CONTROL UNIT ENCLOSURES COINCIDING WITH THE PARTITION SYSTEM INSTALLED TO MAINTAIN STC RATING AND ELIMINATE FLANKING NOISE BETWEEN ADJACENT ROOMS OR SPACES.
   a. WHERE EXISTING PARTITIONS ARE SCHEDULED TO REMAIN, PROVIDE SAME ACOUSTIC PILLOWS.

8- VAPOR RETARDERS

A. UNLESS OTHERWISE INDICATED ON THE CONSTRUCTION DRAWINGS, OR IN THE ABSENCE OF SPECIFICATION, PROVIDE VAPOR RETARDERS TYPE PRODUCTS AS FOLLOWS:

B. LOCATION: ON NON-FIRE RATED GYPSUM BOARD PARTITION ASSEMBLIES, PROVIDE REINFORCED-POLYETHYLENE VAPOR RETARDERS; 2 OUTER LAYERS OF POLYETHYLENE FILM LAMINATED TO AN INNER REINFORCING LAYER CONSISTING OF EITHER NYLON CORD OR POLYESTER SCRIM AND WEIGHING NOT LESS THAN 25 LB/1000 SQ. FT., WITH MAXIMUM PERMEANCE RATING OF 0.0507 PERM.

1. PRODUCTS:
   a. RAVEN INDUSTRIES INC.; DURA-SKRIM 6WW.
   b. REEF INDUSTRIES, INC.; GRIFFOLYN T-65.
2. LOCATION: ON FIRE RATED GYPSUM BOARD PARTITION ASSEMBLIES PROVIDE FIRE-RETARDANT, REINFORCED-POLYETHYLENE VAPOR RETARDERS: 2 OUTER LAYERS OF POLYETHYLENE FILM LAMINATED TO AN INNER REINFORCING LAYER CONSISTING OF EITHER NONWOVEN GRID OF NYLON CORD OR POLYESTER SCRIM AND WEIGHING NOT LESS THAN 22 LB/1000 SQ. FT., WITH MAXIMUM PERMEANCE RATING OF 0.1317 PERM AND WITH FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES OF NOT MORE THAN 5 AND 60, RESPECTIVELY.

1. PRODUCTS:
   a. RAVEN INDUSTRIES INC.; DURA-SKRIM 2FR.
   b. REEF INDUSTRIES, INC.; GRIFFOLYN T-55 FR.
   c. LOCATION: MECHANICAL ROOMS, DATA CENTERS, UPS, SWITCHGEAR, BATTERY STORAGE ROOMS, AND ANY ROOM WITH ELECTRICAL EQUIPMENTS SUCH AS POWER DISTRIBUTION UNITS, TRANSFORMERS AND TECHNOLOGY ROOMS (ALSO KNOWN AS IDF, MDF, TR, LAN).

C. VAPOR-RETARDER TAPE: PRESSURE-SENSITIVE TAPE OF TYPE RECOMMENDED BY INSULATION MANUFACTURERS FOR SEALING JOINTS AND PENETRATIONS IN VAPOR-RETARDER FACINGS.

9- GYPSUM BOARD FINISHING

A. UNLESS OTHER WISE INDICATED, LEVEL 4 GYPSUM BOARD FINISH SHALL BE THE FINISH LEVEL FOR THIS PROJECT DOCUMENTED HEREWITH.

B. GENERAL: TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR APPLIED FINISHED MATERIALS SPECIFIED ON . PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES.

C. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS.

D. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.

E. GYPSUM BOARD FINISH LEVELS: REFER TO SCHEDULE OF FINISHES ON FINISH PLAN AND COORDINATE GYPSUM FINISH PANELS TO LEVELS INDICATED BELOW:

1. LEVEL 1: CEILING PLENUM AREAS, CONCEALED AREAS, AND WHERE INDICATED.
2. LEVEL 2: PANELS THAT ARE SUBSTRATE FOR TILE AND PANELS THAT ARE SUBSTRATE FOR ACOUSTICAL TILE.
3. LEVEL 3: SURFACES RECEIVING MEDIUM OR HEAVY TEXTURED FINISH BEFORE PAINTING OR HEAVY WALL COVERING AND WHERE LIGHTING IS NOT CRITICAL.
4. LEVEL 4: THIS IS THIS PROJECT STANDARD LEVEL FOR ALL EXPOSED GYPSUM BOARD PARTITIONS SURFACES AND SURFACES RECEIVING LIGHT TEXTURED FINISH, WALL COVERING AND FLAT PAINTS. APPLY REQUIRED DRYWALL PRIMERS TO ROUGH DRYWALL PARTITION SURFACES BEFORE FINAL FINISHES PER ASTM C840 AND AS RECOMMENDED BY APPLIED FINISHED MATERIAL MANUFACTURER.
5. LEVEL 5: FOR SURFACES RECEIVING GLOSS AND SEMIGLOSS ENAMELS, SPECIAL THIN VENEER FINISHES, WRITABLE SURFACE WALL COVERING AND SURFACES SUBJECT TO SEVERE LIGHTING.
   a. EMBED TAPE AND APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES, AND APPLY SKIM COAT OF JOINT COMPOUND OVER ENTIRE SURFACE WHERE INDICATED.

2.1.8 FIRE EXTINGUISHER & CABINET

A. PORTABLE FIRE EXTINGUISHERS PLACEMENT & INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 10.

B. FIRE EXTINGUISHER CABINET: BASIS-OF-DESIGN PRODUCT: PROVIDE IN QUANTITIES INDICATED ON THE DRAWINGS ARCHITECTURAL SERIES, VERTICAL DUO, MODEL NUMBER 2409-R2 AND FS-2409-R2 BY LARSEN OR A COMPARABLE PRODUCT BY ONE OF THE FOLLOWING:

1. JL INDUSTRIES, INC.
2. KIDDE FYRNETICS.
3. POTTER ROEMER; DIV. OF SMITH INDUSTRIES, INC.

C. WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF PORTABLE FIRE EXTINGUISHERS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.

1. FAILURES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   a. FAILURE OF HYDROSTATIC TEST ACCORDING TO NFPA 10.
   b. FAULTY OPERATION OF VALVES OR RELEASE LEVERS.
   c. WARRANTY PERIOD: SIX YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

1. MATERIAL: PROVIDE FOR THE ENTIRE PROJECT COLD-ROLLED STEEL SHEET; ASTM A 1008/A 1008M, COMMERCIAL STEEL(CS), TYPE B UNLESS OTHERWISE OTHER INDICATED ON THE DRAWINGS. OTHER MATERIALS SUCH AS STAINLESS STEEL, ANODIZED ALUMINUM OR BRONZE ANODIZED ALUMINUM MAY BE INDICATED ELSEWHERE ON THE DRAWINGS.
2. CABINET TYPE: SUITABLE FOR SPECIFIED FIRE EXTINGUISHER
3. CABINET CONSTRUCTION: NONRATED AND FIRE RATED NO LESS THAN RATING OF ADJACENT WALLS INDICATED.
4. CABINET MATERIAL: ENAMELED-STEEL SHEET UNLESS SPECIFIED ON DRAWINGS.
5. RECESSED CABINET: CABINET BOX RECESSED IN WALLS OF SUFFICIENT DEPTH TO SUIT STYLE OF TRIM INDICATED.
6. EXPOSED FLAT TRIM: ONE-PIECE COMBINATION TRIM AND PERIMETER DOOR FRAME OVERLAPPING SURROUNDING WALL SURFACE WITH EXPOSED TRIM FACE AND WALL RETURN AT OUTER EDGE (BACKBEND) OF 1/4 TO 5/16 INCH.
7. CABINET TRIM MATERIAL: SAME MATERIAL AND FINISH AS DOOR.
8. DOOR MATERIAL: STEEL SHEET.
9. DOOR STYLE: VERTICAL DUO PANEL WITH FRAME.
10. DOOR GLAZING: ACRYLIC SHEET.
11. ACRYLIC SHEET COLOR: CLEAR TRANSPARENT.
12. DOOR HARDWARE: MANUFACTURER'S STANDARD DOOR-OPERATING HARDWARE OF PROPER TYPE FOR CABINET TYPE, TRIM STYLE, AND DOOR MATERIAL AND STYLE INDICATED.
    a. PROVIDE PROJECTING LEVER HANDLE WITH CAM-ACTION LATCH IN CLEAR ANODIZED FINISH. WHERE STAINLESS STEEL RECESSED CABINETS ARE INDICATED, LEVER FINISH SHALL BE # 4 STAINLESS STEEL. WHERE BRONZE ANODIZED ALUMINUM FIRE EXTINGUISHER CABINETS ARE INDICATED, LEVER FINISH SHALL BE SATIN BRONZE.
    b. PROVIDE CONCEALED HINGE PERMITTING DOOR TO OPEN 180 DEGREES.
14. MOUNTING BRACKET: MANUFACTURER'S STANDARD STEEL, DESIGNED TO SECURE FIRE EXTINGUISHER TO FIRE-PROTECTION CABINET, OF SIZES REQUIRED FOR TYPES AND CAPACITIES OF FIRE EXTINGUISHERS INDICATED, WITH BAKED-ENAMEL FINISH IN RED COLOR.
15. FINISHES:FACTORY PRIMED FOR FIELD PAINTING UNLESS OTHERWISE INDICATED AND SPECIFIED ELSEWHERE ON THE DRAWINGS.
    a. COLOR AND TEXTURE: MATCH COLOR OF ADJACENT WALL IN SEMI GLOSS FINISH.
    b. PAINT SCHEDULE: PAINT INTERIOR AND EXTERIOR OF FIRE EXTINGUISHER CABINET. DO NOT PAINT LEVER.
15. MOUNTING HEIGHT: INSTALL FIRE EXTINGUISHER CABINET WITH TOP AT 4'-FEET, 6-INCHES ABOVE CONCRETE SLAB.
16. RECESSED CABINETS AND FIRE EXTINGUISHER SCHEDULE: PROVIDE FOR ENTIRE PROJECT EXCEPT AS INDICATED IN SECTION C4 BELOW.

C. FIRE EXTINGUISHERS

1. GENERAL REQUIREMENTS: PROVIDE INSTRUCTION LABELS, INCLUDE PICTORIAL MARKING SYSTEM COMPLYING WITH NFPA 10, APPENDIX B AND BAR CODING FOR DOCUMENTING FIRE EXTINGUISHER LOCATION, INSPECTIONS, MAINTENANCE, AND RECHARGING
2. FOR RECESSED CABINETS: PROVIDE MULTIPURPOSE DRY-CHEMICAL TYPE IN STEEL CONTAINER, MODEL # MP10, UL-RATED 4A-80B:C, 10-LB NOMINAL CAPACITY, WITH MONOAMONIUM PHOSPHATE-BASED DRY CHEMICAL IN ENAMELED-STEEL CONTAINER.
3. FOR SURFACE WALL MOUNT: PROVIDE CARBON DIOXIDE TYPE IN STEEL CONTAINER MODEL # CD10, UL-RATED 10:B:C.
4. SCHEDULE: PROVIDE SPECIFIED CARBON DIOXIDE TYPE FIRE EXTINGUISHER IN QUANTITIES INDICATED ON DRAWINGS BUT NOT LESS THAN 1 IN THE FOLLOWING ROOMS OR SPACES IDENTIFIED FOR THAT USE AS PART OF THE FITOUT AND IN EXISTING ROOMS THAT A ARE PART OF THE BUILDING CORE OR BUILDING SPACES ON THE FLOOR(S):
   a. MECHANICAL ROOMS.
   b. UPS AND BATTERY ROOMS
   c. INFORMATION TECHNOLOGY ROOMS AKA DATA CENTERS, IDF, MDF, TR, LAN ETC...
   d. ELECTRICAL, SWITCH AND SWITCH GEAR ROOMS.
   e. TELEPHONE CLOSETS, PBX ROOMS, OR SIMILAR USE ROOMS.
5. MOUNTING BRACKETS: MANUFACTURER'S STANDARD STEEL # 575 DESIGNED TO SECURE FIRE EXTINGUISHER TO WALL OR STRUCTURE, OF SIZES REQUIRED FOR TYPES AND CAPACITIES OF FIRE EXTINGUISHERS INDICATED, WITH BAKED-ENAME FINISH.
   a. COLOR: RED
   b. MOUNTING HEIGHT: INSTALL FIRE EXTINGUISHER WITH FLAT BRACKET LEG AT 3-FEET, 2-INCHES ABOVE CONCRETE SLAB.
6. IDENTIFICATION: PICTOGRAM SIGN OR LETTERING COMPLYING WITH AUTHORITIES HAVING JURISDICTION FOR LETTER STYLE, SIZE, SPACING, AND LOCATION. LOCATE AS INDICATED BY ARCHITECT.
   a. IDENTIFY BRACKET-MOUNTED FIRE EXTINGUISHERS WITH THE WORDS "FIRE EXTINGUISHER" IN RED LETTER DECALS APPLIED TO MOUNTING SURFACE,
   b. ORIENTATION: VERTICAL

E. ADJUSTING AND CLEANING:

1. TOUCH UP MARRED FINISHES, OR REPLACE FIRE-PROTECTION CABINETS THAT CANNOT BE RESTORED TO FACTORY-FINISHED APPEARANCE. USE ONLY MATERIALS AND PROCEDURES RECOMMENDED OR FURNISHED BY FIRE-PROTECTION CABINET MANUFACTURER.
2. REPLACE FIRE-PROTECTION CABINETS THAT HAVE BEEN DAMAGED OR HAVE DETERIORATED BEYOND SUCCESSFUL REPAIR BY FINISH TOUCH-UP OR SIMILAR MINOR REPAIR PROCEDURES

F. SIGNAGE:

1. PROVIDE WALL MOUNTED FIRE EXTINGUISHER LOCATION SIGN ABOVE WALL MOUNTED FIRE EXTINGUISHERS AND FIRE EXTINGUISHERS WITHIN CABINETS.
   a. SIZE: 4" X 6" (LONG DIMENSION VERTICAL)
   b. THICKNESS: 1/8"
   c. BRACKET: EITHER (2) 1" X 1" ALUMINUM ANGLES OR SINGLE "U" FORMING "I" (I) TYPE 6" LONG.
   d. MATERIAL: BASE OF DESIGN: FOR BRACKETS AND SIGN, SATIN ALUMINUM WITH ALL EDGES SANDBLASTED.
      - ALTERNATE: STAINLESS STEEL # 4 FINISH.
   e. GRAPHICS: FIRE EXTINGUISHER PICTORIAL, ENGRAVED AND FILLED WITH MATT RED PAINT.
   f. MOUNTING: MOUNT SIGN WITH BOTTOM AT 80 INCHES CENTERED ON WALL MOUNTED FIRE EXTINGUISHER OR FIRE EXTINGUISHER CABINET.
   g. FOR ITEM (d) SUBMIT LABOR AND MATERIAL FOR ALUMINUM AND STAINLESS STEEL FINISH FOR REVIEW AND APPROVAL.

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JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK.
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.599.3333
www.syska.com

CONSULTANT

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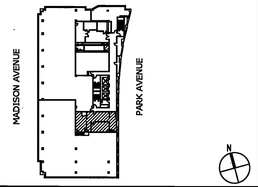
NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & LL REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



PROJECT NUMBER 112162.01	JP MORGAN CHASE 270 PARK AVENUE NEW YORK, NY SC2 LEVEL
SCALE NA	
DATE 08.08.12	PROJECT GENERAL NOTES SHEET 4 OF 4
PROJECT MANAGER CR	
PROJECT ARCHITECT MT	
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REGISTERED ARCHITECT TED MOUDIS No. 018102 STATE OF NEW YORK

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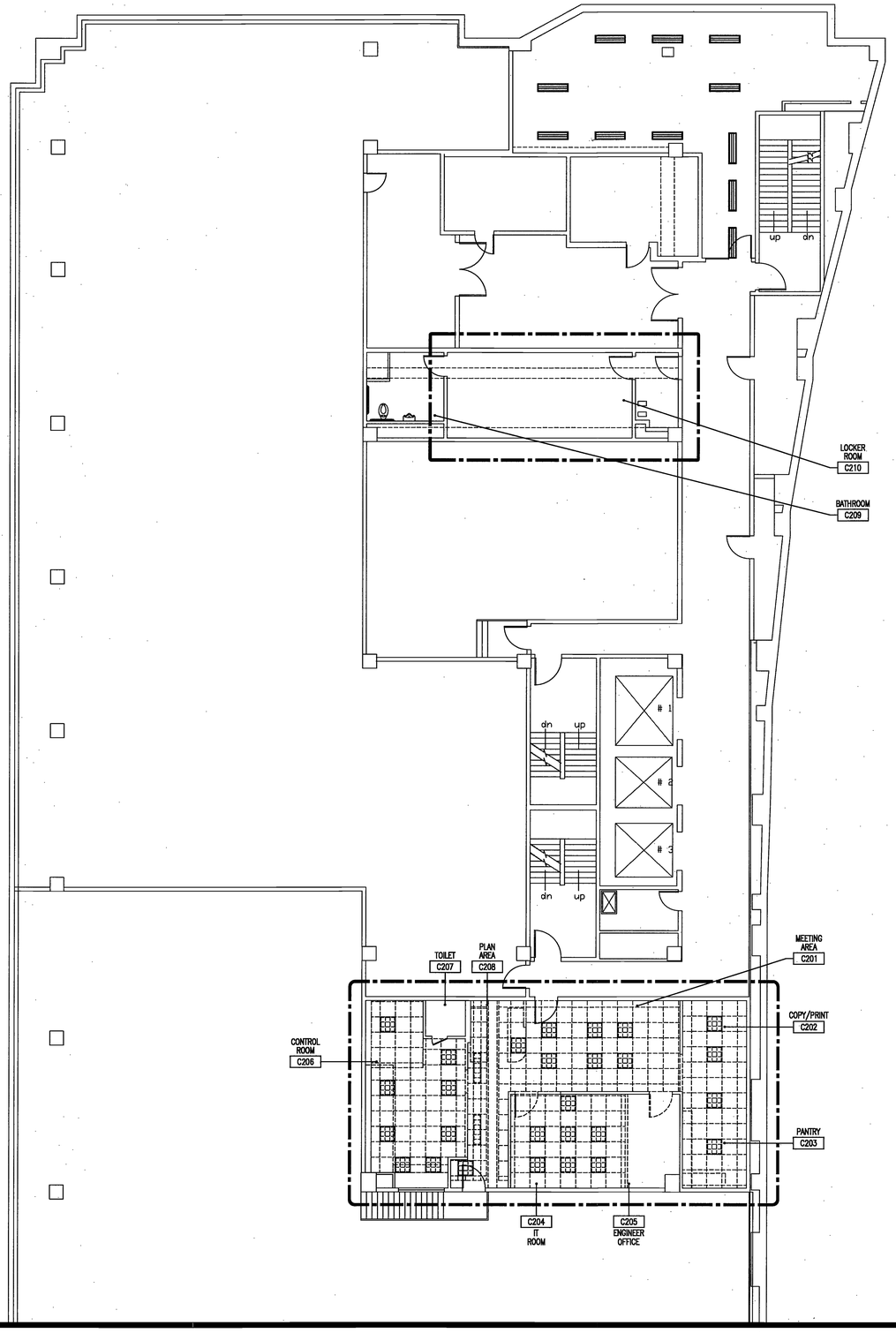
B. SULAIMAN ARSHAD
JAN 27 2014
ACCEPTANCE FOR PERMIT UNDER DIRECTIVE NO. 14/19



DEMOLITION LEGEND

SYMBOL	DESCRIPTION
	EXISTING BLDG. CORE, PARTITION AND MILLWORK TO REMAIN
======	EXISTING CONSTRUCTION TO BE DEMOLISHED

DEMOLITION NOTES

CONSTRUCTION

1. REMOVE ALL EXISTING CONSTRUCTION AS INDICATED ON THESE PLANS INCLUDING DOORS, FRAMES, ALL HANGING CLIPS, STRAPS, HANGERS ETC. FROM SLAB ABOVE.
2. KEEP GYPSUM BOARD FURRING AND WALL FINISH ON COLUMNS, CORE AND PERIMETER CONSTRUCTION, UNO.
3. AREAS OF WORK INTENDED TO REMAIN BUT INADVERTENDLY DAMAGED SHALL BE REPAIRED TO A PRE-DEMOLITION CONDITION AT THE CONTRACTORS EXPENSE.
4. COORDINATE WITH BUILDING MANAGEMENT AND BUILDING RULES & REGULATIONS FOR DOCK PROCEDURES, INCLUDING ELEVATOR TIMES AND NOISE RESTRICTIONS.

FLOOR

5. REMOVE ALL FLOOR FINISHES INCLUDING BUILDING MATERIALS, ADHESIVES, TACKLESS STRIPS, ETC. LEAVE BASE BUILDING FLOOR SLAB AND/OR RAISED FLOOR CLEAN AND LEVEL FOR NEW FINISH APPLICATION.
6. PLUG/FILL ALL UNUSED FLOOR CORES WITH SIMILAR MATERIAL TO MATCH EXISTING ADJACENT CONDITION.

CEILING

7. REMOVE ALL EXISTING CEILING CONSTRUCTION INCLUDING, BUT NOT LIMITED TO: GRID FOR ACCOUSTICAL CEILING SYSTEM AND GYPSUM BOARD CEILING AND SUPPORT SYSTEMS.

RECYCLING

8. CEILING TILES WILL BE RECYCLED; COORDINATE REQUIREMENTS WITH NEW CEILING TILE MANUFACTURER.
9. CARPET WILL BE RECYCLED; COORDINATE REQUIREMENTS WITH NEW CARPET TILE MANUFACTURER.
10. IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO REMOVE, TRANSPORT AND DISPOSE OF DEBRIS. MINIMUM 50% OF ALL DEBRIS CREATED ON JOB SITE SHOULD BE RECYCLED ACCORDING TO CHICAGO CODE.

ELECTRICAL / TELEPHONE / DATA

11. REMOVE ALL EXISTING TELEPHONE AND POWER FLOOR OUTLETS, WALL OUTLETS, JUNCTION BOXES, SWITCHES, WIRING AND CONNECTING CONDUIT BACK TO ELECTRICAL PANEL. PLUG HOLES WITH LIGHTWEIGHT CONCRETE.
12. CM/ G.C. WILL BE RESPONSIBLE TO TRACE, PROTECT & MAINTAIN EXISTING VOICE/ DATA & SECURITY CABLES ETC. FOR DURATION OF CONSTRUCTION THAT MAY SERVE OUTSIDE SCOPE OF WORK.
13. TEMPORARY LIGHTING IS TO BE PROVIDED, AS PER CODE, DURING AND AFTER DEMOLITION WORK IS COMPLETED.

GENERAL

14. asdfGC TO COORDINATE DEMOLITION AS REQUIRED IN ORDER TO MEET DESIGN INTENT FOR THE ENTIRE SCOPE OF THE PROJECT (ARCHITECTURAL, STRUCTURAL, MEP, ETC.)
15. GC SHALL COORDINATE & CONFIRM ALL ACTIVITIES IN CONNECTION WITH WHEN AND HOW WORK IS TO BE PERFORMED WITH OWNER & INCLUDED THIS SERVICE UNDER BASE CONTRACT.
16. THE GENERAL CONTRACTOR SHALL ASCERTAIN THAT THE AREA OF DEMOLITION HAS BEEN CLEARED BY OTHERS OF ALL MOVEABLE EQUIPMENT IN ORDER TO ALLOW FOR DEMOLITION TO PROCEED. GC/CM SHALL NOTIFY OWNER IMMEDIATELY OF ANY SUCH CONDITIONS THAT PREVENTS PROCEEDING WITH DEMOLITION.
17. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND SERVICES FOR ALL DEMOLITION OF WORK, INCLUDING REMOVAL FROM THE BUILDING AS NOTED ON THE DRAWINGS. THE WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
18.
    a. TENANT PARTITIONS OF MASONRY, METAL, DRYWALL AND GLASS, INCLUDING EXCESS COLUMN FURRING. DOORS & HARDWARE AS NOTED ON PLAN.
    b. CEILING, LIGHT FIXTURES, DIFFUSERS, GRILLES, ETC...
    c. UNNECESSARY MECHANICAL EQUIPMENT, STRUCTURAL SUPPORTS, AND ASSOCIATED PIPING. (SEE ENGINEERING DRAWINGS)
    d. UNNECESSARY CONDUITS, WIRING, THERMOSTATS, CONTROL DEVICES, LIGHT SWITCHES AND JUNCTION BOXES. (SEE ENGINEERING DRAWINGS)
    e. ALL OTHER ITEMS AS DEFINED ON DRAWINGS.
    f. REFER TO ENGINEERING DRAWINGS FOR COORDINATION OF ALL DEMOLITION/ RELOCATION OF SMOKE DETECTORS, DIFFUSERS, DUCTWORK, FIRE PROTECTION DEVICES AND ELECTRICAL OUTLETS.
19. PROTECTION OF ADJACENT SURFACES & FINISHES ARE REQUIRED, INCLUDING WINDOW BLINDS.
20. ALL BUILDING STANDARD CONVECTORS TO BE PROTECTED & SEALED DURING DEMOLITION.
21. G.C. TO COORDINATE DEMOLITION AS REQUIRED IN ORDER TO MEET DESIGN INTENT IN THE ENTIRE SCOPE OF THE PROJECT (ARCHITECTURAL, STRUCTURAL, MEP ETC. VIF BEFORE PLACING BID AND MAKE THIS SCOPE OF WORK PART OF THE BASE CONTRACT. NO EXCLUSIONS ACCEPTED)
22. G.C. MUST NOTIFY BUILDING MANAGER OR CHIEF ENGINEER OF ALL WORK WHICH MAY AFFECT THE BASE BUILDING SYSTEMS AND OBTAIN ALL APPROVALS PRIOR TO COMMENCEMENT OF THIS WORK.
23. ALL REMOVAL OF DUCTWORK, EQUIPMENT & CABLING, SHUTDOWN OF ANY SYSTEM INCLUDING PLUMBING, HEATING, ELECTRICAL, AIR CONDITIONING, ETC., SHALL BE COORDINATED WITH THE BUILDING MANAGEMENT & OWNER.
24. G.C. SHALL BE RESPONSIBLE FOR FIELD VERIFICATION & WALK THROUGH WITH SUBCONTRACTORS TO DOCUMENT CONDITIONS & SCOPE OF WORK BEFORE STARTING DEMOLITION WORK. (NO EXCLUSIONS ACCEPTED)
25. ALL DEMOLITION WORK REGARDING "FIRE SAFETY EQUIPMENT" MUST BE COORDINATED WITH BUILDING MANAGEMENT (SEE COVER SHEET) FOR THE DISCONNECT OF THE APPROPRIATE FIRE ALARM EQUIPMENT. ALL NECESSARY FIRE SAFETY EQUIPMENT AND ASSOCIATED CONDUIT & WIRING SHALL BE PROTECTED DURING DEMOLITION. ALL FIRE SAFETY EQUIPMENT SHALL BE KEPT IN FULL OPERATING ORDER AT ALL THE TIMES. FLOOR & ELEVATOR LOBBY TO HAVE ADEQUATE COVERAGE.
26. G.C. IS TO PROTECT ACCESS AREAS TO THE FLOOR DURING DEMOLITION TO AVOID DAMAGING ADJACENT AREAS (FINISH FLOOR SLAB, WINDOWS, WALLS, A/C ENCLOSURES, ETC.) CONTRACTOR IS RESPONSIBLE, AT HIS OWN EXPENSE, FOR REPAIRING OR REPLACING ANY DAMAGED ITEM TO THE SATISFACTION OF BUILDING OWNER/ MANAGER.
27. G.C. TO INSTALL A TEMPORARY FILTER ON THE RETURN AIR DUCT SOURCE BEFORE STARTING DEMOLITION. SEE BUILDING ENGINEER FOR ADEQUATE LOCATION.
28. G.C. SHALL PROVIDE FOR DAILY REMOVAL OF ALL DEMOLITION DEBRIS. AFTER COMPLETION OF DEMOLITION WORK ALL AREAS ARE TO BE LEFT "BROOM CLEAN."
29. ALL TRADES SHALL STAND BY FOR DEMOLITION WHEN REQUIRED. G.C. SHALL INCLUDE IN PRICING IF IT IS OVERTIME WORK.
30. ALL EXISTING FURNITURE REMOVAL IS TO BE BY OWNER.
31. ALL DEMOLITION SUBCONTRACTORS TO REVIEW THE AMOUNT OF DEBRIS REQUIRED FOR REMOVAL DURING WALK THROUGH.
32. DEMOLITION WORK ALL AREAS ARE TO BE LEFT "BROOM CLEAN."

DEMOLITION KEY NOTES

1 ---

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT
UNDER DIRECTIVE NO. 14/1975

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

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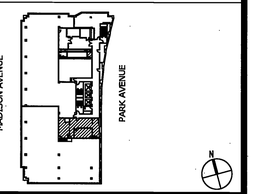
ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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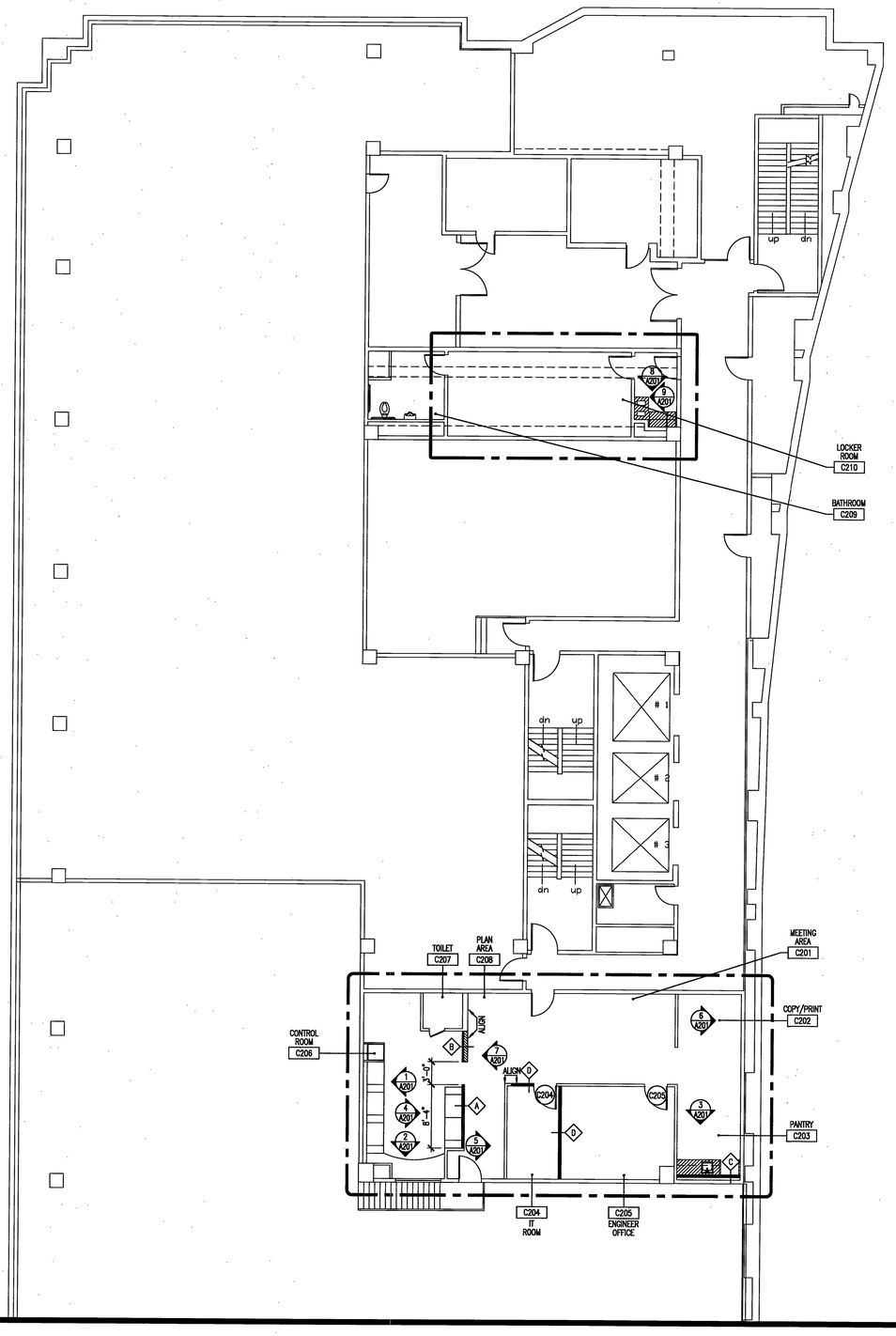
SCALE	1/8"=1'-0"
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-102DP-SC2.dw

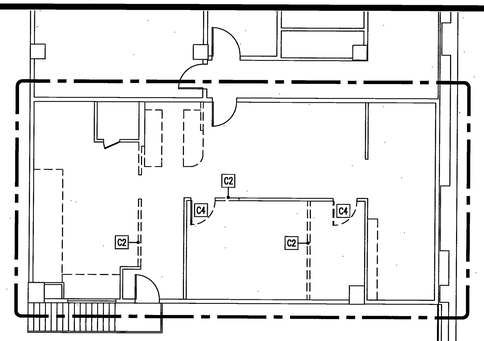
JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL
CEILING DEMOLITION PLAN

REGISTERED ARCHITECT TED MOUDIS No. 016196-1 STATE OF NEW YORK

DM-102.00
7 OF 20





1 PARTIAL DEMOLITION PLAN
SCALE: 1/8"=1'-0"

CONSTRUCTION LEGEND

SYMBOL	DESCRIPTION
	EXISTING BLDG. CORE AND PARTITION TO REMAIN
	NEW DRYWALL PARTITION
	NEW WIRED PARTITION BY WIRE CRAFTERS OR APPROVED EQUAL
XXXX	NEW DOOR & DOOR NUMBER
A	FLAG INDICATES SYMBOL FOR PARTITION TYPE LETTER INDICATE PARTITION TYPES
	NEW MILLWORK. SEE KEY PLAN FOR DETAILS

CONSTRUCTION NOTES

REFER TO GENERAL NOTES G-002.00, G-003.00 AND G-003.00.

CONSTRUCTION KEY NOTES

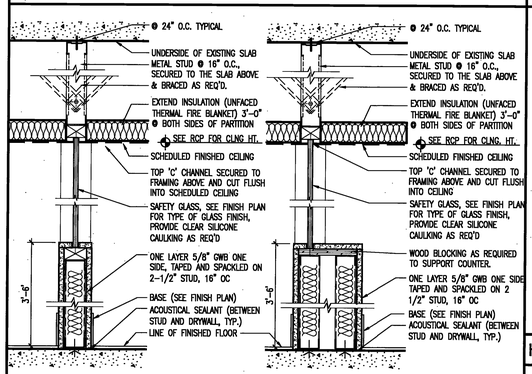
C1 CC TO PROVIDE ACCESS PANEL FOR ELECTRICAL CLOSET AND TO COST INTO BID. NO EXCEPTIONS.

C2 EXISTING PARTITION TO BE DEMOLISHED. PATCH/REPAIR FLOOR AS REQUIRED.

C3 FINISH TO MATCH EXISTING ADJACENT. PATCH AND REPAIR AS REQUIRED.

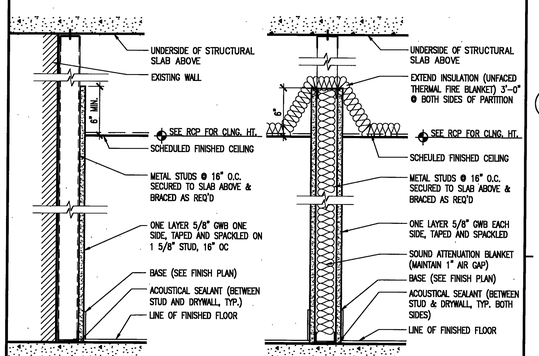
C4 EXISTING DOOR, FRAME & HARDWARE TO BE DEMOLISHED. PATCH/REPAIR ANY AREA OF WALL AFFECTED BY DEMOLITION AS REQUIRED.

PARTITION TYPES



A STUD FRAMELESS GLAZED PARTITION 6" ABOVE FINISH CEILING
SCALE: NOT TO SCALE

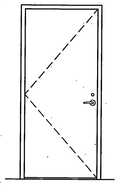
B STUD FRAMELESS GLAZED PARTITION 6" ABOVE FINISH CEILING
SCALE: NOT TO SCALE



C NON-RATED PARTITION EXTENDED 6" ABOVE CEILING
SCALE: NOT TO SCALE

D NON-RATED PARTITION EXTENDED 6" ABOVE CEILING
SCALE: NOT TO SCALE

DOOR SCHEDULE



DOOR SCHEDULE

HOLLOW METAL DOOR & FRAME W/ 3/4" UNDERCUT

LEVER: SCHLAGE MORTISE L-SERIES;
C204 – STOREROOM FUNCTION
C205 – OFFICE FUNCTION
LEVER MANHATTAN; 626 FINISH

HINGES: 1-1/2 PAIRS-STANLEY #FBB179; 4-1/2"X4-1/2"; 626 FINISH
SILENCERS: IVES # SR 65 (3 FOR EACH DOOR)

CLOSER: SURFACE MOUNTED OVER HEAD DOOR CLOSER BY LCN

DOOR STOP: FLOOR STOP BY FSB #3816; 626 FINISH

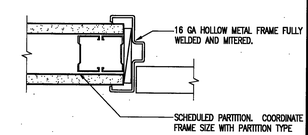
[FOR DOOR C204 ONLY, ADD]

CARD READER: ALL CONDUITS, JUNCTION BOXES BY GC. SEE ENGG DWGS FOR WIRING & SPECS

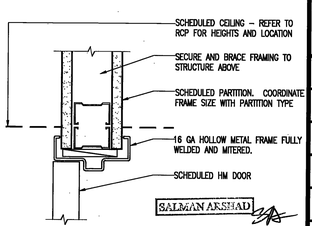
ELECTRIC STRIKE: BY VON DUPRIN; TIE TO BLDG CLASS 'E' FIRE ALARM SYSTEM

DOOR SCHEDULE DOOR #C204 & C205

HEAD & JAMB DETAILS



J1 JAMB @ HOLLOW METAL FRAME
SCALE: N.T.S.



H1 HEAD @ HOLLOW METAL FRAME
SCALE: N.T.S.

SALMAN AKSHAD
JAN 2 7 2014
UNDER DIRECTION FOR PERMIT
UNDER DIRECTIVE NO. 14/1975

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ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE1 9LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.596.3333
www.syska.com

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DEPT BLDG9 121654662 Job Number
SC110162039 Scan Code

NO.	DATE	DESCRIPTIONS
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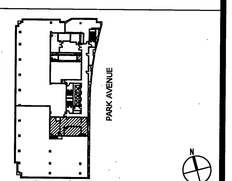
1	08.05.13	ISSUE FOR BID, FILING & LL REVIEW

ISSUE/REVISIONS

KEY PLAN



▨ - AREA OF WORK

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CADD FILE	112162.01-A-111CP-SC2.DW

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL CONSTRUCTION PLAN

REGISTERED ARCHITECT TED MOUDIS No. 016796-1 STATE OF NEW YORK

A-111.00

8 OF 20

Jan 13, 2014 - 2:24pm
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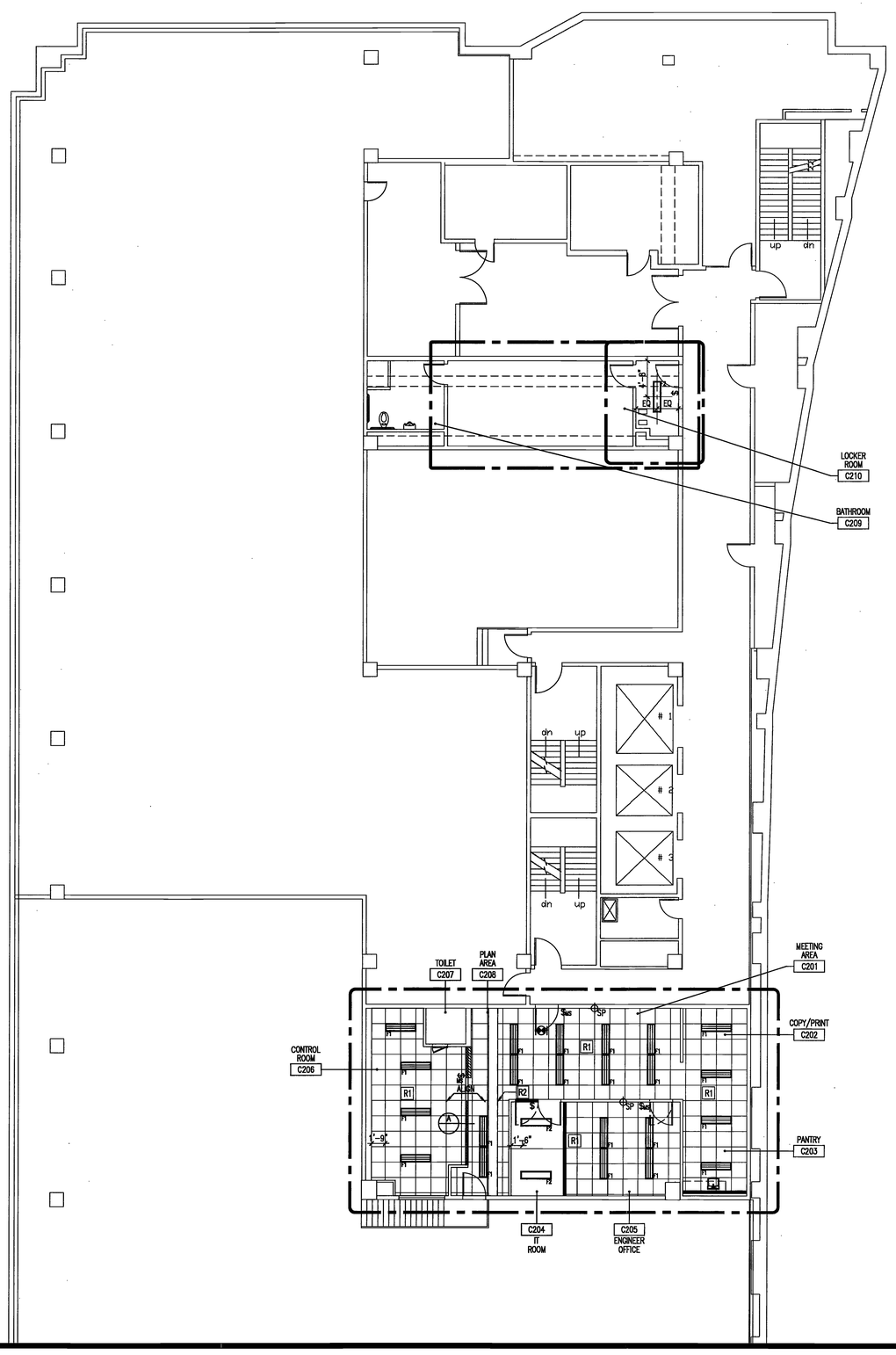

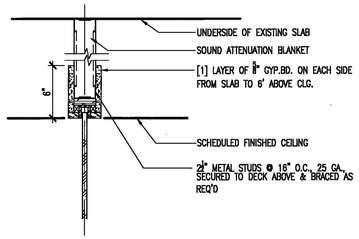

A SECTION DETAIL
SCALE: 1-1/2"=1'-0"

REFLECTED CEILING LEGEND

SYMBOL	DESCRIPTION
	TYPE F1: 1'X4' FLOURESCENT LIGHT FIXTURE BY LITHONIA LIGHTING #RTBB- -1-32WTB-MVOLT-BIHP-L835HTB-PWS1836-NYC
	TYPE F2: 1'X4' FLOURESCENT PENDANT LIGHT FIXTURE BY LEGION LIGHTING, #2800-232 ESD-DL-410. LAMPING: F32T8/ADV835/ALTO BY PHILIP OR APPROVED EQUAL BY SYLVANIA. FIXTURE ON STEM AND WIREGUARD
$	WALL LIGHT SWITCH TO MATCH BLDG. STANDARD
$os	WALL OCCUPANCY SENSOR LIGHT SWITCH
	EXISTING ACOUSTICAL CEILING & GRID SYSTEM
	NEW ACOUSTICAL CEILING TILES TO MATCH EXISTING

REFLECTED CEILING NOTES

LIGHTING

1. COORDINATE ALL LIGHT SWITCHES AND CIRCUITS OF ALL LIGHTING FIXTURES WITH ARCHITECT, ENGINEER AND TENANT PRIOR TO INSTALLATION.
2. NIGHT LIGHTS, EXIT LIGHTS AND ALARMS SHALL BE PROVIDED BY G.C. AS REQUIRED BY APPLICABLE CODE.
3. ENGINEER TO CHECK AND/OR RECOMMEND BULB WATTAGE AND ADJUSTMENT IN FIXTURE SWITCHING PLACEMENT AS NECESSARY.
4. ALL LIGHTING SHALL BE INSTALLED IN CONFORMANCE WITH ELECTRICAL CODES.
5. SOME LIGHTING FIXTURES MAY REQUIRE LONGER LEAD TIME. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALLOWING SUFFICIENT TIME FOR ORDER PLACEMENT, SUBMITTAL REVIEW, & ORDER RELEASE.
6. SUBSTITUTIONS FOR SPECIFIED LIGHTING PRODUCTS ARE NOT ACCEPTABLE & WILL NOT BE CONSIDERED. FAILURE TO INCLUDE ONE OF SPECIFIED PRODUCTS AS A PART OF BASE BID MAY, AT DISCRETION OF OWNER, INVALIDATE THE ENTIRE LIGHTING PRODUCT BID & EXCLUDE CONTRACTOR FROM FURTHER CONSIDERATION.
7. UNIT PRICING SHOULD BE MADE AVAILABLE ON ALL SPECIFIED LIGHTING FIXTURES.
8. DISTRIBUTOR NET PRICING HAS BEEN SECURED FROM MANUFACTURER OR MANUFACTURER'S REPRESENTATIVE & HAS BEEN USED IN PREPARATION OF PRELIMINARY OPINIONS OF PROBABLE COSTS. A RECORD OF SPECIFIC UNIT COSTS HAS BEEN SHARED WITH OWNER TO ASSIST IN ANALYSIS OF BID SUBMITTALS.
9. U.N.O. LIGHT SWITCH COVER PLATE FINISH TO MATCH BUILDING STANDARD. GANG ALL SWITCHES TOGETHER.
10. LIGHTS WILL BE CONTROLLED VIA WALL MOUNTED MOTION SENSORS. REFER TO ENGINEERING DRAWINGS.

LIFE SAFETY

11. NEW SMOKE DETECTORS AND/OR FIRE ALARM STROBES & SPEAKERS, ETC. SHALL BE FURNISHED AND INSTALLED AS REQUIRED. LOCATION TO BE DETERMINED IN THE FIELD. COORDINATE WITH BUILDING MANAGEMENT AND ARCHITECT. REFER TO ENGINEERING DRAWINGS.
12. GENERAL CONTRACTOR SHALL INSTALL NEW EXIT SIGNS AS REQUIRED BY LOCAL BUILDING CODE. SEE MEP DRAWINGS FOR LOCATIONS.
13. REFER TO ENGINEERING DRAWINGS FOR EMERGENCY LIGHT SPECIFICATIONS AND LOCAL LAW REQUIREMENTS.

HVAC

14. HVAC CONTRACTOR TO PROVIDE BALANCING REPORT & SUBMIT TO BUILDING MANAGEMENT. HVAC CONTRACTOR TO NOTIFY BUILDING CHIEF ENGINEER OF DATE & TIME OF BALANCING FOR WITNESS.
15. LOCATION OF THERMOSTATS TO BE ACCEPTED BY ARCHITECT PRIOR TO INSTALLATION. DO NOT INSTALL ON PANELED, FEATURE WALLS OR BEHIND FURNITURE PANELS. COORDINATE WITH FURNITURE INSTALLER.

FINISHES

16. PROVIDE SMOOTH FINISH @ ALL GYPSUM BOARD CEILINGS IF REQUIRED TO RECEIVE NEW FINISH.
17. GENERAL CONTRACTOR TO CLEAN/ WIPE DUST FROM TOPS OF EXPOSED MECHANICAL DUCTS AND LIGHT FIXTURES PRIOR TO FURNITURE INSTALLATION.
18. REFER TO FINISH PLAN FOR GYPSUM BOARD CEILING PAINT.

COORDINATION

19. GENERAL CONTRACTOR SHALL COORDINATE ALL TRADES AFFECTED BY HUNG CEILING CONSTRUCTION (HVAC, SPRINKLER, LIGHTING, POWER, ETC).
20. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COMPATIBILITY BETWEEN FIXTURE TRIMS & CEILING GRID.
21. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING SHOP DRAWINGS FOR SPECIFIED EQUIPMENT FOR APPROVAL TO ARCHITECT ON TIMELY BASIS.

REFLECTED CEILING KEY NOTES

R1 GC TO PROVIDE THE MAXIMUM CEILING HEIGHT ACHIEVABLE ON THE SPACE. COORDINATE WITH ALL TRADES.

R2 EXISTING PIPE LOWER THAT THE CEILING LINE. GC TO TERMINATE THE CEILING TIGHT TO THE EXISTING PIPING.

SALMAN ARSHAD
JAN 27 2014
ACCEPTANCE IS NOT A PERMIT UNDER DIRECTIVE NO. 14/1975

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ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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DEPT.BLDGS 121664662 Job Number
SC1101162036 Scan Code

NO.	DATE	DESCRIPTIONS
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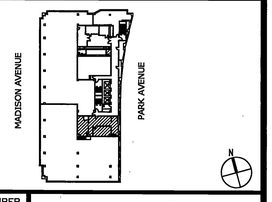
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN — AREA OF WORK



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SCALE	1/8"=1'-0"
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PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-121RP-SC2.DWG

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL
REFLECTED CEILING PLAN

REGISTERED ARCHITECT TED MOUDIS No. 016195 STATE OF NEW YORK

A-121.00

9 OF 20

Jan 13, 2014 - 2:25pm
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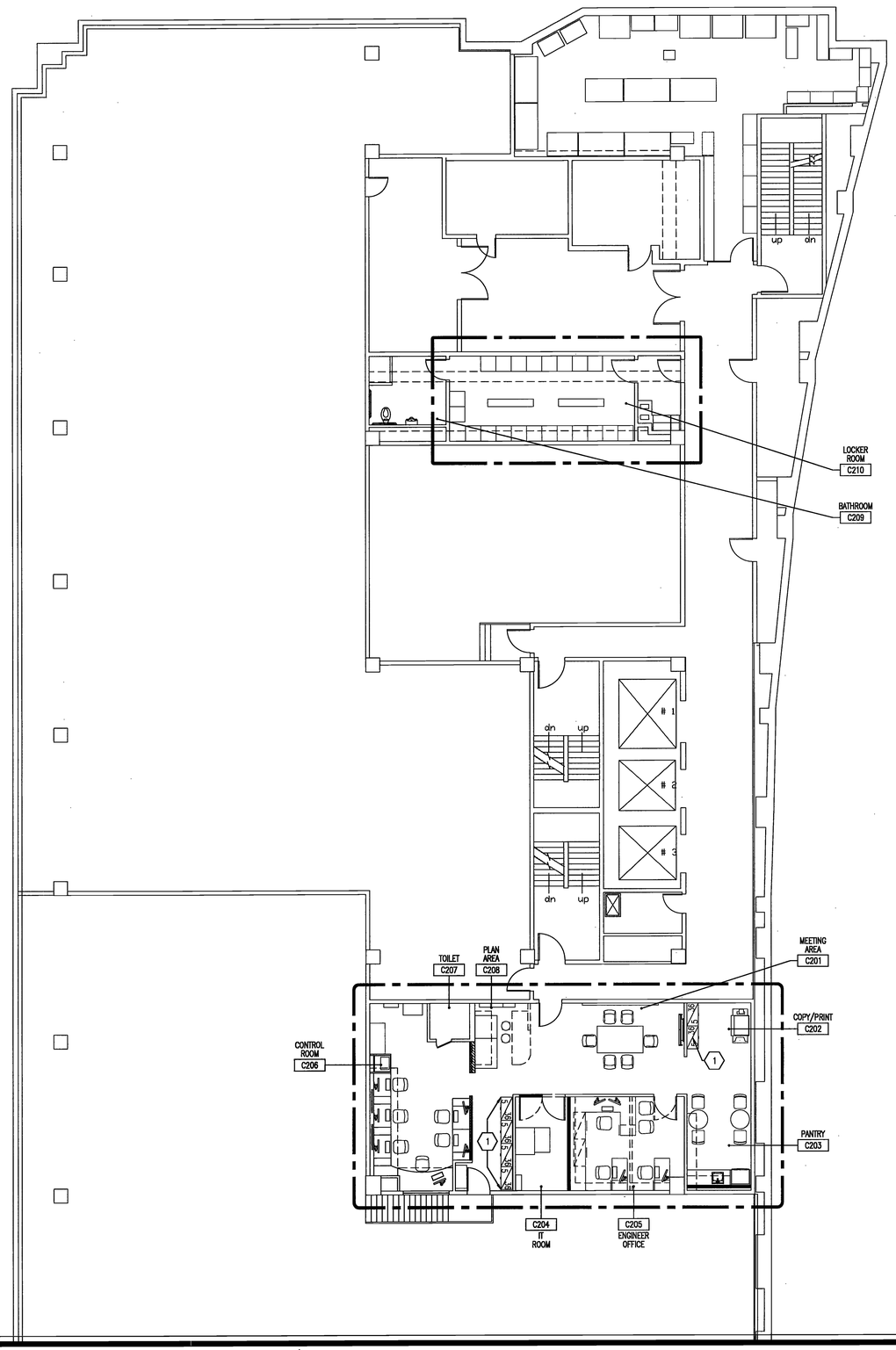


FURNITURE LEGEND

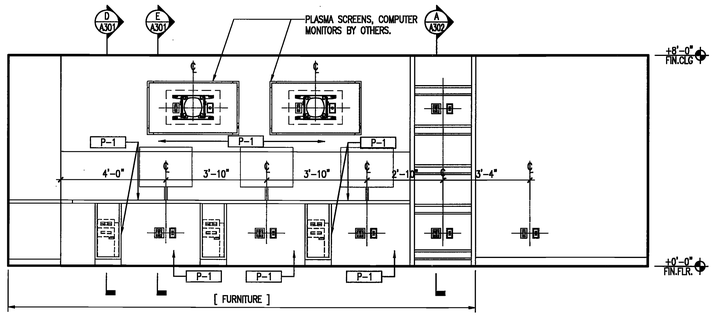
SYMBOL	DESCRIPTION
CH-x	CHAIR AND SEATING
CR-x	CREDENZA
F-x	FILING
PO-x	PRIVATE OFFICE CASEGOOD CONFIGURATION
SH-x	SHELVING
T-x	TABLE
WS-x	WORKSTATION CONFIGURATION
	NEW MILLWORK BY G.C.

EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION
PC	DESKTOP COMPUTER [BY OTHERS]
TV	FLATSCREEN TV W/ BRACKET [BY OTHERS]
TV	DESKTOP TV [BY OTHERS]
C	COPIER
PT	PRINTER
SK	SINK
F	FAUCET
HWH	HOT WATER HEATER TANK
MW	MICROWAVE [BY OTHERS]
CM	COFFEEMAKER [BY OTHERS]
CS	CHARGING STATION
RF	REFRIGERATOR [BY OTHERS]

FURNITURE SCHEDULE

SYMBOL	ITEM	MANUFACTURER	MODEL NO.	FINISHES	REMARKS	CONTACT



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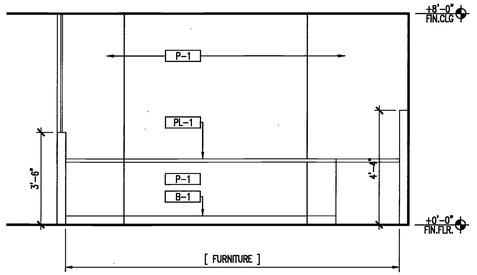

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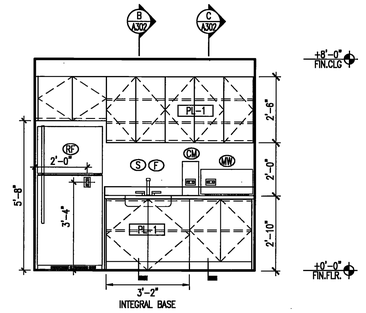

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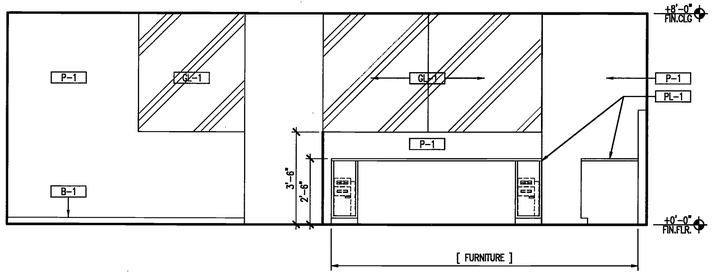

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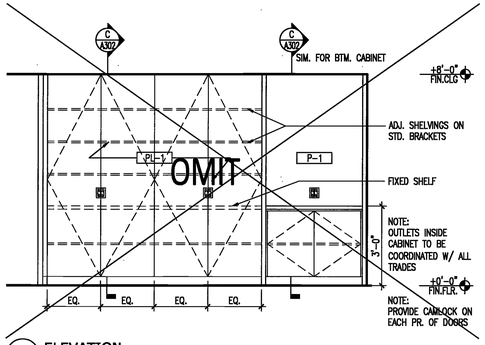
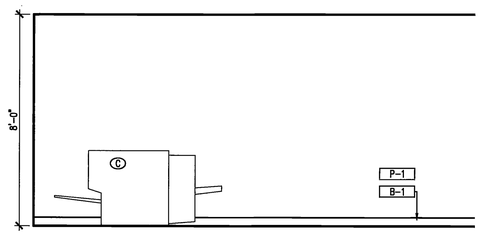


5 ELEVATION
SCALE: 3/8"=1'-0"



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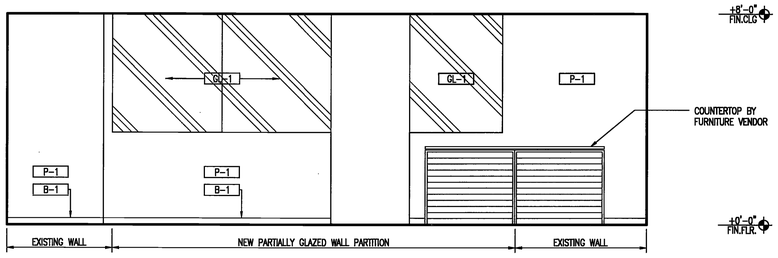

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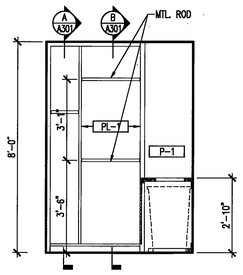

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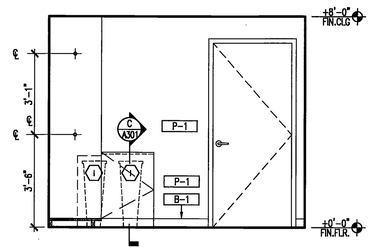

9 ELEVATION
SCALE: 3/8"=1'-0"

EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER/MODEL NO/DIMENSION.	VOLTAGE	AMP	WATTAGE	REMARKS
(S)	SINK & FITTINGS	ELKAY CELEBRITY #GECR25212 SERIE				
(F)	FAUCET	ELKAY ALLURE #LK6175 SERIES				
(CM)	COFFEEMAKER	EXISTING				PROVIDE WATER LINE
(MW)	MICROWAVE	EXISTING				
(REF)	REFRIGERATOR	EXISTING				
(C)	COPIER	EXISTING				

SALMAN ARCHIVED

JAN 27 2014

ACCEPTABLE FOR PERMIT
UNDER DIRECTIVE NO. 14/1975

JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
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www.syska.com

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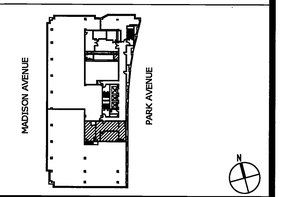

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JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

ELEVATIONS

REGISTERED ARCHITECT
TED MOUDIS
No. 010186
STATE OF NEW YORK

A-201.00

11 OF 20

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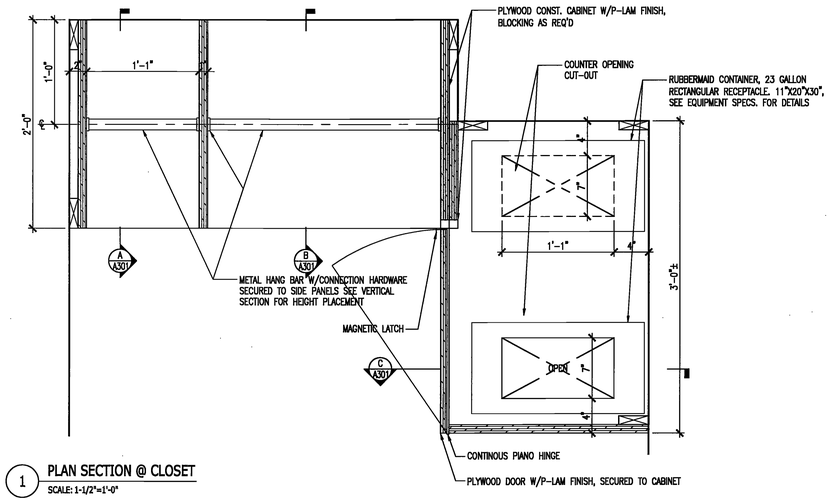
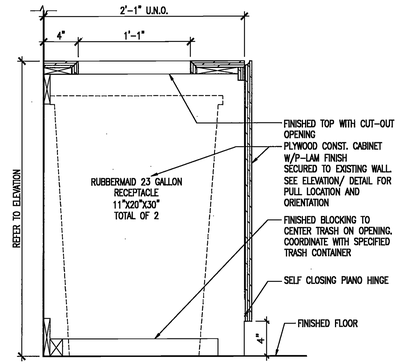


1 PLAN SECTION @ CLOSET
SCALE: 1-1/2"=1'-0"



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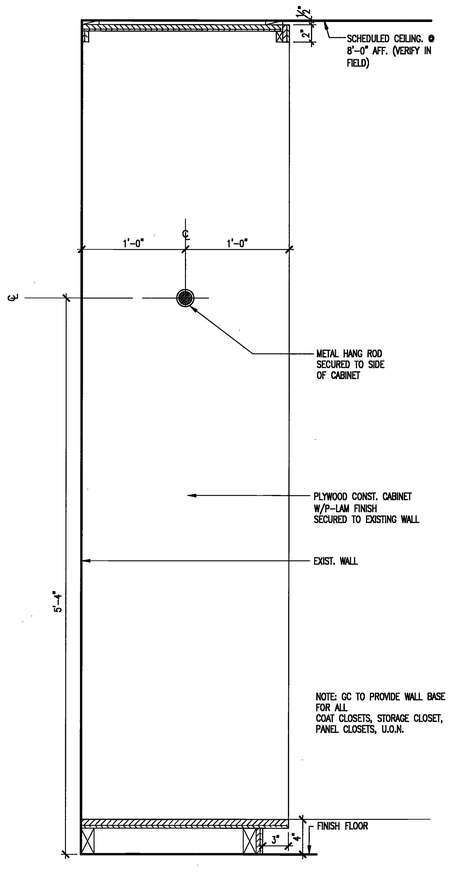

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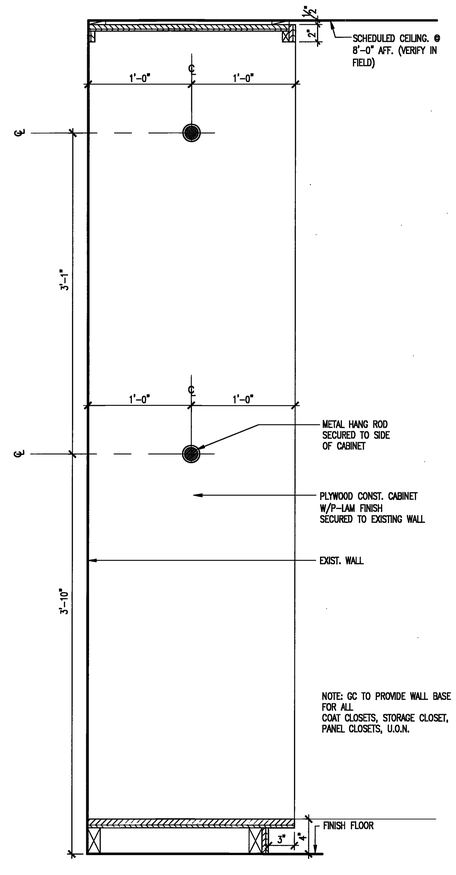

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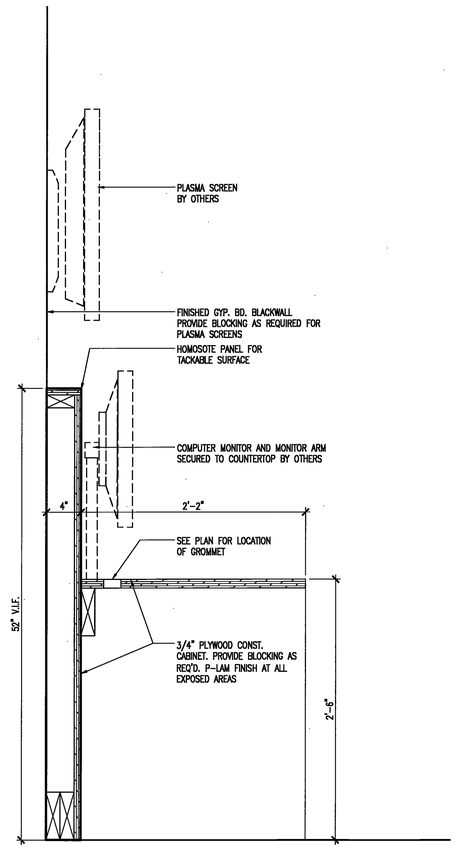

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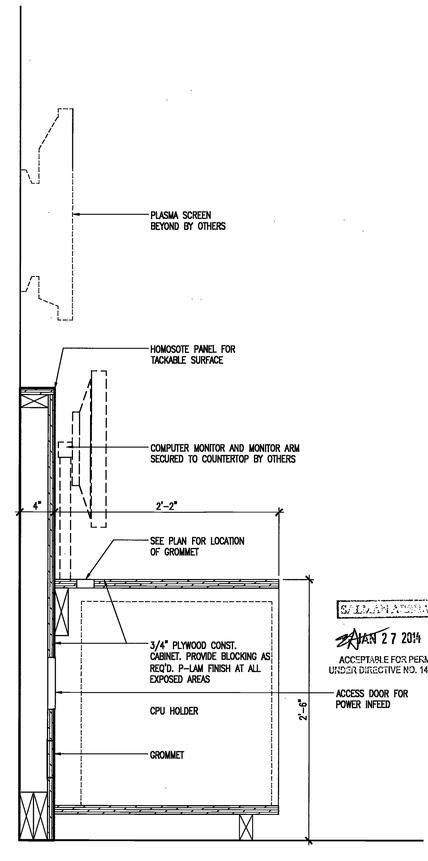

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DEPARTMENT OF BUILDINGS
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/15

Jan 13, 2014 - 2:25pm
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London SE19LR, UK.
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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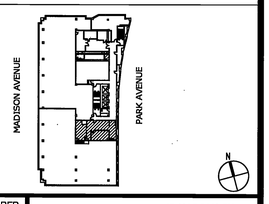
Job Number 112162.01
Scan Code SC110162058

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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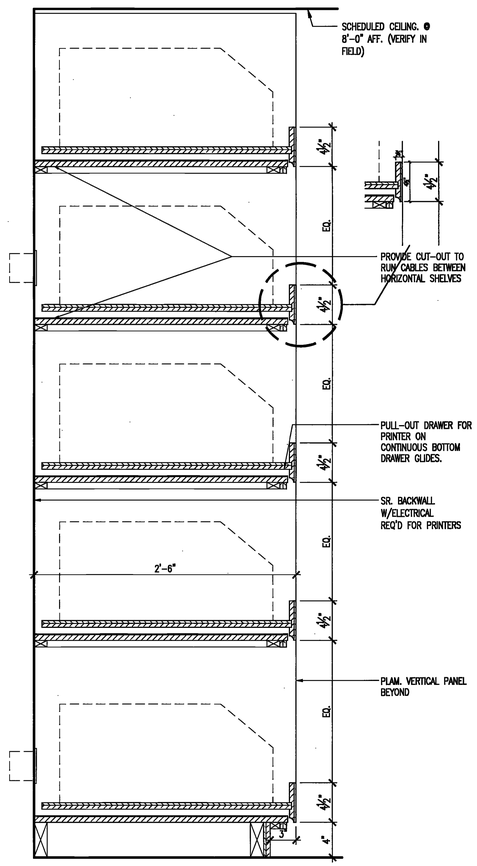
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-301SE.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SECTION & DETAILS

REGISTERED ARCHITECT TED MOUDIS No. 016196 STATE OF NEW YORK

A-301.00
12 OF 20



A SECTION [FURNITURE]
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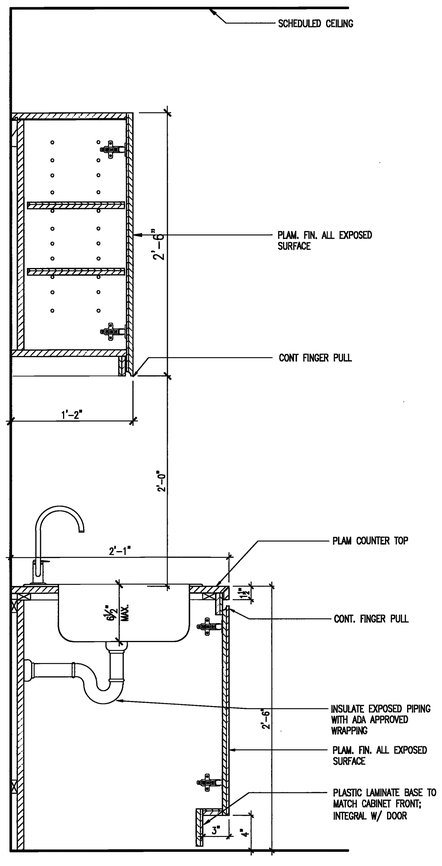

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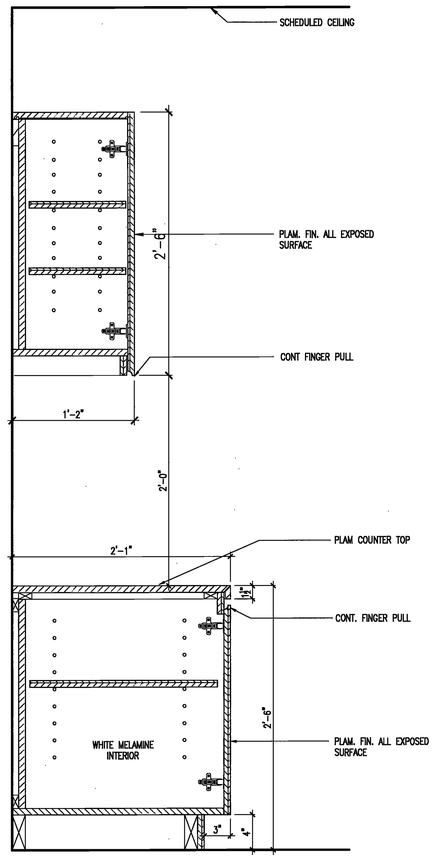

C SECTION
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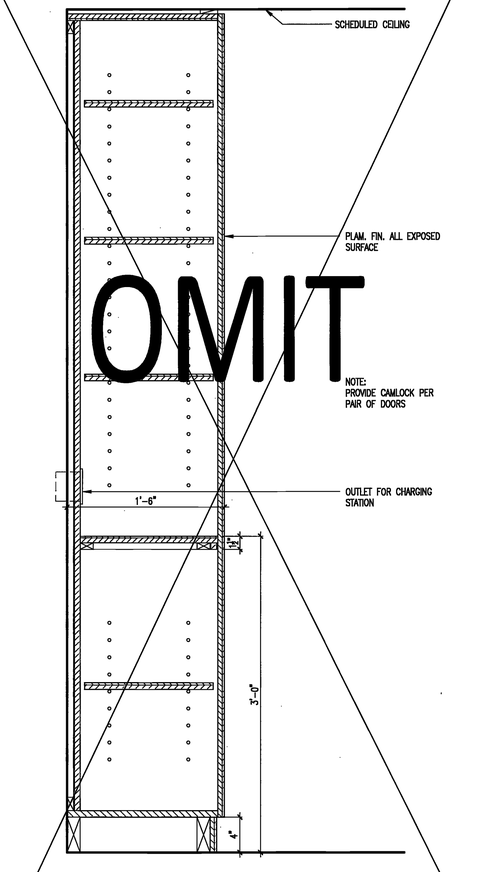

D SECTION
SCALE: 1-1/2"=1'-0"

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT
UNDER DIRECTIVE NO. 14/1975

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DEPT BLDGS 121654662 Job Number
SC110162055 Scan Code

NO.	DATE	DESCRIPTIONS
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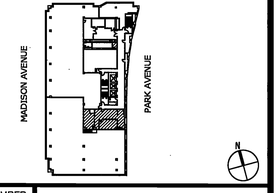
1	08.05.13	ISSUE FOR BID, FILING & LL REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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SCALE AS NOTED	
DATE 08.08.12	SECTION & DETAILS
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PROJECT ARCHITECT MT	
DRAWN BY GM	
CHECKED BY GM	
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REGISTERED ARCHITECT TED MOUDIS No. 016196-1 STATE OF NEW YORK

A-302.00
13 OF 20

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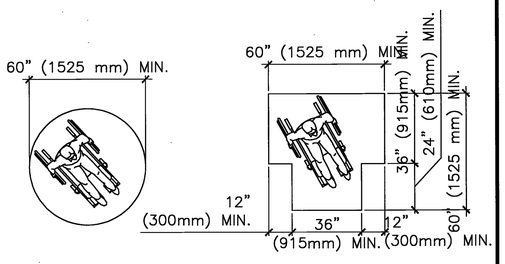
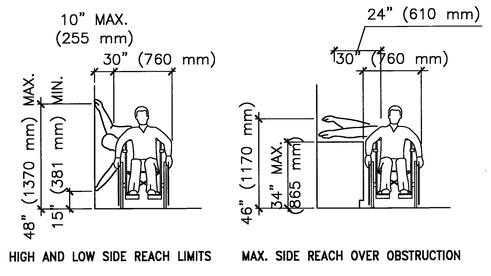
ICC/ANSI 2003 ACCESSIBILITY DIAGRAMS

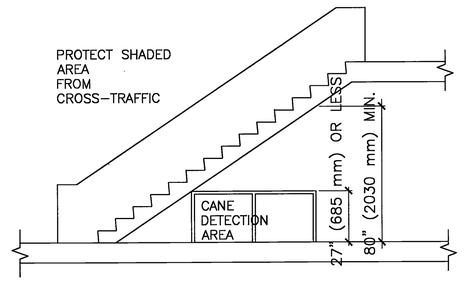


CIRCULAR T-SHAPED

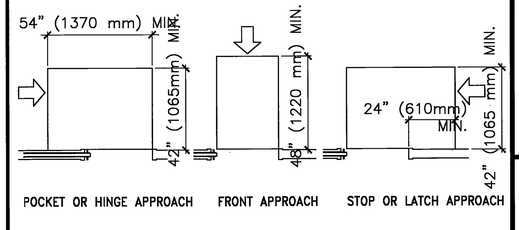


HIGH AND LOW SIDE REACH LIMITS MAX. SIDE REACH OVER OBSTRUCTION

PARALLEL/SIDE REACH LIMITS

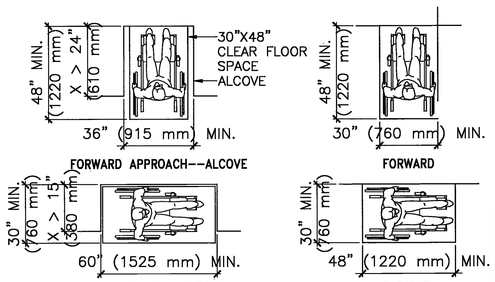


OVERHEAD HAZARDS



POCKET OR HINGE APPROACH FRONT APPROACH STOP OR LATCH APPROACH

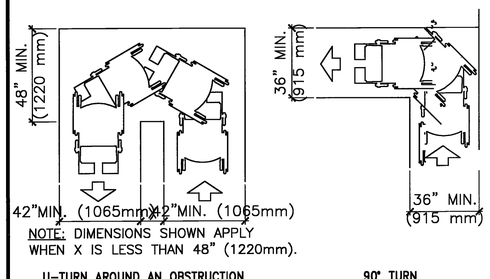
MANEUVERING CLEARANCE AT SLIDING AND FOLDING DOORS



FORWARD APPROACH--ALCOVE FORWARD

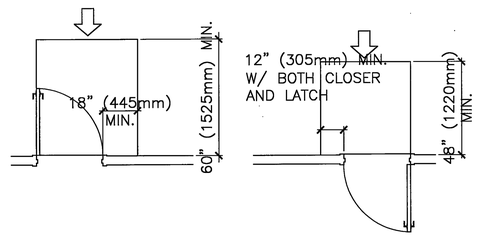
PARALLEL APPROACH--ALCOVE PARALLEL

MANEUVERING CLEARANCE IN ALCOVES

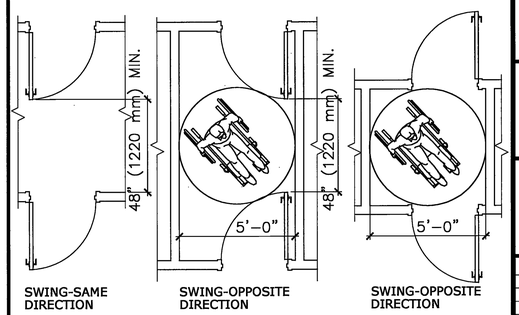


U-TURN AROUND AN OBSTRUCTION 90° TURN

WHEELCHAIR TURNS

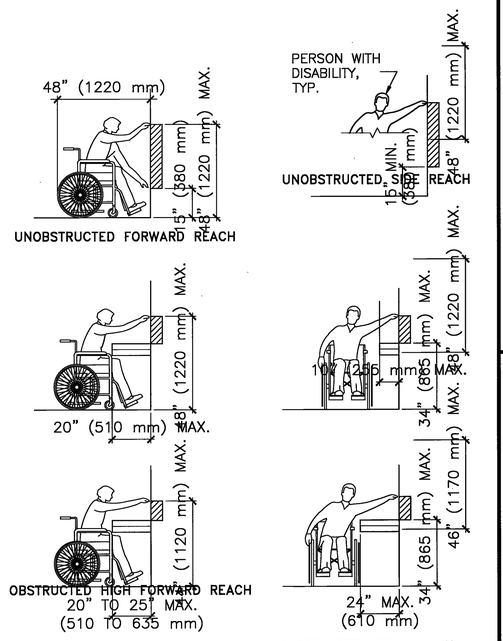


FRONT APPROACHES–SWINGING DOORS



SWING-SAME DIRECTION SWING-OPPOSITE DIRECTION SWING-OPPOSITE DIRECTION

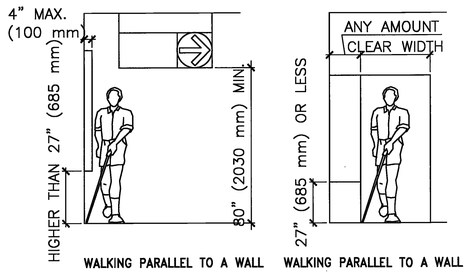
TWO HINGED DOORS IN SERIES



UNOBSTRUCTED FORWARD REACH UNOBSTRUCTED SIDE REACH

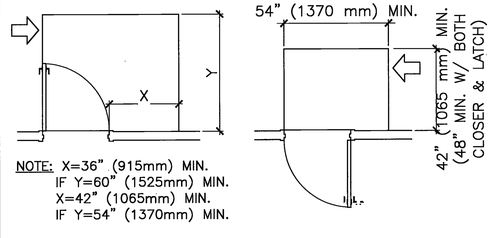
OBSTRUCTED SIDE REACH

REACH RANGES



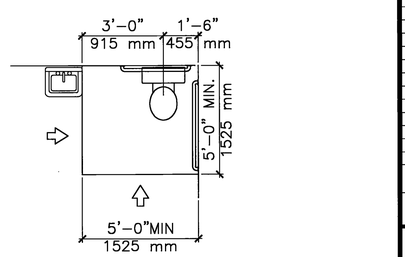
WALKING PARALLEL TO A WALL WALKING PARALLEL TO A WALL

PROTRUDING OBJECTS



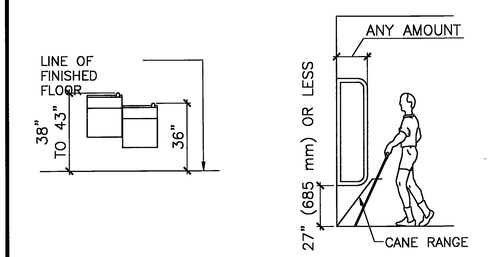
NOTE: X=36" (915mm) MIN.
IF Y=60" (1525mm) MIN.
X=42" (1065mm) MIN.
IF Y=54" (1370mm) MIN.

HINGE SIDE APPROACHES–SWINGING DOORS

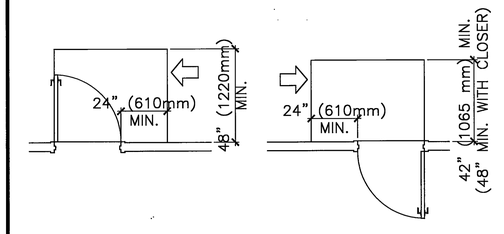


EITHER APPROACH

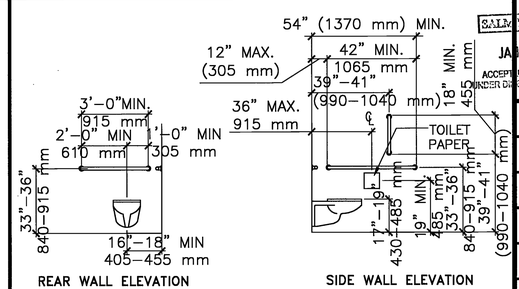
CLEAR FLOOR SPACE AT WATER CLOSETS



DRINKING FOUNTAIN MOUNTING HEIGHT WALKING PERPENDICULAR TO A WALL



LATCH SIDE APPROACHES–SWINGING DOORS



REAR WALL ELEVATION SIDE WALL ELEVATION

GRAB BARS AT WATER CLOSETS

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Tel: 212.921-2300
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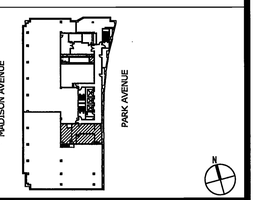
DEPT/LOGS: 1215684662 Job Number

BC110162052 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & LL REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

PROJECT NUMBER	112162.01
SCALE	NA
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-702-HC-2008-NYC-ICC-ANSI-2003.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

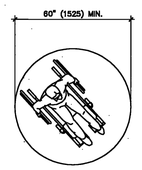
ACCESSIBILITY DIAGRAMS
SHEET 1 OF 2

REGISTERED ARCHITECT TED MOUDIS No. 016196-1 STATE OF NEW YORK

A-702.00

14 OF 20

LOCAL LAW 58 OF 87 & ANSI A117.1-1986 ACCESSIBILITY DIAGRAMS



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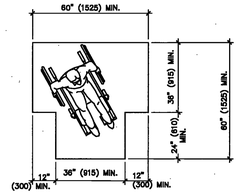
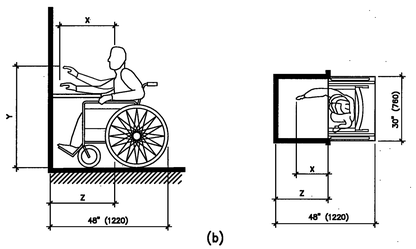


T-SHAPED

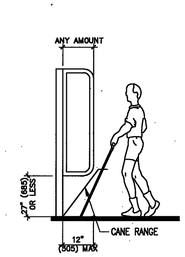
WHEELCHAIR TURNING SPACE



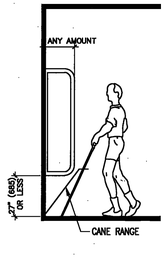
(b)

MAXIMUM FORWARD REACH OVER AN OBSTRUCTION

NOTES:
1. X SHALL BE ≤ 25 IN (635); Z SHALL BE ≥ X.
2. WHEN X < 20 IN (510), THEN Y SHALL BE 48IN (1220) MAXIMUM.
3. WHEN X 1S 20 ITO 25 IN (510 TO 635), THEN Y SHALL BE 44 IN (1120) MAXIMUM.

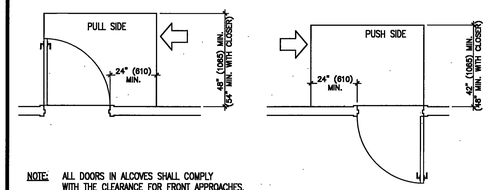


WALKING PERPENDICULAR TO OBJECTS MOUNTED ON POSTS OR PYLONL



WALKING PERPENDICULAR TO A WALL

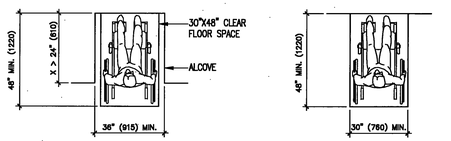
PROTRUDING OBJECTS



NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCE FOR FRONT APPROACHES.

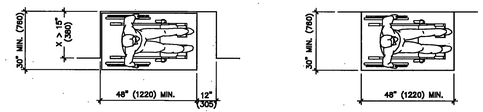
(c)

LATCH SIDE APPROACHES-SWINGING DOORS



FORWARD APPROACH--ALCOVE

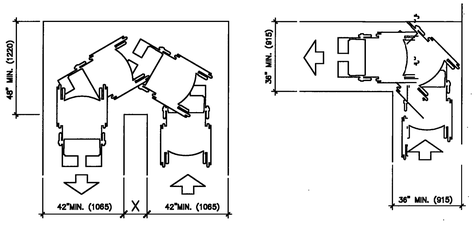
FORWARD



PARALLEL APPROACH--ALCOVE

PARALLEL

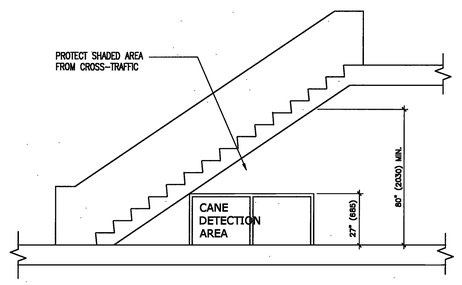
MANEUVERING CLEARANCE IN ALCOVES



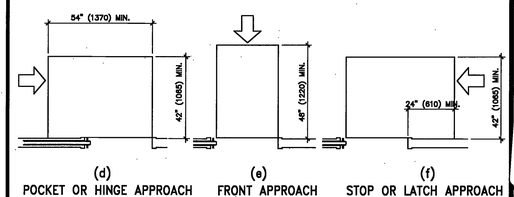
U-TURN AROUND AN OBSTRUCTION

90° TURN

WHEELCHAIR TURNS



OVERHEAD HAZARDS



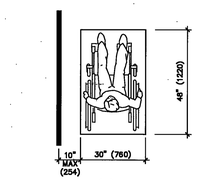
(d) POCKET OR HINGE APPROACH

(e) FRONT APPROACH

(f) STOP OR LATCH APPROACH

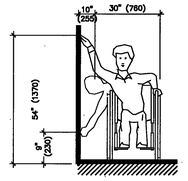
NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCE FOR FRONT APPROACHES.

MANEUVERING CLEARANCE AT SLIDING AND FOLDING DOORS



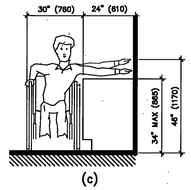
(a)

CLEAR FLOOR SPACE PARALLEL APPROACH



(b)

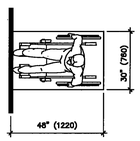
HIGH & LOW SIDE REACH LIMITS



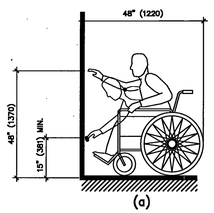
(c)

MAXIMUM SIDE REACH OVER OBSTRUCTION

SIDE REACH

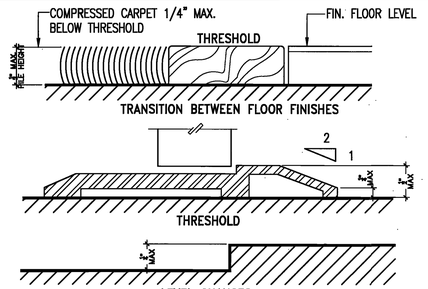


CLEAR FLOOR SPACE PARALLEL APPROACH



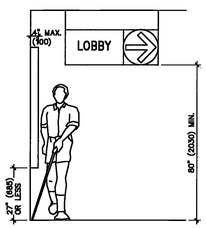
(a)

HIGH FORWARD REACH LIMIT

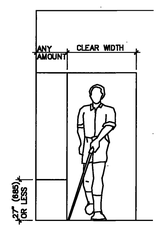


1. 1/2" MAXIMUM TOTAL HEIGHT WITH 1/4" MAXIMUM VERTICAL CHANGE AT EDGE.
2. 1 : 2 SLOPED BEVEL REQUIRED IF LEVEL CHANGE IS OVER 1/4" VERITCAL LEVEL CHANGE.
3. 1/4" MAXIMUM VERTICAL LEVEL CHANGE.

ACCESSIBLE ROUTE

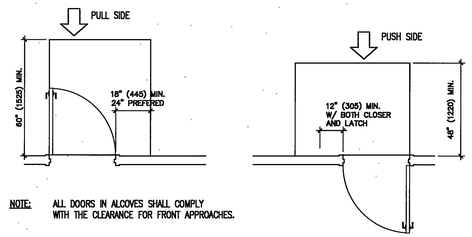


WALKING PARALLEL TO A WALL



WALKING PARALLEL TO A WALL

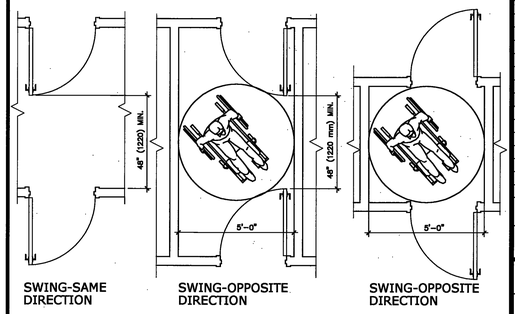
PROTRUDING OBJECTS



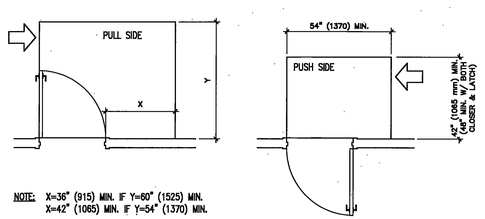
NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCE FOR FRONT APPROACHES.

(a)

FRONT APPROACHES-SWINGING DOORS



TWO HINGED DOORS IN SERIES

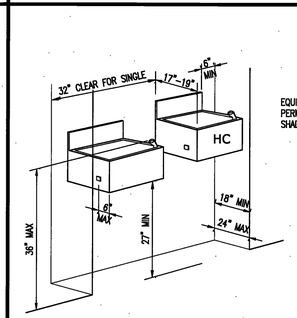


NOTE: X=36" (915) MIN. IF Y=60" (1525) MIN.
X=42" (1065) MIN. IF Y=54" (1370) MIN.

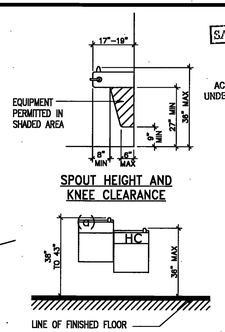
NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCE FOR FRONT APPROACHES.

(b)

HINGE SIDE APPROACHES-SWINGING DOORS



RECESSED DRINKING FOUNTAIN MOUNTING HEIGHT



SPOUT HEIGHT AND KNEE CLEARANCE

DRINKING FOUNTAIN MOUNTING HEIGHT

JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE1 9LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPT. BLDSS ; 121664662 Job Number
SC110182049 Scan Code

NO.	DATE	DESCRIPTIONS
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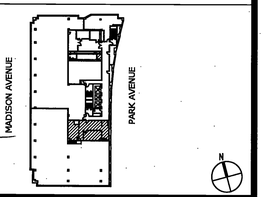
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN



SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

PROJECT NUMBER	112162.01
SCALE	NA
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-702-HC-1986-NYC-LL 58 OF 87-1986.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

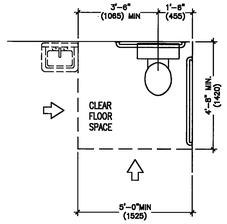
ACCESSIBILITY DIAGRAMS
SHEET 1 OF 2

REGISTERED ARCHITECT TED MOUDIS No. 016195-1 STATE OF NEW YORK

A-702.00

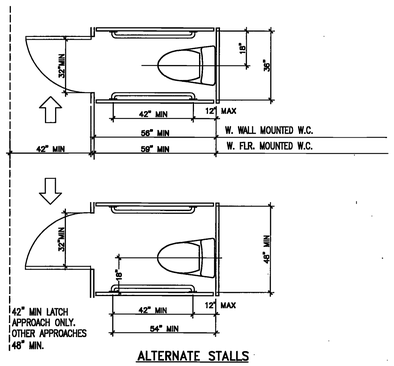
14 OF 20

LOCAL LAW 58 OF 87 & ANSI A117.1-1986 ACCESSIBILITY DIAGRAMS-Continued

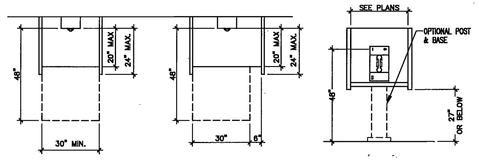


EITHER APPROACH

CLEAR FLOOR SPACE AT WATER CLOSETS



ALTERNATE STALLS

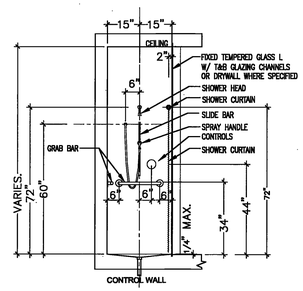


PLANS; FORWARD REACH REQUIRED

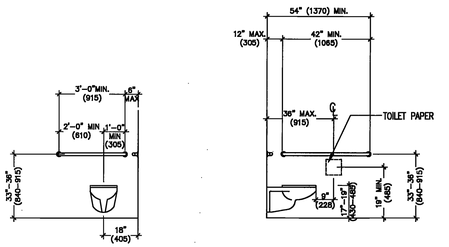
ELEVATION

MOUNTING HEIGHT & CLEARANCE FOR TELEPHONES

HEIGHT TO HIGHEST OPERABLE PARTS WHICH ARE ESSENTIAL TO BASIC OPERATION OF TELEPHONE.



