

# CENTER LINE PUBLIC SCHOOLS RISING STARS ACADEMY AT MILLER ELEMENTARY SCHOOL

ISSUED FOR: BIDS  
DATE: MARCH 11, 2013  
PROJECT NO.: 121440

ARCHITECT:  
WAKELY ASSOCIATES, INC./ARCHITECTS  
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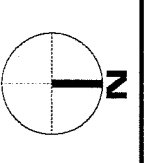
FOOD SERVICE CONSULTANT:  
E.F. WHITNEY, INC.  
568 ANN STREET, BIRMINGHAM, MI 48009, 248.644.0990

MECHANICAL/ELECTRICAL ENGINEER:  
PETER BASSO ASSOCIATES, INC.  
5105 LIVERNOIS, SUITE 100, TROY, MI 48098

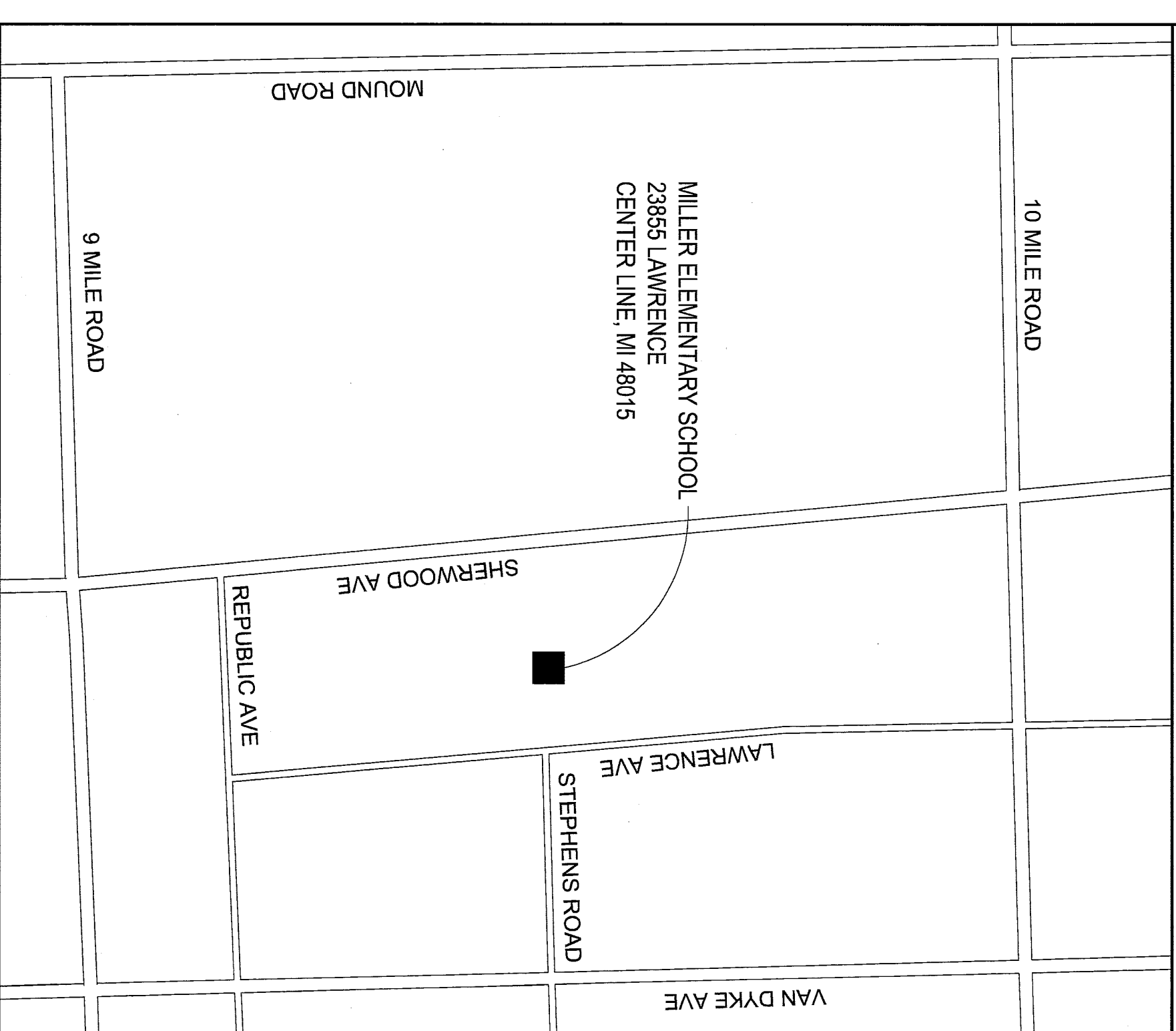
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## Location Map

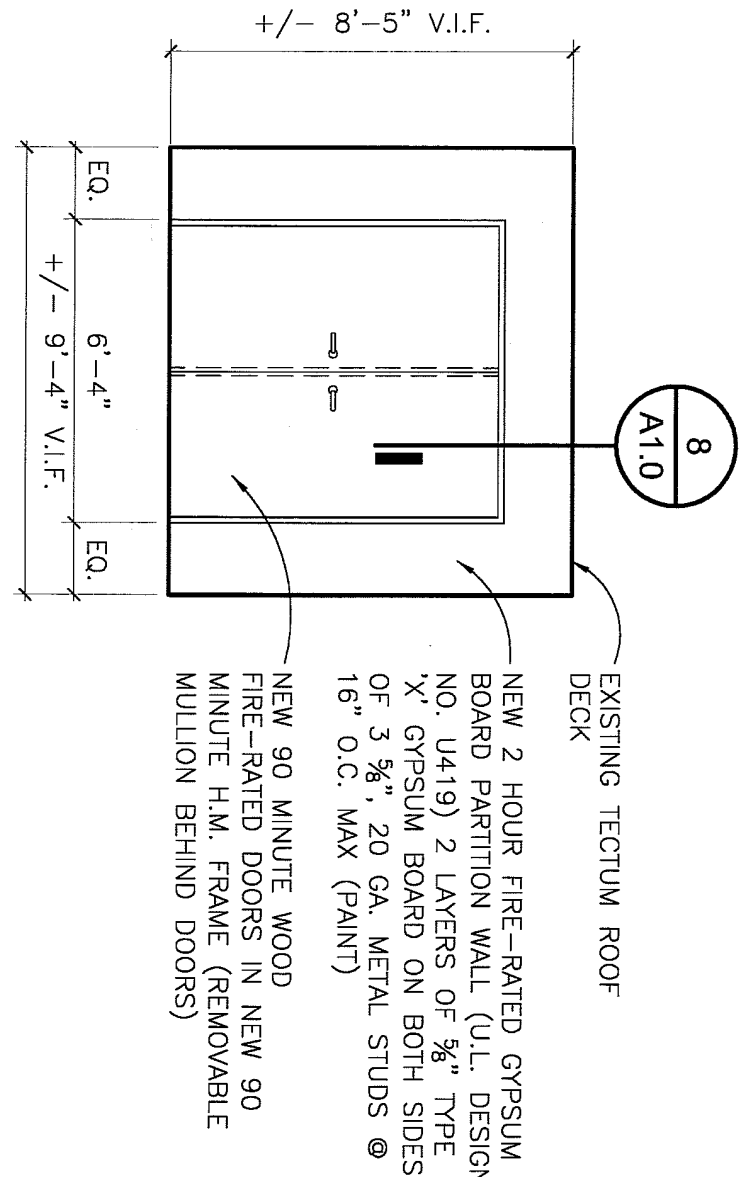


NOT TO SCALE

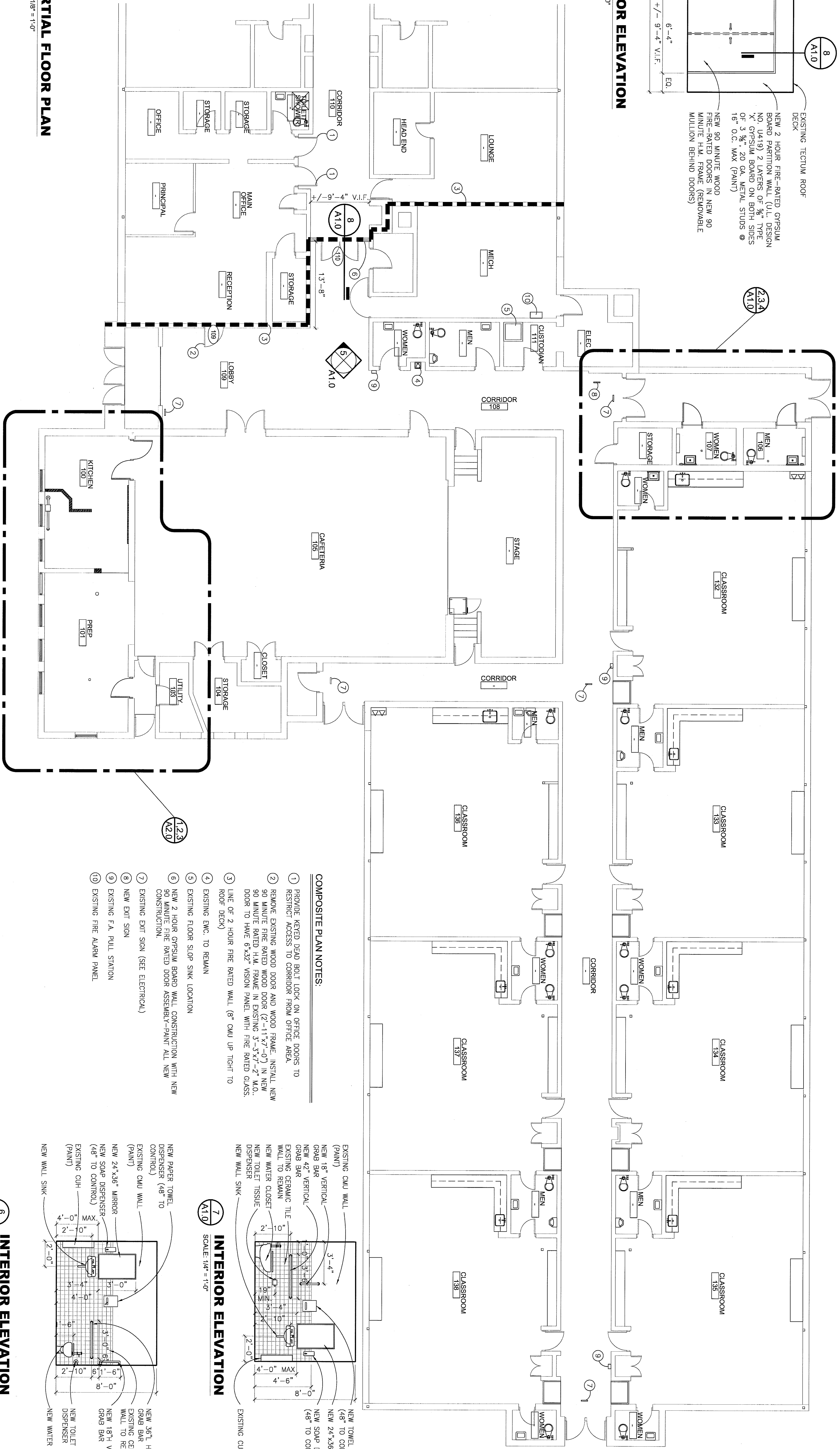


## BUILDING CODE SUMMARY

PROJECT: MILLER ELEMENTARY SCHOOL  
CENTER LINE PUBLIC SCHOOLS  
ADDRESS: 23851 LAWRENCE CENTER LINE, MI 48015  
PROPOSED USE: EDUCATION FACILITY (K-12)  
REFERENCE CODES:  
BUILDING: MICHIGAN BUILDING CODE 2009 ED., IBC/TA 01/18/09 ED. (LIFE SAFETY CODE)  
PLUMBING: MICHIGAN PLUMBING CODE 2009 ED. (EXISTING CLASSROOMS)  
ELECTRICAL: 2008 NATIONAL ELECTRIC CODE ED.  
MECHANICAL: MICHIGAN MECHANICAL CODE 2009 ED. (KITCHEN NEW WORK)  
BUILDING DATA  
USE GROUP: E, EDUCATIONAL  
CONSTRUCTION TYPE: AMBC TYPE 2B (NFPA 101 10.02)  
SPRINKLER SYSTEM: NON-SPRINKLED BUILDING  
BUILDING HEIGHT PERMITTED: 2 STORES, 35 FEET  
ADDITIONAL BUILDING HEIGHT: 1 STORY, 13'6"  
MEZZANINE: NO  
HIGH RISE: NO  
GROSS BUILDING AREA EXISTING:  
GRADE LEVEL: 35,000 SF



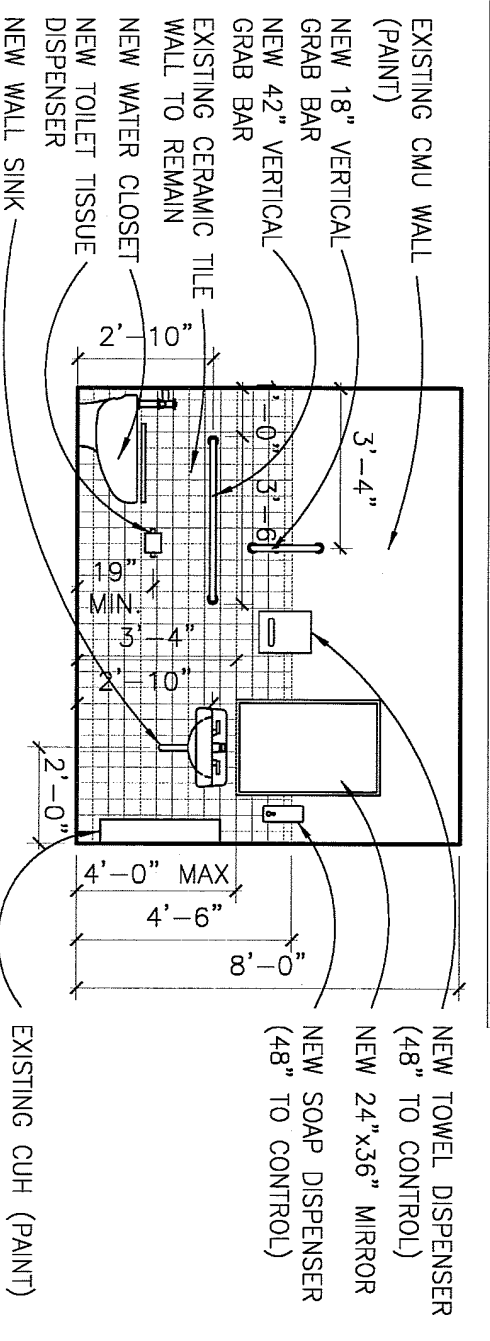
**5 INTERIOR ELEVATION**  
SCALE: 1/4" = 1'-0"



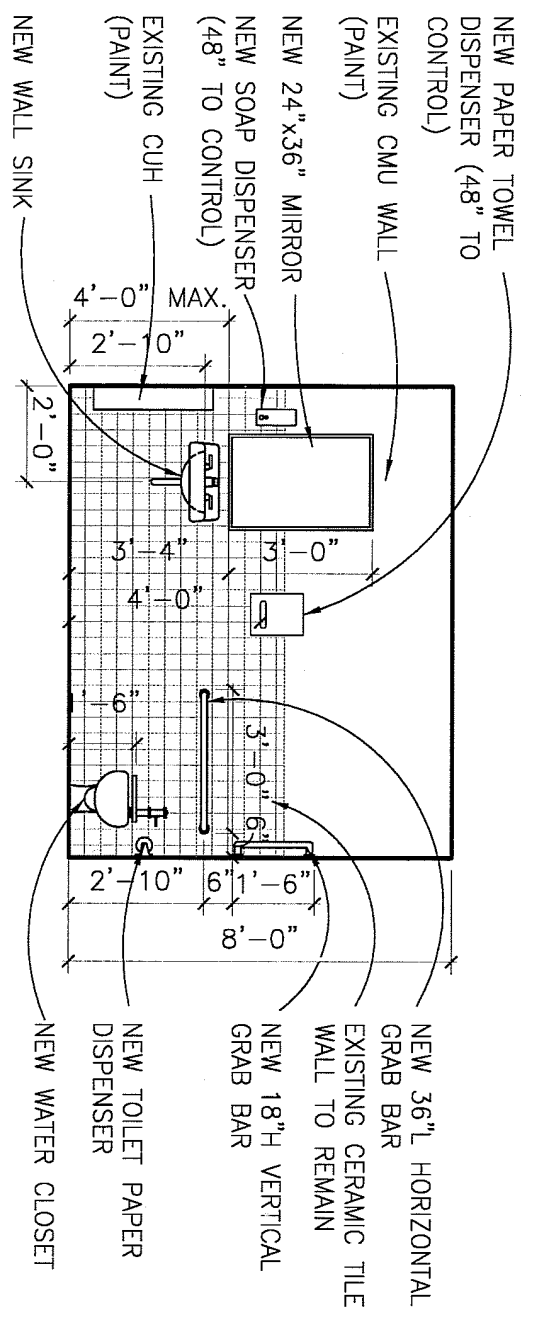
**1 PARTIAL FLOOR PLAN**  
SCALE: 1/8" = 1'-0"

- COMPOSITE PLAN NOTES:**
- REMOVE EXISTING WOOD BOOR AND WOOD FRAME. INSTALL NEW 90 MINUTE RATED H.M. FRAME IN EXISTING 3'-3 1/2" x 2" W.O. DOOR TO HAVE 6"x32" VISION PANEL WITH FIRE RATED GLASS.
  - LINE OF 2 HOUR FIRE RATED WALL (8" CMU UP TOP) TO ROOF DECK
  - EXISTING SPC. TO REMAIN
  - EXISTING FLOOR SLIP SINK LOCATION
  - NEW 2 HOUR GYPSUM BOARD WALL CONSTRUCTION WITH NEW CONSTRUCTION.
  - NEW 90 MINUTE FIRE RATED DOOR ASSEMBLY-PAINT ALL NEW CONSTRUCTION.
  - EXISTING EXIT SIGN (SEE ELECTRICAL)
  - NEW EXIT SIGN
  - EXISTING F.A. PULL STATION
  - EXISTING FIRE ALARM PANEL

**7 INTERIOR ELEVATION**  
SCALE: 1/4" = 1'-0"



**6 INTERIOR ELEVATION**  
SCALE: 1/4" = 1'-0"



**DEMOLITION PLAN NOTES: (SHEET A1.0)**

- 3'-0"x2'-0" ROOF AND WOOD FRAME AND THRESHOLD TO BE REMOVED (3'-4 1/2" x 2" M.O. TO REMAIN)
- WATER CLOSET TO BE REMOVED
- WALL SINK TO BE REMOVED
- REMOVE TOILET PARTITIONS COMPLETE. CAULK HOLES IN WALLS. FILL FLOOR HOLES WITH GROUT TO MATCH EXISTING.
- REMOVE WATER CLOSET - CAP UTILITIES AT WALL CODED WALL.
- REMOVE URINAL, CONCRETE INFL. WALL AND EXISTING WALL TILE TO MATCH
- EXISTING FLOOR DRAIN LOCATION
- CAB. HEATER TO REMAIN.
- REMOVE MIRROR AND SOAP DISPENSER. CAULK HOLES IN WALLS.

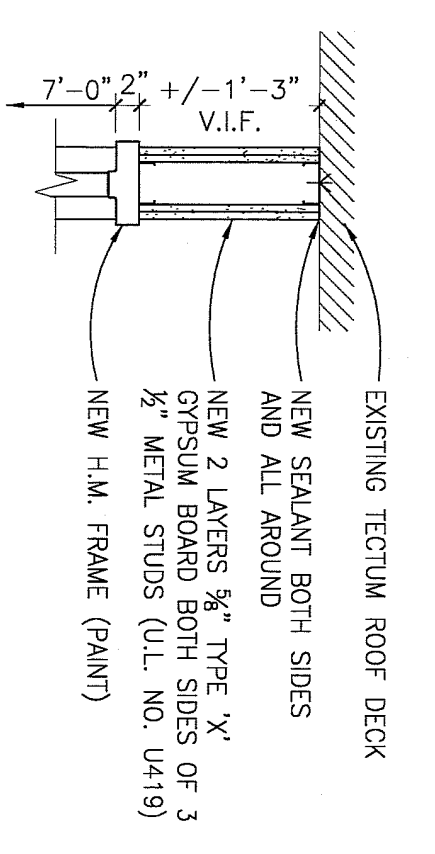
**NEW WORK PLAN NOTES: (SHEET A1.0)**

- NEW 3'-4 1/2" x 2'-0" FLOOR, WOOD BOOR IN NEW H.M. FRAME TO FIT 3'-4 1/2" x 2" M.O. PROVIDE NEW MARBLE THRESHOLD
- NEW FLOOR DRAIN AT OLD URINAL LOCATION.
- PATCH FLOOR WITH NEW MASC CEMENT FLOOR FLOOR DRAIN (1/2" x 3/4" AREA)
- NEW WATER CLOSET
- NEW WALL MOUNTED HAND SINK AND FACET
- PAINT CHU WALLS ABOVE 4'-4" CERAMIC WALL TILE
- EXISTING WALL CAB. HEATER - PAINT
- NEW SOAP DISPENSER @ 40" AFF
- NEW 21"x35" MIRROR

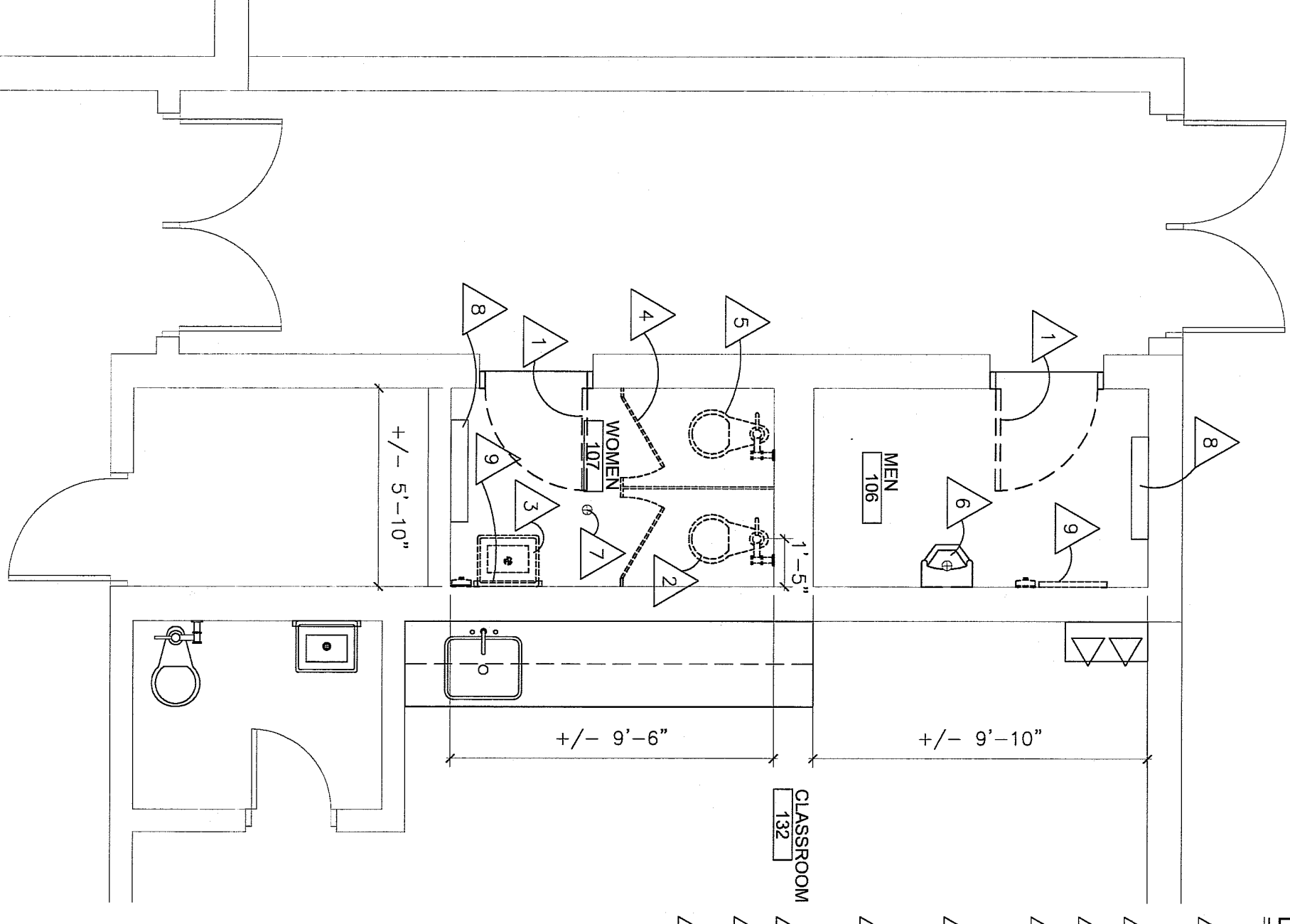
**REFLECTED CEILING PLAN NOTES: (SHEET A1.0)**

- REMOVE SURFACE MOUNTED LIGHT - RETROFIT WITH NEW
- EXISTING EXHAUST GRILLE - VACUUM CLEAN
- EXISTING CONDUIT TO REMAIN - PAINT
- EXISTING CONCRETE CEILING - PAINT

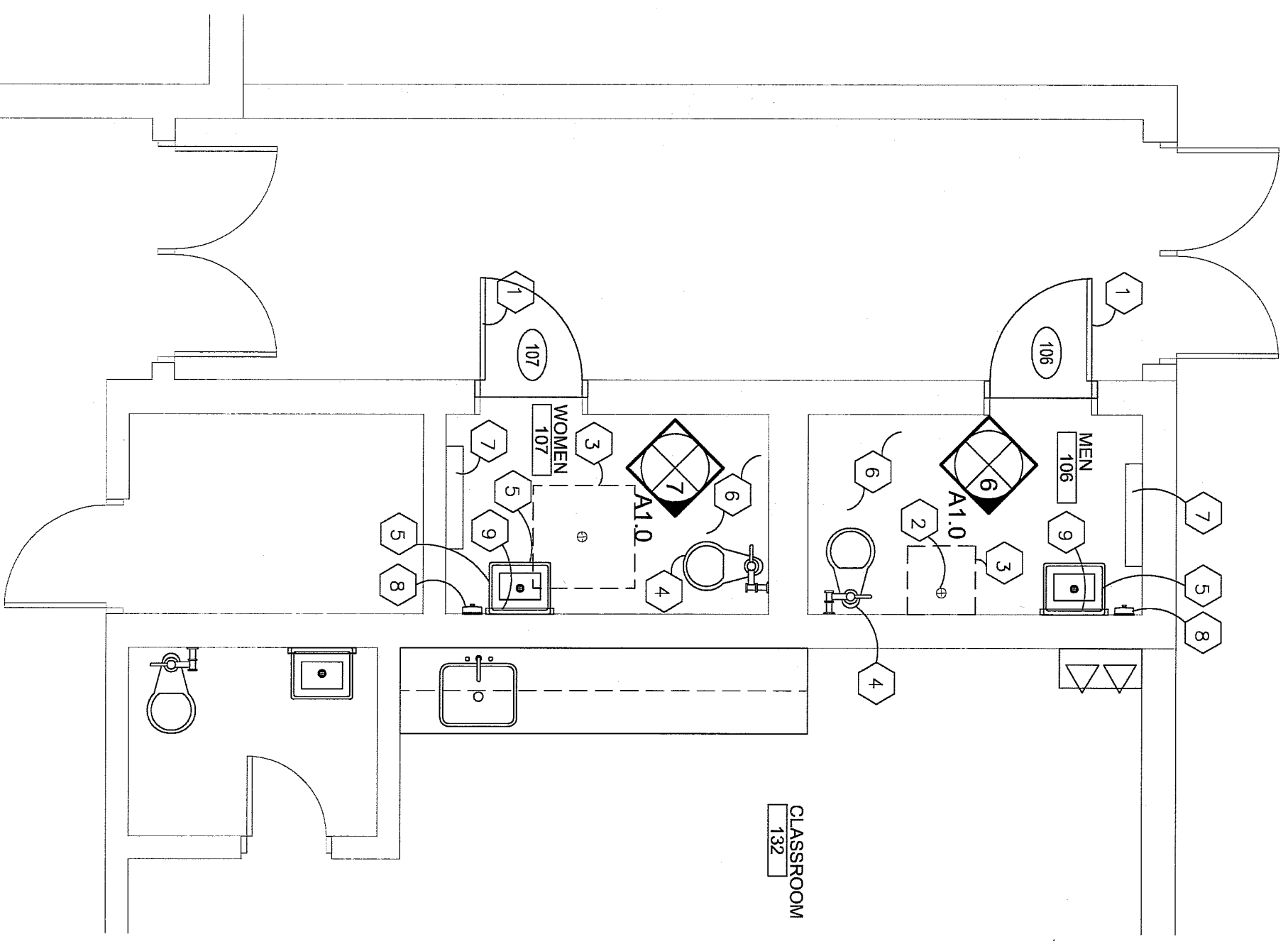
**8 WALL DETAIL**  
SCALE: 3/4" = 1'-0"



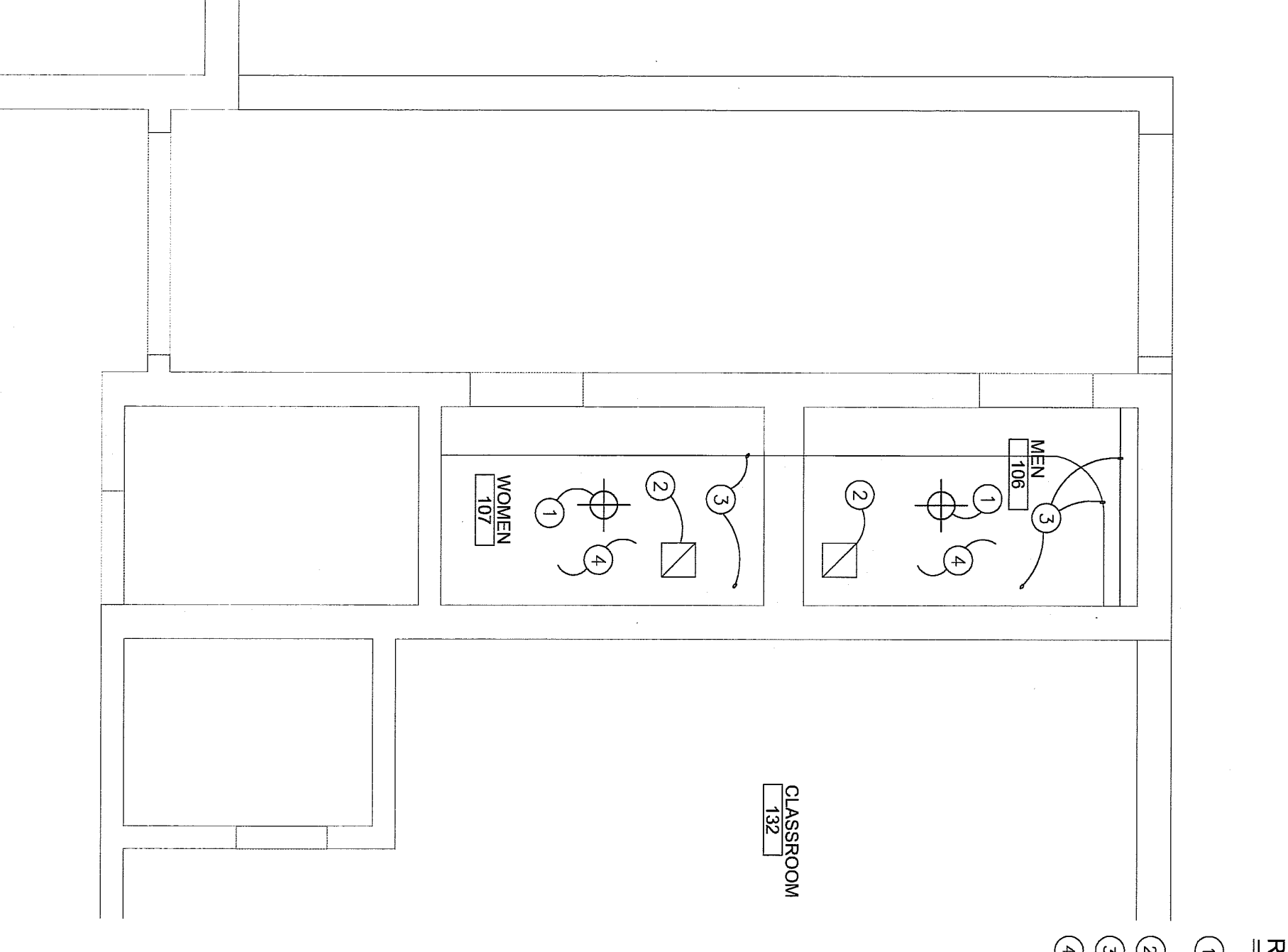
**2 ENLARGED DEMO PLAN**  
SCALE: 1/4" = 1'-0"



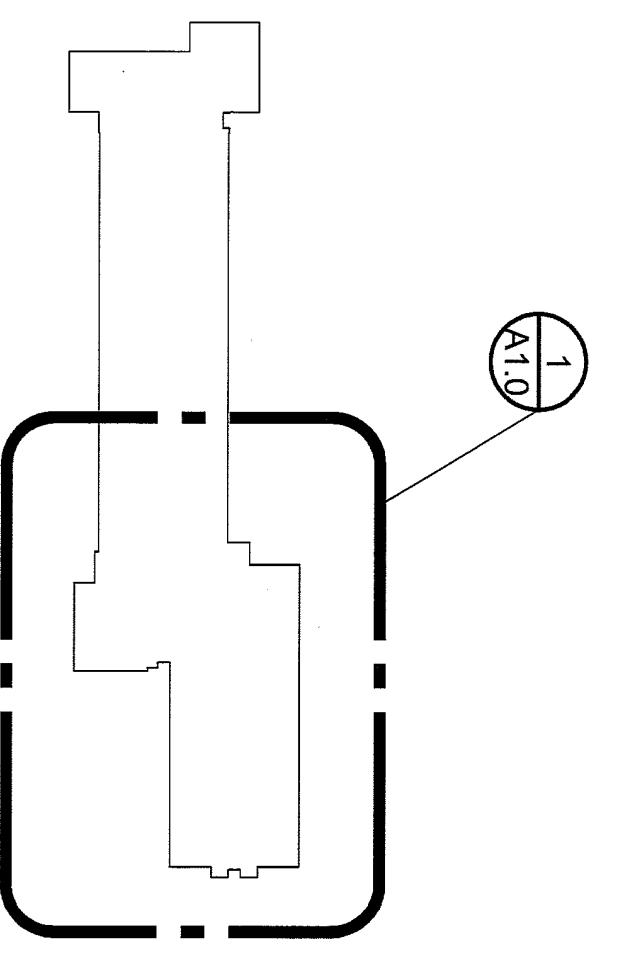
**3 ENLARGED NEW WORK PLAN**  
SCALE: 1/4" = 1'-0"



**4 ENLARGED REFLECTED CEILING PLAN**  
SCALE: 1/4" = 1'-0"



**KEY PLAN**  
SCALE: NOT TO SCALE



**TYPICAL CONSTRUCTION NOTES:**

- ALL WORK SHALL COMPLY WITH NATIONAL, STATE AND LOCAL CODES, ORDINANCES AND REGULATIONS.
- ALL MATERIALS SHALL BE INSTALLED/APPLIED IN STRICT ACCORDANCE WITH MANUFACTURER'S REGULATIONS AND INSTRUCTIONS.
- CONTRACTOR SHALL BE HELD RESPONSIBLE FOR VERIFYING THE JOB SITE AND FAMILIARIZING THEMSELVES WITH EXISTING CONDITIONS PRIOR TO BIDDING AND START OF WORK. ALL DIMENSIONS AND FIELD CONDITIONS FROM BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY. ALL CONDITIONS PRIOR TO THE AWARD OF BID WILL NOT BE CONSIDERED AS GROUNDS FOR AN EXTRA.
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS NECESSARY TO PROTECT THE PUBLIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY TEMPORARY PROTECTION TO ENSURE THE SAFETY OF THE GENERAL PUBLIC DURING CONSTRUCTION.
- ALL ITEMS SHALL BE AS SPECIFIED BY ARCHITECT/ENGINEERS.
- SHIRT SIZES DRAWINGS, PROTECT DATA AND SAMPLES TO THE ARCHITECT FOR REVIEW PRIOR TO INSTALLATION/OPERATION.
- ALL DEERS SHALL BE LEADLY DISPOSED OF OFF THE SITE BY THE CONTRACTOR.
- ALL PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING MATERIALS AND CONSTRUCTION TO REMAIN.
- CONTRACTOR SHALL CUT AND PATCH EXISTING WALLS, FLOORS, CEILINGS ETC., AS REQUIRED TO COMPLETE THE WORK.
- CONTRACTOR SHALL KEEP NOISE, DUST, ETC., TO A MINIMUM STANDARD AS SET FORTH BY THE OWNER.
- CONTRACTOR SHALL COORDINATE INSTALLATION AND PHASING OF WORK WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE PRIOR TO THE START OF WORK.

