

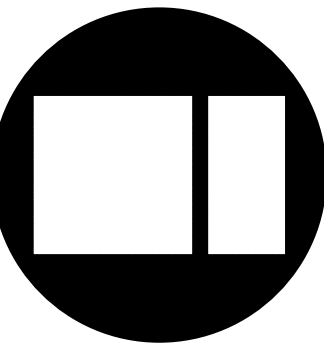
**4949 Harrison Avenue      Suite 100**

## Rockford, Illinois

**DECEMBER 13, 2016**  
**FEBRUARY 3, 2017**

[illegible]

**Larson & Darby Group**  
Architects Engineers Interiors

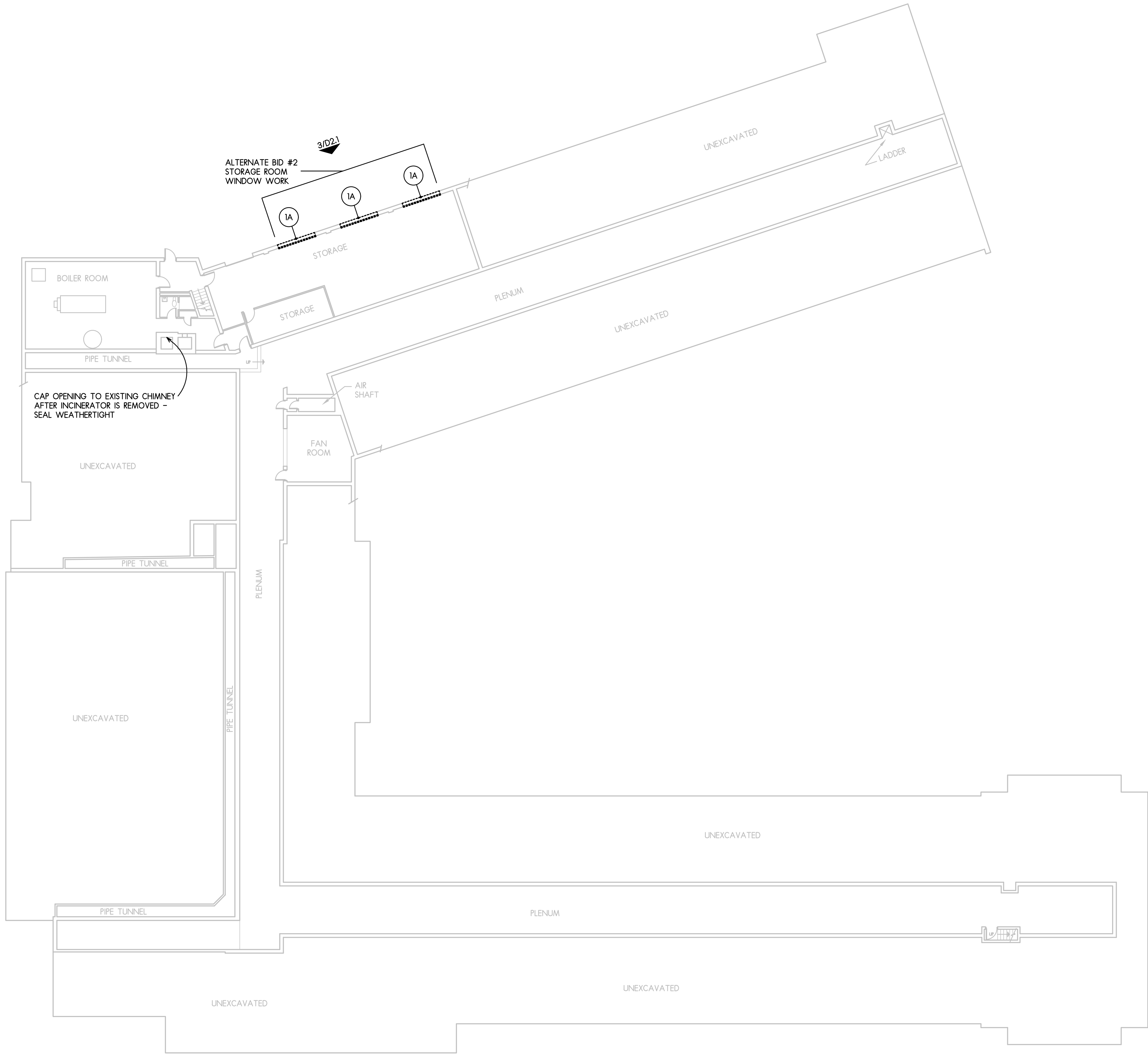


FAIRVIEW EARLY CHILDHOOD CENTER  
HVAC AND WINDOW REPLACEMENT - ROCKFORD IL  
**ROCKFORD PUBLIC SCHOOLS 205**

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**Larson & Darby Group**

ISSUED FOR:	DATE
OWNER REVIEW	12-13-16
BIDDING	02-03-17
DRAWN	APPROVED
-	-

DATE: 10-7-2018
PROJECT NUMBER <b>25110</b>
SHEET NUMBER <b>CS</b>



DEMOLITION KEYNOTES	
ITEM:	
1	WINDOW ASSEMBLY
2	WINDOW AIR CONDITIONER
ACTION:	
A	REMOVE AND DISCARD
B	REMOVE AND TURN OVER TO OWNER
C	REMOVE AND RESTORE FOR REUSE
GENERAL NOTES: FOR DEMOLITION	
1. ITEMS REMOVED AND TURNED OVER TO OWNER SHALL BE TRANSPORTED TO A ROOM OR AREA ONSITE DESIGNATED BY THE OWNER.	
2. WHERE ITEMS ARE REMOVED, THE SUBSTRATE SHALL BE REPAIRED, PATCHED, CLEANED, ETC. TO A CONDITION SUITABLE TO RECEIVE NEW WORK AND/OR FINISHES.	
3. ITEMS TO BE DISPOSED, SHALL BE REMOVED FROM THE SITE ON A TIMELY BASIS.	