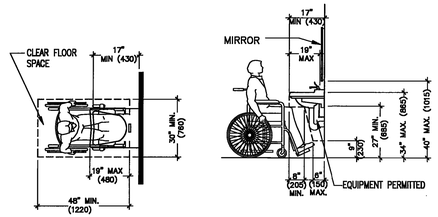
ROLL IN SHOWER–ACCESSORY MOUNTING HEIGHTS @ LOCATION
DIMENSIONS ABOVE ARE BASED ON MIN. 30"X60" SHOWER STALL



REAR WALL ELEVATION

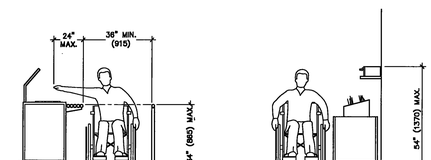
SIDE WALL ELEVATION

GRAB BARS AT WATER CLOSETS



CLEAR FLOOR SPACE AT LAVATORIES

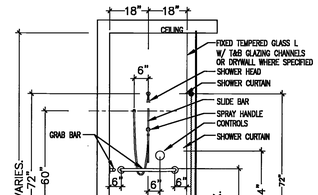
LAVATORY CLEARANCE



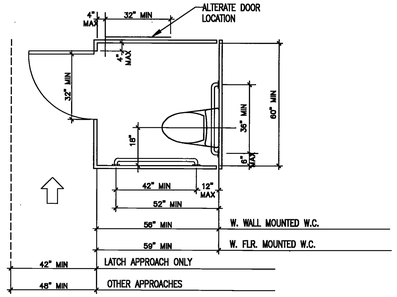
FOOD SERVICE LINES

TABLEWARE AND CONDIMENT TABLE

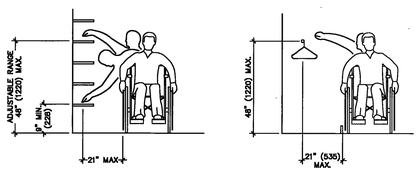
RESTAURANTS AND CAFETERIAS



TRANSFER SHOWER–ACCESSORY MOUNTING HEIGHTS @ LOCATION
DIMENSIONS ABOVE ARE BASED ON MIN. 36"X36" SHOWER STALL



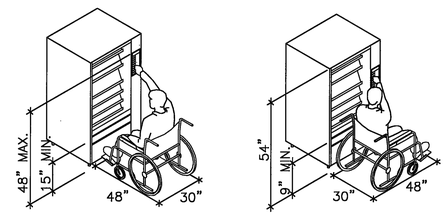
STANDARD STALL



SHELVES

CLOSET

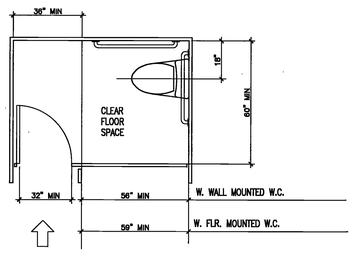
PARALLEL/SIDE REACH LIMITS



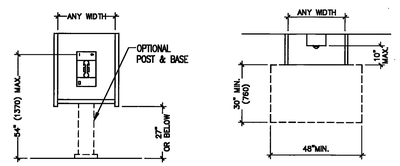
FRONT REACH (ADA)

SIDE REACH (ADA)

VENDING MACHINES AND OTHER EQUIPMENT



STANDARD STALL (END OF ROW)



ELEVATION

PLAN; SIDE REACH POSSIBLE

MOUNTING HEIGHT & CLEARANCE FOR TELEPHONES

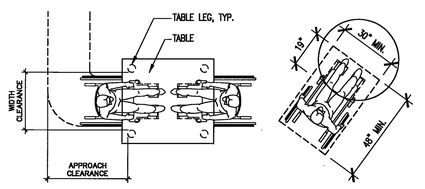


TABLE CLEARANCE

KNEE CLEARANCE

FOR KNEE SPACE BELOW A TABLE TOP WITH A MINIMUM WIDTH OF 2'-6" BETWEEN OBSTRUCTIONS (e.g., TABLE LEGS), THE APPROACH CLEARANCE SHOULD BE 3'-6". A KNEE SPACE WIDTH OF 3'-0" OR MORE SHOULD HAVE AN APPROACH CLEARANCE OF 3'-0".

SEATING AND KNEE CLEARANCE

ACCESSIBILITY NOTES

1. FACILITIES FOR PEOPLE WITH PHYSICAL DISABILITIES SHALL BE IN COMPLIANCE WITH NEW YORK CITY BUILDING CODE TITLE 27, SUB–CHAPTER 4, SUB–ARTICLE 2 AND REFERENCE STANDARD RS4–6.
2. WALKWAYS, HALLS, CORRIDORS, AISLES AND OTHER SPACES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL COMPLY WITH SECTIONS 4.2 AND 4.3.
3. GROUND AND FLOOR SURFACES ALONG ACCESS ROUTES IN RAMPS & SPACES INCLUDING FLOORS, WALKWAYS, RAMPS, CORRIDORS, STAIRS, AND CURB RAMPS SHALL BE STABLE, FIRM AND SLIP RESISTANT IN COMPLIANCE W/ SEC 4.5.1
4. SPACE ALLOWANCES AND REACH RANGES AT ALL ROOMS & SPACES SHALL COMPLY WITH REFERENCE STANDARD 4–6 4.2; REACH RANGES SHALL BE: FORWARD REACH HEIGHT: 9 INCHES MINIMUM AND 54 INCHES MAXIMUM.
5. ANY PART OF AN ACCESSIBLE ROUTE WITH A SLOPE GREATER THAN 1:20 SHALL BE CONSIDERED A RAMP & SHALL COMPLY WITH SECTION 4.8.1
6. DOOR WIDTHS SHALL BE A MINIMUM OF 34" IN COMPLIANCE W/ SEC. 4.13.5
7. THRESHOLDS AT DOORWAYS WILL NOT EXCEED ½" IN HEIGHT AS PER SEC. 4.13.8
8. HANDLES, PULLS, LATHCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL BE MADE TO COMPLY W/ SEC. 4.13.9
9. ACCESSIBLE STORAGE FACILITIES, SUCH AS CABINETS AND CLOSETS, SHALL COMPLY WITH SECTION 4.25.1
10. CONTROLS AND OPERATING MECHANISMS FOR LIGHT SWITCHES AND ALARMS SHALL BE ACCESSIBLE IN COMPLIANCE WITH SECTION 4.27.
11. CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING OF THE WRIST IN COMPLIANCE WITH SECTION 4.27
12. EMERGENCY WARNING SIGNAGE, CIRCULATION DIRECTIONAL SIGNAGE SHALL COMPLY WITH SECTION4.28.
13. EXIT SIGNS, EMERGENCY SIGNAGE, CIRCULATION DIRECTIONAL SIGNAGE SHALL COMPLY WITH SECTION 4.30.
14. ALL BATHROOMS, ASIDE FROM THOSE WHERE FIXTURES ARE REPLACED IN EXISTING ROUGHING, SHALL BE HANDICAPPED ACCESSIBLE IN COMPLIANCE W/ LL 58/87.
15. ANSI/A.D.A. ACCESSIBILITY STANDARDS AND MINIMUM CLEARANCES ARE INCLUSIVE OF, BUT NOT LIMITED TO, FIGURES SHOWN. GENERAL CONTRACTOR AND ALL SUB–CONTRACTORS SHALL REFER TO APPLICABLE LITERATURE (FEDERAL REGISTER, ADAAG).

JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

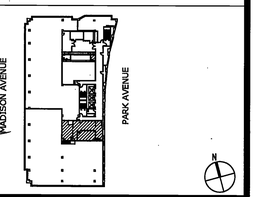
DEPT BL 993 121664662 Job Number

BC110162046 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK

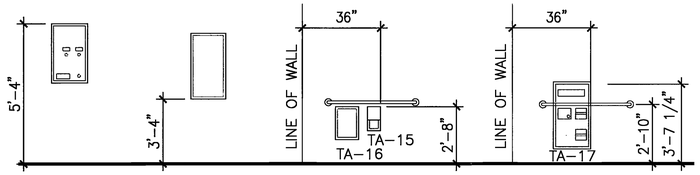


SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

PROJECT NUMBER 112162.01	JP MORGAN CHASE 270 PARK AVENUE NEW YORK, NY SC2 LEVEL
SCALE NA	ACCESSIBILITY DIAGRAMS SHEET 2 OF 2
DATE 08.08.12	
PROJECT MANAGER CR	
PROJECT ARCHITECT MT	
DRAWN BY XX	
CHECKED BY XX	
CADD FILE 112162.01–A–703–HC–1986–NYC–LL58 OF 87–1986.dwg	A-703.00 X OF 20

REGISTERED ARCHITECT 016196-1 STATE OF NEW YORK

PLUMBING FIXTURES & ACCESSORIES



TA-13
SANITARY NAPKIN DISPENSER

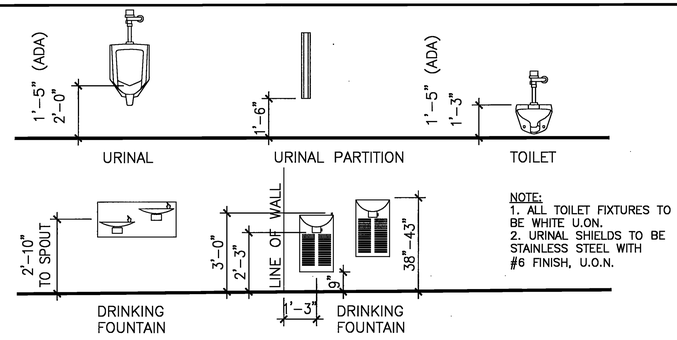
TA-14
MIRROR

TA-15
MULTI-ROLL TOILET PAPER DISPENSER

TA-16
SANITARY NAPKIN DISPOSAL UNIT

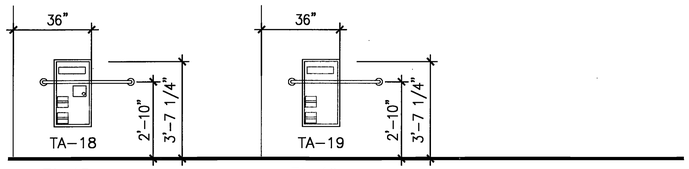
TA-17
RECESSED MULTI-ROLL TOILET PAPER DISPENSER, TOILET SEAT COVER, SANITARY NAPKIN DISPOSAL UNIT

5 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES- 4
SCALE: NOT TO SCALE



NOTE:
1. ALL TOILET FIXTURES TO BE WHITE U.O.N.
2. URINAL SHIELDS TO BE STAINLESS STEEL WITH #6 FINISH, U.O.N.

1 ELAVATION OF TYPICAL TOILET ROOM PLUMBING FIXTURES
SCALE: NOT TO SCALE

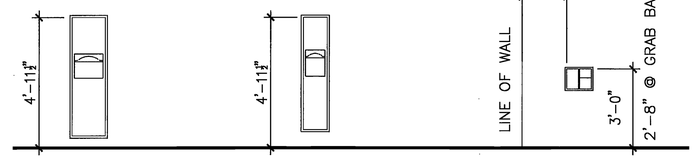


TA-18
TOILET PARTITION MULTI-ROLL TOILET PAPER DISPENSER, TOILET SEAT COVER, SANITARY NAPKIN DISPOSAL UNIT

TA-19
TOILET PARTITION MOUNTED MULTI-ROLL TOILET PAPER DISPENSER, TOILET SEAT COVER,

6 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES - 5
SCALE: NOT TO SCALE

NOTE:
1. FOR ALL TOILET ROOM ACCESSORIES SHOWN IN ELEVATION 12 TO 15 BELOW, MATERIAL SHALL BE STAINLESS STEEL WITH #6 FINISH, U.O.N.

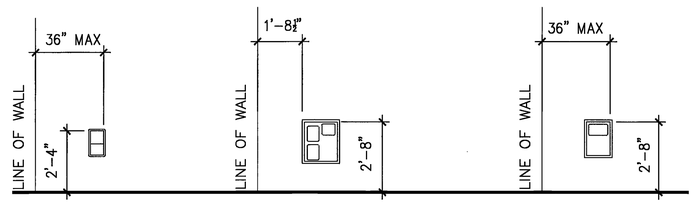


TA-1
PAPER TOWEL DISPENSER & DISPOSAL UNIT

TA-2
PAPER TOWEL DISPENSER & DISPOSAL UNIT

TA-3
MULTI-ROLL TOILET PAPER DISPENSER

2 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES- 1
SCALE: NOT TO SCALE



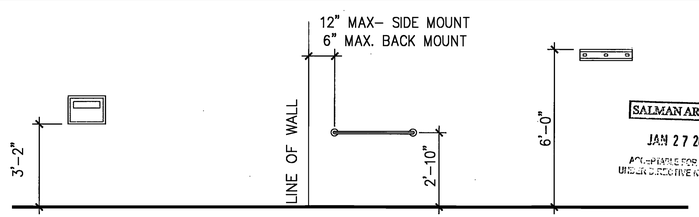
TA-4
MULTI-ROLL TOILET PAPER DISPENSER

TA-5
SANITARY NAPKIN DISPOSAL & DUAL ROLL TOILET PAPER DISPENSER UNIT

TA-7
SANITARY NAPKIN DISPOSAL UNIT

X XX
SCALE: NOT TO SCALE

3 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES- 2
SCALE: NOT TO SCALE



TA-9
RECESSED TOILET SEAT-COVER DISPENSER

TA-11
GRAB BARS
TA-11A 36" LONG
TA-11B 40" LONG
TA-11C 42" LONG

TA-12
MOP & BROOM HOLDER

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

X XX
SCALE: NOT TO SCALE

4 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES- 3
SCALE: NOT TO SCALE

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Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE1 9LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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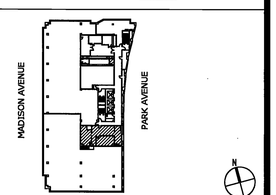
DEPT. BLDGS 121864662 Job Number
SC110102043 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN



▨ - AREA OF WORK

PROJECT NUMBER	112162.01
SCALE	AS NOTED
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-705-DLOC.dwg

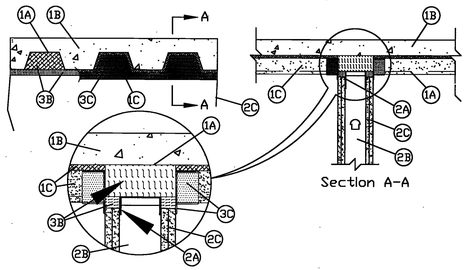
JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SCZ LEVEL

TYP. MOUNTING HEIGHTS & LOCATION OF ARCH. MEP. DEVICES & FIXTURES

REGISTERED ARCHITECT GREGORY MOUDIS No. 026744 STATE OF NEW YORK

A-705.00
17 OF 20

System No. HW-D-0088
Assembly Rating - 1 and 2 Hr (See Item 2)
Nominal Joint Width - 1 in.
Class II Movement Capabilities - 18.75% Compression or Extension



1.0 GENERAL NOTES AND CONDITIONS

System No. HW-D-0088

November 18, 2003
Assembly Ratings -- 1 and 2 Hr (See Item 2)
Nominal Joint Width -- 1 in.
Class II Movement Capabilities -- 18.75% Compression and Extension

1. **Floor Assembly** -- The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 or D800 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Steel Floor and Form Units*** -- Max 3 in. (76 mm) deep galv steel fluted floor units.
   B. **Concrete** -- Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.
   C. **Spray-Applied Fire Resistive Material*** -- After installation of the ceiling runner (Item 2A) or deflection track (Item 3A, If used), steel floor units to be sprayed with a min 5/16 in. (8 mm) to max 11/16 in. (18 mm) thickness of material in accordance with the specifications in the individual D700 or D800 Series Design. Material is to be excluded from the steel deck in the area immediately above the wall as well as from the flanges of the ceiling runner or deflection track.
   ISOLATEK INTERNATIONAL -- Type 300

   W R GRACE & CO - CONN
   CONSTRUCTION PRODUCTS DIV -- Type MK-6/HY

1A. **Roof Assembly** -- (Not Shown) -- As an alternate to the floor assembly (Item 1), a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P700 or P800 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:
   A. **Steel Roof Deck** -- Max 3 in. (76 mm) deep galv steel fluted roof deck.
   B. **Roof Insulation -- Mineral and Fiber Board*** -- Min 3/4 in. (19 mm) thick boards applied in one or more layers directly over steel roof deck or over gypsum board sheathing laid atop steel roof deck.
   C. **Roof Covering*** -- Hot-mopped or cold-application materials compatible with mineral and fiber board insulation.
   D. **Spray-Applied Fire Resistive Material*** -- After installation of the ceiling runner (Item 2A) or deflection track (Item 3A, If used), steel roof deck to be sprayed with a max 3/4 in. (19 mm) thickness of spray applied fire resistive material as specified in the individual P700 or P800 Series Roof-Ceiling design. Material is to be excluded from the steel deck in the area immediately above the wall as well as from the flanges of the ceiling runner or deflection track.
   ISOLATEK INTERNATIONAL -- Type 300

   W R GRACE & CO - CONN
   CONSTRUCTION PRODUCTS DIV -- Type MK-6/HY

2. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Steel Floor and Ceiling Runners** -- Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs . Ceiling runner to be provided with min 1-1/4 in. (32 mm) to max 2 in. (51 mm) flanges. When deflection channel (Item 3A) is used, flange height of ceiling runner is to be equal to or greater than flange height of deflection channel and the ceiling runner is to nest within the deflection channel with a 1/2 in. (13 mm) to 3/4 in. (19 mm) gap maintained between the top of the ceiling runner and the top of the deflection channel. When deflection channel is not used, ceiling runner is secured to steel floor or roof deck with steel fasteners or welds spaced max 24 in. (610 mm) OC.

   A1. **Light Gauge Framing* -- Slotted Ceiling Runner** -- As an alternate to the ceiling runner in Item 2A, ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Items 2B). Ceiling runner installed perpendicular to direction of fluted steel floor or roof deck and secured to valleys with steel fasteners spaced max 24 in. (610 mm) OC. When slotted ceiling runner is used, deflection channel (Item 3A) shall not be used.
   SLIPTRACK SYSTEMS INC -- SLP-TRK

   A2. **Light Gauge Framing* -- Clipped Ceiling Runner** -- As an alternate to the ceiling runner in Items 2A and 2A1, clipped runner to consist of galv steel channel with clips preformed in track flanges which positively engage the inside flange of the steel studs (Item 2B). Track sized to accommodate steel studs (Item 2B). Track flanges to be min 2-1/2 in. (64 mm). Clipped ceiling runner installed perpendicular to direction of fluted steel floor units and secured to valleys with steel fasteners spaced max 24 in. (610 mm) OC. When clipped ceiling runner is used, deflection channel (Item 3A) shall not be used.
   TOTAL STEEL SOLUTIONS L L C -- Snap Trak

   B. **Studs** -- Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 in. (13 mm) to 3/4 in. (19 mm) less in length than assembly height with bottom nesting in and secured to floor runner. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long wafer head steel screws at midheight of slot on each side of wall. When deflection channel (Item 3A) is used, steel studs attached to ceiling runner with sheet metal screws located 1/2 in. (13 mm) below the bottom of the deflection channel. When deflection channel is not used, studs to nest in ceiling runner without attachment. Stud spacing not to exceed 24 in. (610 mm) OC.

C. **Gypsum Board*** -- Gypsum board sheets installed to a min total 5/8 in. (16 mm) or 1-1/4 in. (32 mm) thickness on each side of wall for 1 and 2 hr fire rated assemblies, respectively. Wall to be constructed in the individual U400 Series Design in the UL Fire Resistance Directory, except that a max 1 in. (25 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the steel floor or roof deck. The screws attaching the gypsum board to the studs along the top of the wall shall be located 1 in. (25 mm) below the bottom of the ceiling runner. No gypsum board attachment screws shall be driven into the ceiling runner or into the optional deflection channel.
The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. **Joint System -- Max separation between bottom of floor or roof deck and top of gypsum board (at time of installation of joint system) is 1 in. (25 mm). The joint system is designed to accomodate a max 18.75 percent compression or extension from its installed width.** The joint system shall consist of forming and fill materials, with or without a deflection channel (Item 2A), as follows:

   A. **Deflection Channel** -- (Optional, Not Shown) - Max 2 in. (51 mm) deep min 24 gauge galv steel channel sized to accommodated ceiling runner (Item 2A). Deflection channel secured to steel floor or roof deck with steel fasteners or welds spaced max 24 in. (610 mm) OC. The ceiling runner is installed within the deflection channel to maintain a 1/2 in. (13 mm) to 3/4 in. (19 mm) gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner nests inside the deflection channel without attachment.

   B. **Forming Material*** -- Min 5-5/8 in. (143 mm) or 7 in. (178 mm) thickness of 6 pcf (96 kg/m3) mineral wool batt insulation for 1 and 2 hr fire rated assemblies, respectively, cut to the shape of the fluted deck and installed into the flutes of the steel floor or roof deck between the top of the deflection channel and the steel floor or roof deck. The mineral wool batt insulation is to be compressed min 14.3 percent in thickness such that it is flush with the gypsum board surface on both sides of the wall. Additional sections of mineral wool batt insulation are compressed 50 percent in thickness and installed cut edge first to completely fill the gap above the top of the gypsum board. The forming material shall be installed flush with both surfaces of wall.
   FIBREX INSULATIONS INC -- FBX Safing Insulation

   IIG MINWOOL L L C -- Safing Insulation/MW

   ROCK WOOL MANUFACTURING CO -- Delta Board

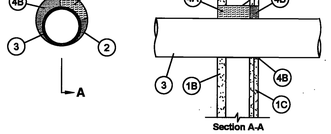
   THERMAFIBER L L C -- Type SAF

   C. **Fill, Void or Cavity Material*-Sealant** -- Min 1/8 in. (3.2 mm) wet thickness or 1/16 in. (1.6 mm) dry thickness of fill material spray applied on each side of the wall in the flutes of the steel floor or roof deck and between the top of the wall and the bottom of the steel floor or roof deck and overlap a min 1/2 in. (13 mm) onto gypsum board and a min 2 in. (51 mm) onto the spray applied material on both sides of wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal AS200 Elastomeric Spray

*Bearing the UL Classification Mark

UL SYSTEM NO. HW-D-0088-Cont.

System No. W-L-1251
F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 0 Hr



Guide XHEZ
Through - penetration Firestop Systems

(W-L-1251 - B Card)
(Cont'd from W-L-1251 - A Card)

System No. W-L-1251

July 24, 2001
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 0 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum board/stud shaft wall assembly shall be constructed of the materials and in the manner specified in the individual U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall incorporate the following construction features:
   A. Steel Studs -- "C-H" or "C-T" shaped studs, min 2-1/2 in. wide by 1-1/2 in. deep, fabricated from min No. 25 gauge galv steel, spaced max 24 in. OC.

   B. Gypsum Board* -- 1 in. thick, 24 in. wide gypsum liner panels installed vertically. Max diam of circular cutout in gypsum liner panel is 10 in.

   C. Gypsum Board* -- 1/2 in. or 5/8 in. thick, 48 in. wide gypsum boards. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of circular cutout in gypsum board is 10 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Metallic Sleeve** -- Cylindrical sleeve fabricated from min No. 30 gauge galv sheet steel and having a min 2 in. lap along the longitudinal seam. Length of the sleeve to be equal to the thickness of the wall. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the opening and releasing the coil to let it uncoil against the circular cutouts in the gypsum board layers. The ends of the steel sleeve shall be flush with each surface of the wall.

3. **Through Penetrant** -- One metallic pipe, tube or conduit installed concentrically or eccentrically within the firestop system. The annular space between the pipe, tube or conduit and the periphery of the sleeved opening to be min 0 in. (point contact) to max 2in. Pipe, tube or conduit to be rigidly supported on both sides of wall assembly. One of the following types and sizes of pipe, tube or conduit may be used:

   D. Steel Pipe -- Nom 8 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.

   E. Iron Pipe -- Nom 8 in. diam (or smaller) cast or ductile iron pipe.

   F. Conduit -- Nom 4 in. diam (or smaller) rigid steel conduit, steel electrical metallic tubing (EMT) or flexible steel conduit.

   G. Copper Pipe or Tube -- Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe or Type L (or heavier) copper tube.

4. **Firestop System** -- The firestop system consists of the following items:

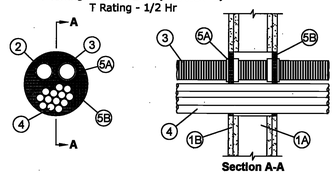
   H. Packing Material -- Min 4 pcf mineral wool batt insulation firmly packed into sleeved opening as a permanent form. Packing material to extend throughout thickness of wall except for a 1 in. deep recess on the finished side of wall to accommodate the fill material.

   I. Fill, Void or Cavity Material* -- **Sealant** -- Min 1 in. thickness of fill material applied within sleeve, flush with finished surface of wall. At the point contact location, a min 3/8 in. diam bead of fill material shall be applied at the penetrant/gypsum board interface.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

*Bearing the UL Classification Marking

System No. W-L-8056
F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 1/2 Hr



Gulde XHEZ
Through-Penetration Firestop Systems

System No. W-L-8056

F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 1/2 Hr

1. Wall Assembly -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. Studs -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.

   B. Gypsum Board* -- Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 8 in. (203 mm).

2. Metallic Penetrants -- One or more metallic pipes, conduits or tubing installed concentrically or eccentrically within the opening. Annular space between metallic penetrants and periphery of opening to be min 0 in. (0 mm, point contact) to max 2 in. (51 mm). Annular space between metallic penetrants and nonmetallic penetrants or cables to be min 1/2 in. (13 mm) to max 1-1/2 in. (38 mm). Metallic pipes, conduits or tubing to be rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of metallic pipes, conduits or tubing may be installed within the opening:

   C. Steel Pipe -- Nom 2 in. (51 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.

   D. Iron Pipe -- Nom 2 in. (51 mm) diam (or smaller) cast or ductile iron pipe.

   E. Conduit -- Nom 2 in. (51 mm) diam (or smaller) rigid steel conduits, electrical metallic tubing (EMT) or flexible steel or aluminum conduit.

2. Electrical Nonmetallic Tubing (ENT)+ -- Nom 2 In. (51 mm) diam (or smaller) ENT formed of PVC, installed in accordance with Article 331 of the National Electrical Code (NFPA No. 70). One or more ENT installed concentrically or eccentrically within the opening. Annular space between ENT and periphery of opening to be min 0 in. (0 mm, point contact) to max 2 in. (51 mm). Annular space between ENT and metallic penetrants or cables to be min 1/2 in. (13 mm) to max 1_1/2 in. (38 mm). ENT to be rigidly supported on both sides of the wall assembly.

   See Electrical Nonmetallic Tubing (FKHU) In UL Electrical Construction Materials Directory for names of manufacturers.

4. Cables -- Nom 4 In. (102 mm) diam (or smaller) tight bundle of cables. Cable bundle spaced min 1/2 In. (13 mm) to max 1-1/2 In. (38 mm) from metallic and nonmetallic penetrants. Cable bundle spaced 0 in. (0 mm, point contact) to 2 in. (51 mm) from periphery of opening. Cable bundle to be rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of cables may be used:

   F. Max 100 pair No. 24 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacket materials.

   B. Max 1/C No. 500 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.

   C. Max 7/C No. 12 AWG (or smaller) copper conductor power and control cables with XLPE or PVC insulation with XLPE or PVC jacket.

   G. Max 4/C No. 4/0 AWG (or smaller) copper or aluminum conductor SER cables with PVC insulation and jacket.

   H. Max 3/C No. 2/0 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TEK cable.

   I. Max 110/125 fiber optic (F.O.) cable with PVC insulation and jacket.

   J. Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable (Romex) with PVC insulation and jacket.

   H. Max RG/U coaxial cable with fluorinated ethylene insulation and jacket.

   I. Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with PVC jacket and insulation.

   K. Max 4/C with ground No. 2/0 (or smaller) aluminum or copper conductor Metal-Clad+ or Armored-Clad+ cable with steel or aluminum jacketing.

   AFC CABLE SYSTEMS INC

3. Firestop System - The firestop system shall consist of the following:

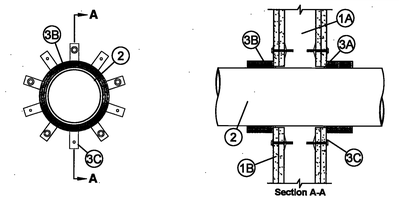
   L. Fill, Void or Cavity Material* - Wrap Strip -- Nom 1/8 or 3/16 in. (3.2 or 4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 2 in. (51 mm) wide strips, or nom 1/4 in. (6 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. (38 mm) wide strips. Single layer wrapped around each individual ENT and secured with a single layer of foil tape. Wrap strip recessed within opening such that ends project a max 1/4 in. (6 mm) on each surface of the wall.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal RED Wrap Strip, SpecSeal BLU Wrap Strip or SpecSeal BLU2 Wrap Strip

   M. Fill, Void or Cavity Material* - Sealant -- Min 5/8 in. (16 mm) thickness of fill material applied flush with both surfaces of wall. At point contact locations, apply a min 3/8 in. (10 mm) diam bead of fill material at the penetrant/gypsum board interface.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

*Bearing the UL Classification Mark
+Bearing the UL Listing Mark



System No. W-L-2074

October 14, 2003
F Ratings -- 1 and 2 Hr (See Items 1 and 2)
T Ratings -- 3/4, 1 and 2 Hr (See Items 1 and 2)
L Rating At Ambient -- Less Than 1 CFM/sq ft
L Rating At 400 F -- Less Than 1 CFM/sq ft

1. **Wall Assembly** -- The 1 or 2 h fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 and U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced 24 in. (610 mm) OC.

   B. **Gypsum Board*** -- 5/8 in. (16 mm) thick, 4 ft (1219 mm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 7 in. (178 mm).
   Except as noted in Item 2, the hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through-Penetrants** -- One nonmetallic pipe or conduit to be centered within the firestop system. A nom annular space of 3/16 in. (4.8 mm) is required within the firestop system. Pipe or conduit to be rigidly supported on both sides of wall assembly. The following types and sizes of nonmetallic pipes or conduit may be used:

   A. Polyvinyl Chloride (PVC) Pipe -- Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid core or cellular PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

   B. Flame Retardant Polypropylene (FRPP) Pipe -- Nom 6 in. (152 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

   C. Rigid Nonmetallic Conduit+ -- Nom 6 in. (152 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70.)

   D. Chlorinated Polyvinyl Chloride (CPVC)Pipe -- Nom 6 in. (152 mm) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.

   E. Fiberglass Reinforced Pipe (FRP) -- Nom 6 in. (152 mm) diam (or smaller) glass fiber reinforced thermosetting resin pipe for use in closed (process or control) or vented (drain, waste or vent) piping systems. **When FRP pipe is used, T Rating is 3/4 hr.**

3. **Firestop System** -- The firestop system shall consist of the following:
   A. Fill, Void or Cavity Material* -- Sealant -- Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

   B. Fill, Void or Cavity Material* -- Wrap Strip -- Nom 1/8 or 3/16 in. (3.2 or 4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 2 in. (51 mm) wide strips or nom 1/4 in. (6 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. (38 mm) wide strips. Single layer wrapped around each individual ENT and secured with a single layer of foil tape. Two stacks of wrap strips, each consisting of three wrap strip layers, are individually wrapped around the through-penetrant with the ends butted and held in place with masking tape. Butted ends in successive layers shall be aligned. Wrap strips are installed on each side of wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal BLU Wrap Strip, SpecSeal BLU2 Wrap Strip or SpecSeal RED Wrap Strip

   C. Steel Collar -- Collar fabricated from coils of precut 0.022 in. (0.6 mm) thick (No. 26 MSG) galv sheet steel available from wrap strip manufacturer. Collar shall be min 3 in. (76 mm) deep with min six 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs. Retainer tabs, 3/4 in. (19 mm) wide tapering down to 3/8 in. (10 mm) wide and located opposite the anchor tabs, are folded 90 degrees toward through-penetrant surface to maintain the annular space around the through-penetrant and to retain the wrap strips. Steel collar wrapped around wrap strips and through-penetrant with a 1 in. (25 mm) wide overlap along its perimeter joint and secured together by means of three No. 8 by 3/8 in. (10 mm) long steel screws. Wrap strip/steel collar assembly is slid along the through-penetrant until it abuts the surface of the wall. Steel collar tightened around wrap strips and through-penetrant using min 1/2 in. (13 mm) wide by 0.028 in. (0.7 mm) thick stainless steel hose clamp spaced 2 in. (51 mm) OC. Collar secured to wall by a min of six 1/8 in. (3.2 mm) diam by min 1-3/4 in. (45 mm) long molly bolts in conjunction with min 1/4 in. (6 mm) by 1-1/2 in. (38 mm) diam steel fender washers. Steel collar installed on each side of wall.

4. **Firestop Device*** -- As an alternate to the wrap strip and the steel collar (Item Nos. 3B and 3C), a firestop device consisting of steel collar lined with an intumescent material sized to fit the specific diam of the nonmetallic through penetrant may be used. Device shall be installed in accordance with the installation instructions supplied with the product. The device shall be installed on the each side of the wall and secured to the wall with 1/8 in. (3.2 mm) diam by min 1-3/4 in. (45 mm) long steel molly bolts in conjunction with min 1-1/4 in. (32 mm) diam steel fender washers.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal Firestop Collar

*Bearing the UL Classification Marking
+Bearing the UL Listing Mark

JAN 27 2014
ACCEPTABLE FOR PERMIT
UNDER DIRECTIVE NO. 14/1975

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

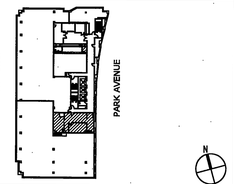
CONSULTANT

DEPT.BLDGS 121664662 Job Number
SC110162040 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



PROJECT NUMBER	112162.01
SCALE	N/A
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PROJECT ARCHITECT	MT
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CADD FILE	112162.01-A-706-FS.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

FIRE STOPPING & JOINT SYSTEM DIAGRAMS
SHEET 1 OF 3

REGISTERED ARCHITECT
MARY E. TED MOUDIS
No. 016196-1
STATE OF NEW YORK

A-706.00

18 OF 20

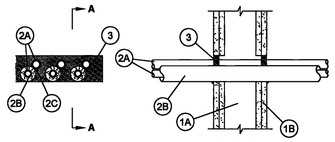
1. UL SYSTEM NO. HW-D-0088

2. UL SYSTEM NO. W-L- 1251

3. UL SYSTEM NO. W-L- 8056

4. UL SYSTEM NO. W-L- 2074

System No. W-L-8027
F Rating - 1 and 2 Hr (See Item 1)
T Rating - 1/4 Hr



Guide XHEZ
Through-Penetration Firestop Systems

(W-L-8027 - B Card)
(Cont'd from W-L-8027 - A Card)

System No. W-L-8027

October 11, 2000
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 1/4 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be 3-5/8 in. wide and spaced max 24 in. OC.

   B. **Gypsum Board*** -- Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max area of opening is 30 in. with a max dimension of 10 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Air Conditioning (AC) Line Set** -- One or more AC line sets installed eccentrically or concentrically within opening. Each AC line set consists of two pipes or tubes (Item 2A), tubing insulation (Item 2B) and a thermostat cable (Item 2C). The space between the AC line sets shall be in 1/2 in. to max 3/4 in. The space between the AC line sets and the periphery of the opening shall be min 0 in. (point contact) to max 1 in.

2A. **Through Penetrant** -- A max of two pipes or tubes to be installed in each AC line set. Of the two pipes or tubes, only one may have a nom diam greater than 1/2 in. Annular space between pipes or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. Pipes or tubing to be rigidly supported on both sides of the wall assembly. The following types and sizes of through penetrants may be used:
A. **Steel Pipe** -- Nom 1 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
B. **Iron Pipe** -- Nom. 1 in. diam (or smaller) cast or ductile iron pipe.
C. **Copper Pipe** -- Nom 1 in. diam (or smaller) Regular (or heavier) copper pipe.
D. **Copper Tube** -- Nom. 1 in. diam (or smaller) Type L (or heavier) copper tube.

2B. **Tube Insulation -- Plastics#** -- Nom 3/4 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The tube insulation may be installed on one max 1/2 in. diam pipe or tube in each AC line set. The annular space between the penetrating item and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. The space between the pipes or tubing within each AC line set shall be 0 in. (point contact).
See **Plastics** (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

2C. **Cable** -- One 4 pair No. 18 AWG (or smaller) thermostat cable with polyvinyl chloride (PVC) insulation and jacket materials may be installed with each AC line set. Cable to be spaced min 0 in (point contact) to max 1/2 in. from the other penetrants in each line set. The space between the cable and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. Cable to be rigidly supported on both sides of wall assembly.

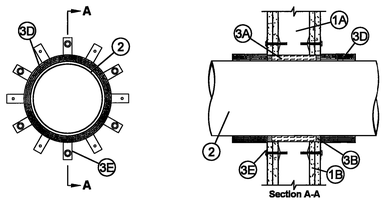
3. **Fill, Void or Cavity Material* -- Sealant** -- Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. diam bead fo fill material applied at through penetrant/gypsum board interface on both surfaces of wall. Additional fill material forced into grouped penetrant interstices to max extent possible.

SPECIFIED TECHNOLOGIES INC -- SpecSeal LCI Sealant

*Bearing the UL Classification Marking
Bearing the UL Recognized Component Marking

5. UL SYSTEM NO. W-L- 8027

System No. W-L-2079
F-Rating - 1 and 2 Hr (See Item 1B)
T-Rating - 0 Hr
L Rating At Ambient - 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft



System No. W-L-2079

October 14, 2003
F Ratings -- 1 and 2 Hr (See Item 1B)
T Rating -- 0 Hr
L Rating At Ambient -- 1 CFM/sq ft
L Rating At 400 F -- Less Than 1 CFM/sq ft

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs --** Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. OC (406 mm) with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.

   B. **Gypsum Board* --** 5/8 in. (16 mm) thick, 4 ft (1219 mm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 10 in. (254 mm).
   The hourly F rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through Penetrant --** One nonmetallic pipe to be centered within the firestop system. A nom annular space of 11/16 in. (18 mm) is required within the firestop system. Pipe to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipes may be used:

   A. **Polyvinyl Chloride (PVC) Pipe --** Nom 8 in. (203 mm) diam (or smaller) Schedule 40 PVC pipe for use in closed (process or supply) vented (drain, waste, or vent) piping systems.

   B. **Flame Retardant Polypropylene (FRPP) Pipe --** Nom 8 in. (203 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

   C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe --** Nom 8 in. (203 mm) diam (or smaller) SDR 17 13.5 CPVC pipe for use in closed (process or supply) piping systems.

3. **Firestop System --** The firestop system shall consist of the following:

   A. **Packing Material --** Min 4 pcf (64 kg/m3) mineral wool insulation cut to size to fill the annulus within the opening and stud cavity. Mineral wool insulation wrapped around the outer circumference of the through penetrant and secured together by means of No. 24 AWG steel tie wire. Mineral wool insulation slid into annulus of opening and recessed from both surfaces of wall to accommodate the required thickness of fill material.

   B. **Fill, Void or Cavity Material* -- Sealant --** Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

   C. **Aluminum Foil Tape --** (Not Shown) -- Nom 3 mil (0.8 mm) thick pressure sensitive aluminum foil tape wrapped around the outer circumference of the through penetrant with a 1 in. (25 mm) wide overlap along its perimeter joint. Foil tape shall abut against both surfaces of the wall and extend a min 5 in. (127 mm) beyond both surfaces of the wall.

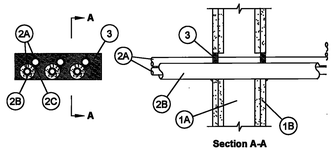
   D. **Fill, Void or Cavity Material* -- Wrap Strip --** Nom 1/8 or 3/16 in. (3.2 or 4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 2 in. (51 mm) wide strips. Two stacks of wrap strips, each consisting of four wrap strips are individually wrapped around the through penetrant with ends butted and held in place with masking tape. Butted ends in successive layers may be aligned or offset. The edge of the wrap strips shall abut each surface of the wall. Two stacks of wrap strips are installed on each side of the wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal BLU Wrap Strip or SpecSeal BLU2 Wrap Strip

   E. **Steel Collar --** Collar fabricated from coils of precut 0.029 in. (0.7 mm) thick (No. 22 MSG) galv sheet steel available from wrap strip manufacturer. Collar shall be nom 4 in. (102 mm) deep with min six 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs for securement to the wall. Retainer tabs, 3/4 in. (19 mm) wide tapering down to 3/8 in. (10 mm) wide and located opposite the anchor tabs, are folded 90 degrees toward through penetrant surface to maintain the annular space around the pipe and to retain the wrap strips. Steel collar wrapped around wrap strips and through penetrant with 1 in. (25 mm) wide overlap along its perimeter joint. Steel collar tightened around wrap strips and through penetrant using min 1/2 in. (13 mm) wide by 0.028 in. (0.7 mm) thick stainless steel hose clamp spaced 2 in. (51 mm) OC. Collar secured to wall with 1/8 in. (3.2 mm) diam by min 1-3/4 in. (45 mm) long steel molly bolts in conjunction with min 1/4 in. (6 mm) by 1-1/4 in. (32 mm) diam steel fender washers. Steel collars are installed on each side of wall.

*Bearing the UL Classification Mark

6. UL SYSTEM NO. W-L- 2079

System No. W-L-8027
F Rating - 1 and 2 Hr (See Item 1)
T Rating - 1/4 Hr



Guide XHEZ
Through-Penetration Firestop Systems

(W-L-8027 - B Card)
(Cont'd from W-L-8027 - A Card)

System No. W-L-8027

October 11, 2000
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 1/4 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be 3-5/8 in. wide and spaced max 24 in. OC.

   B. **Gypsum Board*** -- Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max area of opening is 30 in. with a max dimension of 10 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Air Conditioning (AC) Line Set** -- One or more AC line sets installed eccentrically or concentrically within opening. Each AC line set consists of two pipes or tubes (Item 2A), tubing insulation (Item 2B) and a thermostat cable (Item 2C). The space between the AC line sets shall be in 1/2 in. to max 3/4 in. The space between the AC line sets and the periphery of the opening shall be min 0 in. (point contact) to max 1 in.

2A. **Through Penetrant** -- A max of two pipes or tubes to be installed in each AC line set. Of the two pipes or tubes, only one may have a nom diam greater than 1/2 in. Annular space between pipes or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. Pipes or tubing to be rigidly supported on both sides of the wall assembly. The following types and sizes of through penetrants may be used:
A. **Steel Pipe** -- Nom 1 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
B. **Iron Pipe** -- Nom. 1 in. diam (or smaller) cast or ductile iron pipe.
C. **Copper Pipe** -- Nom 1 in. diam (or smaller) Regular (or heavier) copper pipe.
D. **Copper Tube** -- Nom. 1 in. diam (or smaller) Type L (or heavier) copper tube.

2B. **Tube Insulation -- Plastics#** -- Nom 3/4 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The tube insulation may be installed on one max 1/2 in. diam pipe or tube in each AC line set. The annular space between the penetrating item and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. The space between the pipes or tubing within each AC line set shall be 0 in. (point contact).
See **Plastics** (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

2C. **Cable** -- One 4 pair No. 18 AWG (or smaller) thermostat cable with polyvinyl chloride (PVC) insulation and jacket materials may be installed with each AC line set. Cable to be spaced min 0 in (point contact) to max 1/2 in. from the other penetrants in each line set. The space between the cable and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. Cable to be rigidly supported on both sides of wall assembly.

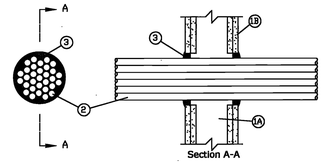
3. **Fill, Void or Cavity Material* -- Sealant** -- Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. diam bead fo fill material applied at through penetrant/gypsum board interface on both surfaces of wall. Additional fill material forced into grouped penetrant interstices to max extent possible.

SPECIFIED TECHNOLOGIES INC -- SpecSeal LCI Sealant

*Bearing the UL Classification Marking
Bearing the UL Recognized Component Marking

7. UL SYSTEM NO. W-L- 8027

System No. W-L-3076
F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 0 Hr



Guide XHEZ
Through-Penetration Firestop Systems

(W-L-3076 - B Card)
(Cont'd from W-L-3076 - A Card)

System No. W-L-3076

August 07, 2000
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 0 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.

   B. **Gypsum Board** * -- The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Diam of circular cutout in gypsum board layers in each side of wall to be 1/2 in. larger than diam of tight cable bundle (item 2 or 2A). Max diam of opening is 4-1/2 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Cables** -- Max 4 in. diam tight bundle of cables to be installed either concentrically or eccentricity in circular cutouts in gypsum wallboard opening. Cables to be rigidly supported on both sides of wall assembly. The annular space within the firestop system shall be a min 0 in. (point contact) to a max 1/2 in. Any combination of the following types and sizes of cables may be used.

   A. Max 150 pair No. 24 AWG (or smaller) copper conductor cable with polyvinyl chloride (PVC) insulation and jacket.

   B. Max 1/C - 350 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.

   C. Max 2/0 AWG (or smaller) copper conductor cable with a XLPE insulation and PVC jacket.

   D. Max 3/C (with ground) No. 8 AWG nonmetallic sheathed (Romex) cable (or smaller) with copper conductor, polyvinyl chloride (PVC) insulation and jacket materials.

   E. Max 3/C (with ground) No. 2/0 AWG (or smaller) aluminum or copper conductor service entrance cable with PVC insulation and jacket materials.

   F. Max 4 pair No. 18 AWG (or smaller) copper conductor thermostat cable with PVC insulation and jacket materials.

   G. Max RG/U Type 11 (or smaller) coaxial cable with fluorinated ethylene insulation and jacket materials.

   H. Max 62.5/125 micron fiber optic cable with PVC insulation and jacket materials.

2A. **Through penetrating Product*** -- As an alternate to the Item 2, a max 4 in. diam tight bundle of max 4 /C (with ground) - No. 2/0 AWG (or smaller) aluminum or steel jacketed **Armored Cable+** or **Metal-Clad Cable+** with aluminum or copper conductors may be used. The annular space between the cable bundle and the periphery of the opening shall be a min of 0 in. (point contact) to a max of 1 in. Through penetrating products may also be used in conjunction with the cables specified in Item 2. The through penetrating products are to be spaced min 1/2 in. from the cable bundle in Item 2. Cables to be rigidly supported on both sides of wall assembly.
AFC CABLE SYSTEMS INC

3. **Fill, Void or Cavity Material* -- Sealant** -- Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall. Fill material to be forced into interstices of cable group to max extent possible. At point contact location, apply min 1/4 in. diam bead of fill material at cable/gypsum board interface on both sides of wall.

SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102 or 105 Sealant

*Bearing the UL Classification Marking
+ Bearing the UL Listing Mark

SALMAN ANSTEAD
JAN 27 2014
ACCEPTABLE FOR PERMIT
UNDER DIRECTIVE NO. 14/1875

8. UL SYSTEM NO. W-L- 3076

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921.2300
Fax: 212.556.3333
www.syska.com

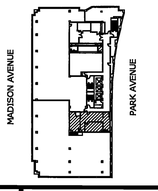
CONSULTANT

DEP# BL2585 121684882 Job Number
SC1101620J7 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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DRAWN BY	XX
CHECKED BY	XX
CADD FILE	112162.01-A-707-FS.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

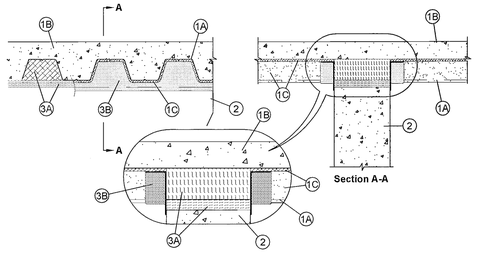
FIRE STOPPING & JOINT SYSTEM DIAGRAMS SHEET 2 OF 3

REGISTERED ARCHITECT TED MOUDIS No. 016186-1 STATE OF NEW YORK

A-707.00

19 OF 20

System No. HW-D-0139
Assembly Rating - 3 Hr
Nominal Joint Width - 1 in.
Class II Movement Capabilities - 18.75% Compression or Extension



System No. HW-D-0139

November 18, 2003
Assembly Rating - 3 Hr
Nominal Joint Width - 1 In
Class II Movement Capabilities - 18.75% Compression or Extension

1. **Floor Assembly --** The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Steel Floor and Form Units* --** Max 3 in. (76 mm) deep galv steel fluted floor units.

   B. **Concrete --** Min 2-1/2 in. ((64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

   C. **Spray-Applied Fire Resistive Material* --** - Prior to installation of the forming material (Item 3A) and sealant (Item 3B), steel floor units to be sprayed with a min 5/16 in. (8 mm) to max 11/16 in. (18 mm) thickness of material in accordance with the specifications in the individual D700 Series Design. Material is to be excluded from the steel deck in the area immediately above the wall. The spray applied fire resistive material is mixed with water in accordance with the mixing instructions on the bag. The min average density of the spray applied fire resistive material shall be 15 pcf (240 kg/m3) with a min individual density of 14 pcf (224 kg/m3). See Design Information Section in Volume 1 of the Fire Resistance Directory for method of density determination.
   W R GRACE & CO - CONN
   CONSTRUCTION PRODUCTS DIV -- Type MK-6/HY

1A **Roof Assembly --** (Not Shown) -- As an alternate to the floor assembly (Item 1), a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P700 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:

   A. **Steel Roof Deck --** Max 3 in. (76 mm) deep galv steel fluted roof deck.

   B. **Roof Insulation -- Mineral and Fiber Board* --** Min 3/4 in. (19 mm) thick boards applied in one or more layers directly over steel roof deck or over gypsum board sheathing laid atop steel roof deck.

   C. **Roof Covering* --** Hot-mopped or cold-application materials compatible with mineral and fiber board insulation.

   D. **Spray-Applied Fire Resistive Material* --** Steel roof deck to be sprayed with a max 3/4 in. (19 mm) thickness of spray applied fire resistive material as specified in the individual P700 Series Roof-Ceiling design. Material is to be excluded from the steel deck in the area immediately above the wall. The spray applied fire resistive material is mixed with water in accordance with the mixing instructions on the bag. The min average density of the spray applied fire resistive material shall be 15 pcf (240 kg/m3) with a min individual density of 14 pcf (224 kg/m3). See Design Information Section in Volume 1 of the Fire Resistance Directory for method of density determination.
   W R GRACE & CO - CONN
   CONSTRUCTION PRODUCTS DIV -- Type MK-6/HY

2. **Wall Assembly --** Min 8 in. (203 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Wall may also be constructed of any UL Classified **Concrete Block*** .
   See **Concrete Block** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

3. **Joint System -- Max separation between bottom of floor or roof deck and top of concrete wall (at time of installation of joint system) is 1 in. (25 mm). The joint system is designed to accommodate a max 18.75 percent compression or extension from it's installed width.** The joint system shall consist of forming and fill materials, as follows:
   A. **Forming Material* --** Sections of min 6 pcf (96 kg/m3) mineral wool batt insulation with a width equal to the thickness of the wall compressed 50 percent in thickness and installed cut edge first to completely fill the gap between the bottom of the steel deck and the top of the concrete wall. Min 9 in. (229 mm) thickness of min 6 pcf (96 kg/m3) mineral wool batt insulation cut to the shape of the fluted deck installed into the flutes of the steel floor above the compressed mineral wool batt insulation atop the concrete wall. The mineral wool batt insulation is to be compressed min 14 percent in thickness such that it is flush with both sides of the wall.

   FIBREX INSULATIONS INC -- FBX Safing Insulation

   IIG MINWOOL L L C -- Safing Insulation/MW

   ROCK WOOL MANUFACTURING CO -- Delta Board

   ROXUL INC -- SAFE

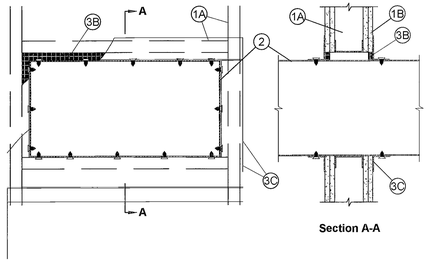
   THERMAFIBER L L C -- Type SAF

   B. **Fill, Void or Cavity Material* - Sealant --** Min 1/8 in. (3.2 mm) wet thickness or 1/16 in. (1.6 mm) dry thickness of fill material spray applied on each side of the wall in the flutes of the steel floor or roof deck and between the top of the wall and the bottom of the steel floor or roof deck and overlap a min 1/2 in. (13 mm) onto concrete and a min 2 in. (51 mm) onto the spray applied material (Item 1C) on both sides of wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal AS200 Elastomeric Spray

*Bearing the UL Classification Mark

9. UL SYSTEM NO. HW-D 0139

System No. W-L-7060
F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 1/2 Hr



System No. W-L-7060

December 04, 2002
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 1/2 Hr

1. **Wall Assembly --** The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs --** Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC. Additional horizontal framing members installed to form a rectangular box around the steel duct (Item 2).

   B. **Gypsum Board* --** Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. When wood studs are used, interior of through opening to be lined with sheets of gypsum board around entire periphery to a total thickness of 5/8 in. (16 mm) or 1-1/4 in. (32 mm) for 1 or 2 hr wall assemblies, respectively. Max area of opening is 952 sq in. (0.61 m2) with a max dim of 32 in. (813 mm).

   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Steel Duct --** Max 24 by 30 in. (610 by 762 mm) No. 26 gauge (or heavier) galv steel duct installed eccentrically or concentrically within opening. Annular space between duct and periphery of opening to be min 0 in. (0 mm, point contact) to max 2 in. (51 mm). Duct to be rigidly supported on both sides of the wall assembly.

3. **Firestop System --** The firestop system shall consist of the following:
   A. **Packing Material --** (Optional, Not Shown) Mineral wool batt insulation, foam backer rod or glass fiber insulation installed as a permanent form to facilitate installation of fill material (Item 3B).

   B. **Fill, Void or Cavity Material* -- Sealant --** Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. (6 mm) diam bead of fill material applied at steel duct/gypsum board interface on both surfaces of wall.

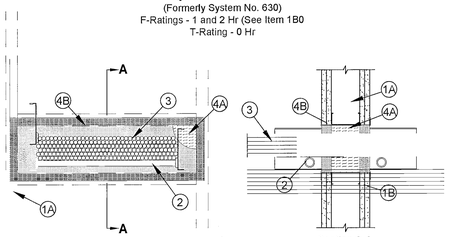
   SPECIFIED TECHNOLOGIES INC -- SpecSeal LCI Sealant

   C. **Retaining Angles --** Min 16 gauge galv steel angles sized to lap onto duct a min of 2 in. (51 mm) and to lap onto wall around periphery of opening a min of 1 in. (25 mm). Angles attached to all four sides of steel duct on both surfaces of wall with No. 10 (or larger) steel sheet metal screws located 1 in. (25 mm) from each end and spaced max 4 in. (102 mm) OC.

*Bearing the UL Classification Mark
Subscriber ID: 650692002
Directory: FIRERES

10. UL SYSTEM NO. W-L- 7060

System No. W-L-4005
(Formerly System No. 630)
F-Ratings - 1 and 2 Hr (See Item 1B0
T-Rating - 0 Hr



Guide XHEZ
Through-Penetration Firestop Systems

(W-L-4005 - B Card)
(Cont'd from W-L-4005 - A Card)

System No. W-L-4005

January 13, 1994
(Formerly System No. 630)
F Ratings -- 1 and 2 Hr (See Item 1B)
T Rating -- 0 Hr

1. **Wall Assembly** -- The 1 or 2 h fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. In 2 h fire rated assemblies steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. In 1 h fire-rated assemblies, steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC. Additional framing members shall be installed in stud cavity containing through-penetrating item to form a rectangular box around the penetrant.

   B. **Gypsum Board*** -- 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max width of opening in wood stud walls is limited 14-1/2 in. Additional framing members shall be installed in stud cavity containing through-penetrating item to form a rectangular box around the penetrant. If the cable tray is installed in a steel stud/gypsum wallboard assembly, the max. area of opening is 136.5 sq in. with max dimension of 22-3/4 in. If the cable tray is installed in a wood stud/gypsum wallboard assembly, the max. width of the cable tray and max. width of the opening is 12 and 14-1/2 in. respectively.
   The hourly F rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Cable Tray*** -- Max 18 in. wide by max 5 in. deep open ladder cable tray with channel-shaped side rails formed of min 0.069 in. thick aluminum and with 1 in. wide by 7/8 in. deep rungs spaced 9 in. OC. One cable tray to be installed in the opening. The annular space between the cable tray and the periphery of the opening shall be min 3/8 in. to max 1-9/16 in. Cable tray to be rigidly supported on both sides of wall assembly.

3. **Cables** -- Aggregate cross-sectional area of cables in cable tray to be max 20 percent of the cross-sectional area of the cable tray based on a max 3 in. cable loading depth within the cable tray. Any combination of the following types and sizes of copper conductor cables may be used:
   A. Max 1/C - 350 kcmil cable with a cross-linked polyethylene jacket (XLPE).
   B. Max 3/C - No. 2 AWG cable XLPE insulation and polyvinyl chloride (PVC) jacket.
   C. Max 7/C - No. 12 AWG cable with PVC insulation and jacket.
   D. Max 2/C - No. 16 AWG cable with PVC insulation and jacket.

4. **Firestop System** -- The firestop system shall consist of the following:

   A. **Packing Material** -- In 2 h fire rated assemblies, min 2-1/2 in. thickness of min 6 pcf mineral wool batt insulation firmly packed into opening as a permanent form. In 1 h fire rated assemblies, min 2-1/4 in. thickness of min 6 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.

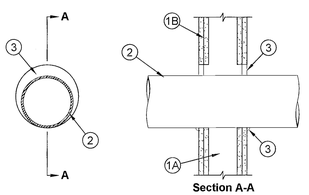
   B. **Fill, Void or Cavity Material* -- Caulk** -- Min 1-1/4 in. thickness of fill material applied within the annulus, on both surfaces of wall. Caulk to be forced into interstices of cable group to max extent possible. Additional caulk to be installed such that a min 1 in. is lapping beyond the periphery of the opening.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101 or 105 Sealant

*Bearing the UL Classification Marking

11. UL SYSTEM NO. W-L- 4005

System No. W-L-1062
F Ratings - 1 and 2 Hr
T Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft



Guide XHEZ
Through-penetration Firestop Systems

(W-L-1062 - B Card)
(Cont'd from W-L-1062 - A Card)

System No. W-L-1062

F Ratings -- 1 and 2 Hr
T Rating -- 0 Hr
L Rating At Ambient -- Less Than 1 CFM/sq ft
L Rating At 400 F -- Less Than 1 CFM/sq ft

1. **Wall Assembly --** The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs --** Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.

   B. **Gypsum Board* --** Thickness, type, number of layers and fasteners as required in the individual Wall and Partition Design. Max diam of opening in wood stud walls is 8 in. Max diam of opening in steel stud walls is 14 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through Penetrants --** One metallic pipe, conduit or tubing to be installed within the firestop system. The space between pipe, conduit or tubing and periphery of opening shall be a min 0 in. (point contact) to a max 2 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

   A. **Steel Pipe --** Nom 12 in. diam (or smaller) Schedule 5 (or heavier steel pipe.

   B. **Iron Pipe --** Nom 12 in. diam (or smaller) cast or ductile iron pipe.

   C. **Conduit --** Nom 4 in. diam (or smaller) electrical metallic tubing, nom 6 in. diam (or smaller) steel conduit or nom 1 in. diam (or smaller) flexible steel conduit.

   D. **Copper Tubing --** Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.

   E. **Copper Pipe --** Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

3. **Fill, Void or Cavity Material* -- Caulk --** Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. Min 3/8 in. diam bead of fill material applied at point contact location at the penetrant/gypsum board interface on both sides of wall.
   GENERAL ELECTRIC CO
   SILICONE PRODUCTS DIV -- Pensil 100 Caulk.
   SPECIFIED TECHNOLOGIES INC -- Pensil 100 Sealant and Pensil 300 Sealant.

*Bearing the UL Classification Mark

SAT SAN ANSELMO, CA
JAN 27 2014
ACCEPTANCE FOR PERMIT
UNDER DIRECTIVE NO. 14/1975

12. UL SYSTEM NO. W-L- 1062

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPT BLDG 121664662 Job Number
SC1110162034 Scan Code

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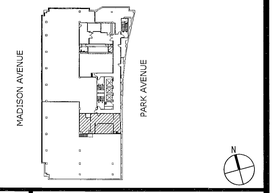
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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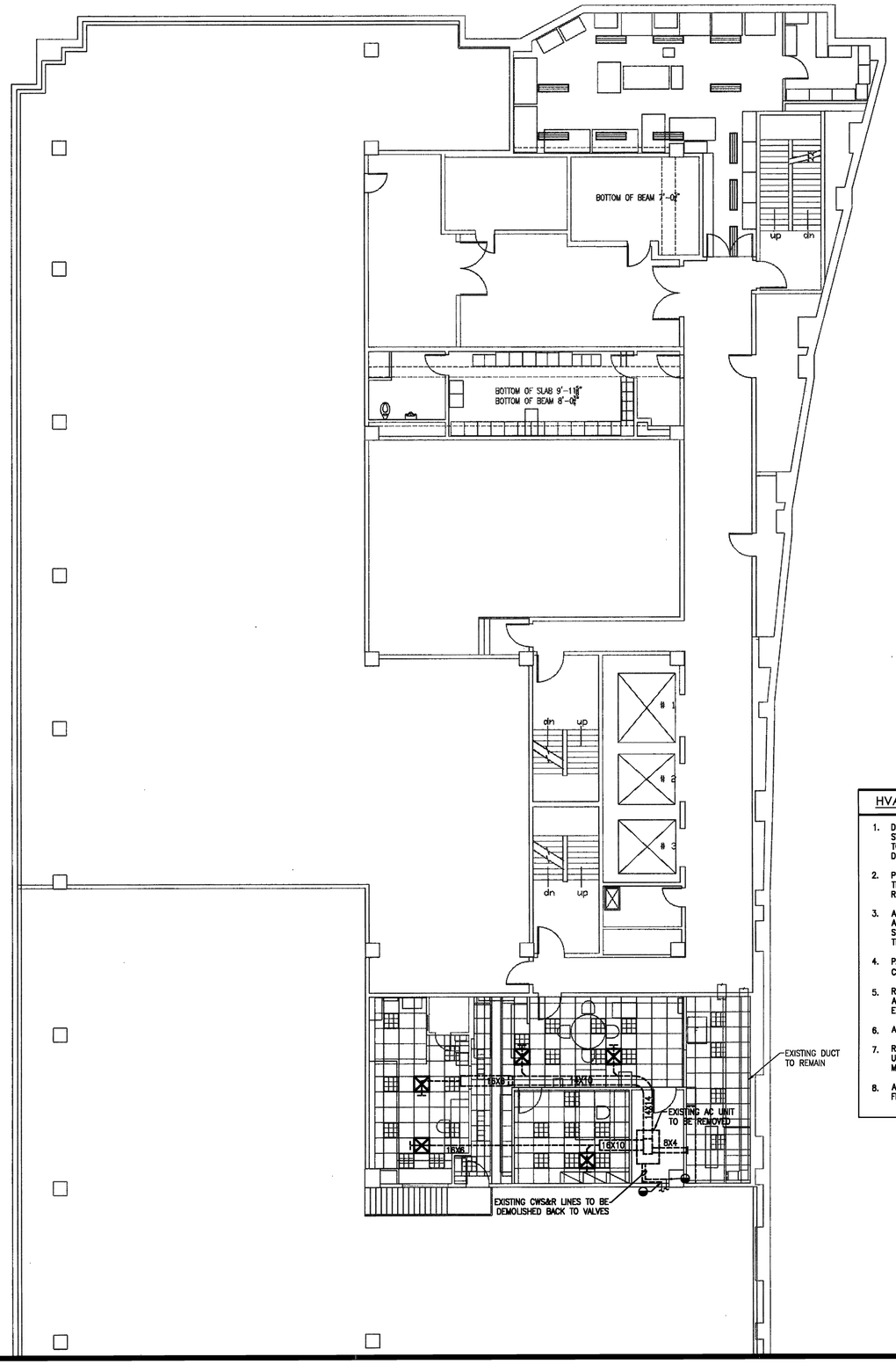
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-708-FS.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

FIRE STOPPING & JOINT SYSTEM DIAGRAMS SHEET 3 OF 3

REGISTERED ARCHITECT GREG MOUDIS No. 010105 STATE OF NEW YORK

A-708.00
20 OF 20



HVAC DEMOLITION WORK NOTES

1. DEMOLITION CONTRACTOR SHALL INVESTIGATE THE SPACE BEFORE STARTING TO DEMOLISH THE WORK, AND BE FAMILIAR WITH THE SYSTEM TO BE REMOVED. HE SHALL REPORT TO ARCHITECT AND ENGINEER ANY DEVIATION FROM SCOPE OF WORK TO BE DEMOLISHED.
2. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THE SPACE AS REQUIRED BY THE REMOVAL OF PIPES, DUCTS, CONDUIT, AND EQUIPMENT.
3. ALL EQUIPMENT SHALL BE REMOVED IN A CAREFULLY PLANNED MANNER. ALL CEILING HUNG EQUIPMENT SHALL BE REMOVED BY PROVIDING SUPPORTS FROM BELOW. NO DROPPING OF EXISTING EQUIPMENT ONTO THE FLOOR SLAB WILL BE ALLOWED.
4. PATCHING OF EXISTING WALL OR SLAB OPENINGS SHALL BE BY GENERAL CONTRACTOR(G.C.). HVAC CONTRACTOR TO COORDINATE WITH G.C.
5. REMOVE CONTROLS, THERMOSTATS, AC UNITS AND CONTROL WIRING ASSOCIATED WITH EQUIPMENT BEING REMOVED. COORDINATE WITH ELECTRICAL CONTRACTOR AS REQUIRED.
6. ALL EXISTING WORK IN HATCHED AREAS SHALL REMAIN.
7. REMOVE ALL SUPPLY MAIN AND BRANCH DUCTWORK BACK TO EXISTING UNIT. REMOVE INCLUDING BUT NOT LIMITED TO, AIR OUTLETS, MISCELLANEOUS ACCESSORIES, ETC.
8. ALL DEMOLITION WORK SHALL STRICTLY COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND STANDARDS.
9. ALL DEMOLITION AND CONNECTION OF NEW WORK SHALL BE COORDINATED WITH THE OWNER AS NOT TO DISRUPT BUILDING OPERATIONS AND SERVICES. IF TEMPORARY SHUT-DOWNS ARE REQUIRED THEY SHALL BE COORDINATED WITH THE OWNER AND SCHEDULED AS REQUIRED. ALL LABOR REQUIRED ON AN OVERTIME BASIS SHALL BE CONFIRMED WITH THE OWNER PRIOR TO SUBMISSION OF BIDS. ALL REQUIRED OVERTIME LABOR SHALL BE INCLUDED IN THE BASE BID AND PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
10. ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH BUILDING RULES AND REGULATIONS OR AS DIRECTED BY THE OWNER.
11. ALL DEMOLISHED WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE OWNER. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF OFF SITE ALL DEMOLISHED WORK IN AN ACCEPTABLE AND SAFE MANNER AND SHALL KEEP ALL PUBLIC AREAS CLEAR AND SAFE.
12. PROVIDE FILTERS ON MAIN RETURN DUCTS DURING DEMOLITION TO STOP THE FLOW OF DUST AND OTHER AIRBORN MATERIALS.

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

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JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPTLEDGS 121664662 Job Number
SC110162031 Scan Code

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2	08.30.13	ISSUE FOR CONSTRUCTION
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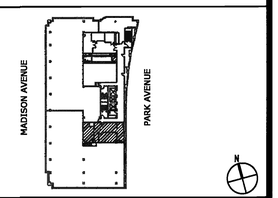
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK

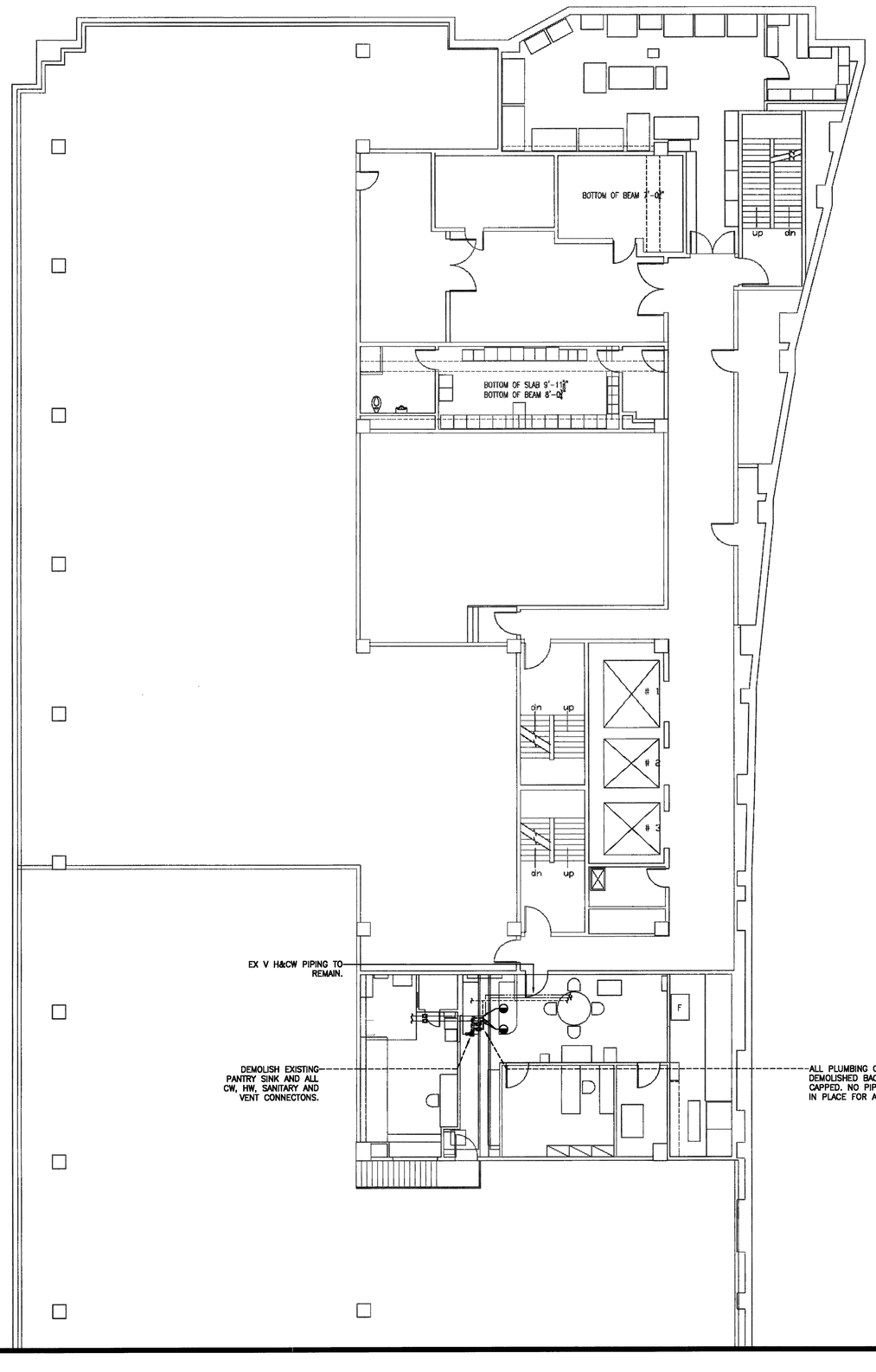


PROJECT NUMBER	JMA37000-DAY-2
SCALE	
DATE	08.08.12
PROJECT MANAGER	NF
PROJECT ARCHITECT	GM
DRAWN BY	
CHECKED BY	
CADD FILE	DMM-100.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL MECHANICAL DEMOLITION PLAN

DMM.100.00



JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPT.BLDGS 121664662 Job Number
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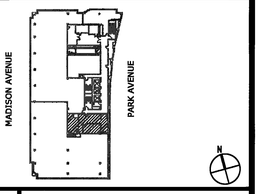
ISSUE/REVISIONS

KEY PLAN

- AREA OF WORK



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DATE	08.08.12
PROJECT MANAGER	NF
PROJECT ARCHITECT	GM
DRAWN BY	
CHECKED BY	
CADD FILE	DMP-100.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL PLUMBING DEMOLITION PLAN

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

FILING NOTE

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DMP-100.00

MECHANICAL SYMBOLS

- NEW DIFFUSER
- NEW RETURN\EXHAUST
- EXISTING DIFFUSER
- EXISTING RETURN\EXHAUST TO BE REMOVED
- SUPPLY DUCTWORK, NEW
- SUPPLY DUCTWORK, EXISTING
- SUPPLY DUCTWORK, TO BE REMOVED
- RETURN DUCTWORK, NEW
- RETURN DUCTWORK, EXISTING
- RETURN DUCTWORK, TO BE REMOVED
- VOLUME DAMPER, NEW
- VOLUME DAMPER, EXISTING
- FIRE DAMPER, NEW
- FIRE DAMPER, EXISTING
- FIRE DAMPER, TO BE REMOVED
- FIRE AND SMOKE DAMPER, NEW
- FIRE AND SMOKE DAMPER, EXISTING
- TRANSFER DUCT WITH SOUND LINING, NEW
- DUCTWORK WITH ACOUSTIC LINING
- DUCT UNDER PRESSURE (SUPPLY AIR OR FAN DISCHARGE)
- DUCT UNDER NEGATIVE PRESSURE (RETURN, EXHAUST OR OUTSIDE AIR)
- R — RISE IN DUCTWORK (IN DIRECTION OF AIR FLOW)
- D — DROP IN DUCTWORK (IN DIRECTION OF AIR FLOW)
- CFM OR CFM — CUBIC FEET PER MINUTE
- VANED ELBOW (SEE DETAIL)
- VERTICAL DUCT DROP
- VERTICAL DUCT RISE
- DIAMETER
- POINT OF CONNECTION
- POINT OF CONNECTION
- T — THERMOSTAT, NEW
- T — THERMOSTAT, EXISTING
- NEW FAN COIL UNIT

HVAC ABBREVIATIONS

AC	AIR CONDITIONING
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
A L	ACOUSTIC LINING
AHU	AIR HANDLING UNIT
CAC	COMPUTER AIR CONDITIONING UNIT
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
COD	CABLE OPERATED VOLUME DAMPER
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
D	DROP
CLG	CEILING
DN	DOWN
DWG	DRAWING
EF	EXHAUST FAN
EDH	ELECTRIC DUCT HEATER
ES	EQUAL SPLIT
(E)	EXISTING
EXH	EXHAUST
EWT	ENTERING WATER TEMPERATURE
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FPB	FAN POWERED BOX
F	FAN
FT	FEET
HV	HEATING AND VENTILATING
IN	INCH OR INCHES
L	LENGTH
LWT	LEAVING WATER TEMPERATURE
LIN FT	LINEAR FEET
MAX	MAXIMUM
MER	MECHANICAL EQUIPMENT ROOM
MIN	MINIMUM
MO	MASONRY / SHEET ROCK OPENING
NC	NORMALLY CLOSED
(N)	NEW
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
R	RISE
RA	RETURN AIR
REL	RELOCATE
REFR	REFRIGERANT
RLD	RETURN LINEAR DIFFUSER
RM	ROOM
SLD	SUPPLY LINEAR DIFFUSER
SP	STATIC PRESSURE
SPEC	SPECIFICATION
TEMP	TEMPERATURE
TD	TRANSFER DUCT
T'STAT	THERMOSTAT
TV	TURNING VANES
TYP	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
VAV	VARIABLE AIR VOLUME UNIT
W	WIDTH
W/	WITH
W/O	WITHOUT
WMS	WIRE MESH SCREEN
UFT	UNDER FLOOR TERMINAL UNIT
UON	UNLESS OTHERWISE NOTED
NSF	NET SQUARE FEET
NSI	NET SQUARE INCHES
RAO	RETURN AIR OPENING

PIPING SYMBOLS

- BALL VALVE
- GATE VALVE
- GLOBE VALVE
- ANGLE GLOBE VALVE
- SILENT CHECK VALVE
- SWING CHECK VALVE
- BUTTERFLY VALVE
- LUBRICATED PLUG VALVE
- "Y" TYPE STRAINER W/BLOWOFF VALVE
- THERMOWELL
- PRESSURE TAP
- EXISTING PIPING OR EQUIPMENT (UNLESS NOTED OTHERWISE)
- NEW PIPING OR EQUIPMENT (UNLESS NOTED OTHERWISE)
- PIPE DROP
- PIPE RISE
- PITCH UP IN DIRECTION OF FLOW
- FLOOR DRAIN
- PITCH DOWN IN DIRECTION OF FLOW
- UNION
- REDUCER
- FLANGED CONNECTION
- FLANGED END
- DEAD END — WELDED CAP
- PIPE ALIGNMENT GUIDE
- FE — FLOW ELEMENT
- FS — FLOW SWITCH
- TEMPORARY STRAINER
- M — MOTORIZED VALVE
- AUTOMATIC CONTROL VALVE
- RELIEF VALVE

PIPING ABBREVIATIONS

AAV	AUTOMATIC AIR VENT
ATM	ATMOSPHERE
AFF	ABOVE FINISHED FLOOR
BD	BLOWDOWN
BFP	BACK FLOW PREVENTOR
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT ELEVATION
CF	CHEMICAL FEED
COD	CORD OPERATED DAMPER
COV	WITH CHAIN OPERATOR VALVE
CW	COLD WATER / CITY WATER
DW	DOMESTIC WATER
DN	DOWN
DWG	DRAWING
EL	ELEVATION
ELEC	ELECTRIC
EXP	EXPANSION
F	FAHRENHEIT
FC	FLEXIBLE CONNECTION
FIN FL	FINISHED FLOOR
FT	FEET
GAL	GALLON
GCHWS	GLYCOL CHILLED WATER SUPPLY
GCHWR	GLYCOL CHILLED WATER RETURN
GPM	GALLONS PER MINUTE
HDR	HEADER
IN	INCH OR INCHES
LBS	POUNDS
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MOV	MOTORIZED VALVE
MU	MAKE-UP WATER
MWP	MAXIMUM WORKING PRESSURE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NO.	NUMBER
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PSIG	PSI GAUGE
RRV	REFRIGERANT RELIEF VENT
S.R.	SHORT RADIUS
SPEC	SPECIFICATION
TEMP	TEMPERATURE
TYP	TYPICAL
VFD	VARIABLE FREQUENCY DEVICE
VTR	VENT TO ROOF
W/	WITH
W/O	WITHOUT

CONSTRUCTION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL FLOORING, WALL AND CEILING ALONG THE EQUIPMENT RIGGING PATH AND FOR PROVIDING ALL MATERIALS TO ENSURE THEIR PROTECTION, SUCH AS FIRE RATED PLYWOOD.
2. MECHANICAL EQUIPMENT TO BE FURNISHED AS PER SCHEDULE ON DWG. M-001 MECHANICAL CONTRACTOR TO PROVIDE A COORDINATED WIRING DIAGRAM FOR REVIEW AND APPROVAL BY THE ENGINEER BEFORE WORK IS STARTED. PROVIDE LAMINATED AS BUILT WIRING DIAGRAM AT COMPLETION OF CONSTRUCTION.
3. COORDINATE ALL WORK ASSOCIATED WITH THE EQUIPMENT MANUFACTURERS AND ALL POWER SOURCE WIRING AND INTERFACING WITH ELECTRICAL CONTRACTOR. CONTROL AND INTERLOCK WIRING SHALL BE DONE BY AUTOMATIC TEMPERATURE CONTROL CONTRACTOR AND ELECTRICAL CONTRACTOR SHALL PROVIDE POWER.
4. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE PRIOR TO STARTING HIS WORK. CONTRACTOR SHALL VERIFY IN THE FIELD THE SIZES AND LOCATION OF EXISTING PIPING THAT AFFECTS HIS WORK.
5. ALL TEMPORARILY REMOVED PIPING, DUCTWORK, ELECTRICAL SYSTEMS, CEILING SUPPORTS TO ALLOW RIGGING AND INSTALLATION OF EQUIPMENT AND PIPING SHALL BE RE-CONNECTED AND OR RELOCATED, PAINTED, AND INSULATED TO MATCH EXISTING.
6. PIPING THROUGH WALLS, FLOORS AND BUILDING CONSTRUCTIONS SHALL BE PROVIDED PIPE SLEEVES AND SPACE BETWEEN SLEEVE AND PIPE FILLED WITH FIRE RATED MATERIAL. SLEEVES SHALL EXTEND THE FULL DEPTH OF THE CONSTRUCTION PENETRATED (SEE DETAIL).
7. ALL WATER PIPING SHALL BE INSTALLED WITH SUFFICIENT PITCH TO INSURE PROPER DRAINGING AND VENTING OF ENTIRE PIPING SYSTEM.
8. ALL DIMENSIONS AND ELEVATIONS FOR NEW AND EXISTING EQUIPMENT, PIPING AND APPARATUS ARE APPROXIMATE AND ARE ONLY FOR CONTRACTOR'S GUIDANCE. CONTRACTOR SHALL EXECUTE SHOP DRAWINGS SHOWING ALL DIMENSIONS AND ELEVATIONS VERIFIED IN THE FIELD.
9. UNLESS NOTED OTHERWISE, ALL BUILDING STRUCTURES INCLUDING CEILING AND WALLS THAT THE CONTRACTOR REMOVES TO FACILITATE THE RIGGING AND INSTALLATION OF EQUIPMENT AND PIPING SHALL BE RE-BUILT TO TO ORIGINAL CONDITIONS.
10. ALL REMOVED EQUIPMENT AND MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR.
11. COORDINATE WITH CONSTRUCTION MANAGER SO THAT LATEST COPY OF BASE BUILDING STANDARDS, RULES AND REGULATIONS ARE ISSUED AND POSTED ON PROJECT SITE.
12. REFER TO STRUCTURAL ENGINEER'S DRAWINGS FOR ADDITIONAL EQUIPMENT AND PIPING SUPPORT REQUIREMENTS AND DETAILS.

"REVIEW DOCUMENTS, VERIFY DIMENSIONS AND FIELD CONDITIONS AND CONFIRM THAT WORK IS BUILDABLE AS SHOWN. THE CONTRACTOR SHALL REPORT ANY CONFLICTS AND/OR OMISSIONS TO THE ENGINEER PRIOR TO PERFORMING ANY WORK IN QUESTION. OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO COMPLETE THE WORK STATED IN ON THE CONTRACT DOCUMENTS BASED UPON THE OPTIMAL ESTABLISHED QUALITY STANDARD."

MECHANICAL CONTRACTOR SHALL COORDINATE & CONFIRM WITH GENERAL CONTRACTOR, PRIOR TO BID, ALL WORK TO BE PERFORMED ON PREMIUM TIME.

MECHANICAL DRAWING LIST

M-001	MECHANICAL SYMBOLS, NOTES, ABBREVIATIONS AND SCHEDULES
M-002	MECHANICAL SPECIFICATIONS
M-003	MECHANICAL SPECIFICATIONS
DMM-100	SC-2 LEVEL MECHANICAL DEMOLITION PLAN
M-100	SC-2 LEVEL MECHANICAL CONSTRUCTION PLAN
M-501	MECHANICAL DETAILS
M-701	MECHANICAL SCHEDULES

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 3000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

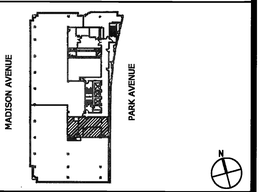
CONSULTANT

DEPT:BLDGS 121664662 Job Number
SC110162056 Scan Code

NO.	DATE	DESCRIPTIONS
2	08.30.13	ISSUE FOR CONSTRUCTION
1	08.05.13	ISSUE FOR BID & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



PROJECT NUMBER	JMA37000-DAY-2
SCALE	
DATE	08.08.12
PROJECT MANAGER	NF
PROJECT ARCHITECT	GM
DRAWN BY	
CHECKED BY	
CADD FILE	M-001.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

MECHANICAL SYMBOLS LIST, ABBREVIATIONS AND NOTES

M-001.00

SPECIFICATIONS FOR HVAC WORK

1) GENERAL

A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", AIA DOCUMENT A201, 14TH EDITION, 1987, AND THIS SPECIFICATION AS APPLICABLE ARE PART OF THIS CONTRACT.

B. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.

C. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM BUILDING OWNER AND TENANT AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.

D. ALL DUCTWORK AND PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICES FOR ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS SUBJECT TO APPROVAL OF ARCHITECT.

E. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL STEEL FRAMING.

F. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

G. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES IN MAKING UP WORK PROPOSAL.

H. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING OWNER. INSTALL ISOLATION VALVES AT POINT OF CONNECTION TO THE EXISTING PIPING. PROVIDE TEMPORARY DUCT CAPS AND/OR CONNECTIONS TO MINIMIZE SHUTDOWN TIME.

I. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ARCHITECT AND ENGINEER.

J. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT, AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.

K. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.

L. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS (NOT IN SHAFTS) WITH MINERAL WOOL OR OTHER NON-COMBUSTIBLE MATERIAL.

M. PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, CONDUIT, AND EQUIPMENT.

N. ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED UNDER THIS CONTRACT WILL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THIS CONTRACTOR AS DIRECTED BY THE OWNER.

O. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED.

P. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.

Q. INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.

R. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT.

T. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED.

U. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC, WHICH AFFECT THIS WORK AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION.

2) SCOPE OF WORK

A. PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR A COMPLETE AND SAFE INSTALLATION OF HVAC IN FULL CONFORMITY WITH REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION; ALL AS INDICATED ON DRAWINGS AND/OR HEREIN SPECIFIED FOR THE SYSTEMS INCLUDED. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER. INCLUDE ALL COSTS FOR PERMITS, LICENSES, CERTIFICATES, FILING AND INSPECTIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION.

B. PERIODIC AND SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED AGENCY.
MECHANICAL – AS PER 1704.15
ENERGY CODE – AS PER BC-109.3.5
FIRE STOP – AS PER BC-1704.25

3) GUARANTEE

A. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF ACCEPTANCE BY OWNER. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

4) SHEET METAL WORK

A. EXCEPT AS OTHERWISE SHOWN OR NOTED, ALL DUCTWORK AND OTHER SHEET METAL WORK SHALL BE GALVANIZED SHEET STEEL AND SHALL BE IN ACCORDANCE WITH MOST RECENT EDITION OF SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. DUCT CONSTRUCTION STANDARDS EXCEPT AS NOTED.

B. DUCTWORK STATIC PRESSURE CLASSIFICATIONS

PRESSURE CLASS	OPERATING CLASS
2 IN. W.G.	UP TO 2 IN. W.G.
6 IN. W.G.	UP TO 6 IN. W.G.

DUCTWORK SEALING REQUIREMENT SHALL BE SEAL CLASS A.

C. UNEQUAL ELBOWS ARE NOT ACCEPTABLE, EXCEPT RADIUS BRANCH DUCTWORK WITH THROAT.

D. VOLUME DAMPERS: SAME MATERIAL AS DUCTWORK, PER SMACNA CONSTRUCTION STANDARDS, EXCEPT PROVIDE BEARING AT ONE END OF DAMPER ROD AND QUADRANT, WITH LEVER AND LOCKSCREW AT OTHER END. FOR INSULATED DUCTS, QUADRANTS MOUNTED ON COLLAR TO CLEAR INSULATION. LEVERS MUST BE

E. FLEXIBLE CONNECTIONS: NEOPRENE-COATED GLASS FABRIC, 30 OZ. PER SQ YD WITH SEWED AND CEMENTED SEAMS, SIMILAR TO VENT FABRICS. PROVIDE WITH METAL COLLARS. ALLOW MINIMUM MOVEMENT OF 1".

F. TURNING VANES: SAME MATERIAL AS DUCTWORK, SMALL DOUBLE-THICKNESS VANES.

G. ALL DUCT DIMENSIONS INDICATED ON PLANS ARE INSIDE CLEAR DIMENSIONS.

5) AIR DISTRIBUTION SYSTEM

A. GENERAL

1. SUITABLE FOR OPERATION AT 5% EXCESS AND 25% LESS THAN NOTED CAPACITY. MANUFACTURER SHALL BE RESPONSIBLE FOR EXAMINING APPLICATION OF EACH OUTLET AND SHALL GUARANTEE THAT EACH WILL PROVIDE REQUIRED NC LEVELS AND COMFORT SPACE CONDITIONS WITHOUT DRAFTS THROUGHOUT OPERATING RANGE.
2. FINISH AND COLOR AS DIRECTED BY ARCHITECT.
3. AIR OUTLETS AND FRAME TYPE SUITABLE FOR MOUNTING IN CEILING TYPES SHALL BE COORDINATED WITH THE ARCHITECT.
4. FOR EXACT LOCATIONS OF ALL AIR OUTLETS SEE ARCHITECTURAL PLANS.
5. PROVIDE BLANK OFF PLATES FOR INACTIVE PORTIONS.

B. AIR DIFFUSERS

1. DIFFUSERS SHALL BE WITH VOLUME DAMPER ADJUSTABLE FROM DIFFUSER FACE EXCEPT AS NOTED, WITHOUT REMOVAL OF FACE LOUVERS OR PANEL. PROVIDE SUPPLY AIR DIFFUSERS WITH AIR-EQUALIZING DEFLECTORS. DIFFUSERS IN SAME ROOM SHALL BE THE SAME SIZE AND TYPE, EXCEPT AS OTHERWISE APPROVED. DIFFUSERS SHALL HAVE REMOVABLE CORE, UNLESS OTHERWISE NOTED. SUPPLY PLASTER FRAMES FOR DIFFUSERS WITHOUT REMOVABLE CORES INSTALLED IN PLASTER FOR SETTING UNDER GENERAL CONSTRUCTION WORK.
   A) PROVIDE DIFFUSERS SUITABLE FOR THE FOLLOWING CEILING CONSTRUCTION, AS REQUIRED.
      (1) LAY-IN ACOUSTICAL TILE CEILING WITH INVERTED TEE-BAR SHALL HAVE LAY-IN TYPE FRAME FOR SETTING ON TEE-BARS.
      (2) PLASTER CEILINGS SHALL BE FLANGED FOR SURFACE MOUNTING, OR PLASTER FRAMES AS INDICATED.
   B) NOISE LEVEL AT NOTED CAPACITIES SHALL NOT EXCEED CRITERIA SPECIFIED IN SECTION NOISE CONTROL. DIFFUSERS SHALL BE SUITABLE FOR OPERATION AT 5 PERCENT EXCESS AND 25 PERCENT LESS THAN NOTED CAPACITY. PROVIDE BLANKING FOR PROPER COVERAGE AND BLOW WITHOUT PRODUCING OBJECTIONABLE NOISE OR AIR MOTION AT OCCUPIED LEVEL. FINISH SHALL MATCH COLOR SAMPLE AS APPROVED. BY ARCHITECT.
      (1) BAKED ENAMEL. (COORDINATE WITH ARCHITECT).

2. SQUARE CEILING DIFFUSERS

A. THE DIFFUSERS SHALL BE CONSTRUCTED OF STEEL AND SHALL BE DESIGNED TO INTEGRATE WITH THE SPECIFIED CEILING SYSTEM TYPE. THE DIFFUSER SHALL CONSIST OF A BACK PAN AND A REMOVABLE, HEAVY GAUGE APPEARANCE PANEL ATTACHED TO THE BACK PAN VIA (4) POSITIVE LOCKING POSTS. THE APPEARANCE PANEL SHALL HAVE AERODYNAMIC, RIGID, HEMMED EDGES AROUND THE PERIMETER AND SHALL BE A SINGLE PIECE CONSTRUCTION. THE PANEL SHALL BE FLAT, SMOOTH, AND SHALL BE FREE OF ANY WELDING OR FORMING BLEMISHES.

THE HORIZONTAL AIR DISCHARGE PATTERN SHALL BE 360° TYPE. BLANK-OFF BAFFLES SHALL BE PROVIDED TO OBTAIN 1,2,OR 3 WAY BLOW PATTERNS AS SCHEDULED. THE SIZE AND ELEVATION OF THE APPEARANCE PANEL SHALL BE AS SCHEDULED FOR ANEMOSTAT'S TYPE A OR C MODELS.

PROVIDE VOLUME CONTROL, MODEL VD OPPOSED BLADE TYPE DAMPERS AS SCHEDULED. DAMPERS SHALL BE ADJUSTABLE FROM THE FACE.

DIFFUSER FINISH SHALL BE COLOR AS SELECTED BY THE ARCHITECT).

DIFFUSER SIMILAR TO ANEMOSTAT PG.

B. CEILING GRILLES
1. GRILLES AND TRANSFER GRILLES: SAME AS REGISTERS BUT WITHOUT VOLUME DAMPER. SIMILAR TO ANEMOSTAT AC3L.

6) NOISE CONTROL

A. UNLESS OTHERWISE NOTED, ALL ROOM NC LEVELS SHALL BE 35 OR LESS.

B. PROVIDE MIN. 1" THICK, MIN. 1-1/2 LB. DENSITY SOUNDLINING (SIMILAR TO JOHNS-MANVILLE MICRO-COUSTIC) FOR THE FOLLOWING DUCTWORK:
1. AIR TRANSFER DUCTS.
2. A MINIMUM OF 10 FT, DOWNSTREAM OF VAV BOXES SUPPLY.
3. A MINIMUM OF 20 FT, DOWNSTREAM OF AC UNIT SUPPLY FAN.