**DEMOLITION PLAN GENERAL NOTES:**

- ALL DEMOLITION NECESSARY FOR THE INSTALLATION OF NEW CONSTRUCTION SHALL BE THE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, CUTTING AND PATCHING, SHOPPING AND BRACING AS REQUIRED TO COMPLETE THE WORK SHOWN/DESCRIBED IN THE CONSTRUCTION DOCUMENTS OR AS REQUIRED TO COMPLETE THE WORK.
- PROVIDE PROTECTION FOR EXISTING CONSTRUCTION TO REMAIN. PATCH AND EXISTING CONSTRUCTION MATERIALS AND FINISHES THROUGH ALL LOCATIONS.
- SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR RELATED AND ADDITIONAL DEMOLITION AND PATCHING WORK BY MECHANICAL AND ELECTRICAL TRADES.
- SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR REMOVAL AND/OR PATCHING OF UTILITIES WHERE EQUIPMENT IS REMOVED.
- COORDINATE PHASING AND SEQUENCING OF DEMOLITION AND PATCHING WORK WITH ALL TRADES.
- DO NOT REMOVE ANY INDICATED OR NOTED WALLS, BEAMS, COLUMNS, OR MASONRY BEARING WALLS WITHOUT OBSERVING THE EFFECT UPON THE STRUCTURAL INTEGRITY OF CONSTRUCTION TO REMAIN. ALL QUESTIONS REGARDING THE REMOVAL OF SUCH ITEMS SHOULD BE REFERRED TO ARCHITECT'S ATTENTION PRIOR TO REMOVAL OF SUCH ITEMS.
- WHERE EXISTING MASONRY WALLS INDICATED TO BE REMOVED EXTERIOR FLOOR SLAB REMOVE MATERIAL TO 8" MIN. BELOW FINISH FLOOR BELOW FLOOR FOR THE IN-OF NEW CONCRETE SLAB (U.N.O.).
- PATCH EXPOSED FACES OF EXISTING WALLS AND CEILINGS TO REMAIN. ADVISORY TO LOCATIONS WHERE EXISTING WALLS ARE INDICATED TO BE REMOVED. FILL AND PATCH SURFACES TO RECEIVE NEW FLOOR COVERING TO RECEIVE NEW BASES. TOOTH-IN NEW MASONRY AT REMOVED WALLS TO MATCH COURSE OF EXISTING WALLS.
- WHERE REMOVAL OF CASEWORK, MILLWORK, CHALKBOARD, TAGBOARD, EQUIPMENT OR EDUCATIONAL SPECIALTY EQUIPMENT IS INDICATED, FILL TO REMAIN EXPOSED.
- WHERE REMOVAL OF PARTS OF SUPERGOSE IS INDICATED OR IS REQUIRED TO PERFORM INDICATED WORK, PATCH AND REPLACE TUBES WITH EXISTING UPON COMPLETION OF RELATED WORK.
- UNLESS OTHERWISE INDICATED, TOOTH NEW MASONRY MATERIAL INTO CONCRETE AND WALL THICKNESS.

# RISEING STARS ACADEMY

## MILLER ELEMENTARY SCHOOL

### CENTER LINE PUBLIC SCHOOLS

COMPOSITE PLAN TOILET ROOM DEMOLITION AND NEW WORK PLANS

WMA ARCHITECTS & ENGINEERS, INC.  
30520 VAN DYKE AVENUE  
SUITE 100 - MICHIGAN 48933  
PH: 586.573.4100  
FX: 586.573.0822  
EMAIL: info@wma.com

DATE: MARCH 11, 2013

SHEET NO: A1.0

JOB NO: 121440

PRELIMINARY DESIGN DEVELOPMENT CONSTRUCTION FINAL RECORD

DRAWN BY: MTS  
CHECKED BY: BJS  
REVISIONS:



# RISEING STARS ACADEMY

## MILLER ELEMENTARY SCHOOL

### CENTER LINE PUBLIC SCHOOLS

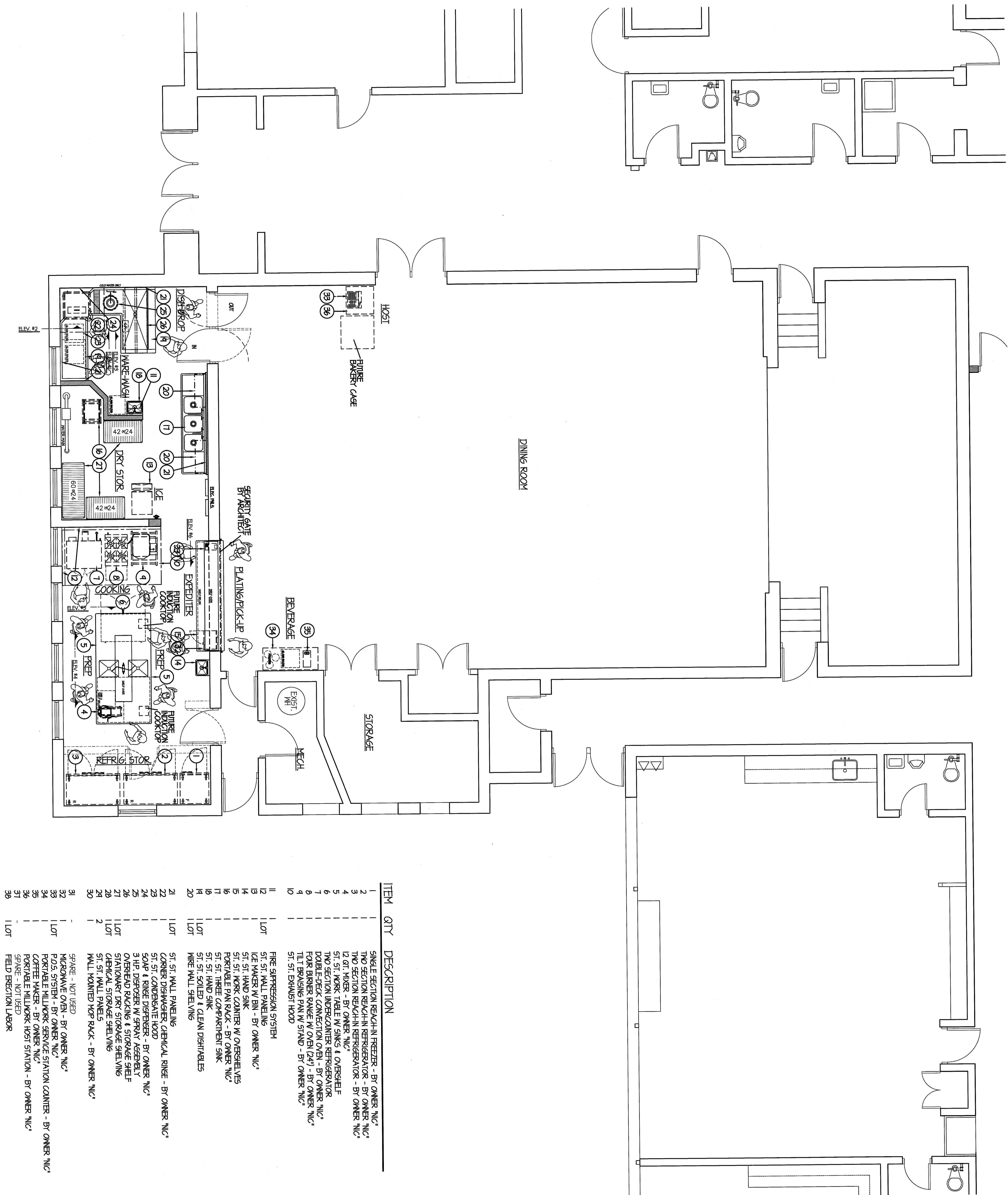
FOOD SERVICE EQUIPMENT LAYOUT

PRELIMINARY	■
DESIGN DEVELOPMENT	■
CONSTRUCTION	■
FINAL RECORD	■
DRAWN BY:	MTS
CHECKED BY:	SJS
REVISIONS:	

DATE: MARCH 11, 2013  
 SHEET NO.:

FSE-1

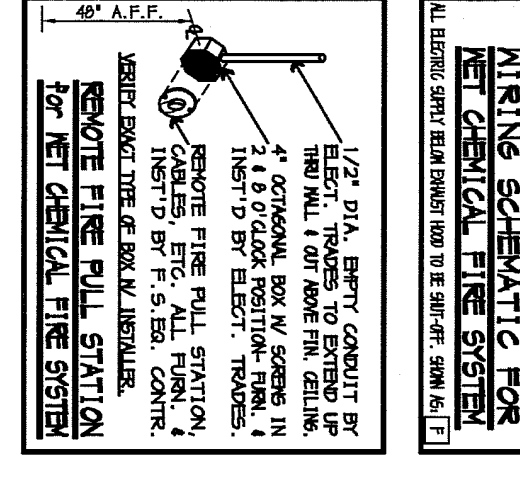
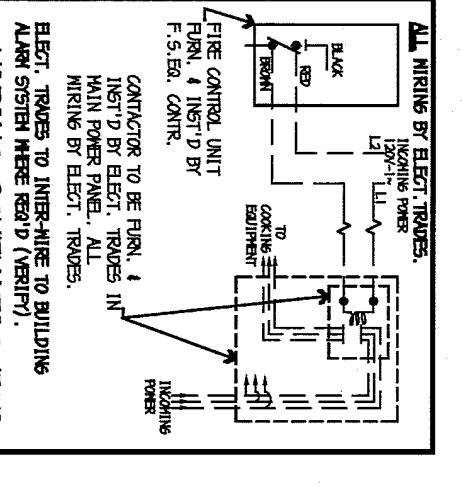
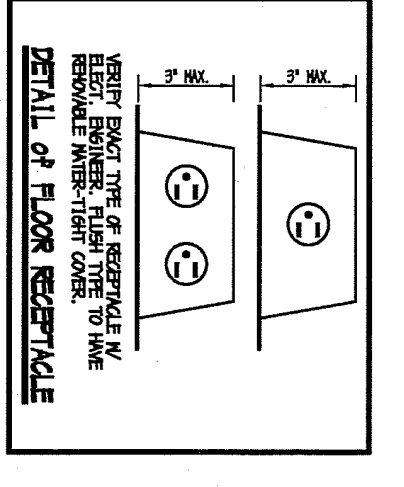
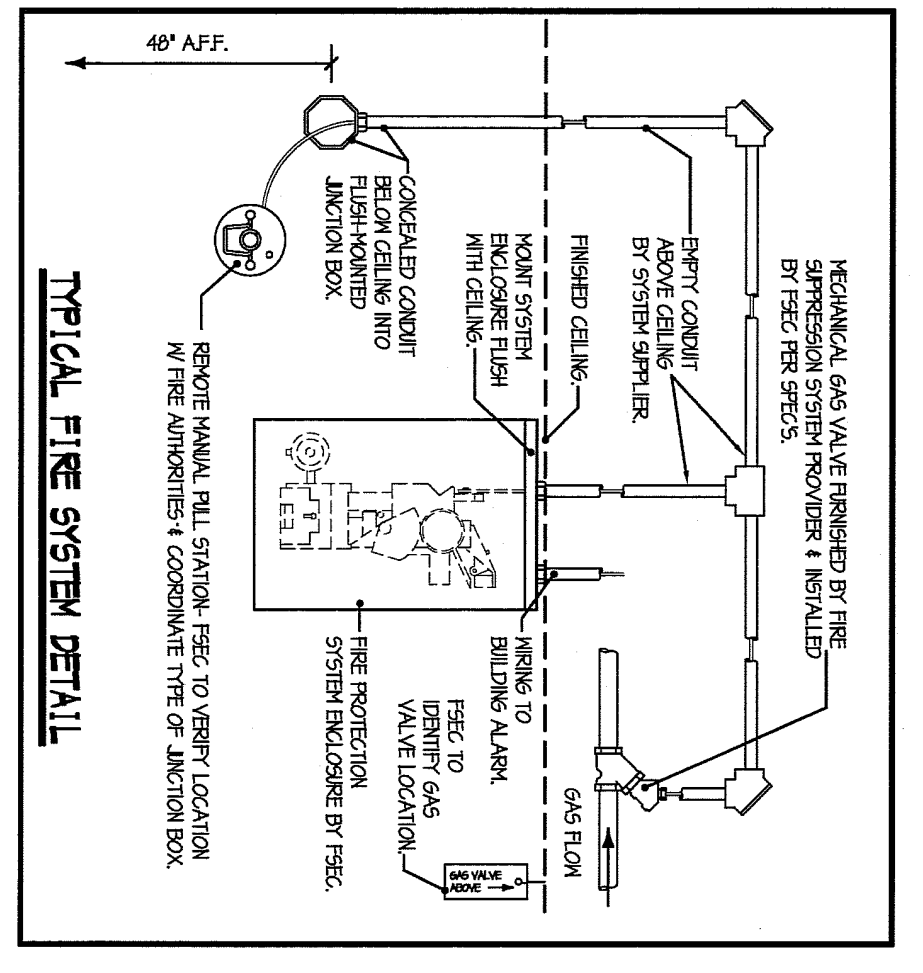
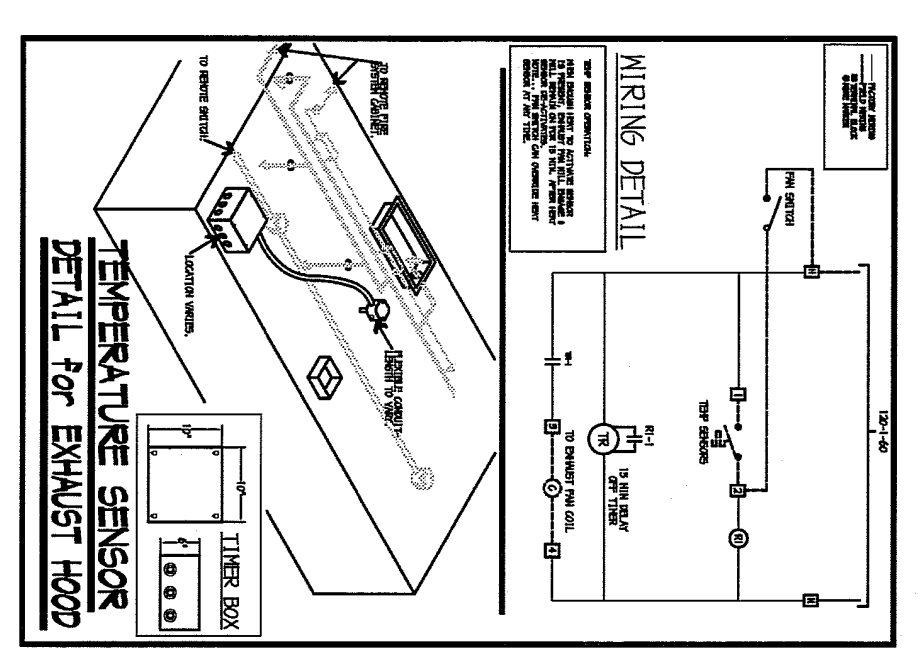
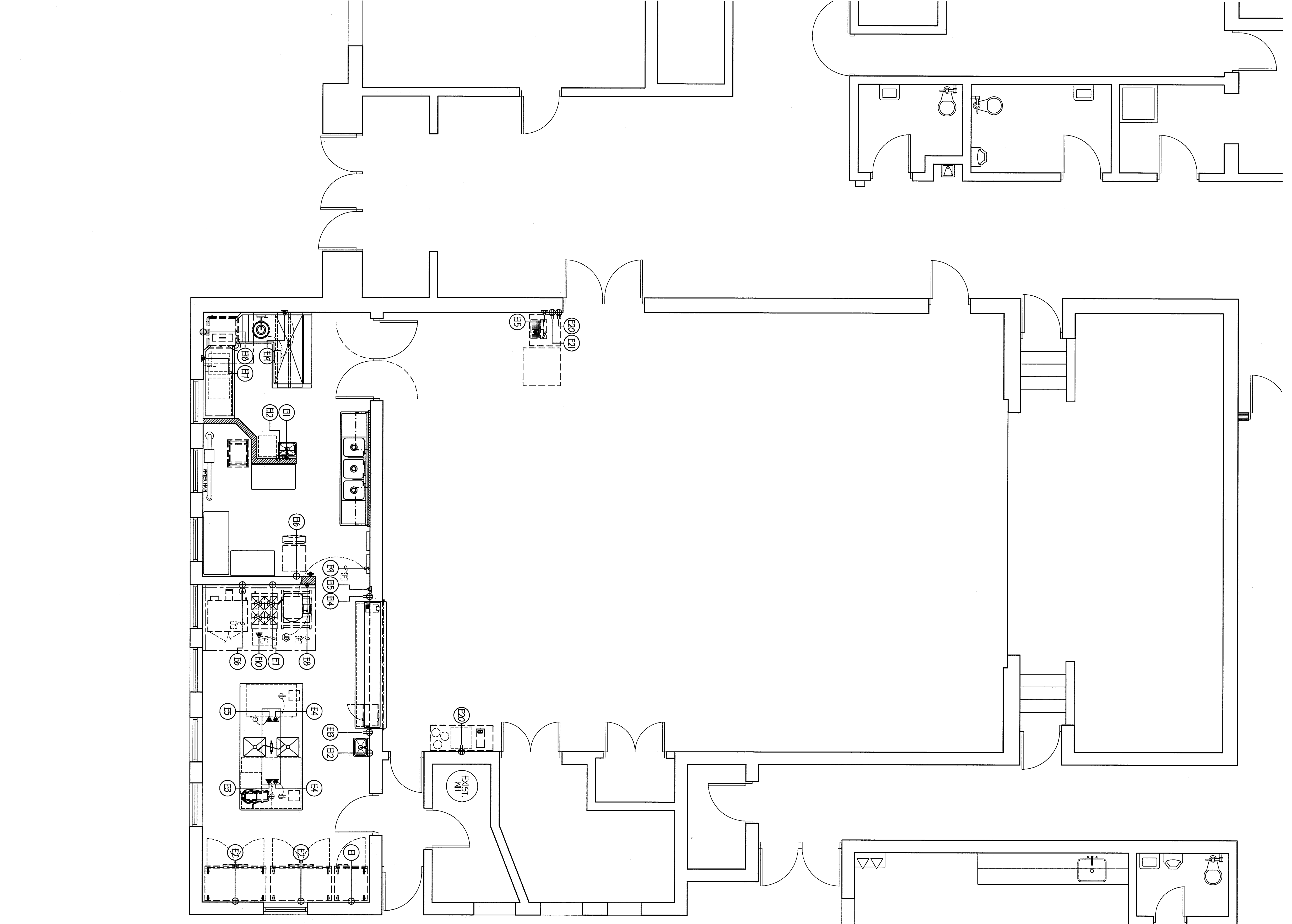
JOB NO.: 12-1440



ITEM	QTY	DESCRIPTION
1	1	SINGLE SECTION REACH-IN FREEZER - BY OWNER, NIC*
2	2	TWO SECTION REACH-IN REFRIGERATOR - BY OWNER, NIC*
3	2	TWO SECTION REACH-IN REFRIGERATOR - BY OWNER, NIC*
4	1	12 QT. W/DR - BY OWNER, NIC*
5	1	51. ST. WORK TABLE W/ SINKS & OVERSHELF
6	1	TWO SECTION UNDERCOUNTER REFRIGERATOR
7	1	DOUBLE-DECK CONVECTION OVEN - BY OWNER, NIC*
8	1	TOR BROWER SINK W/ OVEN (27" DEEP) - BY OWNER, NIC*
9	1	TWO SECTION UNDERCOUNTER REFRIGERATOR
10	1	51. ST. DRINKS HOOD
11	1	FIRE SUPPRESSION SYSTEM
12	1	ST. ST. WALL PANELING
13	1	ICE MAKER W/ BIN - BY OWNER, NIC*
14	1	ST. ST. HAND SINK
15	1	ST. ST. WORK COUNTER W/ OVERSHELVES
16	1	PORTABLE PAN RACK - BY OWNER, NIC*
17	1	ST. ST. THREE COMPARTMENT SINK
18	1	ST. ST. HAND SINK CLEAN DISHWASHER
19	1	ST. ST. HAND SINK CLEAN DISHWASHER
20	1	WIRE WALL SHELVING
21	1	ST. ST. WALL PANELING
22	1	CORNER DISHWASHER, CHEMICAL RINSE - BY OWNER, NIC*
23	1	ST. ST. CONDENSATE HOOD
24	1	SOAP & RINSE DISPENSER - BY OWNER, NIC*
25	1	3 HP. DISPOSER W/ SPRAY ASSEMBLY
26	1	OVERHEAD RACKING & STORAGE SHELF
27	1	STANDARD PAN STORAGE SHELVING
28	1	CHEMICAL STORAGE SHELVING
29	1	ST. ST. HAND SINK
30	2	WALL MOUNTED W/P RACK - BY OWNER, NIC*
31	-	SPARE - NOT USED
32	-	MICROWAVE OVEN - BY OWNER, NIC*
33	1	POS SYSTEM - BY OWNER, NIC*
34	1	PORTABLE MILLWORK SERVICE STATION COUNTER - BY OWNER, NIC*
35	1	COFFEE MAKER - BY OWNER, NIC*
36	1	PORTABLE MILLWORK HOST STATION - BY OWNER, NIC*
37	-	SPARE - NOT USED
38	1	FIELD RECEPTION LABOR

- ELECTRICAL NOTES**
- E1 10/1 AMP (LOAD) 120V-1 PH. SINGLE RECEPTACLE FLUSH IN WALL 1'-3" AFF. FOR SINGLE SECTION FREEZER. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E2 10/1 AMP (LOAD) 120V-1 PH. SINGLE RECEPTACLE FLUSH IN WALL 1'-3" AFF. FOR TWO SECTION REFRIGERATOR. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E3 6/2 AMP (LOAD) 120V-1 PH. COND. CONN. UP FROM FLOOR. ELEC. TRAYS TO CONNECT TO SINGLE RECEPTACLE PRE-INSTALLED IN COUNTER BY F.S.E.C. FOR GENERAL PURPOSE EQUIPMENT USE. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E4 20 AMP (CURRENT) 120V-1 PH. COND. CONN. UP FROM FLOOR. ELEC. TRAYS TO CONNECT TO DIRECTX RECEPTACLE PRE-INSTALLED IN COUNTER BY F.S.E.C. FOR GENERAL PURPOSE EQUIPMENT USE. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E5 50 AMP (LOAD) 120V-1 PH. COND. CONN. UP FROM FLOOR. ELEC. TRAYS TO CONNECT TO SINGLE RECEPTACLE PRE-INSTALLED IN COUNTER BY F.S.E.C. FOR UNDERCOUNTER REFRIGERATOR. TWO (2) 1/4" APF (LOAD) 120V-1 PH. SINGLE RECEPTACLE FLUSH IN WALL FOR DOUBLE DECK CONVECTION OVEN. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E6 50 AMP (LOAD) 120V-1 PH. SINGLE RECEPTACLE FLUSH IN WALL FOR FOUR BURNER RANGE. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E7 5/1 KW 208V-3 PH. COND. CONN. OUT OF WALL FOR TILT BREASING PAN. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E8 0/3 KW 120V-1 PH. SWITCH PANEL & INST'D BY ELEC. TRADES - FLUSH IN WALL 40" AFF. FOR HOOD LIGHTS. PRE-INSTALLED BY F.S.E.C. ON TOP OF WALL. CONN. BY ELEC. TRADES.
  - E9 50 AMP (LOAD) 120V-1 PH. COND. CONN. DOWN FROM ABOVE FOR HOOD TEMPERATURE SENSOR. INTERWIRE TO FAN INTERLOCK AS REQUIRED. FINAL CONN. BY ELEC. TRADES. SEE DETAIL, THIS SHEET.
  - E10 6/0 AMP (LOAD) 120V-1 PH. COND. CONN. OUT OF WALL 1'-0" AFF. FOR FIRE SUPPRESSION SYSTEM. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E11 50 AMP (LOAD) 120V-1 PH. SINGLE RECEPTACLE FLUSH IN WALL 10" AFF. FOR HAND SINK FAUCET. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E12 20 AMP (CURRENT) 120V-1 PH. DIRECTX RECEPTACLE FLUSH IN WALL 50" AFF. FOR GENERAL USE. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E13 20 AMP (DEBANKED) CURRENT 120V-1 PH. DIRECTX RECEPTACLE FLUSH IN WALL 50" AFF. FOR POS. SYSTEM. ELEC. TRAYS TO RUN & INST'AL. EMPTY CONDUIT. RUN BACK TO GENERAL LOCATION FOR DATA LINES. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E14 20 AMP (DEBANKED) CURRENT 120V-1 PH. DIRECTX RECEPTACLE FLUSH IN WALL 50" AFF. FOR POS. SYSTEM. ELEC. TRAYS TO RUN & INST'AL. EMPTY CONDUIT. RUN BACK TO GENERAL LOCATION FOR DATA LINES. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E15 1/5 AMP (LOAD) 120V-1 PH. SINGLE RECEPTACLE FLUSH IN WALL FOR ICE MAKER. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E16 1/5 AMP (LOAD) 120V-1 PH. COND. CONN. OUT OF WALL 10" AFF. FOR DISHWASHER. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E17 1/60 AMP (LOAD) 120V-1 PH. COND. CONN. OUT OF WALL FOR DISHWASHER. MISCONNECT SWITCH FLUSH BY F.S.E.C. & INST'D BY ELEC. TRADES. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E18 20 AMP (CURRENT) 120V-1 PH. DIRECTX RECEPTACLE FLUSH IN WALL 12" AFF. FOR SOAP & RINSE DISPENSER. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E19 3/0 HP 208V-3 PH. COND. CONN. OUT OF WALL 10" AFF. FOR DISPOSER. ELEC. TRAYS TO INTERWIRE & CONTROL PANEL.
  - E20 20 AMP (CURRENT) 120V-1 PH. DIRECTX RECEPTACLE FLUSH IN WALL 50" AFF. FOR GENERAL USE. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
  - E21 20 AMP (DEBANKED) CURRENT 120V-1 PH. DIRECTX RECEPTACLE FLUSH IN WALL 50" AFF. FOR POS. SYSTEM.

**NOTE:** ALL ADDITIONAL RECEPTACLES, CONN.'S, WIRING, ETC. TO BE SHOWN BY ELECT. ENGINEER.  
ALL 120V DIRECTX RECEPTACLES WITHIN KITCHEN AREAS MUST BE GFCI PROTECTED BY ELECT. TRADES.



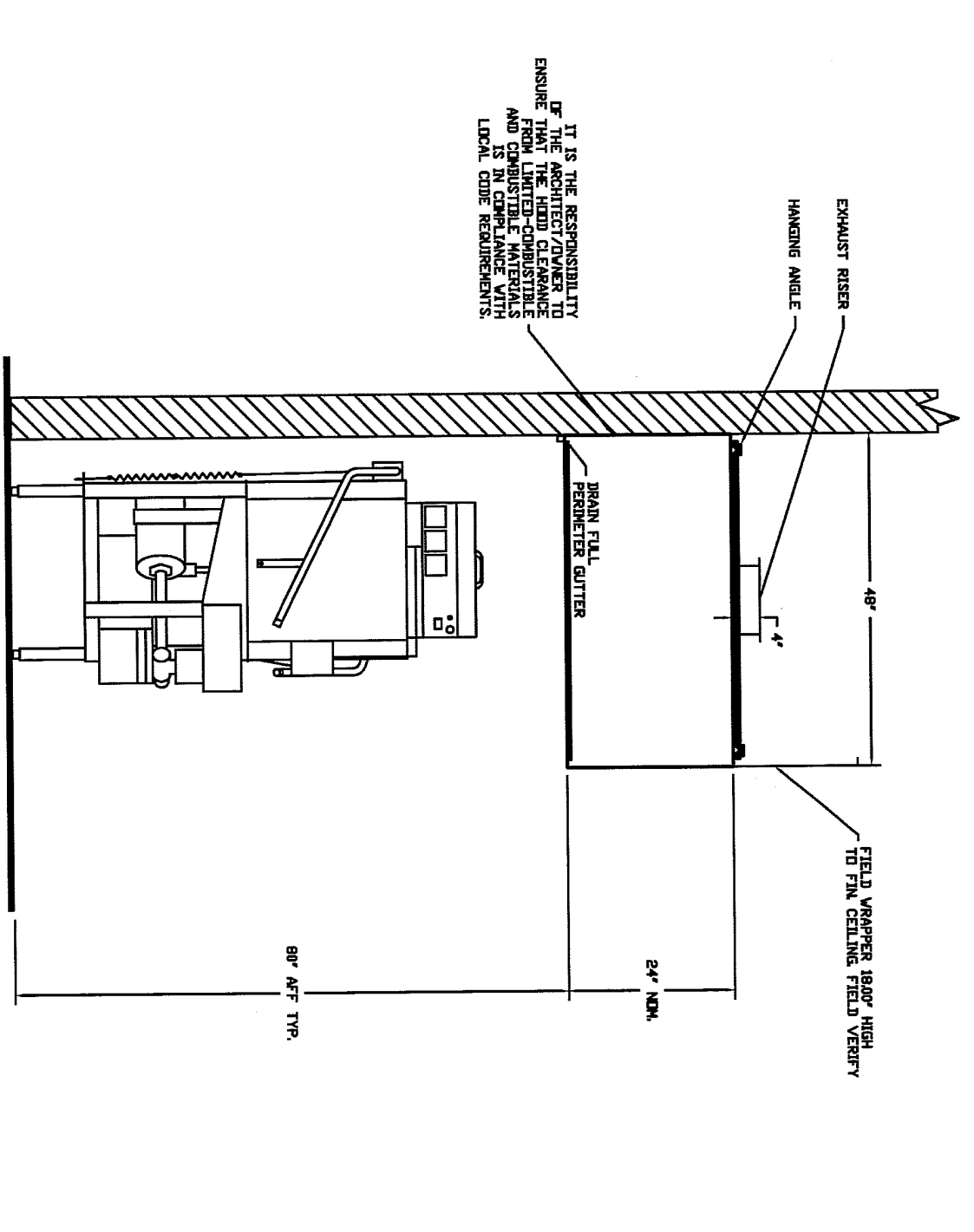
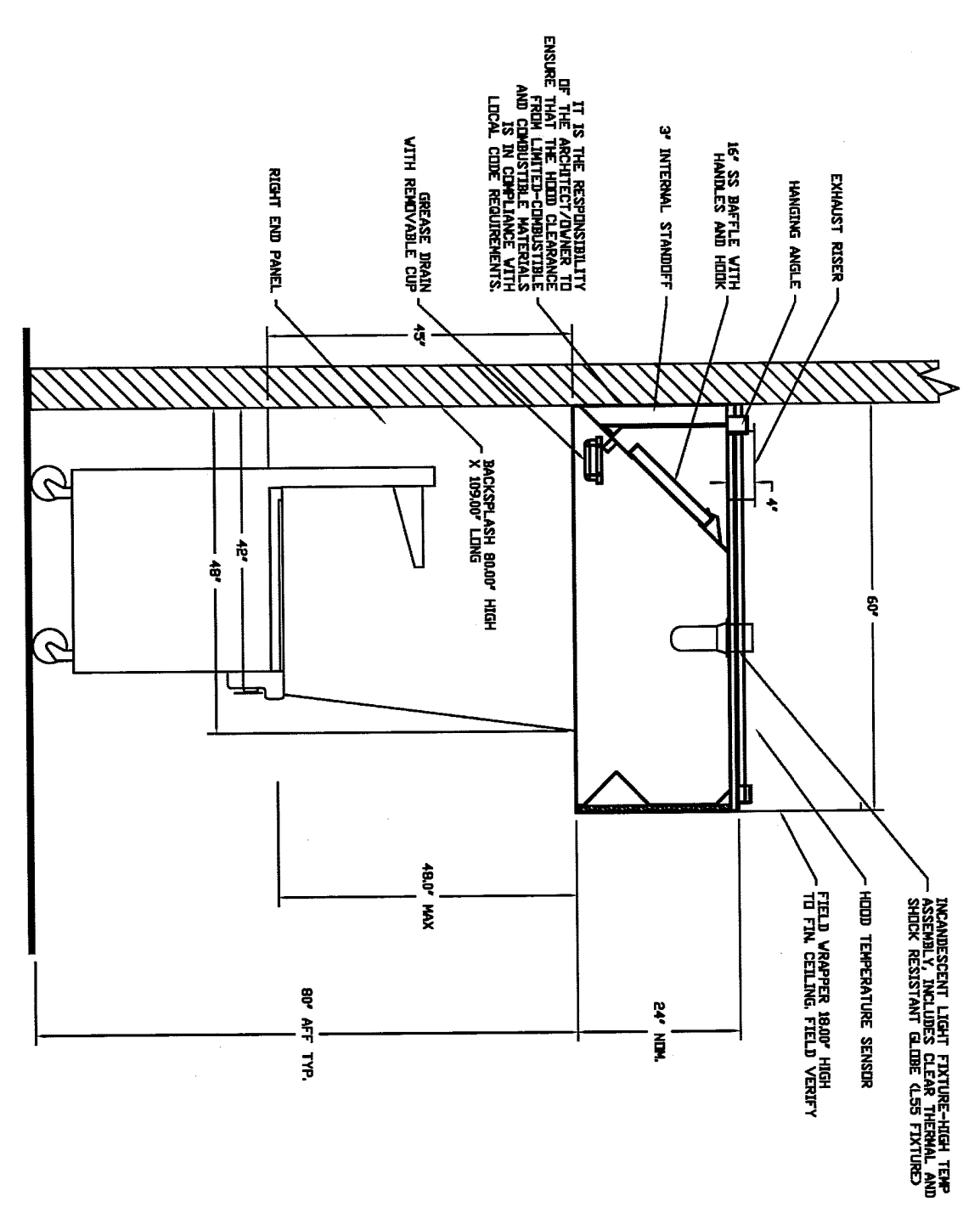
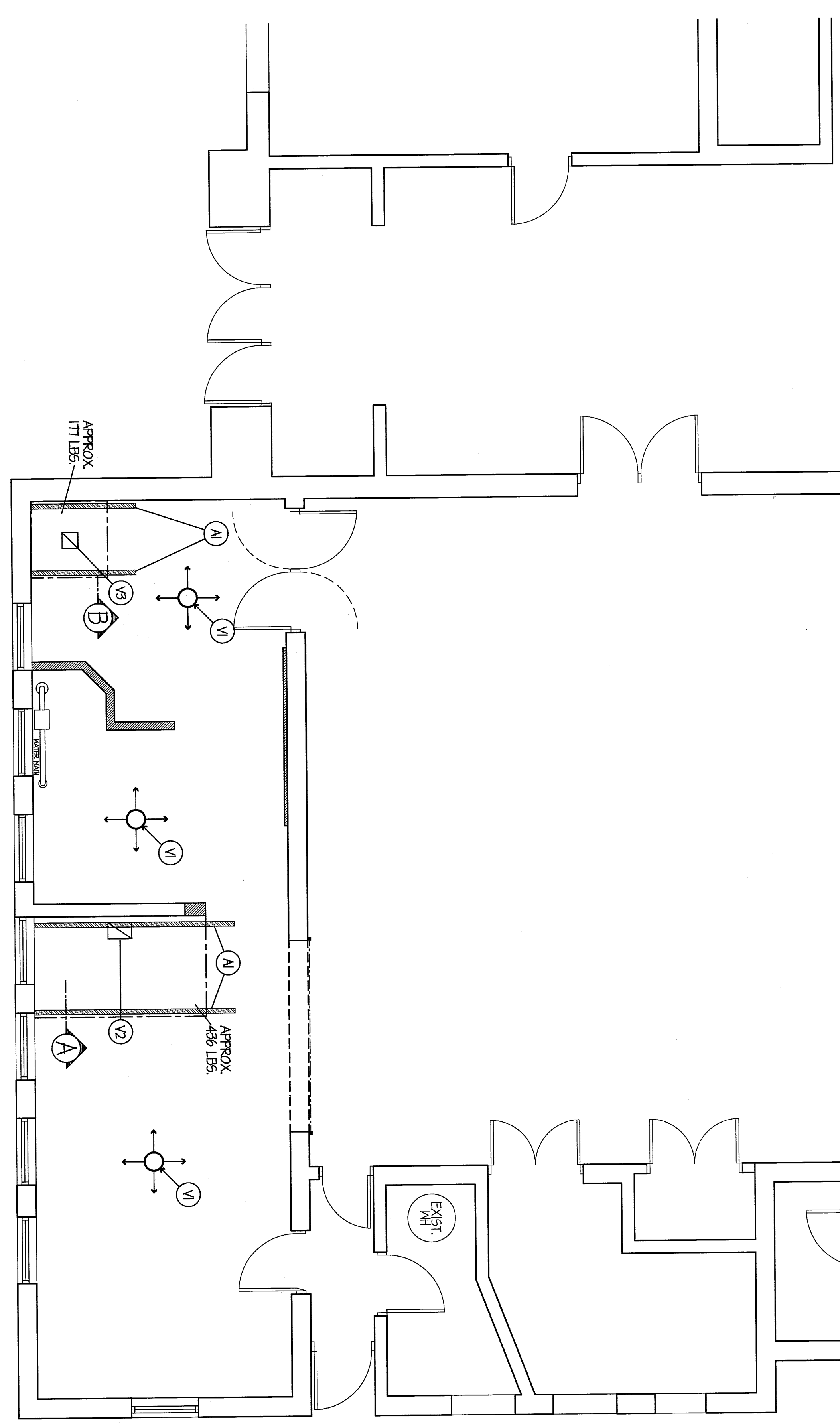
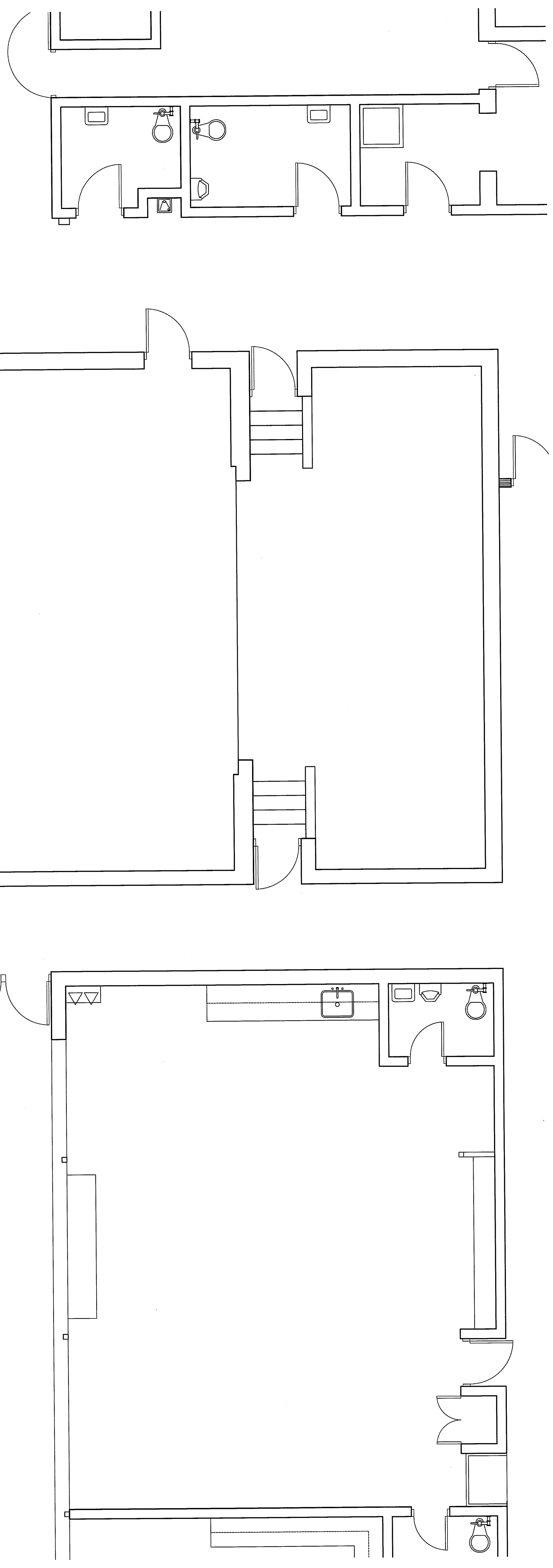
**GENERAL NOTES FOR RECEPTACLE PLAN**