4. OWNER TO REMOVE ALL EQUIPMENT / FURNISHINGS PRIOR TO START OF CONSTRUCTION.	
5. ABATEMENT CONTRACTOR HIRED SEPARATELY BY OWNER WILL REMOVE EXISTING GLAZING, STOPS AND CAULKING AND INSTALL PLYWOOD AND FRAMING TO FILL IN THE OPENINGS - WINDOW CONTRACTOR TO REMOVE PLYWOOD AND FRAMING AND TURN OVER TO THE ABATEMENT CONTRACTOR.	
6. THE DEMOLITION PLAN IS PROVIDED AS AN AID IN PLANNING AND DOES NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY IN FIELD VERIFYING THE EXISTING JOB SITE.	
7. PROVIDE ALL TEMPORARY SHORING AS REQUIRED TO SUPPORT STRUCTURES AND FINISHES TO REMAIN.	
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9. EXISTING WINDOW TREATMENTS TO BE REMOVED BY ABATEMENT CONTRACTOR - OWNER TO REPAIR ALL SURFACE HOLES AFTER REMOVAL.	
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12. ABATEMENT CONTRACTOR TO REMOVE ALL EXISTING WOOD BLOCKING AT WINDOW OPENINGS. WINDOW REPLACEMENT CONTRACTOR TO PROVIDE NEW BLOCKING AS REQUIRED.	

ARCHITECTURAL SYMBOLS :  
1/D2.1 ELEVATION CALLOUT

DEMOLITION  
LOWER LEVEL FLOOR PLAN

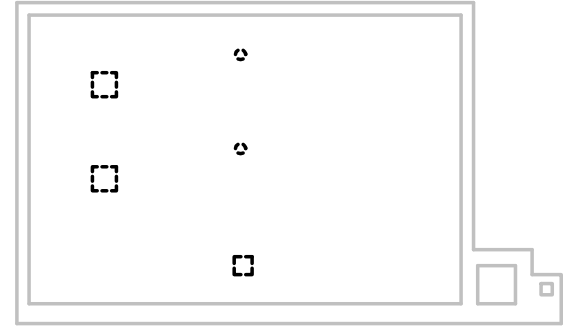
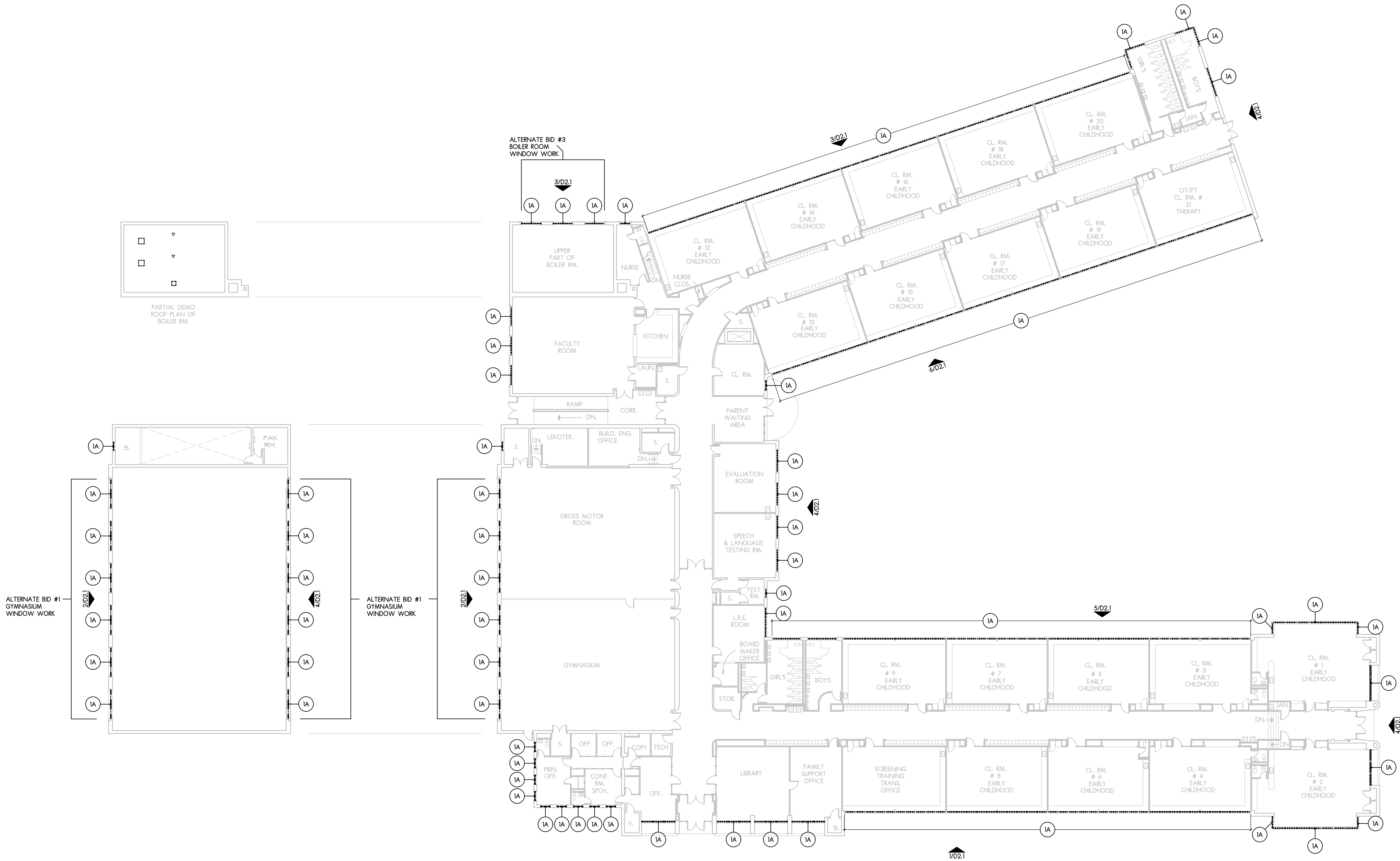
SCALE: 1/16" = 1'-0"