7) TESTING AND BALANCING

A. AIR BALANCING SHALL BE ACCOMPLISHED BY ADJUSTMENT OF FANS AND BRANCH DAMPERS FOR MAJOR ADJUSTMENTS. ADJUSTMENT OF TERMINAL DAMPERS AND DEVICES SHALL BE FOR TRIM OR MINOR ADJUSTMENT ONLY. THIS SHALL BE DONE TO PERMIT THE LEAST NOISE GENERATION IN THE TERMINAL AREAS AND UTILIZE MINIMUM FAN ENERGY. TESTING, ADJUSTING AND BALANCING (TAB) SHALL BE DONE IN ACCORDANCE WITH THE AABC NATIONAL STANDARD FOR TOTAL SYSTEM BALANCE.

B. UPON COMPLETION OF THE INSTALLATION, THE CONTRACTOR SHALL REBALANCE ANY EXISTING PORTION OF AIR DISTRIBUTION SYSTEM AFFECTED BY THE RENOVATION AND ALSO BALANCE ALL NEW WORK.

C. PIPING BALANCING SHALL BE MADE BY ADJUSTING VALVES TO REQUIRED GPM TO EACH EQUIPMENT.

D. THE CONTRACTOR SHALL PROVIDE ALL LABOR, ADDITIONAL SHEAVES AND BELTS REQUIRED TO BALANCE SYSTEMS.

E. BALANCING REPORT SHALL BE PROVIDED ON AABC-TYPE FORMS.

F. AIR HANDLING SYSTEMS AND WATER DISTRIBUTION SYSTEMS SHALL BE BALANCED TO WITHIN +5 PERCENT OF THEIR DESIGN CAPACITIES.

G. CLEANING OF PIPING SYSTEM: PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO FLUSH INTERIOR OF NEW PIPING WITH CLEAN WATER PRIOR TO CONNECTION OF EQUIPMENT AND CONTROL VALVES. THE ENTIRE SYSTEM SHALL BE EXAMINED FOR CLEANLINESS.

H. BALANCING AND TESTING SHALL BE PERFORMED AND SUPERVISED BY TSSM OR ONE OF THE FOLLOWING INDEPENDENT CERTIFIED FIRMS SPECIALIZING IN TESTING AND BALANCING FOR AIR AND WATER SYSTEMS, WITH A MINIMUM OF FIVE YEARS EXPERIENCE AND AABC CERTIFICATION.

1. MERENDINO ASSOCIATES
2. INTERNATIONAL TESTING.
3. AFTER OCCUPANCY OF THE SPACE AND APPROVAL OF THE BALANCING REPORTS, AIR BALANCING 'COMFORT BALANCE' SERVICE. AIR BALANCE COMPANY SHALL ADJUST VOLUME DAMPERS, AND VAV TERMINAL UNIT MINIMUM AND MAXIMUM SETTINGS AS REQUIRED IN RESPONSE TO OCCUPANTS REQUIREMENTS. ALLOW UP TO TWO DAYS ON SITE FOR COMFORT BALANCE SERVICES.
4. SUBMIT COPY OF FINAL AIR AND WATER BALANCE REPORT TO BUILDING FOR THEIR RECORDS.

8) SHOP DRAWINGS

A. INDICATE ON EACH SUBMISSION
1. PROJECT NAME AND LOCATION.
2. ARCHITECT AND ENGINEER
3. ITEM IDENTIFICATION.
4. APPROVAL STAMP OF PRIME CONTRACTOR.

B. SUBMISSIONS
1. SUBMISSIONS 8 1/2 IN. X 14 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT ONE ORIGINAL AND TWO COPIES. OTHERWISE, HE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL FORWARD THE ORIGINAL AND ONE COPY (TWO COPIES WHEN NO ORIGINAL IS RECEIVED) TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE.
2. SUBMISSIONS LARGER THAN 8 1/2 IN. X 14 IN.: SUBMIT TWO PRINTS AND ONE PAPER SEPIA TO THE ARCHITECT. THE ARCHITECT WILL FORWARD ONE PRINT AND THE PAPER SEPIA TO THE ENGINEER.
3. ALL PIPING AND DUCTWORK SHOP DRAWINGS SHALL BE SUBMITTED ON 3/8 IN SCALE DRAWINGS AND SHALL INCLUDE HANGERS, SUPPORTS, EXPANSION JOINTS, GUIDES, ANCHORS AND ANCHOR LOADS.

C. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:
LOCATIONS AND SIZES OF EXISTING EQUIPMENT ALONG WITH NEW WORK. DRAWING SHALL INDICATE LOCATIONS OF
1. DUCTWORK LAYOUT AND SHEET METAL DETAILS.
2. AIR OUTLETS.
3. AIR BALANCING REPORTS.
4. SCHEDULE OF INSULATION.
5. TERMINAL UNITS
6. AC UNITS
7. GAUGES AND THERMOMETERS
8. PIPING LAYOUT
9. OPERATING SEQUENCES
10. VIBRATION ISOLATION
11. AUTOMATIC CONTROL DIAGRAMS.
12. SCHEDULE OF PIPE, VALVES, FITTINGS.

9) INSULATION – GENERAL REQUIREMENTS

A. ALL INSULATION MATERIALS, INCLUDING JACKETS, FACING, ADHESIVE, COATINGS, AND ACCESSORIES SHALL BE FIRE HAZARD RATED AND LISTED BY UNDERWRITERS LABORATORIES, INC., USING STEINER TUNNEL TEST METHOD FOR FIRE HAZARD CLASSIFICATION OF BUILDING MATERIALS, STANDARD UL 723 (ASTM E-84), (ASA A.25-1963). FLAMESPREAD: MAXIMUM 25. FUEL CONTRIBUTED AND SMOKE DEVELOPED: MAXIMUM 50. FLAMEPROOFING TREATMENTS SUBJECT TO DETERIORATION FROM MOISTURE OR HUMIDITY ARE NOT ACCEPTABLE.

10) DUCTWORK INSULATION

A. INSULATE ALL NEW DUCTWORK IN ACCORDANCE WITH INSULATION NOTED HEREIN EXCEPT AS OTHERWISE NOTED.

B. NON-INSULATED DUCTWORK
1. WHERE SOUNDLINING IS OF MINIMUM THICKNESS SPECIFIED FOR INSULATION.

C. DUCTWORK INSULATION AND ACOUSTICAL LINING
INDOOR DUCT INSULATION: 1-INCH THICK, 3/4 LB DENSITY, GLASS FIBER INSULATION, WITH ALUMINNUM FOIL FACING. MANVILLE R-SERIES MICROLITE.
1. INSULATE ALL SUPPLY DUCTWORK
2. DUCT LINING: UNLESS NOTED, 1-INCH THICK 1-1/2 LB. DENSITY COATED ON AIR SIDE WITH FIRE RESISTANT BLACK NEOPRENE COATING. MANVILLE LINACOUSTIC. FOR THE FOLLOWING DUCTWORK:
   A. ALL DUCTWORK NOT LESS THAN 25 FEET FROM FAN FOR SUPPLY AND 20 FEET FROM FAN FOR RETURN DUCTWORK.
   B. AIR TRANSFER DUCTS.
   C. DOWNSTREAM OF ALL VARIABLE AIR VOLUME AND CONSTANT VOLUME BOXES FOR A MINIMUM OF 5 FEET
   D. ALL DUCTWORK ABOVE CONFERENCE ROOMS.

D. MATERIAL
1. TYPE D-1: MINIMUM 3/4-LB DENSITY FIBERGLASS BLANKET, MAXIMUM 0.28 K-FACTOR AT 75 DEG F MEAN TEMPERATURE WITH FACTORY-APPLIED FOIL-SCRIM-KRAFT FACING. SIMILAR TO MANVILLE MICRO-LITE.
2. BLANKET THICKNESS: MINIMUM 1 INCH.

E. INSTALLATION
1. TYPE "D-1" FIBERGLASS BLANKET: 2 IN. LAP STRIPS AT ALL SEAMS. SECURE BOTTOM OF ALL DUCTS OVER 24" WIDE WITH MINIMUM 2 ROWS OF WELD PINS 12" ON CENTER. SECURE ALL SEAMS WITH FOIL VAPOR BARRIER TYPE AND VAPORSEAL ADHESIVE.

11) PIPING INSULATION

A. ALL PIPING LINES EXCEPT WHERE NOTED OTHERWISE SHALL BE INSULATED.

FLAME SPREAD:	25
FUEL CONTRIBUTED:	50
SMOKE DEVELOPED:	50

B. INSULATE ALL INDOOR CONDENSATE DRAIN PIPING IN ACCORDANCE WITH INSULATION SPECIFIED EXCEPT AS OTHERWISE NOTED.

C. PIPE INSULATION MATERIAL
1. TYPE P-1: MOLDED FIBERGLASS, MAXIMUM 0.23 K-FACTOR AT 75 DEG F MEAN TEMPERATURE, MINIMUM 4 LB DENSITY. SIMILAR TO OWENS CORNING FIBERGLASS MODEL 650 ASJ.
2. TYPE P-3: FOR VALVES, FLANGES AND FITTINGS, MOLDED FIBERGLASS FITTING, MAXIMUM 0.23 K-FACTOR AT 75 DEG F MEAN TEMPERATURE, MINIMUM 4 LB DENSITY. SIMILAR TO EPOLUX HAMFAB MOLDED FITTINGS.

D. THICKNESS
1. DRAINAGE PIPING: 1/2 INCH.
2. ALL CONDENSER WATER PIPING SUPPLY AND RETURN INSULATION SHALL BE 1" AS PER THE BUILDING STANDARD.

E. INSTALLATION
1. BEFORE APPLYING INSULATION ALL PRESSURE AND LEAK TESTS SHALL BE COMPLETED AND APPROVED.
2. ALL INSULATION SHALL BE BUTTED FIRMLY TOGETHER. PROVIDE 2" LAP STRIPS AT ALL SEAMS, SECURED WITH ADHESIVE USE VAPOR BARRIER TAPE AND VAPORSEAL ADHESIVE WHERE REQUIRED.
3. ALL INSULATION AND VAPOR BARRIERS SHALL BE CONTINUOUS PASSING THROUGH SLEEVES, HANGERS, ETC. OR OTHER OPENINGS. PROVIDE SADDLES OR SHIELDS FOR PROTECTION.
4. INSULATION FOR STRAINERS OR OTHER FITTINGS OR ACCESSORIES REQUIRING SERVICING OR INSPECTION SHALL HAVE INSULATION REMOVABLE AND REPLACEABLE WITHOUT DAMAGE.
5. PROVIDE FLOW ARROWS AND CONTENTS CLEAR ON OUTSIDE JACKETING OF INSULATION. PROVIDE EVERY 20 FT.

12) THERMOMETERS AND GAUGES

A. THERMOMETERS: INDUSTRIAL TYPE, MERCURY FILLED, AND 4-INCH STEM. SIMILAR TO MOELLER INSTRUMENTS CO. MODEL 903A4.

B. PRESSURE GAUGE: 6-INCH DIAMETER, 0-130 PSIG DISCHARGE AND SUCTION. SIMILAR TO WEKSLER MODEL AA44-A.

C. PULSATION DAMPERS AT PUMPS: SIMILAR TO WEKSLER TYPE RS7.

D. BAR STOCK NEEDLE COCK VALVE: SIMILAR TO WEKSLER AV-44.

13) VIBRATION ISOLATION

A. GENERAL
1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE LEVELING DEVICES AND APPROVED RESILIENT RESTRAINING DEVICES AS REQUIRED TO LIMIT EQUIPMENT AND PIPING MOTION IN EXCESS OF 1/4 IN.
3. ACCEPTABLE MANUFACTURERS:
   A) MASON INDUSTRIES, INC.
   B) VIBRATION ELIMINATOR CO.
   C) KORFUND DYNAMICS CORP.

B. CEILING HUNG EQUIPMENT
1. SIMILAR TO MASON TYPE 30N.
2. 1 INCH MINIMUM STATIC DEFLECTION 1/2 IN. MINIMUM RESERVE DEFLECTION. FACTORY-PRELOADED TO 75% OF RATED LOAD.
3. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE EQUIPMENT OR STRUCTURE CANNOT SUPPORT POINT LOADS.

14) PIPING – GENERAL REQUIREMENTS

A. COMPLETE WITH: PIPE, FITTINGS, VALVES, COUPLINGS, STRAINERS, HANGERS, ANCHORS, SUPPORTS, GUIDES, SLEEVES, AND ACCESSORIES.

B. ALL ITEMS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING CODES AND STANDARDS:
1. AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).
2. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).
3. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
4. MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY (MSS).

C. FOR JOINTS OF DISSIMILAR METALS, PROVIDE FLANGE CONNECTION WITH ISOLATING GASKETS, SLEEVES AND WASHERS BETWEEN FLANGES, BOLTS, AND NUTS. GASKETS SIMILAR TO DUPONT TEFLON.

D. ALL PRESSURIZED PIPING TO BE TESTED HYDROSTATICALLY TO 175 PSI OR 150% OF OPERATING PRESSURE, WHICHEVER IS GREATER. TEST DURATION TO BE 2 HOURS WITH NO PRESSURE CHANGE, CORRECTED FOR TEMPERATURE CHANGE. REPAIR OR REPLACE LEAKS OR DEFECTS WITHOUT ADDITIONAL COST. COORDINATE TEST WITH BUILDING AND SUBMIT REPORT TO BUILDING UPON COMPLETION.

E. PIPE SUPPORTS
1. PROVIDE ADEQUATE SUPPORT FOR PIPE AND CONTENTS TO PREVENT SAGGING, VIBRATION OR SWAYING AND ALLOW FOR EXPANSION AND CONTRACTION. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE STRUCTURE CANNOT SUPPORT POINT LOADS.
2. HORIZONTAL PIPING TO BE SUPPORTED BY FORGED STEEL ADJUSTABLE CLEVIS TYPE HANGER. MAXIMUM SPACING AS FOLLOWS:
   A) STEEL 1 IN. AND SMALLER: 7 FT.
   B) STEEL 1-1/4 IN. AND LARGER: 10 FT.
   C) COPPER 3 IN. AND SMALLER: 7 FT.
   D) COPPER 4 IN. AND LARGER: 10 FT.
   E) ADDITIONAL SUPPORTS AT CHANGES IN DIRECTION, RUNOUTS, AND CONCENTRATED LOADS DUE TO VALVES, ETC.
3. VERTICAL PIPING:
   A) BASE ELBOW SUPPORT WITH BEARING PLATE ON STRUCTURAL SUPPORT.
   B) GUIDES AT EVERY SECOND FLOOR (SPACING NOT TO EXCEED 25 FEET).
   C) TOP SUPPORT HANGER OR SADDLE IN HORIZONTAL CONNECTION WITH PROVISIONS FOR EXPANSION.
   D) INTERMEDIATE STEEL RISER CLAMP SUPPORT BOLTED AND WELDED TO PIPE BEARING ON STRUCTURAL STEEL OR BEARING PLATE AT FLOOR.

15) DRAIN PIPING AND MAKEUP WATER PIPING

A. PIPE: ASTM B88, HARD DRAWN COPPER TUBING TYPE "K".

B. FITTINGS: BRAZED JOINT FOR DOMESTIC WATER AND FOR DRAINS SOLDERED JOINT FITTINGS, 95/5 SOLDER.

C. PITCH, EXCEPT AS NOTED. ALL DRAIN PIPING PITCHING SHALL BE OF 1 IN. IN 8 FT. MINIMUM.

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79 Madison Avenue, 10th Floor, New York, NY 10016, T. 212 561 2000
The LaSalle Wacker, 221 North LaSalle Street, Chicago, IL 60601, T. 312 924 5000
MCM Architecture Limited, 71 Hopton Street, London SE1 9LR, UK, T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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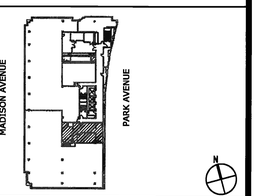

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JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

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16) PIPING

A. ALL CHILLED WATER PIPING AND A/C CONDENSATE DRAIN PIPING UP TO 2½" SHALL BE HARD DRAWN TYPE 'K' COPPER TUBING WITH WROUGHT COPPER FITTINGS. ALL JUNCTIONS OF DISIMILAR METALS SHALL BE ISOLATED USING DIELECTRIC FITTINGS.

B. PIPE SMALLER THAN 1½" IN DIAMETER SHALL BE CONNNECTED WITH SCREWED GROUND JOINT UNIONS. INSTALL LINE SIZE MANUAL VALVES AT EACH INLET AND OUTLET OF EACH PIECE OF EQUIPMENT.

C. ALL PIPES SHALL BE SUPPORTED AT PROPER INTERVAL SO THAT DETECTION WILL NOT EXCEED 1/8" ON ALL CONDENSER AND COLD WATER LINES. THE HANGER SHALL BE INSTALLED ON THE PIPE SURFACE. WHERE THE HANGER IS INSTALLED OUTSIDE OF THE INSULATIONS, A METAL SHEILD SHALLED BE INSTALLED TO PROTECT INSULATION.

D. UNLESS OTHERWISE NOTED PIPE FITTINGS SHALL HAVE THE SAME RATING AS THE PIPING TO WHICH THEY ARE CONNECTED.

E. ALL CHILLED WATER VALVES SHALL BE SIZED FOR A MINUIMUM OF 175 PSI.

F. GATE VALVES–2½" AND SMALLER, 300 PSI, ALL BRONZE SOLID WEDGE, INSIDE SCREW, NRS, SCREW ENDS, NIBCO FIG. T–133 BALL VALVES MAY BE USED IN LIEU OF GATE VALVES IN THESE SIZES.

G. BALL VALVES–BRONZE BODY, IFE SEATS AND SEALS, LEVER HANDLE, NIBCO FIGT–5880, SIZED FOR 175 PSI.

H. CIRCUIT SETTERS–PROVIDE BELL AND GOSSET MODEL CB CIRCUIT SETTERS WHERE SHOWN ON DRAWINGS AR WHERE REQUIRED FOR ADEQUATE FLOW BALANCING. PROVIDE ONE BELL AND GOSSET RO–4 METER. TURN OVER TO OWNER AFTER COMPLETION OF FLOW BALANCING. SIZED FOR 175 PSI.

I. FITTINGS

1. 2½" AND SMALLER: 175–LB WSP FITTINGS.
2. PROVIDE THREE SWING ELBOWS AT ALL EQUIPMENT CONNECTION POINTS.

17) VALVE TAGS, CHARTS, PIPE LABELING AND STENCILING

A. TAGS

1. MINIMUM 2" DIAMETER.
2. NO. 18 GAUGE ALUMINUM WITH STAMPED NUMBERS AND LETTERS FILLED IN WITH BLACK PAINT.
3. IDENTIFYING NUMBER AND SYSTEM LETTER.
4. FASTENED BY HEAVY ALUMINUM HOOK OR CHAIN.
5. DIFFERENT PATTERN THAN THOSE USED FOR PLUMBING AND SPRINKLER WORK.
6. PROVIDE ON AC UNIT.

B. STENCILING

1. BY HVAC CONTRACTOR.
2. MARK PIPING WITH SIZE, PURPOSE AND DIRECTION OF FLOW FOR CORRECT LABEL STENCILING.

C. PIPE LABELING: ALL LABELS SHALL BE WEATHER–PROOFED WITH FLOW DIRECTION INDICATOR, LABEL SIZES TO FIT PIPE SIZES. PROVIDE ON MAIN PIPES ONLY; ONE EVERY 50 FEET OF STRAIGHT RUN. SIMILAR TO SETTON OR APPROVED EQUAL.

18) COMMISSIONING

CONTRACTOR SHALL VALIDATE THAT THE BUILDING SYSTEM WILL COMPLY WITH ALL DESIGN AND OPERATIONAL REQUIREMENTS AS WELL AS ENVIRONMENTAL CONDITIONS (E.G. TEST AUTOMATIC CONTROL).

1. CONTRACTOR SHALL TEST THE EQUIPMENT INDIVIDUALLY IN ALL MODES, INCLUDING:
   A. AUTOMATIC
   B. MANUAL
   C. EMERGENCY
2. CONTRACTOR SHALL TEST THE OPERATION OF THE EQUIPMENT ON A SYSTEM LEVEL INCLUDING INTERFACING WITH OTHER SYSTEMS. THE CONTRACTOR SHALL COORDINATE WITH THE BUILDING AND OPERATIONS ENGINEER AND VERIFY THAT THE SYSTEM PERFORMS AS DESIGNED WITH NEW OR MODIFIED COMPONENTS BEFORE PROJECT SIGN–OFF.

A. TRAINING OF OWNER'S PERSONNEL
THE CONTRACTOR SHALL VERIFY THAT THE NEW OR MODIFIED EQUIPMENT, CONTROLS, ETC. ARE FULLY UNDERSTOOD BY THE BUILDING AND OPERATIONS ENGINEERING PERSONNEL. APPLICABLE TRAINING (MANUFACTURER'S SITE REPRESENTATIVE, VIDEO INSTRUCTION, ETC.) SHOULD BE IDENTIFIED AT TIME OF BID AND IMPLEMENTED BEFORE PROJECT SIGN–OFF. QUALIFIED INSTRUCTORS SHALL BE PROVIDED BY THE CONTRACTOR IN ORDER TO TRAIN BUILDING AND OPERATIONS ENGINEERS ON THE SPECIFIC OPERATION & MAINTENANCE APPLICATION REQUIREMENTS FOR ALL EQUIPMENT. THE FOLLOWING TRAINING TECHNIQUES SHALL BE USED:

1. THE CONTRACTOR SHALL PROVIDE WALK–THROUGHS WITH THE BUILDING AND OPERATIONS ENGINEER TO UNDERSTAND THE EQUIPMENT LAYOUT.
2. THE CONTRACTOR SHALL TRAIN THE BUILDING AND OPERATIONS ENGINEER SO THAT THE ENGINEERS HAVE A FULL UNDERSTANDING OF THE MODES OF OPERATION:
   A. MANUAL
   B. AUTOMATIC
   C. EMERGENCY
3. THE CONTRACTOR SHALL PROVIDE EQUIPMENT MAINTENANCE REQUIREMENTS TO THE BUILDING AND OPERATIONS ENGINEER. THE FOLLOWING REQUIREMENTS SHALL BE INCLUDED:
   A. PROCEDURES
   B. FREQUENCIES
   C. SPECIAL TOOLS AND INSTRUMENTS NEEDED
   D. DELEGATION OF RESPONSIBILITIES TO ASSIGNED PERSONNEL (SPECIALTY CONTRACTORS OR BUILDING AND OPERATIONS ENGINEERS)
   E. TESTING AND NON–INVASIVE MAINTENANCE OF NEW OR MODIFIED EQUIPMENT, CONTROLS, ETC. SHOULD BE UNDERSTOOD BY BUILDING AND OPERATIONS ENGINEERS
4. THE CONTRACTOR SHALL TRAIN THE BUILDING AND OPERATIONS ENGINEER AS TO APPLICABLE SAFETY PROCEDURES/OPERATIONS.
5. THE CONTRACTOR SHALL LIST ANY SPECIALTY GROUPS REQUIRED.

B. THE CONTRACTOR SHALL IDENTIFY THE CONDITIONS OR INTERVALS FOR WHEN A SPECIALIZED GROUP(S) IS REQUIRED.

C. OPERATIONAL AND MAINTENANCE SPARE PARTS, MATERIALS AND TESTING EQUIPMENT THE CONTRACTOR SHALL ENSURE THAT SPARE PARTS, MATERIALS AND EQUIPMENT ARE INCLUDED IN THE CONTRACT, SUCH AS:

1. SPARE PARTS
2. MATERIALS
3. MAINTENANCE /TESTING EQUIPMENT

20) THE FOLLOWING ARE THE CLOSE OUT REQUIREMENTS FOR THIS PROJECT.

A. DOCUMENTATION/TECHNICAL DATA DELIVERABLES
THE CONTRACTORS ARE RESPONSIBLE FOR KEEPING THE LATEST REVISIONS OF ALL DOCUMENTATION, AND PROVIDING THE FOLLOWING:

1. AS–BUILT DRAWINGS (REPRODUCIBLES, PRINTS & COMPUTER DRAWING FILES IN AUTOCADD R14 FORMAT OR LATEST VERSION)
   A. CONTRACT DRAWINGS AND SPECIFICATIONS (LATEST REVISIONS)
   B. SHOP DRAWINGS
   C. CONTROL DIAGRAMS
2. PERMIT/CERTIFICATION DOCUMENTS
   A. ALL APPLICABLE PERMITS AND CERTIFICATIONS.
3. EQUIPMENT SPECIFICATION DATA
   A. PERMANENT NAMEPLATES IDENTIFYING EQUIPMENT, SYSTEM ACCESSORIES AND CONTROLS
   B. AUTOMATIC CONTROL DIAGRAMS AND OPERATIONS SEQUENCES OF THE BUILDING SYSTEMS READY FOR WALL–MOUNTING AND IN BINDERS (2 COPIES)
   C. SYSTEM AND EQUIPMENT DESCRIPTIVE DATA AND SCHEMATIC DIAGRAMS (2 COPIES)
4. IDENTIFICATION OF EQUIPMENT
   A. VALVE IDENTIFICATION TAGGING AND WALL–MOUNTED LOCATION CHARTS
   B. PERMANENTLY AFFIXED LABELS FOR MAJOR EQUIPMENT
5. SOFTWARE USER MANUAL/ ELECTRONIC BACKUPS
6. OPERATION & MAINTENANCE MANUALS (3 SETS)
   A. SITE SPECIFIC CUSTOMIZED O&M INSTRUCTIONS
   B. MANUFACTURER'S O&M INSTRUCTIONS
7. PREVENTIVE MAINTENANCE PROCEDURES (3 SETS)
   A. MANUFACTURER'S EQUIPMENT PM PROCEDURES
   B. SITE SPECIFIC CUSTOMIZED PM
8. SPARE PARTS LIST (3 SETS)
   A. ALL APPLICABLE MAINTENANCE PARTS AND ACCESSORIES OR MATERIALS
9. WARRANTY INFORMATION
   A. EQUIPMENT START–UP
   B. EQUIPMENT OPERATION
   C. AUTHORIZED REPAIRS

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ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921.2300
Fax: 212.556.3333
www.syska.com

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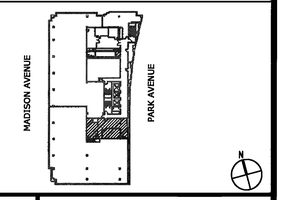

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JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

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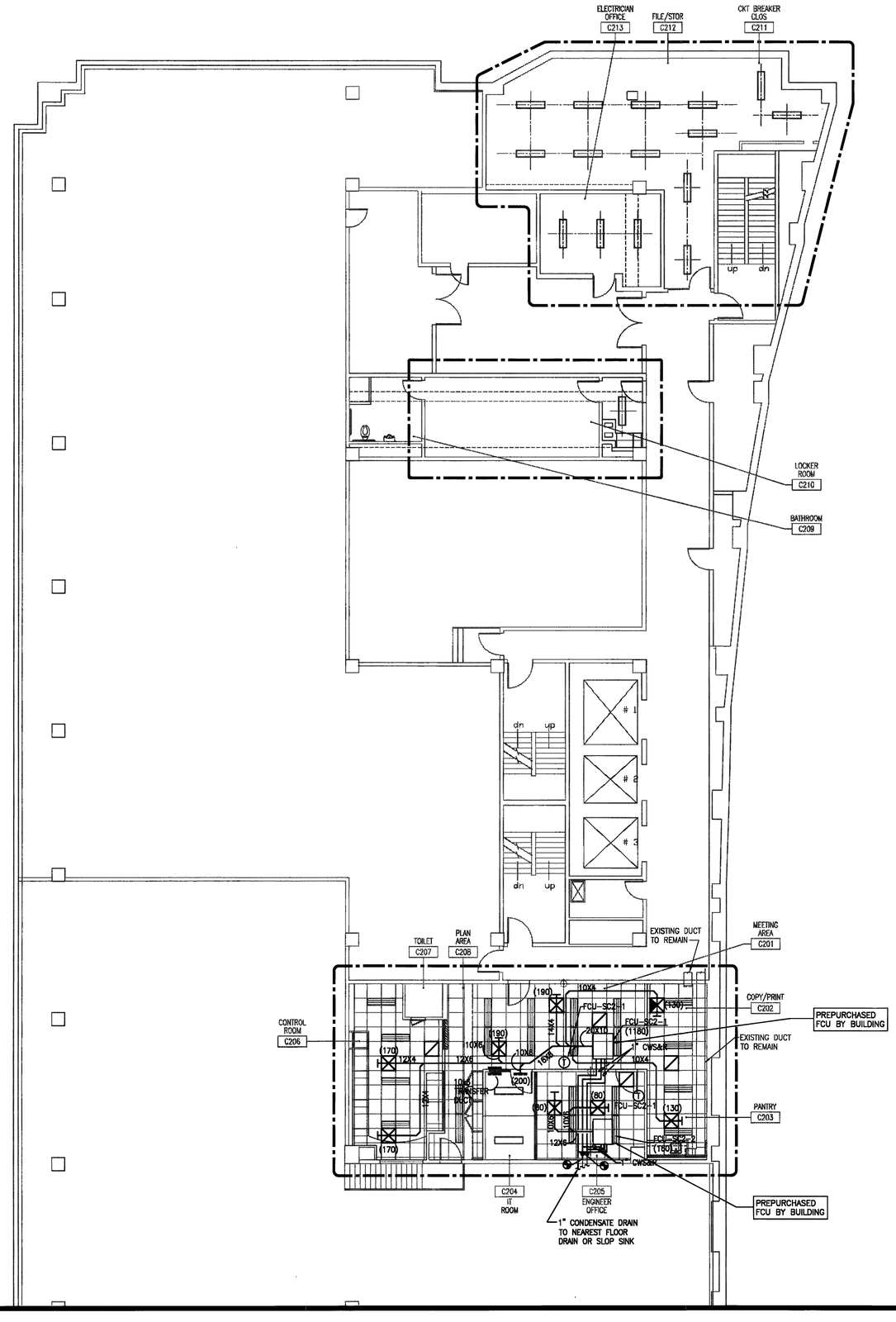

NOTES:

1. FOR ABBREVIATIONS AND NOTES SEE DRAWING M001.
2. CONTRACTOR TO COORDINATE DUCT ROUTING THROUGH BEAM CUTS WITH STRUCTURAL DRAWINGS
3. CONTRACTOR SHALL LOCATE ON SHOP DRAWINGS ALL ACCESS DOOR LOCATIONS REQUIRED TO SERVICE EQUIPMENT FOR THE ARCHITECTS & ENGINEER'S APPROVAL.
4. ALL DUCT SPLITS AND TAKEOFFS SHALL BE PROVIDED WITH VOLUME DAMPERS. SPLITTER DAMPERS. AIR EXTRACTORS ARE NOT ACCEPTABLE.
5. VOLUME DAMPERS IN BRANCH DUCTS SHALL BE LOCATED AS FAR AS POSSIBLE FROM AIR OUTLET OR INLET IN ORDER TO REDUCE NOISE AND TURBULENCE.
6. ALL ACTIVE OPEN ENDED DUCTWORK SHALL BE PROVIDED WITH WIRE MESH SCREEN.
7. SEALANT SHALL BE APPLIED TO LONGITUDINAL SEAMS IN THE SHOP DURING FABRICATION. FIELD APPLY SEALANT TO TRANSVERSE SEAMS AND CONNECTIONS TO DUCTS.
8. RADIUS ELBOWS SHALL BE USED IN ALL DUCT OFFSETS (HORIZONTAL OR VERTICAL). MITERED ELBOWS WITHOUT TURNING VANES ARE NOT ACCEPTABLE.
9. DUCTWORK SHOWN IS DIAGRAMMATIC AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISERS OF RUNS. CONTRACTOR SHALL ALLOW IN HIS PRICE, THE ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS ARE SUBJECT TO APPROVAL. FULL COORDINATION BETWEEN ALL TRADES IS REQUIRED TO AVOID CONFLICTS DURING CONSTRUCTION.
10. CEILING SUPPLY AND RETURN DEVICES SHALL BE COMPATIBLE WITH CEILING SYSTEM, UNLESS OTHERWISE NOTED.
11. CONDITIONS MAY DEVIATE THIS DRAWING. CONTRACTOR SHALL VISIT THE SITE TO UNDERSTAND THE EXISTING FIELD CONDITIONS AND DETERMINE HIS SCOPE OF WORK PRIOR TO SUBMITTING HIS BID. NO ALLOWANCES WILL BE MADE AFTER CONTRACT IS APPROVED. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DUCTWORK AND PIPING EXACT LOCATION AND EXACT SIZES. CONTRACTOR SHALL ROUTE NEW DUCTWORK
12. ALL NEW SUPPLY DUCTS SHALL BE INSULATED PER BUILDING STANDARD.
13. NEW BRANCH DUCT CONNECTIONS SHALL BE SEALED AND CAULKED AIR TIGHT. WHERE EXISTING DUCTS ARE LEAKING, PROVIDE CAULKING AT DUCT JOINTS AND CONNECTIONS.
14. ALL EXISTING EQUIPMENT IN AREA OF WORK MAY NOT BE SHOWN. CONTRACTOR TO SURVEY BEFOREHAND IN ORDER TO LOCATE ANY AND ALL EXISTING EQUIPMENT, PIPING AND DUCTWORK.
15. DUCTWORK A MAXIMUM OF 15 FT DOWNSTREAM OF TERMINAL UNITS TO BE PROVIDED WITH 1" THICK ACOUSTICAL LINING.
16. ALL DUCTWORK, NEW, OVER CONFERENCE ROOMS AND MEETING ROOM SHALL BE ACOUSTICALLY LINED.
17. MECHANICAL CONTRACTOR SHALL BALANCE ALL DIFFUSERS, VARIABLE AIR VOLUME BOXES, AND EXHAUST FANS ON FLOOR IN AREA OF SCOPE TO DESIGN AIR QUANTITIES SHOWN ON DRAWING. INCLUDE SUBMISSION OF BALANCING REPORT.
18. PROVIDE TRANSFER DUCTS PER OUR DETAIL ON M-502 SIZED AT 500FPM FOR ALL ROOMS CONTAINED COMPLETELY BY FULL PARTITIONS.
19. BMS CONTRACTOR TO PROVIDE SUPPORT IF NECESSARY TO RECALIBRATE VAV BOXES TO THE NEW VALUES SPECIFIED ON DRAWING AND TO CONNECT NEW AC UNIT TO THE SYSTEM.

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JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON
79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000
The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
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Tel: 212.921-2300
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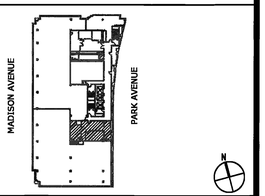

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JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

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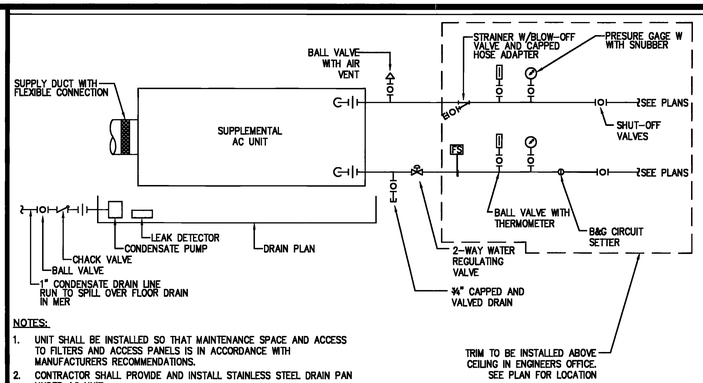
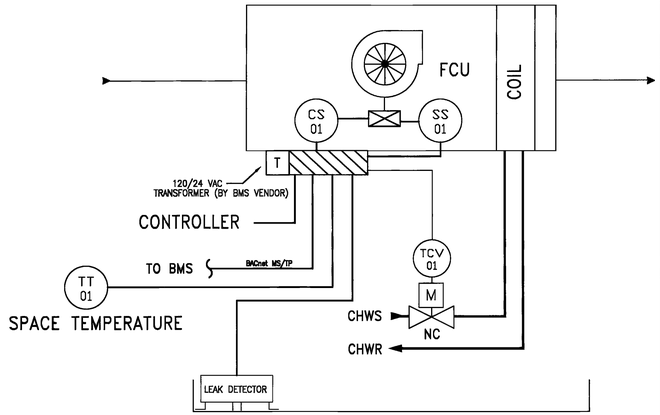


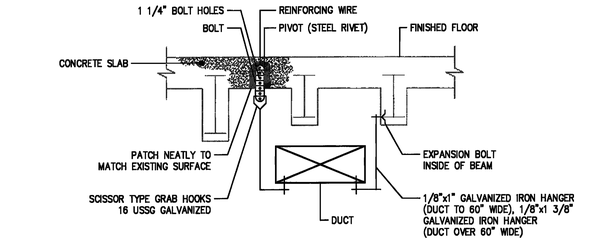
NOTES:

1. UNIT SHALL BE INSTALLED SO THAT MAINTENANCE SPACE AND ACCESS TO FILTERS AND ACCESS PANELS IS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
2. CONTRACTOR SHALL PROVIDE AND INSTALL STAINLESS STEEL DRAIN PAN UNDER AC UNIT.
3. UNIT SHALL ALARM ONLY UPON DETECTION OF MOISTURE BY LEAK DETECTION SENSOR IN DRIP PAN.
4. REFER TO MANUFACTURER FOR PIPE SIZES.
5. PITCH DRAIN PAN TO LEAK DETECTOR. PROVIDE ¾" DRAIN AT LOW POINT.
6. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO SUBMIT EXACT LOCATIONS, WEIGHTS, AND METHODS OF SUPPORT TO STRUCTURAL ENGINNER FOR APPROVAL.

1 CEILING MOUNTED FAN COIL UNIT INSTALLATION DETAIL



2 FAN COIL UNIT CONTOLS (COOLING ONLY)



NOTES:

1. ON DUCTS OVER 48" WIDE, HANGERS SHALL TUEN UNDER AND FASTEN TO BOTTOM OF DUCT WHEN CROSS-SECTIONAL AREA EXCEED 6 SQ. FT. DUCT SHALL BE BRACED BY ANGLES ON ALL FOUR SIDES.
2. CUTTING AND PATCHING SHALL BE LIMITED TO SMALLEST AMOUNT NECESSARY FOR PROPER INSTALLATION OF WORK.

3 DUCT SUPPORT FROM EXISTING CONCRETE SLAB

NOTES:

1. USE FOR SYMBOL, |_ WHERE BRANCH DUCT AIR QUANTITY IS LESS THAN 1000 CFM.
2. NOT TO BE USED AS SUBSITUTE FOR ELBOW.

4 RECTANGULAR DUCT ANGULAR TAP WITH VOLUME DAMPER

WITHOUT INCOMPRESSIBLE INSULATING BLOCK AT HANGER		
PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS USSG
UP TO 3"	12"	18

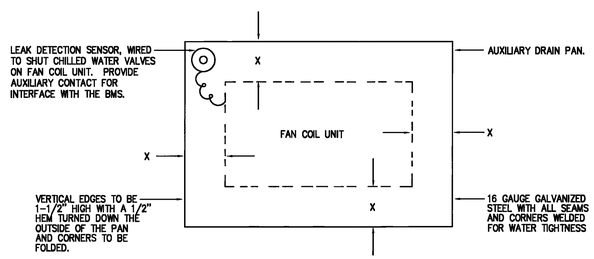
WITH INCOMPRESSIBLE INSULATING BLOCK AT HANGER		
PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS USSG
UP TO 3"	6"	18

NOTES:

1. HANGER AND ROD SHALL BE DIPPED IN ZINC CHROMATE PRIMER PRIOR TO INSTALLATION.
2. CONTRACTOR TO REPAIR ANY DAMAGED OR REMOVED FIREPROOFING DUE TO HANGER INSTALLATION.

5 TYPICAL INSULATED PIPE SUPPORT– UP TO 3"

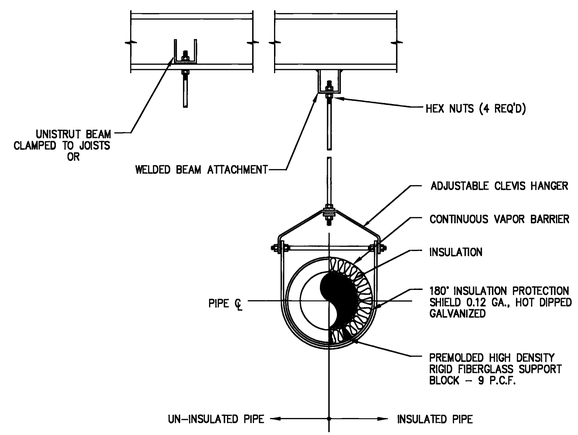
6 TYPICAL PIPE PAN HANGER DETAILS



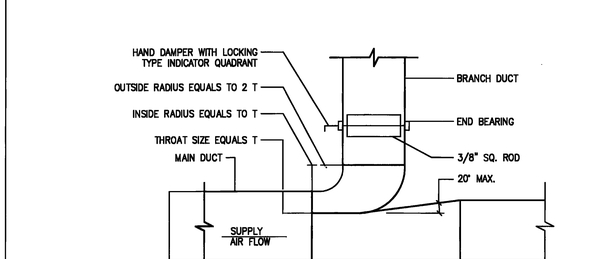
NOTES:

1. THIS DETAIL APPLIES TO –
   – FLOOR MOUNTED OR CEILING HUNG AC UNITS WITH INTEGRAL CONDENSATE DISCHARGE PUMPS.
2. PITCH DRAIN PAN TO LIQUID DETECTOR. PROVIDE 3/4" PLUGGED DRAIN AT LOW POINT.
3. TRAC UNITS DO NOT REQUIRE AUXILLARY DRAIN PAN.

7 TYPICAL DETAIL OF AUXILIARY DRAIN PAN



8 CLEVIS HANGER



NOTES:

1. FURNISH THIS TYPE CONNECTION WHERE NOTED AND WHEN SINGLE LINE DUCTWORK IS INDICATED AS THIS FOR BRANCHES WITH MORE THAN 1000 CFM.
2. FURNISH THIS TYPE CONNECTION WITHOUT HAND DAMPERS FOR ALL HIGH PRESSURE DUCTWORK BRANCHES
3. MUST BE USED WHEN W ≥ 36"
4. MINIMUM T = 4"

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9 RECTANGULAR DUCT BRANCH WITH THROAT AND VOLUME DAMPER

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

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SYSKA HENNESSY GROUP
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New York, NY 10036
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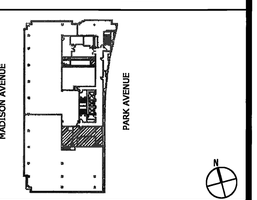
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



PROJECT NUMBER	JMA37000–DAY–2
SCALE	
DATE	08.08.12
PROJECT MANAGER	NF
PROJECT ARCHITECT	GM
DRAWN BY	
CHECKED BY	
CADD FILE	M–501.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

MECHANICAL DETAILS

M-501.00

PAGE NO: 6 of 7

FAN COIL UNIT SCHEDULE (FOR REFERENCE ONLY)

(UNITS HAVE BEEN PRE-PURCHASED AND INSTALLED BY CLIENT)

TAG #	LOCATION	AREA SERVED	S.A. CFM	EXTERNAL STATIC IN. W.C.	TOTAL STATIC IN. W.C.	SUPPLY FAN					CHILLED WATER COIL						REHEAT		HUMDIFICATION		FILTER				
						VOLTAGE	MHP	FLA	TOTAL COOL CAP BTUH	SENS CAP BTUH	EAT (°F)	LAT (°F)	EWT / LWT (°F)	FLOW (GPM)	WATER P.D. (FT. W.C.)	ROW	KW	TYPE	LBS	TYPE		MODEL	DIMENSION (H X W X L)	WEIGHT (LB.)	
FCU-SC2-1	CEILING	SC-2 ENGINEERS OFFICE	1180	0.3	–	208/1/60	–	3.3	–	–	–	–	–	–	–	–	–	–	–	–	–	HPY14	–	–	
FCU-SC2-2	CEILING	SC-2 ENGINEERS OFFICE	160	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	

NOTES:

1. PROVIDE DRAIN PAN
2. PROVIDE SUPPORTS AND VIBRATION ISOLATION AS REQUIRED
3. PROVIDE WITH FIELD INSTALLED CONDENSATE PUMP, (SIMILAR TO LITTLE GIANT VCMA-20ULS), 120V/1PH, UNLESS OTHERWISE NOTED.
4. PROVIDE BASIC MOTOR CONTROL
5. PROVIDE COMMON ALARM DRY CONTACT FOR CONNECTION TO BMS.

DIFFUSER SCHEDULE (BASED ON ANEMOSTAT)

TAG	CFM RANGE*	SERVICE	TYPE	NECK (IN)	FACE OVERALL DIMENSIONS WxL (IN)	NUMBER OF SLOTS	REMARKS
CD-A	0-250	SUPPLY	PLAQUE	8	24x24	–	MODEL 'PG'
CD-B	251-380	SUPPLY	PLAQUE	10	24x24	–	MODEL 'PG'
CD-C	381-560	SUPPLY	PLAQUE	12	24x24	–	MODEL 'PG'
CD-D	561-750	SUPPLY	PLAQUE	14	24x24	–	MODEL 'PG'
RG-A	0-350	RETURN	PLAQUE	10	12x12	–	MODEL 'PG'
RG-B	0-550	RETURN	PLAQUE	12	24x24	–	MODEL 'PG'

NOTES:

1. SEE PLAN FOR CFM NUMBERS AND DIFFUSER TYPE.
2. NOISE CRITERIA FOR ALL CEILING DIFFUSERS SHALL NOT EXCEED 35

SALMAN ARMAN
JAN 27 2014
ACCEPTABLE FOR PERMIT
UNDER DIRECTIVE NO. 14/19

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

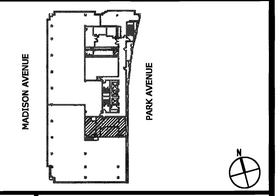
CONSULTANT

DEPT.BLDGS 121664662 Job Number
SC110162041 Scan Code

NO.	DATE	DESCRIPTIONS
2	08.30.13	ISSUE FOR CONSTRUCTION
1	08.05.13	ISSUE FOR BID & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

MECHANICAL SCHEDULES

M-701.00

COM*check* Software Version 3.9.2

Interior Lighting and Power Compliance Certificate

2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard)

Section 1: Project Information

Project Type: **New Construction**
Project Title :

Construction Site: Owner/Agent: Designer/Contractor:

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B x C)
Meeting/Planning Area (Common Space Types:Conference/Meeting/Multipurpose)	407	1.3	529
Engineers Office (Common Space Types:Office - Enclosed)	194	1.1	213
Copy/IT/Control Room (Common Space Types:Workshop)	529	1.9	1005
Pantry (Common Space Types:Dining Area - General)	117	0.9	105
		Total Allowed Watts =	1853

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Meeting/Planning Area (Common Space Types:Conference/Meeting/Multipurpose 407 sq.ft.)				
Linear Fluorescent 1: F1: LITHONIA RTBS: 48" T8 32W (Super T8): Electronic:	1	10	32	320
Engineers Office (Common Space Types:Office - Enclosed 194 sq.ft.)				
Linear Fluorescent 2: F1: LITHONIA RTBS: 48" T8 32W (Super T8): Electronic:	1	4	32	128
Copy/IT/Control Room (Common Space Types:Workshop 529 sq.ft.)				
Linear Fluorescent 3: F1: LITHONIA RTBS: 48" T8 32W (Super T8): Electronic:	1	2	32	64
Linear Fluorescent 5: F2: LEGION SERIES 2600: 48" T8 32W (Super T8): Electronic:	2	2	32	64
Pantry (Common Space Types:Dining Area - General 117 sq.ft.)				
Linear Fluorescent 4: F1: LITHONIA RTBS: 48" T8 32W (Super T8): Electronic:	1	2	32	64
		Total Proposed Watts =		640

Total EW Lighting PASSES (Design 640 watts - Allowed 1853 watts)

Section 4: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard) requirements in COMcheck Version 3.9.2 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title Signature Date

Section 5: Post Construction Compliance Statement

Project Title: Report date: 01/14/14
Data filename: P:\NYO\CF\NPC\JMA37000\Project Engineering\Calculations\Lighting\SC2 ENGINEERS- COMCHECK.cck Page 1 of 3

Record Drawings and Operating and Maintenance Manuals:

☐ 1. Construction documents with record drawings and operating and maintenance manuals provided to the owner.

Lighting Designer or Contractor Name Signature Date

Project Title: Report date: 01/14/14
Data filename: P:\NYO\CF\NPC\JMA37000\Project Engineering\Calculations\Lighting\SC2 ENGINEERS- COMCHECK.cck Page 2 of 3

COM*check* Software Version 3.9.2

Mechanical Compliance Certificate

2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard)

Section 1: Project Information

Project Type: **New Construction**
Project Title :

Construction Site: Owner/Agent: Designer/Contractor:

Section 2: General Information

Building Location (for weather data): **New York, New York**
Climate Zone: **4a**

Section 3: Mechanical Systems List

Quantity System Type & Description

Section 5: Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard) requirements in COMcheck Version 3.9.2 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title Signature Date

Section 6: Post Construction Compliance Statement

☐ HVAC record drawings of the actual installation and performance data for each equipment provided to the owner within 90 days after system acceptance.
☐ HVAC O&M documents for all mechanical equipment and system provided to the owner within 90 days after system acceptance.
☐ Written HVAC balancing report provided to the owner.

The above post construction requirements have been completed.

Principal Mechanical Designer-Name Signature Date

Project Title: Report date: 01/14/14
Data filename: P:\NYO\CF\NPC\JMA37000\Project Engineering\Calculations\Lighting\SC2 ENGINEERS- COMCHECK.cck Page 3 of 3

COM*check* Software Version 3.9.2

Inspection Checklist

Requirements: 0.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Project Title: Report date: 01/14/14
Data filename: P:\NYO\CF\NPC\JMA37000\Project Engineering\Calculations\Lighting\SC2 ENGINEERS- COMCHECK.cck Page 1 of 4

90.4 (2007) Standard	Plan Review	Complies?	Comments/Assumptions
4.2.2 [PRA]†	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
8.4.1.1 8.4.1.2 [ELI]†	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 3%.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Project Title: Report date: 01/14/14
Data filename: P:\NYO\CF\NPC\JMA37000\Project Engineering\Calculations\Lighting\SC2 ENGINEERS- COMCHECK.cck Page 2 of 4

90.1 (2007) Standard	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
9.4.1.1 [EL1]†	Automatic controls to shut off all building lighting installed in buildings >5,000 ft2.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.4.1.2 [EL2]†	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.4.1.4 [EL4]†	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.4.2 [EL2]†	Ballasted one and three lamp fixtures with >30 W/lamp have two lamp tandem wired ballasts when >=2 fixtures in same space on same control.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.4.3 [EL6]†	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.6.2 [EL8]†	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Project Title: Report date: 01/14/14
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90.1 (2007) Standard	Final Inspection	Complies?	Comments/Assumptions
8.7.1 [F116]†	Furnished as-built drawings for electric power systems within 30 days of system acceptance.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
8.7.2 [F117]†	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.2.2.3 [F118]†	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*

Additional Comments/Assumptions:

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)

Project Title: Report date: 01/14/14
Data filename: P:\NYO\CF\NPC\JMA37000\Project Engineering\Calculations\Lighting\SC2 ENGINEERS- COMCHECK.cck Page 4 of 4

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPT. BLDGS 121664662 Job Number
SC1101662038 Scan Code

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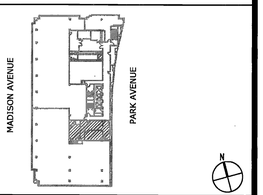

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PROJECT ARCHITECT	GM
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CHECKED BY	
CADD FILE	EN-701.00.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

ENERGY COMCHECK COMPLIANCE REPORT

STATE OF NEW YORK ROBERT TOMMA No. 085873 PROFESSIONAL ENGINEER

EN-701.00

PAGE NO: 01 OF 01

PLUMBING SYMBOL LIST

- CLEAN OUT
- CLEAN OUT DECK PLATE
- CLEAN OUT UP TO DECK PLATE
- FLOOR DRAIN
- ROOF DRAIN
- HOSE BIBB
- HUB DRAIN
- TRAP
- WALL HYDRANT
- CAPPED OUTLET
- CAPPED OUTLET – FLANGED
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- NEW CONNECTION
- PIPING CONNECTION – BOTTOM
- PIPING CONNECTION – DOWN
- PIPING CONNECTION – UP
- UNION
- STRAINER
- ANGLE VALVE
- CHECK VALVE
- GLOBE VALVE
- HOSE VALVE (HV)
- MASTER GAS CONTROL VALVE (MGVC)
- PLUG VALVE
- PRESSURE REDUCING VALVE
- SHUT–OFF VALVE
- TEMPERATURE & PRESSURE RELIEF VALVE
- THERMOSTATIC MIXING VALVE
- AQUASTAT (A)
- BACK FLOW PREVENTER (BFP)
- BASKET STRAINER
- CIRCULATOR PUMP
- PRESSURE SWITCH (PS)
- BALL VALVE
- BALL VALVE (ICI)

NOTE: NOT ALL SYMBOLS SHOWN ARE APPLICABLE. SOME SYMBOLS ARE SHOWN TO FACILIATE REVISIONS AND CHANGES IN THE SCOPE OF WORK.

PLUMBING ABBREVIATIONS
(NOT ALL ABBREV. ARE NECESSARILY USED ON THIS PROJECT)

CO	CLEANOUT
CODP	CLEANOUT DECK PLATE
CM	COFFEE MAKER
CV	CHECK VALVE
CVO	CAPPED AND VALVED OUTLET
CW	COLD WATER
CLG	CEILING
CONT	CONTINUATION
DIA	DIAMETER
DN	DOWN (PENETRATES FLOOR SLAB)
DWG	DRAWING
(E)	EXISTING
(ER)	EXISTING TO BE REMOVED
(ERR)	EXISTING TO BE REMOVED & RELOCATED
EJ DIS	EJECTOR DISCHARGE
FD	FLOOR DRAIN
FL	FLOOR
FT	FEET
GAL	GALLONS
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HW	HOT WATER
HWR	HOT WATER RETURN
IW	INDIRECT WASTE
IN	INCH
MAX	MAXIMUM
MIN	MINIMUM
(N)	NEW
NC	NORMALLY CLOSED
NIC	NOT IN THIS CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
PD	PUMP DISCHARGE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH (GAUGE)
RD	ROOF DRAIN
(RE)	RELOCATED EXISTING
SAN	SANITARY
SD	SUMP PUMP DISCHARGE
SK	SINK
SQ FT	SQUARE FOOT
TYP	TYPICAL
UP	UP (PENETRATES FLOOR SLAB)
UR	URINAL
V	VENT
VB	VACUUM BREAKER
W	WASTE
WCO	WALL CLEANOUT

GENERAL NOTES FOR DEMOLITION WORK

1. ALL EQUIPMENT, PIPING, ETC., TO BE REMOVED, SHALL BE DISPOSED OF, TURNED OVER TO OR SALVAGE AS DIRECTED. THEY SHALL NOT BE REMOVED FROM THE PREMISES WITHOUT APPROVAL.
2. EXISTING EXPOSED PIPING NOT TO BE REUSED AND NOT SPECIFICALLY NOTED OR SHOWN ON DRAWING TO BE ABANDONED SHALL BE COMPLETELY REMOVED.
3. THE EXISTING SYSTEM TO REMAIN SHALL BE LEFT IN PERFECT WORKING ORDER AT COMPLETION OF DEMOLITION WORK.
4. LOCATIONS AND SIZES OF EXISTING PIPING ARE APPROXIMATE. EXACT SIZES AND LOCATIONS OF ALL EXISTING PIPING SHALL BE VERIFIED ON THE JOB.
5. NO REMOVED EXISTING PIPING SHALL BE REUSED.
6. ALL EXISTING EXPOSED, UNNECESSARY PIPING RELATED TO WORK BEING REMOVED SHALL BE COMPLETELY REMOVED.
7. DO NOT INTERRUPT ANY OF THE SERVICES OF THE EXISTING BUILDING, NOR INTERFERE WITH THE SERVICES IN ANY WAY WITHOUT EXPRESSED PERMISSION. SUCH INTERRUPTIONS AND INTERFERENCE SHALL BE MADE AS BRIEF AS POSSIBLE AND ONLY AT THE DESIGNATED TIMES.
8. WHEN DEMOLITION WORK REQUIRES THE SHUTDOWN OF EXISTING OPERATING SYSTEMS, THE DEMOLITION WORK SHALL BE PERFORMED ONLY AFTER NOTIFYING OWNER AT LEAST 2 WEEKS BEFORE START AND OBTAINING WRITTEN AUTHORIZATION.
9. ALL PIPING REMOVAL SHALL INCLUDE REMOVAL OF ALL APPURTENANCES CONTAINED THEREIN SUCH AS VALVES, HANGERS, SUPPORTS, ETC. COMPLETE. CAPS SHALL BE INSTALLED AT ALL OPEN ENDS OF PIPING TO REMAIN AND SHALL BE OF SAME MATERIAL AND PRESSURE RATING AS EXISTING.
10. REMOVE EXISTING PIPING AS INDICATED ON DRAWING OR AS MAY BE REQUIRED. REMOVE RUBBISH FROM PREMISES AND SITE AT THE END OF EACH WORK DAY AND AS DIRECTED.
11. TORCH CUTTING; BEFORE PROCEEDING WITH WORK, SUBMIT CERTIFICATE OF COMPLIANCE AND NOTIFY BUILDING FIRE WARDEN.
12. PLUMBING DEMOLITION WORK SHALL BE IN STRICT CONFORMITY WITH THE NEW YORK CITY BUILDING CODE AND OTHER AUTHORITIES HAVING JURISDICTION.

MATERIAL SCHEDULE

SYSTEM	PIPE								FITTINGS					JOINTS		
	REQUIRED	CAST IRON NO–HUB PIPE	CAST IRON WATER PIPE	STEEL SCHEDULE 40	TYPE "L" COPPER TUBING	TYPE "K" COPPER TUBING	GALVANIZED	CAST IRON – SERVICE WEIGHT	CAST IRON – NO–HUB	CAST IRON HUB & SPIGOT	WROUGHT COPPER	PLASTIC	GALVANIZED	THREADED	SOLDERED 95–5	MECH. JOINT – NO HUB	MECH. JOINT – GASKET
VENTS	●	●							●							●	
SANITARY STACKS	●	●							●							●	
SANITARY BRANCHES	●	●							●							●	
C.W.	●				●						●				●		
H.W.	●				●						●				●		

N.Y.C. BUILDING DEPARTMENT PLUMBING NOTES

1. THE PLUMBING SYSTEMS (SANITARY, VENT AND WATER DISTRIBUTION) AND ALL ASSOCIATED EQUIPMENT WILL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE FULL REQUIREMENTS OF THE 2008 NEW YORK CITY PLUMBING CODE (NYCPC).
2. ALL PLUMBING WORK SHALL COMPLY WITH CHAPTER 4 OF THE 2008 NEW YORK CITY PLUMBING CODE AND CHAPTERS 1 THROUGH 13 OF THE NEW YORK CITY PLUMBING CODE.
3. THE SANITARY SYSTEM SHALL BE PROVIDED IN FULL ACCORDANCE WITH THE GENERAL PROVISIONS PC305.
4. THE MATERIALS USED IN THE PLUMBING SYSTEM SHALL BE PROVIDED IN FULL ACCORDANCE WITH SECTION PC303.
5. THE INSTALLATION OF FIXTURES SHALL BE IN FULL ACCORDANCE WITH PC401.
6. VERTICAL AND HORIZONTAL PIPING SHALL BE HUNG AND SUPPORTED AS DIRECTED IN SPECIFICATIONS AND IN FULL ACCORDANCE WITH SECTION PC308.
7. CLEANOUTS SHALL BE INSTALLED AS PER SECTION PC708.
8. TRAPS FOR FIXTURES SHALL BE INSTALLED IN FULL ACCORDANCE WITH SECTION PC1002.
9. THE WATER SUPPLY SHALL BE INSTALLED AND MAINTAINED IN FULL ACCORDANCE WITH PC601 THROUGH PC613. VALVES SHALL PROVIDED AS PER SECTION PC606.
10. THE SANITARY DRAINAGE SYSTEM SHALL BE SIZED AND INSTALLED IN FULL ACCORDANCE WITH SECTIONS PC701 THROUGH PC715.
11. THE VENT PIPING FOR THE SANITARY DRAINAGE SYSTEM SHALL BE PROVIDED IN FULL ACCORDANCE WITH SECTION PC901 THROUGH PC919.
12. SANITARY TEES AND QUARTER BENDS SHALL BE USED IN DRAINAGE LINES ONLY WHERE THE DIRECTION OF FLOW IS FROM THE HORIZONTAL TO THE VERTICAL.
13. SHORT SWEEPS SHALL BE PERMITTED IN DRAINAGE PIPING 3 INCHES IN DIAMETER OR LARGER FOR OFFSETS EITHER HORIZONTAL OR VERTICAL.
14. SPECIAL AND MISCELLANIOUS PIPING SHALL BE AS DIRECTED IN SECTION PC1201 THROUGH PC1203.
15. STORM DRAINAGE PIPING SHALL BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTSOF PC1100 THROUGH PC1108.

GENERAL PLUMBING NOTES:

1. ALL PLUMBING WORK SHALL BE IN STRICT ACCORDANCE WITH THE RULES AND REGULATIONS GOVERNING PLUMBING AND DRAINAGE WORK; SHALL CONFORM TO ALL OTHER APPLICABLE REGULATIONS AND SHALL MEET REQUIREMENTS OF THE A.H.J.
2. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS. EXACT LOCATION SHALL BE COORDINATED WITH ALL TRADES, ARCHITECTURAL DRAWINGS, GENERAL CONTRACTOR AND PRIME CONTRACTOR.
3. VERIFY THE LOCATIONS AND SIZES OF EXISTING PIPING IN THE FIELD AND IF ANY DISCREPANCIES OCCUR WITH CONTRACT DRAWINGS, NOTIFY ENGINEER PRIOR TO COMMENCEMENT OF NEW WORK.
4. ALL EXPOSED PIPING PENETRATIONS THROUGH WALLS OR CEILINGS SHALL BE PROVIDED WITH APPROVED FIRE RETARDANT SEALANT AND ESCUTCHEONS.
5. ALL FIXTURES TO BE SEALED WHERE FIXTURE COMES IN CONTACT WITH WALLS OR FLOOR WITH CLEAR SEALANT.
6. COORDINATE ALL WORK WITH ALL OTHER CONTRACTORS PERTAINING TO THE LOCATIONS OF PLUMBING AND DRAINAGE PIPING, HVAC WORK, LIGHTING FIXTURES, ELECTRICAL, SPRINKLER PIPING AND SPRINKLER HEADS, PROVIDE ALL NECESSARY PIPING OFFSETS AND CHANGES IN DIRECTION TO ACCOMPLISH A COMPLETE INSTALLATION.
7. SUBMISSION OF A PROPOSAL SHALL BE EVIDENCE THAT A CAREFUL EXAMINATION OF THE SITE, DRAWINGS & SPECIFICATIONS HAS BEEN MADE AND THE CONTRACTOR IS FAMILIAR WITH THOSE ITEMS AND AREAS THAT WILL PRESENT DIFFICULTY TO THE PERFORMANCE OF THIS CONTRACT. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT, ETC..., NECESSARY TO COMPLETE ALL WORK AS A RESULT OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN.

A. CONTRACTOR TO VERIFY THE EXISTING CONDITIONS BEFORE CONSTRUCTION, CONFIRM SIZES AND LOCATIONS OF ALL EXISTING PIPING PRIOR TO START OF WORK.

B. ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR AT THIS SITE BEFORE PROCEEDING WITH ANY WORK.

C. PRIOR TO STARTING CONSTRUCTION. DETERMINE EXACT INVERT ELEVATION, SIZE, DEPTH AND LOCATION OF EXISTING CONDITIONS.

D. THE PLUMBING CONTRACTOR SHALL: PAY FEES, GIVE NOTICE, FILE NECESSARY DRAWINGS AND OBTAIN PERMITS AND CERTIFICATES OF APPROVAL, REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT. HE SHALL COMPLY WITH NEW YORK CITY CODE, ORDINANCES, NEW YORK STATE CODE AND THE NEW YORK ENERGY CODE.

E. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR OR HIS WORKMEN BE PERMITTED TO USE ANY PART OF THE BUILDING AS A SHOP EXCEPT PARTS AS DESIGNATED FOR SUCH USE. BY THE OWNER.

F. ANY EXISTING INSULATION DISTURBED & ALL EXISTING PIPING WHICH REQUIRES REINSULATION, SUCH AS COLD WATER, HOT WATER, ETC., SHALL BE INSULATED AS PER THE SPECIFICATION.

G. PLUMBING CONTRACTOR SHALL COORDINATE ALL TIE–INS, PLUS REMOVALS WITH GENERAL CONTRACTOR AND OWNER'S SCHEDULE.

H. COORDINATE WITH GENERAL CONTRACTOR FOR ACCESS DOOR REQUIREMENTS.

I. REFER TO ARCHITECTURAL DRAWINGS FOR FINAL LOCATION OF ALL EQUIPMENT.

J. PROVIDE STAINLESS STEEL ACCESS DOORS FOR SHOCK ABSORBERS.

K. STORE MATERIALS IN DESIGNATED SPACES.

L. LOCATIONS AND SIZES OF EXISTING PIPING ARE APPROXIMATE, VERIFY IN FIELD.

M. UNNECESSARY NOISE SHALL BE AVOIDED AT ALL TIMES AND NECESSARY NOISE SHALL BE REDUCED TO A MINIMUM.

N. NEW WORK AND EQUIPMENT SHALL BE THOROUGHLY CLEANED AND MADE READY FOR USE.

O. SANITARY DRAINAGE SHALL HAVE A UNIFORM GRADE OF 1/4" PER FOOT, FOR 2 1/2" AND SMALLER AND AN 1/8" PER FOOT FOR 3" OR LARGER, U.O.N.

P. INSTALL SHOCK ABSORBERS ON EACH FIXTURE BRANCH HAVING A FLUSH VALVE AND QUICK CLOSING VALVES. INSTALL SHOCK ABSORBERS IN ACCORDANCE WITH THE PLUMBING AND DRAINAGE INSTITUTE STANDARDS WITH REGARDS TO SIZE AND LOCATION.

Q. COORDINATE ALL FLOOR CORING, FLOOR PENETRATIONS, SLEEVES & FLOOR OPENINGS WITH EXISTING STRUCTURAL.

R. PROVIDE CLEANOUTS AT OR NEAR THE BASE OF EACH VERTICAL STACK, CLEANOUTS SHALL BE SAME SIZE AS THE PIPES THEY SERVE UP TO 4 INCHES, AND NOT LESS THAN 4 INCHES FOR LARGER PIPING.

S. PROVIDE CLEANOUTS FOR CHANGES IN DIRECTION FOR ALL SANITARY PIPING.

T. REFER TO ARCHITECTURAL DRAWINGS FOR AREA OF DEMOLITION & CONSTRUCTION.

U. ALL FLOOR DRAINS SHALL BE 3 INCH MINIMUM WITH 1½ INCH VENTS.

V. PROVIDE FLOOR DRAIN IN TOILET ROOM. PROVIDE HOSE BIBB IN TOILET ROOM. ALL HOT WATER RETURN LINES ARE 1/2" U.O.N. EACH MAIN, RISER AND BRANCH TO A GROUP OF PLUMBING FIXTURES SHALL BE VALVED.

W. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.

X. SUPPORT ALL PLUMBING WORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL STEEL FRAMING.

Y. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

Z. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES IN MAKING UP WORK PROPOSAL.

AA. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ENGINEER.

AB. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT, AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.

AC. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.

AD. SEAL OPENINGS AROUND PLUMBING WORK AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS (NOT IN SHAFTS) WITH NON–COMBUSTIBLE MATERIAL.

AE. PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, PLUMBING WORK, AND EQUIPMENT.

AF. ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED UNDER THIS CONTRACT WILL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THIS CONTRACTOR AS DIRECTED BY THE OWNER.

AG. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE ARCHITECT/ ENGINEER.

AH. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES,

AI. PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR A COMPLETE AND SAFE INSTALLATION IN FULL ACCORDANCE WITH REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION; ALL AS INDICATED ON DRAWINGS AND/OR HEREIN SPECIFIED FOR THE SYSTEMS INCLUDED. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER.

AJ. INCLUDE ALL COSTS FOR PERMITS, LICENSES, CERTIFICATES, FILING AND INSPECTIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION.

AK. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF ACCEPTANCE BY OWNER, THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

AL. ALL REQUIRED TEMPORARY SHUTDOWNS IN BUILDING SERVICES SHALL BE MINIMIZED AND SHALL BE APPROVED BY AND COORDINATED WITH THE OWNER A MINIMUM OF ONE WEEK IN ADVANCE OF SHUTDOWN. ALL SERVICE CONNECTIONS TO EXISTING BUILDINGS SHALL BE PERFORMED AFTER COORDINATION WITH OWNER & ENGINEER.

AM. CONTRACTOR TO COORDINATE ALL DIMENSIONS, ELEVATIONS AND CONNECTION REQUIREMENTS FOR FINAL CONNECTIONS.

AN. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED DURING CONSTRUCTION.

PLUMBING FIXTURE & PIPE CONNECTION SCHEDULE					
TAG	DESCRIPTION	CONNECTION SIZE			
		CW	HW	WASTE	VENT
		INCHES	INCHES	INCHES	INCHES
S–1	PANTRY SINK	½"	½"	2"	2"

REVIEW DOCUMENTS, VERIFY DIMENSIONS AND FIELD CONDITIONS AND CONFIRM THAT WORK IS BUILDABLE AS SHOWN. THE CONTRACTOR SHALL REPORT ANY CONFLICTS AND/OR OMISSIONS TO THE ENGINEER PRIOR TO PERFORMING ANY WORK IN QUESTION. OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO COMPLETE THE WORK STATED IN ON THE CONTRACT DOCUMENTS BASED UPON THE OPTIMAL ESTABLISHED QUALITY STANDARD.

DRAWING LIST

P–001.00	PLUMBING LEGEND,NOTES AND ABBREVIATIONS
P–002.00	PLUMBING SPECIFICATIONS
DMP–100.00	SC2 LEVEL PLUMBING DEMOLITION PLAN
P–100.00	SC2 LEVEL PLUMBING PLAN
P–501.00	PLUMBING DETAILS

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

FILING NOTE

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING OR IN ACCORDANCE WITH APPLICABLE CODES.

THIS DRAWING FILED FOR PLUMBING SYSTEM ONLY

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue, 10th Floor, New York, NY 10016, T. 212 561 2000
The LaSalle Wacker, 221 North LaSalle Street, Chicago, IL 60601, T. 312 924 5000
MCM Architecture Limited, 71 Hopton Street, London SE1 9LB, UK, T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPT.BLDGS 121664682 Job Number
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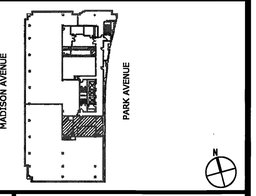
2	08.30.13	ISSUE FOR CONSTRUCTION
1	08.05.13	ISSUE FOR BID & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



PROJECT NUMBER	JMA37000–DAY–2
SCALE	
DATE	08.08.12
PROJECT MANAGER	NF
PROJECT ARCHITECT	GM
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CADD FILE	P–001.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

PLUMBING SYMBOLS LIST, ABBREVIATIONS AND NOTES

P–001.00

PAGE NO: 1 of 5

PLUMBING SPECIFICATION

1.00 GENERAL

1.01 GENERAL REQUIREMENTS

A. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS, 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 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 INTERFERENCE 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. ALL PIPING PASSING OVER ELECTRICAL OR TELEPHONE EQUIPMENT SHALL BE PROVIDED WITH DRIP PANS.

1.04 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 MANUFACTURER 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. SLEEVES.

2. ACCESS DOORS.

3. VALVES.

4. SUPPORTS.

5. PIPE, FITTINGS AND JOINTS.

6. THERMOMETERS.

7. PRESSURE GAGES.

8. TRAP PRIMERS.

9. CLEANOUTS.

10. INSULATION.

11. PLUMBING FIXTURES, TRIM, TRAPS, ETC.

12. WATER FILTERS.

13. HOT WATER DISPENSERS.

14. LOCAL DRAINAGE PUMPS.

15. SOLDER.

16. AIR GAPS.

17. VACUUM BREAKERS.

18. BACKFLOW PREVENTERS.

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. STORM WATER SYSTEM, INCLUDING CONNECTIONS TO EXISTING ROOF DRAINS AND PIPING.

3. DOMESTIC WATER SUPPLY SYSTEM, INCLUDING CONNECTIONS TO EXISTING PIPING, VALVES, PLUMBING FIXTURES AND EQUIPMENT.

5. PLUMBING FIXTURES.

6. INSULATION

7. CORE DRILLING, ROUGH CUTTING AND PATCHING.

8. SHOP DRAWINGS.

9. TESTING, FILING AND FEES.

10. CADD AS-BUILT DRAWINGS

11. DISINFECTION OF DOMESTIC WATER SYSTEM.

12. CONTROL AND ALARM WIRING.

1.06 DEMOLITION

A. IN DEMOLITION WORK, UNUSED PIPING SHALL NOT BE ABANDONED 'IN PLACE'. PIPING SHALL BE REMOVED BACK TO SOURCE OR POINT OF DISCHARGE, AND THE RESULTING OPENINGS PLUGGED AS INDICATED ON THE DRAWINGS.

B. DISCONNECT, REMOVE AND CAP OR PLUG EXISTING UNUSED PIPING AS NOTED OR REQUIRED TO PERMIT NEW INSTALLATION.

C. ALL EXISTING PLUMBING FIXTURES, PIPING AND EQUIPMENT TO BE REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE DISPOSED OF BY THIS CONTRACTOR AS DIRECTED BY THE OWNER.

D. THE CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING UNUSED PIPING AND FIXTURES WITHOUT INTERRUPTING EXISTING REQUIRED FUNCTIONING SYSTEMS.

E. ALL PIPING FROM FIXTURES TO BE REMOVED AND REPLACED SHALL BE PROPERLY PLUGGED OR CAPPED, AT WALL OR FLOOR, TO AWAIT INSTALLATION OF NEW FIXTURES.

F. ALL UNUSED PIPING AND RELATED ITEMS CONCEALED IN WALLS, FLOORS AND CEILING WITHIN THE STRUCTURE SHALL BE ABANDONED AND REMOVED WHERE EXPOSED TO VIEW.

G. ALL WASTE AND SANITARY DRAINAGE PIPING NOT TO BE USED SHALL BE REMOVED AND PLUGGED AT ACTIVE MAIN OR RISER. NO DEADENDS SHALL REMAIN LONGER THAN TWO (2) FT.

1.07 WORK NOT INCLUDED

A. FINISHED PATCHING AND PAINTING.

B. TOILET ROOM ACCESSORIES, INCLUDING MEDICINE CABINETS, MIRRORS, GRAB BARS, ETC.

C. INSTALLATION OF ACCESS DOORS.

1.08 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. PLUMBING FIXTURES: ELJER CO., AMERICAN STANDARD, INC., CRANE CO., KOHLER CO., SLOAN, POWERS, FIAT AND LAWLER.

2. STAINLESS STEEL SINKS: JUST MFG. CO., ELKAY MFG. CO., RELIANCE, AND STERLING.

3. BRASSWARE TRIM: CHICAGO FAUCET CO., MCGUIRE, JAMCO, AND BRASSCRAFT.

4. FAUCETS: ELKAY MFG. CO., SYMMONS, DELTA FAUCET CO., SPEAKMAN, T&S BRASS, CHICAGO FAUCET AND SLOAN.

5. FLUSHOMETERS: SLOAN VALVE CO. (OPTIMA), COYNE AND DELANY CO. (FLUSHBOY) AND ZURN.

8. ELECTRIC WATER COOLERS: HALSEY TAYLOR CO., ELKAY MFG. CO. AND FILTRINE.

9. BALL AND CHECK VALVES (INSIDE): CONBRACO "APOLLO," STOCKHAM VALVES AND FITTINGS, WALWORTH CO., CRANE CO., WM. POWEL VALVE CO., NIBCO (USA), AND MILWAUKEE VALVE CO.

10. PLUG VALVES (GAS COCKS): WALWORTH CO., FLOWSERVE (NORDSTROM), HEALY, DEZURIK, AND CRANE CO.

11. PRESSURE GAUGES AND THERMOMETERS: ASHCROFT AMER. GAUGE CO., U.S. GAUGE CO., ASHTON VALVE CO., WEKSLER INSTRUMENTS CORP., AND H.O. TRERICE CO.

12. BACKFLOW PREVENTERS: WATTS REGULATOR CO., CLA-VAL CO., HERSEY PRODUCTS, INC., AND WILKINS.

2.02 GENERAL ITEMS

A. AIR CHAMBERS: 12 IN. HIGH, PROVIDE ON INDIVIDUAL HOT AND COLD WATER BRANCHES TO FIXTURES.

B. ESCUTCHEONS: PROVIDE EXPOSED PIPING BOTH BARE AND COVERED, WITH CP CAST BRASS ESCUTCHEONS ON BOTH SIDES WHERE PASSING THROUGH CEILINGS, WALLS OR PARTITIONS.

C. VALVE TAGS AND CHARTS: PROVIDE 2 IN. SQUARE, 18 GAUGE ALUMINUM WITH STAMPED NUMBERED TAGS, FILL IN WITH BLACK PAINT. PROVIDE ON CONTROL VALVES EXCEPT THOSE CONTROLLING A SINGLE FIXTURE AND LOCATED ADJACENT TO FIXTURES. FASTEN WITH BRASS HOOKS. PROVIDE FRAMED CHART LISTING OPERATION, LOCATION AND PURPOSE OF VALVES. COORDINATE WITH EXISTING BUILDING VALVE CHART.

D. SLEEVES: PROVIDE NO. 22 USSG GALVANIZED STEEL SLEEVES EXTENDED THROUGH CONSTRUCTION IN CEILINGS, WALLS AND PARTITIONS. FOR INSULATED PIPING, SIZED TO ALLOW INSULATION TO PASS THROUGH SLEEVE. PROVIDE 1/2 IN. SPACE BETWEEN PIPE AND/OR INSULATION AND SLEEVE. FIREPROOF BY SEALING ALL SLEEVES IN ACCORDANCE WITH BUILDING CODE AND FIRE DEPARTMENT REQUIREMENTS.

E. HANGER AND PIPING SUPPORTS

1. SUPPORT MATERIALS: GALVANIZED, EXCEPT ON GAS OR MEDICAL GASES, SAME AS PIPING MATERIAL.

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, ANVIL INTERNATIONAL SWIVEL RING FIG. 69.

5. FOR HORIZONTAL PIPING 3 IN. AND LARGER, PROVIDE GALVANIZED "CLEVIS" HANGERS, ANVIL INTERNATIONAL FIG. 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. SUSPEND TRAPEZE AND/OR HANGERS FROM EXPANSION ANCHORS IN SOLID CONCRETE SLABS, SIMILAR TO HILTI HDI OR FROM EXISTING STRUCTURAL STEEL WITH BEAM CLAMPS SIMILAR TO ANVIL INTERNATIONAL FIG. 95 W/ RETAINING CLIP FIG. 89. PROVIDE RODS SIZED FOR PIPE SUPPORTED AND LOCK HANGER IN PLACE WITH DOUBLE NUTS. PROVIDE GALVANIZED METAL PROTECTION SHIELDS ON INSULATED PIPING. INSTALL HANGERS OVER INSULATION AND SHIELDS.

9. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING HANGER RODS IN REQUIRED LOCATIONS, PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND REVIEWED.

F. ACCESS DOORS:

1. 12 IN. X 12 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. KARP STYLE DSC 214M OR KRP-150-FR IN FIRE RATED CONSTRUCTION.

G. LABELING:

1. PROVIDE ON ALL PIPING IN OR AT CEILING, 10 FT. ON CENTERS, INDICATING SYSTEM, SIZE AND DIRECTION OF FLOW.

H. DISSIMILAR METALS:

1. PROVIDE BRASS OR COPPER WATER PIPING CONNECTED TO GALVANIZED PIPE AND FOR ANY OTHER DISSIMILAR METALS WITH DIELECTRIC FITTINGS.

2.03 PIPING AND FITTINGS

A. SANITARY DRAINAGE AND VENT PIPING:

1. SERVICE WEIGHT CAST IRON HUB AND SPIGOT SOIL PIPE AND DRAINAGE FITTINGS, OR GALVANIZED STEEL PIPE WITH GALVANIZED THREADED CAST IRON DRAINAGE FITTINGS, WITH GALVANIZED THREADED MALLEABLE IRON VENT 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. BRASS PIPE IN COMPLIANCE WITH NSF 61 WITH THREADED CAST BRASS FITTINGS OR TYPE 'L" COPPER TUBING WITH WROUGHT COPPER OR CAST BRONZE FITTINGS WITH 95-5 SOLDERED JOINTS.

2. ALL EXPOSED WATER PIPING AT PLUMBING FIXTURES SHALL BE CHROME PLATED.

2.04 VALVES

A. SHUT-OFF OR THROTTLING VALVES (WATER): BRONZE BODY BALL VALVE WITH STAINLESS STEEL BALL AND STEM, VIRGIN TFE SEATS AND SEALS, 600 PSI W.O.G., THREADED ENDS CONBRACO 'APOLLO' 70-100 SERIES, SOLDER JOINT ENDS CONBRACO 'APOLLO' 70-200 SERIES.

B. CHECK VALVES (WATER): BRONZE SWING TYPE, 125 PSI WSP, THREADED ENDS, STOCKHAM NO. B-319. SOLDER JOINT ENDS, STOCKHAM NO. B-309.

2.05 PLUMBING EQUIPMENT

A. FIXED AIR GAP:

1. CHROME PLATED CAST BRONZE.

2. CONFORMING TO ANSI A112.1.2.

3. J. R. SMITH NO. 3950 FOR UNDERCOUNTER DISHWASHERS.

B. VACUUM BREAKERS:

1. NON-CONTINUOUS PRESSURE USE WITH BACK PRESSURE.

A) CAST BRASS BODY, WITH FULL SIZE ORIFICE

B) ATMOSPHERIC TYPE, WATTS NO 288A.

C. BACKFLOW PREVENTERS:

1. BRONZE BODY, STAINLESS STEEL INTERNAL PARTS.

A) LOW FLOW, LOW HEAD LOSS TYPE.

B) WATTS NO. 9D.

2. SPILL DRAIN TO SERVICE SINK OR FLOOR DRAIN.

A) PROVIDE AIR GAP, WATTS 909-AG-C.

D. 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 45° 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.

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°F MEAN.

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. VAPOR SEAL INSULATION ON CW PIPING. THICKNESS SAME AS REQUIRED ON PIPING.

D. CW PIPING: i IN. THICK FIBERGLASS SECTIONAL PIPE COVERING WITH VAPOR BARRIER JACKET. NO STAPLES PERMITTED.

E. HW (AND HWR) PIPING: 1 IN. FIBERGLASS SECTIONAL PIPE COVERING.

F. PROVIDE SWEATPROOFING ON DRAINAGE PIPING, AS NOTED FOR INSULATION ON CW PIPING, USING THE NEXT LARGER DIAMETER COVERING OVER HUBS FOR HORIZONTAL STORM WATER DRAINS AND FOR DRAINAGE PIPING FROM ICE MAKER FLOOR DRAINS, PROVIDE BETWEEN FIXTURE AND STACK.

2.07 PLUMBING FIXTURES:

A. STAINLESS STEEL PANTRY SINKS:

1. STOPS: PROVIDE 1/2" CHROME PLATED COPPER WITH HEAVY DUTY NPS 1/2" I.P.S. x 1/2" O.D. LOCKSHIELD ANGLE TYPE STOPS WITH STUFFING BOX AND LOOSE KEY. C.P. CAST BRASS 1/2"x3" NIPPLE AND SET SCREW ESCUTCHEON.
   A) STOPS, McGUIRE NO. H2167LK.
   B) SUPPLY NIPLE AND ESCUTCHEON McGUIRE NO. NO318030 AND NO. 127050.
   C) HANDICAP STOP, McGUIRE NO. 158WC.

2. PROVIDE TYPE 316 STAINLESS STEEL STRAINER WASTE WITH 1-1/2" 17 GAUGE COPPER TUBING TAILPICE, SIMILAR TO ELKAY NO. LK-18B. 11 IN. X 2 IN., CAST BRASS P-TRAP WITH CLEANOUT, MCGUIRE NO. 204 WITH 17 GAUGE COPPER TUBING. CONNECT TO CONCEALED WASTE PIPING USING CP. CAST BRASS WALL OUTLET NIPPLE WITH CP BRASS SET SCREW AND ESCUTCHEON, MCGUIRE NO. 3127.

3. FOR HANDICAP SINKS: TRAP, SUPPLIES AND STRAIGHT STOPS SHALL RUN CLOSE TO WALL TO CLEAR KNEES (IF MORE THAN 6 IN. OFF THE WALL, PROVIDE i IN. INSULATION ON EXPOSED HOT WATER AND DRAIN). PROVIDE OPEN STRAINER WASTE, MCGUIRE NO.1151WC.

4. TYPE SK:
   A) DOUBLE COMPARTMENT, IN THE COUNTER TYPE 22 IN. X 33 IN. X 6i IN. DEEP SELF RIMMING TYPE, 3 FAUCET HOLES, 4 IN. ON CENTERS, SIMILAR TO JUST NO. VDL-2233-A-GR WITH JUST NO. J35GS316, 316 STAINLESS STEEL STRAINER.
   B) SINGLE COMPARTMENT PANTRY SINK, SATIN FINISH THROUGHOUT 25 IN. ACROSS X 22 IN. FRONT TO BACK X 6i IN. DEEP, CENTER OUTLET DRAIN 20 GAUGE, SOUND DEAD-ENDED, 4 HOLES, 25 YEAR WARRANTY. SIMILAR TO STERLING PLUMBING GROUP, INC., BANNER NO. B258.
   C) SINK SHALL BE NO. 18 USSG 18-8 SOLID STAINLESS STEEL TYPE 302 AND SHALL BE SEAMLESSLY DRAWN. EXPOSED SURFACE SHALL HAVE A SATIN FINISH. UNDERSIDE SHALL BE SOUND DEADENED.
   D) HORIZONTAL AND VERTICAL CORNERS OF BOWLS SHALL BE ROUNDED TO 1s IN. OUTLET AND DRILLED FOR TRIM AS REQUIRED. PROVIDE WOOD STRIPS FOR FASTENING TOP TO CABINETS.

5. SINK TYPE HSK:
   A) SINGLE COMPARTMENT, MOUNTED IN THE COUNTER NO GREATER THAN 34 IN. FROM THE FLOOR, 22 IN. X 25 IN. X 6i IN. DEEP WITH 3 FAUCET HOLES, 4 IN. ON CENTERS. NO. 18 USSG 302 STAINLESS STEEL, SINGLE COMPARTMENT, FLAT RIM TYPE. JUST RADIUS. JOINTS SHALL BE WELDED AND GROUND SMOOTH. BOTTOM SHALL BE PITCHED TO DRAIN NO. VSL-2225-A-GR WITH AN ELKAY NO. 35L, 316 STAINLESS STEEL STRAINER. DOUBLE COMPARTMENT PANTRY SINK, SATIN FINISH THROUGHOUT, 33 IN. ACROSS, 22 IN. FRONT TO BACK, 6i IN. DEEP, OUTLETS 1i IN. ON CENTERS, 20 GAUGE, SOUND DEADENED, 4 HOLES, 25 YEAR WARRANTY. SIMILAR TO STERLING PLUMBING GROUP, INC., BANNER NO. B338.

6. FAUCETS:
   A) TYPE SK AND HSK, DECK MOUNTED, 8 IN. GOOSENECK SWING SPOUT WITH LAMINAR FLOW OUTLET, WRISTBLADE HANDLES, MAXIMUM FLOW 1.5 GPM VANDAL PROOF. CHICAGO NO. 786-GN8A SERIES.

7. PIPE SIZES: DRAIN: 2 IN.; VENT: 1i IN.; CW: i IN.; HW: i IN.

B. SHOWERS:

1. SHOWER RECEPTORS:
   A) TYPE SH, BLACK AND WHITE MARBLE CHIPS IN WHITE CEMENT BASE. 36 IN. X 36 IN., NON-SLIP, REINFORCED TERRAZZO RECEPTOR BASE FOR TILE WALLS WITH 2 IN. STAINLESS STEEL BOTTOM OUTLET DRAIN WITH REMOVABLE STRAINER CAST INTEGRAL. FIAT MONTERY MFT.
   B) TYPE SH, PROVIDE 36 IN. X 36 IN. NONSLIP REINFORCED PRECAST TERRAZZO RECEPTOR WITH 2 IN. STAINLESS STEEL DRAIN WITH VANDAL PROOF STRAINER CAST INTEGRAL AND GALVANIZED FLANGES FOR WALL ATTACHMENT. FIAT SIERRA NO. 36FT.

C. WATER FILTERS:

1. VALVE IN HEAD DESIGN WITH AUTOMATIC SHUT OFF WHEN THE CARTRIDGE IS REMOVED FOR REPLACEMENT INCORPORATING CELLULOSE FILTER SHEET AND ACTIVATED CARBON, 5 MICRON FILTRATION, UNDER COUNTER TYPE. PROVIDE TWO DOZEN SPARE REPLACEMENT CARTRIDGES.

2. PROVIDE ON WATER SUPPLY TO ICE AND COFFEE MAKERS: MAXIMUM TEMPERATURE 100°F, MAXIMUM PRESSURE 125 PSI, FLOW RATE I GPM. CUNO 'AQUA PURE' NO. AP717.

3. PIPE SIZE: CW: r IN.

4. PROVIDE ON WATER SUPPLY TO ELECTRIC WATER COOLERS: MAXIMUM TEMPERATURE 100°F, MAXIMUM PRESSURE 125 PSI, FLOW RATE 2 GPM. CUNO 'AQUA PURE' NO. AP500 GOLD.

5. PIPE SIZE: CW: 3/8 IN.

D. ICE AND COFFEE MAKERS (BY OTHERS):

1. PROVIDE VALVED CW CONNECTION WITH CHECK VALVE AND VACUUM BREAKER. PROVIDE FLOOR DRAIN FOR ICE MAKER. SPILL INDIRECT WASTE FROM ICE MAKER TO FLOOR DRAIN.

2. PIPE SIZE: DRAIN s IN. IW; CW: r IN.

E. UNDERCOUNTER DISHWASHERS (BY OTHERS):

1. PROVIDE VALVED WATER CONNECTION WITH CHECK VALVE AND VACUUM BREAKER.

2. PROVIDE WASTE WITH AIR GAP WHERE WASTE DOES NOT RISE ABOVE RIM OF SINK.

3. PIPE SIZE: DRAIN: s IN.; HW: i IN.

F. HOT WATER DISPENSERS:

1. DISPENSER WITH TANK. ELKAY NO. LK-H-180.

2. PROVIDE VALVED CONNECTION.

3. PIPE SIZE: r IN. CW.

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. LAG PLUMBING FIXTURE CARRIER BASE PLATES OR FEET TO SLAB WITH LEAD EXPANSION SHIELDS AND INSERT BOLTS IN ALL BOLT HOLES.