ALL SERVICES SHOWN WITH SYMBOLS REFER TO THE RECEPTACLE PLAN. RECEPTACLES SHOWN WITH SYMBOLS IN THIS PLAN ON FLOOR PLAN ARE TO BE INSTALLED ON THE FLOOR PLAN. RECEPTACLES SHOWN WITH SYMBOLS IN THIS PLAN ON FLOOR PLAN ARE TO BE INSTALLED ON THE FLOOR PLAN.

**RECEPTACLE PLAN**

RECEPTACLES SHOWN WITH SYMBOLS IN THIS PLAN ON FLOOR PLAN ARE TO BE INSTALLED ON THE FLOOR PLAN. RECEPTACLES SHOWN WITH SYMBOLS IN THIS PLAN ON FLOOR PLAN ARE TO BE INSTALLED ON THE FLOOR PLAN.





**VENTILATION NOTES**

- (V1) ALL ROOM VENTILATION BY HVAC.
  - (V2) 10\"/>
- ARCHITECTURAL NOTES**
- (A1) TWO HANGER CHANGES RAN & LIGHTS BY ARCH. TRACES. SECURED TO BUILDING STRUCTURE TO SUPPORT EXHAUST HOODS (WEIGHTS AS SHOWN). FLOOR CONCR. TO VERIFY ALL SIZES & LOCATIONS.

**GENERAL NOTES FOR ROUGH-IN PLAN**

THIS PLAN IS TO BE USED FOR THE ROUGH-IN OF THE HOOD, DUCT, AND EXHAUST FAN. THE HOOD, DUCT, AND EXHAUST FAN SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE HOOD, DUCT, AND EXHAUST FAN SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE HOOD, DUCT, AND EXHAUST FAN SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

**VENTILATION ROUGH-IN CODE**

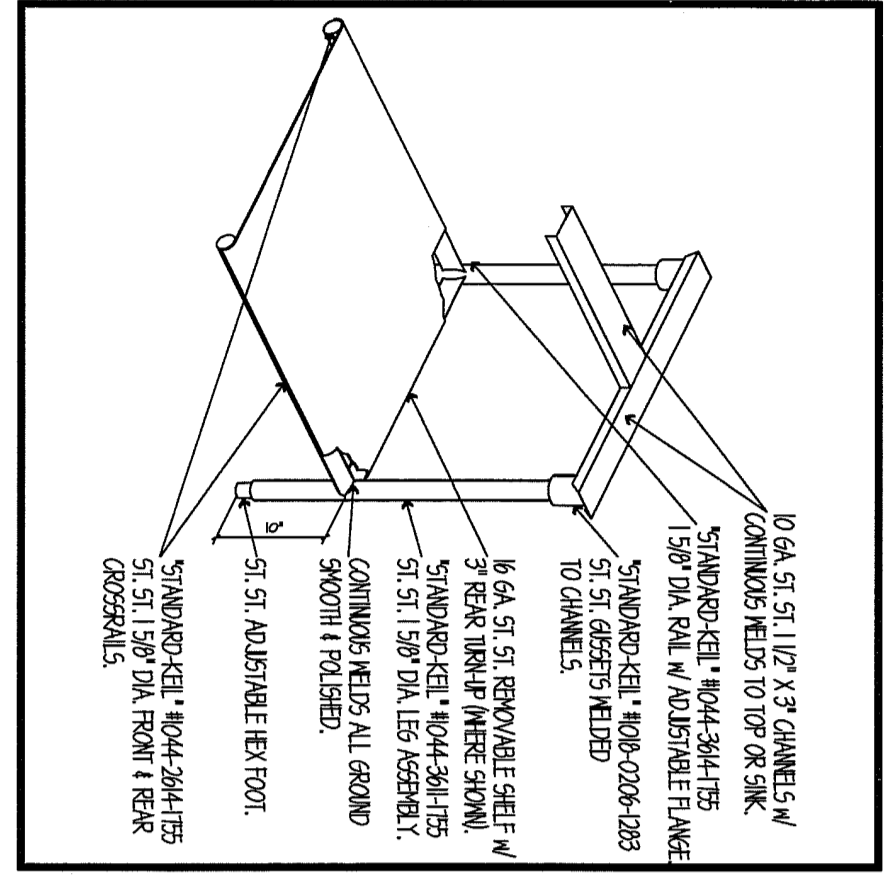
1. ALL ROOM VENTILATION BY HVAC.

2. ALL ROOM VENTILATION BY HVAC.

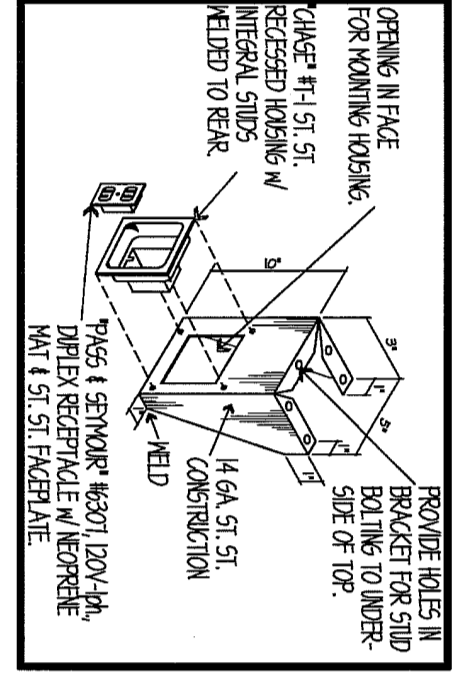
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4. ALL ROOM VENTILATION BY HVAC.

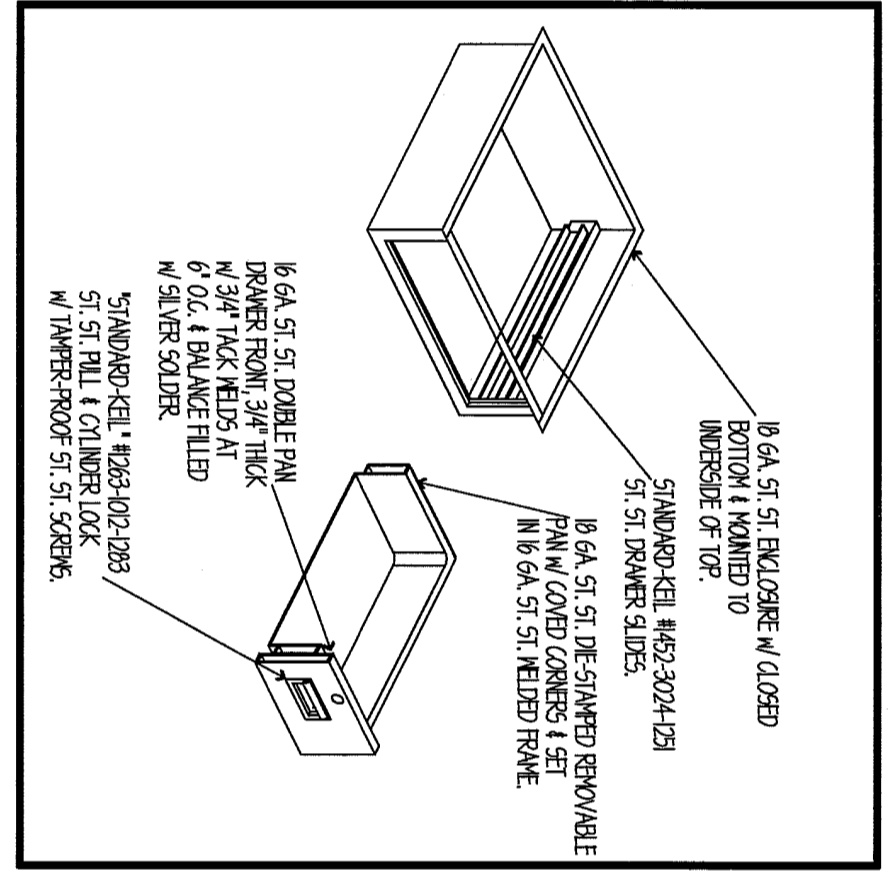
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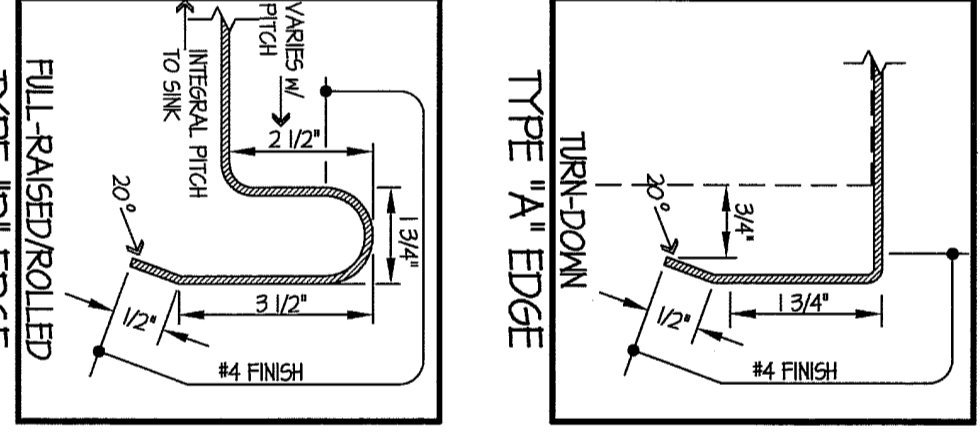
**DOUBLE LEG SUPPORT DETAIL**  
NO SCALE



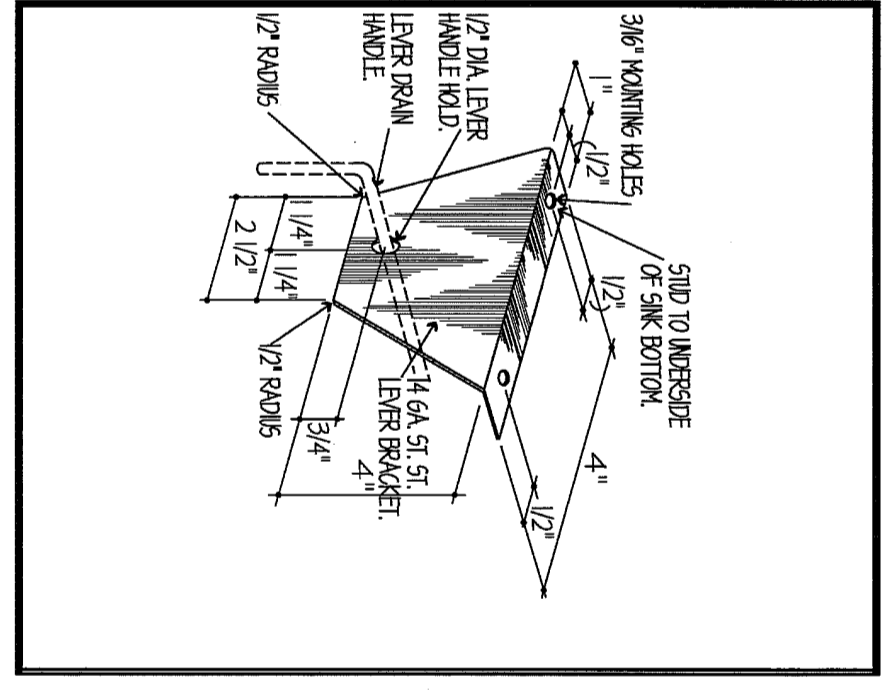
**RECEPTACLE BRACKET DETAIL**  
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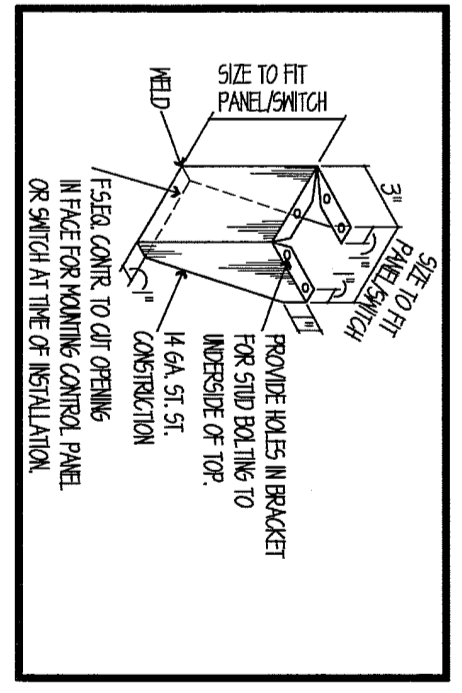
**SINGLE DRAWER DETAIL**  
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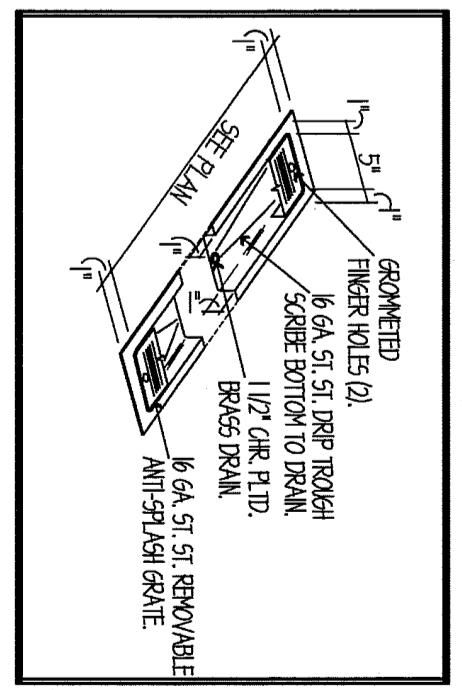
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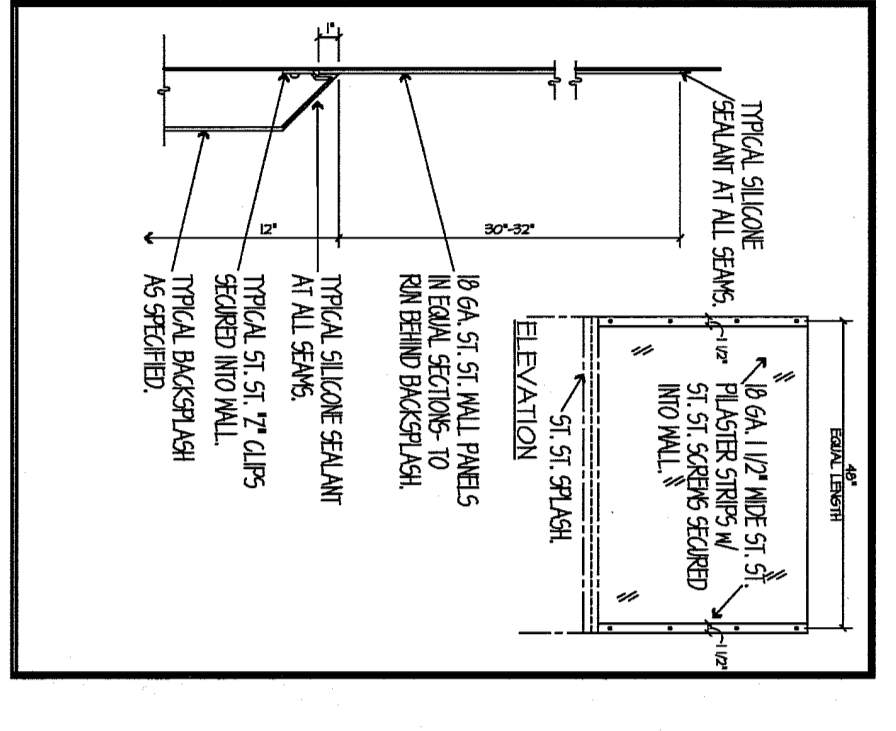
**LEVER HANDLE DETAIL**  
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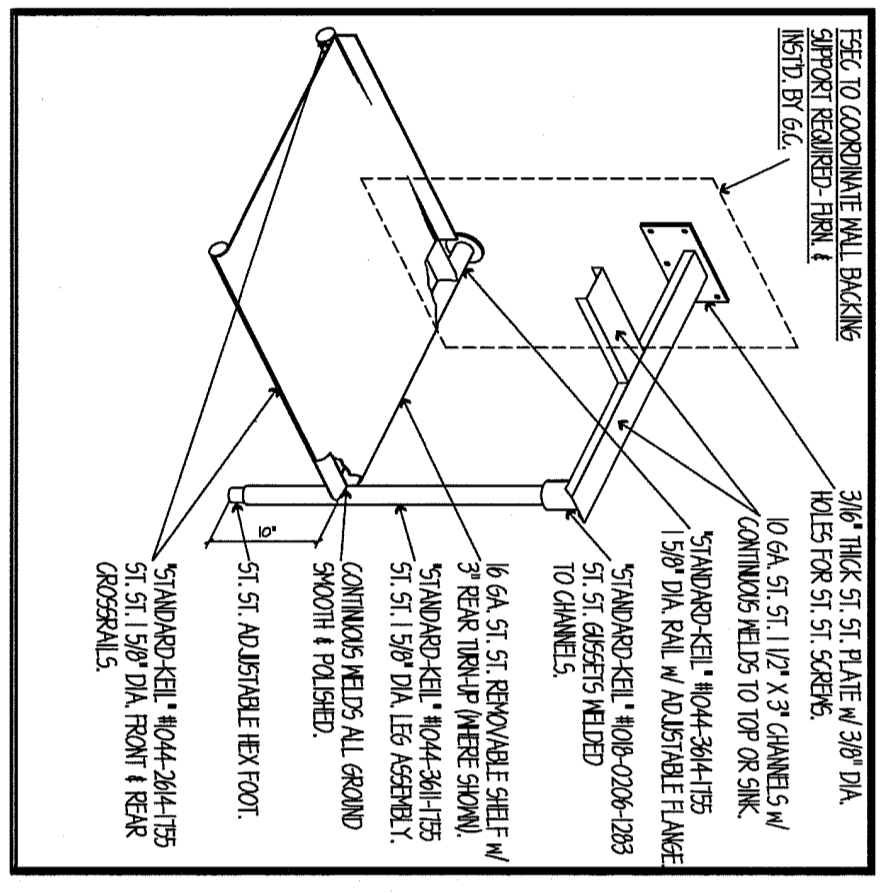
**CONTROL PANEL BRACKET DETAIL**  
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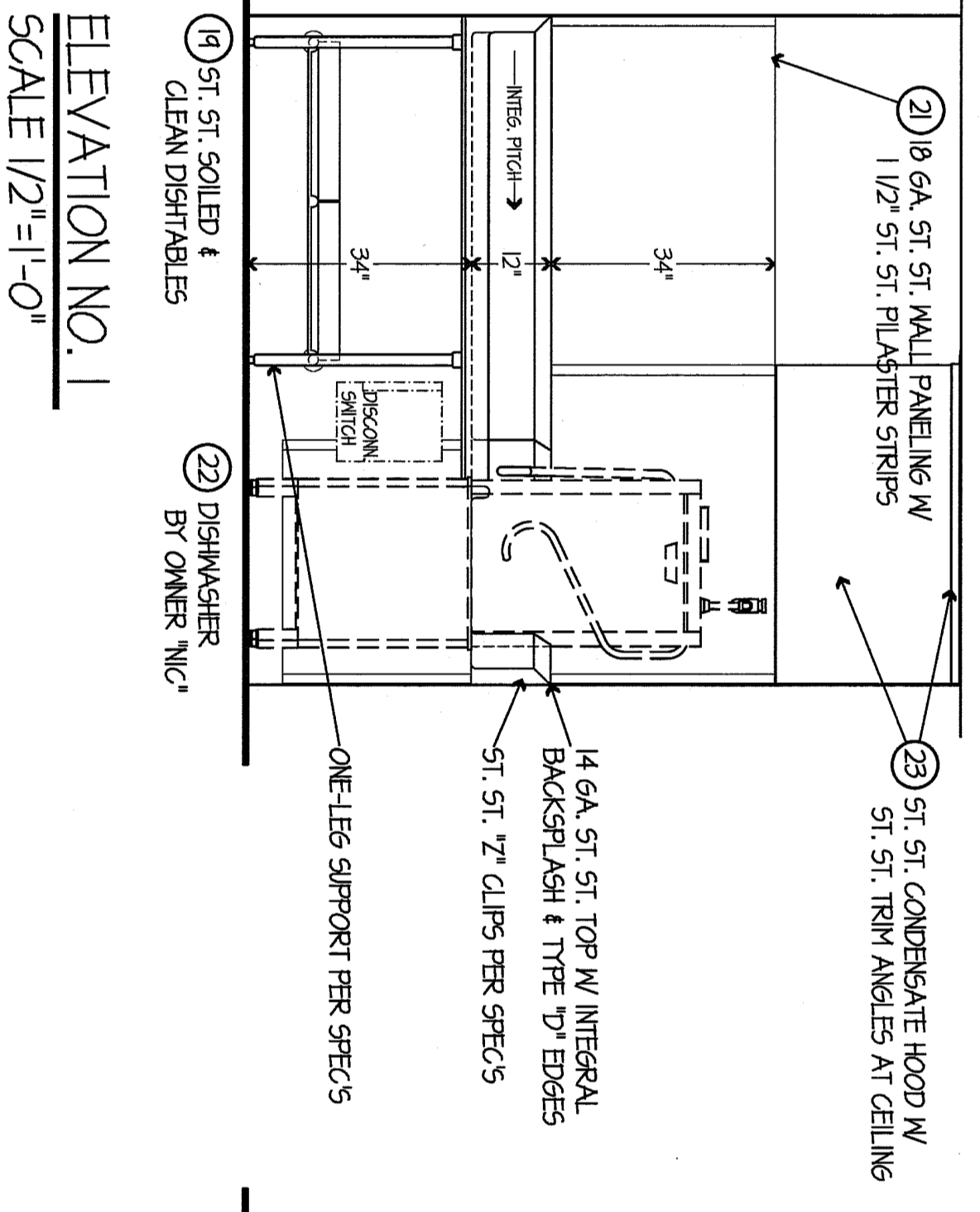
**TROUGH DRAIN DETAIL**  
NO SCALE



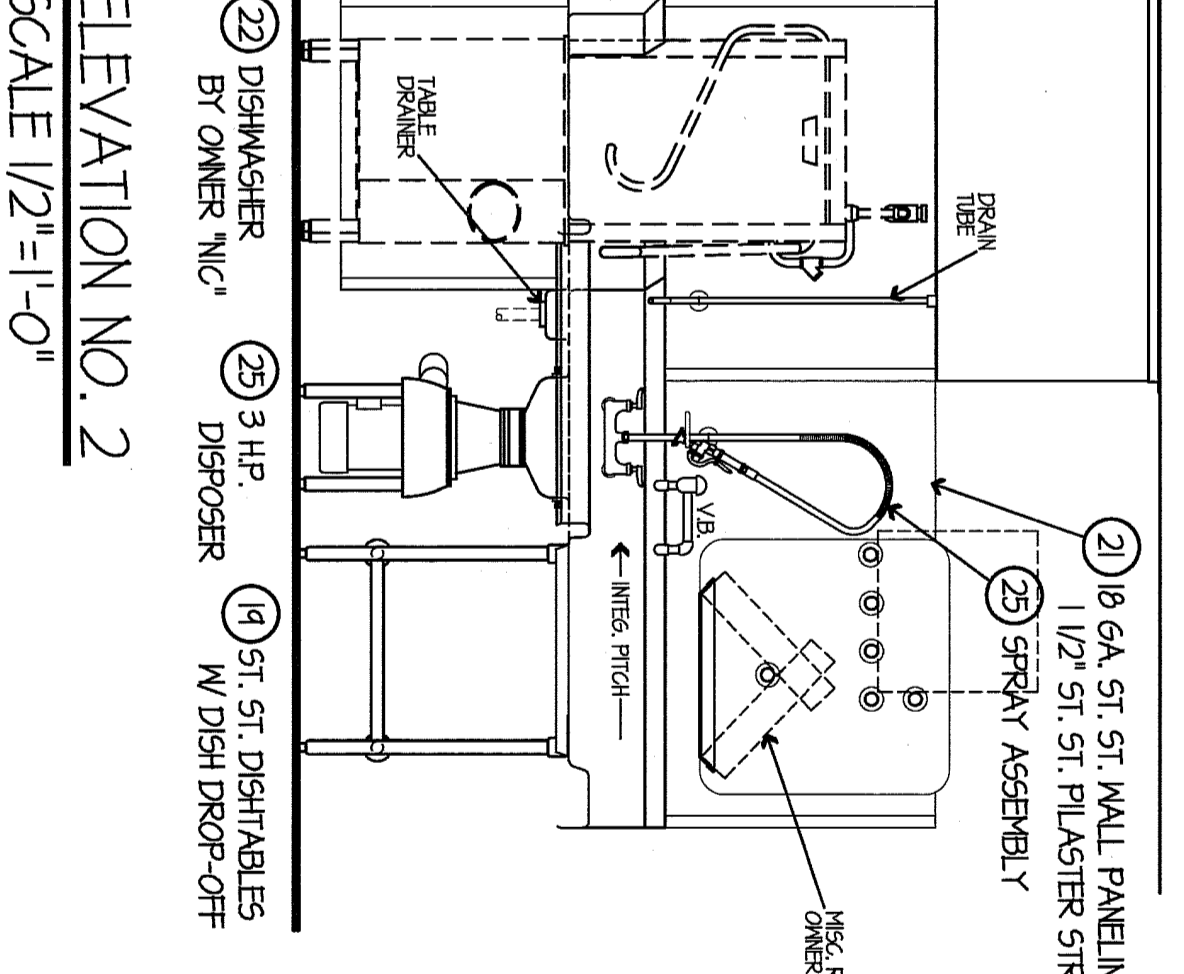
**MALL PANELING DETAIL**  
NO SCALE



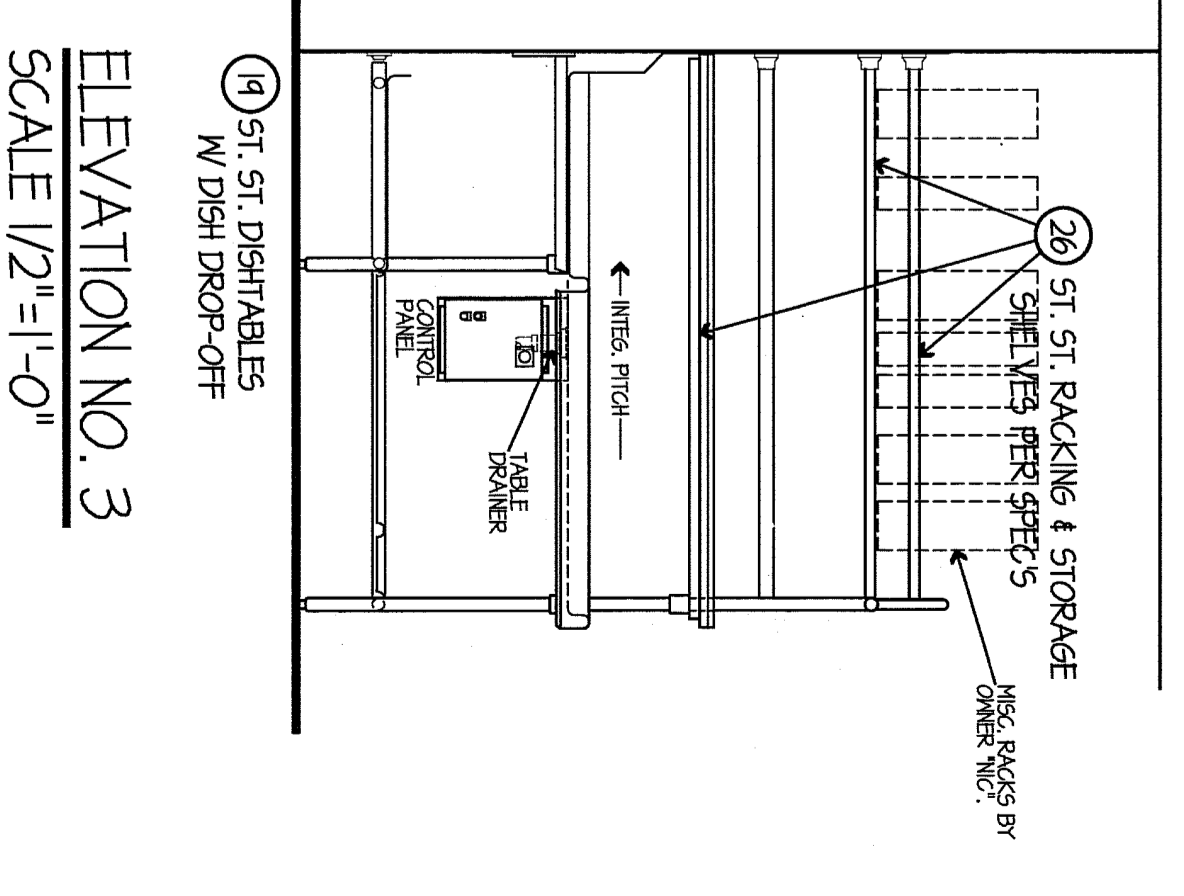
**SINGLE LEG SUPPORT DETAIL**  
NO SCALE