North

ISSUED FOR:	DATE
OWNER REVIEW	02-23-16
BOARDS	02-23-16
DRAWN	APPROVED
SAT	SMN

DATE: 10-7-2016	PROJECT NUMBER
25110	SHEET NUMBER
D1.1	





PARTIAL DEMO  
ROOF PLAN OF  
BOILER RM.

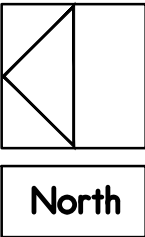
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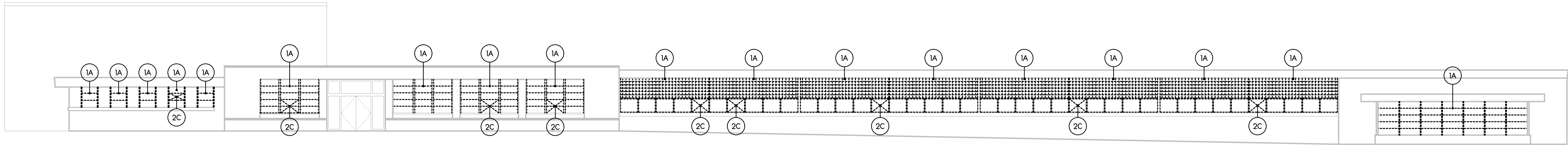
ARCHITECTURAL SYMBOLS :

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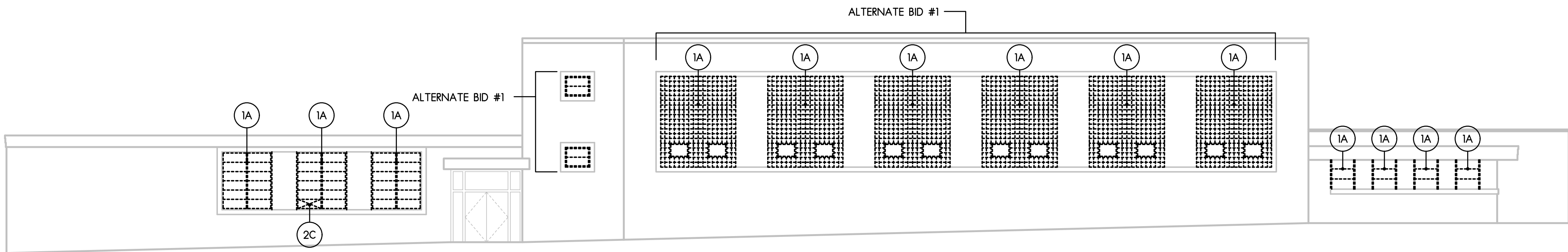
DEMOLITION  
MAIN LEVEL FLOOR PLAN

SCALE: 1/16" = 1'-0"