2. WHERE WALL HUNG WATER CLOSETS ARE SUPPORTED ADJACENT TO STUD WALLS, PROVIDE REAR ANCHOR FOOT ASSEMBLY BOLTED TO SLAB.

3. SEAL ALL SPACES BETWEEN FIXTURES, AND WALLS OR FLOORS, WITH A NON YELLOWING OR SHRINKING FLEXIBLE WATER SEALANT.

4. WHERE PLUMBING FIXTURES ARE REMOVED AND REPLACED PROVIDE NEW ROUGHING AS REQUIRED FOR PROPER INSTALLATION.

5. ALL EXPOSED PIPING SHALL BE CHROME PLATED.

3.02 TESTS

A. TEST ALL SYSTEMS AS REQUIRED BY BUILDING CODE.

3.03 DISINFECTION

A. DISINFECT DOMESTIC WATER PIPING SYSTEMS AS REQUIRED BY BUILDING CODE.

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JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

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Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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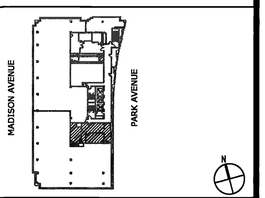
NO.	DATE	DESCRIPTIONS
2	08.30.13	ISSUE FOR CONSTRUCTION
1	08.05.13	ISSUE FOR BID & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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SCALE
DATE 08.08.12
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PROJECT ARCHITECT GM
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CHECKED BY
CADD FILE P-002.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

PLUMBING SPECIFICATIONS

REGISTERED ARCHITECT STATE OF NEW YORK

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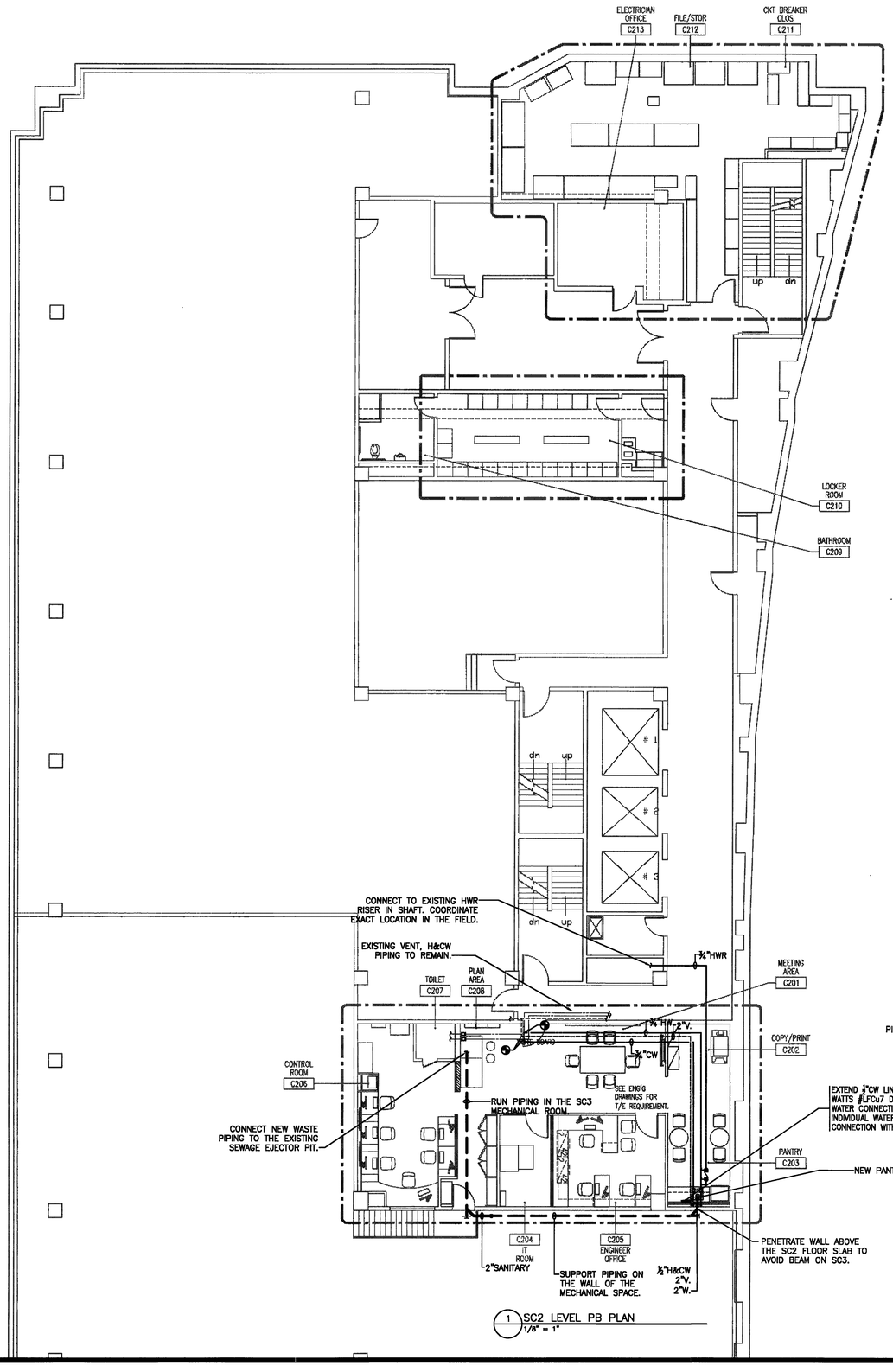
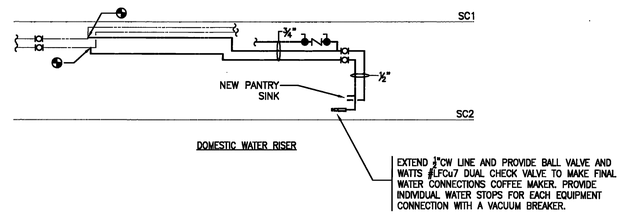
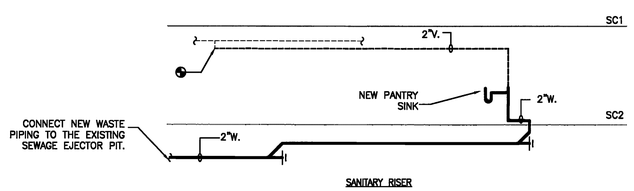
PAGE NO: 2 of 5



1 SC2 LEVEL PB PLAN
1/8" = 1'





2 PLUMBING RISER DIAGRAMS
N.T.S.

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T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
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71 Hopton Street
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Syska Hennessy Group, Inc.
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Fax: 212.566.3333
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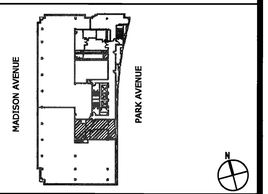
KEY PLAN — ▨ - AREA OF WORK



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JP MORGAN CHASE
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NEW YORK, NY
SC2 LEVEL

SC2 LEVEL PLUMBING PLAN

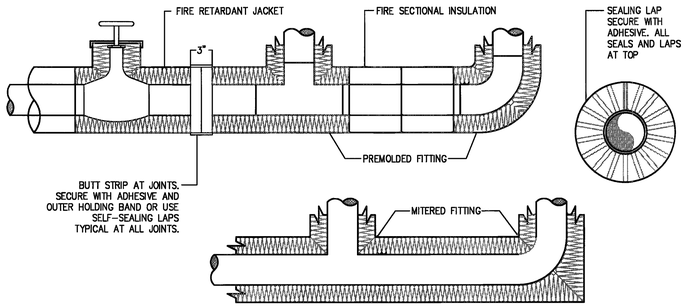
STATE OF NEW YORK — ROBERT — ARSHAD — 076 — LICENSED PROFESSIONAL ENGINEER

P-100.00

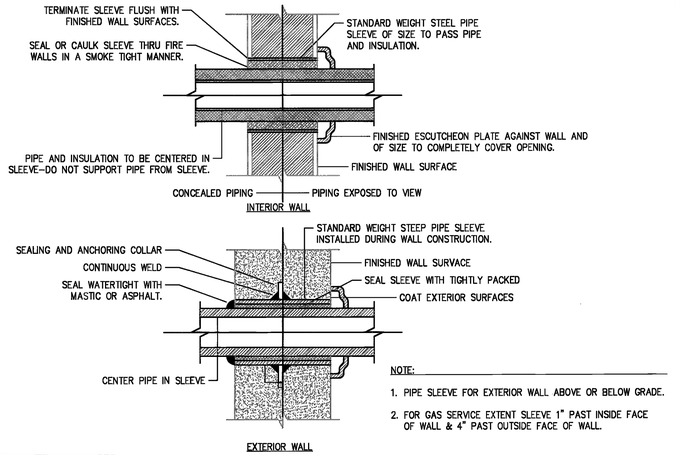
PAGE NO: 4 of 5

CONCEALED VALVES AND FITTINGS
- WRAP WITH 1 INCH THICK, 1 POUND DENSITY TO REQUIRED PIPE INSULATION THICKNESS.
- SECURE WITH WIRE OR TAPE.
- VAPOR SEAL COLD WATER, CHILLED WATER AND STORM WATER PIPING.

EXPOSED VALVES AND FITTINGS
- PREMOLDED FIRBERGLASS OR RADIAL MITERED PIPE INSULATION.
- SKIM COAT OF INSULATION CEMENT.
- COAT OF MASTIC.
- WRAP WITH FIBERLASS REINFORCING CLOTH.
- FINISH COAT OF MASTIC.
- OVERLAP 2 INCHES ON PIPE INSULATION.

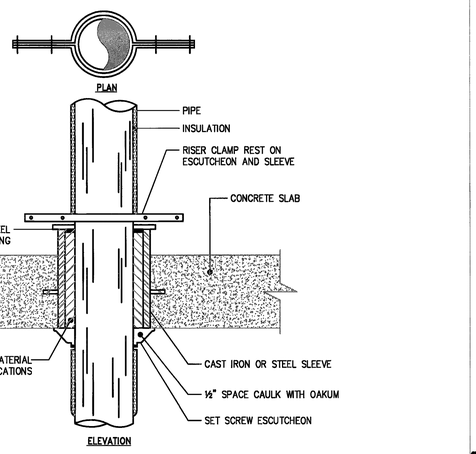


INSULATION OF PIPING, VALVES AND FITTINGS FOR EXPOSED AND CONCEALED LOCATIONS — 1

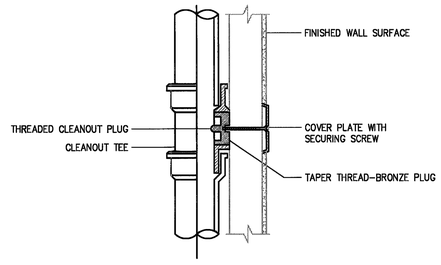


NOTE:
1. PIPE SLEEVE FOR EXTERIOR WALL ABOVE OR BELOW GRADE.
2. FOR GAS SERVICE EXTENT SLEEVE 1" PAST INSIDE FACE OF WALL & 4" PAST OUTSIDE FACE OF WALL.

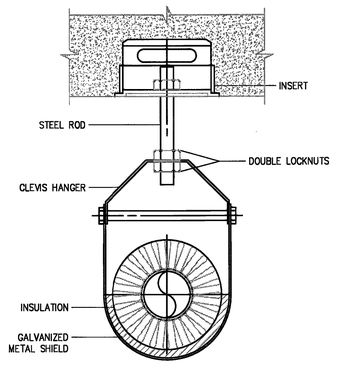
PIPE SLEEVE THRU WALL — 2



RISER CLAMP — 3



CLEANOUT FOR DRAINAGE PIPING CONCEALED BEHIND WALLS — 4



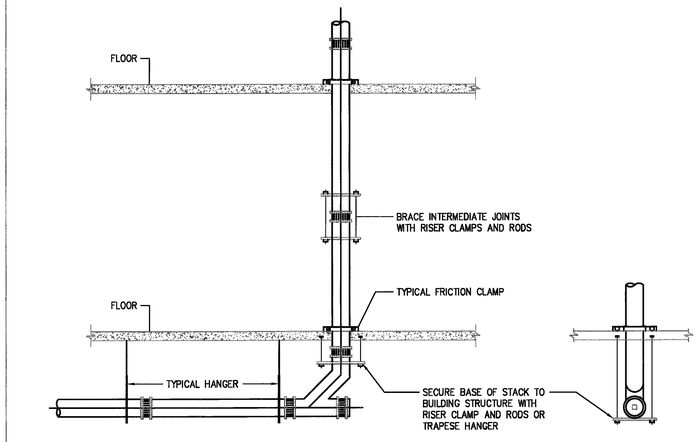
WITH INCOMPRESSIBLE INSULATING BLOCK AT HANGER		
PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS USSG
UP TO 3"	6"	18
4" UP TO 6"	8"	16
8" AND LARGER	12"	16

WITHOUT INCOMPRESSIBLE INSULATING BLOCK AT HANGER		
PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS USSG
UP TO 3"	12"	18
UP TO 4"	15"	16
UP TO 5"	18"	16
UP TO 6"	21"	16
8" AND LARGER	24"	14

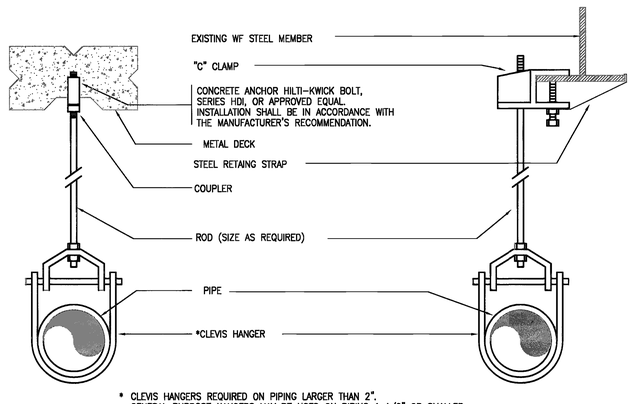
NOTE:

HANGER, ROD AND INSERT SHALL BE DIPPED IN RED OXIDE PRIMER PRIOR TO INSTALLATION.

INSULATED PIPE SUPPORT — 5



HUBLESS PIPE BRACING FOR VERTICAL PIPING — 6



* CLEVIS HANGERS REQUIRED ON PIPING LARGER THAN 2". GENERAL PURPOSE HANGERS MAY BE USED ON PIPING 1 1/2" OR SMALLER.

TYPICAL HANGER DETAIL — 7

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INTERIOR DESIGN
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10th Floor
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T. 212 551 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

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T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
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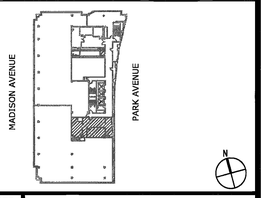
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



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ARCHITECT:

TED MOUDIS ASSOCIATES
79 MADISON AVENUE
NEW YORK, NY 10016
PHONE: 212-561-2000
FAX: 212-561-2020
CONTACT:
CESAR ROBLES
GENE MANEZ
MIDORI TAKADA
EMAIL: CRobles@tedmoudis.com
GManez@tedmoudis.com
Mtakada@tedmoudis.com

MEP ENGINEER:

SYSKA HENNESSY GROUP
1515 BROADWAY
NEW YORK, NY 10036

NICK FOX
PHONE: 212-921-2300
FAX: 212-556-3333
EMAIL: NFox@syska.com

FILING CONSULTANT:

MILROSE CONSULTANT
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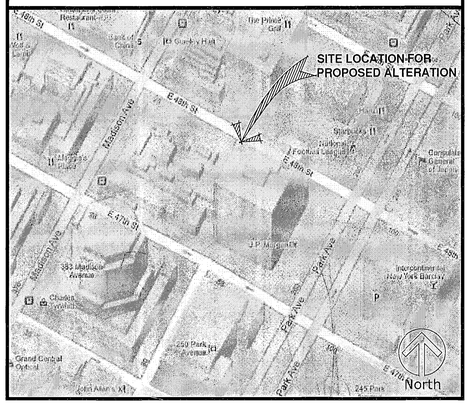
VICINITY MAP



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PLOT PLAN

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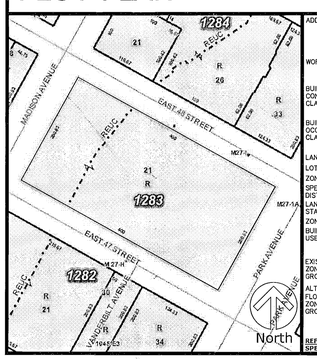


ADDRESS:	270 PARK AVENUE, NEW YORK, NY 10022
WORK ON FLOOR	SC2 LEVEL
BUILDING CONSTRUCTION CLASSIFICATION	1A
BUILDING OCCUPANCY CLASSIFICATION	B (E)
LAND USE:	COMMERCIAL
LOT AREA:	80, 388 SF.
ZONING DISTRICT:	C5-3
SPECIAL ZONING DISTRICT:	NA
LANDMARK STATUS	N
ZONING MAP:	8d
BUILDING ZONING USE GROUP:	6
EXIST. FLOOR (S) ZONING USE GROUP	6
ALTERATION FLOOR (S) ZONING USE GROUP	C2: SAME AS EXIST.

REFER TO DRAWING G-001 FOR REQUIRED SPECIAL INSPECTIONS AND DOB NOTES

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK CITY ENERGY CONSERVATION CODE.

TITLE SHEET

REGISTERED ARCHITECT TED MOUDIS STATE OF NEW YORK

T-000.00
1 OF 23

Jan 13, 2014 - 2:43pm
M:\docs R\2012_pw\pwrgrn Chase\112162.01 - 270 Park Ave, Level SC2\02--Drawings\03--CD\CD set\112162.01--A-000TS.dwg

ABBREVIATIONS

ACCES	ACCESSORY
ACOUS	ACOUSTIC(AL)
ACT	ACOUSTIC TILE
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFS	ABOVE FINISHED SLAB
AGGR	AGGREGATE
AL	ALUMINUM
ALT	ALTERNATE
ANOD	ANODIZED
AP	ACCESS PANEL
APPL	APPLIANCE
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
ASB	ASBESTOS
ASPH	ASPHALT
AUTO	AUTOMATIC
AVG	AVERAGE
BD	BOARD
BITUM	BITUMINOUS
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BEAM
BOT	BOTTOM
BRDLM	BROADLOOM
BTB	BACK TO BACK
BU	BUILT UP
CAB	CABINET
CB	CATCH BASIN
CD	CONSTRUCTION DOCUMENTS
CEM	CEMENT(ITIOUS)
CER	CERAMIC
CI	CAST IRON
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CM	CONSTRUCTION MANAGER
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
COATG	COATING
COLG	COOLING
COL	COLUMN
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUOUS(ATION)
CONTR	CONTRACT(OR)
CORR	CORRIDOR
COV	COVER
CPT	CARPET
CTR	CENTER
CTSK	COUNTERSUNK
DBL	DOUBLE
DEPT	DEPARTMENT
DES	DESIGN(ED)
DET	DETAIL
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DN	DOWN
DS	DOOR OPENING
DN	DOOR
DO	DOWNSPOUT
DSCON	DISCONNECT
DSP	DRY STANDPIPE
DW	DISHWASHER
DWG (S)	DRAWING (S)
DWR	DRAWER
E	EAST
EJ	EACH
EL EA	EACH FACE
EF	EXPANSION JOINT
	ELEVATION
ELAST	ELASTOMERIC
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMBED	EMBED(DED)(ING)
EMER	EMERGENCY
ENCL	ENCLOSURE
ENG	ENGINEER
ENTR	ENTRANCE
EP	ELECTRICAL PANEL
EQ	EQUAL
EQUIP	EQUIPMENT
EXIST	EXISTING
EXP	EXPANSION
EXPS	EXPOSE(D)
EXT	EXTERIOR
EWC	ELECTRIC WATER COOLER
F.T.	FIRE TREATED
F&I	FINISH and INSTALL
FA	FIRE ALARM
FAB	FABRICATION
FB	FLAT BAR
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHC	FIRE HOSE CABINET
FIN	FINISH
FLASH	FLASHING
FLDG	FOLDING
FLUOR	FLUORESCENT
FOC	FACE of CONCRETE
FOF	FACE of FINISH
FOS	FACE of STUDS
FP	FIREPROOF
FPLC	FIREPLACE
FR	FIRE RAT(ING)(ED)
FXD	FIXED
FXTR	FIXTURE
FLR	FLOOR(ING)
FRMG	FRAMING
FS	FULL SIZE
FT	FOOT or FEET

FTG	FOOTING
FURN	FURNITURE
FURR	FURRING
FUT	FUTURE
FWP	FABRIC WRAPPED PANEL
G	GROUND
GA	GAUGE
GB	GRAB BAR
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GFRC	GLASS FIBER REINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GFRP	GLASS FIBER REINFORCED PLASTER
GL	GLASS/GLAZING
GR	GRAD(E)(ING)
GYP	GYPSUM
GWB	GYPSUM WALL BOARD
H.C.	HOSE CABINET
HB	HOME BID
HC	HANDICAP
HD	HEAD
HDW	HARDWARE
HDWD	HARDWOOD
HDWE	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
I.D.	INSIDE DIAMETER (DIM.)
INFILTR	INFILTRATION
INFO	INFORMATION
INSTRUM	INSTRUMENT(ATION)
INSUL	INSULATION
INT	INTERIOR
INTLK	INTERLOCK(ING)
JAN	JANITOR
JC	JANITOR'S CLOSET
JT.	JOINT
KIT	KITCHEN
LAB	LABORATORY
LAM	LAMINATED
LAV	LAVATORY
LB	POUND
LKR	LOCKER
LT	LIGHT
LVLG	LEVELING
LVR	LOUVER
LW	LIGHTWEIGHT
MAX	MAXIMUM
MC	MEDICINE CABINET
MDF	MEDIUM DENSITY FIBERBOARD
MECH	MECHANICAL
MEMB	MEMBRANE
MET	METAL
MFD	MANUFACTURED
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MLWK	MILLWORK
MOIST	MOISTURE
MO	MASONRY OPENING
MOT	MOTOR(IZED)
MTD	MOUNTED
MUL	MULLION
N	NEW
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OBS	OBSCURE
OC	ON CENTER
OD	OUTSIDE DIAMETER (DIM.)
OFF	OFFICE
OH	OPPOSITE HAND
OPNG	OPENING(S)
OPP	OPPOSITE
OPR	OPERABLE
ORNA	ORNAMENTAL
OVFL	OVERFLOW
OVHD	OVERHEAD

PBD	PARTICLE BOARD
PC	PRECAST CONCRETE
PEDTR	PEDESTRIAN
PLS	PLASTIC
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLYWD	PLYWOOD
PNL	PANEL
POLYST	POLYSTYRENE
PORT	PORTABLE
PR	PAIR
PRCST	PRECAST
PREFIN	PREFINISHED
PREFAB	PREFABRICATED
PT	POINT
PTD	PAPER TOWEL DISPENSER COMBINATION PAPER TOWEL DISPENSER & RECEPTACLE
PTN	PARTITION
QUAL	QUALITY
QA	QUALITY ASSURANCE
QC	QUALITY CONTROL
QCR	QUALITY CONTROL
QTY	QUANTITY
QT.	QUARRY TILE
R	RELOCATE
RAD	RADIUS
RD	ROOF DRAIN
RDR	READER
RECES	RECESSED
RECPT	RECEPTACLE
REF	REFER(ENCE)
REFL	REFLECTED
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCE(D)(ING)(MENT)
REQD	REQUIRED
RESIS	RESIST(ANT)(IVE)
RESIL	RESILIENT
RF	RAISED FLOOR
RFG	ROOFING
RM	ROOM
RO	ROUGH OPENING
RWD	REDWOOD
RWL	RAIN WATER LEADER
SC	SOLID CORE
SCD	SEAT COVER DISPENSER
SCHED	SCHEDULE
SCR	SCRIBE
SD	SOAP DISPENSER
SECT	SECTION
SECUR	SECURITY
SF	SQUARE FEET
SGL	SINGLE
SH	SHELF
SHR	SHOWER
SHORG	SHORING
SHT	SHEET
SIM	SIMILAR
SLNT	SEALANT
SND	SANITARY NAPKIN DISPENSER
SNR	SANITARY NAPKIN RECEPTACLE
SPEC	SPECIFICATION
SQ	SQUARE
SSK	SERVICE SINK
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRFR	STOREFRONT
STRUCT	STRUCTURAL
SURF	SURFACE
SUSP	SUSPENDED
SYS	SYSTEM(S)
T&G	TONGUE and GROOVE
TEL.	TELEPHONE
TELECOM	TELECOMMUNICATION
THK	THICK
T.O.	TOP OF
TOIL	TOILET
TRAF	TRAFFIC
TRANS	TRANSPARENT
TRTD	TREATED
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UNDRLAY	UNDERLAYMENT
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VIN	VINYL
VT	VINYL TILE
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WPM	WATER PROOFING MEMBRANE
WT	WEIGHT
WTRPRF	WATERPROOFING

SYMBOLS

&	AND
∠	ANGLE
@	AT
℄	CENTERLINE
ø	DIAMETER
⊥	PERPENDICULAR
⊏	CHANNEL
#	POUND or NUMBER
(E)	EXISTING

REGULATORY INFORMATION

A. THIS IS A SINGLE TENANT OCCUPANCY FLOOR.
B. THERE IS NO CHANGE TO THE USE, EGRESS OR OCCUPANCY AS PART OF THIS ALTERATION WORK DOCUMENTED HEREWITH
C. ENTIRE FLOOR AREA TO BE MECHANICALLY VENTILATED AS PER ART. 12, ART. 13 & RS13.
D. CONSTRUCTION OF HUNG CEILING TO COMPLY WITH SECTIONS. 27-327 AND 27-350.
E. THIS FLOOR IS FULLY SPRINKLERED. SPRINKLER SYSTEM INSTALLATION SHALL BE IN ACCORDANCE W/ RS 17-2 & CONNECTED TO A FIRE DEPARTMENT APPROVED CENTRAL MONITORING STATION. SPRINKLER WORK BE FILED UNDER SEPARATE APPLICATION.
F. THIS WORK COMPLIES WITH LOCAL LAW 5/73, LOCAL LAW 16/84 AND LOCAL LAW 58/87.
G. ALL WORK TO BE PERFORMED UNDER THIS APPLICATION & PERMIT SHALL COMPLY W/ APPLICABLE REGULATIONS NOTED BELOW.

H. APPLICABLE REGULATIONS:
1. UNIFORM FIRE CODE, STATE OF NEW YORK 1997
2. THE 1968 NYC BUILDING CODE
3. 2008 NEW YORK CITY PLUMBING CODE (IPC 2003)
4. 2008 NEW YORK CITY MECHANICAL CODE (IMC 2003)
5. 2007 NEW YORK CITY ELECTRICAL CODE (NEC 2005) WITH NEC 2005 AMENDMENTS.
6. NYC ENERGY CONSERVATION CODE LL66 OF 2010 ADOPTING 2010 NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE AS LOCALLY AMENDED (2011 NYCECC).
7. NEW YORK CITY FIRE/LIFE SAFETY CODE, NEW YORK CITY FIRE CODE AND NEW YORK CITY BUILDING CODE (NFPA 5000)
8. 2008 NEW YORK CITY FUEL GAS CODE.
9. 1986 BUILDING CODE REFERENCE STANDARD 4-6, ANSI A117.1, 1986 AND LOCAL LAW 58-1987
10. SAFETY CODE FOR ELEVATOR AND ESCALATORS ASME A17.1 AS MODIFIED BY APPENDIX K. ACCESSIBILITY FOR PASSENGER ELEVATORS ICC/ANSI A117.3 2003

B. NEW YORK CITY BUILDING CODE REQUIREMENTS:
1. USE AND OCCUPANCY
a. EXISTING BUILDING: (C) (B) (BUSINESS). ZONING USE GROUP 6
b. INTERIOR ALTERATION: LEVEL C2: (C) (B) (BUSINESS). ZONING USE GROUP 6

C. BUILDING LIMITATIONS:
1. BUILDING HEIGHT: 707 FEET, 52 STORIES
2. TOTAL ALL FLOOR GROSS AREA: 20,445 SQ.FT.
a. LEVEL SC2 GROSS AREA: NOT AVAILABLE
b. LEVEL SC2 ALTERATION AREA: 2,105 SQ.FT.

D. BUILDING CONSTRUCTION CLASSIFICATION:
1. EXISTING BUILDING IS CLASSIFIED AS HIGH RISE
2. BUILDING CONSTRUCTION CLASS "IB"-NONCOMBUSTIBLE PROTECTED.
3. AN AUTOMATIC SPRINKLER SYSTEM IS PROVIDED.
4. AN AUTOMATIC FIRE DETECTION SYSTEM IS PROVIDED.
5. AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM IS PROVIDED.
6. A FIRE DEPARTMENT COMMUNICATION SYSTEM IS PROVIDED.
7. A FIRE DEPARTMENT COMMAND CENTER IS PROVIDED.

E. FIRE RESISTANCE RATING OF ELEMENTS IN HOURS -CLASS I NONCOMBUSTIBLE (TABLE 3-4) & NOTED SECTIONS:

	ELEMENT TYPE	REQUIRED	PROVIDED
	EXTERIOR NONBEARING WALLS 3' OR <	1	N/A
	EXTERIOR NONBEARING WALLS > 3' BUT < 15'	1	N/A
	EXTERIOR NONBEARING WALLS 15' OR > BUT < 30'	1	N/A
	EXTERIOR NONBEARING WALLS = OR > 30'	0	N/A
	STRUCTURAL FRAME INCLUDING COLUMNS, GIRDERS, TRUSSES & SPANDRELS	3	N/A
	FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS	2	N/A
	ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS & JOISTS	1	N/A
2	SHAFTS FIRE RESISTANCE IN HOURS (SECTION 27-344)		
	SHAFTS CONNECTING 4 FLOOR OR MORE	2	N/A
	SHAFTS CONNECTING 3 FLOOR OR LESS	2	N/A
3	PUBLIC CORRIDORS (SECTION 27-369]		
	ANY OCCUPANCY	1	N/A
4	EXIT ENCLOSURES (SECTION 27-375)		
	STAIRS CONNECTING 4 FLOORS OR MORE	2	N/A
	STAIRS CONNECTING 3 FLOORS OR LESS	2	N/A
5	DIFFERENT TENANCY (SECTION 27-341 a)		
	OCCUPANCY B, FULLY SPRINKLERED	1	1
6	SEPARATION OF OCCUPANCIES (TABLE 5-1 OR 5-2)		
	B (BUSINESS) / B (BUSINESS) FULLY SPRINKLERED	1	1
7	OPENING PROTECTIVE FIRE PROTECTION RATING: COMPLY WITH REQUIREMENT OF SECTION 27-342 AND TABLE 5-3		
8	GLAZING GENERAL: SUBCHAPTER 10, RS-67 & RS-68. GLAZING IN FIRE RESISTIVE PARTITION: AS PERMITTED BY SECTION 27-342 (a) & BUILDING COMMISSIONER.		

F. MEANS OF EGRESS (SUBCHAPTER 6):
1. DETERMINATION OF OCCUPANT LOAD CAPACITY SHALL COMPLY WITH FLOOR AREA ALLOWANCES IN TABLE 6-2
2. MINIMUM REQUIRED EGRESS WIDTH FOR STAIRWAYS AND OTHER COMPONENTS SHALL BE NO LESS THAN 44 INCHES. ALL CORRIDORS TO BE 3'-8" MIN. CLEAR WIDTH AS PER SECTIONS. 27-369.
3. EGRESS DOORS SHALL SWING IN DIRECTION OF EGRESS EXCEPT IN SPACES AND ROOMS WITH ONE MEANS OF EGRESS PER TABLE 6-3
4. EGRESS DOORS SHALL BE HINGE MOUNTED SWING TYPE. NUMBER OF EGRESS DOORS FROM FLOORS, SPACES AND ROOMS SHALL BE PER TABLE 6-1 EXCEPT SPACES AND ROOMS WITH ONE MEANS OF EGRESS MEETING THE OCCUPANT LOAD REQUIREMENTS IN TABLE 6-3
5. EGRESS DOORS TO STAIRWAYS SHALL BE SELF LATCHING, SELF CLOSING MATCHING THE FIRE RESISTANCE REQUIREMENTS FOR STAIRWAY ENCLOSURES.
6. ALL NEW DOORS SHALL BE 3'-0" WIDE UNLESS OTHERWISE NOTED. ALL HARDWARE TO BE LEVER TYPE.
7. MEANS OF EGRESS POWER OPERATED DOORS SHALL BE FAIL SAFE AND OPERABLE MANUALLY FROM THE EGRESS SIDE WITHOUT SPECIAL KNOWLEDGE OR EFFORT.
8. WHEN MORE THAN ONE EXIT DOORWAYS ARE REQUIRED, EXIT ACCESS DOORWAYS SHALL BE REMOTE FROM EACH OTHER AND SHALL BE PLACED AT A DISTANCE APART EQUAL TO NOT LESS THAN THAN 30 FEET PER SECTION 27-363 (b)(2)).
9. EGRESS PASSING THROUGH ADJACENT TENANT ON ANY ONE FLOOR IS NOT PERMITTED. EACH TENANT SHALL HAVE ACCESS TO THE REQUIRED EXITS WITHOUT PASSING THROUGH THE ADJACENT TENANT SPACE.
10. AISLES SERVING AS PORTION OF THE EXIT ACCESS SHALL BE DETERMINED BY TABLE 6.1 BUT SHALL NOT BE LESS THAN 36 INCHES.
11. EXIT ACCESS RAVEL DISTANCE LIMITATIONS SHALL BE IN ACCORDANCE WITH TABLE 6-1.
12. THE WIDTH OF EXIT ACCESS CORRIDORS SHALL BE DESIGNED TO MEET THE CAPACITY OF THE OCCUPANTS IT SERVES AS PER TABLE 6-1 BUT SHALL NOT BE LESS THAN 44 OMCHES.
13. DEAD END IN EXIT ACCESS SYSTEM SHALL BE 50 FEET PER TABLE 6-1.

G. EXIT SIGNS
1. ILLUMINATION OF MEANS OF EGRESS COMPONENTS SHALL COMPLY W/ SUB-CAHPTER SIX, ARTICLE SIX.
2. ILLUMINATED EXIT SIGNS SHALL BE LOCATED AT ALL EXITS AND SUPPLEMENTAL DIRECTIONAL SIGNS SHALL BE INSTALLED WITHIN LARGE SPACES OR SPACES WITH OBSTRUCTED VIEWS IN ACCORDANCE WITH SECTION 27-385 & SECTION 37-386.
3. THE POWER SOURCE FOR EMERGENCY LIGHTING AND ILLUMINATED EXIT SIGNS SHALL COMPLY W/ SEC. 27-384.

H. FIRE PROTECTION CONSTRUCTION
1. FIRE-RESISTANT RATED PARTITIONS SHALL EXTEND UP TO AND BE SECURED TO THE UNDERSIDE OF THE FLOOR STRUCTURE ABOVE.
2. PENETRATIONS THROUGH FIRE-RESISTANT RATED PARTITIONS & FLOORS SHALL BE PROTECTED IN COMPLIANCE WITH SECTIONS 27-343 AND 27-344.
3. ALL OPENING PROTECTIVE DOORS AND FRAMES IN FIRE-RESISTANT RATED EXIT ENCLOSURE, FIRE DIVISIONS, AND FIRE SEPARATIONS SHALL BE SELF-CLOSING, SELF LATCHING, FIRE RATED SWINGING DOORS BEARING THE UNDERWRITERS LABORATORIES LABEL.
4. ALL WOOD TO BE FIRE RETARDANT AS PER SECTIONS. 27-228, 27-1019 (b) (3) AND TABLE 3-5.
5. INTERIOR FINISHES SHALL COMPLY WITH SECTION 27-348 AND RS 5-5 FOR FLAME SPREAD AND SMOKE DEVELOPED AND TABLE 5-4 FOR CLASS REQUIREMENTS:
   - FLAME SPREAD RATING: A: 0 – 25, B: 26 – 75 C: 76 – 225, D: Over 225
   - SMOKE DEVELOPED RATING: EXITS, CORRIDORS – 25, OCCUPANCY GROUPS H-1 AND H-2 – 50, ROOMS IN WHICH THE NET FLOOR AREA PER OCCUPANT IS TEN SQUARE FEET, OR LESS -100.
6. MATERIALS USED AS INTERIOR FINISHES, TRIMS AND DECORATIVE MATERIALS HAVING A THICKNESS OF 0.036 INCHES (1/16 INCHES) AND APPLIED DIRECTLY TO A NON-COMBUSTIBLE OR FIRE RETARDED TREATED WOOD SUBSTRATE SHALL BE EXEMPT FROM COMPLIANCE WITH THE ALLOWABLE FLAME SPREAD AND SMOKE DEVELOPMENT
7. FLOOR FINISHES SHALL COMPLY WITH SECTION 27-351.

I. GLASS AND GLAZING (SUBCHAPTER 10)
1. INDIVIDUAL GLAZED AREAS SUBJECT TO HUMAN IMPACT INCLUDING GLASS MIRRORS, IN HAZARDOUS LOCATIONS SHALL BE OF SAFETY TYPE GLAZING IN COMPLIANCE WITH "ANSI Z97.1"AND SHALL PASS THE TEST REQUIREMENTS OF "CPSC 16 CFR, 1201".
2. GLAZING PANELS IN HANDRAILS AND GUARDS SHALL BE EITHER SINGLE FULLY TEMPERED GLASS, LAMINATED FULLY TEMPERED GLASS OR LAMINATED HEAT THRENGTHENED GLASS. THE GLASS PANELS AND THEIR SUPPORT SYSTEM SHALL BE DESIGNED TO WITHSTAND LOAD SPECIFIED IN SECTION 27-558 (B) WITH A SAFETY FACTOR OF 4.
3. DISTRACTION MARKINGS ON TRANSPARENT GLASS PANELS AND SIDELIGHTS SHALL COMPLY WITH NEW YORK CITY BOARD OF STANDARDS AND APPEALS (BSA) RULE 4-01

REGULATORY INFORMATION-Cont.

J. SPECIAL INSPECTION REQUIRED (2008 BC CHAPTER 17)
-MECHANICAL SYSTEMS PER SECTION BC 1704.15
-SPRINKLER SYSTEMS PER SECTION BC 1704.21
-FIRE ALARM TEST PER SECTION BC 907 AND BC 1704.13
-SPRAYED FIRE-RESISTANT MATERIALS PER SECTION BC 1704.11

K. PROGRESS INSPECTION REQUIRED (2008 BC)
-FINAL INSPECTION SIGN-OFF PER DIRECTIVE 14 OF 1975 & 1 RCNY 101-10.
-FIRE RESISTANCE RATED CONSTRUCTION INSPECTION PER SECTION BC 109.3.4
-ENERGY CODE COMPLIANCE INSPECTIONS PER SECTION BC 109.3.5

L. NYC ENERGY CONSERVATION CODE (2010 NYSECCC)

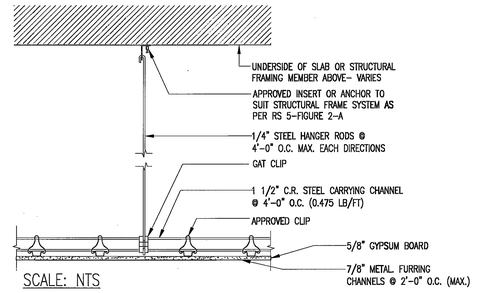
ENERGY ANALYSIS

COMMERCIAL

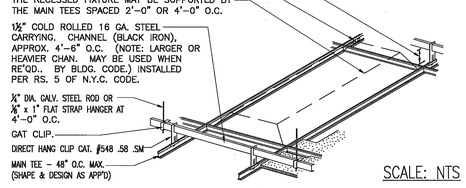
ITEM DESCRIPTION	CODE REQUIRED VALUE AND CITATION	PROPOSED DESIGN VALUE
BUILDING ENVELOPE	N/A-(EXISTING EXTERIOR BUILDING WALL SYSTEM TO REMAIN) – NO EFFECT.	N/A-(EXISTING EXTERIOR BUILDING WALL SYSTEM TO REMAIN) – NO EFFECT.
HVAC/MECHANICAL SYSTEMS	SEE ENGINEERING DRAWINGS	SEE ENGINEERING DRAWINGS
LIGHTING SYSTEMS	SEE ENGINEERING DRAWINGS	SEE ENGINEERING DRAWINGS

TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK CITY ENERGY CONSERVATION CONSTRUCTION CO de

TYP. GYP. BD. CLG. DETAILS



SCALE: NTS



SCALE: NTS

NOTES
1. AT EACH END OF LIGHT FIXTURE AN INTERLOCKING CROSS TEE OR LOCKING BAR MUST BE USED
2. THE TOTAL WEIGHT OF A LIGHT FIXTURE AND OTHER EQUIPMENT (AIR BOXES, ETC.) AND CEILING MATERIAL SUPPORTED BY THE MAIN BEAM MUST NOT EXCEED THE ALLOWABLE DEFLECTION OF 1/360 OF ITS SPAN. DEFLECTION DATA MUST BE FURNISHED AND CERTIFIED BY THE MANUFACTURER.
3. SURFACE OR PENDENT FIXTURES MUST BE INDEPENDENTLY SUPPORTED FROM 1½" BLACK IRON OR FROM FLOOR OR ROOF CONSTRUCTION.

2008 TENANT SAFETY NOTES

1. EGRESS.
AT ALL TIMES IN THE COURSE OF CONSTRUCTION PROVISION SHALL BE MADE FOR ADEQUATE EGRESS AS REQUIRED BY THIS CODE AND THE TENANT PROTECTION PLAN SHALL IDENTIFY THE EGRESS THAT WILL BE PROVIDED. REQUIRED EGRESS SHALL NOT BE OBSTRUCTED AT ANY TIME EXCEPT WHERE APPROVED BY THE COMMISSIONER.

2. FIRE SAFETY.
ALL NECESSARY LAWS AND CONTROLS, INCLUDING THOSE WITH RESPECT TO OCCUPIED DWELLINGS, AS WELL AS ADDITIONAL SAFETY MEASURES NECESSITATED BY THE CONSTRUCTION SHALL BE STRICTLY OBSERVED.

3. HEALTH REQUIREMENTS.
SPECIFICATION OF METHODS TO BE USED FOR CONTROL OF DUST, DISPOSAL OF CONSTRUCTION DEBRIS, PEST CONTROL AND MAINTENANCE OF SANITARY FACILITIES, AND LIMITATION OF NOISE TO ACCEPTABLE LEVELS SHALL BE INCLUDED.
3.1. THERE SHALL BE INCLUDED A STATEMENT OF COMPLIANCE WITH APPLICABLE PROVISIONS OF LAW RELATING TO LEAD AND ASBESTOS.

4. COMPLIANCE WITH HOUSING STANDARDS.
THE REQUIREMENTS OF THE NEW YORK CITY HOUSING MAINTENANCE CODE, AND, WHERE APPLICABLE, THE NEW YORK STATE MUL-TIPLE DWELLING LAW SHALL BE STRICTLY OBSERVED.

5. STRUCTURAL SAFETY.
NO STRUCTURAL WORK SHALL BE DONE THAT MAY ENDANGER THE OCCUPANTS.

6. NOISE RESTRICTIONS.
WHERE HOURS OF THE DAY OR THE DAYS OF THE WEEK IN WHICH CONSTRUCTION WORK MAY BE UNDERTAKEN ARE LIMITED PURSUANT TO THE NEW YORK CITY NOISE CONTROL CODE, SUCH LIMITATIONS SHALL BE STATED.

SAMUEL SCHWARTZ

JAN 27 2014

ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

DRAWING INDEX

NO.	DESCRIPTION	8/05/13 ISSUED FOR BID, FILING & L.L. REVIEW	1/13/14 ISSUED FOR FILING & CONSTRUCTION
	ARCHITECTURAL DRAWINGS.		
T-001.00	TITLE SHEET	•	•
G-001.00	ABBRV. CODE INFO, DRWGS INDEX & TYP. CLG.DTLS	•	•
G-002.00	GENERAL NOTES-SHEET 1 OF 4	•	•
G-003.00	GENERAL NOTES-SHEET 2 OF 4	•	•
G-004.00	GENERAL NOTES-SHEET 3 OF 4	•	•
G-005.00	GENERAL NOTES-SHEET 4 OF 4	•	•
A-102.00	SC2 LEVEL CEILING DEMOLITION PLAN	•	•
A-111.00	SC2 LEVEL CONSTRUCTION PLAN	•	•
A-121.00	SC2 LEVEL REFLECTED CEILING PLAN	•	•
A-131.00	SC2 LEVEL POWER & COMMUNICATION PLAN	•	
A-141.00	SC2 LEVEL FINISH PLAN	•	
A-151.00	SC2 LEVEL FURNITURE PLAN	•	•
A-201.00	ELEVATIONS & SECTIONS	•	•
A-301.00	SECTION & DETAILS	•	•
A-302.00	SECTION & DETAILS	•	•
A-702.00	ACCESSIBILITY DIAGRAMS SHEET 1 OF 2	•	•
A-703.00	ACCESSIBILITY DIAGRAMS SHEET 2 OF 2	•	•
A-704.00	TYP.MTG. HTS. & LOCATIONS OF ARCH/MEP DEVICES & FIXTURES	•	•
A-705.00	TYP.MTG. HTS. & LOCATIONS OF ARCH/MEP DEVICES & FIXTURES	•	•
A-706.00	FIRE STOPPING & JOINT SYSTEM DIAGRAMS SHEET 1 OF 3	•	•
A-707.00	FIRE STOPPING & JOINT SYSTEM DIAGRAMS SHEET 2 OF 3	•	•
A-708.00	FIRE STOPPING & JOINT SYSTEM DIAGRAMS SHEET 3 OF 3	•	•
	ELECTRICAL DRAWINGS		
E-001.00	ELECTRICAL SYMBOLS, NOTES & ABBREVIATIONS	•	•
E-002.00	ELECTRICAL SPECIFICATIONS	•	•
E-601.00	ELECTRICAL RISER DIAGRAM	•	•
DME-100.00	SC2 LEVEL ELECTRICAL DEMOLITION PLAN	•	•
EL-100.00	SC1 LEVEL ELECTRICAL LIGHTING PLAN	•	•
EP-100.00	SC1 LEVEL ELECTRICAL POWER PLAN	•	•
EN-701.00	ELECTRICAL LIGHTING COMPLIANCE		•
EN-702.00	MECHANICAL COMPLIANCE		•
	MECHANICAL DRAWINGS		
M-001.00	MECHANICAL SYMBOLS LIST, ABBREVIATIONS &NOTES	•	•
M-002.00	MECHANICAL SPECIFICATIONS	•	•
M-003.00	MECHANICAL SPECIFICATIONS CONT.	•	•
M-100.00	SC2 LEVEL MECHANICAL HVAC PLAN	•	•
M-501.00	MECHANICAL DETAILS	•	•
M-701.00	MECHANICAL SCHEDULES	•	•
DMM-100.00	SC2 LEVEL MECHANICAL DEMOLITION PLAN	•	•
	PLUMBING DRAWINGS		
P-001.00	PLUMBING SYMBOLS LIST, ABBREVIATIONS & NOTES	•	•
P-002.00	PLUMBING SPECIFICATIONS	•	•
P-100.00	SC2 LEVEL PLUMBING PLAN	•	•
P-501.00	PLUMBING DETAILS	•	•
DMP-100.00	SC2 LEVEL PLUMBING DEMOLITION PLAN	•	•
	SPRINKLER DRAWINGS		
PD-100.00	SC2 LEVEL SPRINKLER DEMOLITION PLAN	•	•
SP-001.00	SPRINKLER SYMBOLS LIST, ABBREVIATIONS & NOTES	•	•
SP-002.00	SPRINKLER SPECIFICATIONS	•	•
SP-100.00	C2 LEVEL SPRINKLER PLAN	•	•
SP-501.00	SPRINKLER DETAILS	•	•
SP-601.00	SPRINKLER RISER DIAGRAM	•	•

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L REVIEW

ISSUE/REVISIONS

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue, 10th Floor, New York, NY 10016, T. 212.561.2000
The LaSalle Wacker, 221 North LaSalle Street, Chicago, IL 60601, T. 312.924.5000
MCM Architecture Limited, 71 Hopton Street, London SE19LR, UK, T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT
DEPT BLDGS 121664662 Job Number
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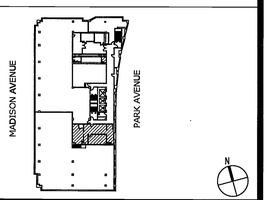

▨ - AREA OF WORK

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JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

ABBREVIATIONS, CODE INFO DRAWINGS INDEX AND TYPICAL CEILING DETAILS

REGISTERED ARCHITEC

1.0 GENERAL REQUIREMENTS

1.1 GENERAL CONDITIONS

1.1.1 SUMMARY

A. ALL WORK SHALL COMPLY WITH THE REGULATIONS OF THE GOVERNMENTAL AUTHORITIES HAVING JURISDICTION. THE SPECIFICATIONS SHALL BE SUPPLEMENTAL TO ALL LAWS AND CODES OF GOVERNMENTAL REGULATING BODIES RELATING TO BUILDINGS, AND ALL APPLICABLE REQUIREMENTS SPECIFIED IN THESE REGULATIONS SHALL BE FOLLOWED AS THOUGH SPECIFICALLY NOTED IN THE SPECIFICATIONS OR DRAWINGS. THIS SHALL NOT HOWEVER, BE CONSTRUED TO MEAN THAT ANY REQUIREMENTS SET FORTH IN THE SPECIFICATIONS CAN BE MODIFIED BECAUSE THEY ARE NOT SPECIFICALLY NOTED BY SUCH CODES OR LAWS.

B. ALL TMA DRAWINGS AND CONSTRUCTION NOTES ARE COMPLIMENTARY, AND WHAT IS CALLED FOR BY ONE WILL BE BINDING AS IF CALLED FOR BY ALL.

C. CONTRACTOR SHALL NOTIFY TMA IMMEDIATELY IF HE CANNOT COMPLY WITH ALL NOTES CALLED FOR ON THIS SHEET AND ON ALL OTHER TMA DRAWINGS.

D. THE GENERAL CONTRACTOR SHALL NOTIFY TMA OF ANY DISCREPANCIES BETWEEN THE DRAWINGS, THESE NOTES, AND FIELD CONDITIONS BEFORE SUBMITTING A PROPOSAL OR COMMENCING ANY WORK AND REQUEST CLARIFICATION.

E. BEFORE SUBMITTING A PROPOSAL, ALL CONTRACTORS SHALL VISIT THE PREMISES, FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND SATISFY THEMSELVES AS TO THE NATURE AND THE SCOPE OF THE WORK AND THE DIFFICULTIES THAT ATTEND ITS EXECUTION.

F. THE SUBMISSION OF A BID PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIAL OR FOR DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE, WILL NOT BE RECOGNIZED.

1. PRICING AND OR BID PROPOSALS SUBMISSIONS SHALL BE IN A COMPLETE BREAKDOWN FORM, LISTING WORK NOT ONLY BY VARIOUS TRADES, BUT ALSO WITH MAJOR SUB CATEGORIES WITHIN EACH TRADE ITEMIZED.

2. PROOF OF INSURANCE COVERING IN AMOUNTS REQUIRED BY LOCAL LAW, AS STIPULATED BY THE BUILDING, AND AS REQUIRED BY TENANT/OWNER. PROOF OF INSURANCE SHALL BE SUBMITTED TO TENANT/OWNER AND THE BUILDING PRIOR TO CONSTRUCTION. CERTIFICATES, ETC., SHALL BE AVAILABLE AT JOB SITE FOR EXAMINATION ON DEMAND.

3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL CITY AND STATE FILING, PERMITS, APPROVALS, REQUIRED INSPECTIONS AND SIGN-OFFS WITH THE AUTHORITY HAVING JURISDICTION (AHJ) AND FOR PAYMENT OF ALL REQUIRED FEES BY THE ABOVE "AHJ" TO BE INCLUDED IN PRICING AND OR BID PROPOSALS INCLUDING IF REQUIRED THE USE OF BUILDING DEPARTMENT EXPEDITER.

G. THE GENERAL CONTRACTOR SHALL INCLUDE IN HIS ESTIMATE ALL COSTS (INCLUDING OVERTIME WORK) FOR REMOVAL, NEW INSTALLATION AND REINSTALLATION WORK FOR ANY PLUMBING, CEILING (TAKE DOWN AND REINSTALLATION), ELECTRICAL, TELEPHONE COMMUNICATION EQUIPMENT OR HVAC WORK ON FLOOR, ABOVE OR BELOW TENANT SPACE TO COMPLETE WORK ON FLOOR BEING RENOVATED.

H. THE GENERAL CONTRACTOR AGREES TO PAY ALL VERTICAL AND HORIZONTAL TRANSPORTATION CHARGES ON ALL HIS MATERIAL OR EQUIPMENT TO THE POINT OF USE, AND SHALL BE RESPONSIBLE FOR ALL UNLOADING, CHECKING AND STORING OF SAME IN CONNECTION WITH THIS CONTRACT.

I. THE GENERAL CONTRACTOR SHALL, AT THE TENANT'S DISCRETION, UTILIZE THE A.I.A. STANDARD FORM FOR REQUESTS FOR PAYMENT AND FOLLOW ALL GUIDELINES ASSOCIATED THEREWITH.

J. ALL CORRESPONDENCE TO THE TENANT,, BUILDING OWNER OR TO TMA SHALL BE IN WRITING FORWARDED IN COPY TO THE OTHER PARTY.

k. THE GENERAL CONTRACTOR AND OR CONSTRUCTION MANAGER HIS SUBCONTRACTOR, AND ANY OTHER CONTRACTOR INVOLVED IN THIS PROJECT SHALL TAKE NOTE THAT ANY COST CAUSED BY DEFECTIVE OR ILL-TIMED WORK, AS A RESULT OF, BUT NOT LIMITED TO INFERIOR WORKMANSHIP OR MATERIALS, IMPROPER SCHEDULING OR DELINQUENT ORDERING SHALL BE BORNE BY THE PARTY RESPONSIBLE THEREFORE.

1.1.2 RELATED DOCUMENTS

A. THE GENERAL CONDITIONS OF THE CONTRACT FOR THE CONSTRUCTION OF BUILDINGS, STANDARD FORM OF THE AMERICAN INSTITUTE OF ARCHITECTS, CURRENT EDITION, SHALL APPLY TO ALL WORK IN THIS CONTRACT, EXCEPT AS SPECIFICALLY MODIFIED UNDER CONTRACT, EXCEPT AS SPECIFICALLY MODIFIED UNDER SUPPLEMENTARY CONDITIONS AND/OR BY AGREEMENT. WHEREVER THE TERM "ARCHITECT" IS USED IN THIS FORM IT SHALL BE UNDERSTOOD THAT THE TERM "DESIGNER" SHALL BE SUBSTITUTED. WHEREEVER THE TERM "CONTRACTOR" IS USED IT SHALL BE UNDERSTOOD THAT THE TERM "GENERAL CONTRACTOR" OR "CONSTRUCTION MANAGER" SHALL BE SUBSTITUTED.

1.1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. AS PER CONTRACT DOCUMENTS.

1.1.4 SEQUENCE

A. IF ANY MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE UNCOVERED DURING REMOVAL OR CONSTRUCTION WORK, NOTIFY THE OWNER IN WRITING. THE BUILDING OWNER IS RESPONSIBLE TO DETERMINE THE EXTENT OF THE AFFECTED AREA, AND ARRANGE FOR IT TO BE SEALED OFF UNTIL INVESTIGATION, AND ASBESTOS REMOVAL IF NECESSARY, HAS BEEN COMPLETED IN COMPLIANCE WITH EPA REQUIREMENTS. WORK IN OTHER AREAS, DETERMINED BY THE OWNER TO BE ASBESTOS-FREE, SHALL CONTINUE WHILE THIS IS BEING DONE. INVESTIGATION AND ABATEMENT OF ASBESTOS WILL BE DONE UNDER A SEPARATE CONTRACT BY THE OWNER, AND IS NOT INCLUDED IN WORK OF THIS CONTRACT.

B. THE GENERAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF THE TENANT'S CONTRACTOR(S). PROVIDE ON-SITE FACILITIES FOR THE TENANT'S CONTRACTORS ENGAGED BY THE OWNER.

1.1.5 DRAWINGS AND SPECIFICATIONS

A. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.

B. THE GENERAL CONTRACTOR UPON ACCEPTANCE AND APPROVAL OF THE DRAWINGS ASSUMES FULL RESPONSIBILITY FOR THE CONSTRUCTION. MATERIALS AND WORKMANSHIP OF THE WORK DESCRIBED IN THESE NOTES AND DRAWINGS, AND HE WILL BE EXPECTED TO COMPLY WITH THE SPIRIT AS WELL AS THE LETTER IN WHICH THEY WERE WRITTEN.

1.1.6 CONTRACTOR USES OF PREMISES

A. LANDLORD/BUILDING OWNER REQUIREMENTS FOR ALL ALTERATIONS SHALL APPLY TO ALL WORK AS REQUIRED. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO FAMILIARIZE HIMSELF WITH THEM.

B. ALL CONTRACTORS SHALL CONTACT THE BUILDING MANAGEMENT TO DETERMINE THE RULES OF THE BUILDING OWNER FOR CONSTRUCTION, TO DETERMINE WHEN AND HOW DELIVERIES CAN BE MADE, WHAT PHASES OF CONSTRUCTION CAN BE DONE ON REGULAR OR OVERTIME, AND IN GENERAL, ANY SPECIAL BUILDING REQUIREMENTS WHICH WILL AFFECT THEIR WORK. (IF OVER-TIME WORK IS REQUIRED BY ANY TRADE, APPROVAL MUST BE OBTAINED PRIOR TO THE EXECUTION OF ANY WORK, INCLUDING COST). THE GENERAL INTENT IS THAT MOST CONSTRUCTION SHALL BE DONE ON REGULAR TIME.

C. EACH CONTRACTOR SHALL MAKE ALL REQUIRED ARRANGEMENTS FOR DELIVERY OF EQUIPMENT AND/OR MATERIALS. IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO CHECK THE RULES AND REGULATIONS GOVERNING WORK ON THE PREMISES, INCLUDING THE FOLLOWING:

1. DATE AND TIME OF DELIVERY SHALL BE ESTABLISHED IN CONJUNCTION WITH THE PERSON HAVING JURISDICTION OVER THE PREMISES (OVERTIME CHARGES AND/OR ANY NECESSARY EXPENSES SHALL BE PAID BY CONTRACTOR REQUIRING SERVICES).

2. BUILDING CONDITIONS INCLUDING SIZE AND LOADING CAPACITY OF ELEVATORS, SIZE OF DOORWAYS, CORRIDORS, WINDOW OPENINGS, ETC. SHALL BE CHECKED FOR ITEMS BEING DELIVERED BY THE CONTRACTOR REQUESTING DELIVERY.

3. ALL CHARGES INVOLVING THE INSTALLATION AND/OR OPERATION OF A HOIST SYSTEM IF REQUIRED, SHALL BE BORNE BY THE CONTRACTOR USING THE SYSTEM. CHARGES INVOLVING THE TEMPORARY REMOVAL AND REINSTALLATION OF WINDOW SASH AND/OR FIXED PANELS REQUIRED FOR DELIVERY SHALL BE BORNE BY THE CONTRACTOR.

4. ALL SPECIAL "BUILDING STANDARD" METHODS OF CONSTRUCTION SHALL BE CONFIRMED BY THE CONTRACTOR.

D. THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS, BOTH FROM HIS OWN AND ALL OTHER SUBCONTRACTORS' EMPLOYEES, INCLUDING THAT RUBBISH WHICH IS A BY-PRODUCT OF OTHER TENANT CONTRACTORS.

E. THE CONTRACTOR TO PROVIDE ALL NECESSARY PROTECTION FOR FLOORS, WALLS, ETC., AND FOR EXISTING ITEMS TO REMAIN. THE GENERAL CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE INCURRED TO THE SAME BY THE TRADES AND WILL BE OBLIGATED TO REPLACE OR RESTORE TO ITS ORIGINAL CONDITION AS DETERMINED BY TMA.

F. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION AND SECURITY FOR HIS WORK UNTIL TURNED OVER TO THE CLIENT.

G. ALL REQUIRED EXITS, WAY OF APPROACH THERETO, AND WAY OF TRAVEL FROM THE EXIT INTO THE STREET SHALL CONTINUOUSLY BE MAINTAINED FREE FROM ALL OBSTRUCTIONS AND IMPEDIMENTS FOR UNOBSTRUCTED EGRESS IN THE CASE OF FIRE OR OTHER EMERGENCY, FIRE EXTINGUISHERS MUST BE AVAILABLE ON THE SITE DURING CONSTRUCTION.

H. DURING THE ENTIRE PERIOD OF DEMOLITION AND CONSTRUCTION, ALL EXISTING EXITS, EXIT LIGHTING, FIRE PROTECTIVE DEVICES AND ALARMS SHALL BE CONSPICUOUSLY POSTED.

I. DURING THE ENTIRE PERIOD OF CONSTRUCTION, THE TELEPHONE NUMBERS OF THE CLOSEST AVAILABLE PHYSICIANS, HOSPITALS, OR AMBULANCES SHALL BE CONSPICUOUSLY POSTED.

J. ONE TOILET FOR EACH SEX SHALL BE UTILIZED FOR CONSTRUCTION PERSONNEL AND ALL OTHERS LOCKED FOR THE PERIOD OF CONSTRUCTION. THE GENERAL CONTRACTOR TO PROVIDE A THOROUGH CLEANING OF ALL TOILET FACILITIES PRIOR TO RELEASING PREMISES TO THE TENANT.

1.1.7 LABOR AND MATERIALS

A. PROVIDE AND PAY FOR LABOR, MATERIALS, EQUIPMENT, TOOLS, UTILITIES, TRANSPORTATION, HOISTING, ELEVATOR CHARGES, BUILDING MECHANICAL AND ELECTRICAL SHUTDOWNS, TESTING OF NEW OR ALTERED SYSTEMS, FIRE WATCH FOR WELDING, STANDBY BUILDING ENGINEERING SERVICES, SPRINKLER TIE-INS AND OTHER FACILITIES AND SERVICES NECESSARY FOR THE EXECUTIVE AND COMPLETION OF THE WORK.

B. UNLESS OTHERWISE NOTED, ALL MATERIAL, EQUIPMENT, ETC. SHALL BE FURNISHED AND INSTALLED BY THE GENERAL CONTRACTOR.

C. GENERAL PRODUCT REQUIREMENTS: PROVIDE PRODUCTS THAT COMPLY WITH THE CONTRACT DOCUMENTS, THAT ARE UNDAMAGED AND,UNLESS OTHERWISE INDICATED, THAT ARE NEW AT TIME OF INSTALLATION.

D. THE USE OF THE TERM "APPROVED EQUAL" IN CONNECTION WITH ANY ITEM SPECIFIED, IS INTENDED TO MEAN, THAT SUCH SHALL BE OF EQUAL QUALITY, FINISH AND MATERIAL. THE SUBSTITUTIONS SHALL BE SUBMITTED, IN WRITTEN FORM, TO TMA FOR APPROVAL.

E. THE TERMS "PROVIDE", OR "PROVIDED" IN CONNECTION WITH ANY ITEM SPECIFIED, IS INTENDED TO MEAN, THAT SUCH SHALL BE FURNISHED, INSTALLED, AND CONNECTED WHERE SO REQUIRED.

F. MOVE IN AND OCCUPANCY LABOR REQUIREMENTS: THE GENERAL CONTRACTOR AND OR CONSTRUCTION MANAGER SHALL PROVIDE THE COST FOR THE FOLLOWING ADDITIONAL LABOR BROKEN DOWN BY TRADE IN THE PRICING AND OR BID PROPOSALS AS AN "ADD ALTERNATE" A AND IT SHOULD BE INDICATED AS A SEPARATE LINE ITEM.

1. PROCEED WITH THE WORK ONLY IF THE "ADD ALTERNATE" IS ACCEPTED BY TENANT/OWNER AS PART OF THE BASE PRICING/BID PROPOSAL AND AS DIRECTED BY TENANT/OWNER TO FACILITATE MOVE IN AND OCCUPANCY.

   a. ELECTRICIAN: PROVIDE FOR TWO MAN-DAYS, FRIDAY NIGHT AND SATURDAY, ON "STANDBY" TO COORDINATE TELEPHONE AND OTHER EQUIPMENT TESTING AND INSTALLATION OF SYSTEMS FURNITURE.

1.1.8 APPLICABLE CODES

A. CONTRACTOR SHALL SECURE AND PAY FOR THE BUILDING PERMIT AND ALL OTHER PERMITS AND GOVERNMENTAL FEES LICENSES, CONTROLLED INSPECTIONS, SIGNOFFS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK WHICH ARE CUSTOMARILY SECURED AFTER EXECUTION OF THE CONTRACT AND WHICH ARE LEGALLY REQUIRED.

B. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK AND SHALL NOTIFY THE ARCHITECT IN WRITING IF ANY PART OF THE CONTRACT DOCUMENTS IS OBSERVED TO BE AT VARIANCE WITH CODES.

C. THE CONTRACTOR SHALL CONFIRM THAT "VOLATILE ORGANIC COMPOUND" CONTENT OF COATINGS APPLIED UNDER ALL SECTIONS OF THESE SPECIFICATIONS IS LIMITED TO THE PERCENTAGE PRESCRIBED FOR FACTORY OR FOR FIELD APPLICATION BY THE AUTHORITIES HAVING JURISDICTION IN THOSE AREAS.

1.1.9 CONSTRUCTION

A. PRIOR TO BEGINNING ANY WORK, THE GENERAL CONTRACTOR SHALL FURNISH A CONSTRUCTION SCHEDULE SHOWING THE CHRONOLOGICAL PHASES OF HIS WORK, AND ALL RELATED WORK FOR THE COMPLETION OF THE PROJECT. THIS SCHEDULE SHALL INDICATE ALL ORDERING LEAD TIME, LENGTH OF TIME FOR EACH PHASE, ITS START AND COMPLETION, WITH A PROJECTED COMPLETION DATE.

B. THE CONTRACTOR SHALL SUPPLY SAMPLES AND/OR CUTS OF ALL MATERIALS, FIXTURES AND EQUIPMENT CALLED FOR ON TMA DRAWINGS, (I.E., LIGHT FIXTURES, HARDWARE, ETC.) FOR APPROVAL.

C. CONTRACTORS SHALL ASSUME RESPONSIBILITY FOR DISCREPANCIES IN THEIR DRAWINGS. THE CONTRACTOR SHALL PROVIDE TEMPORARY UTILITY SERVICES (LIGHTING, HEATING, POWER, WATER, SECURITY, TELEPHONE, ETC.) INCLUDING A SCHEDULE INDICATING IMPLEMENTATION AND TERMINATION OF EACH TEMPORARY SERVICE.

D. ESTABLISH REFERENCE LINE AND BENCHMARKS FOR USE BY ALL TRADES IN SETTING OUT WORK AND DETERMINING ELEVATIONS.

1.1.10 RECORD DOCUMENT SUBMITTALS

A. RECORD DRAWINGS: MAINTAIN A CLEAN, UNDAMAGED SET OF REPRODUCIBLE PRINTS OF A. CONTRACT DRAWINGS AND SHOP DRAWINGS. MARK THE SET TO SHOW THE ACTUAL INSTALLATION WHERE THE INSTALLATION VARIES SUBSTANTIALLY FROM THE WORK AS ORIGINALLY SHOWN. MARK WHICH DRAWING IS MOST CAPABLE OF SHOWING CONDITIONS FULLY AND ACCURATELY. WHERE SHOP DRAWINGS ARE USED, RECORD A CROSS-REFERENCE AT THE CORRESPONDING LOCATION ON THE CONTRACT DRAWINGS. GIVE PARTICULAR ATTENTION TO CONCEALED ELEMENTS THAT WOULD BE DIFFICULT TO MEASURE AND RECORD AT A LATER DATE.

1. MARK RECORD SETS WITH RED ERASABLE PENCIL. USE OTHER COLORS TO DISTINGUISH BETWEEN VARIATIONS IN SEPARATE CATEGORIES OF THE WORK.

2. MARK NEW INFORMATION THAT IS IMPORTANT TO THE OWNER BUT WAS NOT SHOWN ON CONTRACT DRAWINGS OR SHOP DRAWINGS, INCLUDING EQUIPMENT, DUCTWORK, LIGHTING AND ELECTRICAL CIRCUITRY WORK (INCLUDING NUMBERS, CIRCUIT PANELS AND OTHER UTILITY SERVICE ITEMS.

3. NOTE RELATED CHANGE-ORDER NUMBERS WHERE APPLICABLE.

4. ORGANIZE RECORD DRAWING SHEETS INTO MANAGEABLE SETS. BIND SETS WITH DURABLE- PAPER COVER SHEETS; PRINT SUITABLE TITLES, DATES, AND OTHER IDENTIFICATION ON THE COVER OF EACH SET.

1.1.11 TEMPORARY FACILITIES

A. GENERAL: COST OR USE CHARGES FOR TEMPORARY FACILITIES ARE NOT CHARGEABLE TO OWNER OR ARCHITECT AND SHALL BE INCLUDED IN THE CONTRACT SUM. ALLOW OTHER ENTITIES TO USE TEMPORARY SERVICES AND FACILITIES WITHOUT COST, INCLUDING, BUT NOT LIMITED TO, OWNER'S CONSTRUCTION FORCES, OCCUPANTS OF PROJECT, ARCHITECT, TESTING AND INSPECTING AGENCIES AND PERSONNEL OF AUTHORITIES HAVING JURISDICTION.

1. ERECTED TEMPORARY, PARTITIONS, ENCLOSURES AND BARRICADES SHALL NOT UNDERMINE OR REDUCE THE LIFE SAFETY OF THE OWNER/TENANT OR BUILDING OCCUPANT OR INTERRUPT THE USE OF THE SPACE, FLOOR OR BUILDING. COMPLY WITH REQUIREMENTS OF BUILDING CODES AND OSHA REGULATIONS LATEST CHAPTERS RELATING TO THE PROTECTIONS AND SAFEGUARDS DURING CONSTRUCTION OPERATIONS AS PART OF THIS PROJECT.

2. TEMPORARY PARTITIONS, ENCLOSURES AND BARRICADES DELINEATED ON THE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DEMONSTRATE THE ARCHITECT UNDERSTANDING OF OWNER/TENANT SPACE, FLOOR OR BUILDING OCCUPANCY.

   a. THE CONTRACTOR SHALL SCHEDULE PRE-CONSTRUCTION MEETING WITH THE OWNER/TENANT, OWNER'S REPRESENTATIVE, ARCHITECT AND ANY OTHER PARTY IS IMPACTED BY THE TEMPORARY FACILITIES.

   b. ITEMS COVERED BY THE PRE-CONSTRUCTION MEETING INCLUDES, ASSEMBLY TYPE, LOCATION, FILING WITH AHJ IF REQUIRED, FIRE RATING, LIFE SAFETY TO PROPERTY, PERSONNEL AND OCCUPANCY AND PHASING.

   c. MINUTES OF THE PRE-CONSTRUCTION MEETING SHALL BE BY THE CONTRACTOR AND DOCUMENT ACCEPTED TEMPORARY FACILITIES ITEMS COVERED IN ITEM "b" AND SHALL BE DISTRIBUTED TO ALL PARTIES.

   d. ARCHITECT BASED ON THE PRE-CONSTRUCTION MEETING MINUTES, WILL ISSUE FIELD DIRECTIVE IF LOCATION TEMPORARY PARTITIONS ARE DIFFERENT THAN SHOWN ON THE BID CONSTRUCTION DOCUMENTS. DETAILED CONSTRUCTION DRAWINGS OF BARRICADES, TEMPORARY FACILITIES AND ENCLOSURES OTHER THAN TEMPORARY PARTITIONS, INCLUDING ANY FILING AND PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

B. TEMPORARY PARTITIONS: ERECT AND MAINTAIN DUSTPROOF PARTITIONS AND TEMPORARY ENCLOSURES TO LIMIT DUST AND DIRT MIGRATION AND TO SEPARATE AREAS OCCUPIED BY OWNER/TENANT FROM FUMES AND NOISE.

C. CONSTRUCT DUSTPROOF FLOOR-TO-CEILING PARTITIONS OF NOT LESS THAN 2 1/2-INCHE METAL STUDS OF 20 GAGE THICKNESS PLACED 16 INCHES ON CENTER OR METAL STUDS SIZE USED ON THE PROJECT. METAL STUDS DEFLECTION CRITERIA SHALL BE L/240 WITH 13 FEET AS THE MAXIMUM SPAN ALLOWED FOR 2 1/2-INCHES STUDS. INSTALL 5/8-INCH GYPSUM WALLBOARD WITH JOINTS TAPED ON OCCUPIED SIDE, AND 1/2-INCHES FIRE-RETARDANT PLYWOOD ON CONSTRUCTION SIDE. FOR SPANS MORE THAN 13 FEET LIMITING HEIGHT OF METAL STUDS SHALL BE PER ASTM C754AND PER MANUFACTURER WRITTEN SPECIFICATIONS.

2. AT CONTRACTORS OPTION TO SUBSTITUTE 1/2-INCHE FIRE-RETARDANT PLYWOOD WITH 5/8-INCHES GYPSUM WALL BOARD ON CONSTRUCTION SIDE.
3. TEMPORARY PARTITION CAN REMAIN PART OF THE PROJECT IF CONSTRUCTED AND LOCATED TO MEET FINAL PARTITION FINISH LEVEL AND ASSEMBLY INDICATED ON THE CONSTRUCTION DRAWINGS AND IS ACCEPTABLE TO THE ARCHITECT UPON INSPECTION PRIOR TO APPLICATION OF FINISHED MATERIALS.
4. WHERE DESIGN INTENT DOCUMENTED INDICATE NO CEILINGS, TEMPORARY PARTITION TO BE ERECTED FROM FLOOR-TO UNDERSIDE OF SLAB ABOVE WITH SAME MATERIALS DESCRIBED IN ITEM 1 AND OR 1a ABOVE.

D. WHEN PORTION OF THE FLOOR IS UNOCCUPIED, PUBLIC CORRIDORS AND PATH OF ACCESS TO STAIRS OF OCCUPANTS IN OCCUPIED AREAS OF THE FLOOR SHALL BE SEPARATED FROM THAT UNOCCUPIED PORTIONS OF THE FLOOR BY A TEMPORARY PARTITIONS WITH A MINIMUM OF ONE HOUR FIRE RESISTIVE CONSTRUCTION FLOOR TO UNDERSIDE OF SLAB ABOVE AS PER BUILDING CODE. GYPSUM WALLBOARD FOR FIRE RESISTIVE PARTITION ASSEMBLIES SHALL BE 5/8-INCHES TYPE "X". THE ENTIRE PARTITION ASSEMBLY SHALL CARRY TESTED UL LABEL AND DESIGN NUMBER.

1. UNOCCUPIED PORTION OF A FLOOR IS DEFINED AS UNFINISHED BARE CONSTRUCTION WITH NO HUMAN OCCUPANCY OR USE.

E. SEAL JOINTS AND PERIMETER. EQUIP PARTITIONS WITH DUSTPROOF DOORS AND SECURITY LOCKS.

F. PROTECT AIR-HANDLING EQUIPMENT AND DO NOT UNDERMINE THE PERFORMANCE OF EXISTING AIR HVAC SYSTEM.

G. PROVIDE WALK-OFF MATS AT EACH ENTRANCE THROUGH TEMPORARY PARTITION.

H. WATER SERVICE: USE WATER FROM OWNER'S EXISTING WATER SYSTEM WITHOUT METERING AND WITHOUT PAYMENT OF USE CHARGES.

I. ELECTRIC POWER SERVICE: USE ELECTRIC POWER FROM OWNER'S EXISTING SYSTEM WITH METERING AND WITH PAYMENT OF USE CHARGES. CHARGES OF ELECTRIC USE SAHLL BE BORN BY THE TENANT FOR THE DURATION OF CONSTRUCTION OPERATIONS

J. FIRE EXTINGUISHERS: HAND CARRIED, PORTABLE, UL RATED. PROVIDE CLASS AND EXTINGUISHING AGENT AS INDICATED OR A COMBINATION OF EXTINGUISHERS OF NFPA-RECOMMENDED CLASSES FOR EXPOSURES.

1. DEVELOP AND SUPERVISE AN OVERALL FIRE-PREVENTION AND FIRST-AID FIRE-PROTECTION PROGRAM FOR PERSONNEL AT PROJECT SITE. REVIEW NEEDS WITH LOCAL FIRE DEPARTMENT AND ESTABLISH PROCEDURES TO BE FOLLOWED. INSTRUCT PERSONNEL IN METHODS AND PROCEDURES. POST WARNINGS AND INFORMATION.
2. LOCATE FACILITIES WHERE THEY WILL SERVE PROJECT ADEQUATELY AND RESULT IN MINIMUM INTERFERENCE WITH PERFORMANCE OF THE WORK. RELOCATE AND MODIFY FACILITIES AS REQUIRED.

K. SANITARY FACILITIES: COMPLY WITH LOCAL REGULATIONS AND HEALTH CODES FOR TYPE, NUMBER, LOCATION, OPERATION, AND MAINTENANCE OF FIXTURES AND FACILITIES.

1. DISPOSABLE SUPPLIES: PROVIDE TOILET TISSUE, PAPER TOWELS, PAPER CUPS, AND SIMILAR DISPOSABLE MATERIALS FOR EACH FACILITY. MAINTAIN ADEQUATE SUPPLY. PROVIDE COVERED WASTE CONTAINERS FOR DISPOSAL OF USED MATERIAL.

2. TOILETS: OBTAIN OWNER'S APROVAL FOR USE OF OWNER'S EXISTING TOILET FACILITIES. EXISTING FACILITIES SHALL BE CLEANED AND MAINTAINED IN A CONDITION ACCEPTABLE TO OWNER. AT SUBSTANTIAL COMPLETION, RESTORE THESE FACILITIES TO CONDITION EXISTING BEFORE INITIAL USE.

L. DRINKING-WATER FACILITIES: PROVIDE BOTTLED-WATER, DRINKING-WATER UNITS.

M. HEATING AND COOLING: PROVIDE TEMPORARY HEATING AND COOLING REQUIRED BY CONSTRUCTION ACTIVITIES FOR CURING OR DRYING OF COMPLETED INSTALLATIONS OR FOR PROTECTING INSTALLED CONSTRUCTION FROM ADVERSE EFFECTS OF LOW TEMPERATURES OR HIGH HUMIDITY. SELECT EQUIPMENT FROM THAT SPECIFIED THAT WILL NOT HAVE A HARMFUL EFFECT ON COMPLETED INSTALLATIONS OR ELEMENTS BEING INSTALLED.

N. MAINTAIN A MINIMUM TEMPERATURE OF 50 DEG F IN PERMANENTLY ENCLOSED PORTIONS OF BUILDING FOR NORMAL CONSTRUCTION ACTIVITIES, AND 65 DEG F FOR FINISHING ACTIVITIES AND AREAS WHERE FINISHED WORK HAS BEEN INSTALLED.

O. VENTILATION AND HUMIDITY CONTROL: PROVIDE TEMPORARY VENTILATION REQUIRED BY CONSTRUCTION ACTIVITIES FOR CURING OR DRYING OF COMPLETED INSTALLATIONS OR FOR PROTECTING INSTALLED CONSTRUCTION FROM ADVERSE EFFECTS OF HIGH HUMIDITY. SELECT EQUIPMENT FROM THAT SPECIFIED THAT WILL NOT HAVE A HARMFUL EFFECT ON COMPLETED INSTALLATIONS OR ELEMENTS BEING INSTALLED. COORDINATE VENTILATION REQUIREMENTS TO PRODUCE AMBIENT CONDITION REQUIRED AND MINIMIZE ENERGY CONSUMPTION.

P. LIGHTING: PROVIDE TEMPORARY LIGHTING WITH LOCAL SWITCHING THAT PROVIDES ADEQUATE ILLUMINATION FOR CONSTRUCTION OPERATIONS AND TRAFFIC CONDITIONS. INSTALL AND OPERATE TEMPORARY LIGHTING THAT FULFILLS SECURITY AND PROTECTION REQUIREMENTS WITHOUT OPERATING ENTIRE SYSTEM.

1. PROVIDE ONE 100-W INCANDESCENT LAMP PER 500 SQ. FT. UNIFORMLY DISTRIBUTED, FOR GENERAL LIGHTING, OR EQUIVALENT ILLUMINATION.

2. PROVIDE ONE 100-W INCANDESCENT LAMP EVERY 50 FEET IN TRAFFIC AREAS.

3. PROVIDE ONE 100-W INCANDESCENT LAMP PER STORY IN STAIRWAYS AND LADDER RUNS, LOCATED TO ILLUMINATE EACH LANDING AND FLIGHT.

Q. TELEPHONE SERVICE: PROVIDE TEMPORARY TELEPHONE SERVICE THROUGHOUT CONSTRUCTION PERIOD FOR COMMON-USE FACILITIES USED BY ALL PERSONNEL ENGAGED IN CONSTRUCTION ACTIVITIES. INSTALL SEPARATE TELEPHONE LINE FOR EACH FIELD OFFICE AND FIRST-AID STATION.

1. AT EACH TELEPHONE, POST A LIST OF IMPORTANT TELEPHONE NUMBERS, INCLUDING POLICE AND FIRE DEPARTMENTS, AMBULANCE SERVICE, CONTRACTOR'S HOME OFFICE, ARCHITECT'S OFFICE, ENGINEERS' OFFICES, OWNER'S OFFICE AND PRINCIPAL SUBCONTRACTORS' FIELD AND HOME OFFICES.

2. PROVIDE A PORTABLE CELLULAR TELEPHONE FOR SUPERINTENDENT'S USE IN MAKING AND RECEIVING TELEPHONE CALLS WHEN AWAY FROM FIELD OFFICE.

R. EXISTING ELEVATOR USAGE: USE OF OWNER'S EXISTING DESIGNATED ELEVATOR (S) WILL BE PERMITTED, AS LONG AS ELEVATOR (S) ARE CLEANED AND MAINTAINED IN A CONDITION ACCEPTABLE TO OWNER. AT SUBSTANTIAL COMPLETION, RESTORE ELEVATORS TO CONDITION EXISTING BEFORE INITIAL USE,

1. PROVIDE PROTECTIVE COVERINGS, BARRIERS, DEVICES, SIGNS, OR OTHER PROCEDURES TO PROTECT ELEVATOR CAR AND ENTRANCE DOORS AND FRAME. IF, DESPITE SUCH PROTECTION, ELEVATORS BECOME DAMAGED, ENGAGE ELEVATOR INSTALLER TO RESTORE DAMAGED WORK SO NO EVIDENCE REMAINS OF CORRECTION WORK. RETURN ITEMS THAT CANNOT BE REFINISHED IN FIELD TO THE SHOP, MAKE REQUIRED REPAIRS AND REFINISH ENTIRE UNIT, OR PROVIDE NEW UNITS AS REQUIRED.

S. EXISTING STAIR USAGE: USE OF OWNER'S EXISTING STAIRS WILL BE PERMITTED, AS LONG AS STAIRS ARE CLEANED AND MAINTAINED IN A CONDITION ACCEPTABLE TO OWNER. AT SUBSTANTIAL COMPLETION, RESTORE STAIRS TO CONDITION EXISTING BEFORE INITIAL USE.

1. DO NOT USE STAIRS FOR STORAGE OF ANY MATERIALS. PROVIDE PROTECTIVE COVERINGS, BARRIERS, DEVICES, SIGNS, OR OTHER PROCEDURES TO PROTECT STAIRS AND TO MAINTAIN MEANS OF EGRESS. IF, DESPITE SUCH PROTECTION, STAIRS BECOME DAMAGED, RESTORE DAMAGED AREAS SO NO EVIDENCE REMAINS OF CORRECTION WORK.

1.1.12 MAINTENANCE MANUAL

A. COORDINATE INFORMATION GIVING RECOMMENDATIONS FOR ROUTINE MAINTENANCE OF FINISHED SURFACES.

B. INCLUDE GUARANTEES AND WARRANTIES CALLED FOR AND OPERATING, SEQUENCE OF OPERATION AND MAINTENANCE INSTRUCTIONS SUBMITTED FOR EQUIPMENT.

C. SUBMIT TO OWNER IN DUPLICATE.

1.1.13 APPROVALS

A. THE CONTRACTOR, SUBCONTRACTORS AND TENANT'S CONTRACTORS SHALL SUBMIT CERTIFICATES UPON COMPLETION OF WORK, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. FIREPROOF OR FIRE RETARDANT WOOD TEST REPORT.
2. ELECTRICAL, PLUMBING, AIR CONDITIONING, AND SPRINKLER SIGNOFF ISSUED BY:
   a. DEPARTMENT OF WATER SUPPLY, GAS AND ELECTRICITY (OR APPROPRIATE AGENCY).
   b. BOARD OF FIRE UNDERWRITERS.

1.1.14 PERSONNEL SAFETY

A. THE CONTRACTOR SHALL SUPPLY AND MAINTAIN A CURRENT INVENTORY OF ALL C

1.0 GENERAL REQUIREMENTS

1.2.3 SUBMITTAL PROCEDURES

A. COORDINATION: COORDINATE PREPARATION AND PROCESSING OF SUBMITTALS WITH PERFORMANCE OF CONSTRUCTION ACTIVITIES. TRANSMIT EACH SUBMITTAL SUFFICIENTLY IN ADVANCE OF PERFORMANCE OF RELATED CONSTRUCTION ACTIVITIES TO AVOID DELAY.

1. COORDINATE EACH SUBMITTAL WITH FABRICATION, PURCHASING, TESTING, DELIVERY, OTHER SUBMITTALS, AND RELATED ACTIVITIES THAT REQUIRE SEQUENTIAL ACTIVITY.
2. COORDINATE TRANSMITTAL OF DIFFERENT TYPES OF SUBMITTALS FOR RELATED ELEMENTS OF THE WORK SO PROCESSING WILL NOT BE DELAYED BY THE NEED TO REVIEW SUBMITTALS CONCURRENTLY FOR COORDINATION.
   a. THE ARCHITECT RESERVES THE RIGHT TO WITHHOLD ACTION ON A SUBMITTAL REQUIRING COORDINATION WITH OTHER SUBMITTALS UNTIL ALL RELATED SUBMITTALS ARE RECEIVED.
3. PROCESSING: TO AVOID THE NEED TO DELAY INSTALLATION AS A RESULT OF THE TIME REQUIRED TO PROCESS SUBMITTALS, ALLOW SUFFICIENT TIME FOR SUBMITTAL REVIEW, INCLUDING TIME FOR RESUBMITTALS.
   a. NO EXTENSION OF CONTRACT TIME WILL BE AUTHORIZED BECAUSE OF FAILURE TO TRANSMIT SUBMITTALS TO THE ARCHITECT SUFFICIENTLY IN ADVANCE OF THE WORK TO PERMIT PROCESSING.

B. SUBMITTAL TRANSMITTAL: PACKAGE EACH SUBMITTAL APPROPRIATELY FOR TRANSMITTAL AND HANDLING. TRANSMIT EACH SUBMITTAL FROM THE CONTRACTOR TO THE ARCHITECT USING A TRANSMITTAL FORM. THE ARCHITECT WILL NOT ACCEPT SUBMITTALS RECEIVED FROM SOURCES OTHER THAN THE CONTRACTOR.

C. ON THE TRANSMITTAL, RECORD RELEVANT INFORMATION AND REQUESTS FOR DATA. ON THE FORM, OR SEPARATE SHEET, RECORD DEVIATIONS FROM CONTRACT DOCUMENT REQUIREMENTS, INCLUDING VARIATIONS AND LIMITATIONS. INCLUDE CONTRACTOR'S CERTIFICATION THAT INFORMATION COMPLIES WITH CONTRACT DOCUMENT REQUIREMENTS.

1.2.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. BAR-CHART SCHEDULE: PREPARE A FULLY DEVELOPED, HORIZONTAL BAR-CHART-TYPE, CONTRACTOR'S CONSTRUCTION SCHEDULE. SUBMIT WITHIN ONE WEEK AFTER THE DATE ESTABLISHED FOR "COMMENCEMENT OF THE WORK."

1. PROVIDE A SEPARATE TIME BAR FOR EACH SIGNIFICANT CONSTRUCTION ACTIVITY. PROVIDE A CONTINUOUS VERTICAL LINE TO IDENTIFY THE FIRST WORKING DAY OF EACH WEEK.
2. WITHIN EACH TIME BAR, INDICATE ESTIMATED COMPLETION PERCENTAGE IN 10 PERCENT INCREMENTS. AS WORK PROGRESSES, PLACE A CONTRASTING MARK IN EACH BAR TO INDICATE ACTUAL COMPLETION.
3. PREPARE THE SCHEDULE ON A SHEET, OR SERIES OF SHEETS, OF STABLE TRANSPARENCY, OR OTHER REPRODUCIBLE MEDIA, OF SUFFICIENT WIDTH TO SHOW DATA FOR THE ENTIRE CONSTRUCTION PERIOD.
4. SECURE TIME COMMITMENTS FOR PERFORMING CRITICAL ELEMENTS OF THE WORK FROM PARTIES INVOLVED. COORDINATE EACH ELEMENT ON THE SCHEDULE WITH OTHER CONSTRUCTION ACTIVITIES. INCLUDE MINOR ELEMENTS INVOLVED IN THE SEQUENCE OF THE WORK. SHOW EACH ACTIVITY IN PROPER SEQUENCE. INDICATE GRAPHICALLY THE SEQUENCES NECESSARY FOR COMPLETION OF RELATED PORTIONS OF THE WORK.
5. COORDINATE THE CONTRACTOR'S CONSTRUCTION SCHEDULE WITH THE SCHEDULE OF VALUES, LIST OF SUBCONTRACTS, SUBMITTAL SCHEDULE, PROGRESS REPORTS, PAYMENT REQUESTS, AND OTHER SCHEDULES.
6. INDICATE COMPLETION IN ADVANCE OF THE DATE ESTABLISHED FOR SUBSTANTIAL COMPLETION. INDICATE SUBSTANTIAL COMPLETION ON THE SCHEDULE TO ALLOW TIME FOR THE ARCHITECT'S PROCEDURES NECESSARY FOR CERTIFICATION OF SUBSTANTIAL COMPLETION.

B. PHASING: ON THE SCHEDULE, SHOW HOW REQUIREMENTS FOR PHASED COMPLETION TO PERMIT WORK BY SEPARATE CONTRACTORS AND PARTIAL OCCUPANCY BY THE OWNER AFFECT THE SEQUENCE OF WORK.

C. WORK STAGES: INDICATE IMPORTANT STAGES OF CONSTRUCTION FOR EACH MAJOR PORTION OF THE WORK, INCLUDING SUBMITTAL REVIEW, TESTING, AND INSTALLATION.

D. AREA SEPARATIONS: PROVIDE A SEPARATE TIME BAR TO IDENTIFY EACH MAJOR CONSTRUCTION AREA FOR EACH MAJOR PORTION OF THE WORK. INDICATE WHERE EACH ELEMENT IN AN AREA MUST BE SEQUENCED OR INTEGRATED WITH OTHER ACTIVITIES.

E. DISTRIBUTION: FOLLOWING RESPONSE TO THE INITIAL SUBMITTAL, PRINT AND DISTRIBUTE COPIES TO THE ARCHITECT, OWNER, SUBCONTRACTORS, AND OTHER PARTIES REQUIRED TO COMPLY WITH SCHEDULED DATES. POST COPIES IN THE PROJECT MEETING ROOM AND TEMPORARY FIELD OFFICE.

F. WHEN REVISIONS ARE MADE, DISTRIBUTE TO THE SAME PARTIES AND POST IN THE SAME LOCATIONS. DELETE PARTIES FROM DISTRIBUTION WHEN THEY HAVE COMPLETED THEIR ASSIGNED PORTION OF THE WORK AND ARE NO LONGER INVOLVED IN CONSTRUCTION ACTIVITIES.

G. SCHEDULE UPDATING: REVISE THE SCHEDULE AFTER EACH MEETING, EVENT, OR ACTIVITY WHERE REVISIONS HAVE BEEN RECOGNIZED OR MADE. ISSUE THE UPDATED SCHEDULE CONCURRENTLY WITH THE REPORT OF EACH MEETING.

1.2.5 SUBMITTAL SCHEDULE

A. AFTER DEVELOPMENT AND ACCEPTANCE OF THE CONTRACTOR'S CONSTRUCTION SCHEDULE, PREPARE A COMPLETE SCHEDULE OF SUBMITTALS. SUBMIT THE SCHEDULE WITHIN ONE WEEK OF THE DATE REQUIRED FOR SUBMITTAL OF THE CONTRACTOR'S CONSTRUCTION SCHEDULE.

1. COORDINATE SUBMITTAL SCHEDULE WITH THE LIST OF SUBCONTRACTS, SCHEDULE OF VALUES, AND THE LIST OF PRODUCTS AS WELL AS THE CONTRACTOR'S CONSTRUCTION SCHEDULE.

B. DISTRIBUTION: FOLLOWING RESPONSE TO THE INITIAL SUBMITTAL, PRINT AND DISTRIBUTE COPIES TO THE ARCHITECT, OWNER, SUBCONTRACTORS, AND OTHER PARTIES REQUIRED TO COMPLY WITH SUBMITTAL DATES INDICATED. POST COPIES IN THE PROJECT MEETING ROOM AND FIELD OFFICE.

1. WHEN REVISIONS ARE MADE, DISTRIBUTE TO THE SAME PARTIES AND POST IN THE SAME LOCATIONS. DELETE PARTIES FROM DISTRIBUTION WHEN THEY HAVE COMPLETED THEIR ASSIGNED PORTION OF THE WORK AND ARE NO LONGER INVOLVED IN CONSTRUCTION ACTIVITIES.

C. SCHEDULE UPDATING: REVISE THE SCHEDULE AFTER EACH MEETING OR ACTIVITY WHERE REVISIONS HAVE BEEN RECOGNIZED OR MADE. ISSUE THE UPDATED SCHEDULE CONCURRENTLY WITH THE REPORT OF EACH MEETING.

1.2.6 SHOP DRAWINGS

A. SUBMIT NEWLY PREPARED INFORMATION DRAWN ACCURATELY TO SCALE. HIGHLIGHT, ENCIRCLE, OR OTHERWISE INDICATE DEVIATIONS FROM THE CONTRACT DOCUMENTS. DO NOT REPRODUCE CONTRACT DOCUMENTS OR COPY STANDARD INFORMATION AS THE BASIS OF SHOP DRAWINGS. STANDARD INFORMATION PREPARED WITHOUT SPECIFIC REFERENCE TO THE PROJECT IS NOT A SHOP DRAWING.

B. SHOP DRAWINGS INCLUDE FABRICATION AND INSTALLATION DRAWINGS, SETTING DIAGRAMS, SCHEDULES, PATTERNS, TEMPLATES AND SIMILAR DRAWINGS. INCLUDE THE FOLLOWING INFORMATION:

1. DIMENSIONS.
2. IDENTIFICATION OF PRODUCTS AND MATERIALS INCLUDED BY SHEET AND DETAIL NUMBER.
3. COMPLIANCE WITH SPECIFIED STANDARDS.
4. NOTATION OF COORDINATION REQUIREMENTS.
5. NOTATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT.

C. CEILING CAVITY: ALL WORK CONTAINED IN ALL CEILING CAVITIES SHALL BE SIMULTANEOUSLY REPRESENTED ON A SINGLE DRAWING TO CONFIRM THAT ALL TRADES "FIT" WITHIN THE ALLOTTED SPACE AND ALL CONFLICTS SHALL WITH LIGHTING FIXTURES AND OTHER CEILING MOUNTED DEVICES SHALL BE RESOLVED PRIOR TO SUBMITTING SHOP DRAWINGS FOR ARCHITECT/ENGINEER REVIEW AND PRIOR TO EXECUTING ANY WORK WITHIN THE CEILING CAVITY. SUBMIT COMPOSITE COORDINATION DRAWINGS NOT LESS THAN THE SCALE OF 1/2" = 1'-0". REPRODUCE AND DISTRIBUTE REVIEWED COPIES TO ALL CONCERNED PARTIES.

D. TECHNOLOGY ROOMS: COMPUTER INFORMATION ROOMS RAISED ACCESS FLOOR CAVITY: ALL WORK CONTAINED IN RAISED ACCESS FLOOR CAVITIES SHALL BE SIMULTANEOUSLY REPRESENTED ON A SINGLE DRAWING TO CONFIRM THAT ALL TRADES "FIT" WITHIN THE ALLOTTED SPACE AND ALL CONFLICTS SHALL BE RESOLVED PRIOR TO SUBMITTING SHOP DRAWINGS FOR ARCHITECT/ENGINEER REVIEW AND PRIOR TO EXECUTING ANY WORK WITHIN THE RAISED ACCESS FLOOR CAVITY. SUBMIT COMPOSITE COORDINATION DRAWINGS NOT LESS THAN THE SCALE OF 1/2" = 1'-0". REPRODUCE AND DISTRIBUTE REVIEWED COPIES TO ALL CONCERNED PARTIES.

E. SUBMITTAL: SUBMIT ONE CORRECTABLE, TRANSLUCENT, REPRODUCIBLE PRINT AND ONE BLUE- OR BLACK-LINE PRINT FOR THE ARCHITECT'S REVIEW. THE ARCHITECT WILL RETURN THE REPRODUCIBLE PRINT.