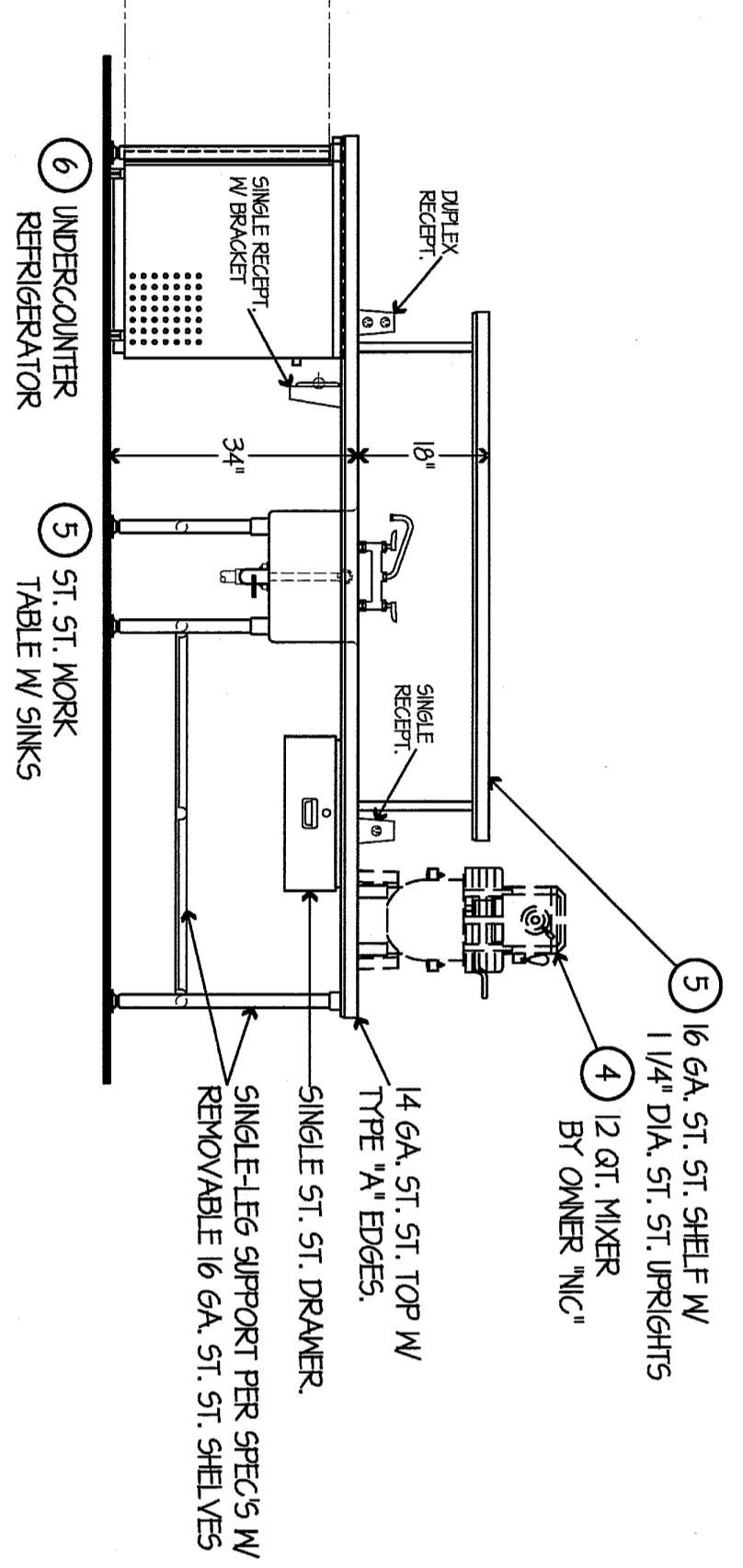
**ELEVATION NO. 1**  
SCALE 1/2"=1'-0"



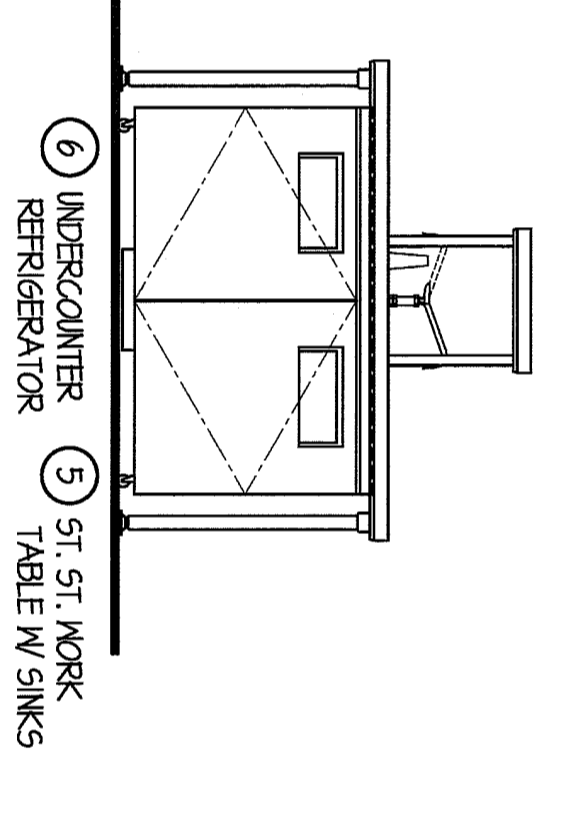
**ELEVATION NO. 2**  
SCALE 1/2"=1'-0"



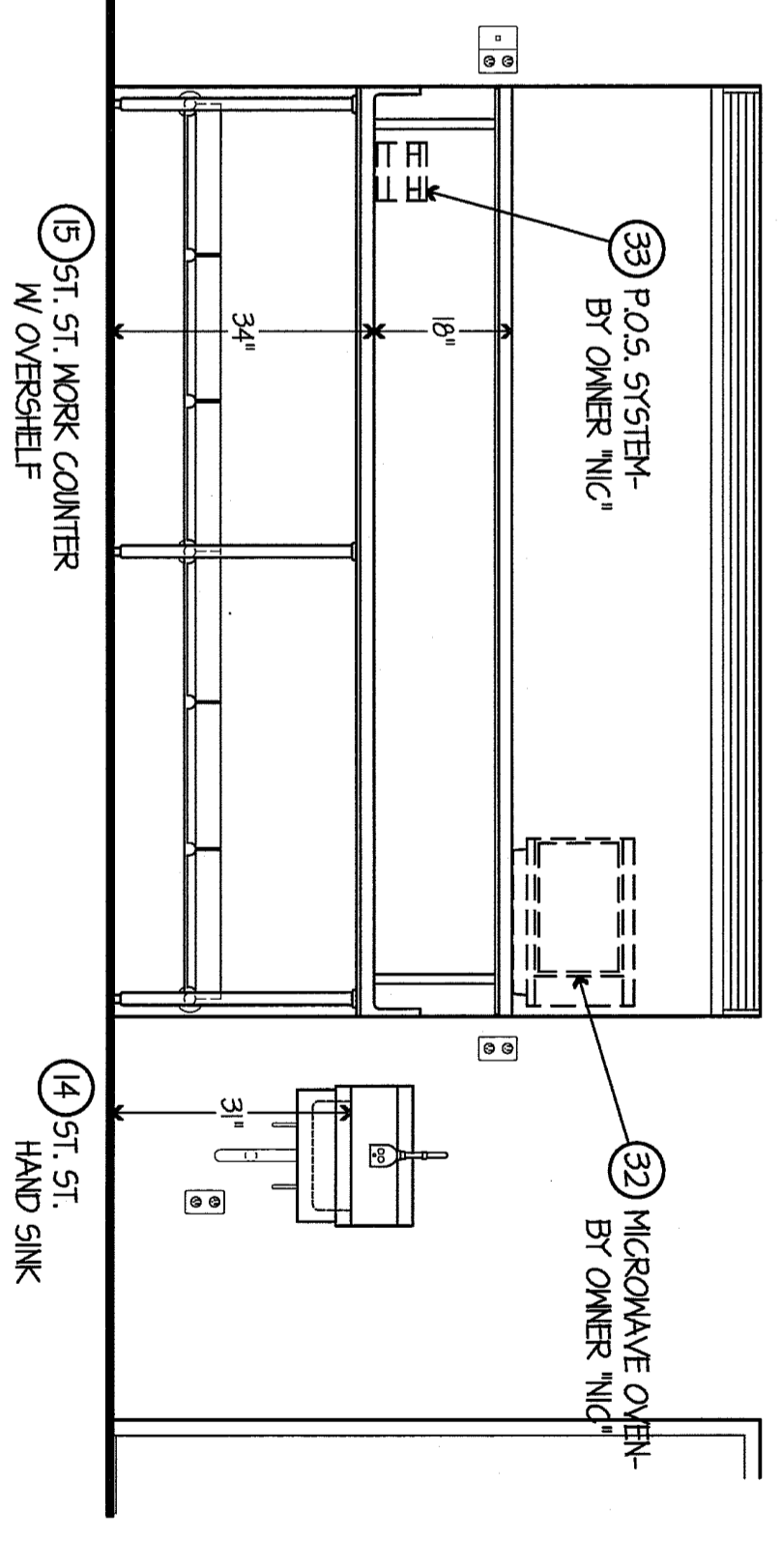
**ELEVATION NO. 3**  
SCALE 1/2"=1'-0"



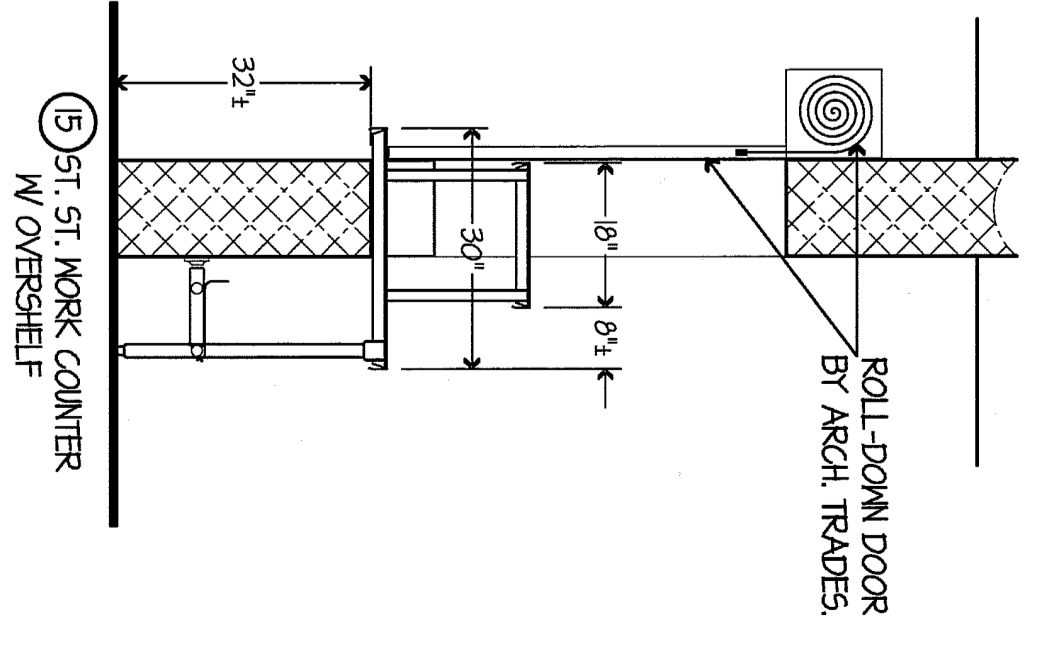
**ELEVATION NO. 4**  
SCALE 1/2"=1'-0"



**ELEVATION NO. 5**  
SCALE 1/2"=1'-0"



**ELEVATION NO. 6**  
SCALE 1/2"=1'-0"



**SECTION DETAIL**  
SCALE 1/2"=1'-0"

# RIISING STARS ACADEMY

## MILLER ELEMENTARY SCHOOL

### CENTER LINE PUBLIC SCHOOLS

FOOD SERVICE EQUIPMENT  
ELEVATION DETAILS

- PRELIMINARY
  - DESIGN DEVELOPMENT
  - CONSTRUCTION
  - FINAL RECORD
- DRAWN BY: MTS  
CHECKED BY: BJS  
REVISIONS:

DATE: MARCH 11, 2013  
SHEET NO.:

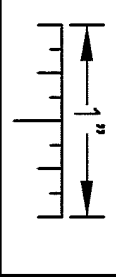
# FSE-5

JOB NO. 121440





THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.

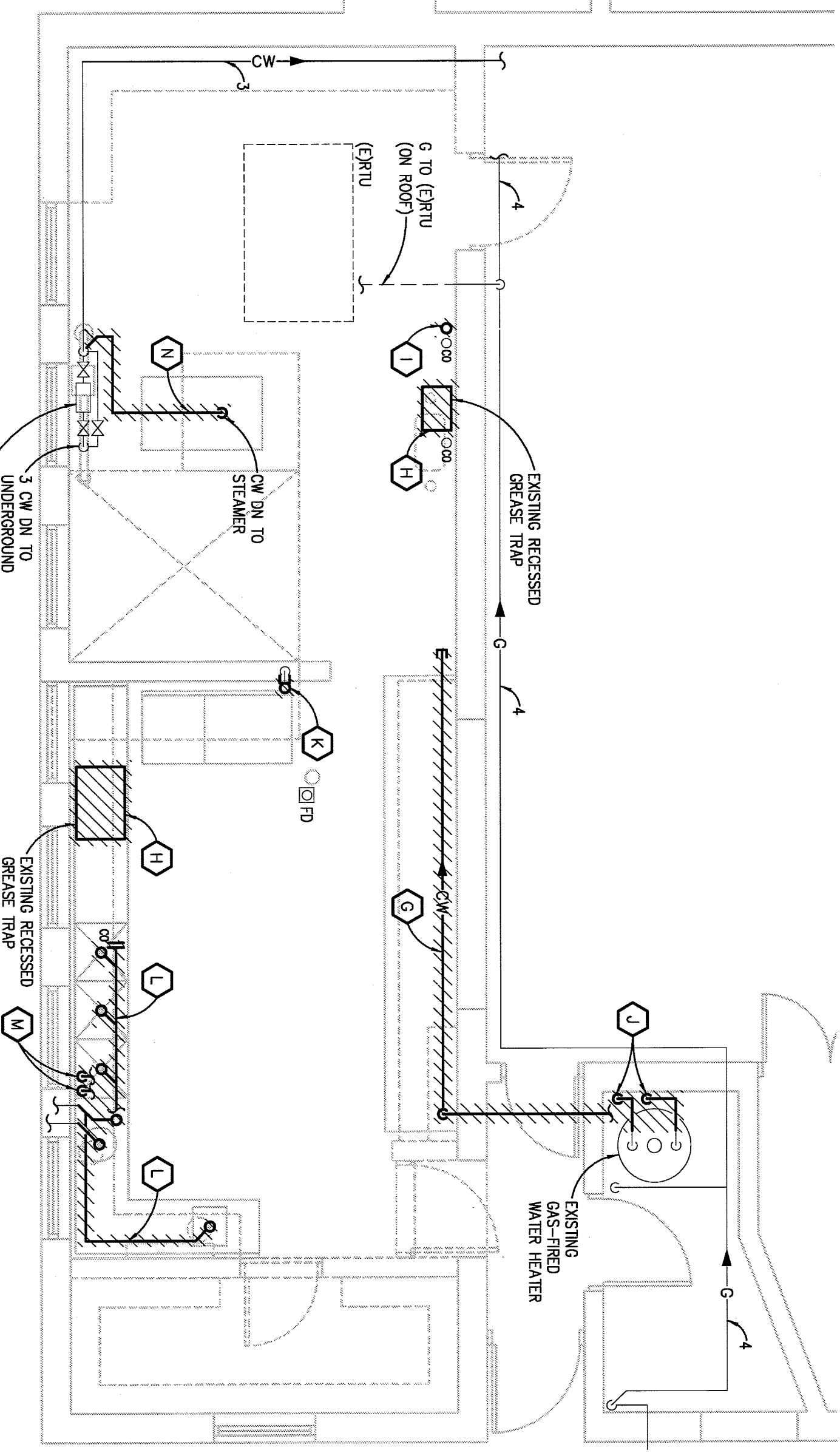


**MECHANICAL GENERAL DEMOLITION NOTES:**

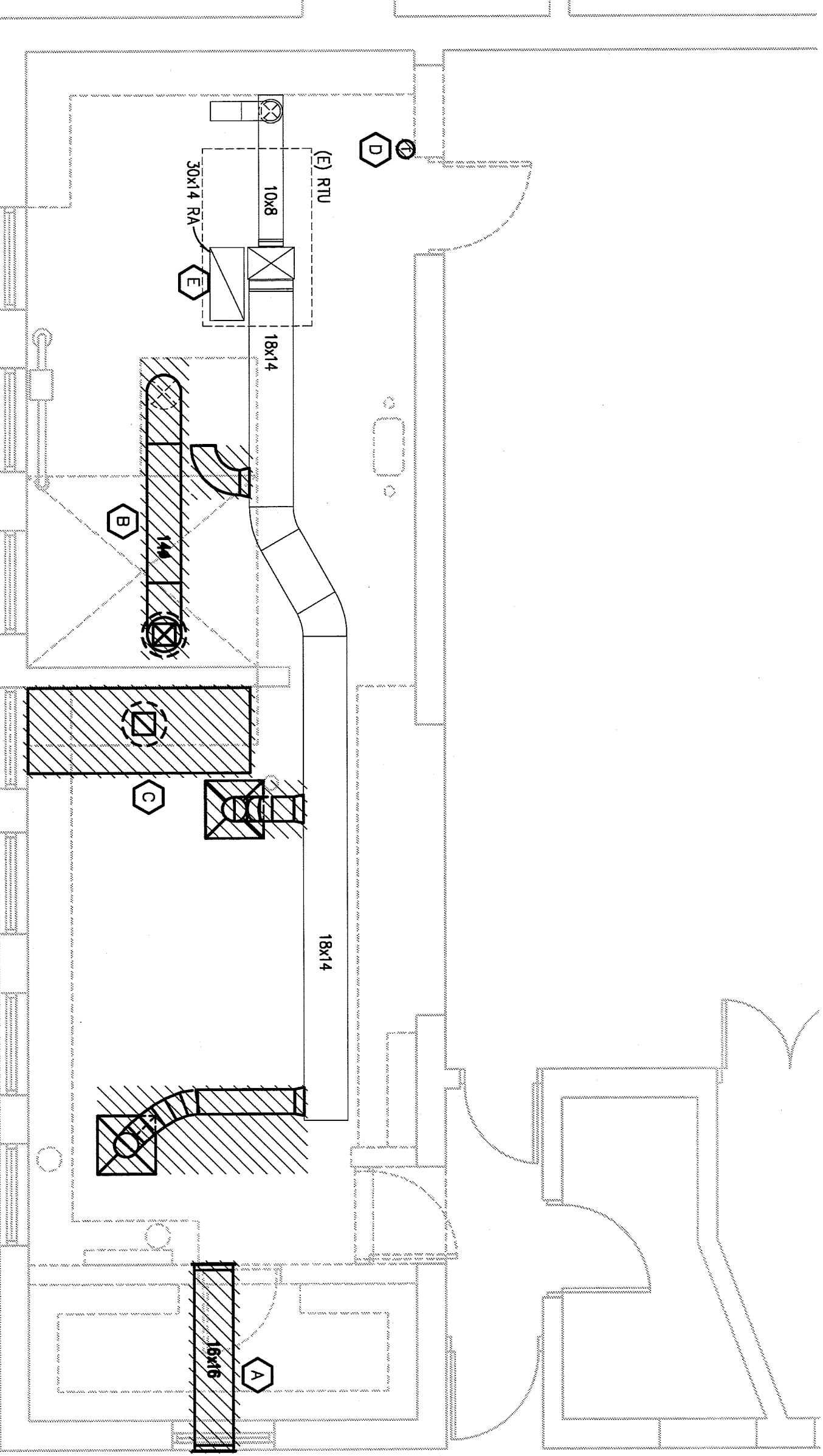
1. ANY INTERSECTION OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE.
2. THESE DRAWINGS ARE DIAGNOSTIC AND INDICATE THE GENERAL EXTENT OF THE WORK. ACTUAL ROUTING AND SIZES OF EXISTING PIPING AND DUCTWORK MUST REFER TO A LIMITED EXISTING FROM WHAT IS SHOWN. MAJOR DISCREPANCIES BETWEEN THESE DRAWINGS AND ACTUAL EXISTING CONDITIONS SHALL BE REPORTED TO THE ENGINEER.
3. THE EXACT EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK.
4. ALL MECHANICAL ITEMS TO BE REMOVED SHALL BE REMOVED COMPLETE, INCLUDING OPEN ENDED PIPES AND LUTWORK.

**DEMOLITION KEY NOTES:**

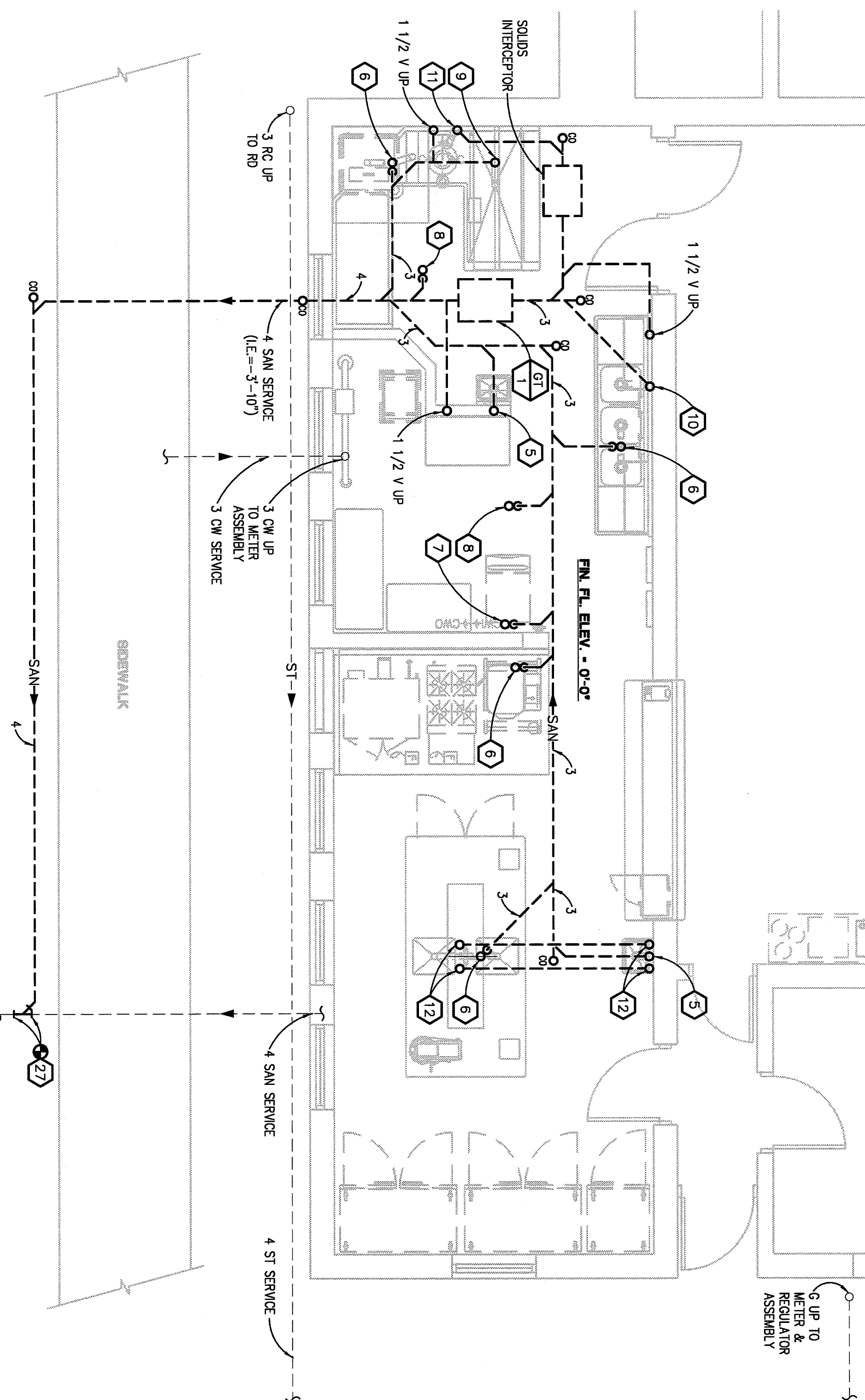
- A. REMOVE EXISTING DUCTWORK, GRILLE AND LOWER COMPARTMENT MATCHING OF EXTERIOR WALL WITH ARCHITECTURAL TRIM.
- B. REMOVE EXISTING STEAMER EXHAUST DUCTWORK AND ROOF MOUNTED EXHAUST FAN COMPLETE. CAP EXISTING CURB ACCORDING TO DETAIL.
- C. REMOVE EXISTING GREASE TRAP ASSOCIATED DUCTWORK AND ROOF MOUNTED EXHAUST FAN COMPLETE. CAP EXISTING EXHAUST FAN CURB ACCORDING TO DETAIL.
- D. RELOCATE EXISTING THERMOSTAT ACCORDING TO NEW WORK PLAN. THERMOSTAT CONTROLS EXISTING GAS FRIED/OIL FRIED/ROOF TOP UNIT (TO REMAIN).
- E. REMOVE 3/4" RA GRILLE FROM RA DUCTWORK.
- F. REMOVE DEFUSER AND BRANCH DUCTWORK BACK TO MAIN AND CAP.
- G. REMOVE EXISTING GREASE TRAP COMPLETE AND REPLACE WITH SANITARY SPOOL PEECE TO KEEP EXISTING SANITARY SPOOL.
- H. REMOVE EXISTING GREASE TRAP COMPLETE AND REPLACE WITH SANITARY SPOOL PEECE TO KEEP EXISTING SANITARY SPOOL.
- I. REMOVE EXISTING CW PIPING AND VALVE TO BELOW FLOOR AND CAP.
- J. REMOVE EXISTING CW & HW PIPING FROM POINTS INDICATED AT WATER HEATER TO BELOW FLOOR AND CAP. PATCH FLOOR TO MATCH EXISTING.
- K. REMOVE EXISTING HUB OUTLET AND ASSOCIATED SANITARY PIPING TO BRAND WALL AND CAP.
- L. REMOVE ALL SANITARY PIPING SERVING THREE COMPARTMENT SINK AND HANDSINK TO POINTS INDICATED AT OUTSIDE WALL AND PREPARE FOR NEW CONNECTION.
- M. REMOVE ALL CW & HW PIPING SERVING THREE COMPARTMENT SINK AND HANDSINK TO BELOW FLOOR AND CAP.
- N. REMOVE CW SERVING STEAMER BACK TO CW MAIN AND CAP.



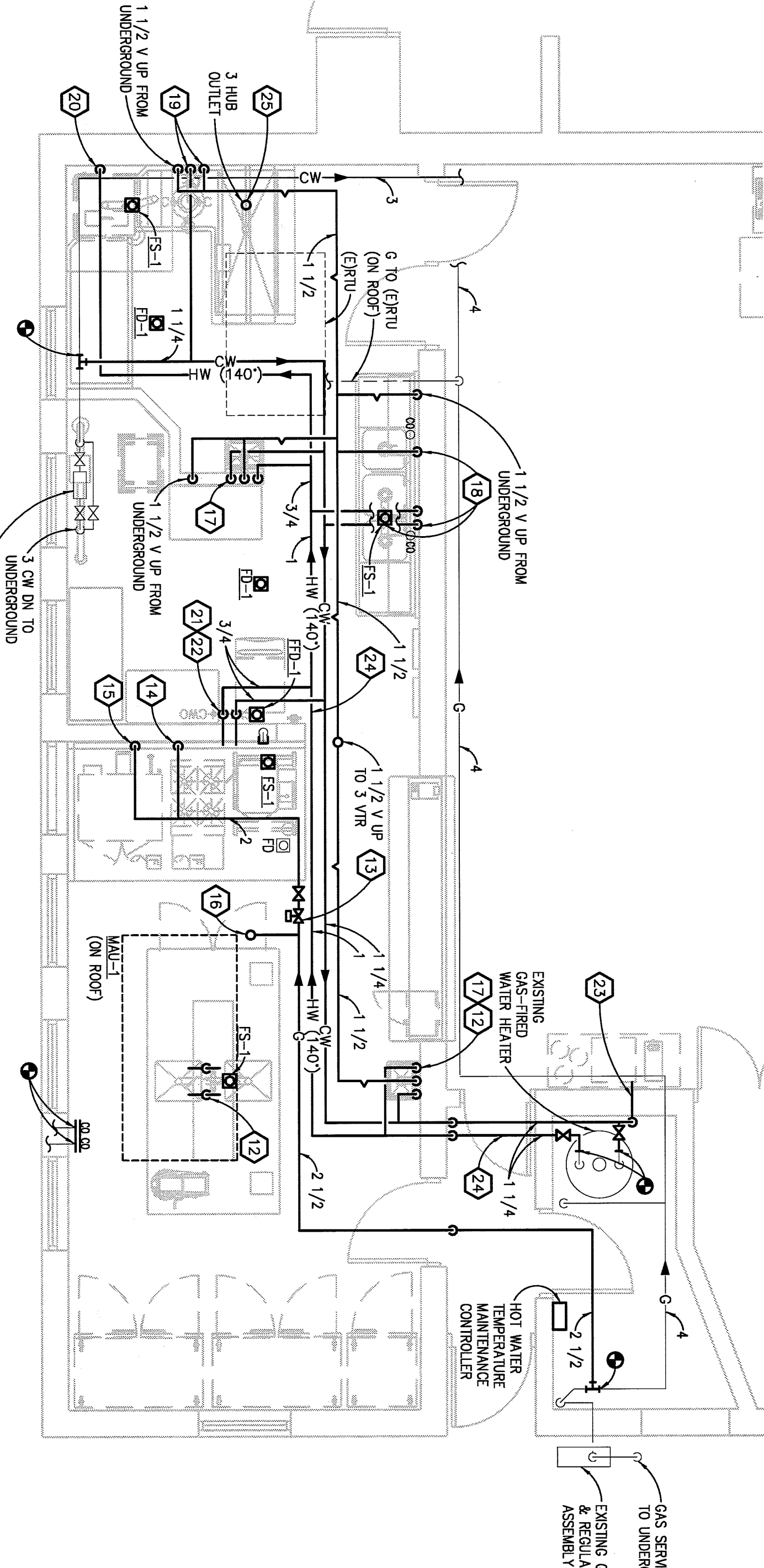
ENLARGED PLUMBING DEMOLITION PLAN  
SCALE: 1/4" = 1'-0"



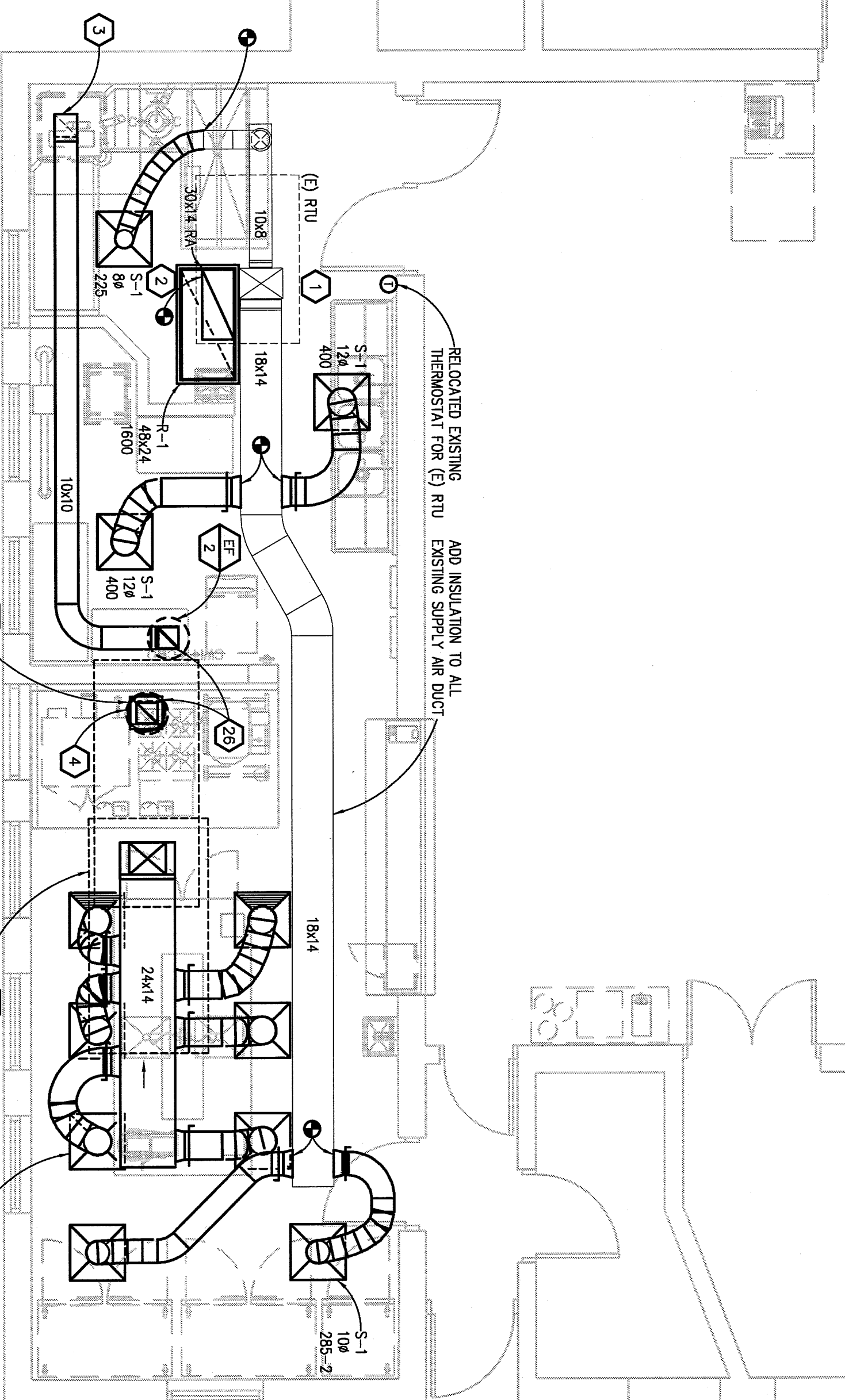
ENLARGED HVAC DEMOLITION PLAN  
SCALE: 1/4" = 1'-0"



ENLARGED UNDERGROUND PLUMBING NEW WORK PLAN  
SCALE: 1/4" = 1'-0"



ENLARGED PLUMBING NEW WORK PLAN  
SCALE: 1/4" = 1'-0"



ENLARGED HVAC NEW WORK PLAN  
SCALE: 1/4" = 1'-0"

**PLUMBING GENERAL NOTES:**

1. THESE DRAWINGS ARE DIAGNOSTIC AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATED/CONSTRUCTION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES SHALL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, SHEET METAL, OTHER TRADES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
2. METAL SYSTEMS SHALL HAVE THE REQUIRED CLEARANCE AND SERVICE ACCESS. SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHUTTER AND ACCESS AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONED LOCATIONS OF PLUMBING FITTINGS.
6. HOT AND COLD WATER PIPING RUN-OUTS TO LAVATORIES AND SINKS SHALL BE 1/2" UNLESS OTHERWISE NOTED.
7. PLUMBING NEW PIPING THROUGH ROOF SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY TREES AND MINIMUM LOCATION AND A MINIMUM OF 1'-0" CLEAR FROM THE INSIDE FACE OF PARAPETS.
8. PROVIDE CURB REQUIRED CLEARANCE FOR ALL CLEANOUTS INSTALLED IN SANITARY WASTE AND VENT PIPING.
9. MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".

**SHEET METAL GENERAL NOTES:**

1. THESE DRAWINGS ARE DIAGNOSTIC AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATED/CONSTRUCTION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES SHALL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, SHEET METAL, OTHER TRADES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS. SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHUTTER AND ACCESS AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR DIMENSIONED LOCATION OF GRILLES, RESISTERS, AND DEFUSERS.