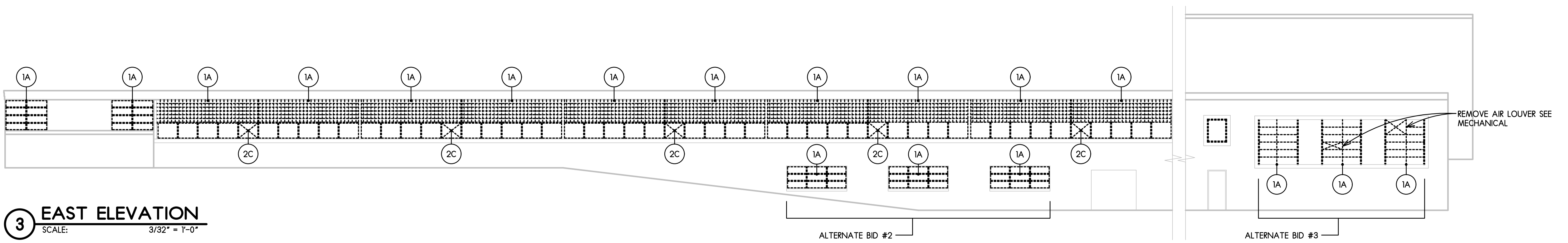




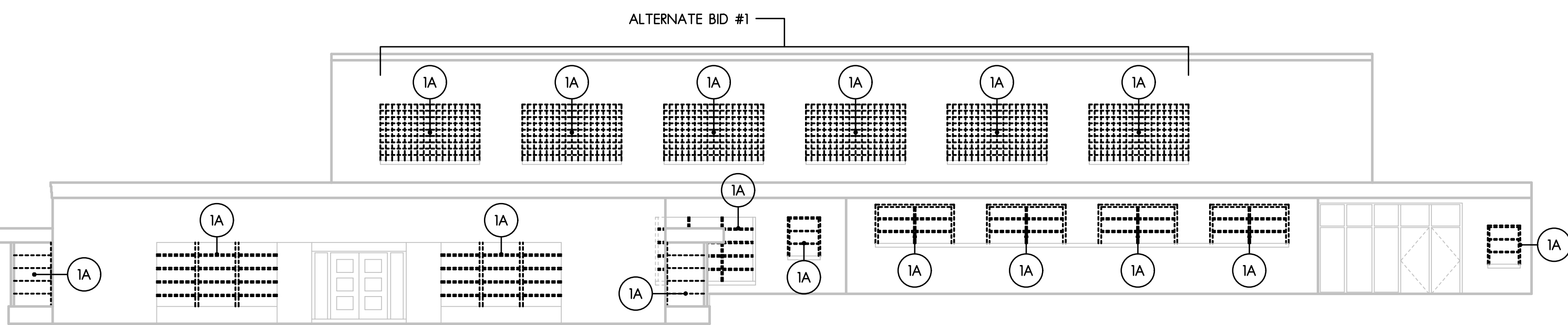
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SCALE: 3/32" = 1'-0"



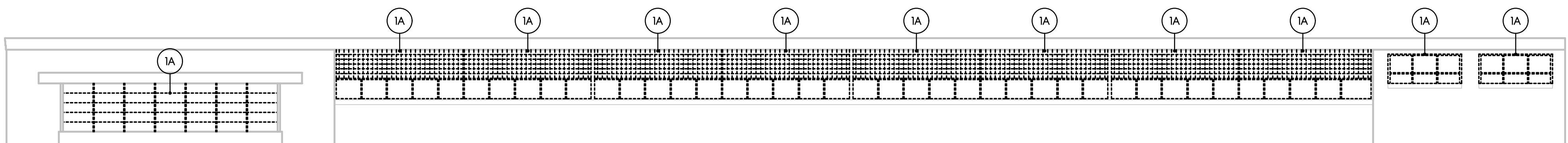
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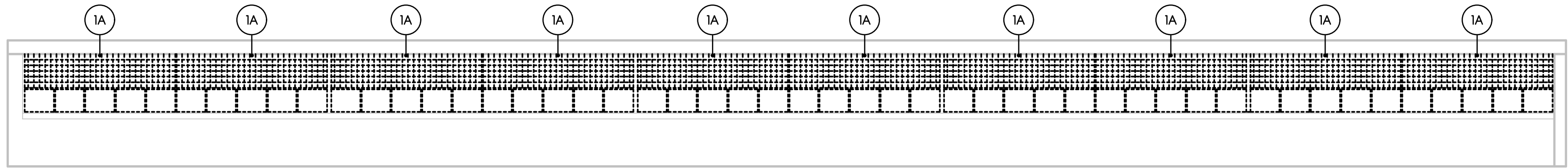
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4 SOUTH ELEVATION  
SCALE: 3/32" = 1'-0"