1. WHEN AGREED TO BY ALL PARTIES, ALTERNATE ELECTRONIC FORMAT SUBMITTAL AS A PDF FILE IS ACCEPTABLE IN ADDITION TO BLACK LINE PRINT. THE ARCHITECT WILL RETURN MARKED-UP SUBMITTAL IN ELECTRONIC PDF FORMAT ONLY.

F. ALL APPROVALS SHALL BE FOR DESIGN APPEARANCE ONLY. CONTACTOR(S) SHALL BE RESPONSIBLE FOR QUANTITIES, DIMENSIONS AND COMPLIANCE WITH CONTRACT DOCUMENTS, AND FOR INFORMATION PERTAINING TO FABRICATION PROCESS OR TECHNIQUES OF FIRST CLASS CONSTRUCTION AND FOR COORDINATION WITH OTHER TRADES.

1.2.7 PRODUCT DATA

A. COLLECT PRODUCT DATA INTO A SINGLE SUBMITTAL FOR EACH ELEMENT OF CONSTRUCTION OR SYSTEM. PRODUCT DATA INCLUDES PRINTED INFORMATION, SUCH AS MANUFACTURER'S INSTALLATION INSTRUCTIONS, CATALOG CUTS, STANDARD COLOR CHARTS, ROUGHING-IN DIAGRAMS AND TEMPLATES, STANDARD WIRING DIAGRAMS, AND PERFORMANCE CURVES.

1. MARK EACH COPY TO SHOW APPLICABLE CHOICES AND OPTIONS. WHERE PRINTED PRODUCT DATA INCLUDES INFORMATION ON SEVERAL PRODUCTS THAT ARE NOT REQUIRED, MARK COPIES TO INDICATE THE APPLICABLE INFORMATION. INCLUDE THE FOLLOWING INFORMATION:
   a. MANUFACTURER'S PRINTED RECOMMENDATIONS.
   b. COMPLIANCE WITH TRADE ASSOCIATION STANDARDS.
   c. COMPLIANCE WITH RECOGNIZED TESTING AGENCY STANDARDS.
   d. APPLICATION OF TESTING AGENCY LABELS AND SEALS.
   e. NOTATION OF DIMENSIONS VERIFIED BY FIELD MEASUREMENT.
   f. NOTATION OF COORDINATION REQUIREMENTS.
2. DO NOT SUBMIT PRODUCT DATA UNTIL COMPLIANCE WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS HAS BE CONFIRMED.
3. DISTRIBUTION: FURNISH COPIES OF FINAL SUBMITTAL TO INSTALLERS, SUBCONTRACTORS, SUPPLIERS, MANUFACTURERS, FABRICATORS, AND OTHERS REQUIRED FOR PERFORMANCE OF CONSTRUCTION ACTIVITIES. SHOW DISTRIBUTION ON TRANSMITTAL FORMS.
   a. DO NOT PROCEED WITH INSTALLATION UNTIL A COPY OF PRODUCT DATA IS IN THE INSTALLER'S POSSESSION.
   b. DO NOT PERMIT USE OF UNMARKED COPIES OF PRODUCT DATA IN CONNECTION WITH CONSTRUCTION.

1.2.8 SAMPLES

A. WHERE PRODUCTS ARE ACCOMPANIED BY THE TERM "MATCH SAMPLE," SAMPLE TO BE MATCHED IS ARCHITECT'S.

B. SUBMIT FULL-SIZE, FULLY FABRICATED SAMPLES CURED AND FINISHED AS SPECIFIED AND PHYSICALLY IDENTICAL WITH THE MATERIAL OR PRODUCT PROPOSED. SAMPLES INCLUDE PARTIAL SECTIONS OF MANUFACTURED OR FABRICATED COMPONENTS, CUTS OR CONTAINERS OF MATERIALS, COLOR RANGE SETS, AND SWATCHES SHOWING COLOR, TEXTURE, AND PATTERN.

1. MOUNT OR DISPLAY SAMPLES IN THE MANNER TO FACILITATE REVIEW OF QUALITIES INDICATED. PREPARE SAMPLES TO MATCH THE ARCHITECT'S SAMPLE. INCLUDE THE FOLLOWING:
   a. SPECIFICATION SECTION NUMBER AND REFERENCE.
   b. GENERIC DESCRIPTION OF THE SAMPLE.
   c. SAMPLE SOURCE.
   d. PRODUCT NAME OR NAME OF THE MANUFACTURER.
   e. COMPLIANCE WITH RECOGNIZED STANDARDS.
   f. AVAILABILITY AND DELIVERY TIME.
2. SUBMIT SAMPLES FOR REVIEW OF SIZE, KIND, COLOR, PATTERN, AND TEXTURE. SUBMIT SAMPLES FOR A FINAL CHECK OF THESE CHARACTERISTICS WITH OTHER ELEMENTS AND A COMPARISON OF THESE CHARACTERISTICS BETWEEN THE FINAL SUBMITTAL AND THE ACTUAL COMPONENT AS DELIVERED AND INSTALLED.
   a. WHERE VARIATION IN COLOR, PATTERN, TEXTURE, OR OTHER CHARACTERISTIC IS INHERENT IN THE MATERIAL OR PRODUCT REPRESENTED, SUBMIT AT LEAST 3 MULTIPLE UNITS THAT SHOW APPROXIMATE LIMITS OF THE VARIATIONS.
   b. SAMPLES THAT ILLUSTRATE WORKMANSHIP, FABRICATION TECHNIQUES, DETAILS OF ASSEMBLY, CONNECTIONS, OPERATION, AND SIMILAR CONSTRUCTION CHARACTERISTICS.
   c. SAMPLES TO BE RETURNED TO THE CONTRACTOR FOR INCORPORATION IN THE WORK. SUCH SAMPLES MUST BE UNDAMAGED AT TIME OF USE. ON THE TRANSMITTAL, INDICATE SPECIAL REQUESTS REGARDING DISPOSITION OF SAMPLE SUBMITTALS.
   d. SAMPLES NOT INCORPORATED INTO THE WORK, OR OTHERWISE DESIGNATED AS THE OWNER'S PROPERTY, ARE THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE PRIOR TO SUBSTANTIAL COMPLETION.
3. PRELIMINARY SUBMITTALS: SUBMIT A FULL SET OF CHOICES WHERE SAMPLES ARE SUBMITTED FOR SELECTION OF COLOR, PATTERN, TEXTURE, OR SIMILAR CHARACTERISTICS FROM A RANGE OF STANDARD CHOICES.
   a. THE ARCHITECT WILL REVIEW AND RETURN PRELIMINARY SUBMITTALS WITH THE ARCHITECT'S NOTATION, INDICATION SELECTION AND OTHER ACTION.
4. SUBMITTALS: EXCEPT FOR SAMPLES ILLUSTRATING ASSEMBLY DETAILS, WORKMANSHIP, FABRICATION TECHNIQUES, CONNECTIONS, OPERATION, AND SIMILAR CHARACTERISTICS, SUBMIT 3 SETS. THE ARCHITECT WILL RETURN ONE SET MARKED WITH THE ACTION TAKEN.
5. MAINTAIN SETS OF SAMPLES, AS RETURNED, AT THE PROJECT SITE, FOR QUALITY COMPARISONS THROUGHOUT THE COURSE OF CONSTRUCTION.
   a. UNLESS NONCOMPLIANCE WITH CONTRACT DOCUMENT PROVISIONS IS OBSERVED, THE SUBMITTAL MAY SERVE AS THE FINAL SUBMITTAL.
   b. SAMPLE SETS MAY BE USED TO OBTAIN FINAL ACCEPTANCE OF THE CONSTRUCTION ASSOCIATED WITH EACH SET.
6. DISTRIBUTION OF SAMPLES: PREPARE AND DISTRIBUTE ADDITIONAL SETS TO SUBCONTRACTORS, MANUFACTURERS, FABRICATORS, SUPPLIERS, INSTALLERS, AND OTHERS AS REQUIRED FOR PERFORMANCE OF THE WORK. SHOW DISTRIBUTION ON TRANSMITTAL FORMS.
   a. FIELD SAMPLES ARE FULL-SIZE EXAMPLES ERECTED ON-SITE TO ILLUSTRATE FINISHES, COATINGS, OR FINISH MATERIALS AND TO ESTABLISH THE PROJECT STANDARD.
   b. COMPLY WITH SUBMITTAL REQUIREMENTS TO THE FULLEST EXTENT POSSIBLE. PROCESS TRANSMITTAL FORMS TO PROVIDE A RECORD OF ACTIVITY.

1.2.9 QUALITY ASSURANCE SUBMITTALS

A. SUBMIT QUALITY-CONTROL SUBMITTALS, INCLUDING DESIGN DATA, CERTIFICATIONS, MANUFACTURER'S INSTRUCTIONS, MANUFACTURER'S FIELD REPORTS, AND OTHER QUALITY-CONTROL SUBMITTALS AS REQUIRED UNDER OTHER SECTIONS OF THE SPECIFICATIONS.

B. CERTIFICATIONS: WHERE OTHER SECTIONS OF THE SPECIFICATIONS REQUIRE CERTIFICATION THAT A PRODUCT, MATERIAL, OR INSTALLATION COMPLIES WITH SPECIFIED REQUIREMENTS, SUBMIT A NOTARIZED CERTIFICATION FROM THE MANUFACTURER CERTIFYING COMPLIANCE WITH SPECIFIED REQUIREMENTS.

C. SIGNATURE: CERTIFICATION SHALL BE SIGNED BY AN OFFICER OF THE MANUFACTURER OR OTHER INDIVIDUAL AUTHORIZED TO SIGN DOCUMENTS ON BEHALF OF THE COMPANY.

D. INSPECTION AND TEST REPORTS: REQUIREMENTS FOR SUBMITTAL OF INSPECTION AND TEST REPORTS FROM INDEPENDENT TESTING AGENCIES ARE INDICATED ON SHEET G-001 UNDER "REGULATORY INFORMATION".

1.2.10 PRODUCT WARRANTIES

A. WARRANTIES: MANUFACTURER'S DISCLAIMERS AND LIMITATIONS ON PRODUCT WARRANTIES DO NOT RELIEVE CONTRACTOR OF OBLIGATIONS UNDER REQUIREMENTS OF THE CONTRACT DOCUMENTS.

1. MANUFACTURER'S WARRANTY: PREPRINTED WRITTEN WARRANTY PUBLISHED BY INDIVIDUAL MANUFACTURER FOR A PARTICULAR PRODUCT AND SPECIFICALLY ENDORSED BY MANUFACTURER TO OWNER FOR A PERIOD OF 1 YEAR.

B. SUBMITTAL TIME: SUBMIT WRITTEN WARRANTIES ON REQUEST OF ARCHITECT FOR DESIGNATED PORTIONS OF THE WORK WHERE COMMENCEMENT OF WARRANTIES OTHER THAN DATE OF SUBSTANTIAL COMPLETION IS INDICATED.

C. PARTIAL OCCUPANCY: SUBMIT PROPERLY EXECUTED WARRANTIES WITHIN 15 DAYS OF COMPLETION OF DESIGNATED PORTIONS OF THE WORK THAT ARE COMPLETED AND OCCUPIED OR USED BY OWNER DURING CONSTRUCTION PERIOD BY SEPARATE AGREEMENT WITH CONTRACTOR.

D. ORGANIZE WARRANTY DOCUMENTS INTO AN ORDERLY SEQUENCE BASED ON THE TABLE OF CONTENTS OF THE PROJECT MANUAL.

1. PROVIDE HEAVY PAPER DIVIDERS WITH PLASTIC-COVERED TABS FOR EACH SEPARATE WARRANTY. MARK TAB TO IDENTIFY THE PRODUCT OR INSTALLATION. PROVIDE A TYPED DESCRIPTION OF THE PRODUCT OR INSTALLATION, INCLUDING THE NAME OF THE PRODUCT AND THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE INSTALLER.

E. PROVIDE ADDITIONAL COPIES OF EACH WARRANTY TO INCLUDE IN OPERATION AND MAINTENANCE MANUALS.

1.2.11 ARCHITECT'S ACTION

A. EXCEPT FOR SUBMITTALS FOR THE RECORD OR INFORMATION, WHERE ACTION AND RETURN IS REQUIRED, THE ARCHITECT WILL REVIEW EACH SUBMITTAL, MARK TO INDICATE ACTION TAKEN, AND RETURN PROMPTLY.

1. COMPLIANCE WITH SPECIFIED CHARACTERISTICS IS THE CONTRACTOR'S RESPONSIBILITY.

B. ACTION STAMP: THE ARCHITECT WILL STAMP EACH SUBMITTAL WITH A UNIFORM, ACTION STAMP. THE ARCHITECT WILL MARK THE STAMP APPROPRIATELY TO INDICATE THE ACTION TAKEN, AS FOLLOWS:

1. FINAL UNRESTRICTED RELEASE: WHEN THE ARCHITECT MARKS A SUBMITTAL "A" ACTION -"APPROVED", THE WORK COVERED BY THE SUBMITTAL MAY PROCEED PROVIDED IT COMPLIES WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.
2. FINAL-BUT-RESTRICTED RELEASE: WHEN THE ARCHITECT MARKS A SUBMITTAL "B" ACTION - "APPROVED AS NOTED", THE WORK COVERED BY THE SUBMITTAL MAY PROCEED PROVIDED IT COMPLIES WITH NOTATIONS OR CORRECTIONS ON THE SUBMITTAL AND REQUIREMENTS OF THE CONTRACT DOCUMENTS. NO RESUBMITTAL FOR RECORD REQUIRED UNLESS "REVISE AND RESUBMIT FOR RECORD ONLY" ACTION IS MARKED. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.
3. RETURNED FOR RESUBMITTAL: WHEN THE ARCHITECT MARKS A SUBMITTAL "C" ACTION - "REVISE AND RESUBMIT," DO NOT PROCEED WITH WORK COVERED BY THE SUBMITTAL, INCLUDING PURCHASING, FABRICATION, DELIVERY, OR OTHER ACTIVITY. REVISE OR PREPARE A NEW SUBMITTAL ACCORDING TO THE NOTATIONS. RESUBMIT WITHOUT DELAY. REPEAT IF NECESSARY TO OBTAIN DIFFERENT ACTION MARK. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.
   a. DO NOT USE, OR ALLOW OTHERS TO USE, SUBMITTALS MARKED "REVISE AND RESUBMIT" AT THE PROJECT SITE OR ELSEWHERE WHERE WORK IS IN PROGRESS.
4. FINAL-BUT-RESTRICTED RELEASE: WHEN THE ARCHITECT MARKS A SUBMITTAL "D" ACTION - "REVISE AND RESUBMIT FOR RECORD ONLY," THE WORK COVERED BY THE SUBMITTAL MAY PROCEED PROVIDED IT COMPLIES WITH NOTATIONS OR CORRECTIONS ON THE SUBMITTAL AND REQUIREMENTS OF THE CONTRACT DOCUMENTS. RECORD SUBMITTAL IS REQUIRED OF CORRECTED AND NOTED ITEMS. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.
5. RETURNED FOR RESUBMITTAL: WHEN THE ARCHITECT MARKS A SUBMITTAL "E" ACTION – "SUBMIT SPECIFIED ITEM," THE PRODUCT SUBMITTED OR PART OF THE SUBMITTAL IS A SUBSTITUTION. DO NOT PROCEED WITH WORK OR PART OF THE WORK NOTED AS SUCH BY THE SUBMITTAL INCLUDING PURCHASING, FABRICATION, DELIVERY, OR OTHER ACTIVITY. REVISE OR PREPARE A NEW SUBMITTAL WITH THE PRODUCT SPECIFIED IN THE CONTRACT DOCUMENTS; RESUBMIT WITHOUT DELAY. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.
   a. DO NOT USE, OR ALLOW OTHERS TO USE, SUBMITTALS MARKED "SUBMIT SPECIFIED ITEM" AT THE PROJECT SITE OR ELSEWHERE WHERE WORK IS IN PROGRESS.
6. RETURNED FOR RESUBMITTAL: WHEN THE ARCHITECT MARKS A SUBMITTAL "F" ACTION - "REJECTED", THE WORK COVERED BY THE SUBMITTAL IS NOT IN COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS. THE SUBMITTAL WILL BE RETURN WITH ACTION "SUBMIT SPECIFIED ITEM" MARKED AS WELL. CONTRACTOR TO PREPARE A NEW SUBMITTAL. NO COMMENTS OR NOTATIONS MADE. FINAL PAYMENT DEPENDS ON THAT COMPLIANCE.
   a. DO NOT USE, OR ALLOW OTHERS TO USE, SUBMITTALS MARKED "REJECTED" AT THE PROJECT SITE OR ELSEWHERE WHERE WORK IS IN PROGRESS.
7. OTHER ACTION: WHEN THE ARCHITECT MARKS A SUBMITTAL "G" ACTION - "REVIEWED FOR ARCHITECTURAL COORDINATION ONLY," THE ENGINEER/ CONSULTANT IS THE PRIMARY REVIEWER OF THE SUBMITTAL. THE ARCHITECT'S COMMENTS ARE ONLY FOR THE PURPOSE OF COORDINATION OF THE ARCHITECTURAL CONTRACT DOCUMENTS.

C. UNSOLICITED SUBMITTALS: THE ARCHITECT WILL RETURN UNSOLICITED SUBMITTALS TO THE SENDER WITHOUT ACTION.

1.3 CUTTING AND PATCHING

1.3.1 SUBMITTALS

A. CUTTING AND PATCHING PROPOSAL: SUBMIT A PROPOSAL DESCRIBING PROCEDURES WELL IN ADVANCE OF THE TIME CUTTING AND PATCHING WILL BE PERFORMED IF THE OWNER REQUIRES APPROVAL OF THESE PROCEDURES BEFORE PROCEEDING. REQUEST APPROVAL TO PROCEED. INCLUDE THE FOLLOWING INFORMATION, AS APPLICABLE, IN THE PROPOSAL:

1. DESCRIBE THE EXTENT OF CUTTING AND PATCHING REQUIRED. SHOW HOW IT WILL BE PERFORMED AND INDICATE WHY IT CANNOT BE AVOIDED.
2. DESCRIBE ANTICIPATED RESULTS IN TERMS OF CHANGES TO EXISTING CONSTRUCTION. INCLUDE CHANGES TO STRUCTURAL ELEMENTS AND OPERATING COMPONENTS AS WELL AS CHANGES IN THE BUILDING'S APPEARANCE AND OTHER SIGNIFICANT VISUAL ELEMENTS.
3. UTILITIES: LIST UTILITIES THAT CUTTING AND PATCHING PROCEDURES WILL DISTURB OR AFFECT. LIST UTILITIES THAT WILL BE RELOCATED AND THOSE THAT WILL BE TEMPORARILY OUT-OF-SERVICE. INDICATE HOW LONG SERVICE WILL BE DISRUPTED.
4. WHERE CUTTING AND PATCHING INVOLVES ADDING REINFORCEMENT TO STRUCTURAL ELEMENTS, SUBMIT DETAILS AND ENGINEERING CALCULATIONS SHOWING INTEGRATION OF REINFORCEMENT WITH THE ORIGINAL STRUCTURE.
5. THE ARCHITECT'S REVIEW OF AREAS TO BE CUT AND PATCHED IS FOR VISUAL IMPACT ONLY. THE ARCHITECT'S REVIEW OF THESE AREAS DOES NOT WAIVE THE ARCHITECT'S RIGHT TO LATER REQUIRE COMPLETE REMOVAL AND REPLACEMENT OR A PART OF THE WORK FOUND TO BE UNSATISFACTORY.

1.3.2 QUALITY ASSURANCE

A. REQUIREMENTS FOR STRUCTURAL WORK: DO NOT CUT AND PATCH STRUCTURAL ELEMENTS IN A MANNER THAT WOULD CHANGE THEIR LOAD-CARRYING CAPACITY OR LOAD-DEFLECTION RATIO.

B. OPERATIONAL LIMITATIONS: DO NOT CUT AND PATCH OPERATING ELEMENTS OR RELATED COMPONENTS IN A MANNER THAT WOULD RESULT IN REDUCING THEIR CAPACITY TO PERFORM AS INTENDED. DO NOT CUT AND PATCH OPERATING ELEMENTS OR RELATED COMPONENTS IN A MANNER THAT WOULD RESULT IN INCREASED MAINTENANCE OR DECREASED OPERATIONAL LIFE OR SAFETY.

C. VISUAL REQUIREMENTS: DO NOT CUT AND PATCH CONSTRUCTION EXPOSED ON THE EXTERIOR OR IN OCCUPIED SPACES IN A MANNER THAT WOULD, IN THE ARCHITECT'S OPINION, REDUCE THE BUILDING'S AESTHETIC QUALITIES. DO NOT CUT AND PATCH CONSTRUCTION IN A MANNER THAT WOULD RESULT IN VISUAL EVIDENCE OF CUTTING AND PATCHING. REMOVE AND REPLACE CONSTRUCTION CUT AND PATCHED IN A VISUALLY UNSATISFACTORY MANNER.

1.3.3 WARRANTY

A. EXISTING WARRANTIES: REPLACE, PATCH, AND REPAIR MATERIAL AND SURFACES CUT OR DAMAGED BY METHODS AND WITH MATERIALS IN SUCH A MANNER AS NOT TO VOID ANY WARRANTIES REQUIRED OR EXISTING.

1.3.4 MATERIALS, GENERAL

A. USE MATERIALS IDENTICAL TO EXISTING MATERIALS. FOR EXPOSED SURFACES, USE MATERIALS THAT VISUALLY MATCH EXISTING ADJACENT SURFACES TO THE FULLEST EXTENT POSSIBLE IF IDENTICAL MATERIALS ARE UNAVAILABLE OR CANNOT BE USED. USE MATERIALS WHOSE INSTALLED PERFORMANCE WILL EQUAL OR SURPASSES THAT OF EXISTING MATERIALS.

1.3.5 INSPECTION

A. EXAMINE SURFACES TO BE CUT AND PATCHED AND CONDITIONS UNDER WHICH CUTTING AND PATCHING IS TO BE PERFORMED BEFORE CUTTING. IF UNSAFE OR UNSATISFACTORY CONDITIONS ARE ENCOUNTERED, TAKE CORRECTIVE ACTION BEFORE PROCEEDING.

1. BEFORE PROCEEDING, MEET AT THE PROJECT SITE WITH PARTIES INVOLVED IN CUTTING AND PATCHING, INCLUDING MECHANICAL AND ELECTRICAL TRADES. REVIEW AREAS OF POTENTIAL INTERFERENCE AND CONFLICT. COORDINATE PROCEDURES AND RESOLVE POTENTIAL CONFLICTS BEFORE PROCEEDING.

1.3.6 PREPARATION

A. TEMPORARY SUPPORT: PROVIDE TEMPORARY SUPPORT OF WORK TO BE CUT.
B. PROTECTION: PROTECT EXISTING CONSTRUCTION DURING CUTTING AND PATCHING TO PREVENT DAMAGE. PROVIDE PROTECTION FROM ADVERSE WEATHER CONDITIONS FOR PORTIONS OF THE PROJECT THAT MIGHT BE EXPOSED DURING CUTTING AND PATCHING OPERATIONS.
C. AVOID INTERFERENCE WITH USE OF ADJOINING AREAS OR INTERRUPTION OF FREE PASSAGE TO ADJOINING.
D. AVOID CUTTING EXISTING PIPE, CONDUIT, OR DUCTWORK SERVING THE BUILDING BUT SCHEDULED TO BE REMOVED OR RELOCATED UNTIL PROVISIONS HAVE BEEN MADE TO BYPASS THOSE AREAS.

1.3.7 PERFORMANCE

A. GENERAL: EMPLOY SKILLED WORKMEN TO PERFORM CUTTING AND PATCHING. PROCEED WITH CUTTING AND PATCHING AT THE EARLIEST FEASIBLE TIME AND COMPLETE WITHOUT DELAY.

1. CUT EXISTING CONSTRUCTION TO PROVIDE FOR INSTALLATION OF OTHER COMPONENTS OR PERFORMANCE OF OTHER CONSTRUCTION ACTIVITIES AND THE SUBSEQUENT FITTING AND PATCHING REQUIRED TO RESTORE SURFACES TO THEIR Original CONDITION.

B. CUTTING: CUT EXISTING CONSTRUCTION USING METHODS LEAST LIKELY TO DAMAGE ELEMENTS RETAINED OR ADJOINING CONSTRUCTION. WHERE POSSIBLE, REVIEW PROPOSED PROCEDURES WITH THE ORIGINAL INSTALLER; COMPLY WITH THE ORIGINAL INSTALLER'S RECOMMENDATIONS.
C. IN GENERAL, WHERE CUTTING, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING WHERE POSSIBLE, NEATLY TO SIZE REQUIRED, AND WITH MINIMUM DISTURBANCE OF ADJACENT SURFACES. TEMPORARILY COVER OPENINGS WHEN NOT IN USE.
D. WHERE SERVICES ARE REQUIRED TO BE REMOVED, RELOCATED, OR ABANDONED, BY-PASS UTILITY SERVICES, SUCH AS PIPE OR CONDUIT, BEFORE CUTTING. CUT-OFF PIPE OR CONDUIT IN WALLS OR PARTITIONS TO BE REMOVED. CAP, VALVE, OR PLUG AND SEAL THE REMAINING PORTION OF PIPE OR CONDUIT TO PREVENT ENTRAN

2.0 CONSTRUCTION DRAWINGS

2.0.1 GENERAL

A. DRAWINGS AND GENERAL CONDITIONS OF THE CONTRACT ON SHEET G-002 APPLY TO ALL SECTIONS ON THIS SHEET AND THE ENTIRE CONSTRUCTION DOCUMENT SHEETS LISTED ON SHEET G-001.

B. REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS: IMMEDIATELY ON DISCOVERY OF THE NEED FOR CLARIFICATION OF THE CONTRACT DOCUMENTS, SUBMIT A REQUEST FOR INTERPRETATION TO ARCHITECT. INCLUDE A DETAILED DESCRIPTION OF PROBLEM ENCOUNTERED, TOGETHER WITH RECOMMENDIATIONS FOR CHANGING THE CONTRACT DOCUMENTS. SUBMIT REQUESTS ON CSI FORM 13.2A, "REQUEST FOR INTERPRETATION." OR CONTRACTOR'S OWN TEMPLATE WITH COMPANY LETTERHEAD, ENTITLED "REQUEST FOR INTERPRETATION," AND INCLUDES THE PROJECT NAME AND LOCATION, TRADES REQUESTING INTERPRETATION, DATE OF REQUEST AND EXPECTED DATE OF INTERPRETATION FROM ARCHITEC/ENGINEER.

C. ARCHITECTURAL CONSTRUCTION DOCUMENTS ARE DIAGRAMMATIC IN NATURE AND DIMENSIONS SHALL BE FIGURED, DO NOT SCALE DRAWINGS. VERIFY SPACE REQUIREMENTS AND DIMENSIONS OF ITEMS SHOWN DIAGRAMMATICALLY ON DRAWINGS.

D. IN THE EVENT OF CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM OR BULLETINS, THE BETTER QUALITY QUALITY OR GREATER QUANTITY OF WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.

E. ALL DIMENSIONS SHOWN ARE TO ROUGH WALL AND PARTITION SURFACES UNLESS SPECIFICALLY OTHERWISE NOTED. ROUGH MEANS UNFINISHED SURFACES OF WALLS AND PARTITIONS PRIOR TO APPLICATION OR CLADDING OF FINISHED MATERIAL OR SHOP ASSEMBLED PRODUCT.

F. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATION. LARGE SCALE VIEWS TAKE PRECEDENT OVER SMALL SCALE VIEWS, DIMENSIONS ON DETAIL TAKE PRECEDENCE OVER DIMENSIONS ON SMALL SCALE PLAN.

2.0.2 SITE EXAMINATION

A. EXISTING CONDITIONS: THE EXISTENCE AND LOCATION OF SITE IMPROVEMENTS, UTILITIES, AND OTHER CONSTRUCTION INDICATED AS EXISTING ARE NOT GUARANTEED. BEFORE BEGINNING WORK, INVESTIGATE AND VERIFY THE EXISTENCE AND LOCATION OF MECHANICAL AND ELECTRICAL SYSTEMS AND OTHER CONSTRUCTION AFFECTING THE WORK.

1. BEFORE CONSTRUCTION, VERIFY THE LOCATION AND POINTS OF CONNECTION OF UTILITY SERVICES.

B. EXISTING UTILITIES: THE EXISTENCE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AND CONSTRUCTION INDICATED AS EXISTING ARE NOT GUARANTEED. BEFORE BEGINNING SITEWORK, INVESTIGATE AND VERIFY THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND OTHER CONSTRUCTION AFFECTING THE WORK.

1. BEFORE CONSTRUCTION, VERIFY THE LOCATION AND INVERT ELEVATION AT POINTS OF CONNECTION OF SANITARY SEWER, STORM SEWER, AND WATER-SERVICE PIPING; AND UNDERGROUND ELECTRICAL SERVICES.
2. FURNISH LOCATION DATA FOR WORK RELATED TO PROJECT THAT MUST BE PERFORMED BY PUBLIC UTILITIES SERVING PROJECT SITE.

C. ACCEPTANCE OF CONDITIONS: EXAMINE SUBSTRATES, AREAS, AND CONDITIONS, WITH INSTALLER OR APPLICATOR PRESENT WHERE INDICATED, FOR COMPLIANCE WITH REQUIREMENTS FOR INSTALLATION TOLERANCES AND OTHER CONDITIONS AFFECTING PERFORMANCE. RECORD OBSERVATIONS.

1. WRITTEN REPORT: PROVIDE A WRITTEN REPORT LISTING CONDITIONS DETRIMENTAL TO PERFORMANCE OF THE WORK, INCLUDE THE FOLLOWING:
   a. DESCRIPTION OF THE WORK.
   b. LIST OF DETRIMENTAL CONDITIONS, INCLUDING SUBSTRATES.
   c. LIST OF UNACCEPTABLE INSTALLATION TOLERANCES.
   d. RECOMMENDED CORRECTIONS.
2. VERIFY COMPATIBILITY WITH AND SUITABILITY OF SUBSTRATES, INCLUDING COMPATIBILITY WITH EXISTING FINISHES OR PRIMERS.
3. EXAMINE ROUGHING-IN FOR MECHANICAL AND ELECTRICAL SYSTEMS TO VERIFY ACTUAL LOCATIONS OF CONNECTIONS BEFORE EQUIPMENT AND FIXTURE INSTALLATION.
4. EXAMINE WALLS, FLOORS, AND ROOFS FOR SUITABLE CONDITIONS WHERE PRODUCTS AND SYSTEMS ARE TO BE INSTALLED.
5. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. PROCEEDING WITH THE WORK INDICATES ACCEPTANCE OF SURFACES AND CONDITIONS.

2.0.3 LAYOUT VERIFICATION

A. CONSTRUCTION LAYOUT:

1. VERIFICATION: BEFORE PROCEEDING TO LAY OUT THE WORK, VERIFY LAYOUT INFORMATION SHOWN ON DRAWINGS, IN RELATION TO THE BUILDING FOOTPRINT AND ANY EXISTING BENCHMARKS. IF DISCREPANCIES ARE DISCOVERED, NOTIFY ARCHITECT PROMPTLY.
   a. ESTABLISH BENCHMARKS AND CONTROL POINTS TO SET LINES AND LEVELS AT EACH STORY OF CONSTRUCTION AND ELSEWHERE AS NEEDED TO LOCATE EACH ELEMENT OF PROJECT.
   b. ESTABLISH DIMENSIONS WITHIN TOLERANCES INDICATED. DO NOT SCALE DRAWINGS TO OBTAIN REQUIRED DIMENSIONS.
   c. INFORM INSTALLERS OF LINES AND LEVELS TO WHICH THEY MUST COMPLY.
   d. CHECK THE LOCATION, LEVEL AND PLUMB, OF EVERY MAJOR ELEMENT AS THE WORK PROGRESSES.
   e. NOTIFY ARCHITECT WHEN DEVIATIONS FROM REQUIRED LINES AND LEVELS EXCEED ALLOWABLE TOLERANCES.
   f. BUILDING LINES AND LEVELS: LOCATE AND LAY OUT CONTROL LINES AND LEVELS FOR STRUCTURES, PARTITIONS, COLUMN GRIDS, AND FLOOR LEVELS, INCLUDING THOSE REQUIRED FOR MECHANICAL AND ELECTRICAL WORK. TRANSFER SURVEY MARKINGS AND ELEVATIONS FOR USE WITH CONTROL LINES AND LEVELS. LEVEL FOUNDATIONS AND PIERS FROM TWO OR MORE LOCATIONS.
2. RECORD LOG: MAINTAIN A LOG OF LAYOUT CONTROL WORK. RECORD DEVIATIONS FROM REQUIRED LINES AND LEVELS. INCLUDE BEGINNING AND ENDING DATES AND TIMES OF SURVEYS, WEATHER CONDITIONS, NAME AND DUTY OF EACH SURVEY PARTY MEMBER, AND TYPES OF INSTRUMENTS AND TAPES USED. MAKE THE LOG AVAILABLE FOR REFERENCE BY ARCHITECT.
3. REFERENCE POINTS: LOCATE EXISTING PERMANENT BENCHMARKS, CONTROL POINTS, AND SIMILAR REFERENCE POINTS BEFORE BEGINNING THE WORK. PRESERVE AND PROTECT PERMANENT BENCHMARKS AND CONTROL POINTS DURING CONSTRUCTION OPERATIONS.
   a. REPLACE LOST OR DESTROYED PERMANENT BENCHMARKS AND CONTROL POINTS PROMPTLY. BASE REPLACEMENTS ON THE ORIGINAL SURVEY CONTROL POINTS.
4. BENCHMARKS: ESTABLISH AND MAINTAIN A MINIMUM OF TWO PERMANENT BENCHMARKS ON PROJECT SITE, REFERENCED TO DATA ESTABLISHED BY SURVEY CONTROL POINTS.
   a. RECORD BENCHMARK LOCATIONS, WITH HORIZONTAL AND VERTICAL DATA, ON PROJECT RECORD DOCUMENTS.
   b. WHERE THE ACTUAL LOCATION OR ELEVATION OF LAYOUT POINTS CANNOT BE MARKED, PROVIDE TEMPORARY REFERENCE POINTS SUFFICIENT TO LOCATE THE WORK.
   c. REMOVE TEMPORARY REFERENCE POINTS WHEN NO LONGER NEEDED. RESTORE MARKED CONSTRUCTION TO ITS ORIGINAL CONDITION.

2.0.4 INSTALLATION GENERAL

A. GENERAL: LOCATE THE WORK AND COMPONENTS OF THE WORK ACCURATELY, IN CORRECT ALIGNMENT AND ELEVATION, AS INDICATED.

1. MAKE VERTICAL WORK PLUMB AND MAKE HORIZONTAL WORK LEVEL.
2. WHERE SPACE IS LIMITED, INSTALL COMPONENTS TO MAXIMIZE SPACE AVAILABLE FOR MAINTENANCE AND EASE OF REMOVAL FOR REPLACEMENT.
3. CONCEAL PIPES, DUCTS, AND WIRING IN FINISHED AREAS, UNLESS OTHERWISE INDICATED.
4. MAINTAIN MINIMUM HEADROOM CLEARANCE OF 8 FEET IN SPACES WITHOUT A SUSPENDED CEILING UNLESS SPECIFICALLY INDICATED ON DRAWINGS.
5. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS FOR INSTALLING PRODUCTS IN APPLICATIONS INDICATED.SHOULD MANUFACTURER'S INSTRUCTIONS CONFLICT WITH THE CONTRACT DOCUMENTS, REQUEST CLARIFICATION FROM ARCHITECT BEFORE PROCEEDING.
6. INSTALL PRODUCTS AT THE TIME AND UNDER CONDITIONS THAT WILL ENSURE THE BEST POSSIBLE RESULTS. MAINTAIN CONDITIONS REQUIRED FOR PRODUCT PERFORMANCE UNTIL SUBSTANTIAL COMPLETION.
7. CONDUCT CONSTRUCTION OPERATIONS SO NO PART OF THE WORK IS SUBJECTED TO DAMAGING OPERATIONS OR LOADING IN EXCESS OF THAT EXPECTED DURING NORMAL CONDITIONS OF OCCUPANCY.
8. DO NOT USE TOOLS OR EQUIPMENT THAT PRODUCE HARMFUL NOISE LEVELS.

2.0.5 TEMPLATES

A. OBTAIN AND DISTRIBUTE TO THE PARTIES INVOLVED TEMPLATES FOR WORK SPECIFIED TO BE FACTORY PREPARED AND FIELD INSTALLED. CHECK SHOP DRAWINGS OF OTHER WORK TO CONFIRM THAT ADEQUATE PROVISIONS ARE MADE FOR LOCATING AND INSTALLING PRODUCTS TO COMPLY WITH INDICATED REQUIREMENTS.

B. ANCHORS AND FASTENERS: PROVIDE ANCHORS AND FASTENERS AS REQUIRED TO ANCHOR EACH COMPONENT SECURELY IN PLACE, ACCURATELY LOCATED AND ALIGNED WITH OTHER PORTIONS OF THE WORK.

C. MOUNTING HEIGHTS: WHERE MOUNTING HEIGHTS ARE NOT INDICATED ON DRAWING ENTITLED "STANDARD DEVICES AND EQUIPMENT LOCATION," MOUNT COMPONENTS AT HEIGHTS DIRECTED BY ARCHITECT.

D. ALLOW FOR BUILDING MOVEMENT, INCLUDING THERMAL EXPANSION AND CONTRACTION.

E. COORDINATE INSTALLATION OF ANCHORAGES. FURNISH SETTING DRAWINGS, TEMPLATES, AND DIRECTIONS FOR INSTALLING ANCHORAGES, INCLUDING SLEEVES, CONCRETE INSERTS, ANCHOR BOLTS, AND ITEMS WITH INTEGRAL ANCHORS, THAT ARE TO BE EMBEDDED IN CONCRETE OR MASONRY. DELIVER SUCH ITEMS TO PROJECT SITE IN TIME FOR INSTALLATION.

F. JOINTS: MAKE JOINTS OF UNIFORM WIDTH. WHERE JOINT LOCATIONS IN EXPOSED WORK ARE NOT INDICATED, ARRANGE JOINTS FOR THE BEST VISUAL EFFECT. FIT EXPOSED CONNECTIONS TOGETHER TO FORM HAIRLINE JOINTS.

G. HAZARDOUS MATERIALS: USE PRODUCTS, CLEANERS, AND INSTALLATION MATERIALS THAT ARE NOT CONSIDERED HAZARDOUS.

2.1 CONSTRUCTION PLAN

2.1.1 GENERAL

A. FORMAL REVIEW AND APPROVAL REQUEST OF PARTITION LAYOUT SNAPPED LINES PRIOR TO INSTALLATION OF ANY TRACK AND STUD FRAMING AND FURNITURE SYSTEM IN OPEN AREAS HOLD MEASUREMENTS AND CLEARANCES IS REQUIRED. IF CORRECTIONS TO SNAPPED LINES AND FURNITURE SYSTEM OVERALL CLEARANCES ARE RAISED, PROMPTLY MAKE THE CORRECTIONS AS DIRECTED BY ARCHITECT WHILE AT THE PROJECT SITE OR SCHEDULE ANOTHER FORMAL REVIEW. SEQUENCE WILL BE REPEATED UNTIL FINAL APPROVAL OF SNAPPED LINES IS OBTAINED.

1. FURNITURE SYSTEM INSTALLER SHALL BE PRESENT ON SITE AND PROVIDE CONTRACTOR WITH THE REQUIRE FURNITURE SYSTEM CLEARANCES FOR THE CONTRATOR TO SNAP TRACK AND STUD FRAMING AFFECTED BY FURNITURE SYSTEM LAYOUT.
2. CONTRACTOR SHALL MARK UP THE PARTITION LAYOUT PLAN AND DOCUMENT ALL AGREED TO DIMENSIONS AND DESCRIPENCIES FROM CONSTRUCTION DOCUMENTS BASED ON FIELD MEASUREMENTS AND CONDITIONS ENCOUNTERED. THE MARK-UP PARTITION LAYOUT PLAN SHOULD INCLUDE ADVERALL MEASUREMENTS OF OPEN AREAS WHERE FURNITURE SYSTEMS ARE TO BE INSTALLED. ELECTRONIC COPIES TO BE FORWARDED TO THE ARCHITECT FOR FORMAT WRITTEN APPROVAL.
3. UPON RECEIPT OF THE CONTRACTOR'S FIELD MEASURED PARTITION LAYOUT PLAN, THE ARCHITECT WILL ISSUE APPROVAL OF APPROVED PARTITION LAYOUT IN WRITING WITHIN 24 HOURS
4. THE ARCHITECT WILL DISTRIBUTE THE FIELD MEASURED AND APPROVED PARTITION LAYOUT PLAN TO ALL PROJECT TEAM AND OWNER FOR RECORD AND COORDINATION.

B. THE CONTRACTOR IS TO PROVIDE ALL SHORING, BARRICADES, AND TEMPORARY PARTITIONS TO ACCOMPLISH ALL WORK IN AN APPROVED AND SAFE MANNER AS PER AUTHORITY HAVING JURISDICTION CURRENT RULES, CODES AND REGULATIONS.

C. COORDINATE SPACE REQUIREMENTS AND INSTALLATION OF MECHANICAL AND ELECTRICAL WORK INDICATED ON THE DRAWINGS. FOLLOW ROUTING SHOWN ON THE DRAWINGS FOR PIPES, DUCTS, AND CONDUITS AS CLOSELY AS PRACTICABLE. PLACE RUNS PARALLEL WITH THE LINE OF THE BUILDING. UTILIZE SPACES EFFICIENTLY TO MAXIMIZE ACCESSIBILITY FOR OTHER INSTALLATIONS, MAINTENANCE, AND REPAIRS.

D. GENERAL CONTRACTOR OR CONSTRUCTION MANAGER SHALL PROVIDE GENERAL CARPENTRY AS REQUIRED FOR WORK WHICH MAY NOT FALL INTO JURISDICTION OF A SPECIFIC TRADE, BUT IS REQUIRED FOR PROPER JOB EXECUTION & COMPLETION OF CONSTRUCTION WORK DOCUMENTED HEREWITH.

E. IN FINISHED AREAS, CONCEAL PIPES, DUCTS, AND WIRING WITHIN THE CONSTRUCTION. COORDINATE LOCATIONS OF FIXTURES AND OUTLETS WITHIN FINISHED ASSEMBLIES. FINISHED AREAS MEANS OCCUPIED SPACES AND ROOMS INCLUDING PANTRIES, COPY ROOMS, STORAGE ROOMS, TECHNOLOGY ROOMS, COAT AND STORAGE CLOSETS AND SIMILAR SUPPORT SPACES. UNOCCUPIED AREA SUCH AS UTILITY SPACES INCLUDING MECHANICAL, ELECTRICAL AND TELEPHONE AND SIMILAR FUNCTION TYPE ROOMS AND SPACES.

F. DO NOT USE MATERIALS AND EQUIPMENT REMOVED FROM EXISTING PREMISES, EXCEPT AS SPECIFICALLY PERMITTED.

G. ITEMS NOTED "N.I.C." (NOT IN CONTRACT) WILL BE FURNISHED AND INSTALLED BY TENANT.

H. FIRE SAFETY EQUIPMENT AND THEIR ASSOCIATED CONDUIT AND WIRING SYSTEMS SHALL NOT BE MARRED DURING CONSTRUCTION AND SHALL BE PROTECTED FROM ANY PHYSICAL DAMAGE BY THE GENERAL CONTRACTOR AND OR CONSTRUCTION MANAGER AND THEIR SUBCONTRACTORS FOR THE DURATION OF THE PROJECT.

2.1.2 STRUCTURAL FLOOR SLAB

A. FLOOR SLAB X-RAY OR GROUND PENETRATING RADAR: THIS METHOD SHALL BE USED FOR POST TENSIONED AND ONE AND TWO-WAY CONCRETES SLABS; PRIOR TO CORING; OBTAIN BUILDING APPROVAL AND FOLLOW ALL BUILDING REGULATIONS & REQUIREMENTS FOR FLOOR CORES. REFER TO DRAWING G-003 SECTION 3 CUTTING AND PATCHING.

B. EXISTING ABANDONED FLOOR CORE DRILLS TO BE FILLED WITH CONCRETE MIX IN THICKNESS MATCHING CONCRETE SLAB AND FIRE RATING.

C. EXISTING EMPTY THROUGH FLOOR SLAB PENETRATIONS OR EXISTING PENETRATIONS WITH PIPING AND DUCT PENETRANTS THAT ARE IN USE BUT ARE NOT FIRESTOPPED AND ALL PENETRATIONS NEW CAUSED BY THE SCOPE OF THE NEW CONSTRUCTION ACTIVITIES SHALL BE FIRESTOPPED WITH APPROVED UL TESTED SYSTEM FOR PENETRATE TYPE AND FIRE RATING MATCHING STRUCTURAL FLOOR SLAB, REFER TO ARTICLE

D. WHEN NEW SCOPE CALLS FOR NEW STRUCTURAL CONCRETE SLAB IN-FILL, IN-FILL SHALL BE COMPATIBLE WITH EXISTING ADJACENT STRUCTURAL CONCRETE SLAB SCHEDULED TO REMAIN INCLUDING FIRE RATING, CONCRETE MIX AND REINFORCEMENT UNLESS OTHERWISE DIRECTED BY A PROFESSIONAL ENGINEER.

E. TRENCHING OR CHOPPING OF STRUCTURAL CONCRETE SLAB MAY UNDERMINE STRUCTURAL STABILITY AND FIRE RATING. DO NOT TRENCH OR CHOP EXISTING STRUCTURAL CONCRETE SLAB UNLESS INDICATED ON THE DRAWINGS OR DIRECTED BY THE ARCHITECT.

F. EXISTING CRACKS IN FLOOR SLAB 1/8 INCHES TO 1/4 INCHES WIDE THAT ARE NOT DEEMED STRUCTURAL BY A STRUCTURAL ENGINEER SHALL BE FILLED/REPAIRED AND THE SURFACE PATCHED SMOOTH AND LEVEL WITH ADJACENT FLOOR SLAB. CRACK FILLER SHALL BE REZI-WELD FLEX BY W.R. MEADOWS OR APPROVED EQUAL.

1. SCOPE OF FLOOR SLAB CRACK FILLER SHALL BE INCLUDED IN THE BID PROPOSAL. NO CHANGE ORDER WILL BE ACCEPTED FOR ANY CRACK FILLER WORK. REFER TO "GENERAL CONDITIONS" ARTICLE 1.1.1-SUMMARY, PARAGRAPH "C", "D", "E", "F" AND "K".

G. VARIATIONS IN FLOOR LEVEL IN EXCESS OF 1/4" FOR EVERY 10'-0" IN ANY DIRECTION SHALL BE LEVELED WITH ADJACENT FLOOR SLAB.

1. SCOPE OF FLOOR SLAB LEVELING SHALL BE INCLUDED IN THE BID PROPOSAL. NO CHANGE ORDER WILL BE ACCEPTED FOR ANY FLOOR LEVELING WORK. REFER TO "GENERAL CONDITIONS" ARTICLE 1.1.1-SUMMARY, PARAGRAPH "C", "D", "E", "F" AND "K".
2. IN THE ABSENCE OF ANY SPECIFIC NOTES ON THE CONSTRUCTION DRAWINGS FOR FLOOR LEVELING MATERIAL, ACCEPTABLE LEVELING MATERIAL SHALL BE LATICRETE 816 LATIPATCH OR ARDEX GPS GENERAL PATCH & SKIMCOAT.

2.1.3 WATERPROOFING

A. UNLESS SPECIFICALLY CALLED FOR AND INDICATED ON THE DRAWINGS OR IN THE ABSENCE OF SUCH SPECIFICATIONS PROVIDE ONE OF THE THE FOLLOWING WATERPROOFING PRODUCTS:

1. LATICRETE 9235 COMPLYING WITH ASTM C-672 WITH LATICRETE 125 SOUND AND CRACK ADHESIVE.
2. LATICRETE HYDROBAN WATERPROOFING AND ANTIFRACTURE MEMBRANE.

B. APPLICATION: APPLY WATERPROOFING ACCORDING TO ASTM C 898 AND MANUFACTURER'S WRITTEN INSTRUCTIONS TO HORIZONTAL AND VERTICAL SURFACES.

1. VERTICAL APPLICATION SHALL BE LIMITED TO A MINIMUM OF 4 INCHES THROUGH-OUT.

C. PROTECTION:

1. DO NOT PERMIT FOOT OR VEHICULAR TRAFFIC ON UNPROTECTED MEMBRANE.
2. PROTECT WATERPROOFING FROM DAMAGE AND WEAR DURING REMAINDER OF CONSTRUCTION PERIOD.

D. SCHEDULE: INSTALL WATERPROOFING PRODUCT BELOW:

1. RESILIENT TILE (STANDARD, CONDUCTIVE OR ANTISTATIC).
2. RESILIENT SHEETS (STANDARD, CONDUCTIVE OR ANTISTATIC).
3. CERAMIC TILE.
4. PORCELAIN TILE.
5. QUARRY TILE.
6. GLASS AND GLASS MOSAIC TILES.
7. PLASTIC AND METAL TILES.
8. STONE TILE AND DIMENSIONED STONE PANELS.
9. POURED TYPE TERRAZZO, TERRAZZO TILE OR PANELS.
10. PAVERS.

E. LOCATION: WHERE THE ABOVE LISTED MATERIALS IS SCHEDULED IN ROOMS AN SPACES NOT LIMITED TO THE FOLLOWING:

1. PANTRY ROOMS AND FOOD SERVICE TYPE ROOMS OR SPACES.
2. TOILET ROOMS-UNISEX, EXECUTIVE OR CORE TOILETS.
3. SHOWER ROOMS.
4. SPRINKLER ROOMS AND SPRINKLER PREACTION CLOSETS.
5. TECHNOLOGY ROOMS WITH FLOOR FINISH DIRECTLY APPLIED TO CONCRETE SUBSTRATE.

F. UNLESS SPECIFICALLY CALLED FOR AND INDICATED ON THE DRAWINGS OR IN THE ABSENCE OF SUCH SPECIFICATIONS PROVIDE WATERPROOFING/SEALER FOR EXPOSED CONCRETE FLOORS OF NEW MECHANICAL ROOMS.

1. ACCEPTABLE PRODUCTS:
   a. VULKEM 360 NF, ONE_PART POLYURETHANE COATING MANUFACTURED BY TREMCO, INC.

G. UNLESS SPECIFICALLY CALLED FOR AND INDICATED ON THE DRAWINGS OR IN THE ABSENCE OF SUCH SPECIFICATIONS PROVIDE SEALER FOR EXPOSED CONCRETE FLOORS UNDER RAISED ACESS FLOOR SYSTEM.

1. ACCEPTABLE PRODUCTS:
   a. CONSOLIDECK-SINGLESTEP BY PROSOCO.
   b. SEAL KRETE CLEAR FLOOR SEALER BY SEAL KRETE.

2.1.4 SPRAYED AND INTUMESCENT FIREPROOFING

A. WHERE FIRE-PROOFING OF EXISTING COLUMNS OR BEAMS IS DISTURBED BY NEW WORK, THE FIRE-PROOFING SHALL BE RESTORED TO PROVIDE A MINIMUM RESISTANCE RATING AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION BUILDING CODE.

B. FIRE PROTECTION OF STRUCTURAL STEEL MEMBERS SPRAYED ON FIREPROOFING NOT INDICATED ELSEWHERE ON THE CONSTRUCTION DRAWINGS SHALL BE "MONOCOTE MK 6" BY "GRACE CONSTRUCTION PRODUCTS" OR APPROVED EQUAL.

C. WHERE NO SUSPENDED CEILINGS ARE INDICATED IN ROOMS, OPEN AREAS OR SPACES, EXPOSED, SPRAYED FIREPROOFING MATERIAL ON EXISTING OR NEW STRUCTURAL STEEL MEMBERS PROVIDE SPRAY APPLIED SEALER BY "AD FIRE PROTECTION SYSTEMS, AD TC-55"; COLOR TO BE SELECTED BY ARCHITECT.

D. INTUMESCENT FIREPROOFING OF EXPOSED STRUCTURAL STEEL MEMBERS NOT SPECIFIED ELSEWHERE ON THE CONSTRUCTION DRAWINGS SHALL BE "CARBOLINE-A/D FIREFILM III" BY A/D FIRE PROTECTION SYSTEMS, INC.

1. SURFACE PREPARATION AND PRIMERS SHALL BE ACCEPTABLE TO CARBOLINE-A/D FIRE PROTECTION SYSTEMS, INC., IN WRITING.
2. FINAL FINISH COAT SHALL BE AS SECLECTED BY ARCHITECT FROM CARBOLINE-A/D FIRE PROTECTION SYSTEMS, INC. "CARBOLINE A/D COLORCOAT"

2.1.5 FIRESTOPPING, THROUGH-PENETRATION FIRE STOP AND FIRE RESISTIVE JOINT SYSTEM

A. SCOPE OFNON-COMPLYING OR MISSING FIRESTOPPING, THROUGH-PENETRATION FIRE STOP AND FIRE RESISTIVE JOINT SYSTEM SHALL BE INCLUDED IN THE BID PROPOSAL. NO CHANGE ORDER WILL BE ACCEPTED FOR THIS WORK AFTER AWARD. REFER TO "GENERAL CONDITIONS" ARTICLE 1.1.1-SUMMARY, PARAGRAPH "C", "D", "E", "F" AND "K".

B. FOR FIRE RATED WALL, NEW FIRESTOPPING, THROUGH-PENETRATION FIRE STOP AND FIRE RESISTIVE JOINT SYSTEM APPLICATION TO NEW AND EXISTING FIRE RATED ELEMENTS, PROVIDE SYSTEMS IN COMPLIANCE WITH:

1. FIRE STOOPING AND THROUGH-PENETRATION FIRESTOP AS DETERMINED PER ASTM E 814 FOR:
   a. FLOORS.
   b. ROOFS.
   c. WALLS AND PARTITIONS.
   d. SMOKE BARRIERS.
   e. CONSTRUCTION ENCLOSING COMPARTMENTALIZED AREAS.
2. FIRE RESISTIVE JOINT SYSTEMS AS DETERMINED PER NFPA 285 AND UL 2079.
   a. FLOOR-TO-FLOOR JOINTS.
   b. FLOOR-TO-WALL JOINTS.
   c. HEAD-OF-WALL JOINTS.
   d. WALL-TO-WALL JOINTS.
   e. JOINTS BETWEEN PERIMETER EDGE OF FIRE-RESISTANCE-RATED FLOOR ASSEMBLIES AND BACK OF NON-FIRE-RESISTANCE-RATED, EXTERIOR, GLAZED ALUMINUM CURTAIN WALLS.

C. DETAILS INDICATED ON DRAWINGS SERIES A700 ARE SELECTIVE OF TYPICAL APPLICATIONS AND DO NOT REFLECT THE FULL UL TESTS IN VOLUMES 2A AND 2B. CONTRACTOR TO SUBMIT APPLICABLE TESTS FOR SPECIFIC INSTALLATION FOR REVIEW AND APPROVAL AS REQUIRED BY GENERAL CONDITIONS OF THE CONTRACT, ARTICLE 1.2- SUBMITTAL PROCEDURES ON SHEET G-002.

2.1.6 ACCESS PANELS/DOORS

A. ACCESS PANELS OR DOORS IN PARTITIONS AND CEILINGS REQUIRED TO GAIN ACCESS TO CONCEALED VALVES, CONTROLS, ELECTRICAL CONNECTION, MECHANICAL, PLUMBING OR OTHER CONCEALED WORK AND MEP SYSTEMS, DEVICES AND EQUIPMENTS SHALL NOT BE INSTALLED WITHOUT PRIOR COORDINATION WITH THE ARCHITECT/ENGINEER.

B. SUBMIT PRODUCT DATA AND SHOP DRAWINGS OF ACCESS DOOR AND FRAME FOR EACH TYPE SHOWING FIRE RATING, MATERIALS, INDIVIDUAL COMPONENTS AND PROFILES, FINISHES AND INSTALLATION DETAILS AND ATTACHMENT TO OTHER WORK. SUBMIT REFLECTED CEILING PLAN SHOWING CEILING-MOUNTED ITEMS INCLUDING ACCESS DOORS AND FRAMES, LIGHTING FIXTURES, DIFFUSERS, GRILLES, SPEAKERS, SPRINKLERS, AND SPECIAL TRIM ARE SHOWN AND COORDINATED WITH EACH OTHER.

C. FIRE-RATED ACCESS DOORS AND FRAMES UNITS COMPLYING WITH NFPA 80 THAT ARE IDENTICAL TO ACCESS DOOR AND FRAME ASSEMBLIES TESTED FOR FIRE-TEST-RESPONSE CHARACTERISTICS PER THE FOLLOWING TEST METHOD AND THAT ARE LISTED AND LABELED BY UL OR ANOTHER TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION:
1. NFPA 252 OR UL 10B)FOR VERTICAL ACCESS DOORS AND FRAMES.
2. ASTM E 119 OR UL 263 FOR HORIZONTAL ACCESS DOORS AND FRAMES

D. ACCEPTABLE MANUFACTURERS FOR VERTICAL INSTALLATION (PARTITIONS) AND FIRE RATED HORIZONTAL INSTALLATION (CEILINGS) PROVIDE ACCESS DOORS AND FRAMES:

1. ACUDOR PRODUCTS, INC.
2. J. L. INDUSTRIES, INC.
3. KARP ASSOCIATES, INC.
4. LARSEN'S MANUFACTURING COMPANY.
   a. MATERIAL: STEEL UNLESS OTHERWISE INDICATED ON DRAWINGS.
   b. INSTALLATION: FLUSH TRIMLESS FRAME
   c. FINISH: PAINT
   d. COLOR: AS SELECTED BY ARCHITECT TO MATCH ADJACENT PARTITION AND CEILING COLOR
   e. TEXTURE: AS SELECTED BY ARCHITECT

E. ACCEPTABLE MANUFACTURERS FOR NONE FIRE RATED HORIZONTAL INSTALLATION (CEILINGS), PROVIDE ACCESS DOORS AND FRAMES:

1. WIND-LOCK1055 LEISCZ'S BRIDGE ROAD, PA 19533, 1-800-872-5625
2. PRODUCT: STEALTH GFRG.
3. INSTALLATION: FLUSH TRIMLESS FRAME.
4. FINISH: PAINT
5. COLOR: AS SELECTED BY ARCHITECT
6. TEXTURE: AS SELECTED BY ARCHITECT AND INDICATED ON DRAWINGS

2.1.7 GYPSUM BOARD ASSEMBLIES

1- GENERAL

A. COMPLY WITH ASTM C 840 AND GA 216 FOR GYPSUM BOARD PRODUCT INSTALLATION.

B. COMPLY WITH ASTM C 36/C 36M OR ASTM C 1396/C 1396M, AS APPLICABLE TO TYPE OF GYPSUM BOARD INDICATED AND WHICHEVER IS MORE STRINGENT.

C. SIZE: PROVIDE IN MAXIMUM LENGTHS AND WIDTHS AVAILABLE THAT WILL MINIMIZE JOINTS IN EACH AREA AND THAT CORRESPOND WITH SUPPORT SYSTEM INDICATED.

D. FIRE-TEST-RESPONSE CHARACTERISTICS: FOR GYPSUM BOARD ASSEMBLIES WITH FIRE-RESISTANCE RATINGS, PROVIDE MATERIALS AND CONSTRUCTION IDENTICAL TO THOSE TESTED IN ASSEMBLY INDICATED ACCORDING TO ASTM E 119 BY AN INDEPENDENT TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION.

E. SOUND TRANSMISSION CHARACTERISTICS: FOR GYPSUM BOARD ASSEMBLIES WITH STC RATINGS, PROVIDE MATERIALS AND CONSTRUCTION IDENTICAL TO THOSE TESTED IN ASSEMBLY INDICATED ACCORDING TO ASTM E 90 AND CLASSIFIED ACCORDING TO ASTM E 413 BY A QUALIFIED INDEPENDENT TESTING AGENCY.

F. REFER TO SCHEDULE OF MATERIALS AND FINISHES ON FINISH PLAN (S) SHEETS FOR SPECIFIED APPLIED AND FLUSH TYPE WALL BASE AND OTHER APPLIED FINISH MATERIALS.

G. FOR STANDARD PARTITION ASSEMBLIES, GYPSUM WALLBOARD PANELS SHALL BE REGULAR TYPE, 5/8 THICK WITH TAPERED LONG EDGE UNLESS OTHERWISE INDICATED ON PARTITION ASSEMBLIES ON PARTITION TYPE SHEETS.

H. FOR FIRE RATED PARTITION ASSEMBLIES, GYPSUM WALLBOARD PANELS SHALL BE TYPE "X" OR AS TESTED BY MANUFACTURER FOR REQUIRED FIRE RATING, 5/8 INCHES THICK, WITH TAPERED LONG EDGE UNLESS OTHERWISE INDICATED ON PARTITION ASSEMBLIES ON PARTITION TYPE SHEETS.

I. ALL ACOUSTICAL STC/MTC RATED PARTITION CONSTRUCTION SHALL EXTEND TO THE BOTTOM OF STRUCTURE AND HAVE BOUNDARY TERMINATION SEALED AIR TIGHT WITH ACOUSTICAL SEALANT. FIRE RATED SEALANT SHALL BE USED AT FIRE RATED PARTITIONS.

J. ISOLATE PERIMETER OF GYPSUM BOARD APPLIED TO NON-LOAD-BEARING PARTITIONS AT STRUCTURAL ABUTMENTS, BUILDING CORE WALLS, EXCEPT FLOORS. PROVIDE 1/4-TO 1/2-INCH WIDE SPACES AT THESE LOCATIONS, AND TRIM EDGES WITH EDGE TRIM WHERE EDGES OF PANELS ARE EXPOSED. SEAL JOINTS BETWEEN EDGES AND ABUTTING STRUCTURAL SURFACES WITH ACOUSTICAL OR FIRE RESISTIVE JOINT SEALANT AS APPLICABLE.

K. DO NOT MECHANICALLY SECURE NEW PARTITIONS TO EXISTING BUILDING WINDOW MULLION, WINDOW SILLS OR PERIMETER BUILDING CLIMATE CONTROL UNIT ENCLOSURE. SUBMIT PROPOSED METHOD OF ATTACHMENT FOR REVIEW AND APPROVAL IF NOT SPECIFICALLY DETAILED IN THIS CONSTRUCTION DOCUMENTS SET.

1. ISOLATE STUDS INSTALLED DIRECTLY AGAINST BUILDING

2.0 CONSTRUCTION DRAWINGS- Continued

4- NON-LOAD BEARING STEEL FRAMING

A. STRUCTURAL PROPERTIES AND LIMITING HEIGHT OF METAL STUD SHALL BE PER ASTM C754 AND PER MANUFACTURER SPECIFICATION FOR BUT NOT LESS THAN THE FOLLOWING:

1. METAL STUDS ARE TO BE PLACED 16 INCHES ON CENTER UNLESS OTHERWISE NOTED ON PARTITION TYPE SHEETS.
2. METAL TRACK AND STUDS ARE 20 GAGE UNLESS OTHERWISE NOTED ON PARTITION TYPE SHEETS.
3. DEFLECTION CRITERIA FOR METAL STUDS INSTALLED FROM TOP OF SLAB TO UNDERSIDE OF SLAB ABOVE, REGARDLESS OF THE NUMBER OF LAYERS OF GYPSUM WALL BOARD PANELS IS L/240 UNLESS OTHERWISE INDICATED.
4. STEEL DRILL SCREWS: ASTM C 1002, UNLESS OTHERWISE INDICATED.
5. USE SCREWS COMPLYING WITH ASTM C 954 FOR FASTENING PANELS TO STEEL MEMBERS FROM 0.033 TO 0.112 INCH THICK.
6. FOR FASTENING CEMENTITIOUS BACKER UNITS, USE SCREWS OF TYPE AND SIZE RECOMMENDED BY PANEL MANUFACTURER.

B. SPECIFIED METAL TRACK FASTENERS ASSUMES SLAB IS NOT POST TENSIONED. ALTERNATE FASTENERS MAY CONSIST OF ONE OF THE FOLLOWING:

1. 3/16" DIAM. TAPCON ANCHORS W/1 1/4" EMBED. @24" O.C. STAGGERED AND AT FREE ENDS OF TRACK.
2. 2" LONG X 5/16" INSIDE DIAM. HILTI HY-150 ADHESIVE SLEEVE ANCHORS W/REMOVABLE RODS USING HILTI HY-20 ADHESIVE AND 1 3/4" MIN. EMBEDDED 4'-0" O.C. AND AT FREE ENDS OF TRACK.
3. 3/8" DIAM. HILTI KB-11 EXPANSION ANCHORS W/1 1/2" EMBED. @ 4'-0" O.C. AND AT FREE ENDS OF TRACK. NOT TO BE FASTENED TO LIGHTWEIGHT CONCRETE.

C. DEFLECTION TRACK: PROVIDE WHERE EXISTING FLOOR OR ROOF FRAMING MEMBERS IS OF LIGHT STEEL OR WOOD JOIST FRAMING SYSTEM. STEEL SHEET TOP RUNNER MANUFACTURED TO PREVENT CRACKING OF FINISHES APPLIED TO INTERIOR PARTITION FRAMING RESULTING FROM DEFLECTION OF STRUCTURE ABOVE; IN THICKNESS NOT LESS THAN INDICATED FOR STUDS AND IN WIDTH TO ACCOMMODATE DEPTH OF STUDS.

1. AVAILABLE PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   a. STEEL NETWORK INC. VERTITRACK VTD SERIES.
   b. SUPERIOR METAL TRIM; SUPERIOR FLEX TRACK SYSTEM (SFT).

D. METAL STUDS SHALL BE INSTALLED A MINIMUM OF 1/2 INCHES BELOW TOP TRACK AT ALL TIMES TO ALLOW FOR EXISTING FLOOR OR ROOF DEFLECTION UNLESS ROOF AND FLOOR SLAB CONSTRUCTION IS OF LIGHT STEEL OR WOOD JOIST FRAMING SYSTEM.

E. DOUBLE STUDS ARE REQUIRED AT BOTH JAMBS OF DOOR FRAMES AND HEADER.

F. STUDS AT DOOR JAMBS AND ON TOPS OF DOOR FRAMES MUST BE SCREWED TO RUNNERS AT TOP, BOTTOMS AND BOTH SIDES.

G. PARTITIONS SHALL NOT BE FASTENED OR BRACED TO DUCTWORK, CONDUIT OR ANY OVERHEAD PIPING.

H. PROVIDE FLAT STRAP PLATE SECURED TO METAL DECK FOR TOP TRACK ATTACHMENT WHERE PARTITION RUN IS PARALLEL TO METAL DECK FLUTES. METAL PLATE SHALL ENGAGE AT LEAST 3 DECK FLUTES.

1. WIDTH: 4" MINIMUM.
2. LENGTH: 12" OR 3 DECK FLUTES WHICHEVER IS GREATER.
3. THICKNESS: 0.0625 MINIMUM.

5- ROUGH CARPENTRY

A. INTERIORS ROUGH CARPENTRY WOOD PRODUCTS USED FOR EXPOSED OR CONCEALED BLOCKING APPLICATION SHALL BE "TYPE A", FIRE RETARDANT TREATED TYPE COMPLYING WITH "AWPA C20" FOR LUMBER AND "AWPA C27 FOR PLYWOOD.

1. FIRE RETARDANT TREATED PLYWOOD BACKING PANELS SHALL BE TYPE "A" NOT LESS THAN 3/4 INCHES NOMINAL THICKNESS.
2. FOR EXPOSED FIRE RETARDANT TREATED LUMBER OR PLYWOOD INDICATED TO RECEIVE A STAINED OR NATURAL FINISH, USE CHEMICAL FORMULATIONS THAT DO NOT BLEED THROUGH, CONTAIN COLORANTS, OR OTHERWISE ADVERSELY AFFECT FINISHES.
3. USE FIRE RETARDANT TREATED CONCEALED BLOCKING FOR ITEMS INDICATED ON THE DRAWINGS AND NOT LIMITED TO THE FOLLOWING APPLICATION:
   a. FRAMING FOR RAISED PLATFORMS.
   b. UNDERLAYMENT FOR WOOD FLOORS.
   c. NAILING STRIPS.
   d. FURRING STRIPS.
   e. FRAMING FOR NON-LOAD-BEARING INTERIOR PARTITIONS WHERE INDICATED.
   f. ROOF CONSTRUCTION.
   g. PLYWOOD BACKING PANELS FOR TECHNOLOGY ROOMS, ELECTRICAL AND TELEPHONE PANELS, DOC PS 1, EXPOSURE 1, C-D PLUGGED NOT LESS THAN 3/4 INCHES NOMINAL THICKNESS.
   h. PLYWOOD BLOCKING FOR AV VISUAL DISPLAY, ART WORK AND OTHER EQUIPMENT MOUNTED ON PARTITIONS, COLUMNS AND GYPSUM BOARD CONSTRUCTION.
   i. PLYWOOD BACKING PANELS CONCEALED IN WALL CAVITY BEHIND OVERHEAD FURNITURE BINS, UPPER MILLWORK CABINET AND AS REQUIRED BY THE AMERICAN WOODWORK INSTITUTE FOR SUPPORT OF ARCHITECTURAL WOODWORK.

6- TRIM ACCESSORIES

A. FOR TRIM WITH BACK FLANGES INTENDED FOR FASTENERS, ATTACH TO FRAMING WITH SAME FASTENERS USED FOR PANELS. OTHERWISE, ATTACH TRIM ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

B. CONTROL JOINTS: INSTALL CONTROL JOINTS AT LOCATIONS IN ACCORDING TO ASTM C 840 FOR PLACING CONTROL AND EXPANSION JOINTS AND IN SPECIFIC LOCATIONS APPROVED BY ARCHITECT FOR VISUAL EFFECT. CONTROL JOINTS SHALL BE PROVIDED AT PARTITIONS WHERE THE UNINTERRUPTED SPAN IS 30 FEET IN ANY DIRECTION. EXPANSION JOINTS SHALL BE PROVIDED TO COINCIDE WITH BUILDING EXPANSION JOINTS.

C. ON ALL FIRE RATED PARTITIONS – ALL PENETRATIONS AND JOINTS ARE TO BE TAPED AND SPACKLED SLAB TO SLAB.

D. CORNER BEADS ARE TO BE INSTALLED ON ALL CORNERS AND TO BE SPACKLED SMOOTH WITH ADJACENT AREA.

E. TRIM ACCESSORIES.

1. INTERIOR TRIM: ASTM C 1047.
2. MATERIAL: GALVANIZED OR ALUMINUM-COATED STEEL SHEET.
3. SHAPES:
   a. CORNERBEAD.
   b. BULLNOSE BEAD.
   c. LC-BEAD: J-SHAPED; EXPOSED LONG FLANGE RECEIVES JOINT COMPOUND.
   d. L-BEAD: L-SHAPED; EXPOSED LONG FLANGE RECEIVES JOINT COMPOUND.
   e. U-BEAD: J-SHAPED; EXPOSED SHORT FLANGE DOES NOT RECEIVE JOINT COMPOUND.
   f. EXPANSION (CONTROL) JOINT.
   g. CURVED-EDGE CORNERBEAD: WITH NOTCHED OR FLEXIBLE FLANGES.

7- INSULATION

A. PROVIDE INSULATION AND RELATED MATERIALS WITH THE FIRE-TEST-RESPONSE CHARACTERISTICS INDICATED, AS DETERMINED BY TESTING IDENTICAL PRODUCTS PER TEST METHOD INDICATED BELOW BY UL OR ANOTHER TESTING AND INSPECTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. IDENTIFY MATERIALS WITH APPROPRIATE MARKINGS OF APPLICABLE TESTING AND INSPECTING AGENCY.

1. SURFACE-BURNING CHARACTERISTICS: ASTM E 84.
2. FIRE-RESISTANCE RATINGS: ASTM E 119.
3. COMBUSTION CHARACTERISTICS: ASTM E 136.

B. UNLESS OTHERWISE INDICATED ON THE CONSTRUCTION DRAWINGS, OR IN THE ABSENCE OF SPECIFICATION, PROVIDE BATT OR ROLL TYPE INSULATION PRODUCTS AS FOLLOWS:

1. FOR NON-RATED GYPSUM BOARD PARTITION ASSEMBLIES, UNFACED GLASS-FIBER SOUND ATTENUATION BLANKET INSULATION ASTM C 665, TYPE I (BLANKETS WITHOUT MEMBRANE FACING); CONSISTING OF FIBERS; WITH MAXIMUM FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES OF 25 AND 50, RESPECTIVELY.
2. FOR FIRE RATED GYPSUM BOARD PARTITION ASSEMBLIES, UNFACED, SLAG-WOOL-FIBER/ROCK-WOOL-FIBER BLANKET INSULATION: ASTM C 665, TYPE I (BLANKETS WITHOUT MEMBRANE FACING); CONSISTING OF FIBERS; WITH MAXIMUM FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES OF 25 AND 50, RESPECTIVELY.
   a. THICKNESS: AS INDICATED ON PARTITION TYPES DRAWING (S) BUT NO LESS THAN 2 INCHES WHEN 2 1/2 INCHES STUD ARE INDICATED FOR UNFACED GLASS-FIBER SOUND ATTENUATION BLANKET AND NO LESS THAN 1 1/2 INCHES WHEN 2 1/2 INCHES SHAFT WALL STUD ARE INDICATED FOR UNFACED, SLAG-WOOL-FIBER/ROCK-WOOL-FIBER BLANKET INSULATION.
   b. WIDTH: TO SUIT METAL STUD FRAMING SPACING INDICATED ON PARTITION TYPES DRAWING (S)
   c. DENSITY: 3.0 PCF MINIMUM FOR AN STC RATING OF 45 MINIMUM.
   d. INSTALLATION: PLACE INSULATION IN CAVITIES FORMED BY FRAMING MEMBERS TO PRODUCE A FRICTION FIT BETWEEN EDGES OF INSULATION AND ADJOINING FRAMING MEMBERS.
   e. LOCATION: MECHANICAL ROOMS, DATA CENTERS, UPS, SWITCHGEAR, BATTERY STORAGE ROOMS AND ANY ROOM WITH ELECTRICAL EQUIPMENT SUCH AS POWER DISTRIBUTION UNITS, TRANSFORMERS AND TECHNOLOGY ROOMS (ALSO KNOWN AS IDF, MDF, TR, LAN), AREA SEPARATION, CORRIDOR WALLS, TENANT SEPARATION, FIRE AREA SEPARATIONS, FIRE BARRIERS, SMOKE BARRIERS, SHAFT WALLS OF ELEVATORS, ELECTRICAL AND MECHANICAL SHAFTS AND WHERE INDICATED ON THE CONSTRUCTION DOCUMENTS
2. FOR METAL-FRAMED WALL CAVITIES WHERE CAVITY HEIGHTS EXCEED 8 FEET SUPPORT UNFACED BLANKETS MECHANICALLY.
3. FOR PARTITIONS NOT EXTENDING THROUGH SUSPENDED CEILING SYSTEM, INSTALL, 3 INCHES THICK, UNFACED FIBER SOUND ATTENUATION BLANKET INSULATION OVER SUSPENDED CEILINGS GRID AT PARTITIONS IN A WIDTH THAT EXTENDS 48 INCHES ON CENTER.
   a. PLACE ON EITHER SIDE OF PARTITION FOR THE ENTIRE RUN OF THE PARTITION WITHIN THE ROOM OR SPACE.
4. WHEN NEW PARTITION OR MILLWORK (DEMOUNTABLE PARTITION SYSTEM) INTERSECTS BUILDING EXTERIOR AT PERIMETER WALL CLIMATE CONTROL UNIT ENCLOSURES (CONVECTORS, INDUCTION UNIT, ETC.) PROVIDE ACOUSTIC PILLOWS BY "CONTROLLED ACOUSTICS CORPORATION" OR APPROVED EQUAL WITHIN CAVITY OF THE CLIMATE CONTROL UNIT ENCLOSURES COINCIDING WITH THE PARTITION SYSTEM INSTALLED TO MAINTAIN STC RATING AND ELIMINATE FLANKING NOISE BETWEEN ADJACENT ROOMS OR SPACES.
   a. WHERE EXISTING PARTITIONS ARE SCHEDULED TO REMAIN, PROVIDE SAME ACOUSTIC PILLOWS.

8- VAPOR RETARDERS

A. UNLESS OTHERWISE INDICATED ON THE CONSTRUCTION DRAWINGS, OR IN THE ABSENCE OF SPECIFICATION, PROVIDE VAPOR RETARDERS TYPE PRODUCTS AS FOLLOWS:

B. LOCATION: ON NON-FIRE RATED GYPSUM BOARD PARTITION ASSEMBLIES, PROVIDE REINFORCED-POLYETHYLENE VAPOR RETARDERS; 2 OUTER LAYERS OF POLYETHYLENE FILM LAMINATED TO AN INNER REINFORCING LAYER CONSISTING OF EITHER NYLON CORD OR POLYESTER SCRIM AND WEIGHING NOT LESS THAN 25 LB/1000 SQ. FT., WITH MAXIMUM PERMEANCE RATING OF 0.0507 PERM.

1. PRODUCTS:
   a. RAVEN INDUSTRIES INC.; DURA-SKRIM 6WW.
   b. REEF INDUSTRIES, INC.; GRIFFOLYN T-65.
2. LOCATION: ON FIRE RATED GYPSUM BOARD PARTITION ASSEMBLIES PROVIDE FIRE-RETARDANT, REINFORCED-POLYETHYLENE VAPOR RETARDERS: 2 OUTER LAYERS OF POLYETHYLENE FILM LAMINATED TO AN INNER REINFORCING LAYER CONSISTING OF EITHER NONWOVEN GRID OF NYLON CORD OR POLYESTER SCRIM AND WEIGHING NOT LESS THAN 22 LB/1000 SQ. FT., WITH MAXIMUM PERMEANCE RATING OF 0.1317 PERM AND WITH FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES OF NOT MORE THAN 5 AND 60, RESPECTIVELY.
1. PRODUCTS:
   a. RAVEN INDUSTRIES INC.; DURA-SKRIM 2FR.
   b. REEF INDUSTRIES, INC.; GRIFFOLYN T-55 FR.
   c. LOCATION: MECHANICAL ROOMS, DATA CENTERS, UPS, SWITCHGEAR, BATTERY STORAGE ROOMS, AND ANY ROOM WITH ELECTRICAL EQUIPMENTS SUCH AS POWER DISTRIBUTION UNITS, TRANSFORMERS AND TECHNOLOGY ROOMS (ALSO KNOWN AS IDF, MDF, TR, LAN).

C. VAPOR-RETARDER TAPE: PRESSURE-SENSITIVE TAPE OF TYPE RECOMMENDED BY INSULATION MANUFACTURERS FOR SEALING JOINTS AND PENETRATIONS IN VAPOR-RETARDER FACINGS.

9- GYPSUM BOARD FINISHING

A. UNLESS OTHER WISE INDICATED, LEVEL 4 GYPSUM BOARD FINISH SHALL BE THE FINISH LEVEL FOR THIS PROJECT DOCUMENTED HEREWITH.

B. GENERAL: TREAT GYPSUM BOARD JOINTS, INTERIOR ANGLES, EDGE TRIM, CONTROL JOINTS, PENETRATIONS, FASTENER HEADS, SURFACE DEFECTS, AND ELSEWHERE AS REQUIRED TO PREPARE GYPSUM BOARD SURFACES FOR APPLIED FINISHED MATERIALS SPECIFIED ON . PROMPTLY REMOVE RESIDUAL JOINT COMPOUND FROM ADJACENT SURFACES.

C. PREFILL OPEN JOINTS, ROUNDED OR BEVELED EDGES, AND DAMAGED SURFACE AREAS.

D. APPLY JOINT TAPE OVER GYPSUM BOARD JOINTS, EXCEPT THOSE WITH TRIM HAVING FLANGES NOT INTENDED FOR TAPE.

E. GYPSUM BOARD FINISH LEVELS: REFER TO SCHEDULE OF FINISHES ON FINISH PLAN AND COORDINATE GYPSUM FINISH PANELS TO LEVELS INDICATED BELOW:

1. LEVEL 1: CEILING PLENUM AREAS, CONCEALED AREAS, AND WHERE INDICATED.
2. LEVEL 2: PANELS THAT ARE SUBSTRATE FOR TILE AND PANELS THAT ARE SUBSTRATE FOR ACOUSTICAL TILE.
3. LEVEL 3: SURFACES RECEIVING MEDIUM OR HEAVY TEXTURED FINISH BEFORE PAINTING OR HEAVY WALL COVERING AND WHERE LIGHTING IS NOT CRITICAL.
4. LEVEL 4: THIS IS THIS PROJECT STANDARD LEVEL FOR ALL EXPOSED GYPSUM BOARD PARTITIONS SURFACES AND SURFACES RECEIVING LIGHT TEXTURED FINISH, WALL COVERING AND FLAT PAINTS. APPLY REQUIRED DRYWALL PRIMERS TO ROUGH DRYWALL PARTITION SURFACES BEFORE FINAL FINISHES PER ASTM C840 AND AS RECOMMENDED BY APPLIED FINISHED MATERIAL MANUFACTURER.
5. LEVEL 5: FOR SURFACES RECEIVING GLOSS AND SEMIGLOSS ENAMELS, SPECIAL THIN VENEER FINISHES, WRITABLE SURFACE WALL COVERING AND SURFACES SUBJECT TO SEVERE LIGHTING.
   a. EMBED TAPE AND APPLY SEPARATE FIRST, FILL, AND FINISH COATS OF JOINT COMPOUND TO TAPE, FASTENERS, AND TRIM FLANGES, AND APPLY SKIM COAT OF JOINT COMPOUND OVER ENTIRE SURFACE WHERE INDICATED.

2.1.8 FIRE EXTINGUISHER & CABINET

A. PORTABLE FIRE EXTINGUISHERS PLACEMENT & INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 10.

B. FIRE EXTINGUISHER CABINET: BASIS-OF-DESIGN PRODUCT: PROVIDE IN QUANTITIES INDICATED ON THE DRAWINGS ARCHITECTURAL SERIES, VERTICAL DUO, MODEL NUMBER 2409-R2 AND FS-2409-R2 BY LARSEN OR A COMPARABLE PRODUCT BY ONE OF THE FOLLOWING:

1. JL INDUSTRIES, INC.
2. KIDDE FYRNETICS.
3. POTTER ROEMER; DIV. OF SMITH INDUSTRIES, INC.

C. WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE COMPONENTS OF PORTABLE FIRE EXTINGUISHERS THAT FAIL IN MATERIALS OR WORKMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.

1. FAILURES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   a. FAILURE OF HYDROSTATIC TEST ACCORDING TO NFPA 10.
   b. FAULTY OPERATION OF VALVES OR RELEASE LEVERS.
   c. WARRANTY PERIOD: SIX YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

1. MATERIAL: PROVIDE FOR THE ENTIRE PROJECT COLD-ROLLED STEEL SHEET; ASTM A 1008/A 1008M, COMMERCIAL STEEL(CS), TYPE B UNLESS OTHERWISE OTHER INDICATED ON THE DRAWINGS. OTHER MATERIALS SUCH AS STAINLESS STEEL, ANODIZED ALUMINUM OR BRONZE ANODIZED ALUMINUM MAY BE INDICATED ELSEWHERE ON THE DRAWINGS.
2. CABINET TYPE: SUITABLE FOR SPECIFIED FIRE EXTINGUISHER
3. CABINET CONSTRUCTION: NONRATED AND FIRE RATED NO LESS THAN RATING OF ADJACENT WALLS INDICATED.
4. CABINET MATERIAL: ENAMELED-STEEL SHEET UNLESS SPECIFIED ON DRAWINGS.
5. RECESSED CABINET: CABINET BOX RECESSED IN WALLS OF SUFFICIENT DEPTH TO SUIT STYLE OF TRIM INDICATED.
6. EXPOSED FLAT TRIM: ONE-PIECE COMBINATION TRIM AND PERIMETER DOOR FRAME OVERLAPPING SURROUNDING WALL SURFACE WITH EXPOSED TRIM FACE AND WALL RETURN AT OUTER EDGE (BACKBEND) OF 1/4 TO 5/16 INCH.
7. CABINET TRIM MATERIAL: SAME MATERIAL AND FINISH AS DOOR.
8. DOOR MATERIAL: STEEL SHEET.
9. DOOR STYLE: VERTICAL DUO PANEL WITH FRAME.
10. DOOR GLAZING: ACRYLIC SHEET.
11. ACRYLIC SHEET COLOR: CLEAR TRANSPARENT.
12. DOOR HARDWARE: MANUFACTURER'S STANDARD DOOR-OPERATING HARDWARE OF PROPER TYPE FOR CABINET TYPE, TRIM STYLE, AND DOOR MATERIAL AND STYLE INDICATED.
   a. PROVIDE PROJECTING LEVER HANDLE WITH CAM-ACTION LATCH IN CLEAR ANODIZED FINISH. WHERE STAINLESS STEEL RECESSED CABINETS ARE INDICATED, LEVER FINISH SHALL BE # 4 STAINLESS STEEL. WHERE BRONZE ANODIZED ALUMINUM FIRE EXTINGUISHER CABINETS ARE INDICATED, LEVER FINISH SHALL BE SATIN BRONZE.
   b. PROVIDE CONCEALED HINGE PERMITTING DOOR TO OPEN 180 DEGREES.
14. MOUNTING BRACKET: MANUFACTURER'S STANDARD STEEL, DESIGNED TO SECURE FIRE EXTINGUISHER TO FIRE-PROTECTION CABINET, OF SIZES REQUIRED FOR TYPES AND CAPACITIES OF FIRE EXTINGUISHERS INDICATED, WITH BAKED-ENAMEL FINISH IN RED COLOR.
15. FINISHES:FACTORY PRIMED FOR FIELD PAINTING UNLESS OTHERWISE INDICATED AND SPECIFIED ELSEWHERE ON THE DRAWINGS.
   a. COLOR AND TEXTURE: MATCH COLOR OF ADJACENT WALL IN SEMI GLOSS FINISH.
   b. PAINT SCHEDULE: PAINT INTERIOR AND EXTERIOR OF FIRE EXTINGUISHER CABINET. DO NOT PAINT LEVER.
15. MOUNTING HEIGHT: INSTALL FIRE EXTINGUISHER CABINET WITH TOP AT 4-FEET, 8-INCHES ABOVE CONCRETE SLAB.
16. RECESSED CABINETS AND FIRE EXTINGUISHER SCHEDULE: PROVIDE FOR ENTIRE PROJECT EXCEPT AS INDICATED IN SECTION C4 BELOW.

C. FIRE EXTINGUISHERS

1. GENERAL REQUIREMENTS: PROVIDE INSTRUCTION LABELS, INCLUDE PICTORIAL MARKING SYSTEM COMPLYING WITH NFPA 10, APPENDIX B AND BAR CODING FOR DOCUMENTING FIRE EXTINGUISHER LOCATION, INSPECTIONS, MAINTENANCE, AND RECHARGING
2. FOR RECESSED CABINETS: PROVIDE MULTIPURPOSE DRY-CHEMICAL TYPE IN STEEL CONTAINER, MODEL # MP10, UL-RATED 4A-80BC, 10-LB NOMINAL CAPACITY, WITH MONOAMONIUM PHOSPHATE-BASED DRY CHEMICAL IN ENAMELED-STEEL CONTAINER.
3. FOR SURFACE WALL MOUNT: PROVIDE CARBON DIOXIDE TYPE IN STEEL CONTAINER MODEL # CD10, UL-RATED 10:BC.
4. SCHEDULE: PROVIDE SPECIFIED CARBON DIOXIDE TYPE FIRE EXTINGUISHER IN QUANTITIES INDICATED ON DRAWINGS BUT NOT LESS THAN 1 IN THE FOLLOWING ROOMS OR SPACES IDENTIFIED FOR THAT USE AS PART OF THE FITOUT AND IN EXISTING ROOMS THAT A ARE PART OF THE BUILDING CORE OR BUILDING SPACES ON THE FLOOR(S):
   a. MECHANICAL ROOMS.
   b. UPS AND BATTERY ROOMS
   c. INFORMATION TECHNOLOGY ROOMS AKA DATA CENTERS, IDF, MDF, TR, LAN ETC...
   d. ELECTRICAL, SWITCH AND SWITCH GEAR ROOMS.
   e. TELEPHONE CLOSETS, PBX ROOMS, OR SIMILAR USE ROOMS.
5. MOUNTING BRACKETS: MANUFACTURER'S STANDARD STEEL # 575 DESIGNED TO SECURE FIRE EXTINGUISHER TO WALL OR STRUCTURE, OF SIZES REQUIRED FOR TYPES AND CAPACITIES OF FIRE EXTINGUISHERS INDICATED, WITH BAKED-ENAME FINISH.
   a. COLOR: RED
   b. MOUNTING HEIGHT: INSTALL FIRE EXTINGUISHER WITH FLAT BRACKET LEG AT 3-FEET, 2-INCHES ABOVE CONCRETE SLAB.
6. IDENTIFICATION: PICTOGRAM SIGN OR LETTERING COMPLYING WITH AUTHORITIES HAVING JURISDICTION FOR LETTER STYLE, SIZE, SPACING, AND LOCATION. LOCATE AS INDICATED BY ARCHITECT.
   a. IDENTIFY BRACKET-MOUNTED FIRE EXTINGUISHERS WITH THE WORDS "FIRE EXTINGUISHER" IN RED LETTER DECALS APPLIED TO MOUNTING SURFACE,
   b. ORIENTATION: VERTICAL

E. ADJUSTING AND CLEANING:

1. TOUCH UP MARRED FINISHES, OR REPLACE FIRE-PROTECTION CABINETS THAT CANNOT BE RESTORED TO FACTORY-FINISHED APPEARANCE. USE ONLY MATERIALS AND PROCEDURES RECOMMENDED OR FURNISHED BY FIRE-PROTECTION CABINET MANUFACTURER.
2. REPLACE FIRE-PROTECTION CABINETS THAT HAVE BEEN DAMAGED OR HAVE DETERIORATED BEYOND SUCCESSFUL REPAIR BY FINISH TOUCH-UP OR SIMILAR MINOR REPAIR PROCEDURES

F. SIGNAGE:

1. PROVIDE WALL MOUNTED FIRE EXTINGUISHER LOCATION SIGN ABOVE WALL MOUNTED FIRE EXTINGUISHERS AND FIRE EXTINGUISHERS WITHIN CABINETS.
   a. SIZE: 4" X 6" (LONG DIMENSION VERTICAL)
   b. THICKNESS: 1/8"
   c. BRACKET: EITHER (2) 1" X 1" ALUMINUM ANGLES OR SINGLE "U" FORMING "I" (I) TYPE 6" LONG.
   d. MATERIAL; BASE OF DESIGN: FOR BRACKETS AND SIGN, SATIN ALUMINUM WITH ALL EDGES SANDBLASTED.
      - ALTERNATE: STAINLESS STEEL # 4 FINISH.
   e. GRAPHICS: FIRE EXTINGUISHER PICTORIAL, ENGRAVED AND FILLED WITH MATT RED PAINT.
   f. MOUNTING: MOUNT SIGN WITH BOTTOM AT 80 INCHES CENTERED ON WALL MOUNTED FIRE EXTINGUISHER OR FIRE EXTINGUISHER CABINET.
   g. FOR ITEM (d) SUBMIT LABOR AND MATERIAL FOR ALUMINUM AND STAINLESS STEEL FINISH FOR REVIEW AND APPROVAL.

SAMUEL G. WOOD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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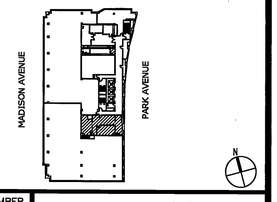
SC110161976 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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DATE	08.08.12
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PROJECT ARCHITECT	MT
DRAWN BY	XX
CHECKED BY	XX
CADD FILE	112162.01-A-005GN.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

PROJECT GENERAL NOTES
SHEET 4 OF 4

REGISTERED ARCHITECT TED MOUDIS No. 016196-1 STATE OF NEW YORK

G-005.00
OF 20

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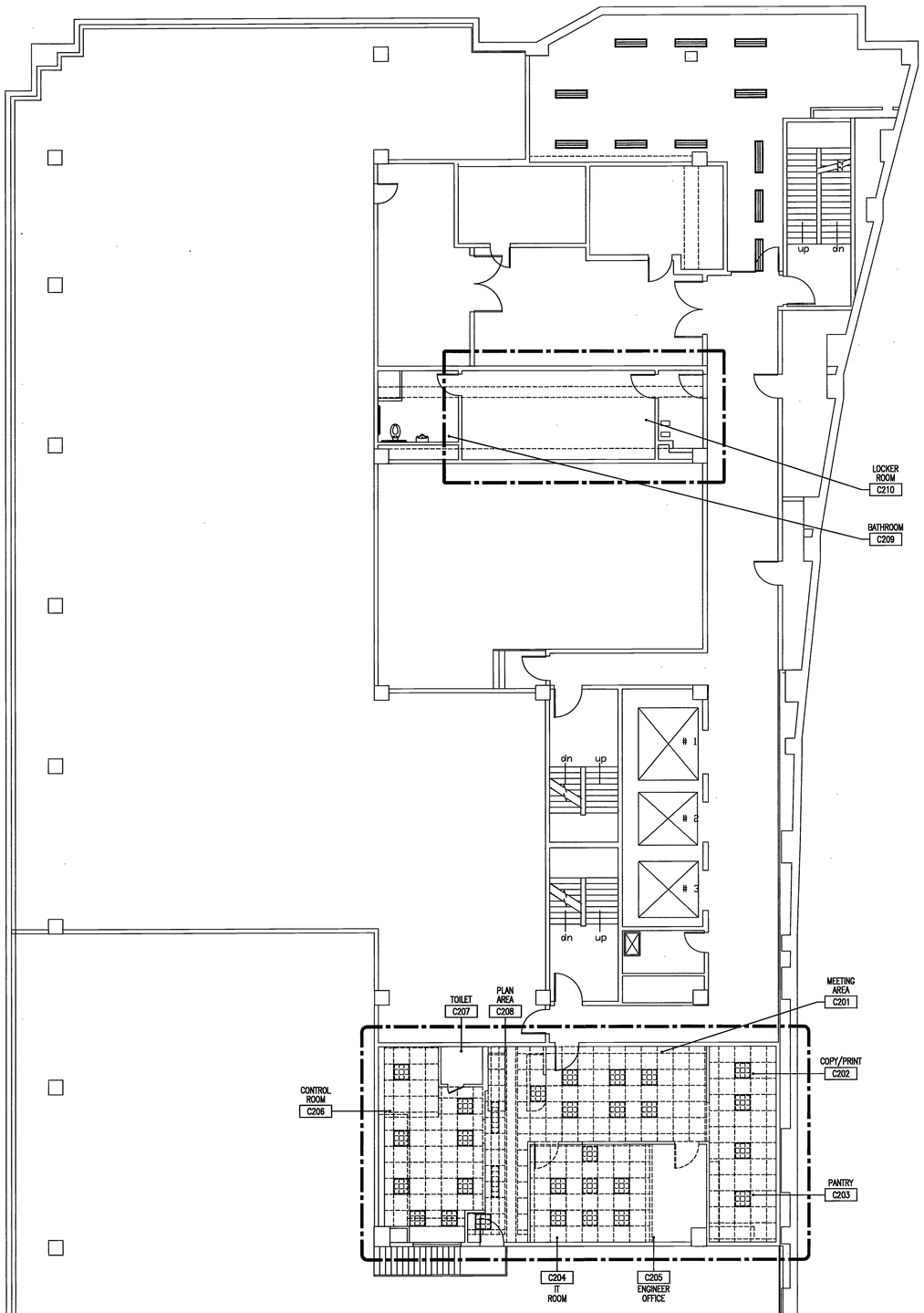

DEMOLITION LEGEND

SYMBOL	DESCRIPTION
———	EXISTING BLDG. CORE, PARTITION AND MILLWORK TO REMAIN
- - - - -	EXISTING CONSTRUCTION TO BE DEMOLISHED

DEMOLITION NOTES

CONSTRUCTION

1. REMOVE ALL EXISTING CONSTRUCTION AS INDICATED ON THESE PLANS INCLUDING DOORS, FRAMES, ALL HANGING CLIPS, STRAPS, HANGERS ETC. FROM SLAB ABOVE.
2. KEEP GYPSUM BOARD FURRING AND WALL FINISH ON COLUMNS, CORE AND PERIMETER CONSTRUCTION, UNO.
3. AREAS OF WORK INTENDED TO REMAIN BUT INADVERTENDLY DAMAGED SHALL BE REPAIRED TO A PRE-DEMOLITION CONDITION AT THE CONTRACTORS EXPENSE.
4. COORDINATE WITH BUILDING MANAGEMENT AND BUILDING RULES & REGULATIONS FOR DOCK PROCEDURES, INCLUDING ELEVATOR TIMES AND NOISE RESTRICTIONS.