**CONSTRUCTION NOTES:**

1. PROVIDE MANUAL OUTSIDE AIR DAMPER AND DAMPERING RELIEF DAMPER FOR EXISTING EXHAUST ROOF TOP UNIT. BALANCE EXISTING FRO TO 200 CM OA AND 1000 CM SIA.
2. EXISTING EXHAUST 30x14 (VUL.) RA DOWN AND TRANSITION TO NEW 48x24 RETURN GRILLE IN CEILING.
3. 10x10 EXHAUST HOOD DISMISHER HOOD COLLAR.
4. 10x15 EXHAUST HOOD COLLAR TRANSITION TO 16" ZERO CLEARANCE PREFABRICATED GREASE TRAP. ROUTE UP TO FF-1 ON ROOF. PROVIDE NECESSARY TRANSITIONS AT ROOF AND EXHAUST FAN FOR CONNECTIONS.
5. ROUTE 3 SAN UP TO FLOOR SINK.
6. ROUTE 3 SAN UP TO FLOOR SINK.
7. ROUTE 3 SAN UP TO TONNEL FLOOR DRAIN.
8. ROUTE 3 SAN UP TO FLOOR DRAIN. PROVIDE WIRE TRAP SEAL PROTECTION DEVICE.
9. ROUTE 3 SAN UP TO HUB OUTLET.
10. ROUTE 3 SAN UP TO WASH COMPARTMENT OF THREE COMPARTMENT SINK.
11. ROUTE 3 SAN UP TO PRE-RINSE SINK.
12. ROUTE 3/4" CW & 3/4" HW IN IN CHASE TO BELOW FLOOR. ROUTE SEAMLESS SPLIT DISPERSE TRAP BELOW FLOOR TO ISLAND SINKS. ROUTE 3/4" CW & 3/4" HW THROUGH ASS. 100% WAXING VALVE SET AT 120°F. ROUTE 3/4" CW & 3/4" HW TERMINATE AT CODE REQUIRED DISTANCE ABOVE FLOOR SINK AND ABOVE FINNELL FLOOR DRAIN.
13. MECHANICAL GAS SHUT-OFF VALVE (EQUIPPED BY PEEC AND INSTALLED BY PLUMBER).
14. ROUTE 1 1/2" DN ALONG WALL AND CONNECT TO STAIRS. CONTRACTORS TO VERIFY PEEC. RELOCATORS OF ALL OWNERS PROVIDED EQUIPMENT.
15. ROUTE 1 1/2" DN ALONG WALL AND CONNECT TO CONNECTION OPEN CONTRACTOR TO VERIFY PEEC. RELOCATORS OF ALL OWNERS PROVIDED EQUIPMENT.
16. ROUTE 1 1/2" CW THROUGH ROOF AND CONNECT TO MAKE-UP AIR UNIT.
17. ROUTE 3/4" CW, 3/4" HW, 1 1/2" V DN IN CHASE/WALL. ROUTE 3/4" CW, 3/4" HW, AND 1 1/2" W AND CONNECT TO SINK.
18. ROUTE 3/4" CW & 3/4" HW DN IN WALL AND CONNECT TO FAUCET. ON THREE CONTROL FITTING TO UNDERGROUND AND CONNECT TO SERVICE TRAP. ROUTE 2 W FROM RANGE AND SANITARY COMPARTMENTS AND TERMINATE AT CODE REQUIRED DISTANCE ABOVE FLOOR SINK.
19. ROUTE 3/4" CW DN IN CHASE. ROUTE 3/4" CW DN WALL AND CONNECT TO PRE-SPLIT. PROVIDE WATER TIGHTNESS ON GASKET. ROUTE 3/4" CW DN THROUGH ASS. 100% WAXING VALVE SET AT 120°F. ROUTE 3/4" CW DN THROUGH ROOF DISPERSE 1/4" PER FT. WAX SLOPE DN IN WALL. ROUTE 1 1/2" V UP IN WALL.
20. ROUTE 3/4" HW DN IN WALL AND CONNECT TO DISMISHER. ROUTE W FROM DISMISHER AND TERMINATE AT CODE REQUIRED DISTANCE ABOVE FLOOR SINK.
21. ROUTE 3/4" CW DN IN WALL/CHASE TO FILTER. ROUTE 3/4" CW FROM FILTER TO WAXER. ROUTE W FROM ICE WAXER AND TERMINATE AT CODE REQUIRED DISTANCE ABOVE FINNELL FLOOR DRAIN.
22. ROUTE 3/4" CW & 3/4" HW DN IN WALL/CHASE AND CONNECT TO BRASS PAN FILL FAUCET.
23. ROUTE 1/2" CW THROUGH CODE APPROVED BACKDOW PREVENTER AND CONNECT TO REVENGE EQUIPMENT.
24. PROVIDE SET-REGULATING HEATING CABLES ALONG THE ENTIRE LENGTH OF THE HW PIPING SYSTEM & ASSOCIATED CONTROLLER WITS AS PART OF THE HOT WATER TEMPERATURE MAINTENANCE SYSTEM. REFER TO HEAT TRACE SPECIFICATIONS.
25. ROUTE 2 W FROM TABLE DRAINER AND TERMINATE OVER 3 HUB OUTLET.
26. REMOVE EXISTING ROOF PENETRATION FOR NEW EXHAUST FAN.
27. CONNECT TO EXISTING SANITARY SERVICE EAST VP EXISTING SIDEWALK, AS INDICATED.

**WPA**  
WALKER ASSOCIATES INC.  
ARCHITECTS & ENGINEERS

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**PRB**  
Peter Basso Associates Inc.  
CONSULTING ENGINEERS

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**RISEING STAR ACADEMY**  
MILLER ELEMENTARY SCHOOL  
CENTER LINE PUBLIC SCHOOLS

ENLARGED KITCHEN  
MECHANICAL PLAN

PRELIMINARY  
DESIGN DEVELOPMENT  
CONSTRUCTION  
FINAL RECORD

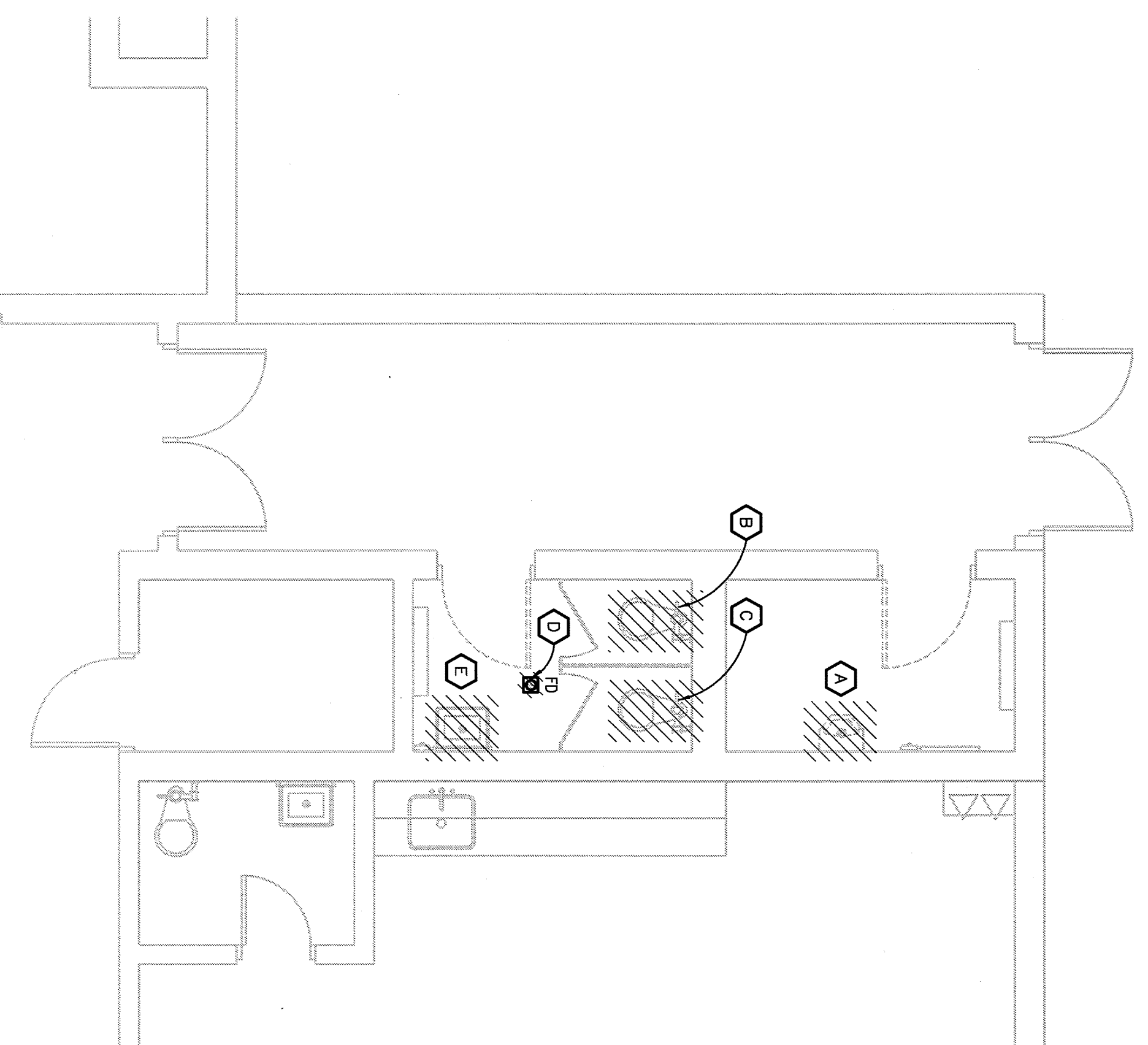
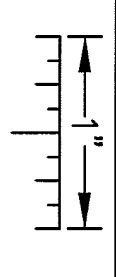
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CHECKED BY: RNS

DATE: March 11, 2013

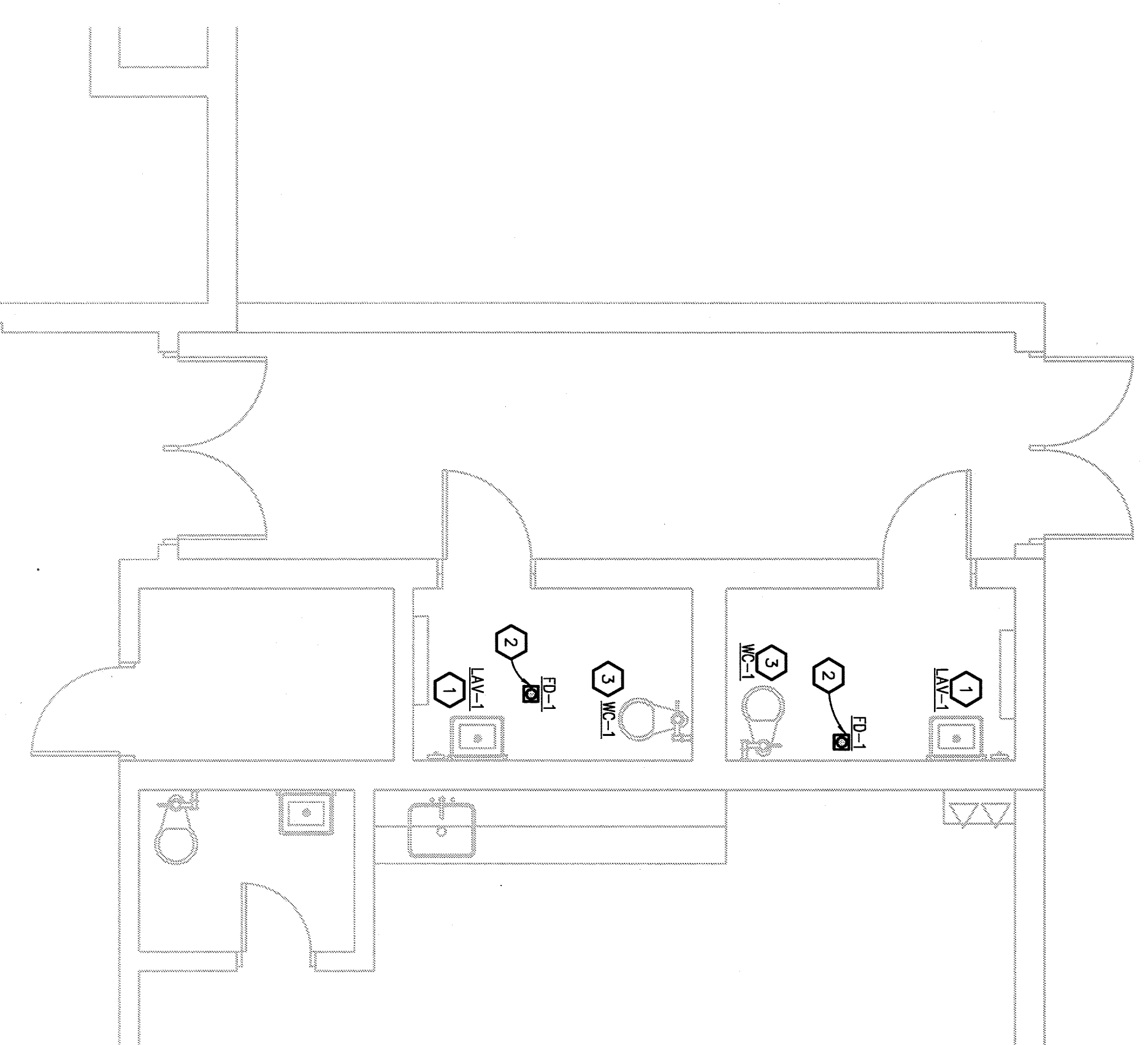
SHEET NO.: **M-5.1**

JOB NO.: 121440

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



ENLARGED PLUMBING DEMOLITION PLAN  
SCALE: 1/4" = 1'-0"



ENLARGED PLUMBING NEW WORK PLAN  
SCALE: 1/4" = 1'-0"

**MECHANICAL GENERAL DEMOLITION NOTES:**

1. ANY INTERIOR OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE REMOVED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE.
2. THESE DRAWINGS ARE DIAGNOSTIC AND INDICATE THE GENERAL EXTENT OF THE WORK. ACTUAL ROUTING AND SIZES OF EXISTING PIPING AND DUCTWORK MAY VARY FROM THE DRAWINGS. THE GENERAL CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING SERVICES AND DUCTWORK. THE EXACT EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK.
3. ALL MECHANICAL ITEMS TO BE REMOVED SHALL BE REMOVED COMPLETE INCLUDING OPEN ENDED PIPES AND DUCTWORK.

**PLUMBING GENERAL NOTES:**

1. THESE DRAWINGS ARE DIAGNOSTIC AND REPRESENT THE GENERAL INTENT OF THE WORK. ACTUAL ROUTING AND SIZES OF EXISTING PIPING AND DUCTWORK MAY VARY FROM THE DRAWINGS. THE GENERAL CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING SERVICES AND DUCTWORK. THE EXACT EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SHALL BE MAINTAINED THROUGHOUT THE PROJECT. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES, ACCESS, REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES, ALL SYSTEMS.
3. CORNER AND PIPING ACCESS DOORS WITHIN ACCESSIBLE CEILING SHALL BE MAINTAINED THROUGHOUT THE PROJECT. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES, ACCESS, REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES, ALL SYSTEMS.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONED LOCATIONS OF PLUMBING FIXTURES.
6. HOT AND COLD WATER PIPING SHALL BE LOCATED A MINIMUM OF 1/2" UNLESS OTHERWISE NOTED.
7. PLUMBING VENT PIPING THROUGH ROOF SHALL BE LOCATED A MINIMUM OF 10" FROM ANY ROOF EDGE AND A MINIMUM OF 12" CLEAR FROM THE INSIDE FACE OF PARAPET.
8. PROVIDE CODE REQUIRED CLEARANCE FOR ALL CELESTIALS INSTALLED IN SANITARY WASTE AND VENT PIPING.
9. MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".

**DEMOLITION KEY NOTES:**

- A. REMOVE EXISTING URINALS AND ASSOCIATED FLUSH VALVE. REMOVE EXISTING PIPE TO BRAND WALL AND CAP. PATCH WALL TO MATCH EXISTING. PREPARE EXISTING SANITARY FOR NEW CONNECTION.
- B. REMOVE EXISTING WATER CLOSET AND ASSOCIATED FLUSH VALVE. REMOVE EXISTING WATER CLOSET AND ASSOCIATED FLUSH VALVE. DISCONNECT EXISTING WATER CLOSET AND ASSOCIATED FLUSH VALVE. DISCONNECT EXISTING CW & SW AND PREPARE FOR NEW CONNECTION.
- C. REMOVE EXISTING WATER CLOSET AND ASSOCIATED FLUSH VALVE. DISCONNECT EXISTING CW & SW AND PREPARE FOR NEW CONNECTION.
- D. REMOVE EXISTING FLOOR DRAIN AND PREPARE EXISTING SANITARY PIPING FOR NEW CONNECTION.
- E. REMOVE EXISTING LAVATORY, SINK, AND ASSOCIATED SINKS. DISCONNECT EXISTING SINKS AND PREPARE FOR NEW CONNECTION.

**CONSTRUCTION NOTES:**

1. EXTEND EXISTING CW, HW, & SW AND CONNECT TO LAVATORY.
2. EXTEND EXISTING SW AND CONNECT TO FLOOR DRAIN.
3. EXTEND EXISTING CW & SW AND CONNECT TO WATER CLOSET.



JOB NO.: 121440

KEY PLAN  
NOT TO SCALE

M-5.2

DATE: March 11, 2013

SHEET NO.:

PRELIMINARY

DESIGN DEVELOPMENT

CONSTRUCTION

FINAL RECORD

DRAWN BY: SWJ

CHECKED BY: RNR

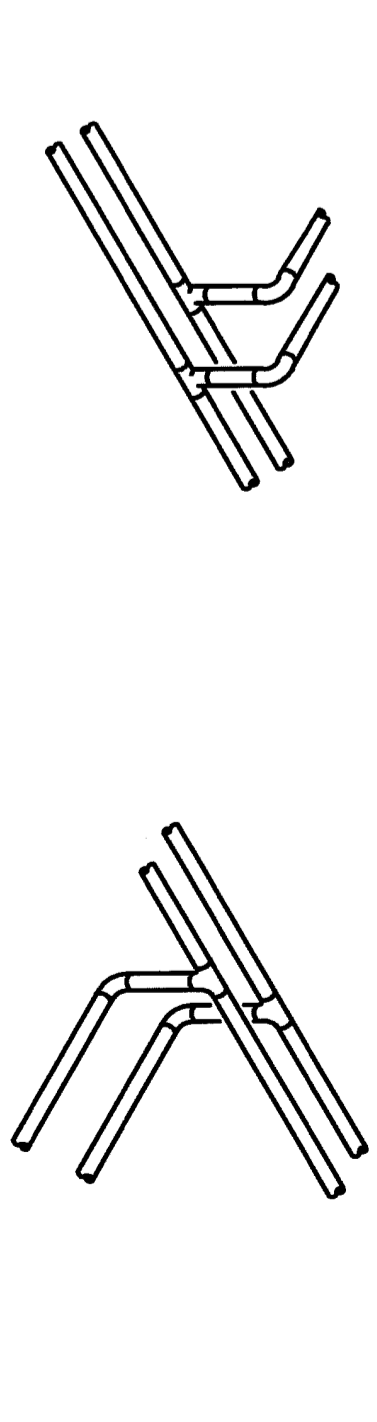
REVISIONS:

ENLARGED TOILET ROOM  
MECHANICAL PLANS

**RISEING STAR ACADEMY**  
MILLER ELEMENTARY SCHOOL  
CENTER LINE PUBLIC SCHOOLS

**WPA**  
WAVEY ASSOCIATES, INC.  
ARCHITECTS & ENGINEERS  
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WARREN, MICHIGAN 48093  
TEL: 586.574.4100  
WWW.WAVEY98.COM

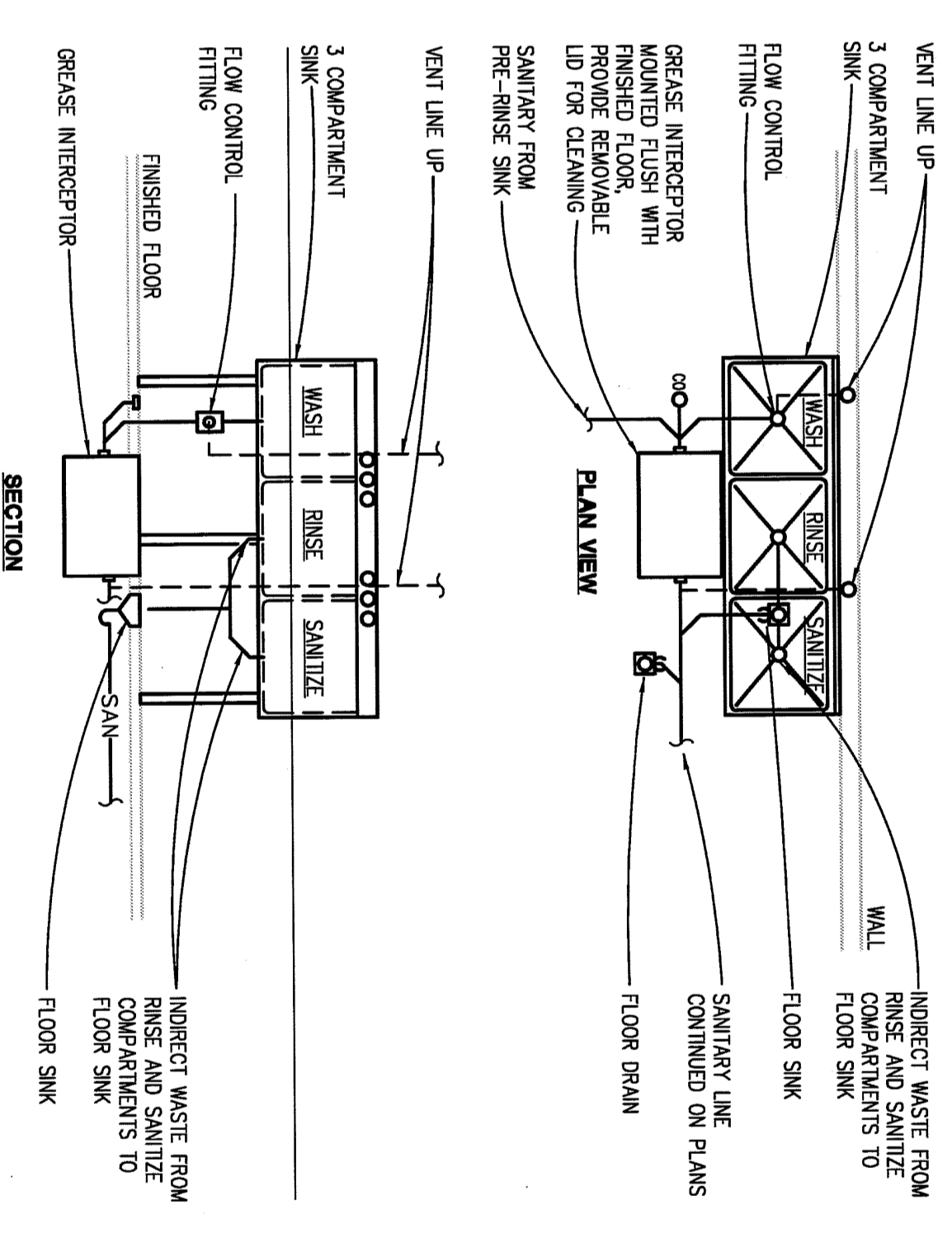
**PBA**  
Peter Basso Associates Inc.  
1500 Lakemont Plaza SW  
Atlanta, GA 30329  
TEL: 404.525.9200  
WWW.PETERBASSO.COM



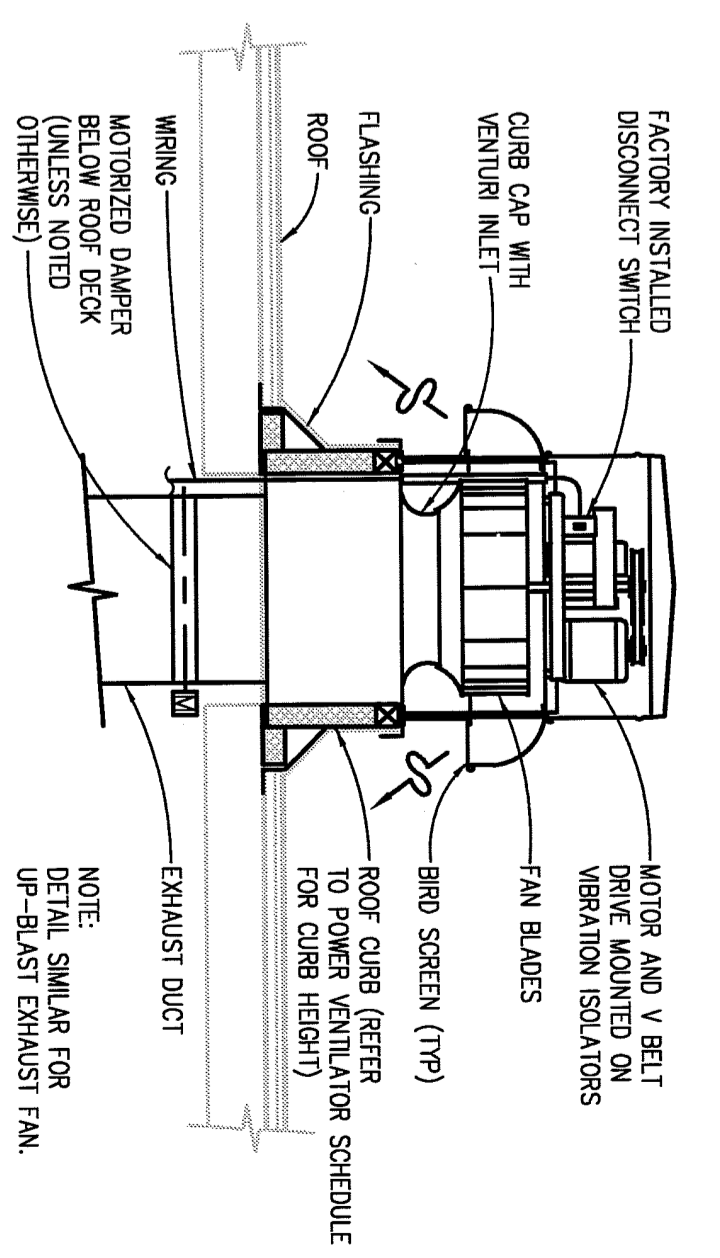
**BRANCH CONNECTION OFF TOP**  
APPLIES TO THE FOLLOWING SYSTEMS:  
DOMESTIC WATER  
HOT WATER HEATING  
STEAM HEATING  
LABORATORY VACUUM  
COMPRESSED AIR  
NATURAL GAS

**BRANCH CONNECTION OFF BOTTOM**  
APPLIES TO THE FOLLOWING SYSTEMS:  
HOT WATER HEATING  
STEAM HEATING  
CONDENSER WATER  
ENERGY RECOVERY  
PROCESS COOLING WATER  
NATURAL GAS

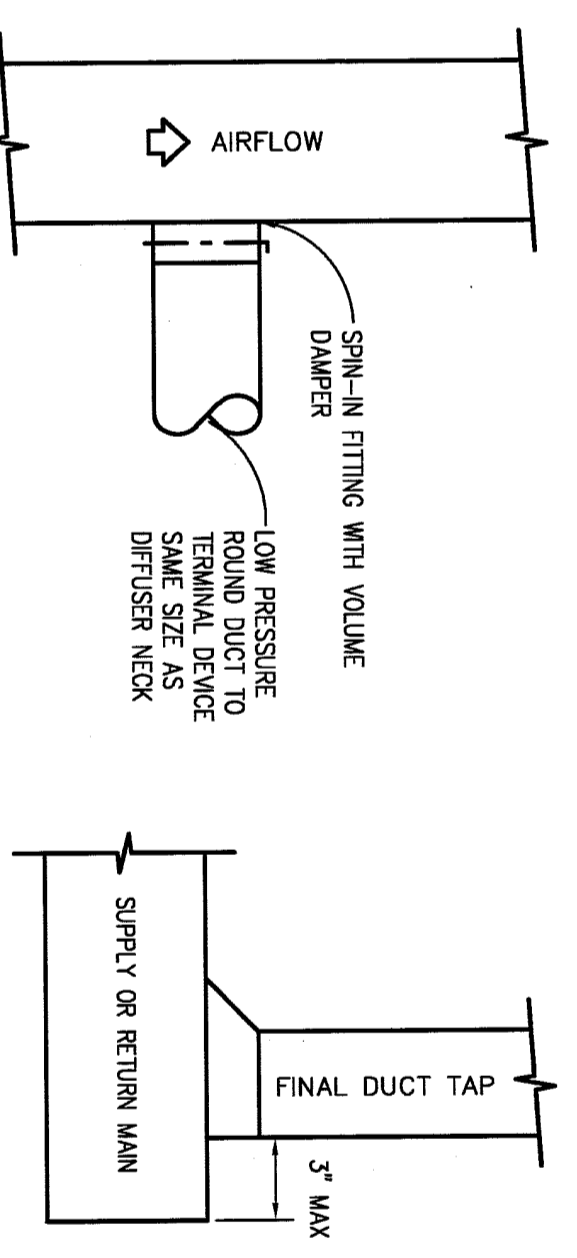
NOTE: BOTTOM AS INDICATED OR SEE CONNECTION IS ACCEPTABLE CONNECTION ABOVE CENTERLINE OF MAIN IS NOT ACCEPTABLE.



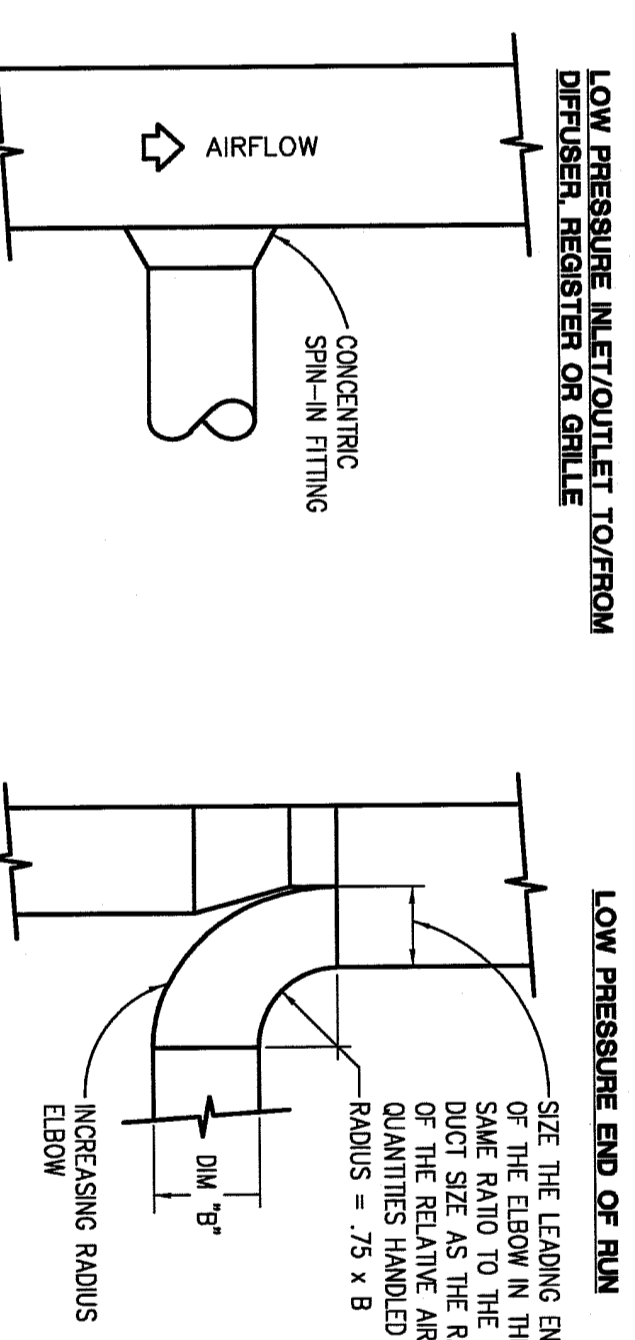
**GREASE INTERCEPTOR DETAIL**  
NO SCALE



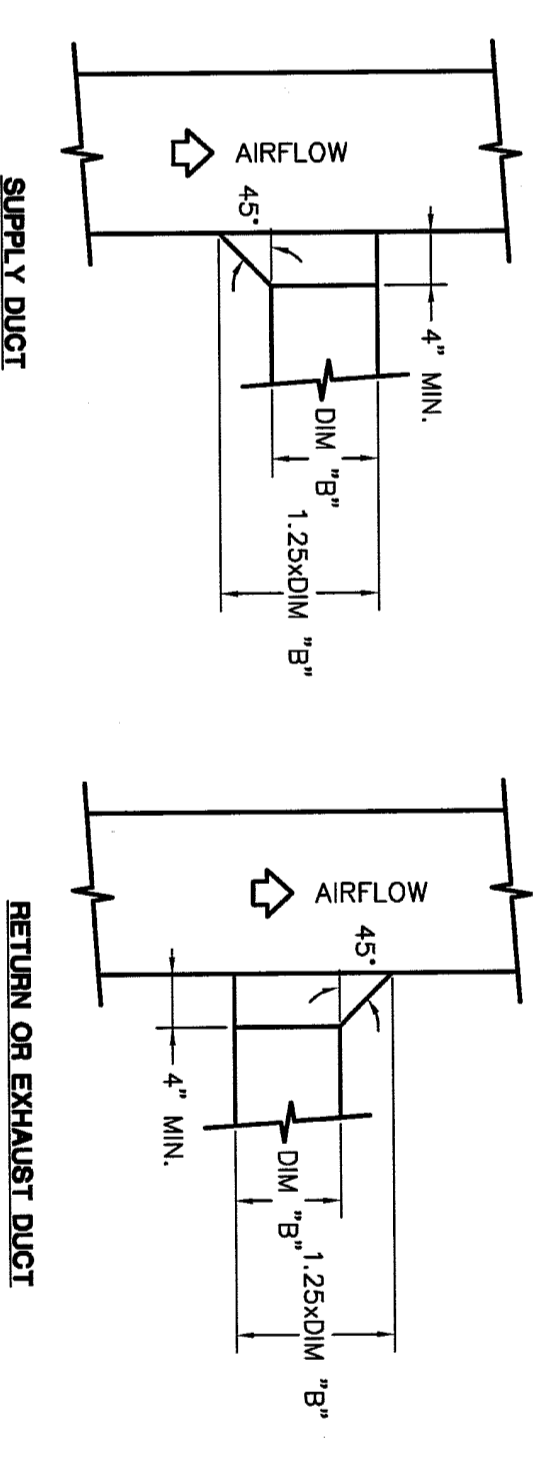
**ROOF MOUNTED POWER VENTILATOR EXHAUST FAN DETAIL**  
NO SCALE



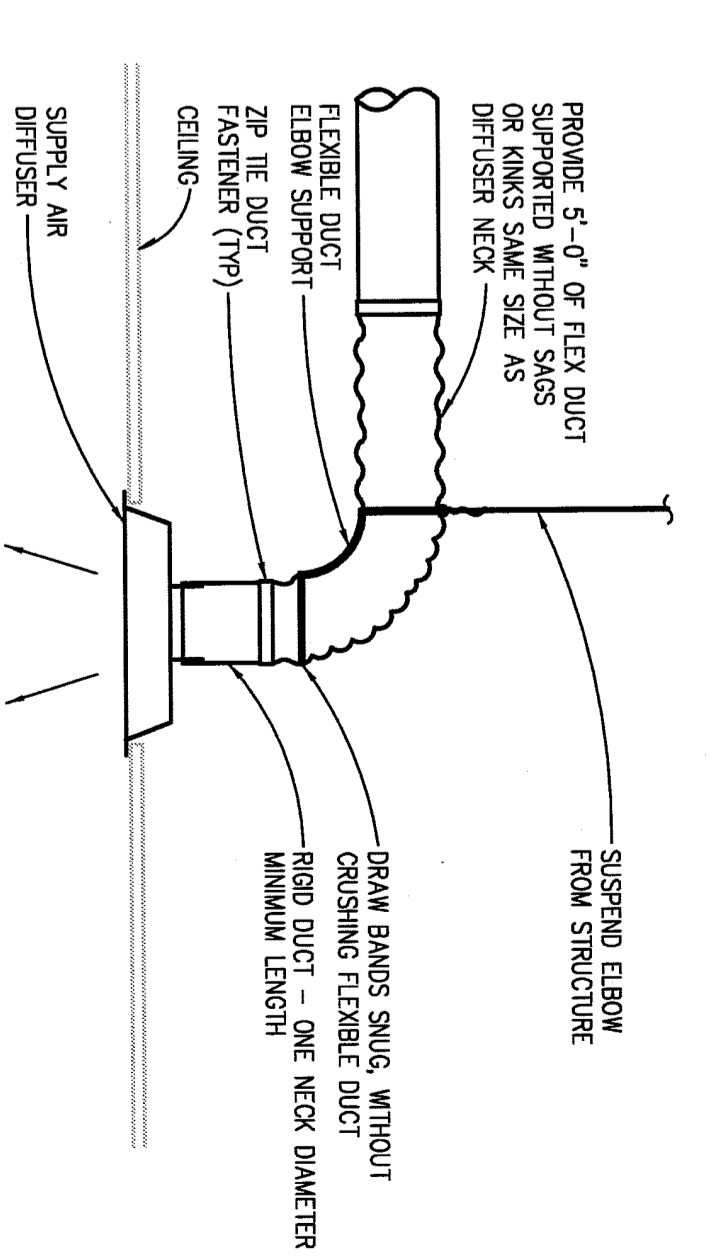
**LOW PRESSURE INLET/OUTLET TO/FROM EXHAUST FAN DETAIL**  
NO SCALE



**LOW PRESSURE END OF RUN**



**RECTANGULAR TO ROUND DUCT**  
**SUPPLY/RETURN OR EXHAUST DUCT**  
NO SCALE



**ROUND NECK SUPPLY AIR DIFFUSER DETAIL**  
NO SCALE

# RIISING STAR ACADEMY

## MILLER ELEMENTARY SCHOOL CENTER LINE PUBLIC SCHOOLS

MECHANICAL DETAILS

PRELIMINARY	■
DESIGN DEVELOPMENT	■
CONSTRUCTION	■
FINAL RECORD	□
DRAWN BY:	SWM
CHECKED BY:	RNR
REVISIONS:	
DATE:	March 11, 2013
SHEET NO.:	

**M-6.1**

JOB NO.: 121440

**PLUMBING PIPING & VALVE APPLICATION SCHEDULE**

Table with columns for Material, Pressure Connections, Gravity DWI Connections, and Isolation Valves. Rows include Aboveground Domestic Water, Aboveground Sanitary Waste & Vent, and Underround Sanitary Waste & Vent.