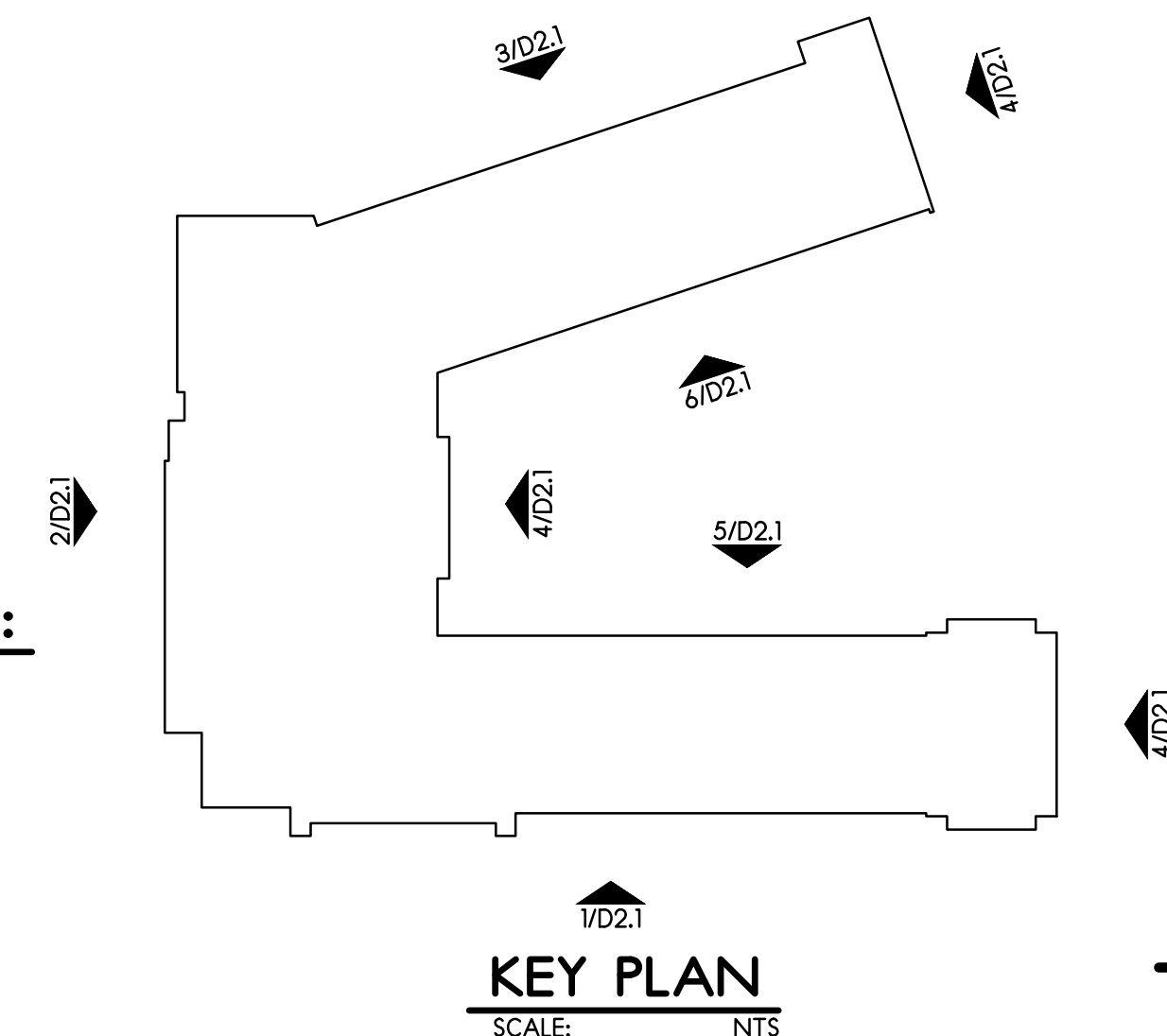
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SCALE: 3/32" = 1'-0"



6 WEST ELEVATION  
SCALE: 3/32" = 1'-0"

ARCHITECTURAL SYMBOLS :