FLOOR

5. REMOVE ALL FLOOR FINISHES INCLUDING BUILDING MATERIALS, ADHESIVES, TACKLESS STRIPS, ETC. LEAVE BASE BUILDING FLOOR SLAB AND/OR RAISED FLOOR CLEAN AND LEVEL FOR NEW FINISH APPLICATION.
6. PLUG/FILL ALL UNUSED FLOOR CORES WITH SIMILAR MATERIAL TO MATCH EXISTING ADJACENT CONDITION.

CEILING

7. REMOVE ALL EXISTING CEILING CONSTRUCTION INCLUDING, BUT NOT LIMITED TO: GRID FOR ACCOUSTICAL CEILING SYSTEM AND GYPSUM BOARD CEILING AND SUPPORT SYSTEMS.

RECYCLING

8. CEILING TILES WILL BE RECYCLED; COORDINATE REQUIREMENTS WITH NEW CEILING TILE MANUFACTURER.
9. CARPET WILL BE RECYCLED; COORDINATE REQUIREMENTS WITH NEW CARPET TILE MANUFACTURER.
10. IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO REMOVE, TRANSPORT AND DISPOSE OF DEBRIS. MINIMUM 50% OF ALL DEBRIS CREATED ON JOB SITE SHOULD BE RECYCLED ACCORDING TO CHICAGO CODE.

ELECTRICAL / TELEPHONE / DATA

11. REMOVE ALL EXISTING TELEPHONE AND POWER FLOOR OUTLETS, WALL OUTLETS, JUNCTION BOXES, SWITCHES, WIRING AND CONNECTING CONDUIT BACK TO ELECTRICAL PANEL. PLUG HOLES WITH LIGHTWEIGHT CONCRETE.
12. CM/ G.C. WILL BE RESPONSIBLE TO TRACE, PROTECT & MAINTAIN EXISTING VOICE/ DATA & SECURITY CABLES ETC. FOR DURATION OF CONSTRUCTION THAT MAY SERVE OUTSIDE SCOPE OF WORK.
13. TEMPORARY LIGHTING IS TO BE PROVIDED, AS PER CODE, DURING AND AFTER DEMOLITION WORK IS COMPLETED.

GENERAL

14. asdfGC TO COORDINATE DEMOLITION AS REQUIRED IN ORDER TO MEET DESIGN INTENT FOR THE ENTIRE SCOPE OF THE PROJECT (ARCHITECTURAL, STRUCTURAL, MEP, ETC.)
15. GC SHALL COORDINATE & CONFIRM ALL ACTIVITIES IN CONNECTION WITH WHEN AND HOW WORK IS TO BE PERFORMED WITH OWNER & INCLUDED THIS SERVICE UNDER BASE CONTRACT.
16. THE GENERAL CONTRACTOR SHALL ASCERTAIN THAT THE AREA OF DEMOLITION HAS BEEN CLEARED BY OTHERS OF ALL MOVEABLE EQUIPMENT IN ORDER TO ALLOW FOR DEMOLITION TO PROCEED. GC/CM SHALL NOTIFY OWNER IMMEDIATELY OF ANY SUCH CONDITIONS THAT PREVENTS PROCEEDING WITH DEMOLITION.
17. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND SERVICES FOR ALL DEMOLITION OF WORK, INCLUDING REMOVAL FROM THE BUILDING AS NOTED ON THE DRAWINGS. THE WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
18.
    a. TENANT PARTITIONS OF MASONRY, METAL, DRYWALL AND GLASS, INCLUDING EXCESS COLUMN FURRING. DOORS & HARDWARE AS NOTED ON PLAN.
    b. CEILING, LIGHT FIXTURES, DIFFUSERS, GRILLES, ETC...
    c. UNNECESSARY MECHANICAL EQUIPMENT, STRUCTURAL SUPPORTS, AND ASSOCIATED PIPING. (SEE ENGINEERING DRAWINGS)
    d. UNNECESSARY CONDUITS, WIRING, THERMOSTATS, CONTROL DEVICES, LIGHT SWITCHES AND JUNCTION BOXES. (SEE ENGINEERING DRAWINGS)
    e. ALL OTHER ITEMS AS DEFINED ON DRAWINGS.
    f. REFER TO ENGINEERING DRAWINGS FOR COORDINATION OF ALL DEMOLITION/ RELOCATION OF SMOKE DETECTORS, DIFFUSERS, DUCTWORK, FIRE PROTECTION DEVICES AND ELECTRICAL OUTLETS.
19. PROTECTION OF ADJACENT SURFACES & FINISHES ARE REQUIRED, INCLUDING WINDOW BLINDS.
20. ALL BUILDING STANDARD CONVECTORS TO BE PROTECTED & SEALED DURING DEMOLITION.
21. G.C. TO COORDINATE DEMOLITION AS REQUIRED IN ORDER TO MEET DESIGN INTENT IN THE ENTIRE SCOPE OF THE PROJECT (ARCHITECTURAL, STRUCTURAL, MEP ETC. VIF BEFORE PLACING BID AND MAKE THIS SCOPE OF WORK PART OF THE BASE CONTRACT. NO EXCLUSIONS ACCEPTED)
22. G.C. MUST NOTIFY BUILDING MANAGER OR CHIEF ENGINEER OF ALL WORK WHICH MAY AFFECT THE BASE BUILDING SYSTEMS AND OBTAIN ALL APPROVALS PRIOR TO COMMENCEMENT OF THIS WORK.
23. ALL REMOVAL OF DUCTWORK, EQUIPMENT & CABLING, SHUTDOWN OF ANY SYSTEM INCLUDING PLUMBING, HEATING, ELECTRICAL, AIR CONDITIONING, ETC., SHALL BE COORDINATED WITH THE BUILDING MANAGEMENT & OWNER.
24. G.C. SHALL BE RESPONSIBLE FOR FIELD VERIFICATION & WALK THROUGH WITH SUBCONTRACTORS TO DOCUMENT CONDITIONS & SCOPE OF WORK BEFORE STARTING DEMOLITION WORK. (NO EXCLUSIONS ACCEPTED)
25. ALL DEMOLITION WORK REGARDING "FIRE SAFETY EQUIPMENT" MUST BE COORDINATED WITH BUILDING MANAGEMENT (SEE COVER SHEET) FOR THE DISCONNECT OF THE APPROPRIATE FIRE ALARM EQUIPMENT. ALL NECESSARY FIRE SAFETY EQUIPMENT AND ASSOCIATED CONDUIT & WIRING SHALL BE PROTECTED DURING DEMOLITION. ALL FIRE SAFETY EQUIPMENT SHALL BE KEPT IN FULL OPERATING ORDER AT ALL THE TIMES. FLOOR & ELEVATOR LOBBY TO HAVE ADEQUATE COVERAGE.
26. G.C. IS TO PROTECT ACCESS AREAS TO THE FLOOR DURING DEMOLITION TO AVOID DAMAGING ADJACENT AREAS (FINISH FLOOR SLAB, WINDOWS, WALLS, A/C ENCLOSURES, ETC.) CONTRACTOR IS RESPONSIBLE, AT HIS OWN EXPENSE, FOR REPAIRING OR REPLACING ANY DAMAGED ITEM TO THE SATISFACTION OF BUILDING OWNER/ MANAGER.
27. G.C. TO INSTALL A TEMPORARY FILTER ON THE RETURN AIR DUCT SOURCE BEFORE STARTING DEMOLITION. SEE BUILDING ENGINEER FOR ADEQUATE LOCATION.
28. G.C. SHALL PROVIDE FOR DAILY REMOVAL OF ALL DEMOLITION DEBRIS. AFTER COMPLETION OF DEMOLITION WORK ALL AREAS ARE TO BE LEFT "BROOM CLEAN."
29. ALL TRADES SHALL STAND BY FOR DEMOLITION WHEN REQUIRED. G.C. SHALL INCLUDE IN PRICING IF IT IS OVERTIME WORK.
30. ALL EXISTING FURNITURE REMOVAL IS TO BE BY OWNER.
31. ALL DEMOLITION SUBCONTRACTORS TO REVIEW THE AMOUNT OF DEBRIS REQUIRED FOR REMOVAL DURING WALK THROUGH.
32. DEMOLITION WORK ALL AREAS ARE TO BE LEFT "BROOM CLEAN."

DEMOLITION KEY NOTES

1 ---

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ARCHITECTURE
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79 Madison Avenue, 10th Floor, New York, NY 10016, T. 212 561 2000
The LaSalle Wacker, 221 North LaSalle Street, Chicago, IL 60601, T. 312 924 5000
MCM Architecture Limited, 71 Hopton Street, London SE1 9LR, UK, T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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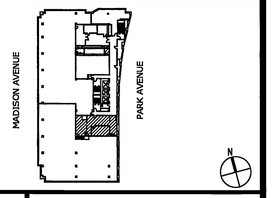
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



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PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
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CHECKED BY	GM
CADD FILE	112162.01-A-102DP-SC2.dw

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL CEILING DEMOLITION PLAN

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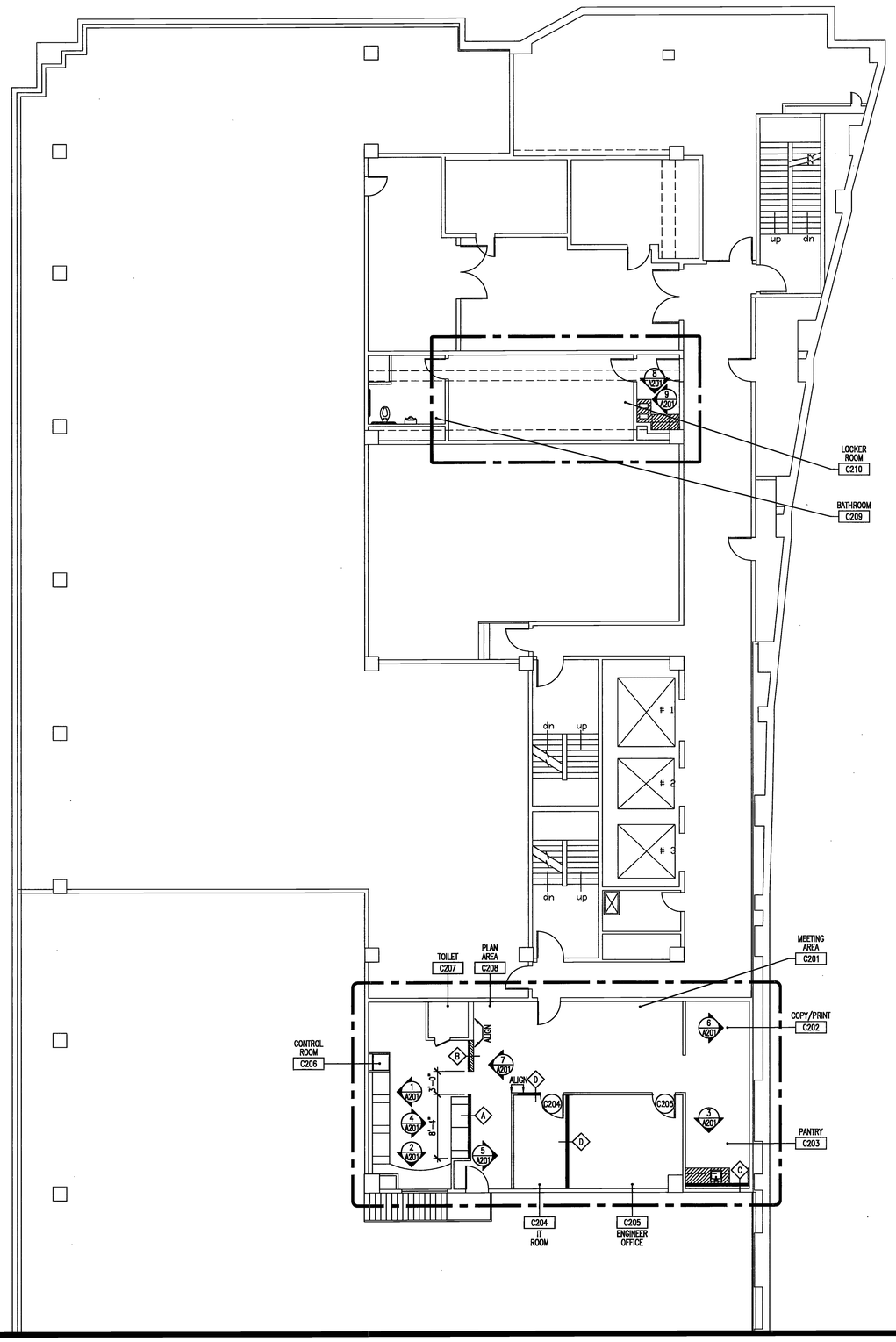
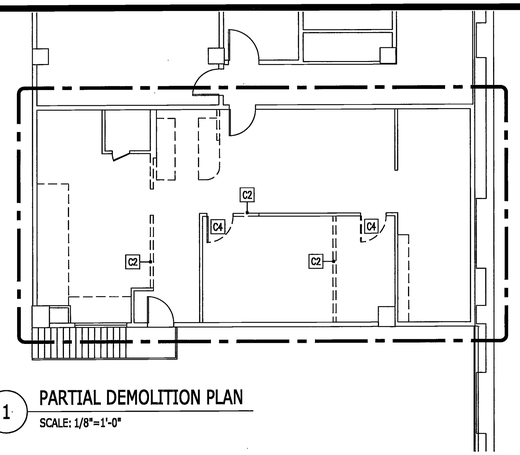
DM-102.00
7 OF 20





1 PARTIAL DEMOLITION PLAN

SCALE: 1/8"=1'-0"

CONSTRUCTION LEGEND

SYMBOL	DESCRIPTION
	EXISTING BLDG. CORE AND PARTITION TO REMAIN
	NEW DRYWALL PARTITION
	NEW WIRED PARTITION BY WIRE CRAFTERS OR APPROVED EQUAL
XXXX	NEW DOOR & DOOR NUMBER
A	FLAG INDICATES SYMBOL FOR PARTITION TYPE LETTER INDICATE PARTITION TYPES
	NEW MILLWORK. SEE KEY PLAN FOR DETAILS

CONSTRUCTION NOTES

REFER TO GENERAL NOTES G-002.00, G-003.00 AND G-003.00.

CONSTRUCTION KEY NOTES

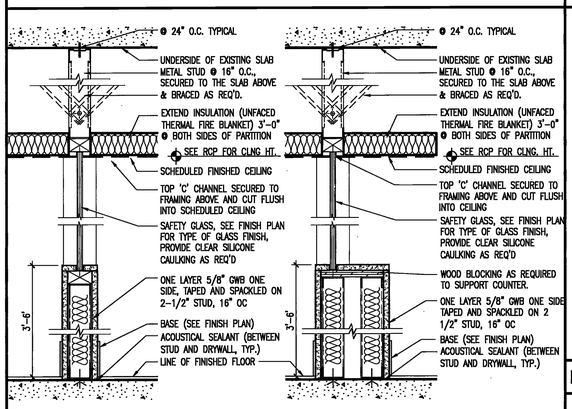
C1 GC TO PROVIDE ACCESS PANEL FOR ELECTRICAL CLOSET AND TO COST INTO BID. NO EXCEPTIONS.

C2 EXISTING PARTITION TO BE DEMOLISHED. PATCH/REPAIR FLOOR AS REQUIRED.

C3 FINISH TO MATCH EXISTING ADJACENT. PATCH AND REPAIR AS REQUIRED.

C4 EXISTING DOOR, FRAME & HARDWARE TO BE DEMOLISHED. PATCH/REPAIR ANY AREA OF WALL AFFECTED BY DEMOLITION AS REQUIRED.

PARTITION TYPES

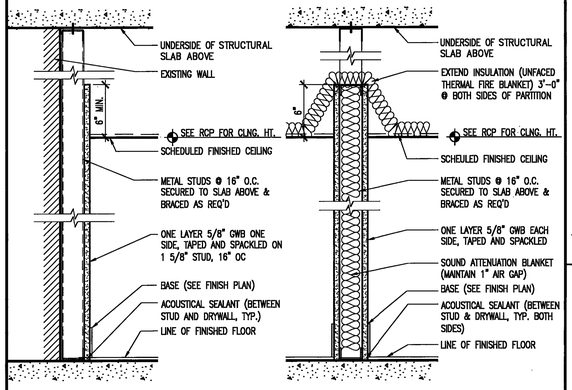


A STUD FRAMELESS GLAZED PARTITION 6" ABOVE FINISH CEILING

SCALE: NOT TO SCALE

B STUD FRAMELESS GLAZED PARTITION 6" ABOVE FINISH CEILING

SCALE: NOT TO SCALE



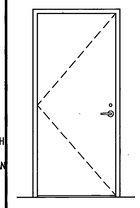
C NON-RATED PARTITION EXTENDED 6" ABOVE CEILING

SCALE: NOT TO SCALE

D NON-RATED PARTITION EXTENDED 6" ABOVE CEILING

SCALE: NOT TO SCALE

DOOR SCHEDULE



DOOR SCHEDULE

HOLLOW METAL DOOR & FRAME W/ 3/4" UNDERCUT

LEVER: SCHLAGE MORTISE L-SERIES;
C204 - STOREROOM FUNCTION
C205 - OFFICE FUNCTION
LEVER MANHATTAN; 626 FINISH

HINGES: 1-1/2 PAIRS-STANLEY #FBB179; 4-1/2"X4-1/2"; 626 FINISH

SILENCERS: IVES # SR 65 (3 FOR EACH DOOR)

CLOSER: SURFACE MOUNTED OVER HEAD DOOR CLOSER BY LCN

DOOR STOP: FLOOR STOP BY FSB #3816; 626 FINISH

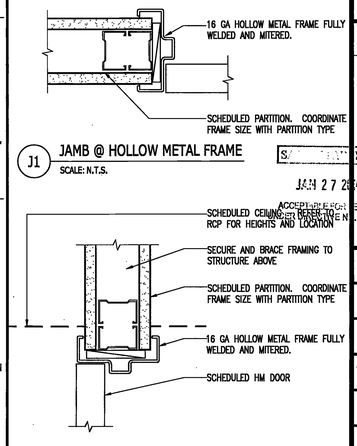
[FOR DOOR C204 ONLY, ADD]

CARD READER: ALL CONDUITS, JUNCTION BOXES BY GC, SEE ENGG DWGS FOR WIRING & SPECS

ELECTRIC STRIKE: BY VON DUPRIN; TIE TO BLDG CLASS 'E' FIRE ALARM SYSTEM

DOOR SCHEDULE DOOR #C204 & C205

HEAD & JAMB DETAILS



J1 JAMB @ HOLLOW METAL FRAME

SCALE: N.T.S.

H1 HEAD @ HOLLOW METAL FRAME

SCALE: N.T.S.

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79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

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Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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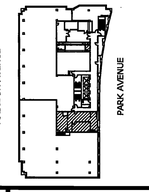

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CADD FILE	112162.01-A-111CP-SC2.DWG

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL CONSTRUCTION PLAN

REGISTERED ARCHITECT TED MOUDIS NO. 010911 STATE OF NY

A-111.00

8 OF 20

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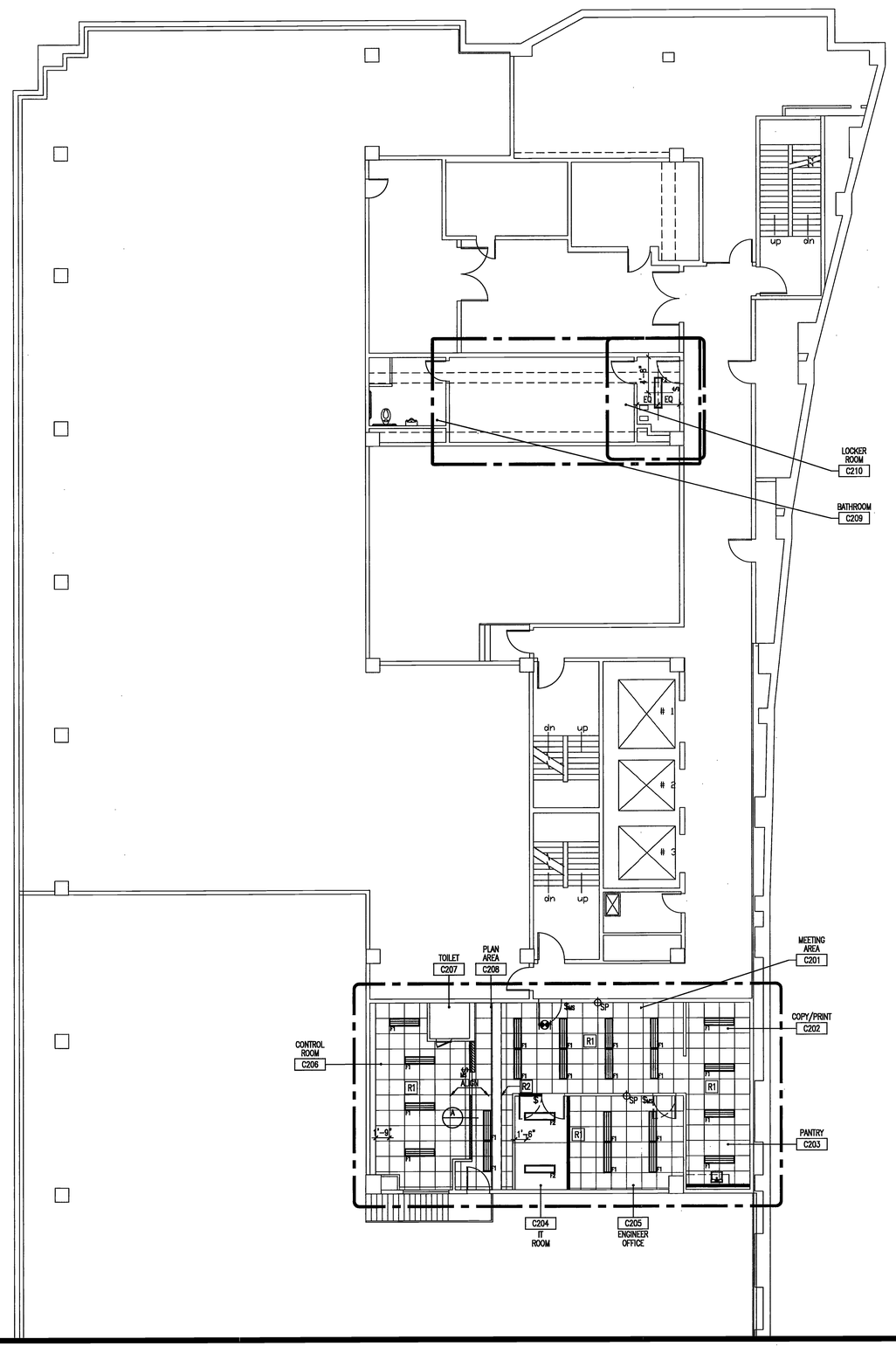

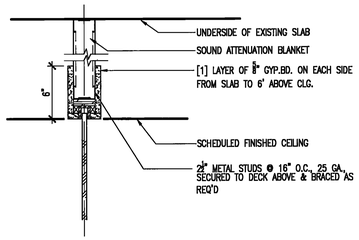

A SECTION DETAIL
SCALE: 1-1/2"=1'-0"

REFLECTED CEILING LEGEND

SYMBOL	DESCRIPTION
	TYPE F1: 1'X4' FLOURESCENT LIGHT FIXTURE BY LITHONIA LIGHTING #RTBB- -1-32WTB-MVOLT-BIHP-L835HTB-PWS1836-NYC
	TYPE F2: 1'X4' FLOURESCENT PENDANT LIGHT FIXTURE BY LEGION LIGHTING, #2600-232 EBO-DL-A10. LAMPING: F32T8/ADV835/ALTO BY PHILIP OR APPROVED EQUAL BY SYLVANIA. FIXTURE ON STEM AND WIREGUARD
$	WALL LIGHT SWITCH TO MATCH BLDG. STANDARD
$os	WALL OCCUPANCY SENSOR LIGHT SWITCH
	EXISTING ACOUSTICAL CEILING & GRID SYSTEM
	NEW ACOUSTICAL CEILING TILES TO MATCH EXISTING

REFLECTED CEILING NOTES

LIGHTING

1. COORDINATE ALL LIGHT SWITCHES AND CIRCUITS OF ALL LIGHTING FIXTURES WITH ARCHITECT, ENGINEER AND TENANT PRIOR TO INSTALLATION.
2. NIGHT LIGHTS, EXIT LIGHTS AND ALARMS SHALL BE PROVIDED BY G.C. AS REQUIRED BY APPLICABLE CODE.
3. ENGINEER TO CHECK AND/OR RECOMMEND BULB WATTAGE AND ADJUSTMENT IN FIXTURE SWITCHING PLACEMENT AS NECESSARY.
4. ALL LIGHTING SHALL BE INSTALLED IN CONFORMANCE WITH ELECTRICAL CODES.
5. SOME LIGHTING FIXTURES MAY REQUIRE LONGER LEAD TIME. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALLOWING SUFFICIENT TIME FOR ORDER PLACEMENT, SUBMITTAL REVIEW, & ORDER RELEASE.
6. SUBSTITUTIONS FOR SPECIFIED LIGHTING PRODUCTS ARE NOT ACCEPTABLE & WILL NOT BE CONSIDERED. FAILURE TO INCLUDE ONE OF SPECIFIED PRODUCTS AS A PART OF BASE BID MAY, AT DISCRETION OF OWNER, INVALIDATE THE ENTIRE LIGHTING PRODUCT BID & EXCLUDE CONTRACTOR FROM FURTHER CONSIDERATION.
7. UNIT PRICING SHOULD BE MADE AVAILABLE ON ALL SPECIFIED LIGHTING FIXTURES.
8. DISTRIBUTOR NET PRICING HAS BEEN SECURED FROM MANUFACTURER OR MANUFACTURER'S REPRESENTATIVE & HAS BEEN USED IN PREPARATION OF PRELIMINARY OPINIONS OF PROBABLE COSTS. A RECORD OF SPECIFIC UNIT COSTS HAS BEEN SHARED WITH OWNER TO ASSIST IN ANALYSIS OF BID SUBMITTALS.
9. U.N.O. LIGHT SWITCH COVER PLATE FINISH TO MATCH BUILDING STANDARD. GANG ALL SWITCHES TOGETHER.
10. LIGHTS WILL BE CONTROLLED VIA WALL MOUNTED MOTION SENSORS. REFER TO ENGINEERING DRAWINGS.

LIFE SAFETY

11. NEW SMOKE DETECTORS AND/OR FIRE ALARM STROBES & SPEAKERS, ETC. SHALL BE FURNISHED AND INSTALLED AS REQUIRED. LOCATION TO BE DETERMINED IN THE FIELD. COORDINATE WITH BUILDING MANAGEMENT AND ARCHITECT. REFER TO ENGINEERING DRAWINGS.
12. GENERAL CONTRACTOR SHALL INSTALL NEW EXIT SIGNS AS REQUIRED BY LOCAL BUILDING CODE. SEE MEP DRAWINGS FOR LOCATIONS.
13. REFER TO ENGINEERING DRAWINGS FOR EMERGENCY LIGHT SPECIFICATIONS AND LOCAL LAW REQUIREMENTS.

HVAC

14. HVAC CONTRACTOR TO PROVIDE BALANCING REPORT & SUBMIT TO BUILDING MANAGEMENT. HVAC CONTRACTOR TO NOTIFY BUILDING CHIEF ENGINEER OF DATE & TIME OF BALANCING FOR WITNESS.
15. LOCATION OF THERMOSTATS TO BE ACCEPTED BY ARCHITECT PRIOR TO INSTALLATION. DO NOT INSTALL ON PANELED, FEATURE WALLS OR BEHIND FURNITURE PANELS. COORDINATE WITH FURNITURE INSTALLER.

FINISHES

16. PROVIDE SMOOTH FINISH @ ALL GYPSUM BOARD CEILINGS IF REQUIRED TO RECEIVE NEW FINISH.
17. GENERAL CONTRACTOR TO CLEAN/ WIPE DUST FROM TOPS OF EXPOSED MECHANICAL DUCTS AND LIGHT FIXTURES PRIOR TO FURNITURE INSTALLATION.
18. REFER TO FINISH PLAN FOR GYPSUM BOARD CEILING PAINT.

COORDINATION

19. GENERAL CONTRACTOR SHALL COORDINATE ALL TRADES AFFECTED BY HUNG CEILING CONSTRUCTION (HVAC, SPRINKLER, LIGHTING, POWER, ETC).
20. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COMPATIBILITY BETWEEN FIXTURE TRIMS & CEILING GRID.
21. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING SHOP DRAWINGS FOR SPECIFIED EQUIPMENT FOR APPROVAL TO ARCHITECT ON TIMELY BASIS.

REFLECTED CEILING KEY NOTES

R1 GC TO PROVIDE THE MAXIMUM CEILING HEIGHT ACHIEVABLE ON THE SPACE. COORDINATE WITH ALL TRADES.

R2 EXISTING PIPE LOWER THAT THE CEILING LINE. GC TO TERMINATE THE CEILING TIGHT TO THE EXISTING PIPING.

SUSAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

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Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
16th Floor
New York, NY 10016
T. 212.561.2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312.924.5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
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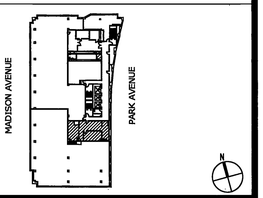
DEPT BLDGS 121664882 Job Number
SC110161991 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN



▨ - AREA OF WORK

PROJECT NUMBER	112162.01
SCALE	1/8"=1'-0"
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-121RP-SC2.DWG

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL
REFLECTED CEILING PLAN

REGISTERED ARCHITECT TED MOUDIS No. 016190-1 STATE OF NEW YORK

A-121.00
9 OF 20

Jan 13, 2014 - 2:44pm
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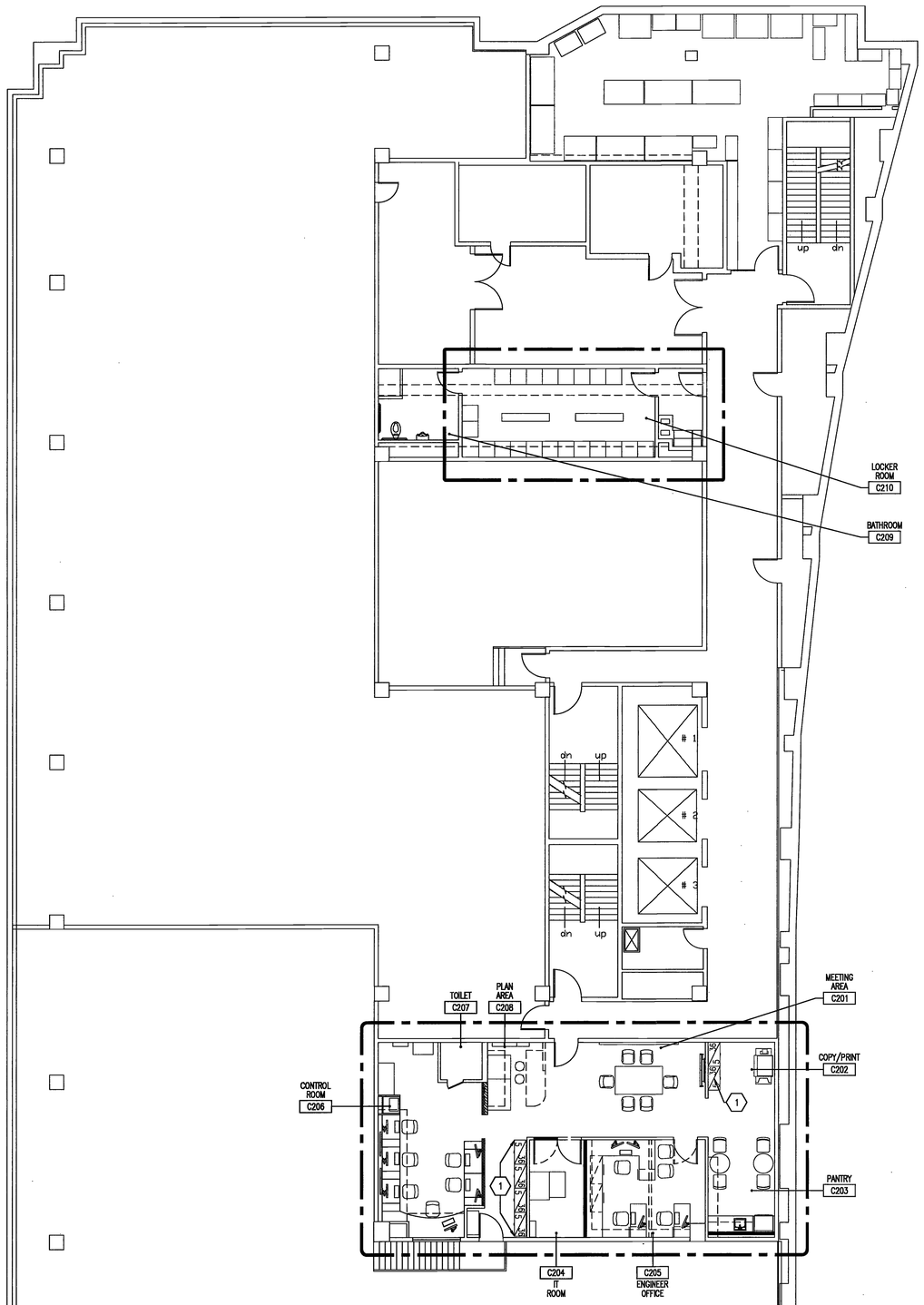


FURNITURE LEGEND

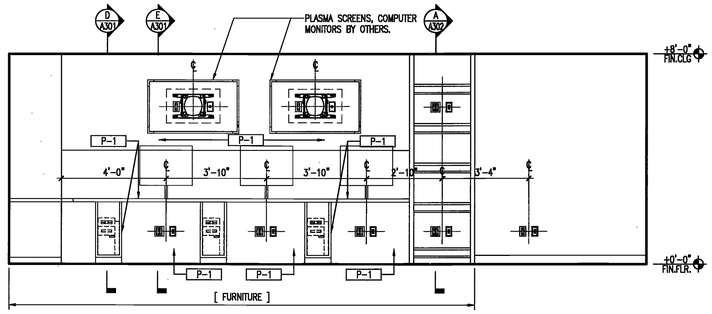
SYMBOL	DESCRIPTION
CH-x	CHAIR AND SEATING
CR-x	CREDENZA
F-x	FILING
PO-x	PRIVATE OFFICE CASEGOOD CONFIGURATION
SH-x	SHELVING
T-x	TABLE
WS-x	WORKSTATION CONFIGURATION
	NEW MILLWORK BY G.C.

EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION
PC	DESKTOP COMPUTER [BY OTHERS]
TV	FLATSCREEN TV W/ BRACKET [BY OTHERS]
TV	DESKTOP TV [BY OTHERS]
C	COPIER
PT	PRINTER
SK	SINK
F	FAUCET
HWH	HOT WATER HEATER TANK
MW	MICROWAVE [BY OTHERS]
CM	COFFEEMAKER [BY OTHERS]
CS	CHARGING STATION
RF	REFRIGERATOR [BY OTHERS]

FURNITURE SCHEDULE

SYM BOL	ITEM	MANUFACTURER	MODEL NO.	FINISHES	REMARKS	CONTACT



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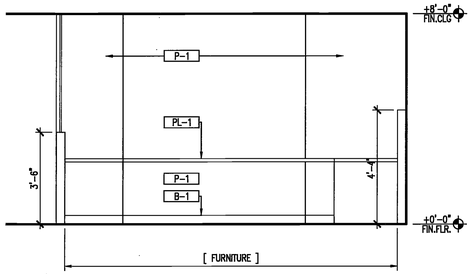

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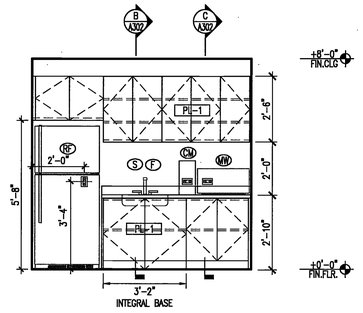

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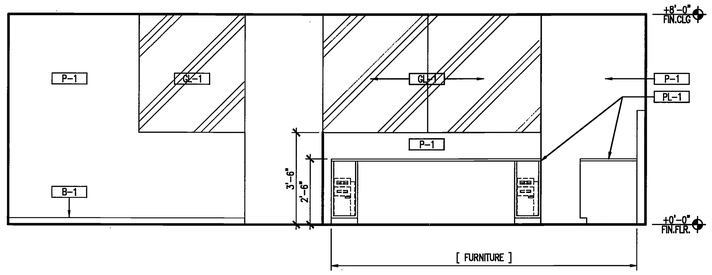

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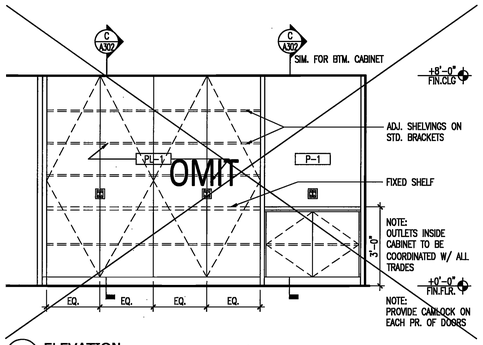

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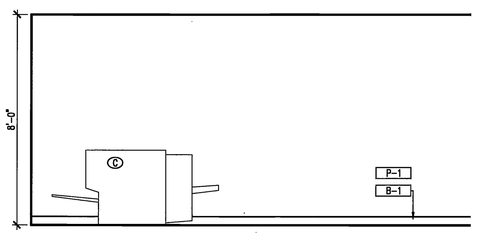

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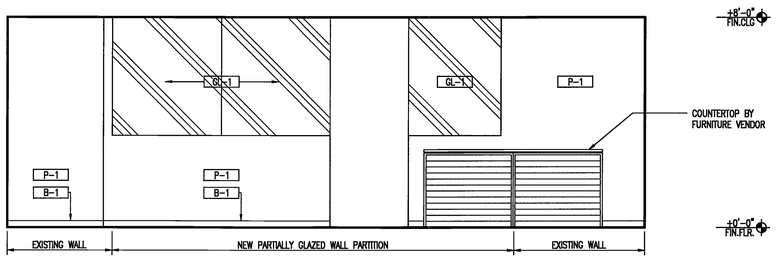
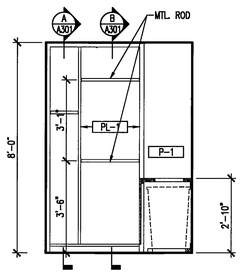
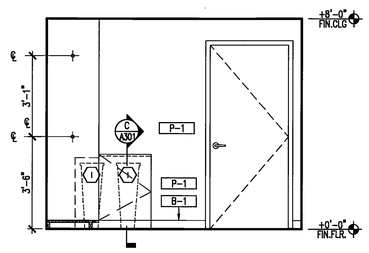


7 ELEVATION
SCALE: 3/8"=1'-0"



8 ELEVATION
SCALE: 3/8"=1'-0"



9 ELEVATION
SCALE: 3/8"=1'-0"

EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER/MODEL NO/DIMENSION.	VOLTAGE	AMP	WATTAGE	REMARKS
S	SINK & FITTINGS	ELKAY CELEBRITY #GECR25212 SERIE				
F	FAUCET	ELKAY ALLURE #LK6175 SERIES				
CM	COFFEEMAKER	EXISTING				PROVIDE WATER LINE
MW	MICROWAVE	EXISTING				
REF	REFRIGERATOR	EXISTING				
C	COPIER	EXISTING				

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10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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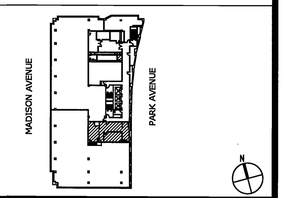
DEPT BU:DGS 12166462 Job Number
SC110161997 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



PROJECT NUMBER	112162.01
SCALE	AS NOTED
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-201E.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

ELEVATIONS

REGISTERED ARCHITECT TED MOUDIS No. 016199-1 STATE OF NEW YORK

A-201.00
11 OF 20

Jan 13, 2014 - 2:44pm
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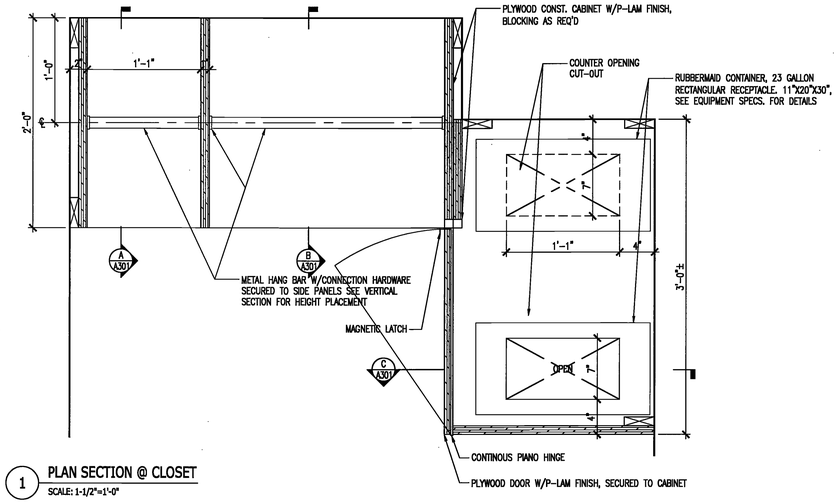
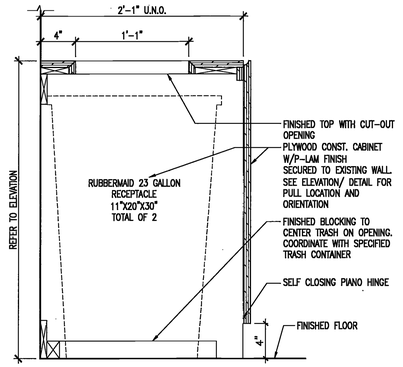


1 PLAN SECTION @ CLOSET
SCALE: 1-1/2"=1'-0"



C SECTION @ BASE CABINET W/TRASH
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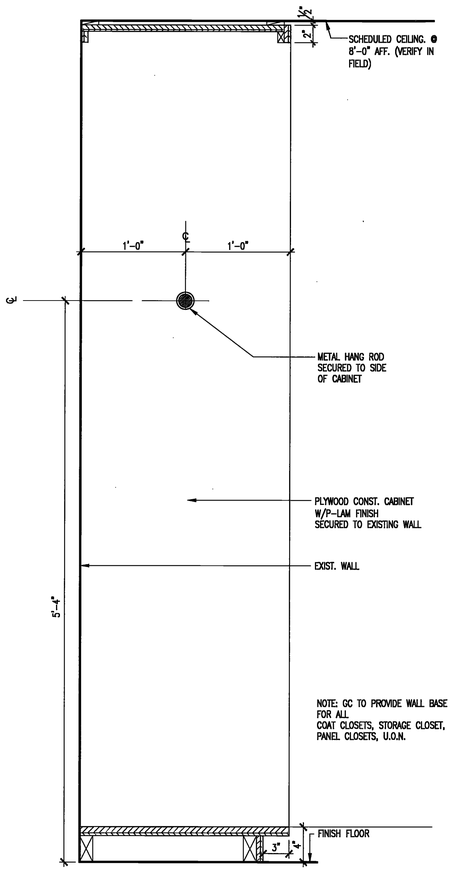

A SECTION @ COAT CLOSET
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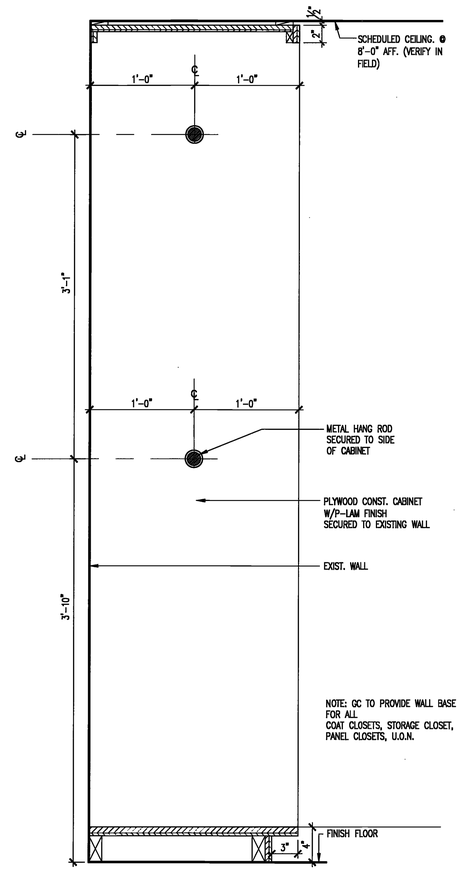

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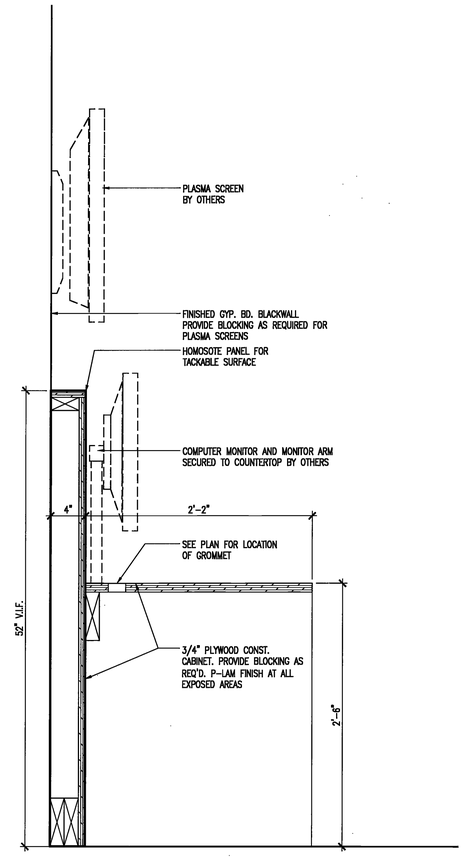

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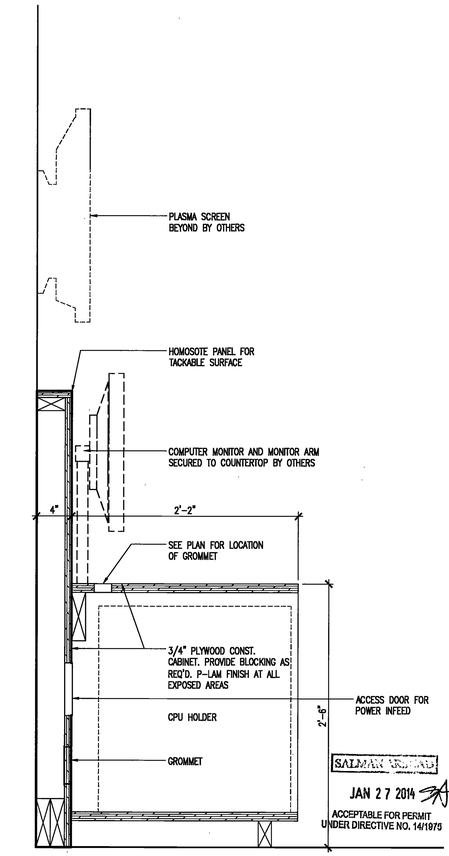

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10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

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71 Hopton Street
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T. 020 7902 0900

CONSULTANT

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11 West 42nd Street
New York, NY 10036
Tel: 212.921.2300
Fax: 212.556.3333
www.syska.com

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DEPT.BLDGS 121684662 Job Number
SC110161998 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
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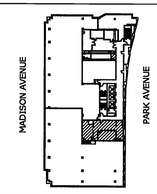
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



PROJECT NUMBER	112162.01
SCALE	AS NOTED
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PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-301SE.dwg

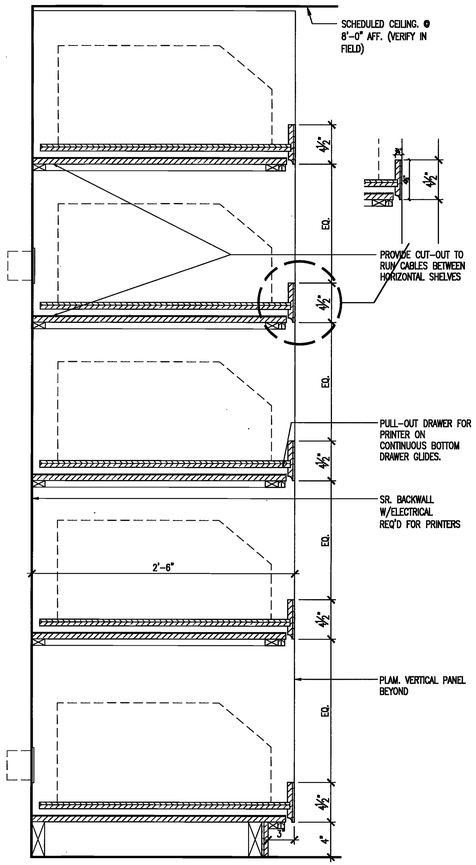
JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SECTION & DETAILS

REGISTERED ARCHITECT TED MOUDIS NO. 016198-1 STATE OF NEW YORK

A-301.00

12 OF 20



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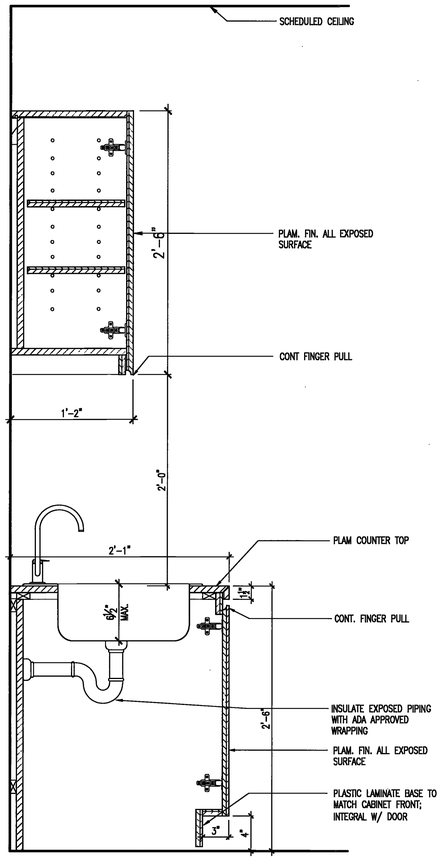

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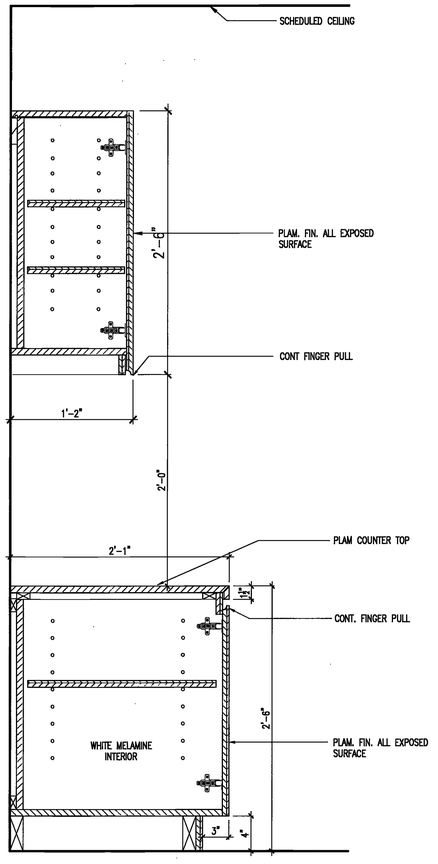

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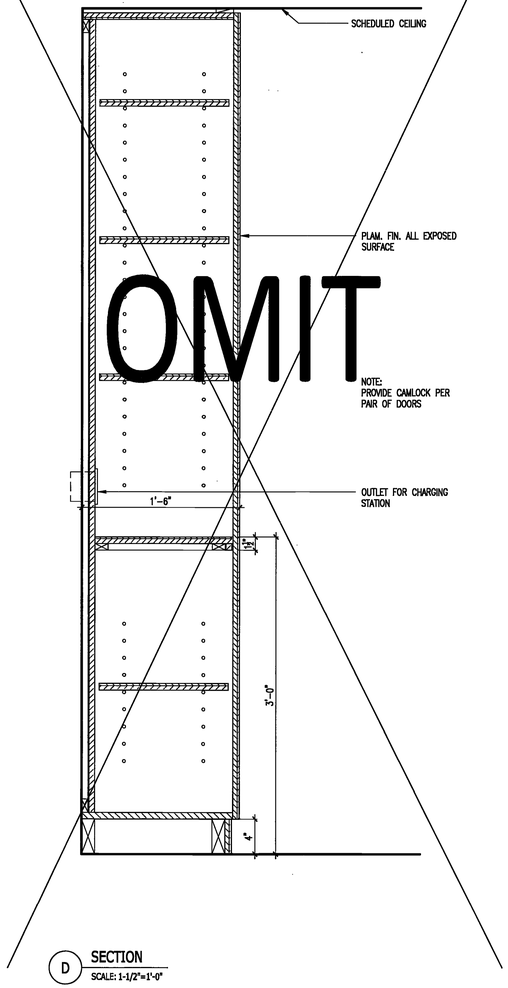

D SECTION
SCALE: 1-1/2"=1'-0"

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JAN 27 2014
ACCEPTABLE FOR PERMIT
UNDER DIRECTIVE NO. 14/1975

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CONSULTANT
DEPT:BLDGS 121664662 Job Number
SC1101161995 Scan Code

NO.	DATE	DESCRIPTIONS
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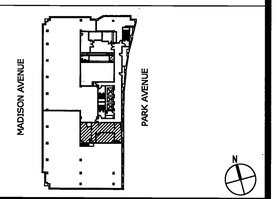
KEY PLAN
- AREA OF WORK



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CHECKED BY	GM
CADD FILE	112162.01–A–302SE.dwg

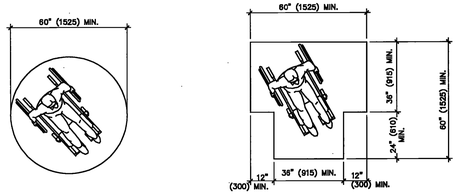
JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SECTION & DETAILS

REGISTERED ARCHITECT TED MOUDIS 026161 STATE OF NEW YORK

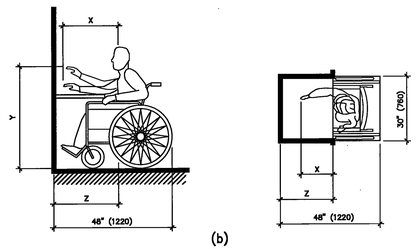
A-302.00
13 OF 20

LOCAL LAW 58 OF 87 & ANSI A117.1-1986 ACCESSIBILITY DIAGRAMS



CIRCULAR T–SHAPED

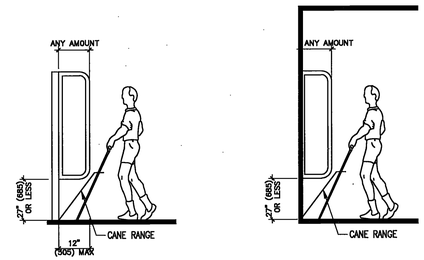
WHEELCHAIR TURNING SPACE



(b)

MAXIMUM FORWARD REACH OVER AN OBSTRUCTION

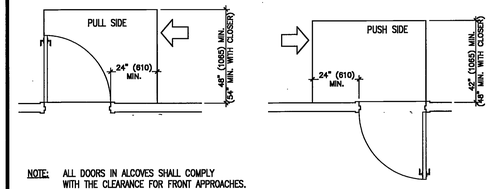
NOTES:
1. X SHALL BE ≤ 25 IN (635); Z SHALL BE ≥ X.
2. WHEN X < 20 IN (510), THEN Y SHALL BE 48IN (1220) MAXIMUM.
3. WHEN X 1S 20 ITO 25 IN (510 TO 635), THEN Y SHALL BE 44 IN (1120) MAXIMUM.



WALKING PERPENDICULAR TO OBJECTS MOUNTED ON POSTS OR PYLONL

WALKING PERPENDICULAR TO A WALL

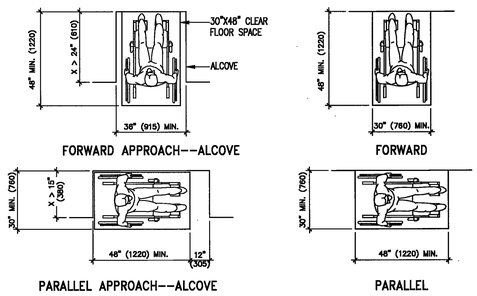
PROTRUDING OBJECTS



NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCE FOR FRONT APPROACHES.

(C)

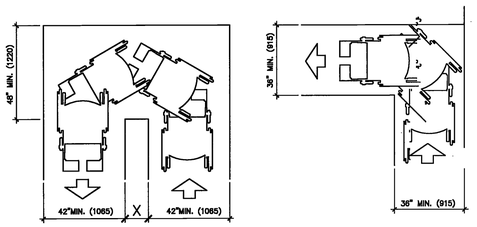
LATCH SIDE APPROACHES–SWINGING DOORS



FORWARD APPROACH––ALCOVE FORWARD

PARALLEL APPROACH––ALCOVE PARALLEL

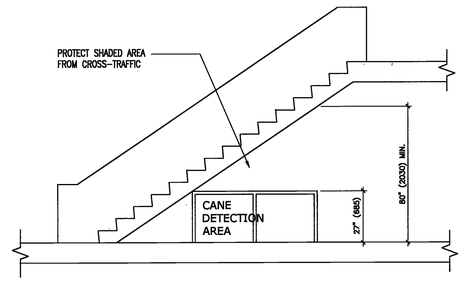
MANEUVERING CLEARANCE IN ALCOVES



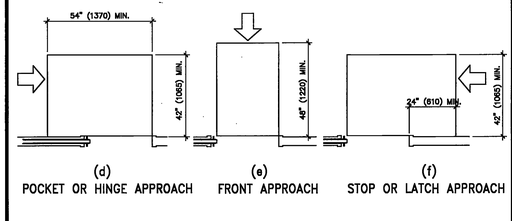
NOTE: DIMENSIONS SHOWN APPLY WHEN X IS LESS THAN 48" (1220).

U–TURN AROUND AN OBSTRUCTION 90° TURN

WHEELCHAIR TURNS



OVERHEAD HAZARDS

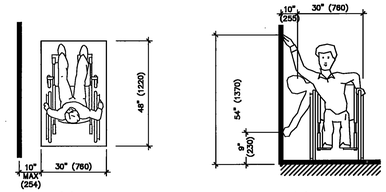


(d) (e) (f)

POCKET OR HINGE APPROACH FRONT APPROACH STOP OR LATCH APPROACH

NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCE FOR FRONT APPROACHES.

MANEUVERING CLEARANCE AT SLIDING AND FOLDING DOORS

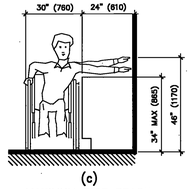


(a)

CLEAR FLOOR SPACE PARALLEL APPROACH

(b)

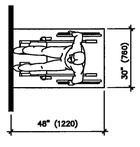
HIGH & LOW SIDE REACH LIMITS



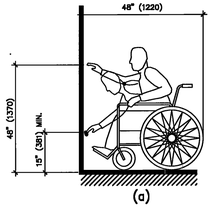
(c)

MAXIMUM SIDE REACH OVER OBSTRUCTION

SIDE REACH

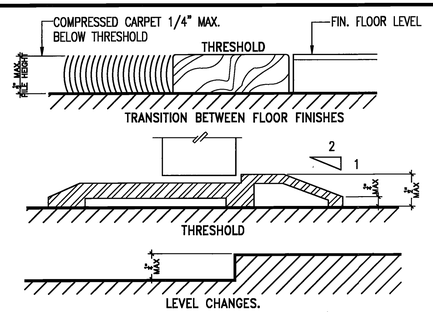


CLEAR FLOOR SPACE PARALLEL APPROACH



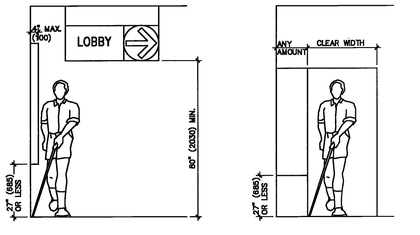
(a)

HIGH FORWARD REACH LIMIT



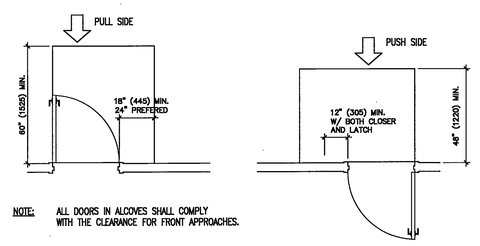
1. 1/2" MAXIMUM TOTAL HEIGHT WITH 1/4" MAXIMUM VERTICAL CHANGE AT EDGE.
2. 1 : 2 SLOPED BEVEL REQUIRED IF LEVEL CHANGE IS OVER 1/4" VERITCAL LEVEL CHANGE.
3. 1/4" MAXIMUM VERTICAL LEVEL CHANGE.

ACCESSIBLE ROUTE



WALKING PARALLEL TO A WALL WALKING PARALLEL TO A WALL

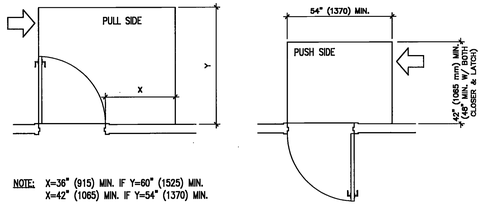
PROTRUDING OBJECTS



NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCE FOR FRONT APPROACHES.

(a)

FRONT APPROACHES–SWINGING DOORS

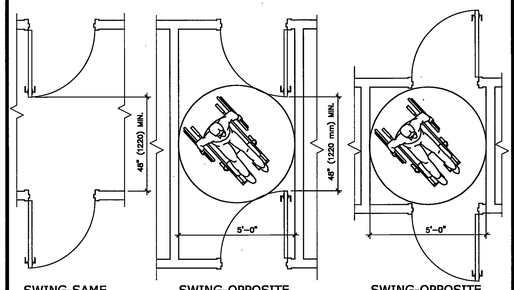


NOTE: X=36" (915) MIN. IF Y=60" (1525) MIN. X=42" (1065) MIN. IF Y=54" (1370) MIN.

NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCE FOR FRONT APPROACHES.

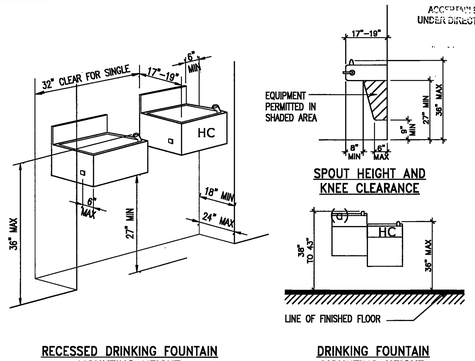
(b)

HINGE SIDE APPROACHES–SWINGING DOORS



SWING–SAME DIRECTION SWING–OPPOSITE DIRECTION SWING–OPPOSITE DIRECTION

TWO HINGED DOORS IN SERIES



RECESSED DRINKING FOUNTAIN MOUNTING HEIGHT

SPOUT HEIGHT AND KNEE CLEARANCE

DRINKING FOUNTAIN MOUNTING HEIGHT

JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.568.3333
www.syska.com

CONSULTANT

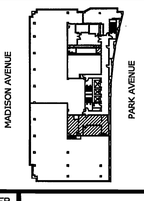
DEPT:BLDGS : 121664662 Job Number

SC1110161992 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



SAFETY FILED

JAN 27 2014

ACCEPTANCE/PERMIT UNDER DIRECTIVE NO. 14/1975

PROJECT NUMBER	112162.01
SCALE	NA
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01–A–702–HC–1986

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

ACCESSIBILITY DIAGRAMS
SHEET 1 OF 2

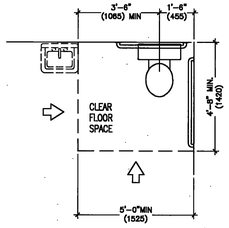
REGISTERED ARCHITECT TED MOUDIS No. 016192 STATE OF NEW YORK

NYC–LL 58 OF 87–1986.dwg

A-702.00

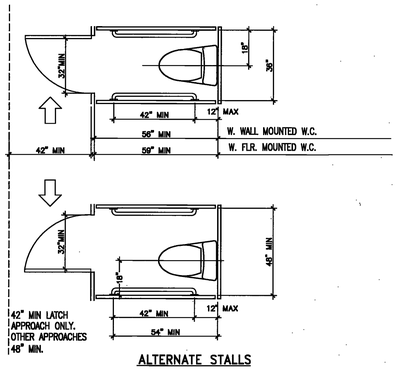
14 OF 20

LOCAL LAW 58 OF 87 & ANSI A117.1-1986 ACCESSIBILITY DIAGRAMS-Continued

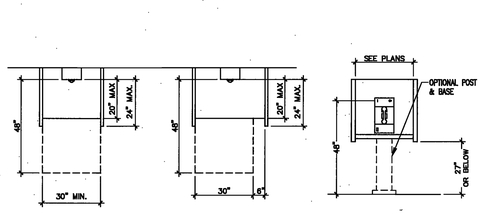


EITHER APPROACH

CLEAR FLOOR SPACE AT WATER CLOSETS



ALTERNATE STALLS

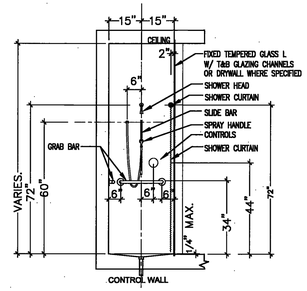


PLANS; FORWARD REACH REQUIRED

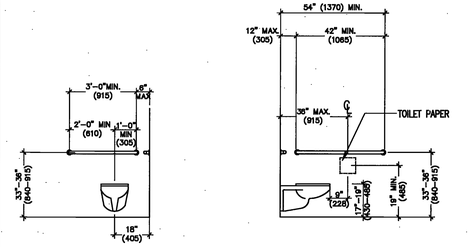
ELEVATION

MOUNTING HEIGHT & CLEARANCE FOR TELEPHONES

HEIGHT TO HIGHEST OPERABLE PARTS WHICH ARE ESSENTIAL TO BASIC OPERATION OF TELEPHONE.



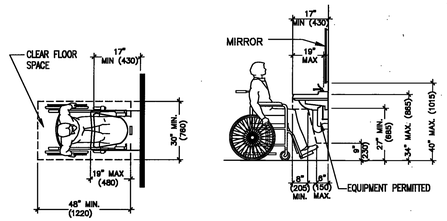
ROLL IN SHOWER–ACCESSORY MOUNTING HEIGHTS & LOCATION DIMENSIONS ABOVE ARE BASED ON MIN. 30"X60" SHOWER STALL



REAR WALL ELEVATION

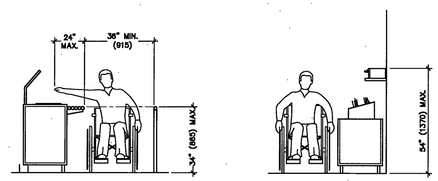
SIDE WALL ELEVATION

GRAB BARS AT WATER CLOSETS



CLEAR FLOOR SPACE AT LAVATORIES

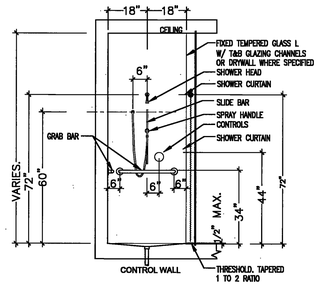
LAVATORY CLEARANCE



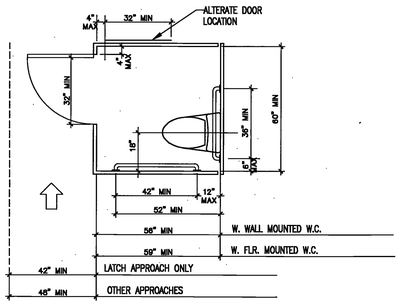
FOOD SERVICE LINES

TABLEWARE AND CONDIMENT TABLE

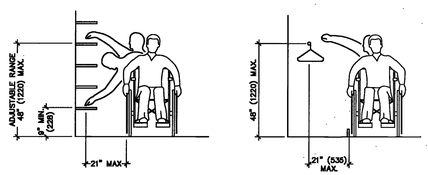
RESTAURANTS AND CAFETERIAS



TRANSFER SHOWER–ACCESSORY MOUNTING HEIGHTS & LOCATION DIMENSIONS ABOVE ARE BASED ON MIN. 36"X36" SHOWER STALL



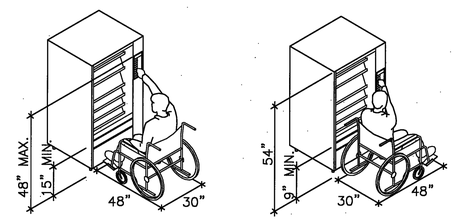
STANDARD STALL



SHELVES

CLOSET

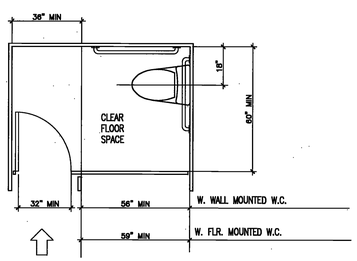
PARALLEL/SIDE REACH LIMITS



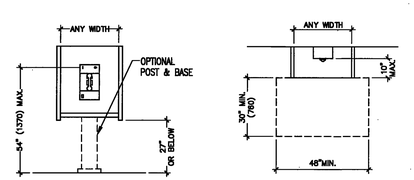
FRONT REACH (ADA)

SIDE REACH (ADA)

VENDING MACHINES AND OTHER EQUIPMENT



STANDARD STALL (END OF ROW)



ELEVATION

PLAN; SIDE REACH POSSIBLE

MOUNTING HEIGHT & CLEARANCE FOR TELEPHONES

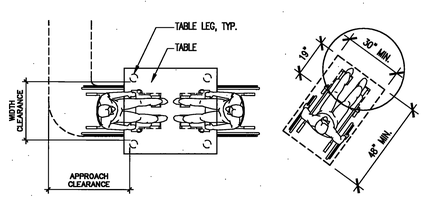


TABLE CLEARANCE

KNEE CLEARANCE

FOR KNEE SPACE BELOW A TABLE TOP WITH A MINIMUM WIDTH OF 2'-6" BETWEEN OBSTRUCTIONS (e.g., TABLE LEGS), THE APPROACH CLEARANCE SHOULD BE 3'-6". A KNEE SPACE WIDTH OF 3'-0" OR MORE SHOULD HAVE AN APPROACH CLEARANCE OF 3'-0".

SEATING AND KNEE CLEARANCE

ACCESSIBILITY NOTES

1. FACILITIES FOR PEOPLE WITH PHYSICAL DISABILITIES SHALL BE IN COMPLIANCE WITH NEW YORK CITY BUILDING CODE TITLE 27, SUB–CHAPTER 4, SUB–ARTICLE 2 AND REFERENCE STANDARD RS4–6.
2. WALKWAYS, HALLS, CORRIDORS, AISLES AND OTHER SPACES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL COMPLY WITH SECTIONS 4.2 AND 4.3.
3. GROUND AND FLOOR SURFACES ALONG ACCESS ROUTES IN RAMPS & SPACES INCLUDING FLOORS, WALKWAYS, RAMPS, CORRIDORS, STAIRS, AND CURB RAMPS SHALL BE STABLE, FIRM AND SLIP RESISTANT IN COMPLIANCE W/ SEC 4.5.1
4. SPACE ALLOWANCES AND REACH RANGES AT ALL ROOMS & SPACES SHALL COMPLY WITH REFERENCE STANDARD 4–6 4.2; REACH RANGES SHALL BE: FORWARD REACH HEIGHT: 9 INCHES MINIMUM AND 54 INCHES MAXIMUM.
5. ANY PART OF AN ACCESSIBLE ROUTE WITH A SLOPE GREATER THAN 1:20 SHALL BE CONSIDERED A RAMP & SHALL COMPLY WITH SECTION 4.8.1
6. DOOR WIDTHS SHALL BE A MINIMUM OF 34" IN COMPLIANCE W/ SEC. 4.13.5
7. THRESHOLDS AT DOORWAYS WILL NOT EXCEED ½" IN HEIGHT AS PER SEC. 4.13.8
8. HANDLES, PULLS, LATHCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL BE MADE TO COMPLY W/ SEC. 4.13.9
9. ACCESSIBLE STORAGE FACILITIES, SUCH AS CABINETS AND CLOSETS, SHALL COMPLY WITH SECTION 4.25.1
10. CONTROLS AND OPERATING MECHANISMS FOR LIGHT SWITCHES AND ALARMS SHALL BE ACCESSIBLE IN COMPLIANCE WITH SECTION 4.27.
11. CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING OF THE WRIST IN COMPLIANCE WITH SECTION 4.27
12. EMERGENCY WARNING SIGNAGE, CIRCULATION DIRECTIONAL SIGNAGE SHALL COMPLY WITH SECTION4.28.
13. EXIT SIGNS, EMERGENCY SIGNAGE, CIRCULATION DIRECTIONAL SIGNAGE SHALL COMPLY WITH SECTION 4.30.
14. ALL BATHROOMS, ASIDE FROM THOSE WHERE FIXTURES ARE REPLACED IN EXISTING ROUGHING, SHALL BE HANDICAPPED ACCESSIBLE IN COMPLIANCE W/ LL 58/87.
15. ANSI/A.D.A. ACCESSIBILITY STANDARDS AND MINIMUM CLEARANCES ARE INCLUSIVE OF, BUT NOT LIMITED TO, FIGURES SHOWN. GENERAL CONTRACTOR AND ALL SUB–CONTRACTORS SHALL REFER TO APPLICABLE LITERATURE (FEDERAL REGISTER, ADAAG).

JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE1 9LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPT.BLDGS 121664662 Job Number

SC110161989 Scan Code

NO.	DATE	DESCRIPTIONS
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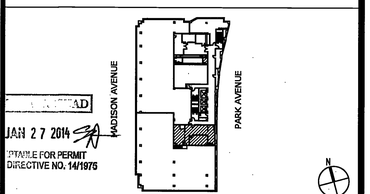
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN



AD

JAN 27 2014

STABLE FOR PERMIT
DIRECTIVE NO. 14/1975

PROJECT NUMBER	112162.01
SCALE	NA
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	XX
CHECKED BY	XX
CADD FILE	112162.01–A–703–HC–1986–NYC–LL 58 OF 87–1986.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

ACCESSIBILITY DIAGRAMS
SHEET 2 OF 2

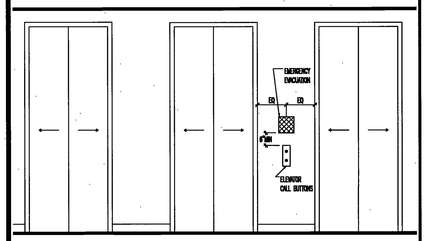
REGISTERED ARCHITECT TED MOUDIS 016196-1 STATE OF NEW YORK

A-703.00

X OF 20

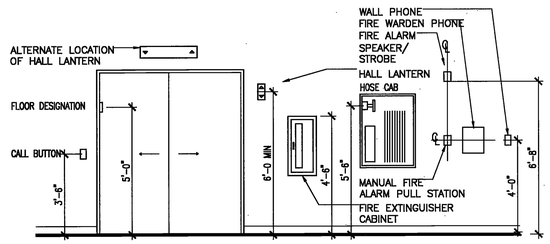
SIGNAGE- Contin.

DEVICES AND HARDWARE



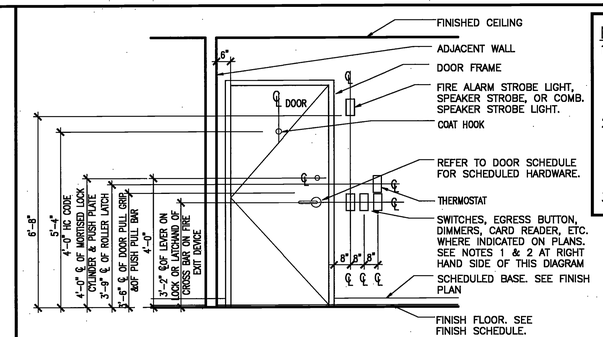
ELEVATOR LOBBY

9 ELEVATION OF TYP SIGNAGE @ PASSENGER ELEVATOR LOBBY DRS.
SCALE: NOT TO SCALE



PASSENGER & FREIGHT ELEVATOR DOOR

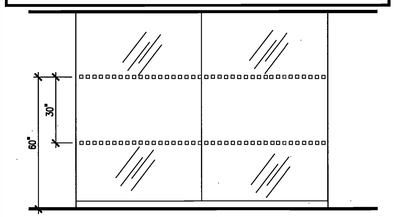
5 ELEVATION OF FIRE PROTECTION DEVICES & DEVICES AT ELEVATOR DOOR LANDING
SCALE: NOT TO SCALE



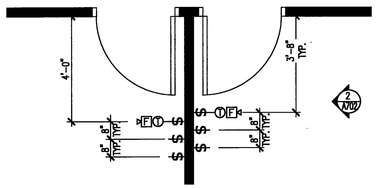
NOTES:
1. WHERE MORE THAN ONE SWITCH EXISTS IN THE SAME LOCATION, NSTALL IN GANG TYPE BOX UNDER ONE COVER PLATE.
2. INTERCOM, THERMOSTAT OR 2ND ROW OF RECPETACLES CLUSTER MAY BE LOCATED AT OPPOSITE SIDE OF DOOR IN CASE OF USING DIMMERS.
3. SEE PLAN VIEW # 6 BELOW

1 ELEVATION OF TYPICAL HARDWARE AND DEVICES AT DOORS - SPACES WITHOUT GLASS FRONTS
SCALE: NOT TO SCALE

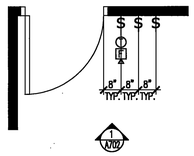
NOTE:
DIGRAMS SHOWN HERE ARE GENERAL AND INDICATE PLACEMENT OF DISTRACTION MARKINGS VERTICALLY. OTHER PLAN WILL INDICATED ACTUAL GEMETRIC DESIGN AND SPACING.



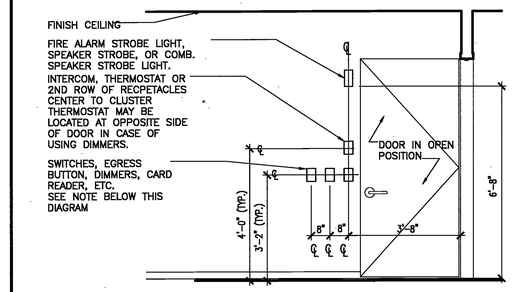
GLASS PARTITION



BACK TO BACK DEVICES- SPACES WITH GLASS FRONTS



BACK TO BACK DEVICES- SPACES WITHOUT GLASS FRONTS



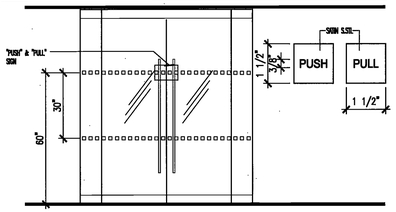
NOTES:
1. WHERE MORE THAN ONE SWITCH EXISTS IN THE SAME LOCATION, NSTALL IN GANG TYPE BOX UNDER ONE COVER PLATE.
2. INTERCOM, THERMOSTAT OR 2ND ROW OF RECPETACLES CLUSTER MAY BE LOCATED AT OPPOSITE SIDE OF DOOR IN CASE OF USING DIMMERS.
3. SEE PLAN VIEW # 6 BELOW

10 ELEVATION OF TYP DISTRACTION MARKINGS AT GLASS FRONTS
SCALE: NOT TO SCALE

6 PLAN OF TYPICAL DEVICES AT DOORS
SCALE: NOT TO SCALE

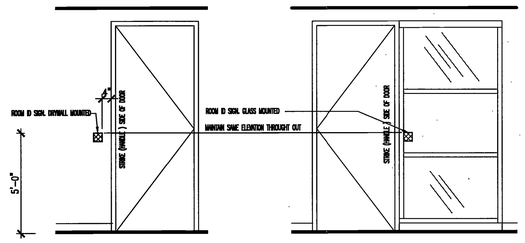
2 ELEVATION OF TYPICAL DEVICES LOCATION AT DOORS - SPACES WITH GLASS FRONTS
SCALE: NOT TO SCALE

NOTE:
DIGRAMS SHOWN HERE ARE GENERAL AND INDICATE PLACEMENT OF DISTRACTION MARKINGS VERTICALLY. OTHER PLAN WILL INDICATED ACTUAL GEMETRIC DESIGN AND SPACING.



GLASS DOORS & SIDELIGHTS

SIGNAGE

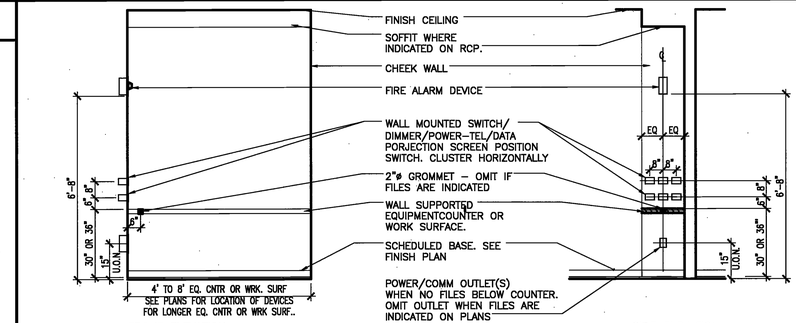


WALL MOUNT GLASS MOUNT

11 ELEVATION OF TYP DISTRACTION MARKINGS AT GLASS FRONTS
SCALE: NOT TO SCALE

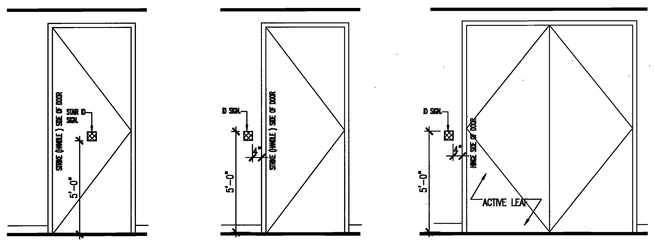
7 ELEVATION OF TYPICAL SIGNAGE AT DOORS AND GLASS OFFICE FRONTS
SCALE: NOT TO SCALE

3 ELEVATION OF FIRE PROTECTION, POWER, LIGHTING CONTROLS & FIRE ALARM @ EQUIPMENT COUNTER
SCALE: NOT TO SCALE

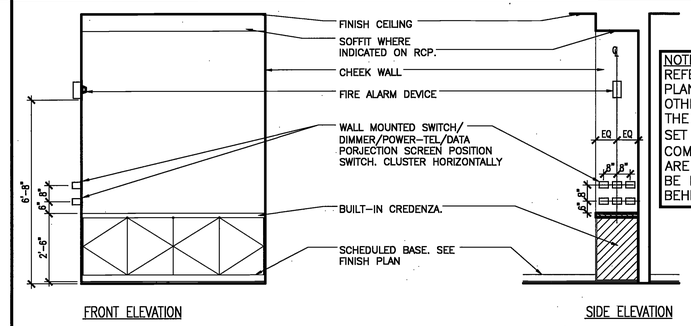


FRONT ELEVATION SIDE ELEVATION

8 ELEVATION OF TYPICAL SIGNAGE AT DOORS
SCALE: NOT TO SCALE



STAIR DOOR TOILET ROOMS FREIGHT ENTRANCE



NOTE:
REFER TO DETAILED PLANS ELEVATIONS IN OTHER PART OF THE CONSTRUCTION SET FOR POWER/ COMM,AV OUTLET(S) ARE SPECIFIED TO BE BELOW & BEHIND CREDENZA.

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1974

FRONT ELEVATION SIDE ELEVATION

4 ELEVATION OF FIRE PROTECTION, POWER, LIGHTING CONTROLS & FIRE ALARM - CONF. RM BUILT-IN CREDENZA
SCALE: NOT TO SCALE

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

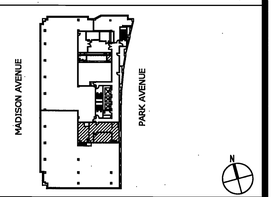
CONSULTANT

DEPT.BLDGS 121664662 Job Number
SC110161984 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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SCALE	NA
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	XX
CADD FILE	112162.01-A-704-STD-TYP.DEVICE LOC.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

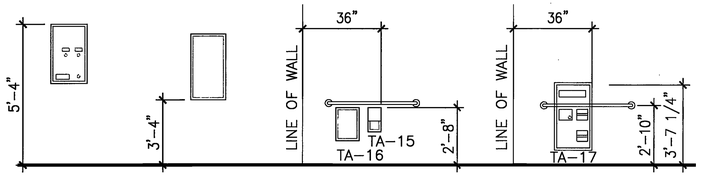
TYP. MOUNTING HEIGHTS & LOCATION OF ARCH. MEP DEVICES & FIXTURES

REGISTERED ARCHITECT TED MOUDIS No. 016198-1 STATE OF NEW YORK

A-704.00

16 OF 20

PLUMBING FIXTURES & ACCESSORIES



TA-13
SANITARY NAPKIN DISPENSER

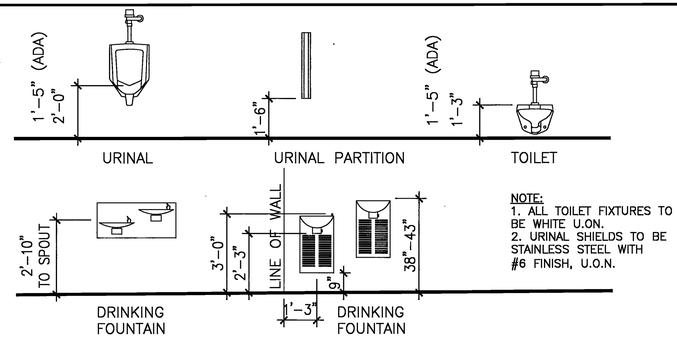
TA-14
MIRROR

TA-15
MULTI-ROLL TOILET PAPER DISPENSER

TA-16
SANITARY NAPKIN DISPOSAL UNIT

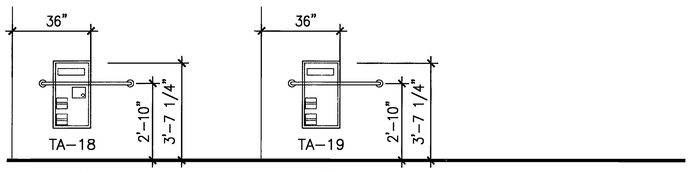
TA-17
RECESSED MULTI-ROLL TOILET PAPER DISPENSER, TOILET SEAT COVER, SANITARY NAPKIN DISPOSAL UNIT

5 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES- 4
SCALE: NOT TO SCALE



NOTE:
1. ALL TOILET FIXTURES TO BE WHITE U.ON.
2. URINAL SHIELDS TO BE STAINLESS STEEL WITH #6 FINISH, U.O.N.

1 ELAVATION OF TYPICAL TOILET ROOM PLUMBING FIXTURES
SCALE: NOT TO SCALE

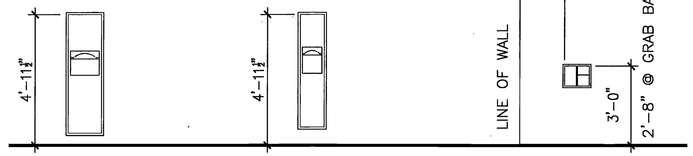


TA-18
TOILET PARTITION MULTI-ROLL TOILET PAPER DISPENSER, TOILET SEAT COVER, SANITARY NAPKIN DISPOSAL UNIT

TA-19
TOILET PARTITION MOUNTED MULTI-ROLL TOILET PAPER DISPENSER, TOILET SEAT COVER,

6 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES - 5
SCALE: NOT TO SCALE

NOTE:
1. FOR ALL TOILET ROOM ACCESSORIES SHOWN IN ELEVATION 12 TO 15 BELOW, MATERIAL SHALL BE STAINLESS STEEL WITH #6 FINISH, U.O.N.



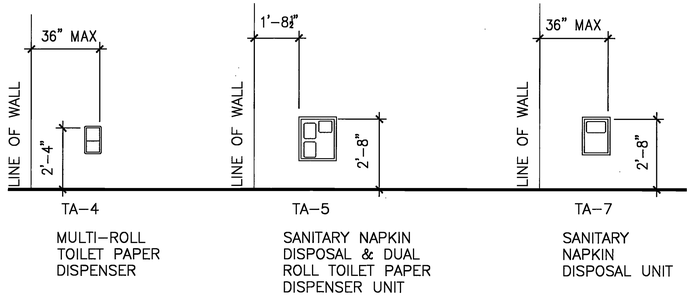
TA-1
PAPER TOWEL DISPENSER & DISPOSAL UNIT

TA-2
PAPER TOWEL DISPENSER & DISPOSAL UNIT

TA-3
MULTI-ROLL TOILET PAPER DISPENSER

2 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES- 1
SCALE: NOT TO SCALE

X XX
SCALE: NOT TO SCALE



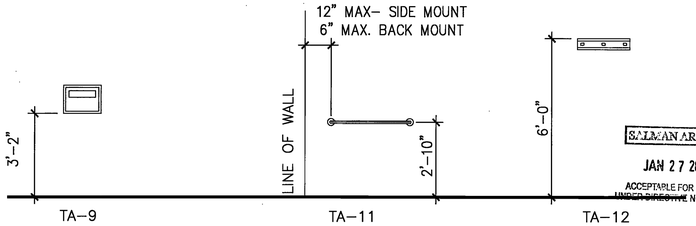
TA-4
MULTI-ROLL TOILET PAPER DISPENSER

TA-5
SANITARY NAPKIN DISPOSAL & DUAL ROLL TOILET PAPER DISPENSER UNIT

TA-7
SANITARY NAPKIN DISPOSAL UNIT

3 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES- 2
SCALE: NOT TO SCALE

X XX
SCALE: NOT TO SCALE



TA-9
RECESSED TOILET SEAT-COVER DISPENSER

TA-11
GRAB BARS
TA-11A 36" LONG
TA-11B 40" LONG
TA-11C 42" LONG

TA-12
MOP & BROOM HOLDER

4 ELEVATION OF TYPICAL TOILET ROOM ACCESSORIES- 3
SCALE: NOT TO SCALE

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue, 10th Floor, New York, NY 10016, T. 212 561 2000
The LaSalle Wacker, 221 North LaSalle Street, Chicago, IL 60601, T. 312 924 5000
MCM Architecture Limited, 71 Hopton Street, London SE19LR, UK, T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

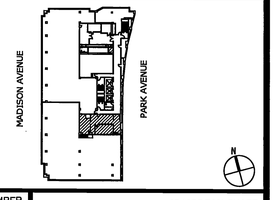
CONSULTANT

DEPT BLDGS 121664662 Job Number
SC110101987 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & LL REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



PROJECT NUMBER	112162.01
SCALE	AS NOTED
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-705-DLOC.dwg

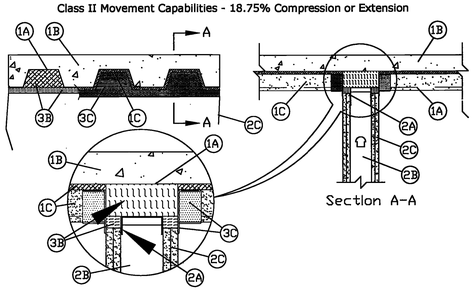
JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

TYP. MOUNTING HEIGHTS & LOCATION OF ARCH. MEP. DEVICES & FIXTURES

REGISTERED ARCHITECT TED MOUDIS NO. 016196-1 STATE OF NEW YORK

A-705.00
17 OF 20

System No. HW-D-0088
Assembly Rating - 1 and 2 Hr (See Item 2)
Nominal Joint Width - 1 in.
Class II Movement Capabilities - 18.75% Compression or Extension



1.0 GENERAL NOTES AND CONDITIONS

System No. HW-D-0088

November 18, 2003
Assembly Ratings -- 1 and 2 Hr (See Item 2)
Nominal Joint Width -- 1 in.
Class II Movement Capabilities -- 18.75% Compression and Extension

1. **Floor Assembly --** The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 or D800 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Steel Floor and Form Units* --** Max 3 in. (76 mm) deep galv steel fluted floor units.
   B. **Concrete --** Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.
   C. **Spray-Applied Fire Resistive Material* --** After installation of the ceiling runner (Item 2A) or deflection track (Item 3A, If used), steel floor units to be sprayed with a min 5/16 in. (8 mm) to max 11/16 in. (18 mm) thickness of material in accordance with the specifications in the individual D700 or D800 Series Design. Material is to be excluded from the steel deck in the area immediately above the wall as well as from the flanges of the ceiling runner or deflection track.
   ISOLATEK INTERNATIONAL -- Type 300

   W R GRACE & CO - CONN
   CONSTRUCTION PRODUCTS DIV -- Type MK-6/HY

1A. **Roof Assembly --** (Not Shown) -- As an alternate to the floor assembly (Item 1), a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P700 or P800 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:
   A. **Steel Roof Deck --** Max 3 in. (76 mm) deep galv steel fluted roof deck.
   B. **Roof Insulation -- Mineral and Fiber Board* --** Min 3/4 In. (19 mm) thick boards applied in one or more layers directly over steel roof deck or over gypsum board sheathing laid atop steel roof deck.
   C. **Roof Covering* --** Hot-mopped or cold-application materials compatible with mineral and fiber board insulation.
   D. **Spray-Applied Fire Resistive Material* --** After installation of the ceiling runner (Item 2A) or deflection track (Item 3A, If used), steel roof deck to be sprayed with a max 3/4 in. (19 mm) thickness of spray applied fire resistive material as specified in the individual P700 or P800 Series Roof-Ceiling design. Material is to be excluded from the steel deck in the area immediately above the wall as well as from the flanges of the ceiling runner or deflection track.
   ISOLATEK INTERNATIONAL -- Type 300

   W R GRACE & CO - CONN
   CONSTRUCTION PRODUCTS DIV -- Type MK-6/HY

2. **Wall Assembly --** The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Steel Floor and Ceiling Runners --** Floor and ceiling runners of wall assembly shall consist of galv steel channels sized to accommodate steel studs . Ceiling runner to be provided with min 1-1/4 in. (32 mm) to max 2 in. (51 mm) flanges. When deflection channel (Item 3A) is used, flange height of ceiling runner is to be equal to or greater than flange height of deflection channel and the ceiling runner is to nest within the deflection channel with a 1/2 In. (13 mm) to 3/4 in. (19 mm) gap maintained between the top of the ceiling runner and the top of the deflection channel. When deflection channel is not used, ceiling runner is secured to steel floor or roof deck with steel fasteners or welds spaced max 24 In. (610 mm) OC.