- GENERAL NOTES
1. 'X' INDICATES ACCEPTABLE SELECTION...
2. ABOVEGROUND PLUMBING PIPING...
3. USE UNIONS OR FLANGES AT VALVE AND EQUIPMENT CONNECTIONS...

**ABOVEGROUND PLUMBING PIPE & ACCESSORY INSULATION APPLICATION SCHEDULE**

Table with columns for Insulation Material & Thickness (Inches) and Field-Applied Jacket Material. Rows include Indoor Pipe System and Domestic Cold Water.

- GENERAL NOTES
1. 'X' OR THICKNESS IN INCHES INDICATES ACCEPTABLE SELECTION...
2. INSULATE PIPING WITH OR THROUGH EQUIPMENT THE SAME AS INDOOR PIPING...

**DUCT SYSTEM APPLICATION SCHEDULE**

Table with columns for Duct Material, Insulation Material & Thickness, Field Applied Material, and Seal Class. Rows include Air Systems and Duct Systems Located Indoors.

- GENERAL NOTES
1. 'X' INDICATES ACCEPTABLE SELECTION...
2. ABOVEGROUND PLUMBING PIPING...
3. USE UNIONS OR FLANGES AT VALVE AND EQUIPMENT CONNECTIONS...

**DUCT SYSTEM INSULATION APPLICATION SCHEDULE**

Table with columns for Insulation Material & Thickness and Field Applied Material. Rows include Duct Systems Located Indoors and Kitchen Exhaust Air (Type II Hood).

- GENERAL NOTES
1. 'X' OR THICKNESS IN INCHES INDICATE ACCEPTABLE SELECTION...
2. ABOVEGROUND PLUMBING PIPING...
3. USE UNIONS OR FLANGES AT VALVE AND EQUIPMENT CONNECTIONS...

**SCHEDULES, GENERAL NOTES:**

- 1. REFER TO ELECTRICAL STANDARD SCHEDULES...
2. PROVIDE THE FOLLOWING FACTORY-WEBBED ELECTRICAL OPTIONS/ACCESSORIES...
3. FOR MODULATION/CONTROL...
4. FANBELT FREQUENCY CONTROLLERS ARE INDICATED TO BE PROVIDED...
5. WHERE EQUIPMENT IS INDICATED TO HAVE A SINGLE POINT ELECTRICAL CONNECTION...
6. WHERE PACKAGED EQUIPMENT IS PROVIDED, WAMPAGE MUST INDICATE MAINLINE OVERCURRENT PROTECTION...
7. WHERE EQUIPMENT IS DESIGNATED BY MANUFACTURER AND MODEL NUMBER...
8. FACTORY MOUNTED SERVICE RECEPTACLE WITH APPROPRIATE RISES AND...
9. SIZE ALL EQUIPMENT FEEDERS BASED ON THE LISTED LOAD (MANUAL OVERCURRENT PROTECTION, REFER TO THE FEEDER AND BRANCH CIRCUIT SIZING SCHEDULE ON THE ELECTRICAL STANDARD SCHEDULES SHEET).

**RIISING STAR ACADEMY MILLER ELEMENTARY SCHOOL CENTER LINE PUBLIC SCHOOLS**

Project information including: PRELIMINARY DESIGN DEVELOPMENT CONSTRUCTION, DRAWN BY: SWM, CHECKED BY: RNM, REVISIONS, DATE: March 11, 2013, SHEET NO.: M-7.1, JOB NO.: 121440, and WPA ARCHITECTS & ENGINEERS logo.

### INDIRECT FIRED MAKE-UP AIR UNIT SCHEDULE

UNIT ID.	AREA	SERIES	FLOW OUTSIDE AIR IN. W.G. IN. W.G.	FLOW OUTSIDE AIR IN. W.G. IN. W.G.	T.S.P. FAN SPEED RPM	T.S.P. FAN SPEED RPM	HP	HEATING SECTION - GAS FUEL (NATURAL GAS)		HEATING SECTION - GAS FUEL (NATURAL GAS)		MAXIMUM UNIT DIMENSIONS		MINIMUM UNIT DIMENSIONS		MAXIMUM OPENING WEIGHT LBS.	ELECTRICAL		MODEL NO.	NOTES					
								HEATING CAPACITY (BTU)	HEATING CAPACITY (BTU)	HEIGHT (IN.)	WIDTH (IN.)	HEIGHT (IN.)	WIDTH (IN.)	VOLTS	PHASE		WATER	WATER							
MAU-1	KITCHEN	2.025/1.000	2.025/1.000	0.5	0.75	724	0.48	3/4	-10	70	225	180	7"	30X	102	52	52	1.690	2000	3	9.9	15	8	10-113-1100	NOTE 3, 4

NOTE: 1. REFER TO SCHEDULES GENERAL NOTES.  
 2. MODEL NUMBERS ARE GREEN/CHEEK UNLESS OTHERWISE NOTED.  
 3. UNIT SHALL HAVE A TWO SPEED OPERATION VIA INTERNAL VFC. REFER TO THERMOSTAT CONTROL DRAWINGS FOR OUTSIDE AIR CONTROL SEQUENCE.  
 4. MAU-1 AND EF-1 SHALL BE A PACKAGED UNIT MOUNTED ON A SINGLE COMBINATION CURB (22 INCHES TALL).

### POWER VENTILATOR SCHEDULE

UNIT IDENTIFICATION	SYSTEM	TYPE	FACE SIZE	NECK SIZE	FRAME TYPE	ACCESSORY	CONSTRUCTION	FINISH	MODEL NUMBER	REMARKS	TIP SPEED RPM	AIR BEAR. CAPACITY (CFM)	ELECT. MOTOR HP	DOME TYPE	CURE HEIGHT INCHES	MOUNTING/CONTROL TYPE	VOLTS	PHASE	OPTIONS/ACCESSORIES	MODEL NUMBER	REMARKS
EF-2	DISHWASHER HOOD	CENTRIFUGAL	800	0.3	2.881	0.93	0.08	1/4	1725	BELT	NOTE 5	AUTO	115	1	8	CFE-101-4					

NOTE: REFER TO SCHEDULES GENERAL NOTES.  
 1. EF-1 AND MAU-1 SHALL BE A PACKAGED UNIT MOUNTED ON A SINGLE CURB.  
 2. MODEL NUMBERS ARE GREEN/CHEEK UNLESS OTHERWISE NOTED.  
 3. FAN DISCHARGE SHALL BE A MINIMUM OF 30 INCHES ABOVE ROOF.

### GRILLE, REGISTER, AND DIFFUSER SCHEDULE

UNIT IDENTIFICATION	TYPE	FACE SIZE	NECK SIZE	FRAME TYPE	ACCESSORY	CONSTRUCTION	FINISH	MODEL NUMBER	REMARKS
S-1	DIFFUSER	24x24	SEE PLANS	NOTE 2	---	STEEL	WHITE	PPF	
R-1	GRILLE	48x24	48x24	NOTE 2	---	STEEL	WHITE	80	

NOTE: 1. MODEL NUMBERS ARE GREEN UNLESS OTHERWISE NOTED.  
 2. CONTRIBUTOR TO DOOR/VALVE FRAME TYPE WITH ARCHITECTURAL SELECTED CEILING PLAN.

### GREASE TRAP SCHEDULE

UNIT IDENTIFICATION	BODY MATERIAL	FLOW RATE GPM	GREASE CAPACITY LBS	INLET/OUTLET SIZE INCHES	BODY HEIGHT INCHES	BODY LENGTH X WIDTH INCHES	EXTENSION HEIGHT INCHES	MOUNTING STYLE	VOLTS	PHASE	ELECTRICAL OPTIONS/ACCESSORIES	MODEL NUMBER	REMARKS
GT-1	POUR/VENT	20	100	3	15	27 X 21	---	RECESSED	---	---	---	99-20	NOTE 5

NOTE: REFER TO SCHEDULES GENERAL NOTES.  
 1. MODEL NUMBERS ARE BIG DIFFER UNLESS OTHERWISE NOTED.  
 2. MANUFACTURER SHALL PROVIDE COMPRESSION RESISTANT EXHAUST FOR EXTERIOR DRAINING.  
 3. MANUFACTURER SHALL PROVIDE FLOW CONTROL FITTING.  
 5. MANUFACTURER SHALL PROVIDE FLOW CONTROL FITTING.

### PLUMBING CONNECTION SCHEDULE

UNIT IDENTIFICATION	SIZE INCHES	TYPE INCHES	SIZE INCHES	TYPE INCHES	REMARKS
WC-1	1 1/2	---	4	2	
LW-1	1/2	1/2	1 1/2	1 1/2	
FD-1	---	---	3	---	
FPD-1	---	---	3	---	
FS-1	---	---	3	---	

NOTE: INDIVIDUAL WATER LINE BRANCHES, WASTE LINES, VENTS, AND TRAPS FOR CONNECTION TO NEIGHBORLY FEATURES, TUBS, FITTINGS, AND SPECIALTIES SHALL BE IN WHOLESALE SCHEDULE OR AS INDICATED ON DRAWINGS.  
 WHICH EVER IS GREATER.

### PLUMBING FIXTURE SCHEDULE

UNIT IDENTIFICATION	FIXTURE MATERIAL	MOUNTING STYLE	CONSUMPTION GALLONS/FLUSH	SUPPLY SPIND LOCATION	FLUSH VALVE MANUFACTURER/MODEL	TOILET SEAT MANUFACTURER/MODEL	MANUFACTURER/MODEL	REMARKS
WC-1	VITREOUS CHINA	FLOOR	1.6	TOP	RECAL-111 XL	AMERICAN STANDARD WASH-2000	AMERICAN STANDARD WASH-2000	

AMERICAN MANUFACTURERS: SINKS, STANDBO, KOHLER, SLOAN, ZURN  
 TOILET SEATS - BROS, CHURCH, OUBORI, FERROSON, QUSONTE, SIMPSONSON, ZURN  
 FLUSHMETERS - CORNE & DELANY, DELTA, SLOAN, ZURN

UNIT IDENTIFICATION	FIXTURE MATERIAL	MOUNTING STYLE	CONSUMPTION GALLONS/FLUSH	SUPPLY SPIND LOCATION	FLUSH VALVE MANUFACTURER/MODEL	TOILET SEAT MANUFACTURER/MODEL	MANUFACTURER/MODEL	REMARKS
LW-1	VITREOUS CHINA	WALL	1.5 x 10" x 6-1/2"	1	20-1/2" x 12-1/2"	AMERICAN STANDARD 5400.172.1V05	AMERICAN STANDARD 5400.172.1V05	PROVIDE ASSE. 1070 WINK VALVE

AMERICAN MANUFACTURERS: SINKS, STANDBO, KOHLER, SLOAN, ZURN  
 TOILET SEATS - BROS, CHURCH, OUBORI, FERROSON, QUSONTE, SIMPSONSON, ZURN  
 FLUSHMETERS - CORNE & DELANY, DELTA, SLOAN, ZURN

UNIT IDENTIFICATION	FIXTURE MATERIAL	MOUNTING STYLE	CONSUMPTION GALLONS/FLUSH	SUPPLY SPIND LOCATION	FLUSH VALVE MANUFACTURER/MODEL	TOILET SEAT MANUFACTURER/MODEL	MANUFACTURER/MODEL	REMARKS
FD-1	STAINLESS STEEL	ROUND	3	BOTTOM	---	---	---	SOX CHIEF/ 832-99SR PROVIDE NICKEL BRONZE STANDER IN TOILET ROOMS
FPD-1	STAINLESS STEEL	ROUND	3	BOTTOM	---	---	---	SOX CHIEF/ 832-99SR PROVIDE SOX CHIEF MODEL
FS-1	PVC	SQUARE	3	BOTTOM	3/4	12 x 12	---	SOX CHIEF/ 881-2965 PROVIDE SOX CHIEF MODEL

AMERICAN MANUFACTURERS: SINKS, STANDBO, KOHLER, SLOAN, ZURN  
 TOILET SEATS - BROS, CHURCH, OUBORI, FERROSON, QUSONTE, SIMPSONSON, ZURN  
 FLUSHMETERS - CORNE & DELANY, DELTA, SLOAN, ZURN

NOTE: 1. ALL PLUMBING FIXTURES, EQUIPMENT, TRIM AND FITTINGS SHALL COMPLY WITH LOCAL, STATE AND FEDERAL REGULATIONS AND CODES, INCLUDING, BUT NOT LIMITED TO, WATER AND ENERGY CONSERVATION CODES. THE SCHEDULED AND/OR SPECIFIC PLUMBING FIXTURES AND EQUIPMENT PERFORM THE MANUFACTURER AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE AN ALTERNATE FOR COMING FIXTURES, EQUIPMENT, TRIM OR FITTINGS. THE ABSENCE OF AN ALTERNATE SHALL BE CONSIDERED TO MEAN THAT THE CONTRACTOR'S DO INCLUDES ALL COSTS NECESSARY TO MEET ALL REGULATIONS AND CODES.

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**WPA**  
 WAREHOUSES & SUPPLIERS

PRELIMINARY  
 DESIGN DEVELOPMENT  
 CONSTRUCTION   
 FINAL RECORD

DRAWN BY: SWM  
 CHECKED BY: RMR

REVISIONS:

# RISING STAR ACADEMY

## MILLER ELEMENTARY SCHOOL

### CENTER LINE PUBLIC SCHOOLS

JOB NO.: 121440

# M-7.2

DATE: March 11, 2013  
 SHEET NO.:

**TEMPERATURE CONTROL - SYMBOLS LIST**

**SCHEMATIC SYMBOLS**

SYMBOL	DESCRIPTION
AFG	AIR FLOW CONTROLLER
AD	ADJUSTAL, STRAP ON BLUB
CD	CARBON DIOXIDE SENSOR - WALL MOUNTED
CDW	CARBON DIOXIDE SENSOR - DUCT MOUNTED
CDM	CARBON MONOXIDE SENSOR - WALL MOUNTED
CDMW	CARBON MONOXIDE SENSOR - DUCT MOUNTED
CS	CURRENT SWITCH
CT	CURRENT TRANSMITTER
DA	DAMPERS - INLET VANES
DB	DAMPERS - OPPOSED BLADE
DBP	DAMPERS - PARALLEL BLADE
DM	DAMPERS MOTOR
DMR	DAMPERS MOTOR W/ POSITIVE POSITIONER
DP	DIFFERENTIAL PRESSURE TRANSMITTER
DPB	DIFFERENTIAL PRESSURE SWITCH
DR	ELECTRIC-PNEUMATIC RELAY
DRP	ELECTRIC TO PNEUMATIC TRANSDUCER
DM	FIRE ALARM SYSTEM, ADDRESSABLE CONTROL MODULE
DMB	FIRE ALARM SYSTEM, ADDRESSABLE INTERFACE MODULE
FM	FLOW WEIGHING STATION
FMW	FLOW METER
FS	FLOW SWITCH
FZ	FREEZE/STAT
G	GAUGE - FLOW
G	GAUGE - PRESSURE
G	GAUGE - TEMPERATURE
G	GAUGE FOR STAT OR SENSOR
H	HUMIDISTAT OR HUMIDITY SENSOR (AS SHOWN ON TC DRAWINGS)
H	HUMIDITY SENSOR, DUCT MOUNTED
L	LEVEL SWITCH OR TRANSMITTER
L	LIMIT SWITCH
L	LINE - ELECTRIC
L	LINE - PNEUMATIC
M	MAIN CONTROL, AIR SUPPLY
MS	MOTOR STARTER
O	OCCUPANCY SENSOR
PL	PILOT LIGHT OR BEACON R - RED LENS B - BLUE LENS G - GREEN LENS
PE	PNEUMATIC-ELECTRIC SWITCH
PS	PRESSURE SWITCH
PT	PRESSURE TRANSMITTER
R	RELAY, ELECTRIC
S	SELECTOR SWITCH, (NUMBER OF POSITIONS)
S	SIGNAL - DDC/BMS, ANALOG INPUT
S	SIGNAL - DDC/BMS, ANALOG OUTPUT
S	SIGNAL - DDC/BMS, DIGITAL INPUT
S	SIGNAL - DDC/BMS, DIGITAL OUTPUT
S	SIGNAL - PACKAGED EQUIPMENT, ANALOG INPUT
S	SIGNAL - PACKAGED EQUIPMENT, ANALOG OUTPUT
S	SIGNAL - PACKAGED EQUIPMENT, DIGITAL INPUT
S	SIGNAL - PACKAGED EQUIPMENT, DIGITAL OUTPUT

**SCHEMATIC SYMBOLS (CONT)**

SYMBOL	DESCRIPTION
SD	SPACE DETECTOR - DUCT MOUNTED
SD	SPACE DETECTOR - SPACE MOUNTED
SR	START/STOP RELAY
SP	STATIC PRESSURE TRANSMITTER
SP	STATIC PRESSURE SENSOR OR PROBE
S	SWITCH
T	TEMPERATURE SENSOR - ROOF ELEMENT IN WELL
T	TEMPERATURE SENSOR - STRAP ON BLUB
T	TEMPERATURE SENSOR - DUCT MOUNTED AND ELEMENT
T	TEMPERATURE SENSOR - DUCT MOUNTED AND ELEMENT (AS SHOWN ON TC DRAWINGS)
T	TEMPERATURE FOR NIGHT SETBACK
T	TRANSFORMER
V	VALVE - 2 WAY CONTROL VALVE
V	VALVE - 3 WAY CONTROL VALVE
V	VALVE - 3 WAY CONTROL W/ POSITIONER
V	VARIABLE FREQUENCY CONTROLLER
V	VELOCITY SENSOR
V	VELOCITY SWITCH
V	VALVE SENSOR

**WIRING SYMBOLS**

SYMBOL	DESCRIPTION
AD	ADJUSTABLE DEVICE (AS DEFINED ON TC DRAWINGS)
AS	COIL - MOTOR STARTER CONTACTOR
AS	COIL - RELAY
AS	COIL - TIME DELAY RELAY
AS	COIL - VARIABLE FREQUENCY CONTROLLER CONTACTOR
AS	COIL - EP OR SOLENOID VALVE
AS	CONTACT - INSTANT OPERATING, NO
AS	CONTACT - INSTANT OPERATING, NC
AS	CONTACT - TIMED AFTER COIL IS ENERGIZED, NO
AS	CONTACT - TIMED AFTER COIL IS ENERGIZED, NC
AS	CONTACT - TIMED AFTER COIL IS DE-ENERGIZED, NO
AS	CONTACT - TIMED AFTER COIL IS DE-ENERGIZED, NC
AS	GROUND
AS	MOTOR, SINGLE PHASE
AS	PILOT LIGHT OR BEACON R - RED LENS B - BLUE LENS G - GREEN LENS
AS	PILOT LIGHT, WITH PUSH-TO-TEST
AS	PUSH BUTTON - MOMENTARY CONTACT, NO
AS	PUSH BUTTON - MOMENTARY CONTACT, NC
AS	PUSH BUTTON - MOMENTARY CONTACT, NO & NC
AS	PUSH BUTTON - MOMENTARY, NO (WASHROOM HEAD)
AS	PUSH BUTTON - MOMENTARY, NC (WASHROOM HEAD)

**WIRING SYMBOLS (CONT)**

SYMBOL	DESCRIPTION
S	SWITCH - 2 POSITION SELECTOR
S	SWITCH - 3 POSITION SELECTOR HAND/PAUL/D
S	SWITCH - FLOW (AIR, WATER, ETC.), NO
S	SWITCH - FLOW (AIR, WATER, ETC.), NC
S	SWITCH - LIMIT, NO
S	SWITCH - LIMIT, NO HELD CLOSED
S	SWITCH - LIMIT, NC
S	SWITCH - LIMIT, NC, HELD OPEN
S	SWITCH - LIQUID LEVEL, NO
S	SWITCH - LIQUID LEVEL, NC
S	SWITCH - MANUAL SPST, NO
S	SWITCH - MANUAL SPST, NO
S	SWITCH - MANUAL DPDT, NO
S	SWITCH - MANUAL SPST, NC
S	SWITCH - MANUAL DPDT, NC
S	SWITCH - MANUAL DPDT, NC
S	SWITCH - MANUAL DPDT, NC
S	SWITCH - PRESSURE & VACUUM, NO
S	SWITCH - PRESSURE & VACUUM, NC
S	SWITCH - TEMPERATURE ACTIVATED, NO
S	SWITCH - TEMPERATURE ACTIVATED, NC
S	THERMAL OVERLOAD, SINGLE PHASE
S	THERMAL OVERLOAD CONTACTS - 3 PHASE
S	TRANSFORMER
S	WIRE TERMINATION AT DEVICE
S	WIRE TO WIRE TERMINATION
S	WIRING NOT CONNECTED

**WIRING TERMS**

ABBREVIATION	DESCRIPTION
SPST	SINGLE POLE SINGLE THROW
SPDT	SINGLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
DPDT	DOUBLE POLE DOUBLE THROW
NO	NORMALLY OPEN
NC	NORMALLY CLOSED
NOC	NORMALLY OPEN TIMED OPEN
NOC	NORMALLY OPEN TIMED CLOSED
NOC	NORMALLY CLOSED TIMED OPEN
NOC	NORMALLY CLOSED TIMED CLOSED

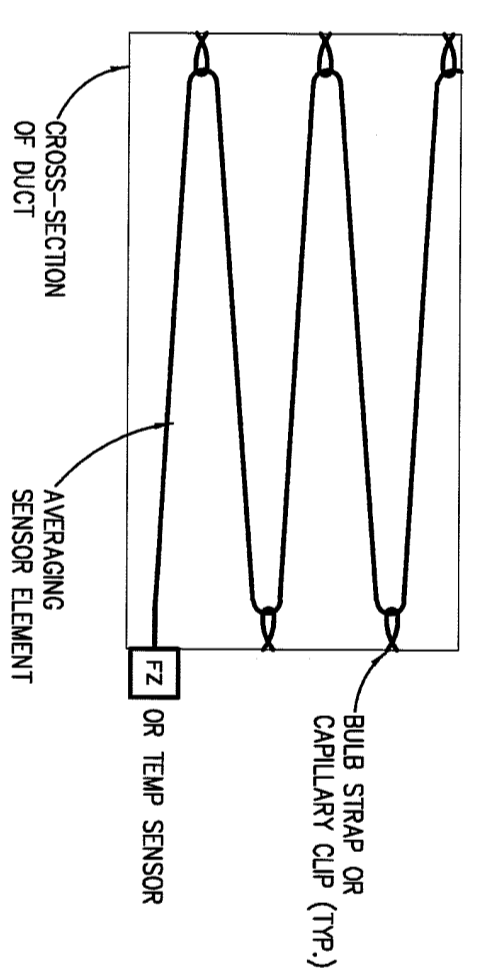
**PNEUMATIC CONTROL SYMBOLS (ADDITIONAL)**

SYMBOL	DESCRIPTION
LA	LOAD ANALYZER
LA	LOW PRESSURE SELECTOR RELAY
LA	MANUAL, MANUAL POSITION SWITCH
LA	PNEUMATIC SWITCH
LA	RAID RELAY
LA	REVERSE CONTROLLER
LA	SWITCHED CONTROL, AIR SUPPLY

NOTE: REFER TO MECHANICAL STANDARDS ON DRAWING FOR ADDITIONAL SYMBOLS & ABBREVIATIONS THAT MAY BE USED ON TEMPERATURE CONTROL DRAWINGS.

NOTE: SOME SYMBOLS & ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT.

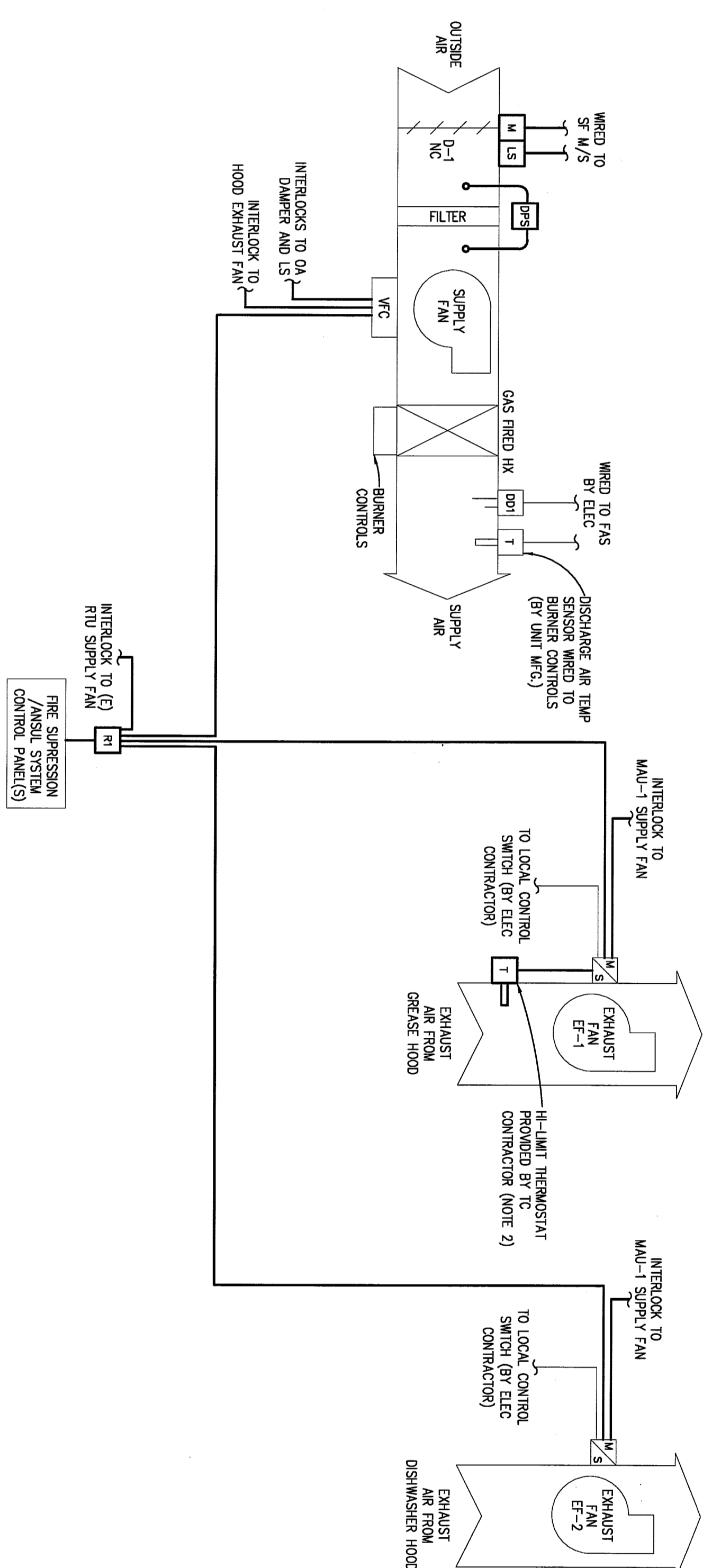
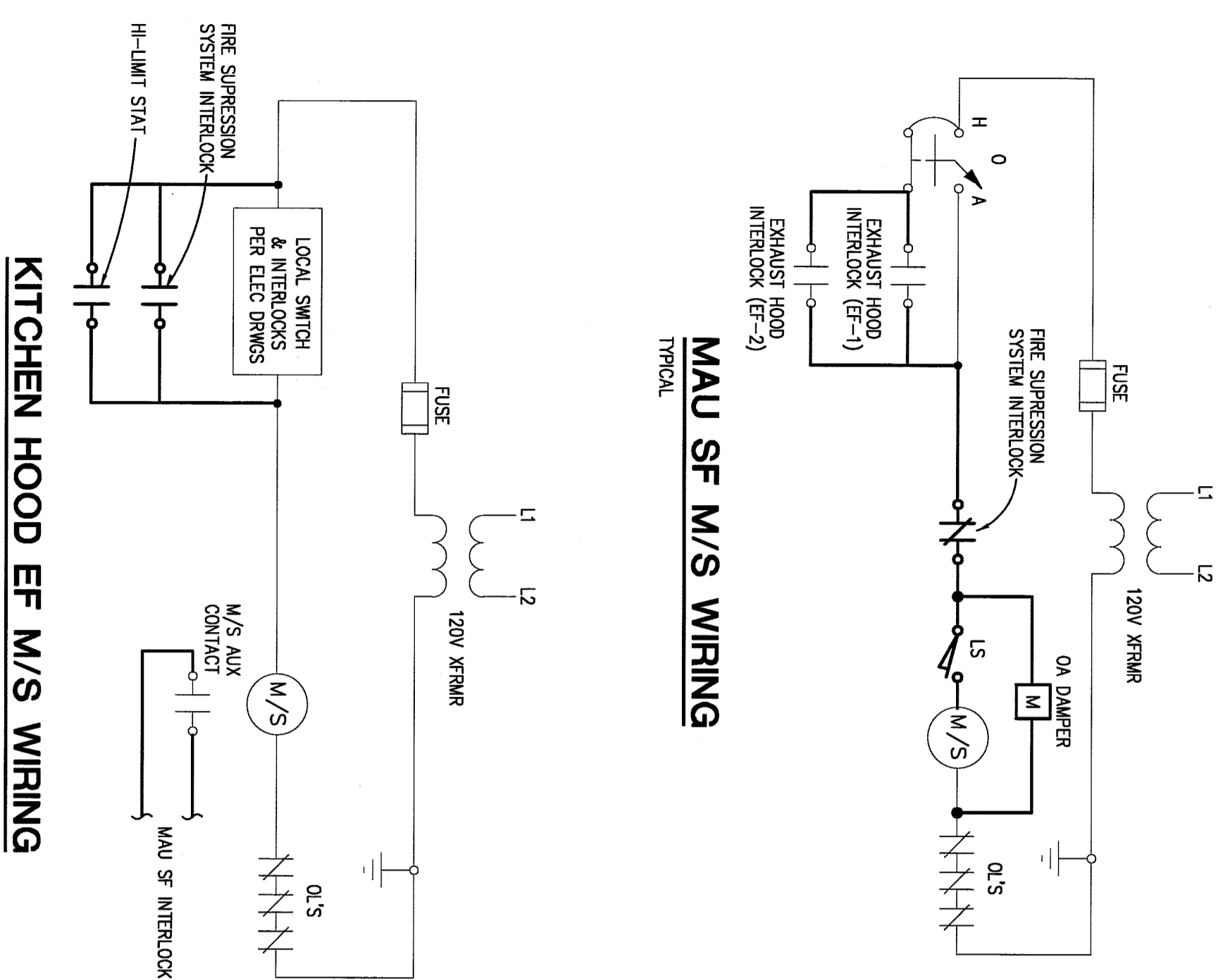
**AVERAGING ELEMENT INSTALLATION DETAIL**



**GENERAL NOTES**

1. THESE GENERAL NOTES SHALL BE APPLICABLE FOR ALL TC DRAWINGS.
2. "PROVIDE" IS DEFINED AS FINISH AND INSTALL.
3. TO CONTRACTORS SHALL BE RESPONSIBLE TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS.
4. FOR TEMPERATURE CONTROL DRAWINGS ONLY, ALL DETAIL INFORMATION IDENTIFIED WITH HEAVY LINES SHOULD BE PROVIDED BY THE CONTRACTOR. THE WEIGHT SHALL BE PROVIDED BY OTHER TRADES.
5. ALL CONTROL SCHEMATICS AND WIRING DIAGRAMS ARE FOR THE CLARIFICATION OF EQUIPMENT INTERLOCKING FUNCTIONS AND THE INTERFACE OF VARIOUS INFORMATION IDENTIFIED WITH LIGHT LINE WEIGHT SHALL BE PROVIDED BY OTHER TRADES.
6. TO CONTRACTOR SHALL PROVIDE FOR CONTROLS AS REQUIRED TO MEET MINIMUM DESIGN DOCUMENTS. REFER TO THE "WIRING" FOR THE CONTROLS WIRING.
7. ALL TC PROVIDED COMPONENTS AND ALL TC CONTRACTOR INSTALLED WIRING SHALL BE LABELED PER SPECIFICATIONS.
8. ALL WIRING AND SYSTEM CONTROL VARIANTS SHALL BE IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURERS RECOMMENDATION AND THE ELECTRICAL SPECIFICATIONS.
9. DUCT SHOCK DETECTORS SHALL BE FINISHED, MOUNTED AND WIRED TO THE FIRE ALARM SYSTEM BY THE ELECTRICAL CONTRACTOR. ELECTRICAL SHALL PROVIDE THE ALARM SYSTEM CONTROL MODULES FOR REQUIRED SENSITIVITIES TO MOTOR STARTERS AS STATED. TO CONTRACTOR SHALL PROVIDE INTERLOCK WIRING FROM CONTROL MODULES TO MOTOR STARTERS.
10. ALL DDC AND CONTROL INTERLOCK WIRING SHALL BE BY TC. CONTRACTOR UNLESS OTHERWISE NOTED. TC CONTRACTOR SHALL COORDINATE WITH MOTOR STARTER SUPPLIERS TO DETERMINE EXACT WIRING REQUIREMENTS AND TERMINATION POINTS.
11. ALL DDC AND CONTROL INTERLOCK WIRING BETWEEN INTERMEDIATE TERMINAL SHALL BE INSTALLED WITHOUT INTERMEDIATE STOPS. WIRE STRUNG AT INTERMEDIATE TERMINAL SHALL BE 18 AWG INSULATED.
12. ALL ELECTRICAL WIRING AND RACKWAY SYSTEMS SHALL COMPLY WITH ELECTRICAL CODES AND SPECIFICATIONS. TO CONTRACTOR SHALL PROVIDE THE ELECTRICAL RACKWAY SYSTEMS. THE OTHER FOR 24V WIRING.
13. TC CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER SUPPLIES REQUIRED FOR TC SYSTEM UNLESS OTHERWISE NOTED. REFER TO ELECTRICAL PANEL SCHEDULES FOR CIRCUIT USE WITH ELECTRICAL COMPARTMENT.
14. TC CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL FIELD MOUNTED COMPONENTS.
15. THERMISTATS AND SPACE TEMPERATURE SENSORS SHALL BE MOUNTED 4'-0" ABOVE FINISH FLOOR LEVEL. TEMPERATURE SENSORS PROVIDE DAMPS FOR SPACE TEMP SENSORS LOCATED IN PUBLIC AREAS.
16. TC CONTRACTOR SHALL PROVIDE AUXILIARY PANELS FOR REQUIRED PANEL MOUNTED EQUIPMENT SUCH AS RELAYS, TRANSDUCERS, CONTROL TRANSFORMERS, ETC. AUXILIARY PANELS SHALL BE LOCATED NEXT TO ASSOCIATED DDC PANEL.
17. REMOTE MOUNTED FIELD DEVICES SUCH AS RELAYS, CONTROL TRANSFORMERS, ETC. SHALL BE HOUSED IN AN ENCLOSURE PROVIDED BY THE TC CONTRACTOR.
18. CONTROL TRANSFORMERS WHEN REQUIRED SHALL BE SIZED FOR 100% OF ACTUAL LOAD.
19. ALL CONTROL DAMPERS AND ASSOCIATED CONTROL ACTUATORS IDENTIFIED ON TC DRAWINGS SHALL BE FINISHED BY TC CONTRACTOR UNLESS OTHERWISE NOTED. DAMPER SIZE AND LOCATIONS ARE INDICATED ON MECHANICAL FLOOR PLAN DRAWINGS.
20. ALL CONTROL DAMPERS FINISHED BY THE TC CONTRACTOR SHALL BE INSTALLED BY CONTRACTOR FOR SENSOR INSTALLATIONS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR.
21. DAMPER ACTUATORS SHALL BE INSTALLED BY TC CONTRACTOR.
22. TC CONTRACTORS SHALL FIELD VERIFY ALL REQUIRED PACKAGED CONTROL COMPONENTS FINISHED BY EQUIPMENT SUPPLIERS WHENEVER IDENTIFIED ON TC DRAWINGS. TC CONTRACTOR SHALL CORRECTIVE SPECIFIC SYSTEM WIRING REQUIREMENTS WITH PROVIDED EQUIPMENT SUPPLIERS.