1/D2.1 ELEVATION CALLOUT

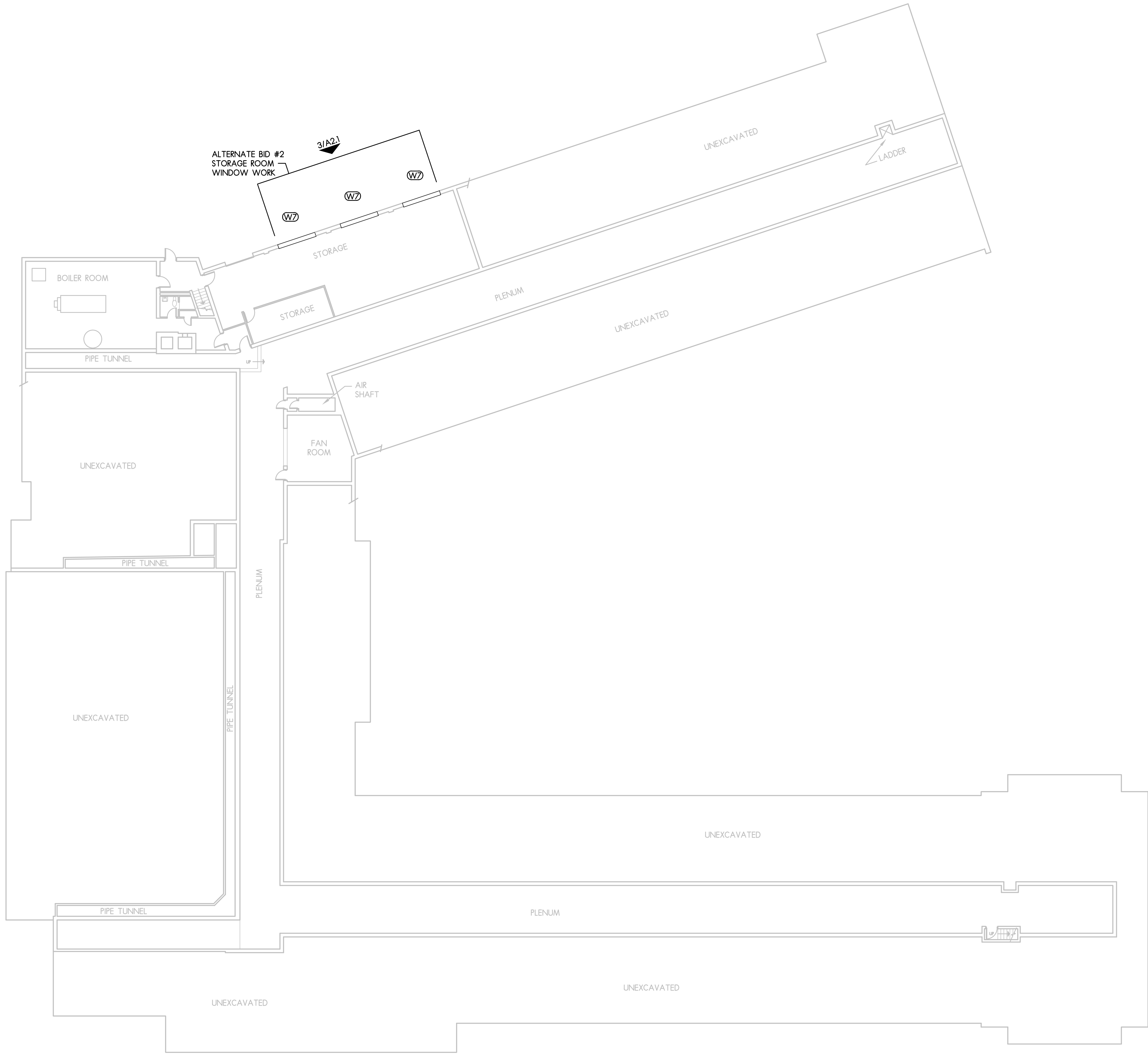


KEY PLAN  
SCALE: NTS

DEMOLITION ELEVATIONS

SCALE: 3/32" = 1'-0"

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1 LOWER LEVEL PLAN  
SCALE: 1/16" = 1'-0"

ARCHITECTURAL SYMBOLS :

- 1/A2.1 ELEVATION CALLOUT - SEE A2.1  
W3 WINDOW CALLOUT - SEE A3.1

GENERAL NOTES :

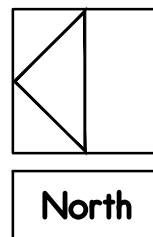
1. LOWER LEVEL FLOOR PLAN - SEE A1.1
2. MAIN LEVEL FLOOR PLAN - SEE A1.2
3. EXTERIOR ELEVATIONS - SEE A2.1
4. WINDOW ELEVATIONS - SEE A3.1
5. WINDOW DETAILS - SEE A4.1

GENERAL NOTES: FOR RENOVATION

1. THE CONTRACTOR SHALL VERIFY ALL EXISTING WINDOW DIMENSIONS PRIOR TO BIDDING - THE DIMENSIONS SHOWN ON THE DRAWINGS ARE +/-.
2. PROVIDE BACKER ROD AND SEALANT AROUND ENTIRE PERIMETER OF NEW WINDOWS - BOTH SIDES OF WINDOW.
3. CONTRACTOR IS RESPONSIBLE FOR ADDING STRUCTURAL REINFORCEMENT AS REQUIRED TO MEET STRUCTURAL LOADING FOR ALL WINDOWS.
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10. INSULATED METAL PANEL COLOR TO MATCH ALUMINUM FRAMING COLOR.
11. CAULK COLOR TO MATCH FRAMING COLOR.
12. WINDOWS SHALL OPEN AS FAR AS POSSIBLE PER ORIGINAL WINDOW MANUFACTURER'S DESIGN - OWNER SHALL DETERMINE WHICH OPERABLE WINDOWS WILL REQUIRED A 4" MAXIMUM OPENING.