   A1. **Light Gauge Framing* -- Slotted Ceiling Runner --** As an alternate to the ceiling runner in Item 2A, ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Items 2B). Ceiling runner installed perpendicular to direction of fluted steel floor or roof deck and secured to valleys with steel fasteners spaced max 24 In. (610 mm) OC. When slotted ceiling runner is used, deflection channel (Item 3A) shall not be used.
   SLIPTRACK SYSTEMS INC -- SLP-TRK

   A2. **Light Gauge Framing* -- Clipped Ceiling Runner --** As an alternate to the ceiling runner in Items 2A and 2A1, clipped runner to consist of galv steel channel with clips preformed in track flanges which positively engage the inside flange of the steel studs (Item 2B). Track sized to accommodate steel studs (Item 2B). Track flanges to be min 2-1/2 in. (64 mm). Clipped ceiling runner installed perpendicular to direction of fluted steel floor units and secured to valleys with steel fasteners spaced max 24 In. (610 mm) OC. When clipped ceiling runner is used, deflection channel (Item 3A) shall not be used.
   TOTAL STEEL SOLUTIONS L L C -- Snap Trak

   B. **Studs --** Steel studs to be min 3-1/2 in. (89 mm) wide. Studs cut 1/2 In. (13 mm) to 3/4 in. (19 mm) less in length than assembly height with bottom nesting in and secured to floor runner. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 In. (13 mm) long wafer head steel screws at midheight of slot on each side of wall. When deflection channel (Item 3A) is used, steel studs attached to ceiling runner with sheet metal screws located 1/2 In. (13 mm) below the bottom of the deflection channel. When deflection channel is not used, studs to nest in ceiling runner without attachment. Stud spacing not to exceed 24 In. (610 mm) OC.

C. **Gypsum Board* --** Gypsum board sheets installed to a min total 5/8 In. (16 mm) or 1-1/4 In. (32 mm) thickness on each side of wall for 1 and 2 hr fire rated assemblies, respectively. Wall to be constructed in the individual U400 Series Design in the UL Fire Resistance Directory, except that a max 1 In. (25 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the steel floor or roof deck. The screws attaching the gypsum board to the studs along the top of the wall shall be located 1 In. (25 mm) below the bottom of the ceiling runner. No gypsum board attachment screws shall be driven into the ceiling runner or into the optional deflection channel.
The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. **Joint System -- Max separation between bottom of floor or roof deck and top of gypsum board (at time of installation of joint system) is 1 in. (25 mm). The joint system is designed to accomodate a max 18.75 percent compression or extension from its installed width.** The joint system shall consist of forming and fill materials, with or without a deflection channel (Item 2A), as follows:

   A. **Deflection Channel --** (Optional, Not Shown) - Max 2 In. (51 mm) deep min 24 gauge galv steel channel sized to accommodated ceiling runner (Item 2A). Deflection channel secured to steel floor or roof deck with steel fasteners or welds spaced max 24 In. (610 mm) OC. The ceiling runner is installed within the deflection channel to maintain a 1/2 In. (13 mm) to 3/4 In. (19 mm) gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner nests inside the deflection channel without attachment.

   B. **Forming Material* --** Min 5-5/8 In. (143 mm) or 7 In. (178 mm) thickness of 6 pcf (96 kg/m3) mineral wool batt insulation for 1 and 2 hr fire rated assemblies, respectively, cut to the shape of the fluted deck and installed into the flutes of the steel floor or roof deck between the top of the deflection channel and the steel floor or roof deck. The mineral wool batt insulation is to be compressed min 14.3 percent in thickness such that it is flush with the gypsum board surface on both sides of the wall. Additional sections of mineral wool batt insulation are compressed 50 percent in thickness and installed cut edge first to completely fill the gap above the top of the gypsum board. The forming material shall be installed flush with both surfaces of wall.
   FIBREX INSULATIONS INC -- FBX Safing Insulation

   IIG MINWOOL L L C -- Safing Insulation/MW

   ROCK WOOL MANUFACTURING CO -- Delta Board

   THERMAFIBER L L C -- Type SAF

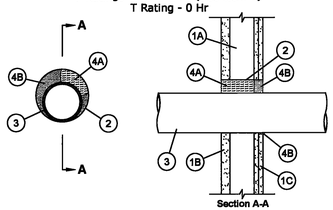
   C. **Fill, Void or Cavity Material*-Sealant --** Min 1/8 In. (3.2 mm) wet thickness or 1/16 In. (1.6 mm) dry thickness of fill material spray applied on each side of the wall in the flutes of the steel floor or roof deck and between the top of the wall and the bottom of the steel floor or roof deck and overlap a min 1/2 In. (13 mm) onto gypsum board and a min 2 In. (51 mm) onto the spray applied material on both sides of wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal AS200 Elastomeric Spray

*Bearing the UL Classification Mark

1. UL SYSTEM NO. HW-D-0088

UL SYSTEM NO. HW-D-0088-Cont.

System No. W-L-1251
F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 0 Hr



Guide XHEZ
Through - penetration Firestop Systems

(W-L-1251 - B Card)
(Cont'd from W-L-1251 - A Card)

System No. W-L-1251

July 24, 2001
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 0 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum board/stud shaft wall assembly shall be constructed of the materials and in the manner specified in the individual U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall incorporate the following construction features:
   A. **Steel Studs** -- "C-H" or "C-T" shaped studs, min 2-1/2 in. wide by 1-1/2 in. deep, fabricated from min No. 25 gauge galv steel, spaced max 24 in. OC.

   B. **Gypsum Board*** -- 1 In. thick, 24 in. wide gypsum liner panels installed vertically. Max diam of circular cutout in gypsum liner panel is 10 In.

   C. **Gypsum Board*** -- 1/2 in. or 5/8 in. thick, 48 in. wide gypsum boards. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of circular cutout in gypsum board is 10 In. **The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.**

2. **Metallic Sleeve** -- Cylindrical sleeve fabricated from min No. 30 gauge galv sheet steel and having a min 2 In. lap along the longitudinal seam. Length of the sleeve to be equal to the thickness of the wall. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the opening and releasing the coil to let it uncoil against the circular cutouts in the gypsum board layers. The ends of the steel sleeve shall be flush with each surface of the wall.

3. **Through Penetrant** -- One metallic pipe, tube or conduit installed concentrically or eccentrically within the firestop system. The annular space between the pipe, tube or conduit and the periphery of the sleeved opening to be min 0 In. (point contact) to max 2in. Pipe, tube or conduit to be rigidly supported on both sides of wall assembly. One of the following types and sizes of pipe, tube or conduit may be used:

   D. **Steel Pipe** -- Nom 8 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.

   E. **Iron Pipe** -- Nom 8 in. diam (or smaller) cast or ductile iron pipe.

   F. **Conduit** -- Nom 4 in. diam (or smaller) rigid steel conduit, steel electrical metallic tubing (EMT) or flexible steel conduit.

   G. **Copper Pipe or Tube** -- Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe or Type L (or heavier) copper tube.

4. **Firestop System** -- The firestop system consists of the following items:

   H. **Packing Material** -- Min 4 pcf mineral wool batt insulation firmly packed into sleeved opening as a permanent form. Packing material to extend throughout thickness of wall except for a 1 in. deep recess on the finished side of wall to accommodate the fill material.

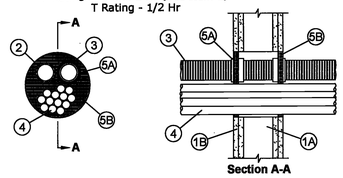
   I. **Fill, Void or Cavity Material* -- Sealant** -- Min 1 In. thickness of fill material applied within sleeve, flush with finished surface of wall. At the point contact location, a min 3/8 in. diam bead of fill material shall be applied at the penetrant/gypsum board interface.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

*Bearing the UL Classification Marking

2. UL SYSTEM NO. W-L- 1251

System No. W-L-8056
F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 1/2 Hr



Guide XHEZ
Through-Penetration Firestop Systems

System No. W-L-8056

F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 1/2 Hr

1. Wall Assembly -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. Studs -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 In. (406 mm) OC. Steel studs to be min 3-1/2 In. (89 mm) wide and spaced max 24 in. (610 mm) OC.

   B. Gypsum Board* -- Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 8 In. (203 mm).

2. Metallic Penetrants -- One or more metallic pipes, conduits or tubing installed concentrically or eccentrically within the opening. Annular space between metallic penetrants and periphery of opening to be min 0 In. (0 mm, point contact) to max 2 In. (51 mm). Annular space between metallic penetrants and nonmetallic penetrants or cables to be min 1/2 In. (13 mm) to max 1-1/2 In. (38 mm). Metallic pipes, conduits or tubing to be rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of metallic pipes, conduits or tubing may be installed within the opening:

   C. Steel Pipe -- Nom 2 In. (51 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.

   D. Iron Pipe -- Nom 2 in. (51 mm) diam (or smaller) cast or ductile iron pipe.

   E. Conduit -- Nom 2 In. (51 mm) diam (or smaller) rigid steel conduits, electrical metallic tubing (EMT) or flexible steel or aluminum conduit.

2. Electrical Nonmetallic Tubing (ENT)+ -- Nom 2 in. (51 mm) diam (or smaller) ENT formed of PVC, installed in accordance with Article 331 of the National Electrical Code (NFPA No. 70). One or more ENT installed concentrically or eccentrically within the opening. Annular space between ENT and periphery of opening to be min 0 In. (0 mm, point contact) to max 2 In. (51 mm). Annular space between ENT and metallic penetrants or cables to be min 1/2 In. (13 mm) to max 1_1/2 In. (38 mm). ENT to be rigidly supported on both sides of the wall assembly.

   See Electrical Nonmetallic Tubing (FKHU) in UL Electrical Construction Materials Directory for names of manufacturers.

4. Cables -- Nom 4 In. (102 mm) diam (or smaller) tight bundle of cables. Cable bundle spaced min 1/2 In. (13 mm) to max 1-1/2 In. (38 mm) from metallic and nonmetallic penetrants. Cable bundle spaced 0 In. (0 mm, point contact) to 2 In. (51 mm) from periphery of opening. Cable bundle to be rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of cables may be used:

   F. Max 100 pair No. 24 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacket materials.

   B. Max 1/C No. 500 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.

   C. Max 7/C No. 12 AWG (or smaller) copper conductor power and control cables with XLPE or PVC insulation with XLPE or PVC jacket.

   G. Max 4/C No. 4/0 AWG (or smaller) copper or aluminum conductor SER cables with PVC insulation and jacket.

   H. Max 3/C No. 2/0 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TEK cable.

   I. Max 110/125 fiber optic (F.O.) cable with PVC insulation and jacket.

   J. Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable (Romex) with PVC insulation and jacket.

   H. Max RG/U coaxial cable with fluorinated ethylene insulation and jacket.

   I. Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with PVC jacket and insulation.

   K. Max 4/C with ground No. 2/0 (or smaller) aluminum or copper conductor Metal-Clad+ or Armored-Clad+ cable with steel or aluminum jacketing.

   AFC CABLE SYSTEMS INC

3. Firestop System - The firestop system shall consist of the following:

   L. Fill, Void or Cavity Material* - Wrap Strip -- Nom 1/8 or 3/16 in. (3.2 or 4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 2 in. (51 mm) wide strips, or nom 1/4 in. (6 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. (38 mm) wide strips. Single layer wrapped around each individual ENT and secured with a single layer of foil tape. Wrap strip recessed within opening such that ends project a max 1/4 in. (6 mm) on each surface of the wall.

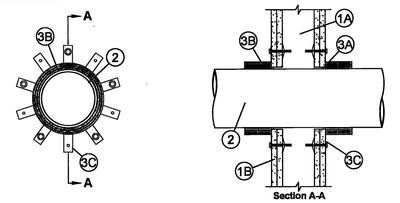
   SPECIFIED TECHNOLOGIES INC -- SpecSeal RED Wrap Strip, SpecSeal BLU Wrap Strip or SpecSeal BLU2 Wrap Strip

   M. Fill, Void or Cavity Material* - Sealant -- Min 5/8 in. (16 mm) thickness of fill material applied flush with both surfaces of wall. At point contact locations, apply a min 3/8 in. (10 mm) diam bead of fill material at the penetrant/gypsum board interface.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

*Bearing the UL Classification Mark
+Bearing the UL Listing Mark

3. UL SYSTEM NO. W-L- 8056



System No. W-L-2074

October 14, 2003
F Ratings -- 1 and 2 Hr (See Item 1)
T Ratings -- 3/4, 1 and 2 Hr (See Items 1 and 2)
L Rating At Ambient -- Less Than 1 CFM/sq ft
L Rating At 400 F -- Less Than 1 CFM/sq ft

1. **Wall Assembly --** The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 and U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs --** Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced 24 in. (610 mm) OC.

   B. **Gypsum Board* --** 5/8 in. (16 mm) thick, 4 ft (1219 mm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 7 In. (178 mm).
   Except as noted in Item 2, the hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through-Penetrants --** One nonmetallic pipe or conduit to be centered within the firestop system. A nom annular space of 3/16 in. (4.8 mm) is required within the firestop system. Pipe or conduit to be rigidly supported on both sides of wall assembly. The following types and sizes of nonmetallic pipes or conduit may be used:

   A. **Polyvinyl Chloride (PVC) Pipe --** Nom 6 In. (152 mm) diam (or smaller) Schedule 40 solid core or cellular PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

   B. **Flame Retardant Polypropylene (FRPP) Pipe --** Nom 6 In. (152 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

   C. **Rigid Nonmetallic Conduit+ --** Nom 6 In. (152 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70.)

   D. **Chlorinated Polyvinyl Chloride (CPVC)Pipe --** Nom 6 In. (152 mm) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.

   E. **Fiberglass Reinforced Pipe (FRP) --** Nom 6 In. (152 mm) diam (or smaller) glass fiber reinforced thermosetting resin pipe for use in closed (process or control) or vented (drain, waste or vent) piping systems. **When FRP pipe is used, T Rating is 3/4 hr.**

3. **Firestop System --** The firestop system shall consist of the following:
   A. **Fill, Void or Cavity Material* -- Sealant --** Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

   B. **Fill, Void or Cavity Material* -- Wrap Strip --** Nom 1/8 or 3/16 in. (3.2 or 4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 2 in. (51 mm) wide strips or nom 1/4 in. (6 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. (38 mm) wide strips. Two stacks of wrap strips, each consisting of three wrap strip layers, are individually wrapped around the through-penetrant with the ends butted and held in place with masking tape. Butted ends in successive layers shall be aligned. Wrap strips are installed on each side of wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal BLU Wrap Strip, SpecSeal BLU2 Wrap Strip or SpecSeal RED Wrap Strip

   C. **Steel Collar --** Collar fabricated from coils of precut 0.022 in. (0.6 mm) thick (No. 26 MSG) galv sheet steel available from wrap strip manufacturer. Collar shall be min 3 in. (76 mm) deep with min six 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs. Retainer tabs, 3/4 in. (19 mm) wide tapering down to 3/8 in. (10 mm) wide and located opposite the anchor tabs, are folded 90 degrees toward through-penetrant surface to maintain the annular space around the through-penetrant and to retain the wrap strips. Steel collar wrapped around wrap strips and through-penetrant with a 1 in. (25 mm) wide overlap along its perimeter joint and secured together by means of three No. 8 by 3/8 in. (10 mm) long steel screws. Wrap strip/steel collar assembly is slid along the through-penetrant until it abuts the surface of the wall. Steel collar tightened around wrap strips and through-penetrant using min 1/2 in. (13 mm) wide by 0.028 in. (0.7 mm) thick stainless steel hose clamp spaced 2 in. (51 mm) OC. Collar secured to wall by a min of six 1/8 in. (3.2 mm) diam by min 1-3/4 in. (45 mm) long molly bolts in conjunction with min 1/4 in. (6 mm) by 1-1/2 in. (38 mm) diam steel fender washers. Steel collar installed on each side of wall.

4. **Firestop Device* --** As an alternate to the wrap strip and the steel collar (Item Nos. 3B and 3C), a firestop device consisting of steel collar lined with an intumescent material sized to fit the specific diam of the nonmetallic through penetrant may be used. Device shall be installed in accordance with the installation instructions supplied with the product. The device shall be installed on the each side of the wall and secured to the wall with 1/8 in. (3.2 mm) diam by min 1-3/4 in. (45 mm) long steel molly bolts in conjunction with min 1-1/4 in. (32 mm) diam steel fender washers.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal Firestop Collar

*Bearing the UL Classification Marking
+Bearing the UL Listing Mark

SALMAN JERWAD
JAN 27 2014
ACCEPTABLE FOR PERMIT
UNDER DIRECTIVE NO. 14/1975

4. UL SYSTEM NO. W-L- 2074

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT
DEPT.BLDGS 121864662 Job Number
SC110161990 Scan Code

NO.	DATE	DESCRIPTIONS
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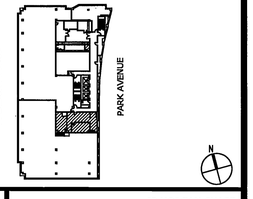
1	08.05.13	ISSUE FOR BID, FILING & LL REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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DATE	08.08.12
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DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-706-FS.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

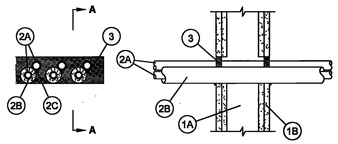
FIRE STOPPING & JOINT SYSTEM DIAGRAMS SHEET 1 OF 3

REGISTERED ARCHITECT TED MOUDIS No. 016196-1 STATE OF NEW YORK

A-706.00

18 OF 20

System No. W-L-8027
F Rating - 1 and 2 Hr (See Item 1)
T Rating - 1/4 Hr



Guide XHEZ
Through-Penetration Firestop Systems

(W-L-8027 - B Card)
(Cont'd from W-L-8027 - A Card)

System No. W-L-8027

October 11, 2000
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 1/4 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be 3-5/8 in. wide and spaced max 24 in. OC.

   B. **Gypsum Board*** -- Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max area of opening is 30 in. with a max dimension of 10 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Air Conditioning (AC) Line Set** -- One or more AC line sets installed eccentrically or concentrically within opening. Each AC line set consists of two pipes or tubes (Item 2A), tubing insulation (Item 2B) and a thermostat cable (Item 2C). The space between the AC line sets shall be in 1/2 in. to max 3/4 in. The space between the AC line sets and the periphery of the opening shall be min 0 in. (point contact) to max 1 in.

2A. **Through Penetrant** -- A max of two pipes or tubes to be installed in each AC line set. Of the two pipes or tubes, only one may have a nom diam greater than 1/2 in. Annular space between pipes or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. Pipes or tubing to be rigidly supported on both sides of the wall assembly. The following types and sizes of through penetrants may be used:
A. **Steel Pipe** -- Nom 1 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
B. **Iron Pipe** -- Nom. 1 in. diam (or smaller) cast or ductile iron pipe.
C. **Copper Pipe** -- Nom 1 in. diam (or smaller) Regular (or heavier) copper pipe.
D. **Copper Tube** -- Nom. 1 in. diam (or smaller) Type L (or heavier) copper tube.

2B. **Tube Insulation -- Plastics#** -- Nom 3/4 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The tube insulation may be installed on one max 1/2 in. diam pipe or tube in each AC line set. The annular space between the penetrating item and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. The space between the pipes or tubing within each AC line set shall be 0 in. (point contact).
See **Plastics** (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

2C. **Cable** -- One 4 pair No. 18 AWG (or smaller) thermostat cable with polyvinyl chloride (PVC) insulation and jacket materials may be installed with each AC line set. Cable to be spaced min 0 in (point contact) to max 1/2 in. from the other penetrants in each line set. The space between the cable and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. Cable to be rigidly supported on both sides of wall assembly.

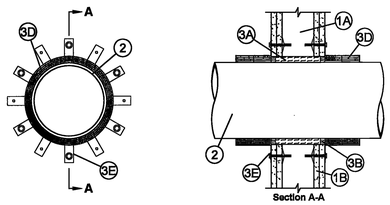
3. **Fill, Void or Cavity Material* -- Sealant** -- Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. diam bead fo fill material applied at through penetrant/gypsum board interface on both surfaces of wall. Additional fill material forced into grouped penetrant interstices to max extent possible.

SPECIFIED TECHNOLOGIES INC -- SpecSeal LCI Sealant

*Bearing the UL Classification Marking
Bearing the UL Recognized Component Marking

5. UL SYSTEM NO. W-L- 8027

System No. W-L-2079
F-Rating - 1 and 2 Hr (See Item 1B)
T-Rating - 0 Hr
L Rating At Ambient - 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft



System No. W-L-2079

October 14, 2003
F Ratings -- 1 and 2 Hr (See Item 1B)
T Rating -- 0 Hr
L Rating At Ambient -- 1 CFM/sq ft
L Rating At 400 F -- Less Than 1 CFM/sq ft

1. **Wall Assembly --** The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs --** Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. OC (406 mm) with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.

   B. **Gypsum Board* --** 5/8 In. (16 mm) thick, 4 ft (1219 mm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 10 in. (254 mm).
   The hourly F rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through Penetrant --** One nonmetallic pipe to be centered within the firestop system. A nom annular space of 11/16 in. (18 mm) is required within the firestop system. Pipe to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipes may be used:

   A. **Polyvinyl Chloride (PVC) Pipe --** Nom 8 in. (203 mm) diam (or smaller) Schedule 40 PVC pipe for use in closed (process or supply) vented (drain, waste, or vent) piping systems.

   B. **Flame Retardant Polypropylene (FRPP) Pipe --** Nom 8 in. (203 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

   C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe --** Nom 8 in. (203 mm) diam (or smaller) SDR 17 13.5 CPVC pipe for use in closed (process or supply) piping systems.

3. **Firestop System --** The firestop system shall consist of the following:

   A. **Packing Material --** Min 4 pcf (64 kg/m3) mineral wool insulation cut to size to fill the annulus within the opening and stud cavity. Mineral wool insulation wrapped around the outer circumference of the through penetrant and secured together by means of No. 24 AWG steel tie wire. Mineral wool insulation slid into annulus of opening and recessed from both surfaces of wall to accommodate the required thickness of fill material.

   B. **Fill, Void or Cavity Material* -- Sealant --** Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

   C. **Aluminum Foil Tape --** (Not Shown) -- Nom 3 mil (0.8 mm) thick pressure sensitive aluminum foil tape wrapped around the outer circumference of the through penetrant with a 1 in. (25 mm) wide overlap along its perimeter joint. Foil tape shall abut against both surfaces of the wall and extend a min 5 in. (127 mm) beyond both surfaces of the wall.

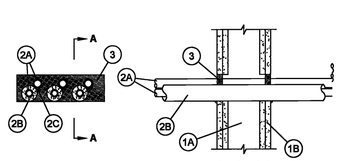
   D. **Fill, Void or Cavity Material* -- Wrap Strip --** Nom 1/8 or 3/16 in. (3.2 or 4.8 mm) thick intumescent material faced on both sides with a plastic film, supplied in 2 in. (51 mm) wide strips. Two stacks of wrap strips, each consisting of four wrap strips are individually wrapped around the through penetrant with ends butted and held in place with masking tape. Butted ends in successive layers may be aligned or offset. The edge of the wrap strips shall abut each surface of the wall. Two stacks of wrap strips are installed on each side of the wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal BLU Wrap Strip or SpecSeal BLU2 Wrap Strip

   E. **Steel Collar --** Collar fabricated from coils of precut 0.029 in. (0.7 mm) thick (No. 22 MSG) galv sheet steel available from wrap strip manufacturer. Collar shall be nom 4 in. (102 mm) deep with min six 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs for securement to the wall. Retainer tabs, 3/4 in. (19 mm) wide tapering down to 3/8 in. (10 mm) wide and located opposite the anchor tabs, are folded 90 degrees toward through penetrant surface to maintain the annular space around the pipe and to retain the wrap strips. Steel collar wrapped around wrap strips and through penetrant with 1 in. (25 mm) wide overlap along its perimeter joint. Steel collar tightened around wrap strips and through penetrant using min 1/2 in. (13 mm) wide by 0.028 in. (0.7 mm) thick stainless steel hose clamp spaced 2 in. (51 mm) OC. Collar secured to wall with 1/8 in. (3.2 mm) diam by min 1-3/4 in. (45 mm) long steel molly bolts in conjunction with min 1/4 in. (6 mm) by 1-1/4 in. (32 mm) diam steel fender washers. Steel collars are installed on each side of wall.

*Bearing the UL Classification Mark

6. UL SYSTEM NO. W-L- 2079

System No. W-L-8027
F Rating - 1 and 2 Hr (See Item 1)
T Rating - 1/4 Hr



Guide XHEZ
Through-Penetration Firestop Systems

(W-L-8027 - B Card)
(Cont'd from W-L-8027 - A Card)

System No. W-L-8027

October 11, 2000
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 1/4 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be 3-5/8 in. wide and spaced max 24 in. OC.

   B. **Gypsum Board*** -- Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max area of opening is 30 in. with a max dimension of 10 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Air Conditioning (AC) Line Set** -- One or more AC line sets installed eccentrically or concentrically within opening. Each AC line set consists of two pipes or tubes (Item 2A), tubing insulation (Item 2B) and a thermostat cable (Item 2C). The space between the AC line sets shall be in 1/2 in. to max 3/4 in. The space between the AC line sets and the periphery of the opening shall be min 0 in. (point contact) to max 1 in.

2A. **Through Penetrant** -- A max of two pipes or tubes to be installed in each AC line set. Of the two pipes or tubes, only one may have a nom diam greater than 1/2 in. Annular space between pipes or tubing and periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. Pipes or tubing to be rigidly supported on both sides of the wall assembly. The following types and sizes of through penetrants may be used:
A. **Steel Pipe** -- Nom 1 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
B. **Iron Pipe** -- Nom. 1 in. diam (or smaller) cast or ductile iron pipe.
C. **Copper Pipe** -- Nom 1 in. diam (or smaller) Regular (or heavier) copper pipe.
D. **Copper Tube** -- Nom. 1 in. diam (or smaller) Type L (or heavier) copper tube.

2B. **Tube Insulation -- Plastics#** -- Nom 3/4 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The tube insulation may be installed on one max 1/2 in. diam pipe or tube in each AC line set. The annular space between the penetrating item and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. The space between the pipes or tubing within each AC line set shall be 0 in. (point contact).
See **Plastics** (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

2C. **Cable** -- One 4 pair No. 18 AWG (or smaller) thermostat cable with polyvinyl chloride (PVC) insulation and jacket materials may be installed with each AC line set. Cable to be spaced min 0 in (point contact) to max 1/2 in. from the other penetrants in each line set. The space between the cable and the periphery of the opening shall be min 0 in. (point contact) to max 1/2 in. Cable to be rigidly supported on both sides of wall assembly.

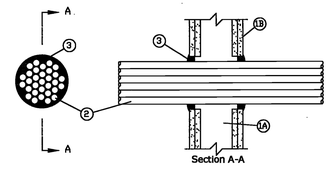
3. **Fill, Void or Cavity Material* -- Sealant** -- Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. diam bead fo fill material applied at through penetrant/gypsum board interface on both surfaces of wall. Additional fill material forced into grouped penetrant interstices to max extent possible.

SPECIFIED TECHNOLOGIES INC -- SpecSeal LCI Sealant

*Bearing the UL Classification Marking
Bearing the UL Recognized Component Marking

7. UL SYSTEM NO. W-L- 8027

System No. W-L-3076
F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 0 Hr



Guide XHEZ
Through-Penetration Firestop Systems

(W-L-3076 - B Card)
(Cont'd from W-L-3076 - A Card)

System No. W-L-3076

August 07, 2000
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 0 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.

   B. **Gypsum Board ®** -- The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Diam of circular cutout in gypsum board layers in each side of wall to be 1/2 in. larger than diam of tight cable bundle (Item 2 or 2A). Max diam of opening is 4-1/2 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Cables** -- Max 4 in. diam tight bundle of cables to be installed either concentrically or eccentricity in circular cutouts in gypsum wallboard opening. Cables to be rigidly supported on both sides of wall assembly. The annular space within the firestop system shall be a min 0 in. (point contact) to a max 1/2 in. Any combination of the following types and sizes of cables may be used.

   A. Max 150 pair No. 24 AWG (or smaller) copper conductor cable with polyvinyl chloride (PVC) insulation and jacket.

   B. Max 1/C - 350 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.

   C. Max 2/0 AWG (or smaller) copper conductor cable with a XLPE insulation and PVC jacket.

   D. Max 3/C (with ground) No. 8 AWG nonmetallic sheathed (Romex) cable (or smaller) with copper conductor, polyvinyl chloride (PVC) insulation and jacket materials.

   E. Max 3/C (with ground) No. 2/0 AWG (or smaller) aluminum or copper conductor service entrance cable with PVC insulation and jacket materials.

   F. Max 4 pair No. 18 AWG (or smaller) copper conductor thermostat cable with PVC insulation and jacket materials.

   G. Max RG/U Type 11 (or smaller) coaxial cable with fluorinated ethylene insulation and jacket materials.

   H. Max 62.5/125 micron fiber optic cable with PVC insulation and jacket materials.

2A. **Through penetrating Product*** -- As an alternate to the Item 2, a max 4 in. diam tight bundle of max 4 /C (with ground) - No. 2/0 AWG (or smaller) aluminum or steel jacketed **Armored Cable+** or **Metal-Clad Cable+** with aluminum or copper conductors may be used. The annular space between the cable bundle and the periphery of the opening shall be a min of 0 in. (point contact) to a max of 1 in. Through penetrating products may also be used in conjunction with the cables specified in Item 2. The through penetrating products are to be spaced min 1/2 in. from the cable bundle in Item 2. Cables to be rigidly supported on both sides of wall assembly.
AFC CABLE SYSTEMS INC

3. **Fill, Void or Cavity Material* -- Sealant** -- Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall. Fill material to be forced into interstices of cable group to max extent possible. At point contact location, apply min 1/4 in. diam bead of fill material at cable/gypsum board interface on both sides of wall.

SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101, 102 or 105 Sealant

*Bearing the UL Classification Marking
+ Bearing the UL Listing Mark

SALMAN ARSHAD
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UNDER DIRECTIVE NO. 14/1975

8. UL SYSTEM NO. W-L- 3076

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

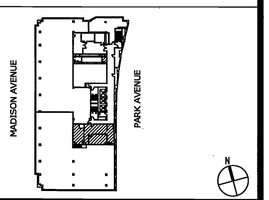
CONSULTANT

DEPT-BLDGS 121864862 Job Number
SC110161993 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



PROJECT NUMBER	112162.01
SCALE	N/A
DATE	08.08.12
PROJECT MANAGER	CR
PROJECT ARCHITECT	MT
DRAWN BY	XX
CHECKED BY	XX
CADD FILE	112162.01-A-707-FS.dwg

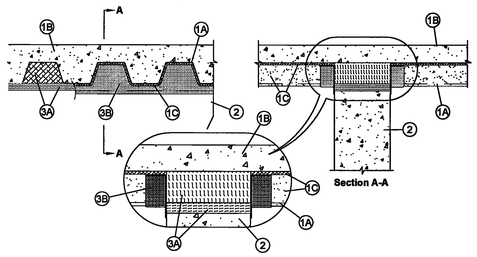
JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

FIRE STOPPING & JOINT SYSTEM DIAGRAMS SHEET 2 OF 3

REGISTERED ARCHITECT TED MOUDIS NEW YORK STATE OF NEW YORK

A-707.00
19 OF 20

System No. HW-D-0139
Assembly Rating - 3 Hr
Nominal Joint Width - 1 in.
Class II Movement Capabilities - 18.75% Compression or Extension



System No. HW-D-0139

November 18, 2003
Assembly Rating - 3 Hr
Nominal Joint Width - 1 In
Class II Movement Capabilities - 18.75% Compression or Extension

1. **Floor Assembly** -- The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Steel Floor and Form Units*** -- Max 3 in. (76 mm) deep galv steel fluted floor units.

   B. **Concrete** -- Min 2-1/2 in. ((64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

   C. **Spray-Applied Fire Resistive Material*** -- - Prior to installation of the forming material (Item 3A) and sealant (Item 3B), steel floor units to be sprayed with a min 5/16 in. (8 mm) to max 11/16 in. (18 mm) thickness of material in accordance with the specifications in the individual D700 Series Design. Material is to be excluded from the steel deck in the area immediately above the wall. The spray applied fire resistive material is mixed with water in accordance with the mixing instructions on the bag. The min average density of the spray applied fire resistive material shall be 15 pcf (240 kg/m3) with a min individual density of 14 pcf (224 kg/m3). See Design Information Section in Volume 1 of the Fire Resistance Directory for method of density determination.
   W R GRACE & CO - CONN
   CONSTRUCTION PRODUCTS DIV -- Type MK-6/HY

1A **Roof Assembly** -- (Not Shown) -- As an alternate to the floor assembly (Item 1), a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P700 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:
   A. **Steel Roof Deck** -- Max 3 In. (76 mm) deep galv steel fluted roof deck.

   B. **Roof Insulation -- Mineral and Fiber Board*** -- Min 3/4 in. (19 mm) thick boards applied in one or more layers directly over steel roof deck or over gypsum board sheathing laid atop steel roof deck.

   C. **Roof Covering*** -- Hot-mopped or cold-application materials compatible with mineral and fiber board insulation.

   D. **Spray-Applied Fire Resistive Material*** -- Steel roof deck to be sprayed with a max 3/4 in. (19 mm) thickness of spray applied fire resistive material as specified in the individual P700 Series Roof-Ceiling design. Material is to be excluded from the steel deck in the area immediately above the wall. The spray applied fire resistive material is mixed with water in accordance with the mixing instructions on the bag. The min average density of the spray applied fire resistive material shall be 15 pcf (240 kg/m3) with a min individual density of 14 pcf (224 kg/m3). See Design Information Section in Volume 1 of the Fire Resistance Directory for method of density determination.
   W R GRACE & CO - CONN
   CONSTRUCTION PRODUCTS DIV -- Type MK-6/HY

2. **Wall Assembly** -- Min 8 In. (203 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Wall may also be constructed of any UL Classified **Concrete Block***
   See **Concrete Block** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

3. **Joint System -- Max separation between bottom of floor or roof deck and top of concrete wall (at time of installation of joint system) is 1 in. (25 mm). The joint system is designed to accommodate a max 18.75 percent compression or extension from it's installed width.** The joint system shall consist of forming and fill materials, as follows:
   A. **Forming Material*** -- Sections of min 6 pcf (96 kg/m3) mineral wool batt insulation with a width equal to the thickness of the wall compressed 50 percent in thickness and installed cut edge first to completely fill the gap between the bottom of the steel deck and the top of the concrete wall. Min 9 in. (229 mm) thickness of min 6 pcf (96 kg/m3) mineral wool batt insulation cut to the shape of the fluted deck installed into the flutes of the steel floor above the compressed mineral wool batt insulation atop the concrete wall. The mineral wool batt insulation is to be compressed min 14 percent in thickness such that it is flush with both sides of the wall.

   FIBREX INSULATIONS INC -- FBX Safing Insulation

   IIG MINWOOL L L C -- Safing Insulation/MW

   ROCK WOOL MANUFACTURING CO -- Delta Board

   ROXUL INC -- SAFE

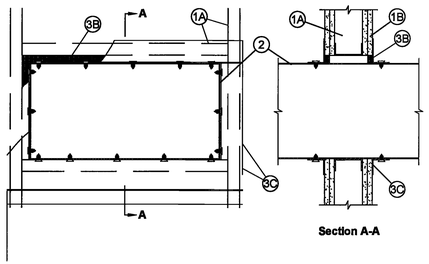
   THERMAFIBER L L C -- Type SAF

   B. **Fill, Void or Cavity Material* - Sealant** -- Min 1/8 in. (3.2 mm) wet thickness or 1/16 in. (1.6 mm) dry thickness of fill material spray applied on each side of the wall in the flutes of the steel floor or roof deck and between the top of the wall and the bottom of the steel floor or roof deck and overlap a min 1/2 in. (13 mm) onto concrete and a min 2 in. (51 mm) onto the spray applied material (Item 1C) on both sides of wall.
   SPECIFIED TECHNOLOGIES INC -- SpecSeal AS200 Elastomeric Spray

*Bearing the UL Classification Mark

9. UL SYSTEM NO. HW-D 0139

System No. W-L-7060
F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 1/2 Hr



System No. W-L-7060

December 04, 2002
F Ratings -- 1 and 2 Hr (See Item 1)
T Rating -- 1/2 Hr

1. **Wall Assembly** -- The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC. Additional horizontal framing members installed to form a rectangular box around the steel duct (Item 2).

   B. **Gypsum Board*** -- Thickness, type, number of layers and fasteners as specified in the Individual Wall and Partition Design. When wood studs are used, interior of through opening to be lined with sheets of gypsum board around entire periphery to a total thickness of 5/8 in. (16 mm) or 1-1/4 in. (32 mm) for 1 or 2 hr wall assemblies, respectively. Max area of opening is 952 sq in. (0.61 m2) with a max dim of 32 In. (813 mm).

   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Steel Duct** -- Max 24 by 30 in. (610 by 762 mm) No. 26 gauge (or heavier) galv steel duct installed eccentrically or concentrically within opening. Annular space between duct and periphery of opening to be min 0 In. (0 mm, point contact) to max 2 in. (51 mm). Duct to be rigidly supported on both sides of the wall assembly.

3. **Firestop System** -- The firestop system shall consist of the following:
   A. **Packing Material** -- (Optional, Not Shown) Mineral wool batt insulation, foam backer rod or glass fiber insulation installed as a permanent form to facilitate installation of fill material (Item 3B).

   B. **Fill, Void or Cavity Material* -- Sealant** -- Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact location, min 1/4 in. (6 mm) diam bead of fill material applied at steel duct/gypsum board interface on both surfaces of wall.

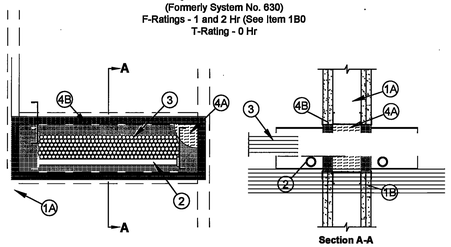
   SPECIFIED TECHNOLOGIES INC -- SpecSeal LCI Sealant

   C. **Retaining Angles** -- Min 16 gauge galv steel angles sized to lap onto duct a min of 2 In. (51 mm) and to lap onto wall around periphery of opening a min of 1 in. (25 mm). Angles attached to all four sides of steel duct on both surfaces of wall with No. 10 (or larger) steel sheet metal screws located 1 in. (25 mm) from each end and spaced max 4 In. (102 mm) OC.

*Bearing the UL Classification Mark
Subscriber ID: 650692002
Directory: FIRERES

10. UL SYSTEM NO. W-L- 7060

System No. W-L-4005
(Formerly System No. 630)
F-Ratings - 1 and 2 Hr (See Item 1B0
T-Rating - 0 Hr



Guide XHEZ
Through-Penetration Firestop Systems

(W-L-4005 - B Card)
(Cont'd from W-L-4005 - A Card)

System No. W-L-4005

January 13, 1994
(Formerly System No. 630)
F Ratings -- 1 and 2 Hr (See Item 1B)
T Rating -- 0 Hr

1. **Wall Assembly** -- The 1 or 2 h fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. In 2 h fire rated assemblies steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC. In 1 h fire-rated assemblies, steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC. Additional framing members shall be installed in stud cavity containing through-penetrating item to form a rectangular box around the penetrant.

   B. **Gypsum Board*** -- 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max width of opening in wood stud walls is limited 14-1/2 in. Additional framing members shall be installed in stud cavity containing through-penetrating item to form a rectangular box around the penetrant. If the cable tray is installed in a steel stud/gypsum wallboard assembly, the max. area of opening is 136.5 sq in. with max dimension of 22-3/4 in. If the cable tray is installed in a wood stud/gypsum wallboard assembly, the max. width of the cable tray and max. width of the opening is 12 and 14-1/2 in. respectively.
   The hourly F rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Cable Tray*** -- Max 18 in. wide by max 5 in. deep open ladder cable tray with channel-shaped side rails formed of min 0.069 in. thick aluminum and with 1 in. wide by 7/8 in. deep rungs spaced 9 in. OC. One cable tray to be installed in the opening. The annular space between the cable tray and the periphery of the opening shall be min 3/8 in. to max 1-9/16 in. Cable tray to be rigidly supported on both sides of wall assembly.

3. **Cables** -- Aggregate cross-sectional area of cables in cable tray to be max 20 percent of the cross-sectional area of the cable tray based on a max 3 in. cable loading depth within the cable tray. Any combination of the following types and sizes of copper conductor cables may be used:
   A. Max 1/C - 350 kcmil cable with a cross-linked polyethylene jacket (XLPE).
   B. Max 3/C - No. 2 AWG cable XLPE insulation and polyvinyl chloride (PVC) jacket.
   C. Max 7/C - No. 12 AWG cable with PVC insulation and jacket.
   D. Max 2/C - No. 16 AWG cable with PVC insulation and jacket.

4. **Firestop System** -- The firestop system shall consist of the following:

   A. **Packing Material** -- In 2 h fire rated assemblies, min 2-1/2 in. thickness of min 6 pcf mineral wool batt insulation firmly packed into opening as a permanent form. In 1 h fire rated assemblies, min 2-1/4 in. thickness of min 6 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.

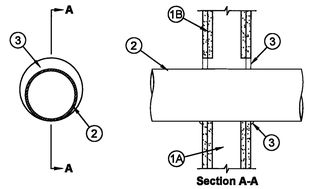
   B. **Fill, Void or Cavity Material* -- Caulk** -- Min 1-1/4 in. thickness of fill material applied within the annulus, on both surfaces of wall. Caulk to be forced into interstices of cable group to max extent possible. Additional caulk to be installed such that a min 1 in. is lapping beyond the periphery of the opening.

   SPECIFIED TECHNOLOGIES INC -- SpecSeal 100, 101 or 105 Sealant

*Bearing the UL Classification Marking

11. UL SYSTEM NO. W-L- 4005

System No. W-L-1062
F Ratings - 1 and 2 Hr
T Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/sq ft
L Rating At 400 F - Less Than 1 CFM/sq ft



Guide XHEZ
Through-penetration Firestop Systems

(W-L-1062 - B Card)
(Cont'd from W-L-1062 - A Card)

System No. W-L-1062

F Ratings -- 1 and 2 Hr
T Rating -- 0 Hr
L Rating At Ambient -- Less Than 1 CFM/sq ft
L Rating At 400 F -- Less Than 1 CFM/sq ft

1. **Wall Assembly** -- The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

   A. **Studs** -- Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in. OC.

   B. **Gypsum Board*** -- Thickness, type, number of layers and fasteners as required in the Individual Wall and Partition Design. Max diam of opening in wood stud walls is 8 in. Max diam of opening in steel stud walls is 14 in.
   The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through Penetrants** -- One metallic pipe, conduit or tubing to be installed within the firestop system. The space between pipe, conduit or tubing and periphery of opening shall be a min 0 In. (point contact) to a max 2 In. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

   A. **Steel Pipe** -- Nom 12 in. diam (or smaller) Schedule 5 (or heavier steel pipe.

   B. **Iron Pipe** -- Nom 12 in. diam (or smaller) cast or ductile iron pipe.

   C. **Conduit** -- Nom 4 in. diam (or smaller) electrical metallic tubing, nom 6 in. diam (or smaller) steel conduit or nom 1 in. diam (or smaller) flexible steel conduit.

   D. **Copper Tubing** -- Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.

   E. **Copper Pipe** -- Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

3. **Fill, Void or Cavity Material* -- Caulk** -- Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. Min 3/8 in. diam bead of fill material applied at point contact location at the penetrant/gypsum board interface on both sides of wall.
   GENERAL ELECTRIC CO
   SILICONE PRODUCTS DIV -- Pensil 100 Caulk.
   SPECIFIED TECHNOLOGIES INC -- Pensil 100 Sealant and Pensil 300 Sealant.

*Bearing the UL Classification Mark

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT
UNDER DIRECTIVE NO. 14/1875

12. UL SYSTEM NO. W-L- 1062

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

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SYSKA HENNESSY GROUP

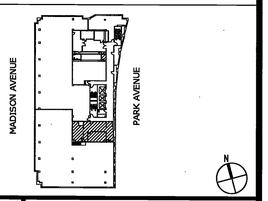
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT
DEPT.BRDGS 121664662 Job Number
SC1101161996 Scan Code

NO.	DATE	DESCRIPTIONS
2	01.13.14	ISSUE FOR FILING & CONSTRUCTION
1	08.05.13	ISSUE FOR BID, FILING & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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DATE	08.08.12
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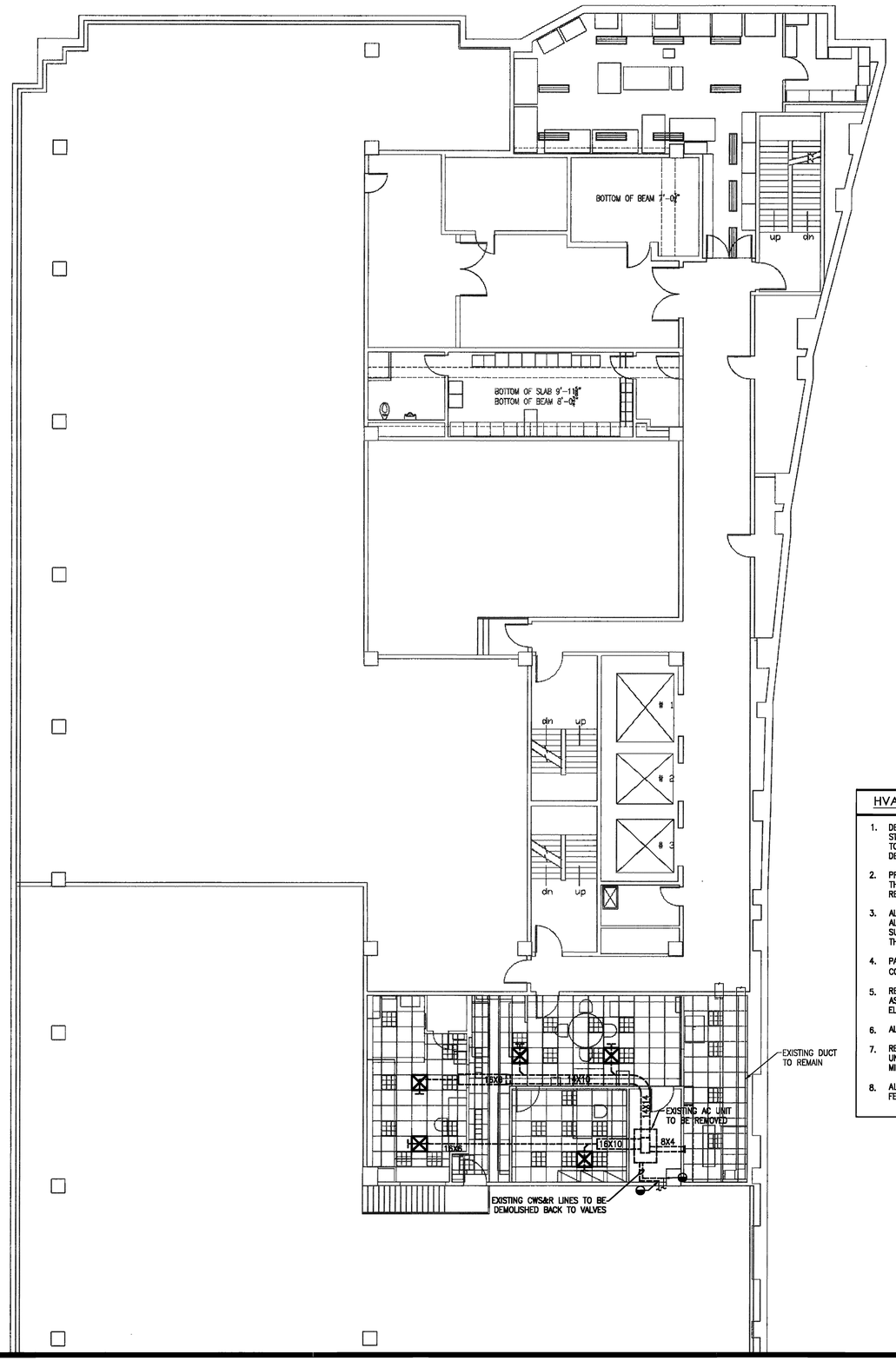
DRAWN BY	GM
CHECKED BY	GM
CADD FILE	112162.01-A-708-FS.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

FIRE STOPPING & JOINT SYSTEM DIAGRAMS SHEET 3 OF 3

REGISTERED ARCHITECT TED MOUDIS No. 016106 STATE OF NEW YORK

A-708.00
20 OF 20



HVAC DEMOLITION WORK NOTES

1. DEMOLITION CONTRACTOR SHALL INVESTIGATE THE SPACE BEFORE STARTING TO DEMOLISH THE WORK, AND BE FAMILIAR WITH THE SYSTEM TO BE REMOVED. HE SHALL REPORT TO ARCHITECT AND ENGINEER ANY DEVIATION FROM SCOPE OF WORK TO BE DEMOLISHED.
2. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THE SPACE AS REQUIRED BY THE REMOVAL OF PIPES, DUCTS, CONDUIT, AND EQUIPMENT.
3. ALL EQUIPMENT SHALL BE REMOVED IN A CAREFULLY PLANNED MANNER. ALL CEILING HUNG EQUIPMENT SHALL BE REMOVED BY PROVIDING SUPPORTS FROM BELOW. NO DROPPING OF EXISTING EQUIPMENT ONTO THE FLOOR SLAB WILL BE ALLOWED.
4. PATCHING OF EXISTING WALL OR SLAB OPENINGS SHALL BE BY GENERAL CONTRACTOR(G.C.). HVAC CONTRACTOR TO COORDINATE WITH G.C.
5. REMOVE CONTROLS, THERMOSTATS, AC UNITS AND CONTROL WIRING ASSOCIATED WITH EQUIPMENT BEING REMOVED. COORDINATE WITH ELECTRICAL CONTRACTOR AS REQUIRED.
6. ALL EXISTING WORK IN HATCHED AREAS SHALL REMAIN.
7. REMOVE ALL SUPPLY MAIN AND BRANCH DUCTWORK BACK TO EXISTING UNIT. REMOVE INCLUDING BUT NOT LIMITED TO, AIR OUTLETS, MISCELLANEOUS ACCESSORIES, ETC.
8. ALL DEMOLITION WORK SHALL STRICTLY COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND STANDARDS.
9. ALL DEMOLITION AND CONNECTION OF NEW WORK SHALL BE COORDINATED WITH THE OWNER AS NOT TO DISRUPT BUILDING OPERATIONS AND SERVICES. IF TEMPORARY SHUT-DOWNS ARE REQUIRED THEY SHALL BE COORDINATED WITH THE OWNER AND SCHEDULED AS REQUIRED. ALL LABOR REQUIRED ON AN OVERTIME BASIS SHALL BE CONFIRMED WITH THE OWNER PRIOR TO SUBMISSION OF BIDS. ALL REQUIRED OVERTIME LABOR SHALL BE INCLUDED IN THE BASE BID AND PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
10. ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH BUILDING RULES AND REGULATIONS OR AS DIRECTED BY THE OWNER.
11. ALL DEMOLISHED WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE OWNER. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF OFF SITE ALL DEMOLISHED WORK IN AN ACCEPTABLE AND SAFE MANNER AND SHALL KEEP ALL PUBLIC AREAS CLEAR AND SAFE.
12. PROVIDE FILTERS ON MAIN RETURN DUCTS DURING DEMOLITION TO STOP THE FLOW OF DUST AND OTHER AIRBORN MATERIALS.

SALMAN ANSARI

JAN 27 2014

ACCEPTABLE FOR PERMIT
UNDER DIRECTIVE NO. 14/1975

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.

JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPT BLDGS 121664662 Job Number
SC110161999 Scan Code

NO.	DATE	DESCRIPTIONS
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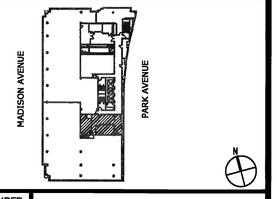
1	08.05.13	ISSUE FOR BID & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



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DATE	08.08.12
PROJECT MANAGER	NF
PROJECT ARCHITECT	GM
DRAWN BY	
CHECKED BY	
CADD FILE	DMM-100.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL MECHANICAL DEMOLITION PLAN

STATE OF NEW YORK ROBERT TO NINA 022872 LICENSED PROFESSIONAL ENGINEER

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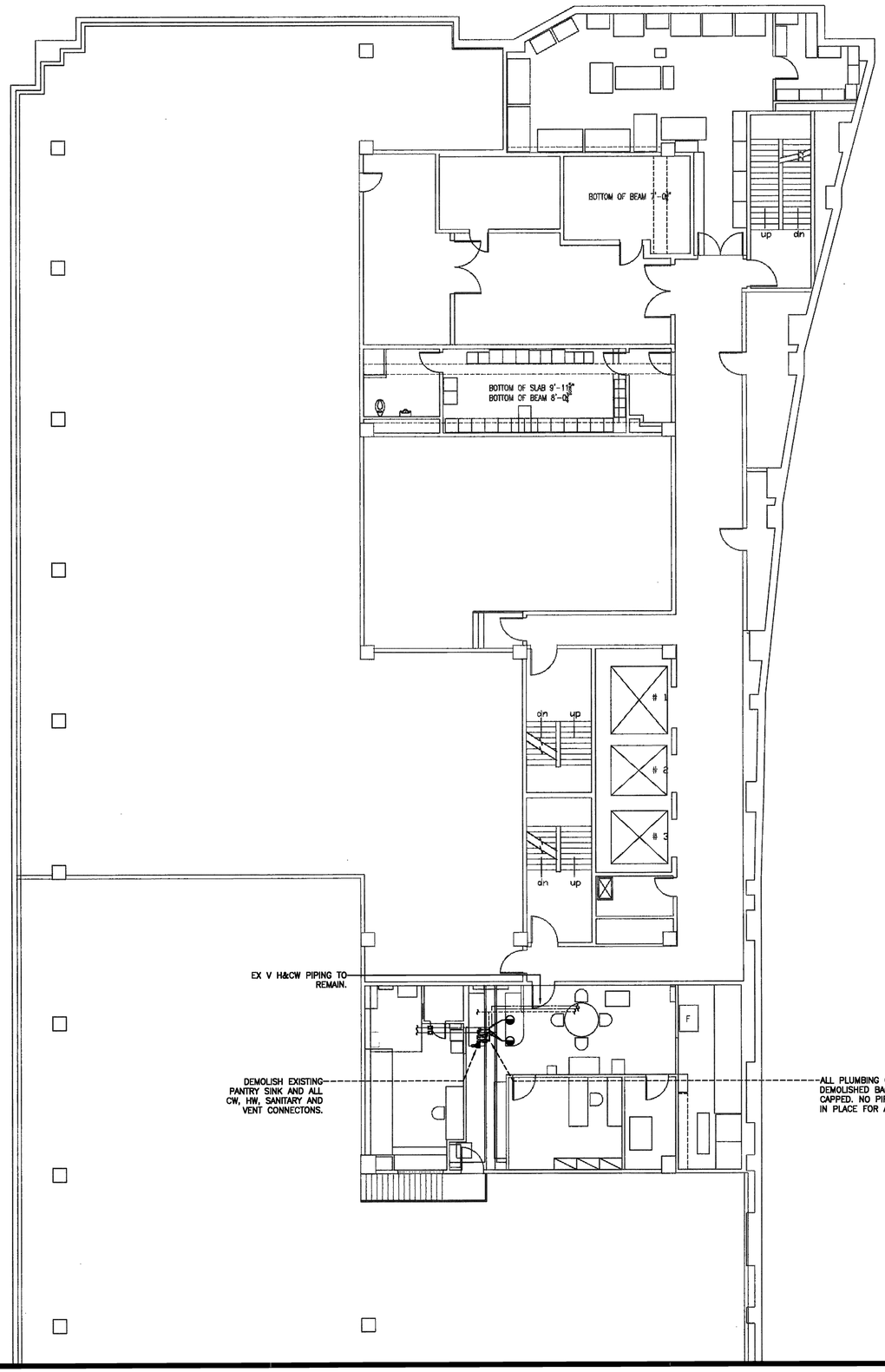
PAGE NO: 4 of 7



SALMAN ARSHAD
JAN 27 2014
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UNDER DIRECTIVE NO. 1/1975

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JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.566.3333
www.syska.com

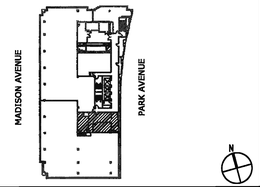
CONSULTANT

DEPT BLDG3 121664662 Job Number
SC110161978 Scan Code

NO.	DATE	DESCRIPTIONS
2	08.30.13	ISSUE FOR CONSTRUCTION
1	08.05.13	ISSUE FOR BID & LL REVIEW

ISSUE/REVISIONS

KEY PLAN — AREA OF WORK



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DATE	08.08.12
PROJECT MANAGER	NF
PROJECT ARCHITECT	GM
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CADD FILE	DMP-100.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL PLUMBING DEMOLITION PLAN

STATE OF NEW YORK ROBERT LAMB LICENSED PROFESSIONAL ENGINEER

DMP-100.00

PAGE NO: 3 of 5

MECHANICAL SYMBOLS

- NEW DIFFUSER
- NEW RETURN\EXHAUST
- EXISTING DIFFUSER
- EXISTING RETURN\EXHAUST TO BE REMOVED
- SUPPLY DUCTWORK, NEW
- SUPPLY DUCTWORK, EXISTING
- SUPPLY DUCTWORK, TO BE REMOVED
- RETURN DUCTWORK, NEW
- RETURN DUCTWORK, EXISTING
- RETURN DUCTWORK, TO BE REMOVED
- VOLUME DAMPER, NEW
- VOLUME DAMPER, EXISTING
- FIRE DAMPER, NEW
- FIRE DAMPER, EXISTING
- FIRE DAMPER, TO BE REMOVED
- FIRE AND SMOKE DAMPER, NEW
- FIRE AND SMOKE DAMPER, EXISTING
- TRANSFER DUCT WITH SOUND LINING, NEW
- DUCTWORK WITH ACOUSTIC LINING
- DUCT UNDER PRESSURE (SUPPLY AIR OR FAN DISCHARGE)
- DUCT UNDER NEGATIVE PRESSURE (RETURN, EXHAUST OR OUTSIDE AIR)
- R — RISE IN DUCTWORK (IN DIRECTION OF AIR FLOW)
- D — DROP IN DUCTWORK (IN DIRECTION OF AIR FLOW)
- S OR CFM — CUBIC FEET PER MINUTE
- VANED ELBOW (SEE DETAIL)
- VERTICAL DUCT DROP
- VERTICAL DUCT RISE
- ∅ — DIAMETER
- POINT OF CONNECTION
- POINT OF CONNECTION
- T — THERMOSTAT, NEW
- T — THERMOSTAT, EXISTING
- NEW FAN COIL UNIT

HVAC ABBREVIATIONS

AC	AIR CONDITIONING
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
A L	ACOUSTIC LINING
AHU	AIR HANDLING UNIT
CAC	COMPUTER AIR CONDITIONING UNIT
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
COD	CABLE OPERATED VOLUME DAMPER
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
D	DROP
CLG	CEILING
DN	DOWN
DWG	DRAWING
EF	EXHAUST FAN
EDH	ELECTRIC DUCT HEATER
ES	EQUAL SPLIT
(E)	EXISTING
EXH	EXHAUST
EWT	ENTERING WATER TEMPERATURE
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FPB	FAN POWERED BOX
F	FAN
FT	FEET
HV	HEATING AND VENTILATING
IN	INCH OR INCHES
L	LENGTH
LWT	LEAVING WATER TEMPERATURE
LIN FT	LINEAR FEET
MAX	MAXIMUM
MER	MECHANICAL EQUIPMENT ROOM
MIN	MINIMUM
MO	MASONRY / SHEET ROCK OPENING
NC	NORMALLY CLOSED
(N)	NEW
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
R	RISE
RA	RETURN AIR
REL	RELOCATE
REFR	REFRIGERANT
RLD	RETURN LINEAR DIFFUSER
RM	ROOM
SLD	SUPPLY LINEAR DIFFUSER
SP	STATIC PRESSURE
SPEC	SPECIFICATION
TEMP	TEMPERATURE
TD	TRANSFER DUCT
T'STAT	THERMOSTAT
TV	TURNING VANES
TYP	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
VAV	VARIABLE AIR VOLUME UNIT
W	WIDTH
W/	WITH
W/O	WITHOUT
WMS	WIRE MESH SCREEN
UFT	UNDER FLOOR TERMINAL UNIT
UON	UNLESS OTHERWISE NOTED
NSF	NET SQUARE FEET
NSI	NET SQUARE INCHES
RAO	RETURN AIR OPENING

PIPING SYMBOLS

- BALL VALVE
- GATE VALVE
- GLOBE VALVE
- ANGLE GLOBE VALVE
- SILENT CHECK VALVE
- SWING CHECK VALVE
- BUTTERFLY VALVE
- LUBRICATED PLUG VALVE
- "Y" TYPE STRAINER W/BLOWOFF VALVE
- THERMOWELL
- PRESSURE TAP
- EXISTING PIPING OR EQUIPMENT (UNLESS NOTED OTHERWISE)
- NEW PIPING OR EQUIPMENT (UNLESS NOTED OTHERWISE)
- PIPE DROP
- PIPE RISE
- PITCH UP IN DIRECTION OF FLOW
- FLOOR DRAIN
- PITCH DOWN IN DIRECTION OF FLOW
- UNION
- REDUCER
- FLANGED CONNECTION
- FLANGED END
- DEAD END – WELDED CAP
- PIPE ALIGNMENT GUIDE
- FE — FLOW ELEMENT
- FS — FLOW SWITCH
- TEMPORARY STRAINER
- M — MOTORIZED VALVE
- AUTOMATIC CONTROL VALVE
- RELIEF VALVE

PIPING ABBREVIATIONS

AAV	AUTOMATIC AIR VENT
ATM	ATMOSPHERE
AFF	ABOVE FINISHED FLOOR
BD	BLOWDOWN
BFP	BACK FLOW PREVENTOR
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT ELEVATION
CF	CHEMICAL FEED
COD	CORD OPERATED DAMPER
COV	WITH CHAIN OPERATOR VALVE
CW	COLD WATER / CITY WATER
DW	DOMESTIC WATER
DN	DOWN
DWG	DRAWING
EL	ELEVATION
ELEC	ELECTRIC
EXP	EXPANSION
F	FAHRENHEIT
FC	FLEXIBLE CONNECTION
FIN FL	FINISHED FLOOR
FT	FEET
GAL	GALLON
GCHWS	GLYCOL CHILLED WATER SUPPLY
GCHWR	GLYCOL CHILLED WATER RETURN
GPM	GALLONS PER MINUTE
HDR	HEADER
IN	INCH OR INCHES
LBS	POUNDS
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MOV	MOTORIZED VALVE
MU	MAKE-UP WATER
MWP	MAXIMUM WORKING PRESSURE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NO.	NUMBER
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PSIG	PSI GAUGE
RRV	REFRIGERANT RELIEF VENT
S.R.	SHORT RADIUS
SPEC	SPECIFICATION
TEMP	TEMPERATURE
TYP	TYPICAL
VFD	VARIABLE FREQUENCY DEVICE
VTR	VENT TO ROOF
W/	WITH
W/O	WITHOUT

CONSTRUCTION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL FLOORING, WALL AND CEILING ALONG THE EQUIPMENT RIGGING PATH AND FOR PROVIDING ALL MATERIALS TO ENSURE THEIR PROTECTION, SUCH AS FIRE RATED PLYWOOD.
2. MECHANICAL EQUIPMENT TO BE FURNISHED AS PER SCHEDULE ON DWG. M-001 MECHANICAL CONTRACTOR TO PROVIDE A COORDINATED WIRING DIAGRAM FOR REVIEW AND APPROVAL BY THE ENGINEER BEFORE WORK IS STARTED. PROVIDE LAMINATED AS BUILT WIRING DIAGRAM AT COMPLETION OF CONSTRUCTION.
3. COORDINATE ALL WORK ASSOCIATED WITH THE EQUIPMENT MANUFACTURERS AND ALL POWER SOURCE WIRING AND INTERFACING WITH ELECTRICAL CONTRACTOR. CONTROL AND INTERLOCK WIRING SHALL BE DONE BY AUTOMATIC TEMPERATURE CONTROL CONTRACTOR AND ELECTRICAL CONTRACTOR SHALL PROVIDE POWER.
4. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE PRIOR TO STARTING HIS WORK. CONTRACTOR SHALL VERIFY IN THE FIELD THE SIZES AND LOCATION OF EXISTING PIPING THAT AFFECTS HIS WORK.
5. ALL TEMPORARILY REMOVED PIPING, DUCTWORK, ELECTRICAL SYSTEMS, CEILING SUPPORTS TO ALLOW RIGGING AND INSTALLATION OF EQUIPMENT AND PIPING SHALL BE RE-CONNECTED AND OR RELOCATED, PAINTED, AND INSULATED TO MATCH EXISTING.
6. PIPING THROUGH WALLS, FLOORS AND BUILDING CONSTRUCTIONS SHALL BE PROVIDED PIPE SLEEVES AND SPACE BETWEEN SLEEVE AND PIPE FILLED WITH FIRE RATED MATERIAL. SLEEVES SHALL EXTEND THE FULL DEPTH OF THE CONSTRUCTION PENETRATED (SEE DETAIL).
7. ALL WATER PIPING SHALL BE INSTALLED WITH SUFFICIENT PITCH TO INSURE PROPER DRAINGING AND VENTING OF ENTIRE PIPING SYSTEM.
8. ALL DIMENSIONS AND ELEVATIONS FOR NEW AND EXISTING EQUIPMENT, PIPING AND APPARATUS ARE APPROXIMATE AND ARE ONLY FOR CONTRACTOR'S GUIDANCE. CONTRACTOR SHALL EXECUTE SHOP DRAWINGS SHOWING ALL DIMENSIONS AND ELEVATIONS VERIFIED IN THE FIELD.
9. UNLESS NOTED OTHERWISE, ALL BUILDING STRUCTURES INCLUDING CEILING AND WALLS THAT THE CONTRACTOR REMOVES TO FACILITATE THE RIGGING AND INSTALLATION OF EQUIPMENT AND PIPING SHALL BE RE-BUILT TO TO ORIGINAL CONDITIONS.
10. ALL REMOVED EQUIPMENT AND MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR.
11. COORDINATE WITH CONSTRUCTION MANAGER SO THAT LATEST COPY OF BASE BUILDING STANDARDS, RULES AND REGULATIONS ARE ISSUED AND POSTED ON PROJECT SITE.
12. REFER TO STRUCTURAL ENGINEER'S DRAWINGS FOR ADDITIONAL EQUIPMENT AND PIPING SUPPORT REQUIREMENTS AND DETAILS.

"REVIEW DOCUMENTS, VERIFY DIMENSIONS AND FIELD CONDITIONS AND CONFIRM THAT WORK IS BUILDABLE AS SHOWN. THE CONTRACTOR SHALL REPORT ANY CONFLICTS AND/OR OMISSIONS TO THE ENGINEER PRIOR TO PERFORMING ANY WORK IN QUESTION. OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO COMPLETE THE WORK STATED IN ON THE CONTRACT DOCUMENTS BASED UPON THE OPTIMAL ESTABLISHED QUALITY STANDARD."

MECHANICAL CONTRACTOR SHALL COORDINATE & CONFIRM WITH GENERAL CONTRACTOR, PRIOR TO BID, ALL WORK TO BE PERFORMED ON PREMIUM TIME.

MECHANICAL DRAWING LIST

M-001	MECHANICAL SYMBOLS, NOTES, ABBREVIATIONS AND SCHEDULES
M-002	MECHANICAL SPECIFICATIONS
M-003	MECHANICAL SPECIFICATIONS
DMM-100	SC-2 LEVEL MECHANICAL DEMOLITION PLAN
M-100	SC-2 LEVEL MECHANICAL CONSTRUCTION PLAN
M-501	MECHANICAL DETAILS
M-701	MECHANICAL SCHEDULES

SALMAN AHMAD

JAN 27 2014

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ARCHITECTURE
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79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921.2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPT BLDGS 121864862 Job Number

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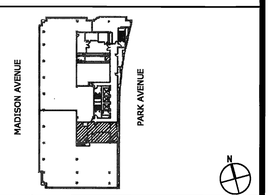
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



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PROJECT ARCHITECT	GM
DRAWN BY	
CHECKED BY	
CADD FILE	M-001.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

MECHANICAL SYMBOLS LIST, ABBREVIATIONS AND NOTES

M-001.00

PAGE NO: 1 of 7

SPECIFICATIONS FOR HVAC WORK

1) GENERAL

A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", AIA DOCUMENT A201, 14TH EDITION, 1987, AND THIS SPECIFICATION AS APPLICABLE ARE PART OF THIS CONTRACT.

B. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.

C. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM BUILDING OWNER AND TENANT AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.

D. ALL DUCTWORK AND PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICES FOR ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS SUBJECT TO APPROVAL OF ARCHITECT.

E. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL STEEL FRAMING.

F. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

G. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES IN MAKING UP WORK PROPOSAL.

H. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING OWNER. INSTALL ISOLATION VALVES AT POINT OF CONNECTION TO THE EXISTING PIPING. PROVIDE TEMPORARY DUCT CAPS AND/OR CONNECTIONS TO MINIMIZE SHUTDOWN TIME.

I. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ARCHITECT AND ENGINEER.

J. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT, AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.

K. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.

L. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS (NOT IN SHAFTS) WITH MINERAL WOOL OR OTHER NON-COMBUSTIBLE MATERIAL.

M. PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, CONDUIT, AND EQUIPMENT.

N. ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED UNDER THIS CONTRACT WILL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THIS CONTRACTOR AS DIRECTED BY THE OWNER.

O. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED.

P. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.

Q. INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.

R. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT.

T. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED.

U. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC, WHICH AFFECT THIS WORK AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION.

2) SCOPE OF WORK

A. PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR A COMPLETE AND SAFE INSTALLATION OF HVAC IN FULL CONFORMITY WITH REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION; ALL AS INDICATED ON DRAWINGS AND/OR HEREIN SPECIFIED FOR THE SYSTEMS INCLUDED. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER. INCLUDE ALL COSTS FOR PERMITS, LICENSES, CERTIFICATES, FILING AND INSPECTIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION.

B. PERIODIC AND SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED AGENCY.
MECHANICAL – AS PER 1704.15
ENERGY CODE – AS PER BC-109.3.5
FIRE STOP – AS PER BC-1704.25

3) GUARANTEE

A. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF ACCEPTANCE BY OWNER. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

4) SHEET METAL WORK

A. EXCEPT AS OTHERWISE SHOWN OR NOTED, ALL DUCTWORK AND OTHER SHEET METAL WORK SHALL BE GALVANIZED SHEET STEEL AND SHALL BE IN ACCORDANCE WITH MOST RECENT EDITION OF SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. DUCT CONSTRUCTION STANDARDS EXCEPT AS NOTED.

B. DUCTWORK STATIC PRESSURE CLASSIFICATIONS

PRESSURE CLASS	OPERATING CLASS
2 IN. W.G.	UP TO 2 IN. W.G.
6 IN. W.G.	UP TO 6 IN. W.G.

DUCTWORK SEALING REQUIREMENT SHALL BE SEAL CLASS A.

C. UNEQUAL ELBOWS ARE NOT ACCEPTABLE, EXCEPT RADIUS BRANCH DUCTWORK WITH THROAT.

D. VOLUME DAMPERS: SAME MATERIAL AS DUCTWORK, PER SMACNA CONSTRUCTION STANDARDS, EXCEPT PROVIDE BEARING AT ONE END OF DAMPER ROD AND QUADRANT, WITH LEVER AND LOCKSCREW AT OTHER END. FOR INSULATED DUCTS, QUADRANTS MOUNTED ON COLLAR TO CLEAR INSULATION. LEVERS MUST BE

E. FLEXIBLE CONNECTIONS: NEOPRENE-COATED GLASS FABRIC, 30 OZ. PER SQ YD WITH SEWED AND CEMENTED SEAMS, SIMILAR TO VENT FABRICS. PROVIDE WITH METAL COLLARS. ALLOW MINIMUM MOVEMENT OF 1".

F. TURNING VANES: SAME MATERIAL AS DUCTWORK, SMALL DOUBLE-THICKNESS VANES.

G. ALL DUCT DIMENSIONS INDICATED ON PLANS ARE INSIDE CLEAR DIMENSIONS.

5) AIR DISTRIBUTION SYSTEM

A. GENERAL

1. SUITABLE FOR OPERATION AT 5% EXCESS AND 25% LESS THAN NOTED CAPACITY. MANUFACTURER SHALL BE RESPONSIBLE FOR EXAMINING APPLICATION OF EACH OUTLET AND SHALL GUARANTEE THAT EACH WILL PROVIDE REQUIRED NC LEVELS AND COMFORT SPACE CONDITIONS WITHOUT DRAFTS THROUGHOUT OPERATING RANGE.
2. FINISH AND COLOR AS DIRECTED BY ARCHITECT.
3. AIR OUTLETS AND FRAME TYPE SUITABLE FOR MOUNTING IN CEILING TYPES SHALL BE COORDINATED WITH THE ARCHITECT.
4. FOR EXACT LOCATIONS OF ALL AIR OUTLETS SEE ARCHITECTURAL PLANS.
5. PROVIDE BLANK OFF PLATES FOR INACTIVE PORTIONS.

B. AIR DIFFUSERS

1. DIFFUSERS SHALL BE WITH VOLUME DAMPER ADJUSTABLE FROM DIFFUSER FACE EXCEPT AS NOTED, WITHOUT REMOVAL OF FACE LOUVERS OR PANEL. PROVIDE SUPPLY AIR DIFFUSERS WITH AIR-EQUALIZING DEFLECTORS. DIFFUSERS IN SAME ROOM SHALL BE THE SAME SIZE AND TYPE, EXCEPT AS OTHERWISE APPROVED. DIFFUSERS SHALL HAVE REMOVABLE CORE, UNLESS OTHERWISE NOTED. SUPPLY PLASTER FRAMES FOR DIFFUSERS WITHOUT REMOVABLE CORES INSTALLED IN PLASTER FOR SETTING UNDER GENERAL CONSTRUCTION WORK.
   A) PROVIDE DIFFUSERS SUITABLE FOR THE FOLLOWING CEILING CONSTRUCTION, AS REQUIRED.
      (1) LAY-IN ACOUSTICAL TILE CEILING WITH INVERTED TEE-BAR SHALL HAVE LAY-IN TYPE FRAME FOR SETTING ON TEE-BARS.
      (2) PLASTER CEILINGS SHALL BE FLANGED FOR SURFACE MOUNTING, OR PLASTER FRAMES AS INDICATED.
   B) NOISE LEVEL AT NOTED CAPACITIES SHALL NOT EXCEED CRITERIA SPECIFIED IN SECTION NOISE CONTROL. DIFFUSERS SHALL BE SUITABLE FOR OPERATION AT 5 PERCENT EXCESS AND 25 PERCENT LESS THAN NOTED CAPACITY. PROVIDE BLANKING FOR PROPER COVERAGE AND BLOW WITHOUT PRODUCING OBJECTIONABLE NOISE OR AIR MOTION AT OCCUPIED LEVEL. FINISH SHALL MATCH COLOR SAMPLE AS APPROVED. BY ARCHITECT.
      (1) BAKED ENAMEL. (COORDINATE WITH ARCHITECT).
2. SQUARE CEILING DIFFUSERS

A. THE DIFFUSERS SHALL BE CONSTRUCTED OF STEEL AND SHALL BE DESIGNED TO INTEGRATE WITH THE SPECIFIED CEILING SYSTEM TYPE. THE DIFFUSER SHALL CONSIST OF A BACK PAN AND A REMOVABLE, HEAVY GAUGE APPEARANCE PANEL ATTACHED TO THE BACK PAN VIA (4) POSITIVE LOCKING POSTS. THE APPEARANCE PANEL SHALL HAVE AERODYNAMIC, RIGID, HEMMED EDGES AROUND THE PERIMETER AND SHALL BE A SINGLE PIECE CONSTRUCTION. THE PANEL SHALL BE FLAT, SMOOTH, AND SHALL BE FREE OF ANY WELDING OR FORMING BLEMISHES.

THE HORIZONTAL AIR DISCHARGE PATTERN SHALL BE 360° TYPE. BLANK-OFF BAFFLES SHALL BE PROVIDED TO OBTAIN 1,2,OR 3 WAY BLOW PATTERNS AS SCHEDULED. THE SIZE AND ELEVATION OF THE APPEARANCE PANEL SHALL BE AS SCHEDULED FOR ANEMOSTAT'S TYPE A OR C MODELS.

PROVIDE VOLUME CONTROL, MODEL VD OPPOSED BLADE TYPE DAMPERS AS SCHEDULED. DAMPERS SHALL BE ADJUSTABLE FROM THE FACE.

DIFFUSER FINISH SHALL BE COLOR AS SELECTED BY THE ARCHITECT).

DIFFUSER SIMILAR TO ANEMOSTAT PG.

B. CEILING GRILLES
1. GRILLES AND TRANSFER GRILLES: SAME AS REGISTERS BUT WITHOUT VOLUME DAMPER. SIMILAR TO ANEMOSTAT AC3L.

6) NOISE CONTROL

A. UNLESS OTHERWISE NOTED, ALL ROOM NC LEVELS SHALL BE 35 OR LESS.

B. PROVIDE MIN. 1" THICK, MIN. 1-1/2 LB. DENSITY SOUNDLINING (SIMILAR TO JOHNS-MANVILLE MICRO-COUSTIC) FOR THE FOLLOWING DUCTWORK:
1. AIR TRANSFER DUCTS.
2. A MINIMUM OF 10 FT, DOWNSTREAM OF VAV BOXES SUPPLY.
3. A MINIMUM OF 20 FT, DOWNSTREAM OF AC UNIT SUPPLY FAN.

7) TESTING AND BALANCING

A. AIR BALANCING SHALL BE ACCOMPLISHED BY ADJUSTMENT OF FANS AND BRANCH DAMPERS FOR MAJOR ADJUSTMENTS. ADJUSTMENT OF TERMINAL DAMPERS AND DEVICES SHALL BE FOR TRIM OR MINOR ADJUSTMENT ONLY. THIS SHALL BE DONE TO PERMIT THE LEAST NOISE GENERATION IN THE TERMINAL AREAS AND UTILIZE MINIMUM FAN ENERGY. TESTING, ADJUSTING AND BALANCING (TAB) SHALL BE DONE IN ACCORDANCE WITH THE AABC NATIONAL STANDARD FOR TOTAL SYSTEM BALANCE.

B. UPON COMPLETION OF THE INSTALLATION, THE CONTRACTOR SHALL REBALANCE ANY EXISTING PORTION OF AIR DISTRIBUTION SYSTEM AFFECTED BY THE RENOVATION AND ALSO BALANCE ALL NEW WORK.

C. PIPING BALANCING SHALL BE MADE BY ADJUSTING VALVES TO REQUIRED GPM TO EACH EQUIPMENT.

D. THE CONTRACTOR SHALL PROVIDE ALL LABOR, ADDITIONAL SHEAVES AND BELTS REQUIRED TO BALANCE SYSTEMS.

E. BALANCING REPORT SHALL BE PROVIDED ON AABC-TYPE FORMS.

F. AIR HANDLING SYSTEMS AND WATER DISTRIBUTION SYSTEMS SHALL BE BALANCED TO WITHIN +5 PERCENT OF THEIR DESIGN CAPACITIES.

G. CLEANING OF PIPING SYSTEM: PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO FLUSH INTERIOR OF NEW PIPING WITH CLEAN WATER PRIOR TO CONNECTION OF EQUIPMENT AND CONTROL VALVES. THE ENTIRE SYSTEM SHALL BE EXAMINED FOR CLEANLINESS.

H. BALANCING AND TESTING SHALL BE PERFORMED AND SUPERVISED BY TSSM OR ONE OF THE FOLLOWING INDEPENDENT CERTIFIED FIRMS SPECIALIZING IN TESTING AND BALANCING FOR AIR AND WATER SYSTEMS, WITH A MINIMUM OF FIVE YEARS EXPERIENCE AND AABC CERTIFICATION.
1. MERENDINO ASSOCIATES
2. INTERNATIONAL TESTING.
3. AFTER OCCUPANCY OF THE SPACE AND APPROVAL OF THE BALANCING REPORTS, AIR BALANCING "COMFORT BALANCE" SERVICE. AIR BALANCE COMPANY SHALL ADJUST VOLUME DAMPERS, AND VAV TERMINAL UNIT MINIMUM AND MAXIMUM SETTINGS AS REQUIRED IN RESPONSE TO OCCUPANTS REQUIREMENTS. ALLOW UP TO TWO DAYS ON SITE FOR COMFORT BALANCE SERVICES.
4. SUBMIT COPY OF FINAL AIR AND WATER BALANCE REPORT TO BUILDING FOR THEIR RECORDS.

8) SHOP DRAWINGS

A. INDICATE ON EACH SUBMISSION
1. PROJECT NAME AND LOCATION.
2. ARCHITECT AND ENGINEER
3. ITEM IDENTIFICATION.
4. APPROVAL STAMP OF PRIME CONTRACTOR.

B. SUBMISSIONS
1. SUBMISSIONS 8 1/2 IN. X 14 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT ONE ORIGINAL AND TWO COPIES. OTHERWISE, HE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL FORWARD THE ORIGINAL AND ONE COPY (TWO COPIES WHEN NO ORIGINAL IS RECEIVED) TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE.
2. SUBMISSIONS LARGER THAN 8 1/2 IN. X 14 IN.: SUBMIT TWO PRINTS AND ONE PAPER SEPIA TO THE ARCHITECT. THE ARCHITECT WILL FORWARD ONE PRINT AND THE PAPER SEPIA TO THE ENGINEER.
3. ALL PIPING AND DUCTWORK SHOP DRAWINGS SHALL BE SUBMITTED ON 3/8 IN SCALE DRAWINGS AND SHALL INCLUDE HANGERS, SUPPORTS, EXPANSION JOINTS, GUIDES, ANCHORS AND ANCHOR LOADS.

C. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:
LOCATIONS AND SIZES OF EXISTING EQUIPMENT ALONG WITH NEW WORK. DRAWING SHALL INDICATE LOCATIONS OF
1. DUCTWORK LAYOUT AND SHEET METAL DETAILS.
2. AIR OUTLETS.
3. AIR BALANCING REPORTS.
4. SCHEDULE OF INSULATION.
5. TERMINAL UNITS
6. AC UNITS
7. GAUGES AND THERMOMETERS
8. PIPING LAYOUT
9. OPERATING SEQUENCES
10. VIBRATION ISOLATION
11. AUTOMATIC CONTROL DIAGRAMS.
12. SCHEDULE OF PIPE, VALVES, FITTINGS.

9) INSULATION – GENERAL REQUIREMENTS

A. ALL INSULATION MATERIALS, INCLUDING JACKETS, FACING, ADHESIVE, COATINGS, AND ACCESSORIES SHALL BE FIRE HAZARD RATED AND LISTED BY UNDERWRITERS LABORATORIES, INC., USING STEINER TUNNEL TEST METHOD FOR FIRE HAZARD CLASSIFICATION OF BUILDING MATERIALS, STANDARD UL 723 (ASTM E-84), (ASA A.25-1963). FLAMESPREAD: MAXIMUM 25. FUEL CONTRIBUTED AND SMOKE DEVELOPED: MAXIMUM 50. FLAMEPROOFING TREATMENTS SUBJECT TO DETERIORATION FROM MOISTURE OR HUMIDITY ARE NOT ACCEPTABLE.

10) DUCTWORK INSULATION

A. INSULATE ALL NEW DUCTWORK IN ACCORDANCE WITH INSULATION NOTED HEREIN EXCEPT AS OTHERWISE NOTED.

B. NON-INSULATED DUCTWORK
1. WHERE SOUNDLINING IS OF MINIMUM THICKNESS SPECIFIED FOR INSULATION.

C. DUCTWORK INSULATION AND ACOUSTICAL LINING
INDOOR DUCT INSULATION: 1-INCH THICK, 3/4 LB DENSITY, GLASS FIBER INSULATION, WITH ALUMINNUM FOIL FACING. MANVILLE R-SERIES MICROLITE.
1. INSULATE ALL SUPPLY DUCTWORK
2. DUCT LINING: UNLESS NOTED, 1-INCH THICK 1-1/2 LB. DENSITY COATED ON AIR SIDE WITH FIRE RESISTANT BLACK NEOPRENE COATING. MANVILLE LINACOUSTIC. FOR THE FOLLOWING DUCTWORK:
   A. ALL DUCTWORK NOT LESS THAN 25 FEET FROM FAN FOR SUPPLY AND 20 FEET FROM FAN FOR RETURN DUCTWORK.
   B. AIR TRANSFER DUCTS.
   C. DOWNSTREAM OF ALL VARIABLE AIR VOLUME AND CONSTANT VOLUME BOXES FOR A MINIMUM OF 5 FEET
   D. ALL DUCTWORK ABOVE CONFERENCE ROOMS.

D. MATERIAL
1. TYPE D-1: MINIMUM 3/4-LB DENSITY FIBERGLASS BLANKET, MAXIMUM 0.28 K-FACTOR AT 75 DEG F MEAN TEMPERATURE WITH FACTORY-APPLIED FOIL-SCRIM-KRAFT FACING. SIMILAR TO MANVILLE MICRO-LITE.
2. BLANKET THICKNESS: MINIMUM 1 INCH.

E. INSTALLATION
1. TYPE "D-1" FIBERGLASS BLANKET: 2 IN. LAP STRIPS AT ALL SEAMS. SECURE BOTTOM OF ALL DUCTS OVER 24" WIDE WITH MINIMUM 2 ROWS OF WELD PINS 12" ON CENTER. SECURE ALL SEAMS WITH FOIL VAPOR BARRIER TYPE AND VAPORSEAL ADHESIVE.

11) PIPING INSULATION

A. ALL PIPING LINES EXCEPT WHERE NOTED OTHERWISE SHALL BE INSULATED.

FLAME SPREAD:	25
FUEL CONTRIBUTED:	50
SMOKE DEVELOPED:	50

B. INSULATE ALL INDOOR CONDENSATE DRAIN PIPING IN ACCORDANCE WITH INSULATION SPECIFIED EXCEPT AS OTHERWISE NOTED.

C. PIPE INSULATION MATERIAL
1. TYPE P-1: MOLDED FIBERGLASS, MAXIMUM 0.23 K-FACTOR AT 75 DEG F MEAN TEMPERATURE, MINIMUM 4 LB DENSITY. SIMILAR TO OWENS CORNING FIBERGLASS MODEL 650 ASJ.
2. TYPE P-3: FOR VALVES, FLANGES AND FITTINGS, MOLDED FIBERGLASS FITTING, MAXIMUM 0.23 K-FACTOR AT 75 DEG F MEAN TEMPERATURE, MINIMUM 4 LB DENSITY. SIMILAR TO EPOLUX HAMFAB MOLDED FITTINGS.

D. THICKNESS
1. DRAINAGE PIPING: 1/2 INCH.
2. ALL CONDENSER WATER PIPING SUPPLY AND RETURN INSULATION SHALL BE 1" AS PER THE BUILDING STANDARD.

E. INSTALLATION
1. BEFORE APPLYING INSULATION ALL PRESSURE AND LEAK TESTS SHALL BE COMPLETED AND APPROVED.
2. ALL INSULATION SHALL BE BUTTED FIRMLY TOGETHER. PROVIDE 2" LAP STRIPS AT ALL SEAMS, SECURED WITH ADHESIVE USE VAPOR BARRIER TAPE AND VAPORSEAL ADHESIVE WHERE REQUIRED.
3. ALL INSULATION AND VAPOR BARRIERS SHALL BE CONTINUOUS PASSING THROUGH SLEEVES, HANGERS, ETC. OR OTHER OPENINGS. PROVIDE SADDLES OR SHIELDS FOR PROTECTION.
4. INSULATION FOR STRAINERS OR OTHER FITTINGS OR ACCESSORIES REQUIRING SERVICING OR INSPECTION SHALL HAVE INSULATION REMOVABLE AND REPLACEABLE WITHOUT DAMAGE.
5. PROVIDE FLOW ARROWS AND CONTENTS CLEAR ON OUTSIDE JACKETING OF INSULATION. PROVIDE EVERY 20 FT.

12) THERMOMETERS AND GAUGES

A. THERMOMETERS: INDUSTRIAL TYPE, MERCURY FILLED, AND 4-INCH STEM. SIMILAR TO MOELLER INSTRUMENTS CO. MODEL 903AJ.

B. PRESSURE GAUGE: 6-INCH DIAMETER, 0-130 PSIG DISCHARGE AND SUCTION. SIMILAR TO WEKSLER MODEL AA44-A.

C. PULSATION DAMPERS AT PUMPS: SIMILAR TO WEKSLER TYPE RS7.

D. BAR STOCK NEEDLE COCK VALVE: SIMILAR TO WEKSLER AV-44.

13) VIBRATION ISOLATION

A. GENERAL
1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE LEVELING DEVICES AND APPROVED RESILIENT RESTRAINING DEVICES AS REQUIRED TO LIMIT EQUIPMENT AND PIPING MOTION IN EXCESS OF 1/4 IN.
3. ACCEPTABLE MANUFACTURERS:
   A) MASON INDUSTRIES, INC.
   B) VIBRATION ELIMINATOR CO.
   C) KORFUND DYNAMICS CORP.

B. CEILING HUNG EQUIPMENT
1. SIMILAR TO MASON TYPE 30N.
2. 1 INCH MINIMUM STATIC DEFLECTION 1/2 IN. MINIMUM RESERVE DEFLECTION. FACTORY-PRELOADED TO 75% OF RATED LOAD.
3. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE EQUIPMENT OR STRUCTURE CANNOT SUPPORT POINT LOADS.

14) PIPING – GENERAL REQUIREMENTS

A. COMPLETE WITH: PIPE, FITTINGS, VALVES, COUPLINGS, STRAINERS, HANGERS, ANCHORS, SUPPORTS, GUIDES, SLEEVES, AND ACCESSORIES.

B. ALL ITEMS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING CODES AND STANDARDS:
1. AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).
2. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).
3. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
4. MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY (MSS).

C. FOR JOINTS OF DISSIMILAR METALS, PROVIDE FLANGE CONNECTION WITH ISOLATING GASKETS, SLEEVES AND WASHERS BETWEEN FLANGES, BOLTS, AND NUTS. GASKETS SIMILAR TO DUPONT TEFLON.

D. ALL PRESSURIZED PIPING TO BE TESTED HYDROSTATICALLY TO 175 PSI OR 150% OF OPERATING PRESSURE, WHICHEVER IS GREATER. TEST DURATION TO BE 2 HOURS WITH NO PRESSURE CHANGE, CORRECTED FOR TEMPERATURE CHANGE. REPAIR OR REPLACE LEAKS OR DEFECTS WITHOUT ADDITIONAL COST. COORDINATE TEST WITH BUILDING AND SUBMIT REPORT TO BUILDING UPON COMPLETION.