	WINGET Y ASSOCIATES, INC. ARCHITECTS & ENGINEERS 3050 VAN DYKE AVENUE SUITE 117 WILMINGTON, OHIO 45393 PHONE: 513.931.9222 WWW.WJA98.COM	Peter Bosso Associates Inc. CONSULTING ENGINEERS 1000 LAMAR, SUITE 300 WILMINGTON, OHIO 45393 PHONE: 513.931.9222 WWW.PB98.COM	PRELIMINARY <input type="checkbox"/>	DESIGN DEVELOPMENT <input type="checkbox"/>	CONSTRUCTION <input type="checkbox"/>	FINAL RECORD <input type="checkbox"/>
			DRAWN BY: SWM CHECKED BY: RMR REVISIONS:	DATE: March 11, 2013 SHEET NO.: <b>M-8.1</b> JOB NO.: 1211440	TEMPERATURE CONTROL SYSTEMS AND GENERAL NOTES	<b>RISEING STAR ACADEMY</b> MILLER ELEMENTARY SCHOOL CENTER LINE PUBLIC SCHOOLS

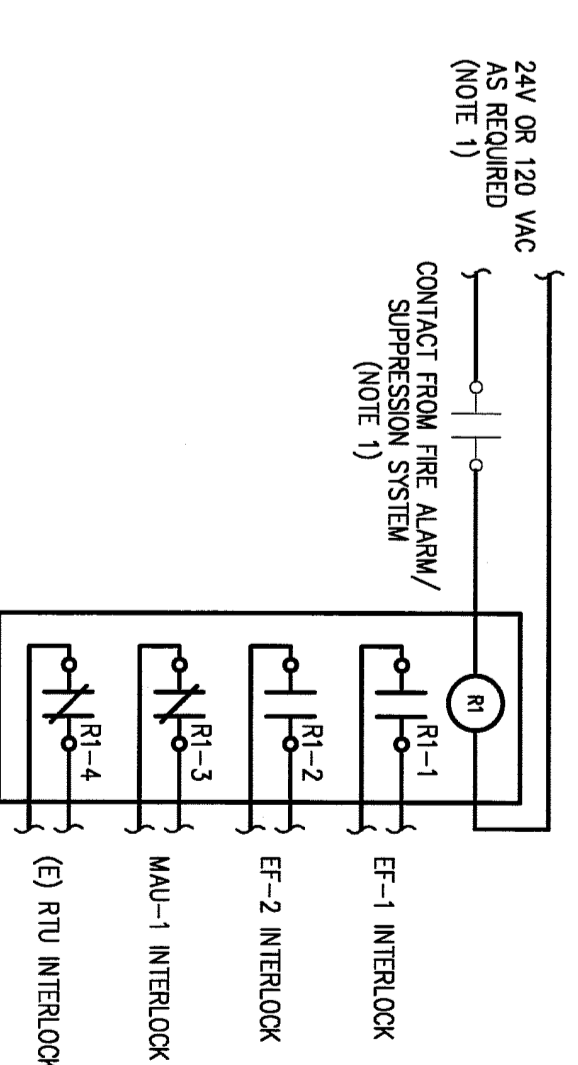


**KITCHEN EXHAUST HOODS (EF-1 & 2) & MAKE-UP AIR UNIT (MAU-1) CONTROL**

- NOTES:
1. COORDINATE WIRING WITH EQUIPMENT SUPPLIERS.
  2. TC CONTRACTOR SHALL FINISH AND INSTALL IFC 2008 COMPLIANT TEMPERATURE INTERLOCK KIT FROM GREENBICK. CONTACT MORGAN AP PRODUCTS (248-537-1026).

**SEQUENCE OF OPERATION**

- KITCHEN EXHAUST HOODS AND MAKE-UP AIR UNIT CONTROL (MAU-1, EF-1, & EF-2):
- NOTE: ALL SETPOINTS INCLUDING RESET SETPOINTS RESPONDED IN SEQUENCE SHALL BE ADJUSTABLE. APPROPRIATE DIAGRAMS SHALL BE USED TO PREVENT SHORT CIRCUITING SITUATIONS. ALL FAN MOTOR CONTROL SWITCHES SHALL BE IN AUTO POSITION.
1. WHEN DISMISHER HOOD (EF-2) IS ACTIVATED BY ITS LOCAL CONTROL SWITCH, WIRING INTERLOCK SHALL ACTIVATE ASSOCIATED MAKE-UP AIR UNIT (MAU-1) AT LOW FAN SPEED (50% SCHEDULED AIRFLOW).
  2. WHEN GREASE HOOD (EF-1) IS ACTIVATED BY ITS LOCAL CONTROL SWITCH, WIRING INTERLOCK SHALL ACTIVATE ASSOCIATED MAKE-UP AIR UNIT (MAU-1) AT HIGH FAN SPEED (100% SCHEDULED AIRFLOW).
  3. WHEN BOTH GREASE HOOD (EF-1) AND DISMISHER HOOD (EF-2) ARE ACTIVATED THROUGH LOCAL CONTROLS SWITCHES, WIRING INTERLOCK SHALL ACTIVATE ASSOCIATED MAKE-UP AIR UNIT (MAU-1) AT HIGH FAN SPEED (100% SCHEDULED AIRFLOW).
  4. WIRING INTERLOCK SHALL PREVENT MAU SUPPLY FAN FROM ACTIVATING UNTIL THEIR UNIT'S OUTDOOR AIR DAMPER IS FULLY OPEN.
  5. WHEN MAU SF IS ACTIVATED, PACKAGED MAU BURNER CONTROLS SHALL MODULATE GAS BURNER TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT OF 65°F (ADJUSTABLE).
  6. MAU FILTER STATUS SHALL BE MONITORED THRU DIFFERENTIAL PRESSURE SWITCHES.
  7. WHEN FIRE SUPPRESSION SYSTEM IS ACTIVATED, EXISTING RPU SUPPLY FAN AND MAU SUPPLY FAN WILL BE DE-ACTIVATED AND THE EXHAUST HOODS SHALL BE ACTIVATED REGARDLESS OF LOCAL CONTROL SWITCH POSITION.
  8. GREASE HOOD EXHAUST FAN MAY ALSO BE ACTIVATED BY H-LIMIT THERMOSTAT DETECTION OF LOCAL CONTROL SWITCH POSITION, IF HEAT IS DETECTED UNDER THE HOOD.



**FIRE SUPPRESSION SYSTEM INTERLOCK WIRING**

- NOTE:
1. FIRE SUPPRESSION SYSTEM IS NEW. COORDINATE INCLUDE REQUIREMENTS, WIRING, ETC. WITH FIRE SUPPRESSION SYSTEM MANUFACTURER.

**RISEING STAR ACADEMY**  
MILLER ELEMENTARY SCHOOL  
CENTER LINE PUBLIC SCHOOLS

TEMPERATURE CONTROLS

PRELIMINARY  
DESIGN DEVELOPMENT  
CONSTRUCTION  
FINAL RECORD

DRAWN BY: SWM  
CHECKED BY: FAK

REVISIONS:

DATE: March 11, 2013

**M-8.2**

JOB NO.: 121440

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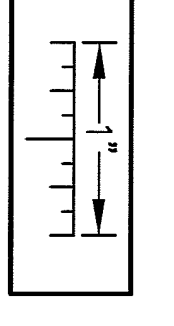
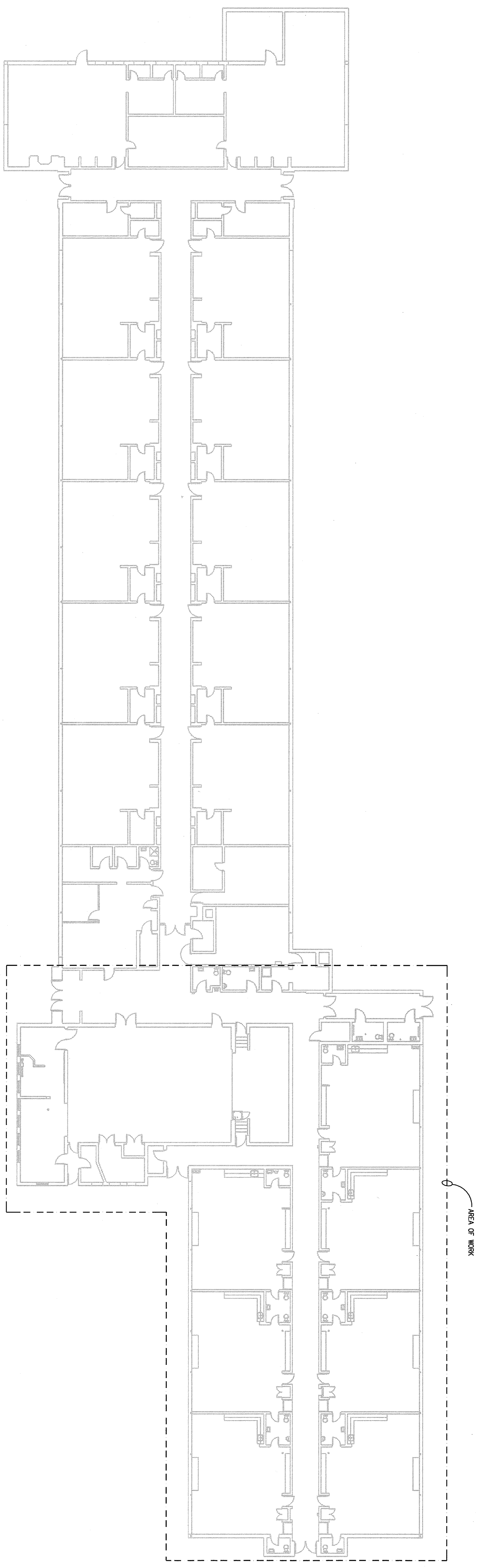
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17250 WOODWAY - SUITE 200  
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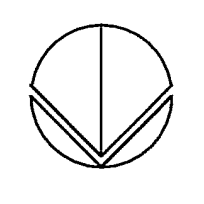






THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.

 **ELECTRICAL COMPOSITE PLAN**  
SCALE: 1/8" = 1'-0"

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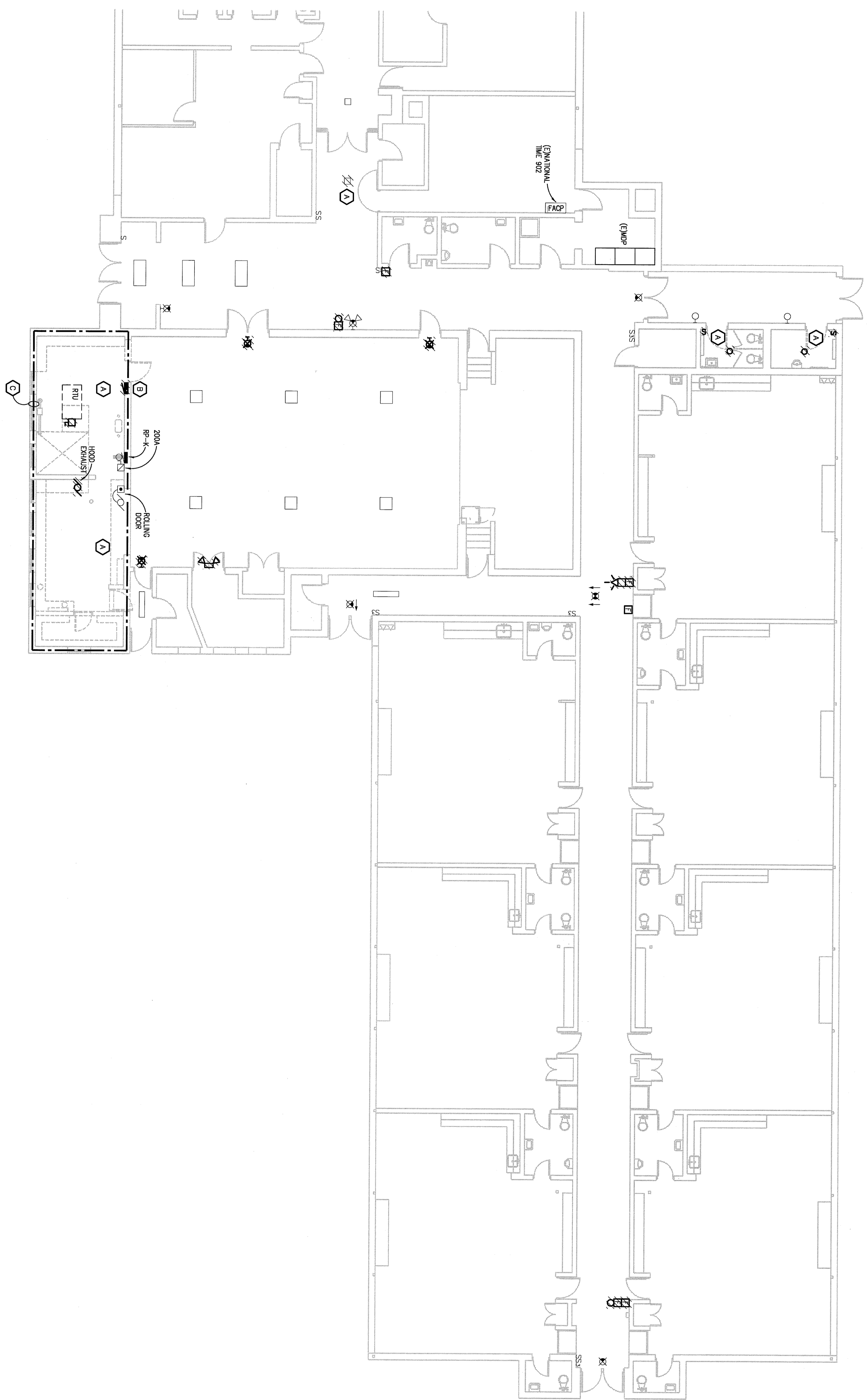
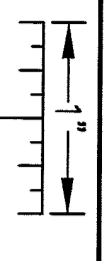
**RISEING STAR ACADEMY**  
MILLER ELEMENTARY SCHOOL  
CENTER LINE PUBLIC SCHOOLS

ELECTRICAL COMPOSITE PLAN

PRELIMINARY  
 DESIGN DEVELOPMENT  
 CONSTRUCTION  
 FINAL RECORD

DRAWN BY:  
CHECKED BY:  
REVISIONS:

DATE: March 11, 2013  
SHEET NO.:  
**E-0.4**  
JOB NO.: 121440



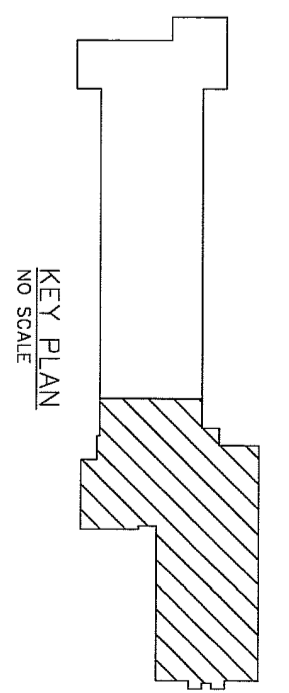
**ELECTRICAL DEMOLITION PLAN**  
SCALE: 1/8" = 1'-0"

**GENERAL DEMOLITION NOTES:**

1. VISIT THE SITE PRIOR TO SUBMISSION OF BO TO EXAMINE THE EXISTING CONDITIONS AND THE EXTENT OF DEMOLITION WORK.
2. EXAMINE THE DRAWINGS OF OTHER TRADES AND BE FAMILIAR WITH THE LOCATION AND/OR REMEDIATION REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES, WHETHER OR NOT SPECIFICALLY INDICATED.
3. REMOVE LIGHTING FIXTURES AND ELECTRICAL DEVICES AS INDICATED ON PLAN WITH CROSS HATCHING. DEMOLITION SHALL INCLUDE, BUT NOT BE LIMITED TO, THOSE DEVICES SHOWN.
4. COORDINATE WITH NEW WORK PLANS, ONE LINE DIAGRAMS AND Riser DIAGRAMS FOR EXTENT OF DEMOLITION WORK.
5. PROVIDE PROPER SUPPORT FOR EXISTING TO REMAIN CONDUITS AND BOXES WHERE NECESSARY TO MAINTAIN SERVICE TO REMAINING BUILDING. PROVIDE PROPER SUPPORT FOR EXISTING TO REMAIN PANELS AND EQUIPMENT AS REQUIRED TO FACILITATE INSTALLATION OF NEW EQUIPMENT AND SYSTEMS IN CEILING SPACES.
6. REMOVE ALL CONDUIT AND WIRE BACK TO THE SOURCE OR NEAREST UPSTREAM DEVICE REMAINING IN SERVICE.
7. MAINTAIN ELECTRICAL SERVICE TO ALL LIGHTING FIXTURES, DEVICES AND EQUIPMENT THAT ARE TO REMAIN. EXTEND CONDUIT AND WIRE AS REQUIRED WHERE DEMOLITION WORK AFFECTS ELECTRICAL SERVICE TO DOWNSTREAM LOADS THAT ARE TO REMAIN.
8. DISPOSE OF ALL WASTEBAILS OF SITE AND INCLUDE ALL COSTS FOR DISPOSAL IN BIDDING. ALL MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS FOR TESTING, TREATMENT, STORAGE, AND/OR RECYCLING OF FLUORESCENT LAMPS.
9. REMOVE BLANK STAINLESS STEEL COVER PLATES WHERE SWITCHES AND DEVICES ARE REMOVED BUT EXISTING WILLS REMAIN AFFIXED TO THE WALL.
10. RING OUT AND TAG ALL CIRCUITS AFFECTED BY THIS ALTERATION AT BOTH ENDS. MARK ALL DIVERS SHUNT BREAKERS SPACER.
11. PROVIDE UPDATED TYPED-IN DIRECTORIES FOR ALL PANELS AFFECTED BY THIS ALTERATION.
12. VERIFY ALL UNDERGROUND AND IN SLAB UTILITY LOCATIONS PRIOR TO SAW-CUTTING OR PENETRATING ANY FLOOR SLAB.
13. COORDINATE ANY SHUT DOWN OF EXISTING SERVICES AND EQUIPMENT THAT ARE TO REMAIN WITH THE OWNER'S REPRESENTATIVE. WHERE EXISTING BUILDING SERVICES ARE TO BE SHUT DOWN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COSTS TO PERFORM THIS WORK DURING WEEKENDS AND EVENINGS INCLUDE ALL COSTS FOR PROVIDING TEMPORARY POWER WHERE SHUT DOWNS MUST OCCUR FOR THE OWNER 72 HOURS PRIOR TO SHUT DOWN.

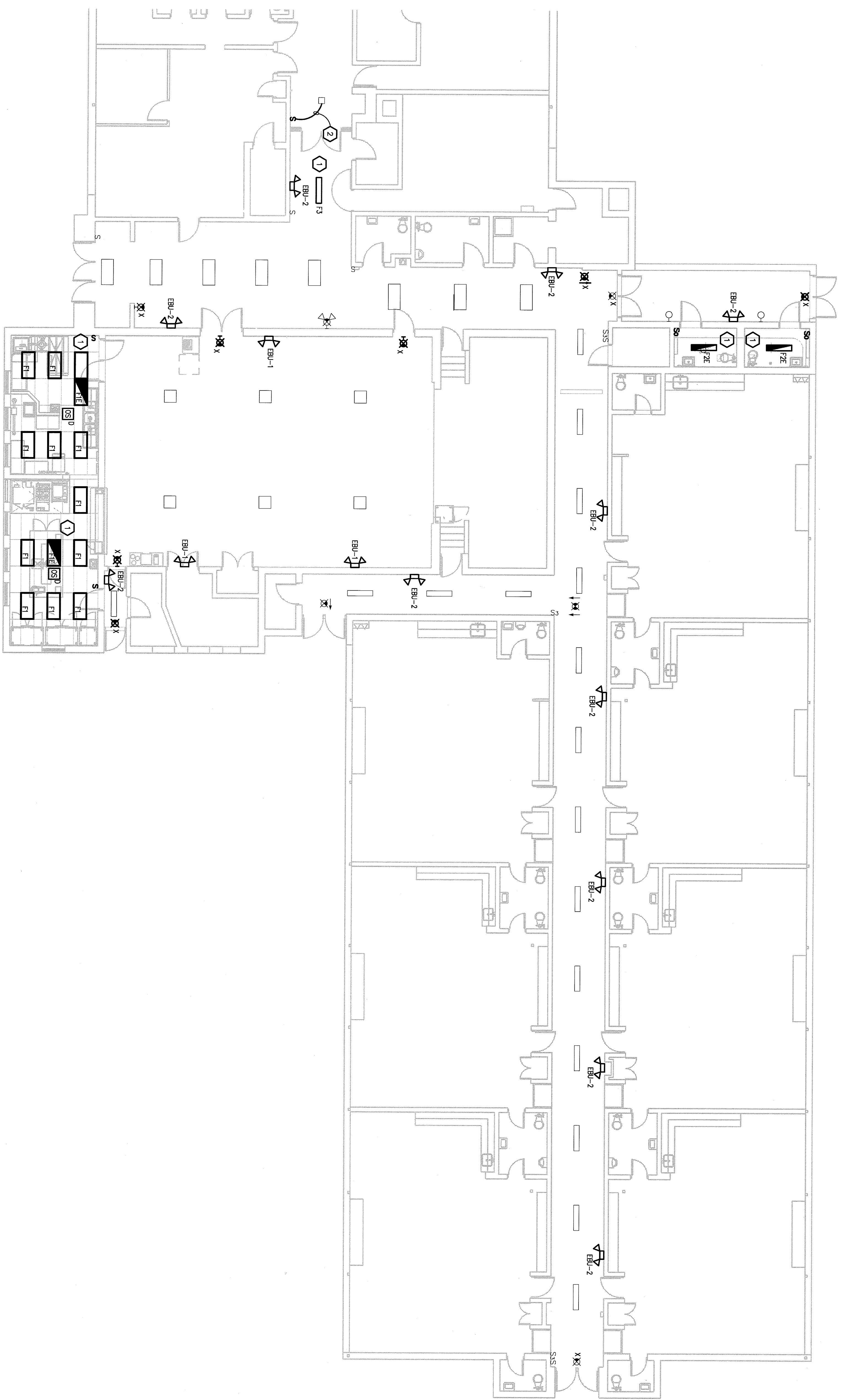
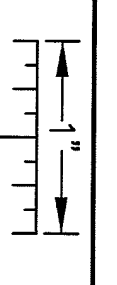
**DEMOLITION NOTES:**

- A. EXISTING LIGHTING FIXTURES SHALL REMAIN FOR REUSE.
- B. REMOVE EXISTING PANELBOARD, BRANCH CIRCUITS COMPLETE BACK TO SOURCE. TURN SWITCH OFF AT MUP, REMOVE FUSES AND LABEL AS SPARE.
- C. DISCONNECT AND REMOVE ALL EXISTING POWER AND DATA IN KITCHEN COMPLETE BACK TO SOURCE UNLESS INDICATED TO REMAIN.



<p><b>WPA</b> WAKELY ASSOCIATES, INC. ARCHITECTS &amp; ENGINEERS</p>	<p>39500 VAN DYKE AVENUE SUITE 101 MICHIGAN 48839 PH: 586.573.4100 FX: 586.573.8822 WWW.WPADESIGN.COM</p>	<p><b>RPB</b> Peter Bosso Associates Inc. CONSULTING ENGINEER 10375 WALKER AVE. SUITE 207 MICHIGAN 48066-0207 PH: 586.919.0000 WWW.PETERBOSSO.COM</p>	<p><b>ED-1.1</b></p> <p><b>121440</b></p> <p><b>RISING STAR ACADEMY</b> MILLER ELEMENTARY SCHOOL CENTER LINE PUBLIC SCHOOLS</p> <p>ELECTRICAL DEMOLITION PLAN</p>
<p>PRELIMINARY ■ DESIGN DEVELOPMENT ■ CONSTRUCTION ■ FINAL RECORD □</p> <p>DRAWN BY: _____ CHECKED BY: _____ REVISIONS: _____</p> <p>DATE: March 11, 2013 SHEET NO.: _____</p>			

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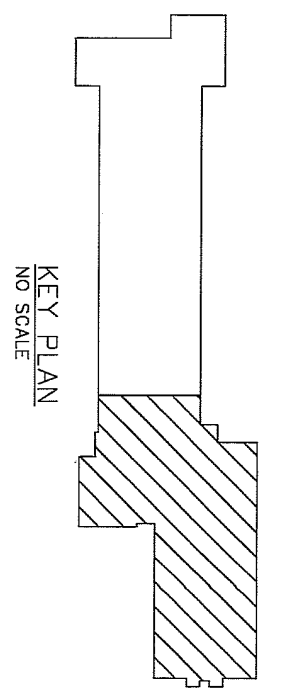
**LIGHTING PLAN**  
SCALE: 1/8" = 1'-0"

**GENERAL NOTES:**

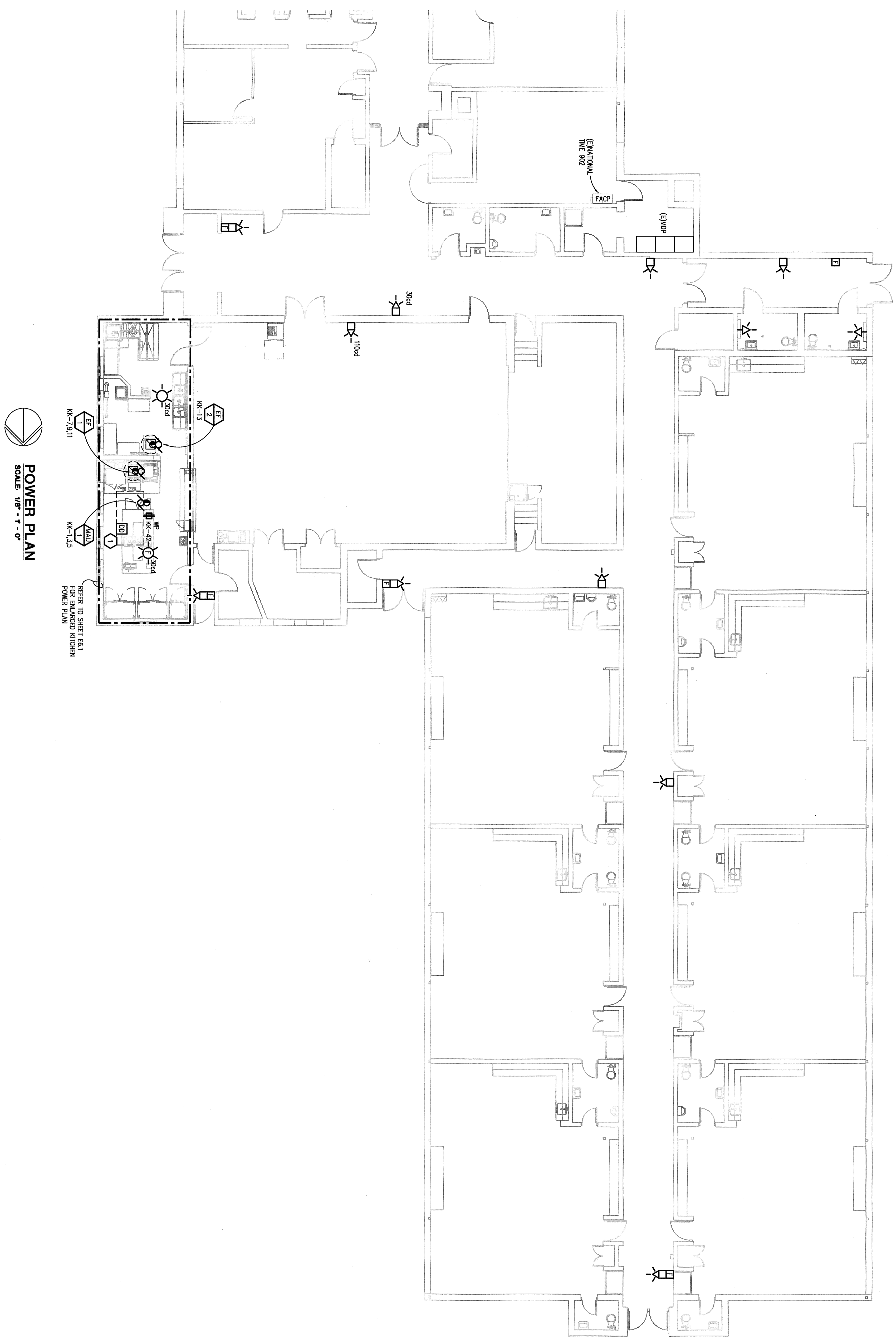
1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS, BUT ARE NOT TO BE CONSIDERED FABRICATION DRAWINGS. INCLUDING ALL NECESSARY COMPONENTS, FITTINGS, AND SPACERS.
2. VERIFY SPACING DATA THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL EQUIPMENT, PIPING, AND SHAFTS, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
3. PROVIDE SUPPLEMENTARY STEEL, AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
4. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR CIRCUIT SIZING SCHEDULES SHOWN ON ELECTRICAL STANDARD SCHEDULES DRAWING UNLESS OTHERWISE NOTED.
5. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
6. COORDINATE EXACT LOCATIONS OF ALL FLOOR BOXES WITH FINAL FURNITURE LAYOUT DRAWINGS.
7. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT, PROVIDE ALL CONNECTIONS, SYSTEMS, DISCONNECTS, REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY OWNER OF ANY CONFLICTS BETWEEN EQUIPMENT ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES. PROVIDE THE CIRCUIT OF HIGHER AMPLACITY. EXIT LIGHTS AND EMERGENCY LIGHTING UNITS SHALL BE CIRCUITED TO UN-SWITCHED HOT LEO OF ADVACENT LIGHT FIXTURE CIRCUIT.

**CONSTRUCTION NOTES:**

1. CONNECT NEW LIGHTING TO EXISTING CIRCUITING, IF EXISTING GROUND WIRE IS NOT PRESENT PROVIDE GROUND WIRE AS REQUIRED PER NEC.
2. REWORK EXISTING SWITCHING AS REQUIRED FOR NEW SWITCH, EXTEND CIRCUITING AS REQUIRED PER NEC.



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PRELIMINARY <input type="checkbox"/> DESIGN DEVELOPMENT <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> FINAL RECORD <input type="checkbox"/>		DRAWN BY: _____ CHECKED BY: _____ REVISIONS: _____		DATE: March 11, 2013 SHEET NO.: _____		DATE: _____ SHEET NO.: _____		DATE: _____ SHEET NO.: _____	



**GENERAL NOTES:**

1. THESE DRAWINGS REPRESENT THE GENERAL SCHEME AND ARRANGEMENT OF SYSTEMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED DESIGN AND COORDINATION WITH OTHER TRADES, AND PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS, AND SYSTEMS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACES IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND PROVIDE ANY OVERHEADS WITH REQUIRED SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS DOORS WITH UNACCESSIBLE CEILING, MECHANICAL ROOMS, AND OTHER AREAS WHERE ACCESS TO EQUIPMENT IS REQUIRED. ACCESS: REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES, ACCESS, REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUFFICIENT STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. HANGING BRACKET SHALL BE USED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED OTHERWISE. VERIFY SUBMITTALS AND ELECTRICAL DRAWINGS WHERE CIRCUIT SIZES ARE SHOWN ON MECHANICAL SCHEDULES. PROVIDE THE CREDIT OF HIGHER CAPACITY MECHANICAL SCHEDULES. PROVIDE THE CREDIT OF HIGHER CAPACITY MECHANICAL SCHEDULES.
6. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL DRAWINGS AND THE TRADES INSTALLING THE WORK.
7. COORDINATE EXACT LOCATIONS OF ALL FLOOR BORES WITH FINAL FURNITURE LAYOUT DRAWINGS.
8. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED OTHERWISE. VERIFY SUBMITTALS AND ELECTRICAL DRAWINGS WHERE CIRCUIT SIZES ARE SHOWN ON MECHANICAL SCHEDULES. PROVIDE THE CREDIT OF HIGHER CAPACITY MECHANICAL SCHEDULES.
9. DIM LIGHTS AND OVERHEAD LIGHTING UNITS SHALL BE COORDINATED TO UN-SWITCHED HOT LEGS OF ADJACENT LIGHT SERVICE BRANCH.

**CONSTRUCTION NOTES:**

1. NEW DUCT SHAKE DETECTOR, COORDINATE REQUIRED QUANTITIES AND MOUNTING LOCATIONS WITH THE EXISTING DUCTWORK TO MEET CODE. PROVIDE A DUCT SHAKE DETECTOR IN EACH DUCT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED OTHERWISE. VERIFY SUBMITTALS AND ELECTRICAL DRAWINGS WHERE CIRCUIT SIZES ARE SHOWN ON MECHANICAL SCHEDULES. PROVIDE THE CREDIT OF HIGHER CAPACITY MECHANICAL SCHEDULES.