LOWER LEVEL FLOOR PLAN

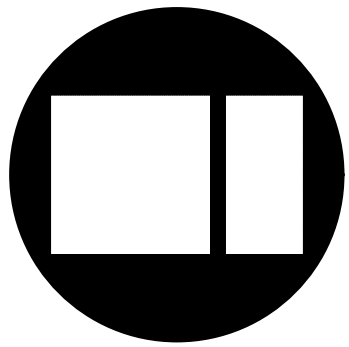
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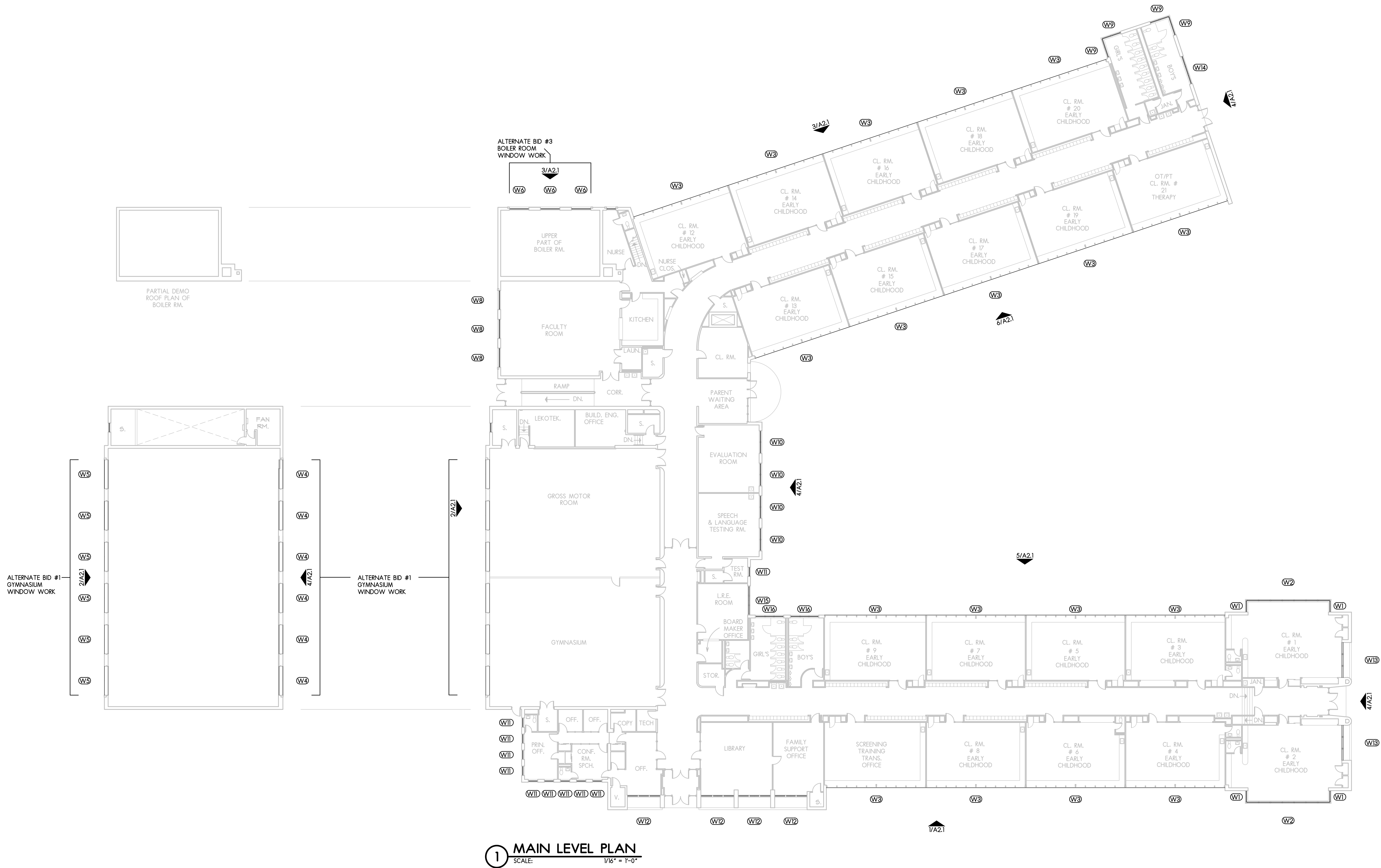
DATE: 10-7-2016	ISSUED FOR: DATE
PROJECT NUMBER 25110	DESIGN REVIEW 02-03-2017
SHEET NUMBER A1.1	DRAWN SAT
	APPROVED SMN

FAIRVIEW EARLY CHILDHOOD CENTER  
HVAC AND WINDOW REPLACEMENT - ROCKFORD IL  
ROCKFORD PUBLIC SCHOOLS 205

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Larson & Darby Group  
Architects Engineers Interiors  
Rockford Office - 401P Harbor Ave., Suite 200, Rockford, IL 61025  
Tel: (815) 444-0739 Fax: (815) 225-9607



ARCHITECTURAL SYMBOLS :

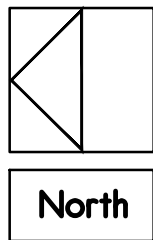
- 1/A2.1 ELEVATION CALLOUT - SEE A2.1
- W3 WINDOW CALLOUT - SEE A3.1

GENERAL NOTES :

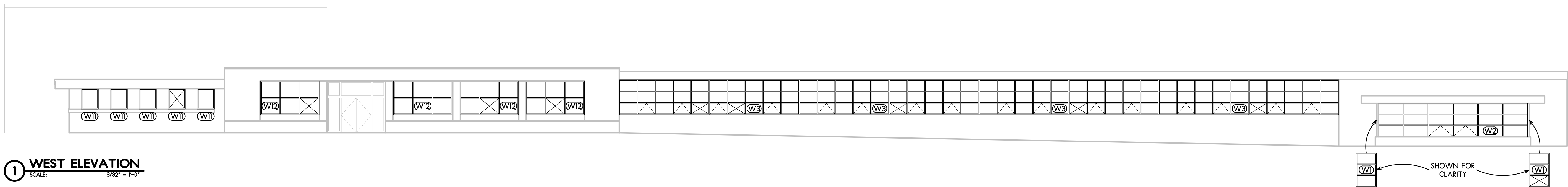
1. LOWER LEVEL FLOOR PLAN - SEE A1.1
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5. WINDOW DETAILS - SEE A4.1