E. PIPE SUPPORTS
1. PROVIDE ADEQUATE SUPPORT FOR PIPE AND CONTENTS TO PREVENT SAGGING, VIBRATION OR SWAYING AND ALLOW FOR EXPANSION AND CONTRACTION. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE STRUCTURE CANNOT SUPPORT POINT LOADS.
2. HORIZONTAL PIPING TO BE SUPPORTED BY FORGED STEEL ADJUSTABLE CLEVIS TYPE HANGER. MAXIMUM SPACING AS FOLLOWS:
   A) STEEL 1 IN. AND SMALLER: 7 FT.
   B) STEEL 1-1/4 IN. AND LARGER: 10 FT.
   C) COPPER 3 IN. AND SMALLER: 7 FT.
   D) COPPER 4 IN. AND LARGER: 10 FT.
   E) ADDITIONAL SUPPORTS AT CHANGES IN DIRECTION, RUNOUTS, AND CONCENTRATED LOADS DUE TO VALVES, ETC.
3. VERTICAL PIPING:
   A) BASE ELBOW SUPPORT WITH BEARING PLATE ON STRUCTURAL SUPPORT.
   B) GUIDES AT EVERY SECOND FLOOR (SPACING NOT TO EXCEED 25 FEET).
   C) TOP SUPPORT HANGER OR SADDLE IN HORIZONTAL CONNECTION WITH PROVISIONS FOR EXPANSION.
   D) INTERMEDIATE STEEL RISER CLAMP SUPPORT BOLTED AND WELDED TO PIPE BEARING ON STRUCTURAL STEEL OR BEARING PLATE AT FLOOR.

15) DRAIN PIPING AND MAKEUP WATER PIPING

A. PIPE: ASTM B88, HARD DRAWN COPPER TUBING TYPE "K".

B. FITTINGS: BRAZED JOINT FOR DOMESTIC WATER AND FOR DRAINS SOLDERED JOINT FITTINGS, 95/5 SOLDER.

C. PITCH, EXCEPT AS NOTED. ALL DRAIN PIPING PITCHING SHALL BE OF 1 IN. IN 8 FT. MINIMUM.

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT
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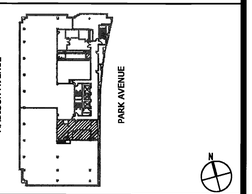

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JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

MECHANICAL SPECIFICATIONS

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16) PIPING

A. ALL CHILLED WATER PIPING AND A/C CONDENSATE DRAIN PIPING UP TO 2½" SHALL BE HARD DRAWN TYPE 'K' COPPER TUBING WITH WROUGHT COPPER FITTINGS. ALL JUNCTIONS OF DISIMILAR METALS SHALL BE ISOLATED USING DIELECTRIC FITTINGS.

B. PIPE SMALLER THAN 1½" IN DIAMETER SHALL BE CONNNECTED WITH SCREWED GROUND JOINT UNIONS. INSTALL LINE SIZE MANUAL VALVES AT EACH INLET AND OUTLET OF EACH PIECE OF EQUIPMENT.

C. ALL PIPES SHALL BE SUPPORTED AT PROPER INTERVAL SO THAT DETECTION WILL NOT EXCEED 1/8" ON ALL CONDENSER AND COLD WATER LINES. THE HANGER SHALL BE INSTALLED ON THE PIPE SURFACE. WHERE THE HANGER IS INSTALLED OUTSIDE OF THE INSULATIONS, A METAL SHEILD SHALLED BE INSTALLED TO PROTECT INSULATION.

D. UNLESS OTHERWISE NOTED PIPE FITTINGS SHALL HAVE THE SAME RATING AS THE PIPING TO WHICH THEY ARE CONNECTED.

E. ALL CHILLED WATER VALVES SHALL BE SIZED FOR A MINUIMUM OF 175 PSI.

F. GATE VALVES–2½" AND SMALLER, 300 PSI, ALL BRONZE SOLID WEDGE, INSIDE SCREW, NRS, SCREW ENDS, NIBCO FIG. T–133 BALL VALVES MAY BE USED IN LIEU OF GATE VALVES IN THESE SIZES.

G. BALL VALVES–BRONZE BODY, IFE SEATS AND SEALS, LEVER HANDLE, NIBCO FIGT–5880, SIZED FOR 175 PSI.

H. CIRCUIT SETTERS–PROVIDE BELL AND GOSSET MODEL CB CIRCUIT SETTERS WHERE SHOWN ON DRAWINGS AR WHERE REQUIRED FOR ADEQUATE FLOW BALANCING. PROVIDE ONE BELL AND GOSSET RO–4 METER. TURN OVER TO OWNER AFTER COMPLETION OF FLOW BALANCING. SIZED FOR 175 PSI.

I. FITTINGS

1. 2½" AND SMALLER: 175–LB WSP FITTINGS.
2. PROVIDE THREE SWING ELBOWS AT ALL EQUIPMENT CONNECTION POINTS.

17) VALVE TAGS, CHARTS, PIPE LABELING AND STENCILING

A. TAGS

1. MINIMUM 2" DIAMETER.
2. NO. 18 GAUGE ALUMINUM WITH STAMPED NUMBERS AND LETTERS FILLED IN WITH BLACK PAINT.
3. IDENTIFYING NUMBER AND SYSTEM LETTER.
4. FASTENED BY HEAVY ALUMINUM HOOK OR CHAIN.
5. DIFFERENT PATTERN THAN THOSE USED FOR PLUMBING AND SPRINKLER WORK.
6. PROVIDE ON AC UNIT.

B. STENCILING

1. BY HVAC CONTRACTOR.
2. MARK PIPING WITH SIZE, PURPOSE AND DIRECTION OF FLOW FOR CORRECT LABEL STENCILING.

C. PIPE LABELING: ALL LABELS SHALL BE WEATHER–PROOFED WITH FLOW DIRECTION INDICATOR, LABEL SIZES TO FIT PIPE SIZES. PROVIDE ON MAIN PIPES ONLY; ONE EVERY 50 FEET OF STRAIGHT RUN. SIMILAR TO SETTON OR APPROVED EQUAL.

18) COMMISSIONING

CONTRACTOR SHALL VALIDATE THAT THE BUILDING SYSTEM WILL COMPLY WITH ALL DESIGN AND OPERATIONAL REQUIREMENTS AS WELL AS ENVIRONMENTAL CONDITIONS (E.G. TEST AUTOMATIC CONTROL).

1. CONTRACTOR SHALL TEST THE EQUIPMENT INDIVIDUALLY IN ALL MODES, INCLUDING:
   A. AUTOMATIC
   B. MANUAL
   C. EMERGENCY
2. CONTRACTOR SHALL TEST THE OPERATION OF THE EQUIPMENT ON A SYSTEM LEVEL INCLUDING INTERFACING WITH OTHER SYSTEMS. THE CONTRACTOR SHALL COORDINATE WITH THE BUILDING AND OPERATIONS ENGINEER AND VERIFY THAT THE SYSTEM PERFORMS AS DESIGNED WITH NEW OR MODIFIED COMPONENTS BEFORE PROJECT SIGN–OFF.

A. TRAINING OF OWNER'S PERSONNEL
THE CONTRACTOR SHALL VERIFY THAT THE NEW OR MODIFIED EQUIPMENT, CONTROLS, ETC. ARE FULLY UNDERSTOOD BY THE BUILDING AND OPERATIONS ENGINEERING PERSONNEL. APPLICABLE TRAINING (MANUFACTURER'S SITE REPRESENTATIVE, VIDEO INSTRUCTION, ETC.) SHOULD BE IDENTIFIED AT TIME OF BID AND IMPLEMENTED BEFORE PROJECT SIGN–OFF. QUALIFIED INSTRUCTORS SHALL BE PROVIDED BY THE CONTRACTOR IN ORDER TO TRAIN BUILDING AND OPERATIONS ENGINEERS ON THE SPECIFIC OPERATION & MAINTENANCE APPLICATION REQUIREMENTS FOR ALL EQUIPMENT. THE FOLLOWING TRAINING TECHNIQUES SHALL BE USED:

1. THE CONTRACTOR SHALL PROVIDE WALK–THROUGHS WITH THE BUILDING AND OPERATIONS ENGINEER TO UNDERSTAND THE EQUIPMENT LAYOUT.
2. THE CONTRACTOR SHALL TRAIN THE BUILDING AND OPERATIONS ENGINEER SO THAT THE ENGINEERS HAVE A FULL UNDERSTANDING OF THE MODES OF OPERATION:
   A. MANUAL
   B. AUTOMATIC
   C. EMERGENCY
3. THE CONTRACTOR SHALL PROVIDE EQUIPMENT MAINTENANCE REQUIREMENTS TO THE BUILDING AND OPERATIONS ENGINEER. THE FOLLOWING REQUIREMENTS SHALL BE INCLUDED:
   A. PROCEDURES
   B. FREQUENCIES
   C. SPECIAL TOOLS AND INSTRUMENTS NEEDED
   D. DELEGATION OF RESPONSIBILITIES TO ASSIGNED PERSONNEL (SPECIALTY CONTRACTORS OR BUILDING AND OPERATIONS ENGINEERS)
   E. TESTING AND NON–INVASIVE MAINTENANCE OF NEW OR MODIFIED EQUIPMENT, CONTROLS, ETC. SHOULD BE UNDERSTOOD BY BUILDING AND OPERATIONS ENGINEERS
4. THE CONTRACTOR SHALL TRAIN THE BUILDING AND OPERATIONS ENGINEER AS TO APPLICABLE SAFETY PROCEDURES/OPERATIONS.
5. THE CONTRACTOR SHALL LIST ANY SPECIALTY GROUPS REQUIRED.

B. THE CONTRACTOR SHALL IDENTIFY THE CONDITIONS OR INTERVALS FOR WHEN A SPECIALIZED GROUP(S) IS REQUIRED.

C. OPERATIONAL AND MAINTENANCE SPARE PARTS, MATERIALS AND TESTING EQUIPMENT THE CONTRACTOR SHALL ENSURE THAT SPARE PARTS, MATERIALS AND EQUIPMENT ARE INCLUDED IN THE CONTRACT, SUCH AS:

1. SPARE PARTS
2. MATERIALS
3. MAINTENANCE /TESTING EQUIPMENT

20) THE FOLLOWING ARE THE CLOSE OUT REQUIREMENTS FOR THIS PROJECT.

A. DOCUMENTATION/TECHNICAL DATA DELIVERABLES
THE CONTRACTORS ARE RESPONSIBLE FOR KEEPING THE LATEST REVISIONS OF ALL DOCUMENTATION, AND PROVIDING THE FOLLOWING:

1. AS–BUILT DRAWINGS (REPRODUCIBLES, PRINTS & COMPUTER DRAWING FILES IN AUTOCADD R14 FORMAT OR LATEST VERSION)
   A. CONTRACT DRAWINGS AND SPECIFICATIONS (LATEST REVISIONS)
   B. SHOP DRAWINGS
   C. CONTROL DIAGRAMS
2. PERMIT/CERTIFICATION DOCUMENTS
   A. ALL APPLICABLE PERMITS AND CERTIFICATIONS.
3. EQUIPMENT SPECIFICATION DATA
   A. PERMANENT NAMEPLATES IDENTIFYING EQUIPMENT, SYSTEM ACCESSORIES AND CONTROLS
   B. AUTOMATIC CONTROL DIAGRAMS AND OPERATIONS SEQUENCES OF THE BUILDING SYSTEMS READY FOR WALL–MOUNTING AND IN BINDERS (2 COPIES)
   C. SYSTEM AND EQUIPMENT DESCRIPTIVE DATA AND SCHEMATIC DIAGRAMS (2 COPIES)
4. IDENTIFICATION OF EQUIPMENT
   A. VALVE IDENTIFICATION TAGGING AND WALL–MOUNTED LOCATION CHARTS
   B. PERMANENTLY AFFIXED LABELS FOR MAJOR EQUIPMENT
5. SOFTWARE USER MANUAL/ ELECTRONIC BACKUPS
6. OPERATION & MAINTENANCE MANUALS (3 SETS)
   A. SITE SPECIFIC CUSTOMIZED O&M INSTRUCTIONS
   B. MANUFACTURER'S O&M INSTRUCTIONS
7. PREVENTIVE MAINTENANCE PROCEDURES (3 SETS)
   A. MANUFACTURER'S EQUIPMENT PM PROCEDURES
   B. SITE SPECIFIC CUSTOMIZED PM
8. SPARE PARTS LIST (3 SETS)
   A. ALL APPLICABLE MAINTENANCE PARTS AND ACCESSORIES OR MATERIALS
9. WARRANTY INFORMATION
   A. EQUIPMENT START–UP
   B. EQUIPMENT OPERATION
   C. AUTHORIZED REPAIRS

SALMAN AKHTAR
JAN 27 2014
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JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

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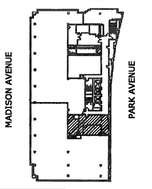
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



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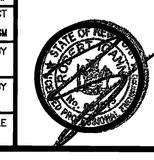
JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

MECHANICAL SPECIFICATIONS



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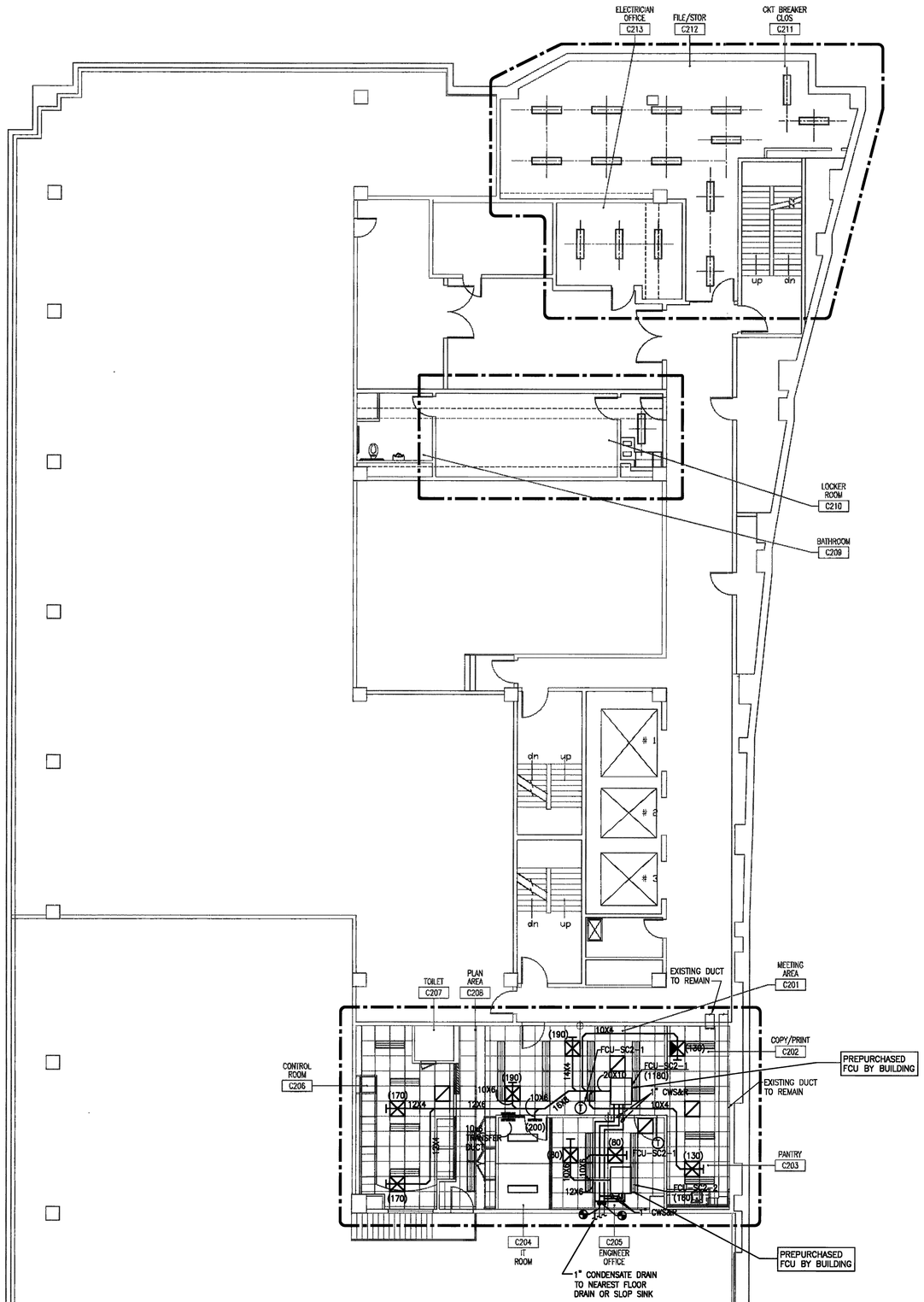

NOTES:

1. FOR ABBREVIATIONS AND NOTES SEE DRAWING M001.
2. CONTRACTOR TO COORDINATE DUCT ROUTING THROUGH BEAM CUTS WITH STRUCTURAL DRAWINGS
3. CONTRACTOR SHALL LOCATE ON SHOP DRAWINGS ALL ACCESS DOOR LOCATIONS REQUIRED TO SERVICE EQUIPMENT FOR THE ARCHITECTS & ENGINEER'S APPROVAL.
4. ALL DUCT SPLITS AND TAKEOFFS SHALL BE PROVIDED WITH VOLUME DAMPERS. SPLITTER DAMPERS. AIR EXTRACTORS ARE NOT ACCEPTABLE.
5. VOLUME DAMPERS IN BRANCH DUCTS SHALL BE LOCATED AS FAR AS POSSIBLE FROM AIR OUTLET OR INLET IN ORDER TO REDUCE NOISE AND TURBULENCE.
6. ALL ACTIVE OPEN ENDED DUCTWORK SHALL BE PROVIDED WITH WIRE MESH SCREEN.
7. SEALANT SHALL BE APPLIED TO LONGITUDINAL SEAMS IN THE SHOP DURING FABRICATION. FIELD APPLY SEALANT TO TRANSVERSE SEAMS AND CONNECTIONS TO DUCTS.
8. RADIUS ELBOWS SHALL BE USED IN ALL DUCT OFFSETS (HORIZONTAL OR VERTICAL). MITERED ELBOWS WITHOUT TURNING VANES ARE NOT ACCEPTABLE.
9. DUCTWORK SHOWN IS DIAGRAMMATIC AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISERS OF RUNS. CONTRACTOR SHALL ALLOW IN HIS PRICE, THE ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS ARE SUBJECT TO APPROVAL. FULL COORDINATION BETWEEN ALL TRADES IS REQUIRED TO AVOID CONFLICTS DURING CONSTRUCTION.
10. CEILING SUPPLY AND RETURN DEVICES SHALL BE COMPATIBLE WITH CEILING SYSTEM, UNLESS OTHERWISE NOTED.
11. CONDITIONS MAY DEVIATE THIS DRAWING. CONTRACTOR SHALL VISIT THE SITE TO UNDERSTAND THE EXISTING FIELD CONDITIONS AND DETERMINE HIS SCOPE OF WORK PRIOR TO SUBMITTING HIS BID. NO ALLOWANCES WILL BE MADE AFTER CONTRACT IS APPROVED. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DUCTWORK AND PIPING EXACT LOCATION AND EXACT SIZES. CONTRACTOR SHALL ROUTE NEW DUCTWORK
12. ALL NEW SUPPLY DUCTS SHALL BE INSULATED PER BUILDING STANDARD.
13. NEW BRANCH DUCT CONNECTIONS SHALL BE SEALED AND CAULKED AIR TIGHT. WHERE EXISTING DUCTS ARE LEAKING, PROVIDE CAULKING AT DUCT JOINTS AND CONNECTIONS.
14. ALL EXISTING EQUIPMENT IN AREA OF WORK MAY NOT BE SHOWN. CONTRACTOR TO SURVEY BEFOREHAND IN ORDER TO LOCATE ANY AND ALL EXISTING EQUIPMENT, PIPING AND DUCTWORK.
15. DUCTWORK A MAXIMUM OF 15 FT DOWNSTREAM OF TERMINAL UNITS TO BE PROVIDED WITH 1" THICK ACOUSTICAL LINING.
16. ALL DUCTWORK, NEW, OVER CONFERENCE ROOMS AND MEETING ROOM SHALL BE ACOUSTICALLY LINED.
17. MECHANICAL CONTRACTOR SHALL BALANCE ALL DIFFUSERS, VARIABLE AIR VOLUME BOXES, AND EXHAUST FANS ON FLOOR IN AREA OF SCOPE TO DESIGN AIR QUANTITIES SHOWN ON DRAWING. INCLUDE SUBMISSION OF BALANCING REPORT.
18. PROVIDE TRANSFER DUCTS PER OUR DETAIL ON M-502 SIZED AT 500FPM FOR ALL ROOMS CONTAINED COMPLETELY BY FULL PARTITIONS.
19. BMS CONTRACTOR TO PROVIDE SUPPORT IF NECESSARY TO RECALIBRATE VAV BOXES TO THE NEW VALUES SPECIFIED ON DRAWING AND TO CONNECT NEW AC UNIT TO THE SYSTEM.

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JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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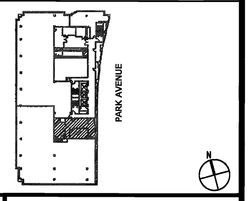
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



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PROJECT ARCHITECT	GM
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CADD FILE	M-100.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
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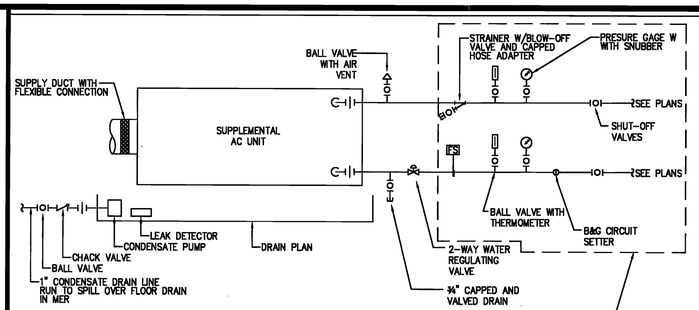
SC2 LEVEL MECHANICAL HVAC PLAN

ROBERT J. MOUDIS NEW YORK LICENSED MECHANICAL ENGINEER

M-100.00

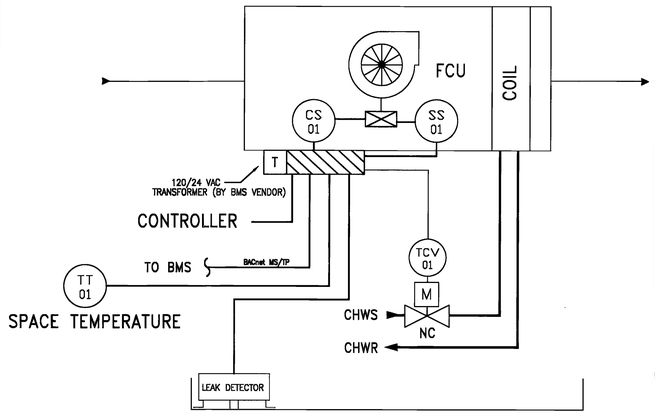
PAGE NO: 05 of 07



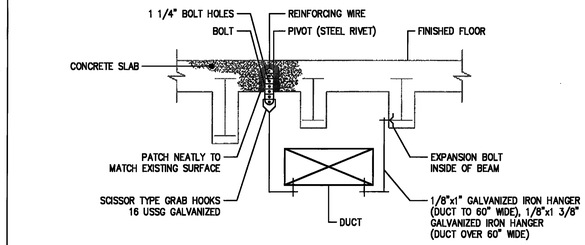
NOTES:

1. UNIT SHALL BE INSTALLED SO THAT MAINTENANCE SPACE AND ACCESS TO FILTERS AND ACCESS PANELS IS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
2. CONTRACTOR SHALL PROVIDE AND INSTALL STAINLESS STEEL DRAIN PAN UNDER AC UNIT.
3. UNIT SHALL ALARM ONLY UPON DETECTION OF MOISTURE BY LEAK DETECTION SENSOR IN DRIP PAN.
4. REFER TO MANUFACTURER FOR PIPE SIZES.
5. PITCH DRAIN PAN TO LEAK DETECTOR. PROVIDE ¾" DRAIN AT LOW POINT.
6. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO SUBMIT EXACT LOCATIONS, WEIGHTS, AND METHODS OF SUPPORT TO STRUCTURAL ENGINNER FOR APPROVAL.

1 CEILING MOUNTED FAN COIL UNIT INSTALLATION DETAIL



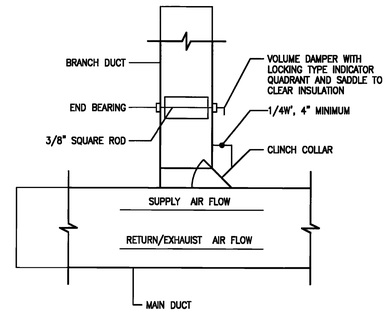
2 FAN COIL UNIT CONTOLS (COOLING ONLY)



NOTES:

1. ON DUCTS OVER 48" WIDE, HANGERS SHALL TUEN UNDER AND FASTEN TO BOTTOM OF DUCT WHEN CROSS-SECTIONAL AREA EXCEED 6 SQ. FT. DUCT SHALL BE BRACED BY ANGLES ON ALL FOUR SIDES.
2. CUTTING AND PATCHING SHALL BE LIMITED TO SMALLEST AMOUNT NECESSARY FOR PROPER INSTALLATION OF WORK.

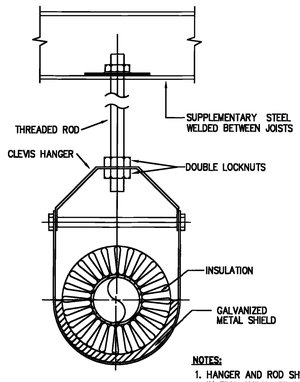
3 DUCT SUPPORT FROM EXISTING CONCRETE SLAB



NOTES:

1. USE FOR SYMBOL, | WHERE BRANCH DUCT AIR QUANTITY IS LESS THAN 1000 CFM.
2. NOT TO BE USED AS SUBSITUTE FOR ELBOW.

4 RECTANGULAR DUCT ANGULAR TAP WITH VOLUME DAMPER



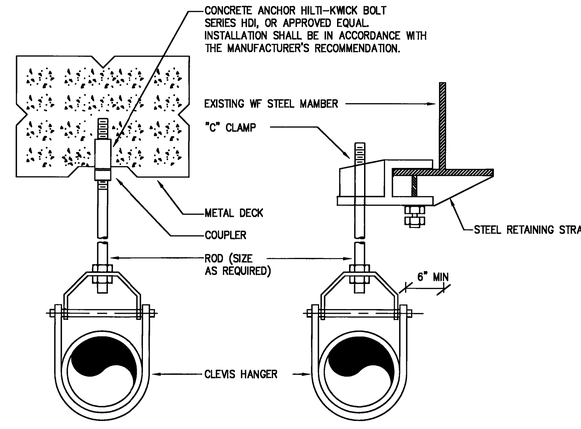
WITHOUT INCOMPRESSIBLE INSULATING BLOCK AT HANGER		
PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS USSG
UP TO 3"	12"	18

WITH INCOMPRESSIBLE INSULATING BLOCK AT HANGER		
PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS USSG
UP TO 3"	6"	18

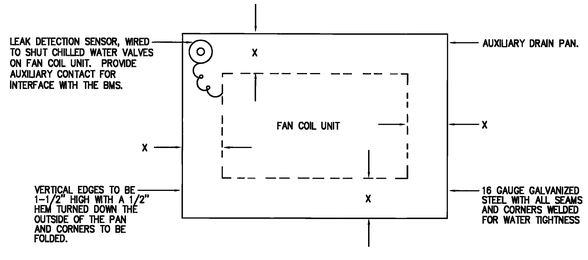
NOTES:

1. HANGER AND ROD SHALL BE DIPPED IN ZINC CHROMATE PRIMER PRIOR TO INSTALLATION.
2. CONTRACTOR TO REPAIR ANY DAMAGED OR REMOVED FIREPROOFING DUE TO HANGER INSTALLATION.

5 TYPICAL INSULATED PIPE SUPPORT– UP TO 3"



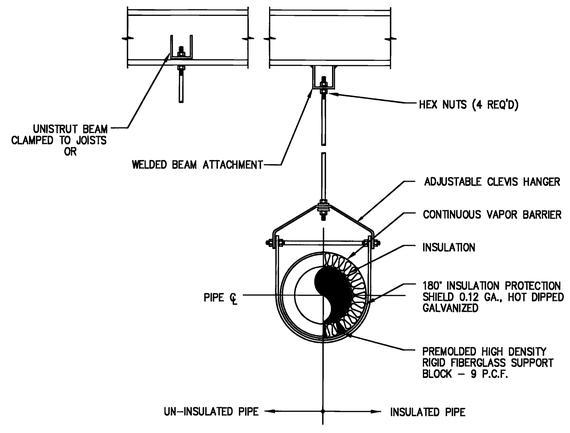
6 TYPICAL PIPE PAN HANGER DETAILS



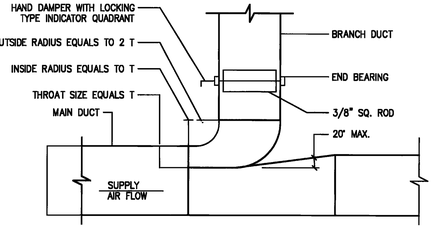
NOTES:

1. THIS DETAIL APPLIES TO –
   – FLOOR MOUNTED OR CEILING HUNG AC UNITS WITH INTEGRAL CONDENSATE DISCHARGE PUMPS.
2. PITCH DRAIN PAN TO LIQUID DETECTOR. PROVIDE 3/4" PLUGGED DRAIN AT LOW POINT.
3. TRAC UNITS DO NOT REQUIRE AUXILLARY DRAIN PAN.

7 TYPICAL DETAIL OF AUXILIARY DRAIN PAN



8 CLEVIS HANGER



NOTES:

1. FURNISH THIS TYPE CONNECTION WHERE NOTED AND WHEN SINGLE LINE DUCTWORK IS INDICATED AS THIS FOR BRANCHES WITH MORE THAN 1000 CFM.
2. FURNISH THIS TYPE CONNECTION WITHOUT HAND DAMPERS FOR ALL HIGH PRESSURE DUCTWORK BRANCHES
3. MUST BE USED WHEN W ≥ 36"
4. MINIMUM T = 4"

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9 RECTANGULAR DUCT BRANCH WITH THROAT AND VOLUME DAMPER

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

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T. 020 7902 0900

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11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

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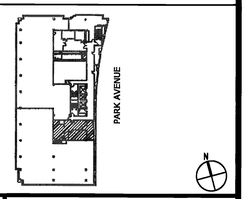

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PROJECT ARCHITECT	GM
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JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

MECHANICAL DETAILS

STATE OF NEW YORK ROBERT JOHNSON LICENSED PROFESSIONAL ENGINEER 082877

M-501.00

PAGE NO: 6 of 7

FAN COIL UNIT SCHEDULE (FOR REFERENCE ONLY)

(UNITS HAVE BEEN PRE-PURCHASED AND INSTALLED BY CLIENT)

TAG #	LOCATION	AREA SERVED	S.A. CFM	EXTERNAL STATIC IN. W.C.	TOTAL STATIC IN. W.C.	SUPPLY FAN					CHILLED WATER COIL						REHEAT		HUMIDIFICATION		FILTER				
						VOLTAGE	MHP	FLA	TOTAL COOL CAP BTUH	SENS CAP BTUH	EAT (°F)	LAT (°F)	EWT / LWT (°F)	FLOW (GPM)	WATER P.D. (FT. W.C.)	ROW	KW	TYPE	LBS	TYPE		MODEL	DIMENSION (H X W X L)	WEIGHT (LB.)	
FCU-SC2-1	CEILING	SC-2 ENGINEERS OFFICE	1180	0.3	-	208/1/60	-	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	HPY14	-	-	
FCU-SC2-2	CEILING	SC-2 ENGINEERS OFFICE	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

NOTES:

1. PROVIDE DRAIN PAN
2. PROVIDE SUPPORTS AND VIBRATION ISOLATION AS REQUIRED
3. PROVIDE WITH FIELD INSTALLED CONDENSATE PUMP, (SIMILAR TO LITTLE GIANT VCMA-20ULS), 120V/1PH, UNLESS OTHERWISE NOTED.
4. PROVIDE BASIC MOTOR CONTROL
5. PROVIDE COMMON ALARM DRY CONTACT FOR CONNECTION TO BMS.

DIFFUSER SCHEDULE (BASED ON ANEMOSTAT)

TAG	CFM RANGE*	SERVICE	TYPE	NECK (IN)	FACE OVERALL DIMENSIONS WxL (IN)	NUMBER OF SLOTS	REMARKS
CD-A	0-250	SUPPLY	PLAQUE	8	24x24	-	MODEL 'PG'
CD-B	251-380	SUPPLY	PLAQUE	10	24x24	-	MODEL 'PG'
CD-C	381-560	SUPPLY	PLAQUE	12	24x24	-	MODEL 'PG'
CD-D	561-750	SUPPLY	PLAQUE	14	24x24	-	MODEL 'PG'
RG-A	0-350	RETURN	PLAQUE	10	12x12	-	MODEL 'PG'
RG-B	0-550	RETURN	PLAQUE	12	24x24	-	MODEL 'PG'

NOTES:

1. SEE PLAN FOR CFM NUMBERS AND DIFFUSER TYPE.
2. NOISE CRITERIA FOR ALL CEILING DIFFUSERS SHALL NOT EXCEED 35

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Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

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CONSULTANT
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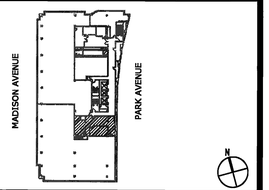

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270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

MECHANICAL SCHEDULES

M-701.00

COMcheck Software Version 3.9.2

Interior Lighting and Power Compliance Certificate

2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard)

Section 1: Project Information

Project Type: **New Construction**
Project Title :

Construction Site: Owner/Agent: Designer/Contractor:

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B x C)
Meeting/Planning Area (Common Space Types:Conference/Meeting/Multipurpose)	407	1.3	529
Engineers Office (Common Space Types:Office - Enclosed)	194	1.1	213
Copy/IT/Control Room (Common Space Types:Workshop)	529	1.9	1005
Pantry (Common Space Types:Dining Area - General)	117	0.9	105
		Total Allowed Watts =	1853

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt	E (C X D)
Meeting/Planning Area (Common Space Types:Conference/Meeting/Multipurpose 407 sq.ft.)				
Linear Fluorescent 1: F1: LITHONIA RTBS: 4ft° T8 32W (Super T8): Electronic:	1	10	32	320
Engineers Office (Common Space Types:Office - Enclosed 194 sq.ft.)				
Linear Fluorescent 2: F1: LITHONIA RTBS: 4ft° T8 32W (Super T8): Electronic:	1	4	32	128
Copy/IT/Control Room (Common Space Types:Workshop 529 sq.ft.)				
Linear Fluorescent 3: F1: LITHONIA RTBS: 4ft° T8 32W (Super T8): Electronic:	1	2	32	64
Linear Fluorescent 5: F2: LEGION SERIES 2600: 4ft° T8 32W (Super T8): Electronic:	2	2	32	64
Pantry (Common Space Types:Dining Area - General 117 sq.ft.)				
Linear Fluorescent 4: F1: LITHONIA RTBS: 4ft° T8 32W (Super T8): Electronic:	1	2	32	64
		Total Proposed Watts =		640
Interior Lighting PASSES: Design 35% better than code				

Section 4: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard) requirements in COMcheck Version 3.9.2 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title Signature Date

Section 5: Post Construction Compliance Statement

Record Drawings and Operating and Maintenance Manuals:

☐ 1. Construction documents with record drawings and operating and maintenance manuals provided to the owner.

Lighting Designer or Contractor Name Signature Date

COMcheck Software Version 3.9.2

Mechanical Compliance Certificate

2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard)

Section 1: Project Information

Project Type: **New Construction**
Project Title :

Construction Site: Owner/Agent: Designer/Contractor:

Section 2: General Information

Building Location (for weather data): **New York, New York**
Climate Zone: **4a**

Section 3: Mechanical Systems List

Quantity System Type & Description

Section 5: Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2010 New York Energy Conservation Construction Code (by application of 90.1 (2007) Standard) requirements in COMcheck Version 3.9.2 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title Signature Date

Section 6: Post Construction Compliance Statement

☐ HVAC record drawings of the actual installation and performance data for each equipment provided to the owner within 90 days after system acceptance.
☐ HVAC O&M documents for all mechanical equipment and system provided to the owner within 90 days after system acceptance.
☐ Written HVAC balancing report provided to the owner.

The above post construction requirements have been completed.

Principal Mechanical Designer-Name Signature Date

COMcheck Software Version 3.9.2

Inspection Checklist

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

90.1 (2007) Standard	Plan Review	Complies?	Comments/Assumptions
4.2.2 [PR4]*	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.4.1.1, 9.4.1.2 [PR5]*	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder conductors sized in accordance with approved plans and branch circuits sized for maximum drop of 3%.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

90.1 (2007) Standard	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
9.4.1.1 [EL1]*	Automatic controls to shut off all building lighting installed in buildings >5,000 ft2.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.4.1.2 [EL2]*	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.4.1.4 [EL4]*	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.4.2 [EL5]*	Ballasted one and three lamp fixtures with >30 Wiamp have two lamp tandem wired ballasts when >2 fixtures in same space on same control.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.4.3 [EL6]*	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.6.2 [EL8]*	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

90.1 (2007) Standard	Final Inspection	Complies?	Comments/Assumptions
8.7.1 [FI16]*	Furnished as-built drawings for electric power systems within 30 days of system acceptance.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
8.7.2 [FI17]*	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	
9.2.2.3 [FI18]*	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not Comply ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
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11 West 42nd Street
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www.syska.com

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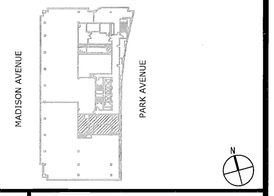

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JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

ENERGY COMCHECK COMPLIANCE REPORT

EN-701.00
PAGE NO: 01 OF 01

PLUMBING SYMBOL LIST

CLEAN OUT	ANGLE VALVE
CLEAN OUT DECK PLATE	CHECK VALVE
CLEAN OUT UP TO DECK PLATE	GLOBE VALVE
FLOOR DRAIN	HOSE VALVE (HV)
ROOF DRAIN	MASTER GAS CONTROL VALVE (MGVC)
HOSE BIBB	PLUG VALVE
HUB DRAIN	PRESSURE REDUCING VALVE
TRAP	SHUT-OFF VALVE
WALL HYDRANT	TEMPERATURE & PRESSURE RELIEF VALVE
CAPPED OUTLET	THERMOSTATIC MIXING VALVE
CAPPED OUTLET – FLANGED	AQUASTAT
CONCENTRIC REDUCER	BACK FLOW PREVENTER
ECCENTRIC REDUCER	BASKET STRAINER
NEW CONNECTION	CIRCULATOR PUMP
PIPING CONNECTION – BOTTOM	PRESSURE SWITCH
PIPING CONNECTION – DOWN	BALL VALVE
PIPING CONNECTION – UP	BALL VALVE
UNION	
STRAINER	

NOTE: NOT ALL SYMBOLS SHOWN ARE APPLICABLE. SOME SYMBOLS ARE SHOWN TO FACILIATE REVISIONS AND CHANGES IN THE SCOPE OF WORK.

PLUMBING ABBREVIATIONS

(NOT ALL ABBREV. ARE NECESSARILY USED ON THIS PROJECT)

CO	CLEANOUT
CODP	CLEANOUT DECK PLATE
CM	COFFEE MAKER
CV	CHECK VALVE
CVO	CAPPED AND VALVED OUTLET
CW	COLD WATER
CLG	CEILING
CONT	CONTINUATION
DIA	DIAMETER
DN	DOWN (PENETRATES FLOOR SLAB)
DWG	DRAWING
(E)	EXISTING
(ER)	EXISTING TO BE REMOVED
(ERR)	EXISTING TO BE REMOVED & RELOCATED
EJ DIS	EJECTOR DISCHARGE
FD	FLOOR DRAIN
FL	FLOOR
FT	FEET
GAL	GALLONS
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HW	HOT WATER
HWR	HOT WATER RETURN
IW	INDIRECT WASTE
IN	INCH
MAX	MAXIMUM
MIN	MINIMUM
(N)	NEW
NC	NORMALLY CLOSED
NIC	NOT IN THIS CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
PD	PUMP DISCHARGE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH (GAUGE)
RD	ROOF DRAIN
(RE)	RELOCATED EXISTING
SAN	SANITARY
SD	SUMP PUMP DISCHARGE
SK	SINK
SQ FT	SQUARE FOOT
TYP	TYPICAL
UP	UP (PENETRATES FLOOR SLAB)
UR	URINAL
V	VENT
VB	VACUUM BREAKER
W	WASTE
WCO	WALL CLEANOUT

GENERAL NOTES FOR DEMOLITION WORK

1. ALL EQUIPMENT, PIPING, ETC., TO BE REMOVED, SHALL BE DISPOSED OF, TURNED OVER TO OR SALVAGE AS DIRECTED. THEY SHALL NOT BE REMOVED FROM THE PREMISES WITHOUT APPROVAL.
2. EXISTING EXPOSED PIPING NOT TO BE REUSED AND NOT SPECIFICALLY NOTED OR SHOWN ON DRAWING TO BE ABANDONED SHALL BE COMPLETELY REMOVED.
3. THE EXISTING SYSTEM TO REMAIN SHALL BE LEFT IN PERFECT WORKING ORDER AT COMPLETION OF DEMOLITION WORK.
4. LOCATIONS AND SIZES OF EXISTING PIPING ARE APPROXIMATE. EXACT SIZES AND LOCATIONS OF ALL EXISTING PIPING SHALL BE VERIFIED ON THE JOB.
5. NO REMOVED EXISTING PIPING SHALL BE REUSED.
6. ALL EXISTING EXPOSED, UNNECESSARY PIPING RELATED TO WORK BEING REMOVED SHALL BE COMPLETELY REMOVED.
7. DO NOT INTERRUPT ANY OF THE SERVICES OF THE EXISTING BUILDING, NOR INTERFERE WITH THE SERVICES IN ANY WAY WITHOUT EXPRESSED PERMISSION. SUCH INTERRUPTIONS AND INTERFERENCE SHALL BE MADE AS BRIEF AS POSSIBLE AND ONLY AT THE DESIGNATED TIMES.
8. WHEN DEMOLITION WORK REQUIRES THE SHUTDOWN OF EXISTING OPERATING SYSTEMS, THE DEMOLITION WORK SHALL BE PERFORMED ONLY AFTER NOTIFYING OWNER AT LEAST 2 WEEKS BEFORE START AND OBTAINING WRITTEN AUTHORIZATION.
9. ALL PIPING REMOVAL SHALL INCLUDE REMOVAL OF ALL APPURTENANCES CONTAINED THEREIN SUCH AS VALVES, HANGERS, SUPPORTS, ETC. COMPLETE. CAPS SHALL BE INSTALLED AT ALL OPEN ENDS OF PIPING TO REMAIN AND SHALL BE OF SAME MATERIAL AND PRESSURE RATING AS EXISTING.
10. REMOVE EXISTING PIPING AS INDICATED ON DRAWING OR AS MAY BE REQUIRED. REMOVE RUBBISH FROM PREMISES AND SITE AT THE END OF EACH WORK DAY AND AS DIRECTED.
11. TORCH CUTTING; BEFORE PROCEEDING WITH WORK, SUBMIT CERTIFICATE OF COMPLIANCE AND NOTIFY BUILDING FIRE WARDEN.
12. PLUMBING DEMOLITION WORK SHALL BE IN STRICT CONFORMITY WITH THE NEW YORK CITY BUILDING CODE AND OTHER AUTHORITIES HAVING JURISDICTION.

MATERIAL SCHEDULE

SYSTEM	PIPE								FITTINGS				JOINTS		
	REQUIRED	CAST IRON NO-HUB PIPE	CAST IRON WATER PIPE	STEEL SCHEDULE 40	TYPE "L" COPPER TUBING	TYPE "K" COPPER TUBING	GALVANIZED	CAST IRON – SERVICE WEIGHT	CAST IRON – NO-HUB	CAST IRON HUB & SPIGOT	WROUGHT COPPER	PLASTIC	GALVANIZED	THREADED	SOLDERED 95-5	MECH. JOINT – NO HUB	MECH. JOINT – GASKET
VENTS	●	●							●						●		
SANITARY STACKS	●	●							●						●		
SANITARY BRANCHES	●	●							●						●		
C.W.	●				●						●				●		
H.W.	●				●						●				●		

N.Y.C. BUILDING DEPARTMENT PLUMBING NOTES

1. THE PLUMBING SYSTEMS (SANITARY, VENT AND WATER DISTRIBUTION) AND ALL ASSOCIATED EQUIPMENT WILL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE FULL REQUIREMENTS OF THE 2008 NEW YORK CITY PLUMBING CODE (NYCPC).
2. ALL PLUMBING WORK SHALL COMPLY WITH CHAPTER 4 OF THE 2008 NEW YORK CITY PLUMBING CODE AND CHAPTERS 1 THROUGH 13 OF THE NEW YORK CITY PLUMBING CODE.
3. THE SANITARY SYSTEM SHALL BE PROVIDED IN FULL ACCORDANCE WITH THE GENERAL PROVISIONS PC305.
4. THE MATERIALS USED IN THE PLUMBING SYSTEM SHALL BE PROVIDED IN FULL ACCORDANCE WITH SECTION PC303.
5. THE INSTALLATION OF FIXTURES SHALL BE IN FULL ACCORDANCE WITH PC401.
6. VERTICAL AND HORIZONTAL PIPING SHALL BE HUNG AND SUPPORTED AS DIRECTED IN SPECIFICATIONS AND IN FULL ACCORDANCE WITH SECTION PC308.
7. CLEANOUTS SHALL BE INSTALLED AS PER SECTION PC708.
8. TRAPS FOR FIXTURES SHALL BE INSTALLED IN FULL ACCORDANCE WITH SECTION PC1002.
9. THE WATER SUPPLY SHALL BE INSTALLED AND MAINTAINED IN FULL ACCORDANCE WITH PC601 THROUGH PC613. VALVES SHALL PROVIDED AS PER SECTION PC606.
10. THE SANITARY DRAINAGE SYSTEM SHALL BE SIZED AND INSTALLED IN FULL ACCORDANCE WITH SECTIONS PC701 THROUGH PC715.
11. THE VENT PIPING FOR THE SANITARY DRAINAGE SYSTEM SHALL BE PROVIDED IN FULL ACCORDANCE WITH SECTION PC901 THROUGH PC919.
12. SANITARY TEES AND QUARTER BENDS SHALL BE USED IN DRAINAGE LINES ONLY WHERE THE DIRECTION OF FLOW IS FROM THE HORIZONTAL TO THE VERTICAL.
13. SHORT SWEEPS SHALL BE PERMITTED IN DRAINAGE PIPING 3 INCHES IN DIAMETER OR LARGER FOR OFFSETS EITHER HORIZONTAL OR VERTICAL.
14. SPECIAL AND MISCELLANIOUS PIPING SHALL BE AS DIRECTED IN SECTION PC1201 THROUGH PC1203.
15. STORM DRAINAGE PIPING SHALL BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTSOF PC1100 THROUGH PC1108.

GENERAL PLUMBING NOTES:

1. ALL PLUMBING WORK SHALL BE IN STRICT ACCORDANCE WITH THE RULES AND REGULATIONS GOVERNING PLUMBING AND DRAINAGE WORK; SHALL CONFORM TO ALL OTHER APPLICABLE REGULATIONS AND SHALL MEET REQUIREMENTS OF THE A.H.J.
2. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS. EXACT LOCATION SHALL BE COORDINATED WITH ALL TRADES, ARCHITECTURAL DRAWINGS, GENERAL CONTRACTOR AND PRIME CONTRACTOR.
3. VERIFY THE LOCATIONS AND SIZES OF EXISTING PIPING IN THE FIELD AND IF ANY DISCREPANCIES OCCUR WITH CONTRACT DRAWINGS, NOTIFY ENGINEER PRIOR TO COMMENCEMENT OF NEW WORK.
4. ALL EXPOSED PIPING PENETRATIONS THROUGH WALLS OR CEILINGS SHALL BE PROVIDED WITH APPROVED FIRE RETARDANT SEALANT AND ESCUTCHEONS.
5. ALL FIXTURES TO BE SEALED WHERE FIXTURE COMES IN CONTACT WITH WALLS OR FLOOR WITH CLEAR SEALANT.
6. COORDINATE ALL WORK WITH ALL OTHER CONTRACTORS PERTAINING TO THE LOCATIONS OF PLUMBING AND DRAINAGE PIPING, HVAC WORK, LIGHTING FIXTURES, ELECTRICAL, SPRINKLER PIPING AND SPRINKLER HEADS, PROVIDE ALL NECESSARY PIPING OFFSETS AND CHANGES IN DIRECTION TO ACCOMPLISH A COMPLETE INSTALLATION.
7. SUBMISSION OF A PROPOSAL SHALL BE EVIDENCE THAT A CAREFUL EXAMINATION OF THE SITE, DRAWINGS & SPECIFICATIONS HAS BEEN MADE AND THE CONTRACTOR IS FAMILIAR WITH THOSE ITEMS AND AREAS THAT WILL PRESENT DIFFICULTY TO THE PERFORMANCE OF THIS CONTRACT. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT, ETC..., NECESSARY TO COMPLETE ALL WORK AS A RESULT OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN.

A. CONTRACTOR TO VERIFY THE EXISTING CONDITIONS BEFORE CONSTRUCTION, CONFIRM SIZES AND LOCATIONS OF ALL EXISTING PIPING PRIOR TO START OF WORK.

B. ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR AT THIS SITE BEFORE PROCEEDING WITH ANY WORK.

C. PRIOR TO STARTING CONSTRUCTION. DETERMINE EXACT INVERT ELEVATION, SIZE, DEPTH AND LOCATION OF EXISTING CONDITIONS.

D. THE PLUMBING CONTRACTOR SHALL: PAY FEES, GIVE NOTICE, FILE NECESSARY DRAWINGS AND OBTAIN PERMITS AND CERTIFICATES OF APPROVAL, REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT. HE SHALL COMPLY WITH NEW YORK CITY CODE, ORDINANCES, NEW YORK STATE CODE AND THE NEW YORK ENERGY CODE.

E. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR OR HIS WORKMEN BE PERMITTED TO USE ANY PART OF THE BUILDING AS A SHOP EXCEPT PARTS AS DESIGNATED FOR SUCH USE. BY THE OWNER.

F. ANY EXISTING INSULATION DISTURBED & ALL EXISTING PIPING WHICH REQUIRES REINSULATION, SUCH AS COLD WATER, HOT WATER, ETC., SHALL BE INSULATED AS PER THE SPECIFICATION.

G. PLUMBING CONTRACTOR SHALL COORDINATE ALL TIE-INS, PLUS REMOVALS WITH GENERAL CONTRACTOR AND OWNER'S SCHEDULE.

H. COORDINATE WITH GENERAL CONTRACTOR FOR ACCESS DOOR REQUIREMENTS.

I. REFER TO ARCHITECTURAL DRAWINGS FOR FINAL LOCATION OF ALL EQUIPMENT.

J. PROVIDE STAINLESS STEEL ACCESS DOORS FOR SHOCK ABSORBERS.

K. STORE MATERIALS IN DESIGNATED SPACES.

L. LOCATIONS AND SIZES OF EXISTING PIPING ARE APPROXIMATE, VERIFY IN FIELD.

M. UNNECESSARY NOISE SHALL BE AVOIDED AT ALL TIMES AND NECESSARY NOISE SHALL BE REDUCED TO A MINIMUM.

N. NEW WORK AND EQUIPMENT SHALL BE THOROUGHLY CLEANED AND MADE READY FOR USE.

O. SANITARY DRAINAGE SHALL HAVE A UNIFORM GRADE OF 1/4" PER FOOT, FOR 2 1/2" AND SMALLER AND AN 1/8" PER FOOT FOR 3" OR LARGER, U.O.N.

P. INSTALL SHOCK ABSORBERS ON EACH FIXTURE BRANCH HAVING A FLUSH VALVE AND QUICK CLOSING VALVES. INSTALL SHOCK ABSORBERS IN ACCORDANCE WITH THE PLUMBING AND DRAINAGE INSTITUTE STANDARDS WITH REGARDS TO SIZE AND LOCATION.

Q. COORDINATE ALL FLOOR CORING, FLOOR PENETRATIONS, SLEEVES & FLOOR OPENINGS WITH EXISTING STRUCTURAL.

R. PROVIDE CLEANOUTS AT OR NEAR THE BASE OF EACH VERTICAL STACK, CLEANOUTS SHALL BE SAME SIZE AS THE PIPES THEY SERVE UP TO 4 INCHES, AND NOT LESS THAN 4 INCHES FOR LARGER PIPING.

S. PROVIDE CLEANOUTS FOR CHANGES IN DIRECTION FOR ALL SANITARY PIPING.

T. REFER TO ARCHITECTURAL DRAWINGS FOR AREA OF DEMOLITION & CONSTRUCTION.

U. ALL FLOOR DRAINS SHALL BE 3 INCH MINIMUM WITH 1½ INCH VENTS.

V. PROVIDE FLOOR DRAIN IN TOILET ROOM. PROVIDE HOSE BIBB IN TOILET ROOM. ALL HOT WATER RETURN LINES ARE 1/2" U.O.N. EACH MAIN, RISER AND BRANCH TO A GROUP OF PLUMBING FIXTURES SHALL BE VALVED.

W. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.

X. SUPPORT ALL PLUMBING WORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL STEEL FRAMING.

Y. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

Z. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES IN MAKING UP WORK PROPOSAL.

AA. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ENGINEER.

AB. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT, AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.

AC. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.

AD. SEAL OPENINGS AROUND PLUMBING WORK AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS (NOT IN SHAFTS) WITH NON-COMBUSTIBLE MATERIAL.

AE. PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, PLUMBING WORK, AND EQUIPMENT.

AF. ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED UNDER THIS CONTRACT WILL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THIS CONTRACTOR AS DIRECTED BY THE OWNER.

AG. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE ARCHITECT/ ENGINEER.

AH. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES,

AI. PROVIDE ALL REQUIRED LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR A COMPLETE AND SAFE INSTALLATION IN FULL ACCORDANCE WITH REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION; ALL AS INDICATED ON DRAWINGS AND/OR HEREIN SPECIFIED FOR THE SYSTEMS INCLUDED. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER.

AJ. INCLUDE ALL COSTS FOR PERMITS, LICENSES, CERTIFICATES, FILING AND INSPECTIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION.

AK. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF ACCEPTANCE BY OWNER, THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

AL. ALL REQUIRED TEMPORARY SHUTDOWNS IN BUILDING SERVICES SHALL BE MINIMIZED AND SHALL BE APPROVED BY AND COORDINATED WITH THE OWNER A MINIMUM OF ONE WEEK IN ADVANCE OF SHUTDOWN. ALL SERVICE CONNECTIONS TO EXISTING BUILDINGS SHALL BE PERFORMED AFTER COORDINATION WITH OWNER & ENGINEER.

AM. CONTRACTOR TO COORDINATE ALL DIMENSIONS, ELEVATIONS AND CONNECTION REQUIREMENTS FOR FINAL CONNECTIONS.

AN. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED DURING CONSTRUCTION.

PLUMBING FIXTURE & PIPE CONNECTION SCHEDULE					
TAG	DESCRIPTION	CONNECTION SIZE			
		CW	HW	WASTE	VENT
		INCHES	INCHES	INCHES	INCHES
S-1	PANTRY SINK	½"	½"	2"	2"

REVIEW DOCUMENTS, VERIFY DIMENSIONS AND FIELD CONDITIONS AND CONFIRM THAT WORK IS BUILDABLE AS SHOWN. THE CONTRACTOR SHALL REPORT ANY CONFLICTS AND/OR OMISSIONS TO THE ENGINEER PRIOR TO PERFORMING ANY WORK IN QUESTION. OTHERWISE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO COMPLETE THE WORK STATED IN ON THE CONTRACT DOCUMENTS BASED UPON THE OPTIMAL ESTABLISHED QUALITY STANDARD.

DRAWING LIST

P-001.00	PLUMBING LEGEND,NOTES AND ABBREVIATIONS
P-002.00	PLUMBING SPECIFICATIONS
DMP-100.00	SC2 LEVEL PLUMBING DEMOLITION PLAN
P-100.00	SC2 LEVEL PLUMBING PLAN
P-501.00	PLUMBING DETAILS

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

FILING NOTE

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING OR IN ACCORDANCE WITH APPLICABLE CODES.

THIS DRAWING FILED FOR PLUMBING SYSTEM ONLY

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212.561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London, SE1 9LB, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

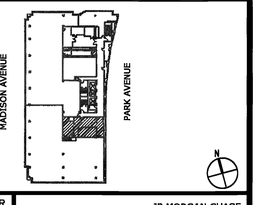
CONSULTANT

DEPT:BLDGS 121664662 Job Number
IBC110161953 Scan Code

NO.	DATE	DESCRIPTIONS
2	08.30.13	ISSUE FOR CONSTRUCTION
1	08.05.13	ISSUE FOR BID & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



PROJECT NUMBER	JWA37000-DAY-2
SCALE	
DATE	08.08.12
PROJECT MANAGER	NF
PROJECT ARCHITECT	GM
DRAWN BY	
CHECKED BY	
CADD FILE	P-001.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

PLUMBING SYMBOLS LIST, ABBREVIATIONS AND NOTES

ROBERT D. ANNA LICENSED PROFESSIONAL ENGINEER

P-001.00

PAGE NO: 1 of 5

PLUMBING SPECIFICATION

1.00 GENERAL

1.01 GENERAL REQUIREMENTS

A. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS, 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 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 INTERFERENCE 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. ALL PIPING PASSING OVER ELECTRICAL OR TELEPHONE EQUIPMENT SHALL BE PROVIDED WITH DRIP PANS.

1.04 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 MANUFACTURER 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. SLEEVES.

2. ACCESS DOORS.

3. VALVES.

4. SUPPORTS.

5. PIPE, FITTINGS AND JOINTS.

6. THERMOMETERS.

7. PRESSURE GAGES.

8. TRAP PRIMERS.

9. CLEANOUTS.

10. INSULATION.

11. PLUMBING FIXTURES, TRIM, TRAPS, ETC.

12. WATER FILTERS.

13. HOT WATER DISPENSERS.

14. LOCAL DRAINAGE PUMPS.

15. SOLDER.

16. AIR GAPS.

17. VACUUM BREAKERS.

18. BACKFLOW PREVENTERS.

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. STORM WATER SYSTEM, INCLUDING CONNECTIONS TO EXISTING ROOF DRAINS AND PIPING.

3. DOMESTIC WATER SUPPLY SYSTEM, INCLUDING CONNECTIONS TO EXISTING PIPING, VALVES, PLUMBING FIXTURES AND EQUIPMENT.

5. PLUMBING FIXTURES.

6. INSULATION

7. CORE DRILLING, ROUGH CUTTING AND PATCHING.

8. SHOP DRAWINGS.

9. TESTING, FILING AND FEES.

10. CADD AS-BUILT DRAWINGS

11. DISINFECTION OF DOMESTIC WATER SYSTEM.

12. CONTROL AND ALARM WIRING.

1.06 DEMOLITION

A. IN DEMOLITION WORK, UNUSED PIPING SHALL NOT BE ABANDONED 'IN PLACE'. PIPING SHALL BE REMOVED BACK TO SOURCE OR POINT OF DISCHARGE, AND THE RESULTING OPENINGS PLUGGED AS INDICATED ON THE DRAWINGS.

B. DISCONNECT, REMOVE AND CAP OR PLUG EXISTING UNUSED PIPING AS NOTED OR REQUIRED TO PERMIT NEW INSTALLATION.

C. ALL EXISTING PLUMBING FIXTURES, PIPING AND EQUIPMENT TO BE REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE DISPOSED OF BY THIS CONTRACTOR AS DIRECTED BY THE OWNER.

D. THE CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING UNUSED PIPING AND FIXTURES WITHOUT INTERRUPTING EXISTING REQUIRED FUNCTIONING SYSTEMS.

E. ALL PIPING FROM FIXTURES TO BE REMOVED AND REPLACED SHALL BE PROPERLY PLUGGED OR CAPPED, AT WALL OR FLOOR, TO AWAIT INSTALLATION OF NEW FIXTURES.

F. ALL UNUSED PIPING AND RELATED ITEMS CONCEALED IN WALLS, FLOORS AND CEILING WITHIN THE STRUCTURE SHALL BE ABANDONED AND REMOVED WHERE EXPOSED TO VIEW.

G. ALL WASTE AND SANITARY DRAINAGE PIPING NOT TO BE USED SHALL BE REMOVED AND PLUGGED AT ACTIVE MAIN OR RISER. NO DEADENDS SHALL REMAIN LONGER THAN TWO (2) FT.

1.07 WORK NOT INCLUDED

A. FINISHED PATCHING AND PAINTING.

B. TOILET ROOM ACCESSORIES, INCLUDING MEDICINE CABINETS, MIRRORS, GRAB BARS, ETC.

C. INSTALLATION OF ACCESS DOORS.

1.08 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. PLUMBING FIXTURES: ELJER CO., AMERICAN STANDARD, INC., CRANE CO., KOHLER CO., SLOAN, POWERS, FIAT AND LAWLER.

2. STAINLESS STEEL SINKS: JUST MFG. CO., ELKAY MFG. CO., RELIANCE, AND STERLING.

3. BRASSWARE TRIM: CHICAGO FAUCET CO., MCGUIRE, JAMCO, AND BRASSCRAFT.

4. FAUCETS: ELKAY MFG. CO., SYMMONS, DELTA FAUCET CO., SPEAKMAN, T&S BRASS, CHICAGO FAUCET AND SLOAN.

5. FLUSHOMETERS: SLOAN VALVE CO. (OPTIMA), COYNE AND DELANY CO. (FLUSHBOY) AND ZURN.

8. ELECTRIC WATER COOLERS: HALSEY TAYLOR CO., ELKAY MFG. CO. AND FILTRINE.

9. BALL AND CHECK VALVES (INSIDE): CONBRACO "APOLLO," STOCKHAM VALVES AND FITTINGS, WALWORTH CO., CRANE CO., WM. POWEL VALVE CO., NIBCO (USA), AND MILWAUKEE VALVE CO.

10. PLUG VALVES (GAS COCKS): WALWORTH CO., FLOWSERVE (NORDSTROM), HEALY, DEZURIK, AND CRANE CO.

11. PRESSURE GAUGES AND THERMOMETERS: ASHCROFT AMER. GAUGE CO., U.S. GAUGE CO., ASHTON VALVE CO., WEKSLER INSTRUMENTS CORP., AND H.O. TRERICE CO.

12. BACKFLOW PREVENTERS: WATTS REGULATOR CO., CLA-VAL CO., HERSEY PRODUCTS, INC., AND WILKINS.

2.02 GENERAL ITEMS

A. AIR CHAMBERS: 12 IN. HIGH, PROVIDE ON INDIVIDUAL HOT AND COLD WATER BRANCHES TO FIXTURES.

B. ESCUTCHEONS: PROVIDE EXPOSED PIPING BOTH BARE AND COVERED, WITH CP CAST BRASS ESCUTCHEONS ON BOTH SIDES WHERE PASSING THROUGH CEILINGS, WALLS OR PARTITIONS.

C. VALVE TAGS AND CHARTS: PROVIDE 2 IN. SQUARE, 18 GAUGE ALUMINUM WITH STAMPED NUMBERED TAGS, FILL IN WITH BLACK PAINT. PROVIDE ON CONTROL VALVES EXCEPT THOSE CONTROLLING A SINGLE FIXTURE AND LOCATED ADJACENT TO FIXTURES. FASTEN WITH BRASS HOOKS. PROVIDE FRAMED CHART LISTING OPERATION, LOCATION AND PURPOSE OF VALVES. COORDINATE WITH EXISTING BUILDING VALVE CHART.

D. SLEEVES: PROVIDE NO. 22 USSG GALVANIZED STEEL SLEEVES EXTENDED THROUGH CONSTRUCTION IN CEILINGS, WALLS AND PARTITIONS. FOR INSULATED PIPING, SIZED TO ALLOW INSULATION TO PASS THROUGH SLEEVE. PROVIDE 1/2 IN. SPACE BETWEEN PIPE AND/OR INSULATION AND SLEEVE. FIREPROOF BY SEALING ALL SLEEVES IN ACCORDANCE WITH BUILDING CODE AND FIRE DEPARTMENT REQUIREMENTS.

E. HANGER AND PIPING SUPPORTS

1. SUPPORT MATERIALS: GALVANIZED, EXCEPT ON GAS OR MEDICAL GASES, SAME AS PIPING MATERIAL.

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, ANVIL INTERNATIONAL SWIVEL RING FIG. 69.

5. FOR HORIZONTAL PIPING 3 IN. AND LARGER, PROVIDE GALVANIZED "CLEVIS" HANGERS, ANVIL INTERNATIONAL FIG. 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. SUSPEND TRAPEZE AND/OR HANGERS FROM EXPANSION ANCHORS IN SOLID CONCRETE SLABS, SIMILAR TO HILTI HDI OR FROM EXISTING STRUCTURAL STEEL WITH BEAM CLAMPS SIMILAR TO ANVIL INTERNATIONAL FIG. 95 W/ RETAINING CLIP FIG. 89. PROVIDE RODS SIZED FOR PIPE SUPPORTED AND LOCK HANGER IN PLACE WITH DOUBLE NUTS. PROVIDE GALVANIZED METAL PROTECTION SHIELDS ON INSULATED PIPING. INSTALL HANGERS OVER INSULATION AND SHIELDS.

9. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING HANGER RODS IN REQUIRED LOCATIONS, PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND REVIEWED.

F. ACCESS DOORS:

1. 12 IN. X 12 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. KARP STYLE DSC 214M OR KRP-150-FR IN FIRE RATED CONSTRUCTION.

G. LABELING:

1. PROVIDE ON ALL PIPING IN OR AT CEILING, 10 FT. ON CENTERS, INDICATING SYSTEM, SIZE AND DIRECTION OF FLOW.

H. DISSIMILAR METALS:

1. PROVIDE BRASS OR COPPER WATER PIPING CONNECTED TO GALVANIZED PIPE AND FOR ANY OTHER DISSIMILAR METALS WITH DIELECTRIC FITTINGS.

2.03 PIPING AND FITTINGS

A. SANITARY DRAINAGE AND VENT PIPING:

1. SERVICE WEIGHT CAST IRON HUB AND SPIGOT SOIL PIPE AND DRAINAGE FITTINGS, OR GALVANIZED STEEL PIPE WITH GALVANIZED THREADED CAST IRON DRAINAGE FITTINGS, WITH GALVANIZED THREADED MALLEABLE IRON VENT 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. BRASS PIPE IN COMPLIANCE WITH NSF 61 WITH THREADED CAST BRASS FITTINGS OR TYPE 'L' COPPER TUBING WITH WROUGHT COPPER OR CAST BRONZE FITTINGS WITH 95-5 SOLDERED JOINTS.

2. ALL EXPOSED WATER PIPING AT PLUMBING FIXTURES SHALL BE CHROME PLATED.

2.04 VALVES

A. SHUT-OFF OR THROTTLING VALVES (WATER): BRONZE BODY BALL VALVE WITH STAINLESS STEEL BALL AND STEM, VIRGIN TFE SEATS AND SEALS, 600 PSI W.O.G., THREADED ENDS CONBRACO 'APOLLO' 70-100 SERIES, SOLDER JOINT ENDS CONBRACO 'APOLLO' 70-200 SERIES.

B. CHECK VALVES (WATER): BRONZE SWING TYPE, 125 PSI WSP, THREADED ENDS, STOCKHAM NO. B-319. SOLDER JOINT ENDS, STOCKHAM NO. B-309.

2.05 PLUMBING EQUIPMENT

A. FIXED AIR GAP:

1. CHROME PLATED CAST BRONZE.

2. CONFORMING TO ANSI A112.1.2.

3. J. R. SMITH NO. 3950 FOR UNDERCOUNTER DISHWASHERS.

B. VACUUM BREAKERS:

1. NON-CONTINUOUS PRESSURE USE WITH BACK PRESSURE.

A) CAST BRASS BODY, WITH FULL SIZE ORIFICE

B) ATMOSPHERIC TYPE, WATTS NO 288A.

C. BACKFLOW PREVENTERS:

1. BRONZE BODY, STAINLESS STEEL INTERNAL PARTS.

A) LOW FLOW, LOW HEAD LOSS TYPE.

B) WATTS NO. 9D.

2. SPILL DRAIN TO SERVICE SINK OR FLOOR DRAIN.

A) PROVIDE AIR GAP, WATTS 909-AG-C.

D. 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 45° 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.

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°F MEAN.

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. VAPOR SEAL INSULATION ON CW PIPING. THICKNESS SAME AS REQUIRED ON PIPING.

D. CW PIPING: 1 IN. THICK FIBERGLASS SECTIONAL PIPE COVERING WITH VAPOR BARRIER JACKET. NO STAPLES PERMITTED.

E. HW (AND HWR) PIPING: 1 IN. FIBERGLASS SECTIONAL PIPE COVERING.

F. PROVIDE SWEATPROOFING ON DRAINAGE PIPING, AS NOTED FOR INSULATION ON CW PIPING, USING THE NEXT LARGER DIAMETER COVERING OVER HUBS FOR HORIZONTAL STORM WATER DRAINS AND FOR DRAINAGE PIPING FROM ICE MAKER FLOOR DRAINS, PROVIDE BETWEEN FIXTURE AND STACK.

2.07 PLUMBING FIXTURES:

A. STAINLESS STEEL PANTRY SINKS:

1. STOPS: PROVIDE 1/2" CHROME PLATED COPPER WITH HEAVY DUTY NPS 1/2" I.P.S. x 1/2" O.D. LOCKSHIELD ANGLE TYPE STOPS WITH STUFFING BOX AND LOOSE KEY. C.P. CAST BRASS 1/2"x3" NIPPLE AND SET SCREW ESCUTCHEON.
A) STOPS, McGUIRE NO. H2167LK.
B) SUPPLY NIPLE AND ESCUTCHEON McGUIRE NO. NO318030 AND NO. 127050.
C) HANDICAP STOP, McGUIRE NO. 158WC.

2. PROVIDE TYPE 316 STAINLESS STEEL STRAINER WASTE WITH 1-1/2" 17 GAUGE COPPER TUBING TAILPICE, SIMILAR TO ELKAY NO. LK-188. 11 IN. X 2 IN., CAST BRASS P-TRAP WITH CLEANOUT, MCGUIRE NO. 204 WITH 17 GAUGE COPPER TUBING.
CONNECT TO CONCEALED WASTE PIPING USING CP. CAST BRASS WALL OUTLET NIPPLE WITH CP BRASS SET SCREW AND ESCUTCHEON, MCGUIRE NO. 3127.

3. FOR HANDICAP SINKS: TRAP, SUPPLIES AND STRAIGHT STOPS SHALL RUN CLOSE TO WALL TO CLEAR KNEES (IF MORE THAN 6 IN. OFF THE WALL, PROVIDE 1 IN. INSULATION ON EXPOSED HOT WATER AND DRAIN). PROVIDE OPEN STRAINER WASTE, MCGUIRE NO.1151WC.

4. TYPE SK:
A) DOUBLE COMPARTMENT, IN THE COUNTER TYPE 22 IN. X 33 IN. X 6i IN. DEEP SELF RIMMING TYPE, 3 FAUCET HOLES, 4 IN. ON CENTERS, SIMILAR TO JUST NO. VDL-2233-A-GR WITH JUST NO. J35GS316, 316 STAINLESS STEEL STRAINER.

B) SINGLE COMPARTMENT PANTRY SINK, SATIN FINISH THROUGHOUT 25 IN. ACROSS X 22 IN. FRONT TO BACK X 6i IN. DEEP, CENTER OUTLET DRAIN 20 GAUGE, SOUND DEAD-ENDED, 4 HOLES, 25 YEAR WARRANTY. SIMILAR TO STERLING PLUMBING GROUP, INC., BANNER NO. B258.

C) SINK SHALL BE NO. 18 USSG 18-8 SOLID STAINLESS STEEL TYPE 302 AND SHALL BE SEAMLESSLY DRAWN. EXPOSED SURFACE SHALL HAVE A SATIN FINISH. UNDERSIDE SHALL BE SOUND DEADENED.

D) HORIZONTAL AND VERTICAL CORNERS OF BOWLS SHALL BE ROUNDED TO 1s IN.

OUTLET AND DRILLED FOR TRIM AS REQUIRED. PROVIDE WOOD STRIPS FOR FASTENING TOP TO CABINETS.

5. SINK TYPE HSK:
A) SINGLE COMPARTMENT, MOUNTED IN THE COUNTER NO GREATER THAN 34 IN. FROM THE FLOOR, 22 IN. X 25 IN. X 6i IN. DEEP WITH 3 FAUCET HOLES, 4 IN. ON CENTERS. NO. 18 USSG 302 STAINLESS STEEL, SINGLE COMPARTMENT, FLAT RIM TYPE. JUST RADIUS. JOINTS SHALL BE WELDED AND GROUND SMOOTH. BOTTOM SHALL BE PITCHED TO DRAIN NO. VSL-2225-A-GR WITH AN ELKAY NO. 35L, 316 STAINLESS STEEL STRAINER. DOUBLE COMPARTMENT PANTRY SINK, SATIN FINISH THROUGHOUT, 33 IN. ACROSS, 22 IN. FRONT TO BACK, 6i IN. DEEP, OUTLETS 16 IN. ON CENTERS, 20 GAUGE, SOUND DEADENED, 4 HOLES, 25 YEAR WARRANTY. SIMILAR TO STERLING PLUMBING GROUP, INC., BANNER NO. B338.

6. FAUCETS:

A) TYPE SK AND HSK, DECK MOUNTED, 8 IN. GOOSENECK SWING SPOUT WITH LAMINAR FLOW OUTLET, WRISTBLADE HANDLES, MAXIMUM FLOW 1.5 GPM VANDAL PROOF. CHICAGO NO. 786-GN8A SERIES.

7. PIPE SIZES: DRAIN: 2 IN.; VENT: 1i IN.; CW: i IN.; HW: i IN.

B. SHOWERS:

1. SHOWER RECEPTORS:

A) TYPE SH, BLACK AND WHITE MARBLE CHIPS IN WHITE CEMENT BASE. 36 IN. X 36 IN., NON-SLIP, REINFORCED TERRAZZO RECEPTOR BASE FOR TILE WALLS WITH 2 IN. STAINLESS STEEL BOTTOM OUTLET DRAIN WITH REMOVABLE STRAINER CAST INTEGRAL. FIAT MONTERY MFT.

B) TYPE SH, PROVIDE 36 IN. X 36 IN. NONSLIP REINFORCED PRECAST TERRAZZO RECEPTOR WITH 2 IN. STAINLESS STEEL DRAIN WITH VANDAL PROOF STRAINER CAST INTEGRAL AND GALVANIZED FLANGES FOR WALL ATTACHMENT. FIAT SIERRA NO. 36FT.

C. WATER FILTERS:

1. VALVE IN HEAD DESIGN WITH AUTOMATIC SHUT OFF WHEN THE CARTRIDGE IS REMOVED FOR REPLACEMENT INCORPORATING CELLULOSE FILTER SHEET AND ACTIVATED CARBON, 5 MICRON FILTRATION, UNDER COUNTER TYPE. PROVIDE TWO DOZEN SPARE REPLACEMENT CARTRIDGES.

2. PROVIDE ON WATER SUPPLY TO ICE AND COFFEE MAKERS: MAXIMUM TEMPERATURE 100°F, MAXIMUM PRESSURE 125 PSI, FLOW RATE i GPM. CUNO 'AQUA PURE' NO. AP717.

3. PIPE SIZE: CW: r IN.

4. PROVIDE ON WATER SUPPLY TO ELECTRIC WATER COOLERS: MAXIMUM TEMPERATURE 100°F, MAXIMUM PRESSURE 125 PSI, FLOW RATE 2 GPM. CUNO 'AQUA PURE' NO. AP500 GOLD.

5. PIPE SIZE: CW: 3/8 IN.

D. ICE AND COFFEE MAKERS (BY OTHERS):

1. PROVIDE VALVED CW CONNECTION WITH CHECK VALVE AND VACUUM BREAKER. PROVIDE FLOOR DRAIN FOR ICE MAKER. SPILL INDIRECT WASTE FROM ICE MAKER TO FLOOR DRAIN.

2. PIPE SIZE: DRAIN s IN. IW; CW: r IN.

E. UNDERCOUNTER DISHWASHERS (BY OTHERS):

1. PROVIDE VALVED WATER CONNECTION WITH CHECK VALVE AND VACUUM BREAKER.

2. PROVIDE WASTE WITH AIR GAP WHERE WASTE DOES NOT RISE ABOVE RIM OF SINK.

3. PIPE SIZE: DRAIN: s IN.; HW: i IN.

F. HOT WATER DISPENSERS:

1. DISPENSER WITH TANK. ELKAY NO. LK-H-180.

2. PROVIDE VALVED CONNECTION.

3. PIPE SIZE: r IN. CW.

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. LAG PLUMBING FIXTURE CARRIER BASE PLATES OR FEET TO SLAB WITH LEAD EXPANSION SHIELDS AND INSERT BOLTS IN ALL BOLT HOLES.

2. WHERE WALL HUNG WATER CLOSETS ARE SUPPORTED ADJACENT TO STUD WALLS, PROVIDE REAR ANCHOR FOOT ASSEMBLY BOLTED TO SLAB.

3. SEAL ALL SPACES BETWEEN FIXTURES, AND WALLS OR FLOORS, WITH A NON YELLOWING OR SHRINKING FLEXIBLE WATER SEALANT.

4. WHERE PLUMBING FIXTURES ARE REMOVED AND REPLACED PROVIDE NEW ROUGHING AS REQUIRED FOR PROPER INSTALLATION.

5. ALL EXPOSED PIPING SHALL BE CHROME PLATED.

3.02 TESTS

A. TEST ALL SYSTEMS AS REQUIRED BY BUILDING CODE.

3.03 DISINFECTION

A. DISINFECT DOMESTIC WATER PIPING SYSTEMS AS REQUIRED BY BUILDING CODE.

SALMAN ARSHAD

JAN 27 2014

ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/1975

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JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212.561.2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312.924.5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.599.3333
www.syska.com

CONSULTANT

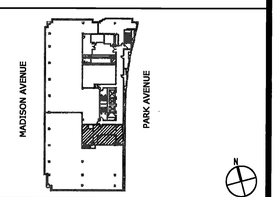
DEPT. BLDG. 121664882 Job Number

SC110161956 Scan Code

NO.	DATE	DESCRIPTIONS
2	08.30.13	ISSUE FOR CONSTRUCTION
1	08.05.13	ISSUE FOR BID & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN - AREA OF WORK



PROJECT NUMBER	JMA37000-DAY-2
SCALE	
DATE	08.08.12
PROJECT MANAGER	NF
PROJECT ARCHITECT	GM
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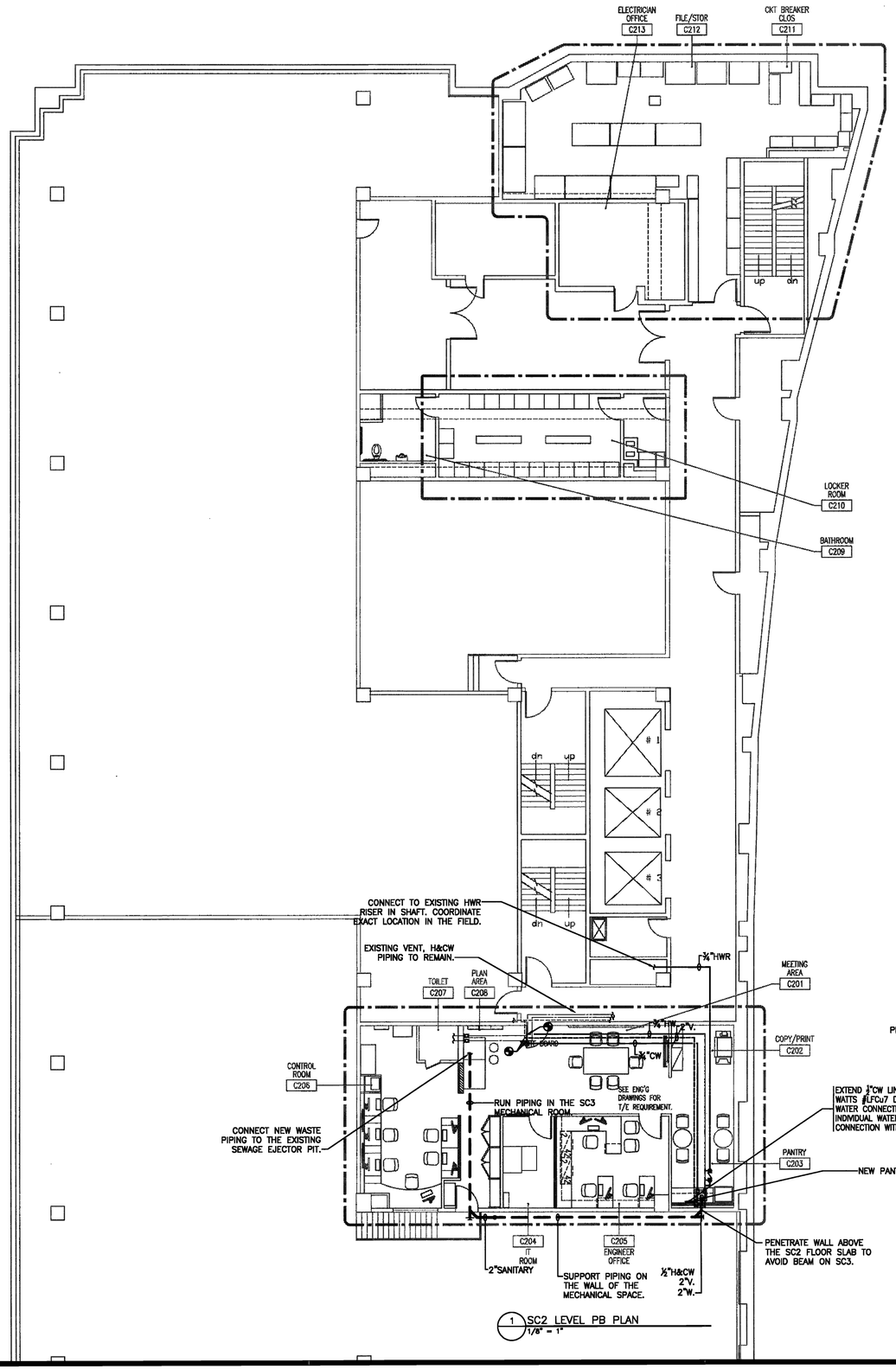
CHECKED BY	
CADD FILE	P-002.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

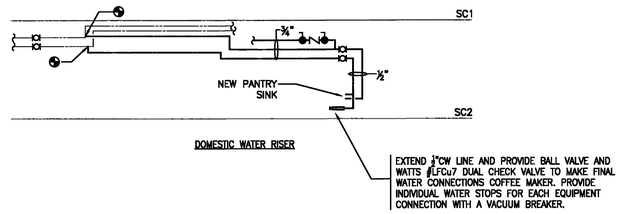
PLUMBING SPECIFICATIONS

P-002.00

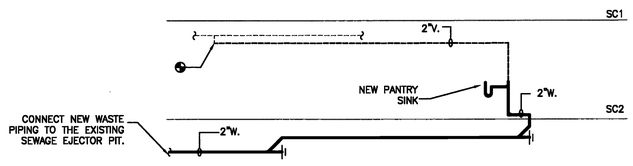
PAGE NO: 2 of 5



1 SC2 LEVEL PB PLAN
1/8" = 1'



DOMESTIC WATER RISER



SANITARY RISER

2 PLUMBING RISER DIAGRAMS
N.T.S.

SALMAN ARSHAD
JAN 27 2014
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JPMorganChase

Ted Moudis Associates

ARCHITECTURE
INTERIOR DESIGN

NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT

SYSKA HENNESSY GROUP

Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

CONSULTANT

DEPARTMENT 121664662 Job Number
SC110161959 Scan Code

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2	08.30.13	ISSUE FOR CONSTRUCTION
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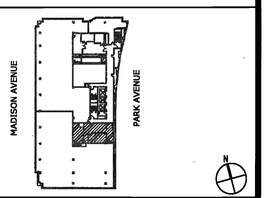
ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



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CADD FILE	P-100.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

SC2 LEVEL PLUMBING PLAN

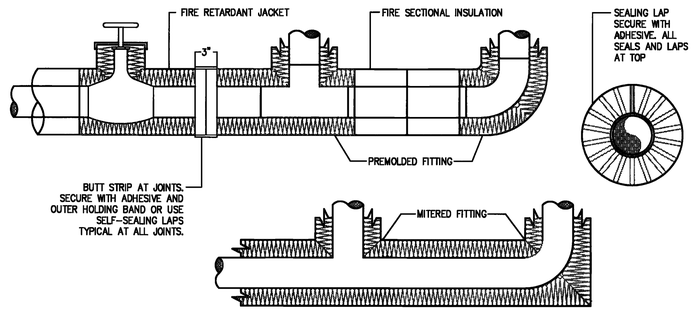
JOSEPH R. MOUDIS NO. 012772 REGISTERED ARCHITECT STATE OF NEW YORK

P-100.00

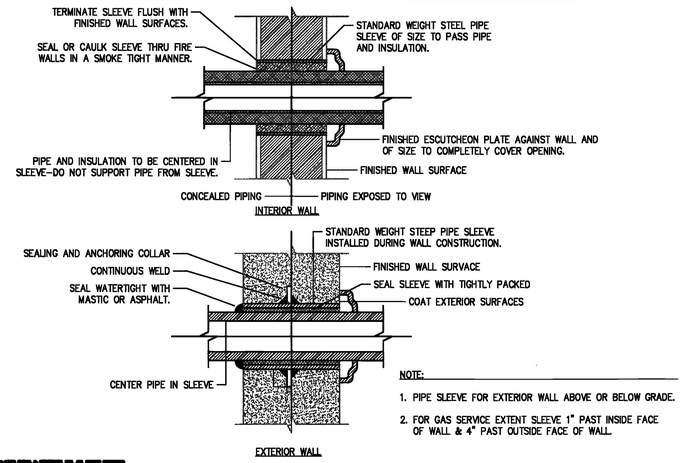
PAGE NO: 4 of 5

CONCEALED VALVES AND FITTINGS
- WRAP WITH 1 INCH THICK, 1 POUND DENSITY TO REQUIRED PIPE INSULATION THICKNESS.
- SECURE WITH WIRE OR TAPE.
- VAPOR SEAL COLD WATER, CHILLED WATER AND STORM WATER PIPING.

EXPOSED VALVES AND FITTINGS
- PREMOLDED FIRBERGLASS OR RADIAL MITERED PIPE INSULATION.
- SKIM COAT OF INSULATION CEMENT.
- COAT OF MASTIC.
- WRAP WITH FIBERLASS REINFORCING CLOTH.
- FINISH COAT OF MASTIC.
- OVERLAP 2 INCHES ON PIPE INSULATION.

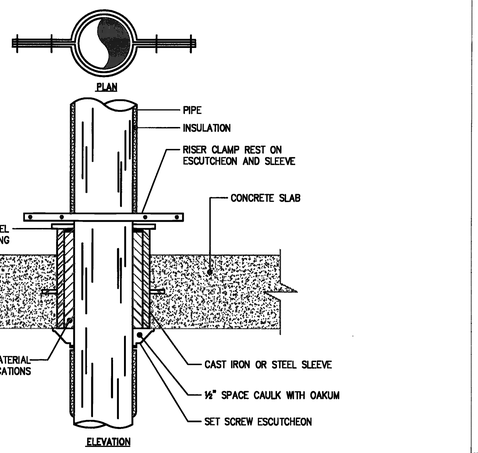


INSULATION OF PIPING, VALVES AND FITTINGS FOR EXPOSED AND CONCEALED LOCATIONS — 1

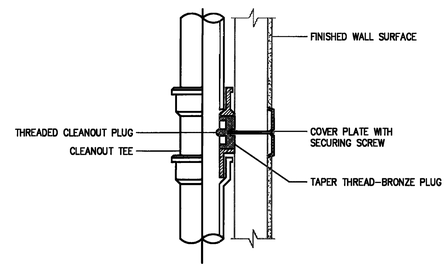


NOTE:
1. PIPE SLEEVE FOR EXTERIOR WALL ABOVE OR BELOW GRADE.
2. FOR GAS SERVICE EXTENT SLEEVE 1" PAST INSIDE FACE OF WALL & 4" PAST OUTSIDE FACE OF WALL.

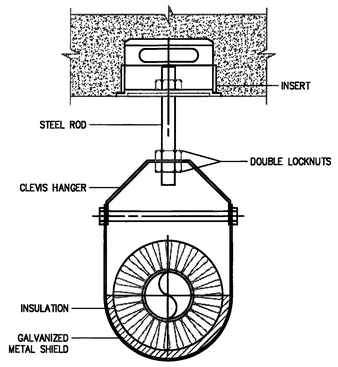
PIPE SLEEVE THRU WALL — 2



RISER CLAMP — 3



CLEANOUT FOR DRAINAGE PIPING CONCEALED BEHIND WALLS — 4



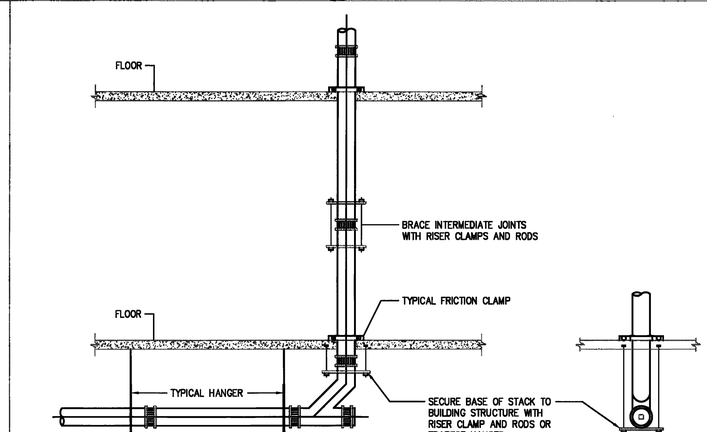
WITH INCOMPRESSIBLE INSULATING BLOCK AT HANGER		
PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS USSG
UP TO 3"	6"	18
4" UP TO 6"	8"	16
8" AND LARGER	12"	16

WITHOUT INCOMPRESSIBLE INSULATING BLOCK AT HANGER		
PIPE DIAMETER	SHIELD LENGTH	SHIELD THICKNESS USSG
UP TO 3"	12"	18
UP TO 4"	15"	16
UP TO 5"	18"	16
UP TO 6"	21"	16
8" AND LARGER	24"	14

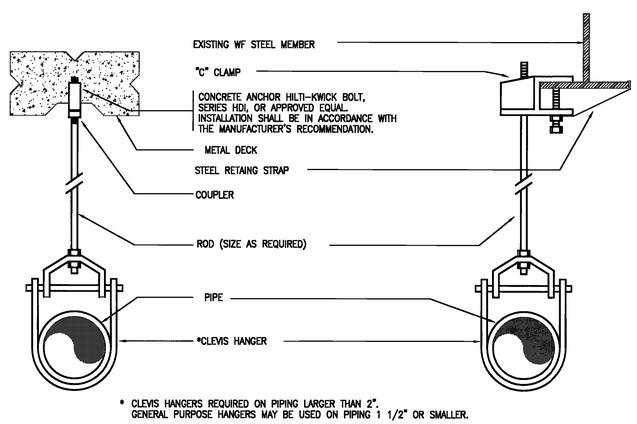
NOTE:

HANGER, ROD AND INSERT SHALL BE DIPPED IN RED OXIDE PRIMER PRIOR TO INSTALLATION.

INSULATED PIPE SUPPORT — 5



HUBLESS PIPE BRACING FOR VERTICAL PIPING — 6



* CLEVIS HANGERS REQUIRED ON PIPING LARGER THAN 2". GENERAL PURPOSE HANGERS MAY BE USED ON PIPING 1 1/2" OR SMALLER.

TYPICAL HANGER DETAIL — 7

SALMAN ARSHAD
JAN 27 2014
ACCEPTABLE FOR PERMIT UNDER DIRECTIVE NO. 14/81/F

FILING NOTE

THIS PLAN IS APPROVED ONLY FOR WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON, OR TO BE CONSIDERED AS EITHER BEING OR IN ACCORDANCE WITH APPLICABLE CODES. THIS DRAWING FILED FOR PLUMBING SYSTEM ONLY

JPMorganChase

Ted Moudis Associates
ARCHITECTURE
INTERIOR DESIGN
NEW YORK | CHICAGO | LONDON

79 Madison Avenue
10th Floor
New York, NY 10016
T. 212 561 2000

The LaSalle Wacker
221 North LaSalle Street
Chicago, IL 60601
T. 312 924 5000

MCM Architecture Limited
71 Hopton Street
London SE19LR, UK
T. 020 7902 0900

CONSULTANT
SYSKA HENNESSY GROUP
Syska Hennessy Group, Inc.
11 West 42nd Street
New York, NY 10036
Tel: 212.921-2300
Fax: 212.556.3333
www.syska.com

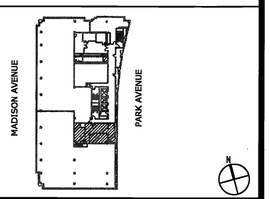
CONSULTANT

DEPT.BLDGS 121664662 Job Number
SC116101962 Scan Code

NO.	DATE	DESCRIPTIONS
2	08.30.13	ISSUE FOR CONSTRUCTION
1	08.05.13	ISSUE FOR BID & L.L. REVIEW

ISSUE/REVISIONS

KEY PLAN — ▨ - AREA OF WORK



PROJECT NUMBER	JPMA37000-DAY-2
SCALE	
DATE	08.08.12
PROJECT MANAGER	NF
PROJECT ARCHITECT	GM
DRAWN BY	
CHECKED BY	
CADD FILE	P-501.dwg

JP MORGAN CHASE
270 PARK AVENUE
NEW YORK, NY
SC2 LEVEL

PLUMBING DETAILS

P-501.00

PAGE NO: 5 of 5