**POWER PLAN**  
SCALE: 1/8" = 1'-0"



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**RIISING STAR ACADEMY**  
MILLER ELEMENTARY SCHOOL  
CENTER LINE PUBLIC SCHOOLS

POWER PLAN

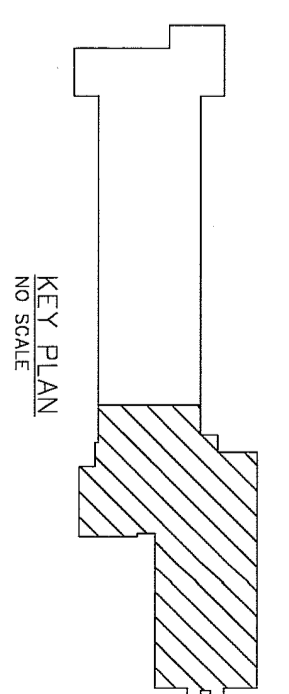
- PRELIMINARY
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DATE: March 11, 2013

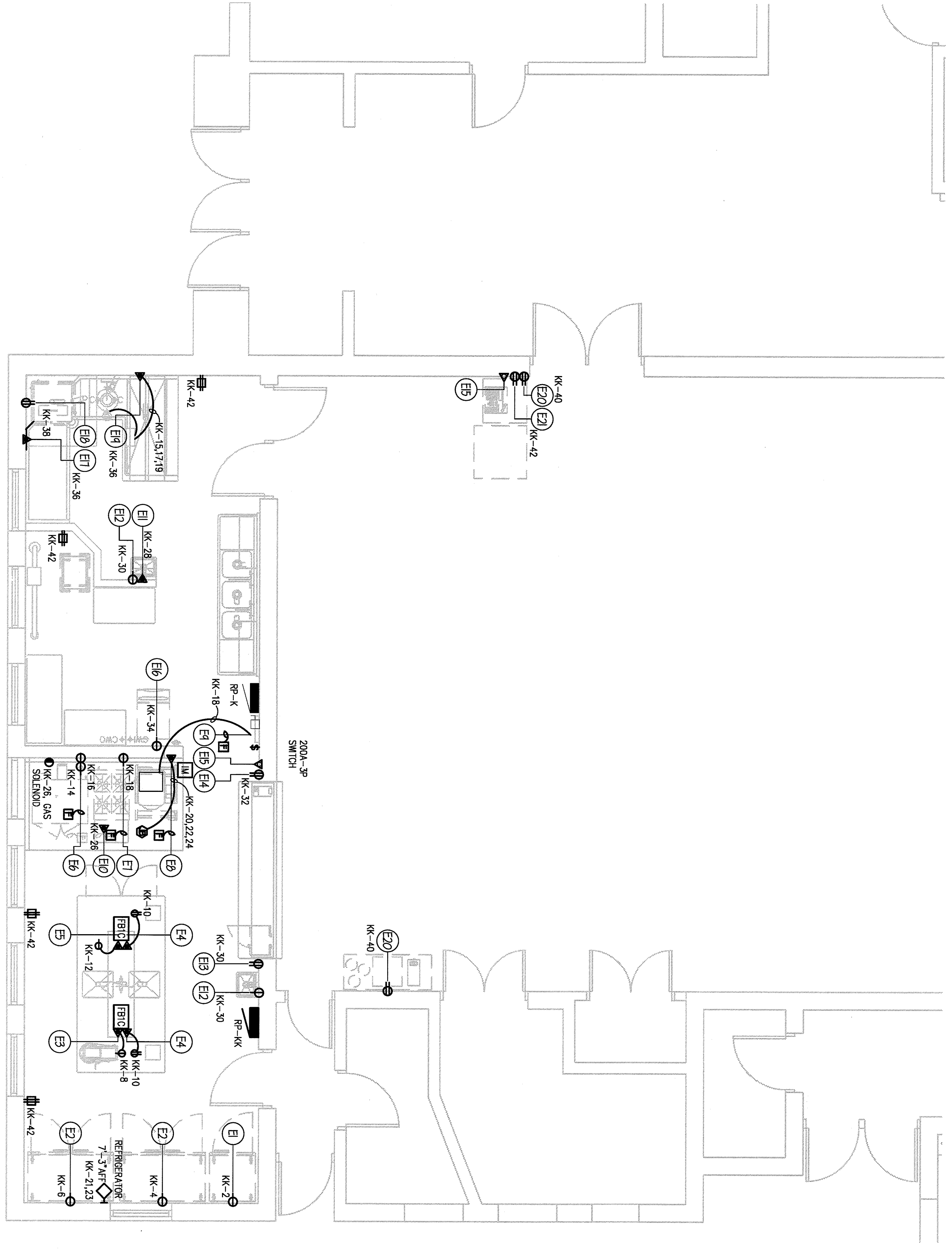
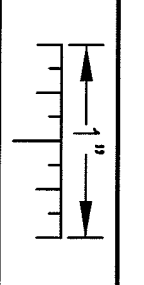
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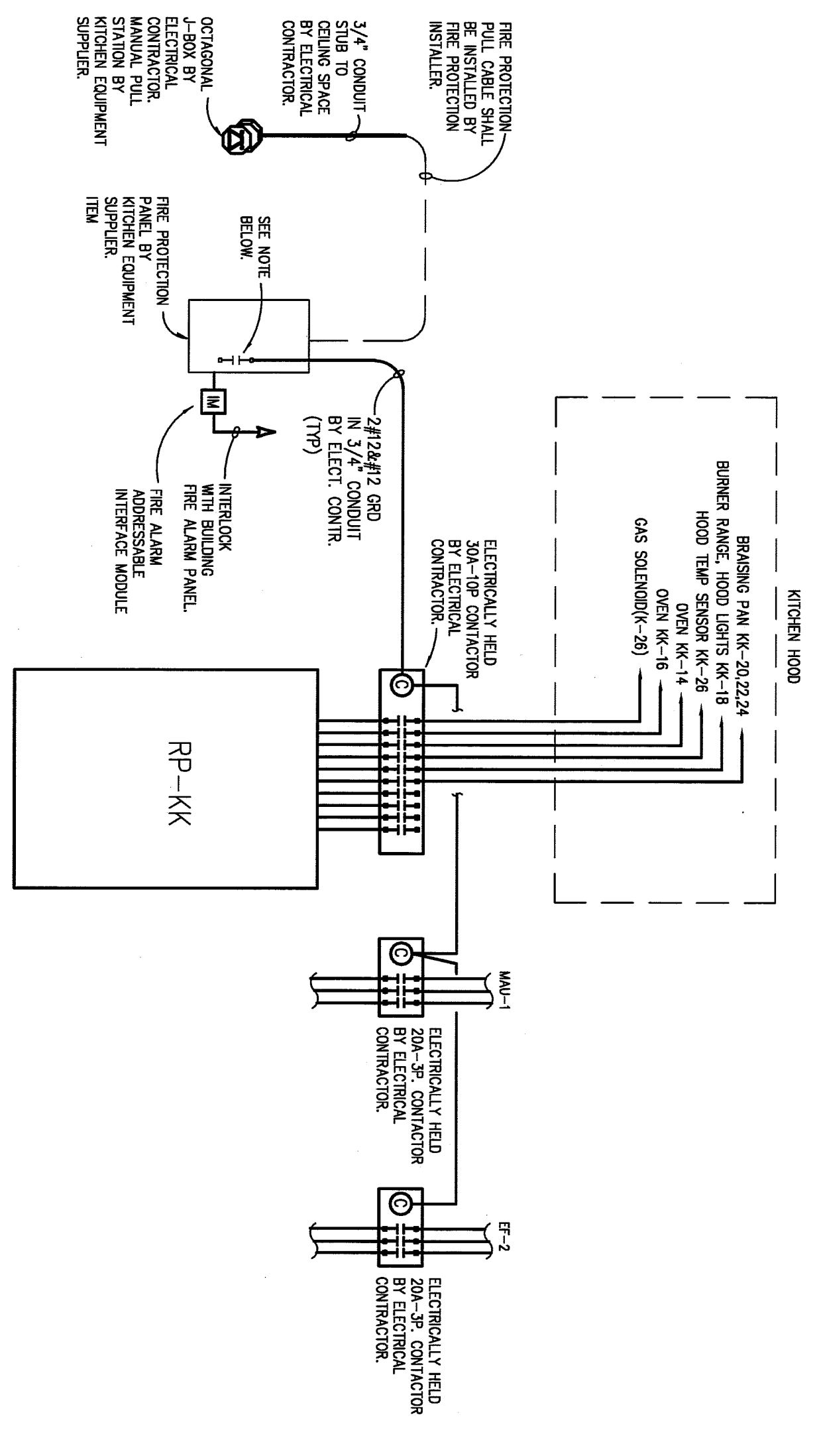
JOB NO.: 121440



THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



ENLARGED KITCHEN POWER PLAN  
SCALE: 1/4" = 1'-0"



FIRE PROTECTION WIRING DETAIL  
NO SCALE

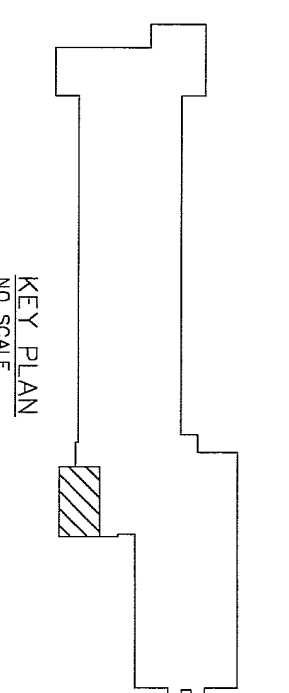
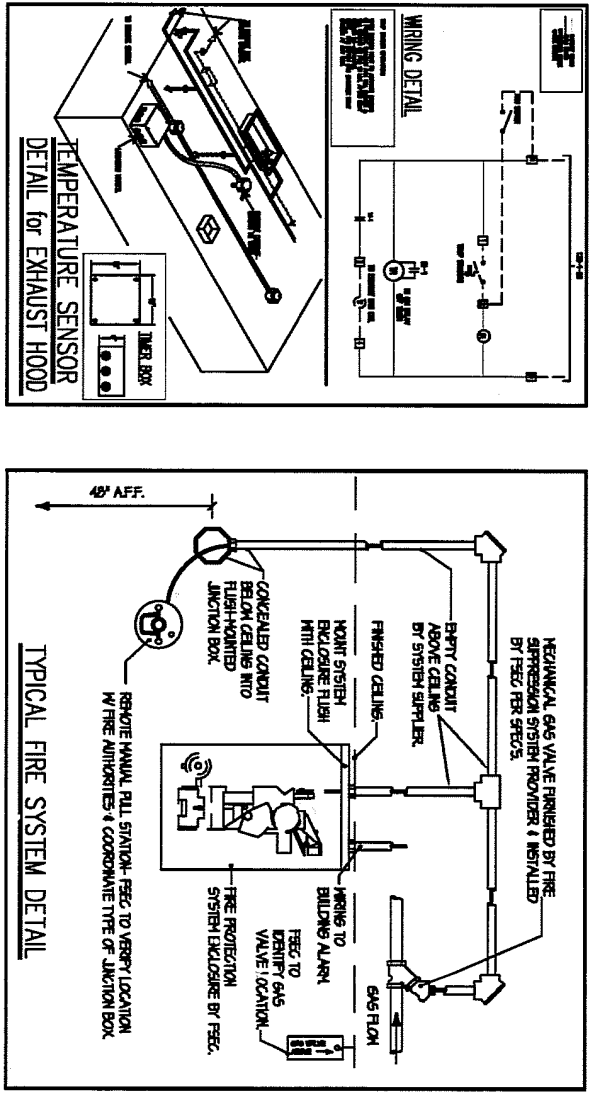
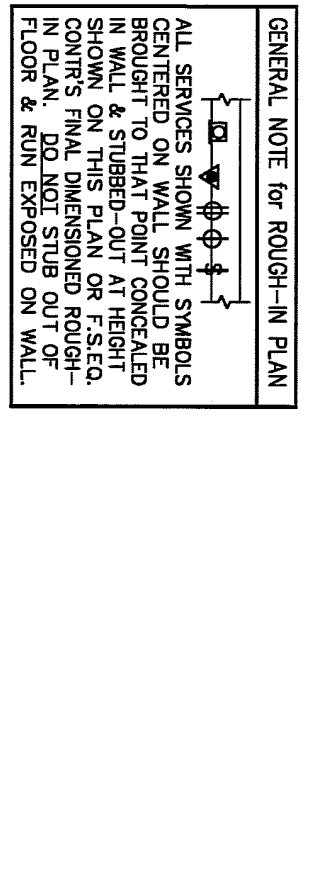
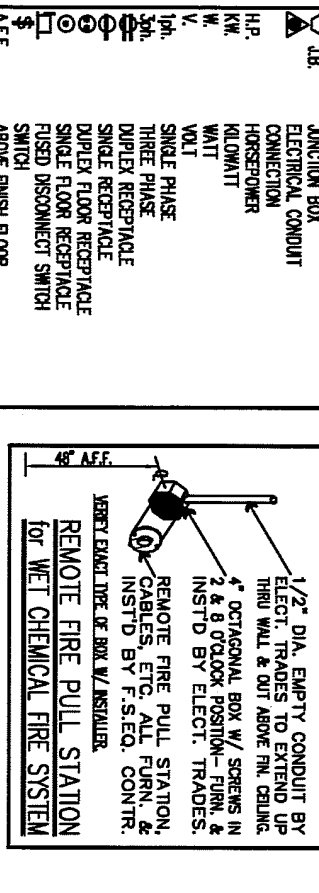
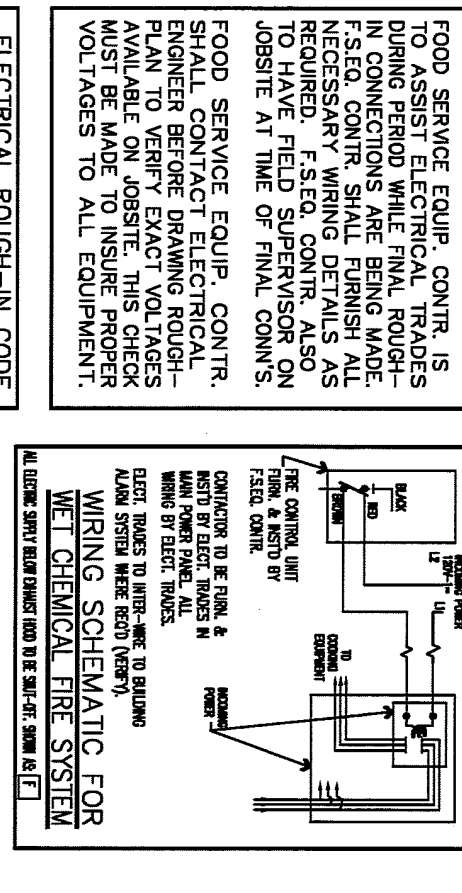
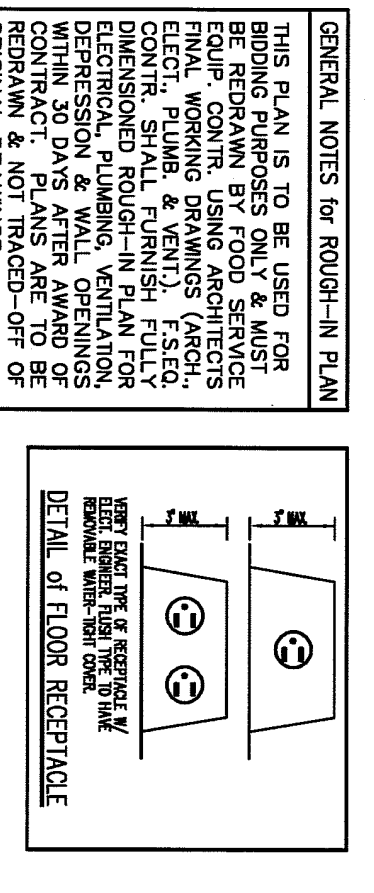
**KITCHEN ELECTRICAL NOTES**

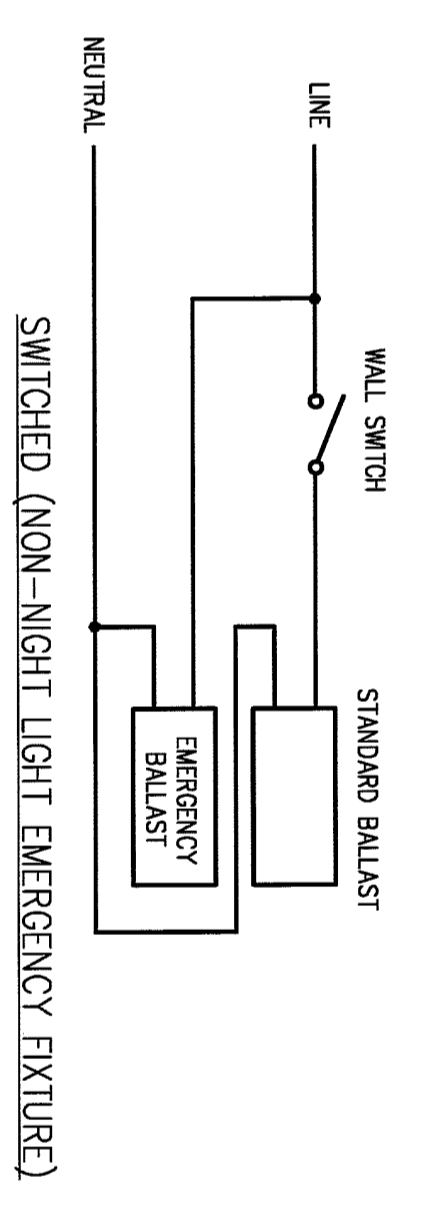
- (E1) 104 AMP (LOAD) 120V-1 PH. SINGLE RECEPTACLE FLUSH IN WALL 1'-3" AFF. FOR SINGLE SECTION FREEZER. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
- (E2) 107 AMP (LOAD) 120V-1 PH. SINGLE RECEPTACLE FLUSH IN WALL 7'-3" AFF. FOR TWO SECTION REFRIGERATOR. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
- (E3) 6.2 AMP (LOAD) 120V-1 PH. COND. CONN. UP FROM FLOOR. ELEC. TRAYS TO CONNECT TO SINGLE RECEPTACLE PREHUNG IN COUNTER BY F5/EC. FOR 12 QT. MIXER. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
- (E4) 20 AMP (LOAD) 120V-1 PH. COND. CONN. UP FROM 100R. ELEC. TRAYS TO CONNECT TO DIRECT EX RECEPTACLE PREHUNG IN COUNTER BY F5/EC. FOR GENERAL PURPOSE EQUIPMENT. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
- (E5) 50 AMP (LOAD) 120V-1 PH. COND. CONN. UP FROM FLOOR. ELEC. TRAYS TO CONNECT TO SINGLE RECEPTACLE PREHUNG IN COUNTER BY F5/EC. FOR DISPOSABLE REFRIGERATOR.
- (E6) 120 1/2 1/4 AMP (LOAD) 120V-1 PH. SINGLE RECEPTABLES FLUSH IN WALL FOR DOUBLE DECK CONNECTION OVER FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
- (E7) 50 AMP (LOAD) 120V-1 PH. SINGLE RECEPTACLE FLUSH IN WALL FOR FOUR BURNER RANGE. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
- (E8) 517 KVA 208V/3 PH. COND. CONN. OUT OF WALL FOR TILT BRAISING PAN. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
- (E9) 0.3 KVA 120V/1 PH. SWITCH BRN. 4 WIRE BY ELEC. TRAYS - FLUSH IN WALL 48" AFF. FOR HOOD LIGHTS. PREHUNG BY F5/EC. TO 180X ON TOP OF WALL. COND. BY ELEC. TRAYS.
- (E10) 50 AMP (LOAD) 120V-1 PH. COND. CONN. DOWN FROM ABOVE FOR HOOD TEMPERATURE SENSOR. INTERWIRE TO FAN INTERLOCK AS REQUIRED. FINAL CONN. BY ELEC. TRAYS. SEE DETAIL THIS SHEET.
- (E11) 60 AMP (LOAD) 120V-1 PH. COND. CONN. OUT OF WALL 1'-0" AFF. FOR FIRE SUPPRESSION SYSTEM.
- (E12) 50 AMP (LOAD) 120V-1 PH. SINGLE RECEPTACLE FLUSH IN WALL BY AFF. FOR HAND SINK FAUCET.
- (E13) 20 AMP (CIRCUIT) 120V-1 PH. DIRECT RECEPTACLE FLUSH IN WALL 50" AFF. FOR GENERAL USE. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
- (E14) 20 AMP (DEDICATED CIRCUIT) 120V-1 PH. DIRECT RECEPTACLE FLUSH IN WALL 50" AFF. FOR POS. SYSTEM.
- (E15) ELEC. TRAYS TO RFRN. 1. INITIAL ENTRY CONDUIT. RUN BACK TO CENTRAL LOCATION FOR DATA LINES. VERIFY ACTUAL REQUIREMENTS WORKER.
- (E16) 115 AMP (LOAD) 120V-1 PH. SINGLE RECEPTACLE FLUSH IN WALL FOR ICE MAKER. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
- (E17) 160 AMP (LOAD) 120V-1 PH. COND. CONN. OUT OF WALL FOR DRYWALLER. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
- (E18) 20 AMP (CIRCUIT) 120V-1 PH. DIRECT RECEPTACLE FLUSH IN WALL 17" AFF. FOR 50AMP 4 RIVE DISBURSER. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
- (E19) 30 HP 208V/3 PH. COND. CONN. OUT OF WALL BY AFF. FOR DISPOSER. ELEC. TRAYS TO INTERWIRE TO DISPOSER CONTROL PANEL.
- (E20) 20 AMP (CIRCUIT) 120V-1 PH. DIRECT RECEPTACLE FLUSH IN WALL 50" AFF. FOR GENERAL USE. FIELD VERIFY ACTUAL REQUIREMENTS FOR ALL OWNER PROVIDED EQUIPMENT.
- (E21) 20 AMP (DEDICATED CIRCUIT) 120V-1 PH. DIRECT RECEPTACLE FLUSH IN WALL 50" AFF. FOR POS. SYSTEM.

NOTE: ALL ADDITIONAL RECEPTABLES, CONN.'S, WIRING, ETC. TO BE SHOWN BY ELECT. ENGINEER. ALL 120V/2PH BY RECEPTABLES WIRING KITCHEN AREAS MUST BE FIELD PROTECTED BY ELEC. TRAYS.

**GENERAL NOTES:**

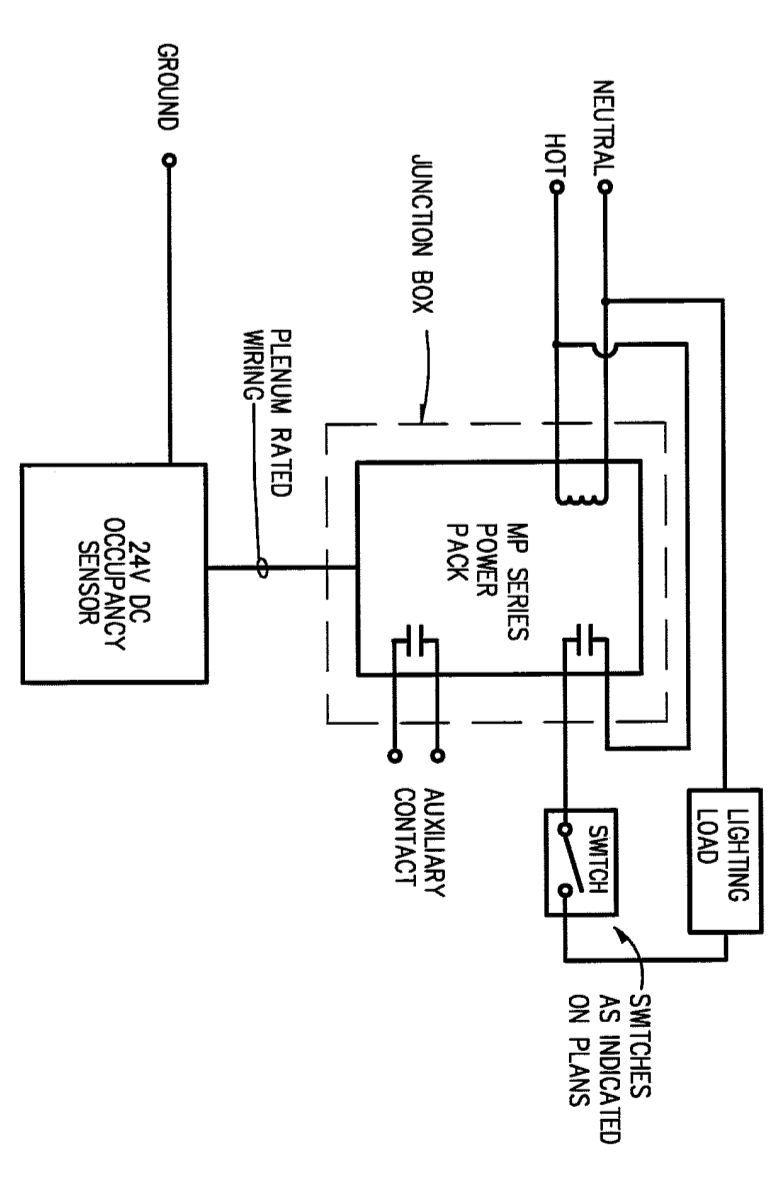
1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF EQUIPMENT AND MATERIALS TO BE INSTALLED. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL MECHANICAL AND ELECTRICAL EQUIPMENT AND MATERIALS, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS, AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. COORDINATE AND PROVIDE ACCESS HOLES WITHIN ACCESSIBLE CEILING, SLAB, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. MOTOR CIRCUIT PROTECTION SHALL BE SIZED IN ACCORDANCE WITH MOTOR DRAWING UNLESS OTHERWISE NOTED.
6. CORRECTIVE THE WIRING HEIGHTS OF RANGES WITH ARCHITECTURAL ELEVATIONS AND THE RANGES INSTALLING THE WORK.
7. COORDINATE EXACT LOCATIONS OF ALL FLOOR BOXES WITH FINAL FURNITURE LAYOUT DRAWINGS.
8. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR ALL MECHANICAL EQUIPMENT. REFER TO ELECTRICAL SCHEDULES FOR ELECTRICAL REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHIP DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL MECHANICAL EQUIPMENT. THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OR WIRING APPROVAL.
9. EXIT LIGHTS AND EMERGENCY LIGHTING UNITS SHALL BE CIRCUITED TO UN-SWITCHED HOT LEGS OF ADJACENT LIGHT TRUNKING CIRCUIT.





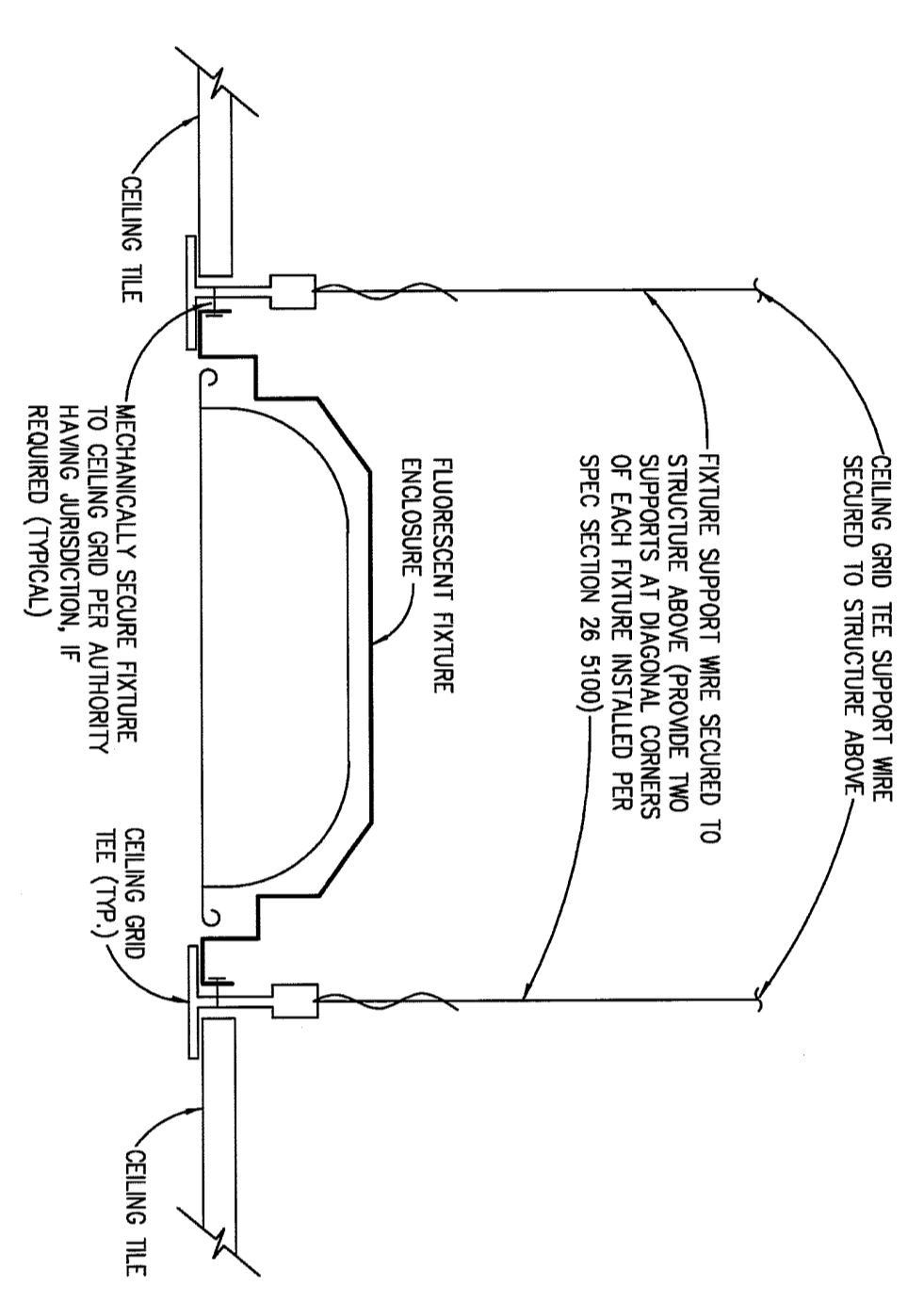
NOTE: PRIMARY CIRCUIT ONLY. LAMP LEADS NOT SHOWN.

**EMERGENCY BALLAST WIRING DIAGRAM**  
 NO SCALE

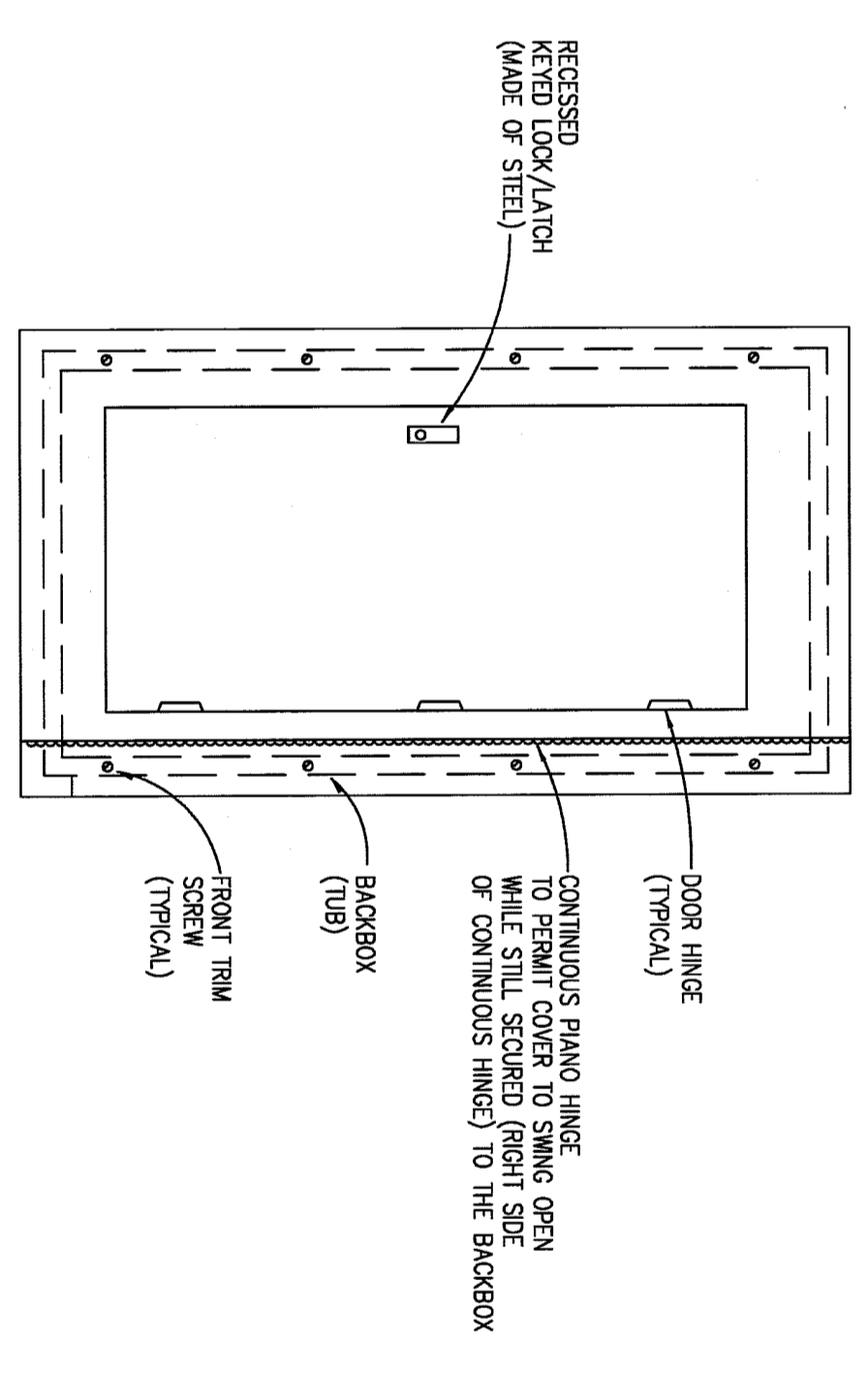


- NOTES:
- OCCUPANCY SENSOR SHALL BE WHITSTORPER (OR ENGINEER APPROVED EQUAL) AS SPEC'D ON DRAWINGS.
  - PROVIDE POWER PACKS AND SAVE PACKS AS REQUIRED FOR SWITCHING AS INDICATED ON PLAN. REVERSE DETAIL AS REQUIRED BY MANUFACTURER.
  - MOUNTING LOCATION PER MANUFACTURER'S RECOMMENDATION.
  - ADJUST SENSITIVITY LEVELS PER THE OWNER.
  - PROVIDE FACTORY SUPPORT FOR MOUNTING/ADJUSTING OF SENSORS.

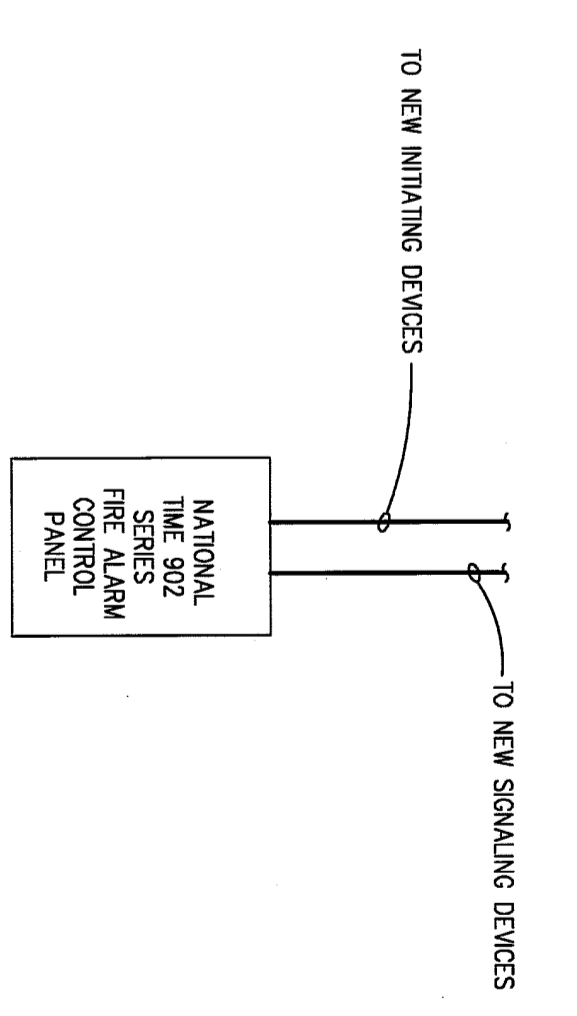
**CEILING MOUNTED OCCUPANCY SENSOR WIRING DIAGRAM**  
 NO SCALE



**RECESSED FLUORESCENT FIXTURE INSTALLATION DETAIL**  
 NO SCALE



**PANELBOARD FRONT COVER DETAIL WITH CONTINUOUS FRONT PLANO HINGE**  
 NO SCALE



- NOTES:
- COORDINATE ROOM MARKS AND OR NUMBERS WITH OWNER PRIOR TO FINAL PROGRAMMING.
  - PROVIDE MANUFACTURER'S FIELD SERVICES FOR SUPERVISING FINAL WIRING CONNECTIONS, INSPECTION AND ADJUSTING OF COMPLETED INSTALLATION AND SYSTEM OPERATION.

**FIRE ALARM CONTROL PANEL DETAIL**  
 NO SCALE

<p>PRELIMINARY</p> <p>DESIGN DEVELOPMENT</p> <p>CONSTRUCTION</p> <p>FINAL RECORD</p>	<p>DRAWN BY:</p> <p>CHECKED BY:</p> <p>REVISIONS:</p>	<p>DATE: March 11, 2013</p> <p>SHEET NO.: <b>E-7.1</b></p> <p>JOB NO.: 121440</p>
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**RISEING STAR ACADEMY**  
 MILLER ELEMENTARY SCHOOL  
 CENTER LINE PUBLIC SCHOOLS

ELECTRICAL DETAILS