MAIN LEVEL FLOOR PLAN

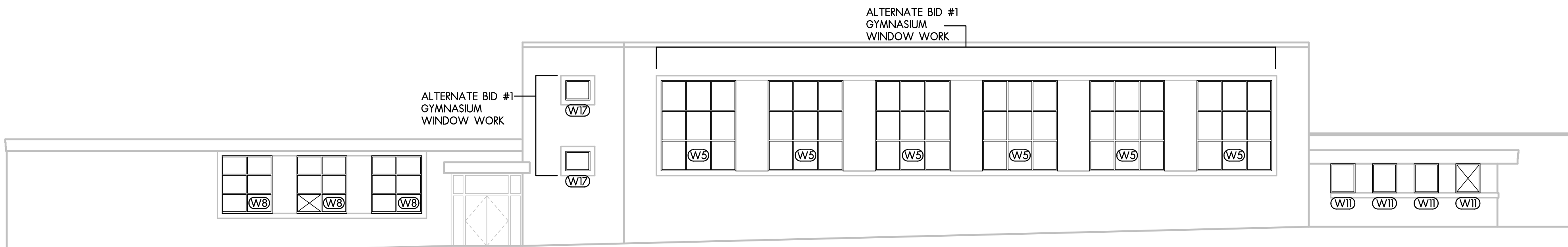
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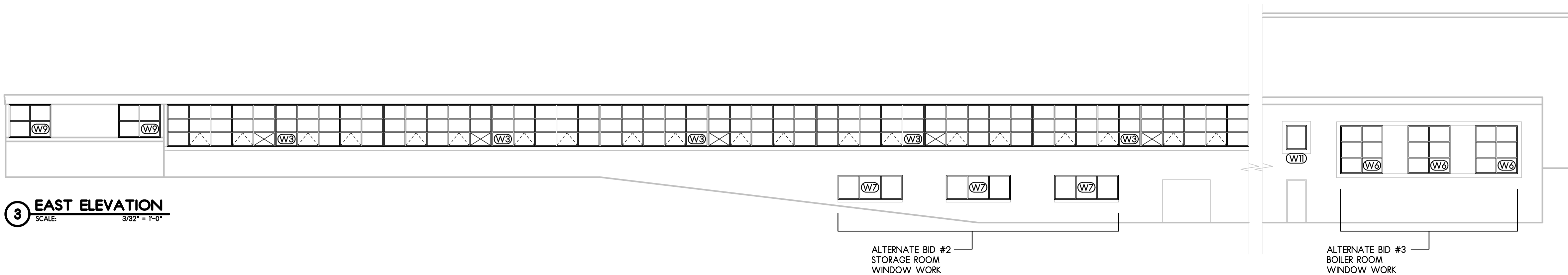




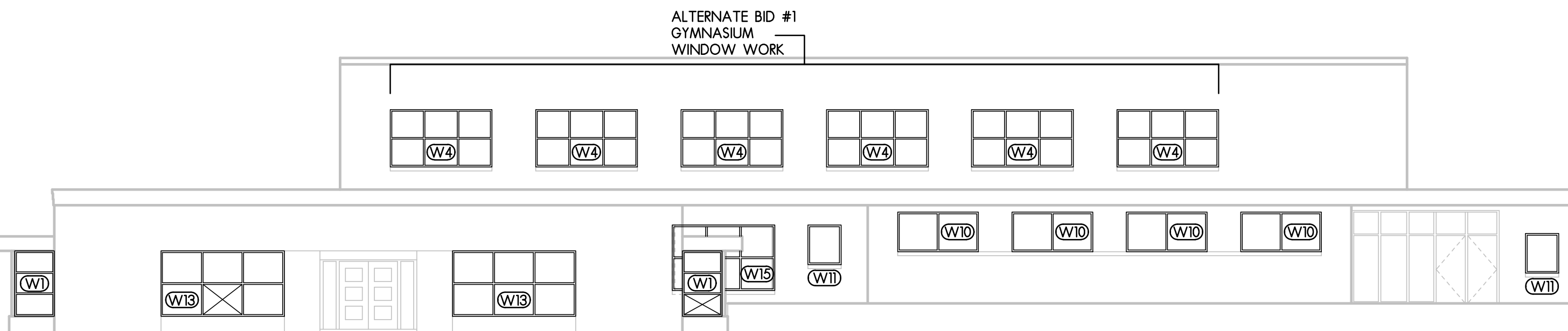
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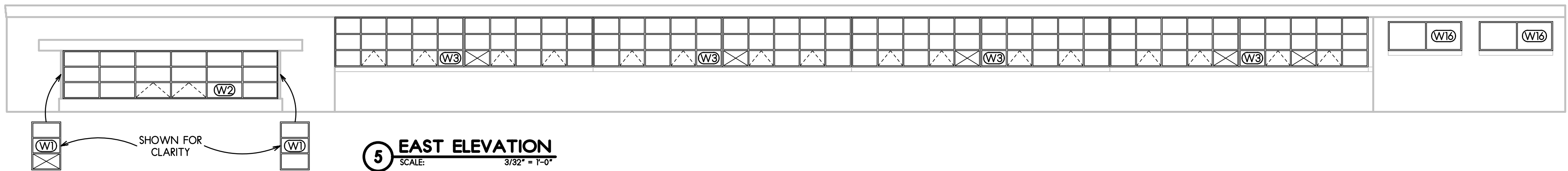
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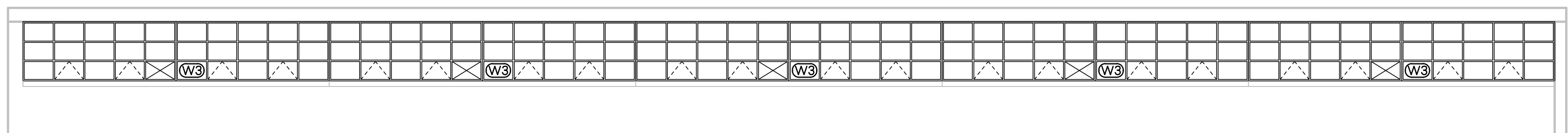
3 EAST ELEVATION  
SCALE: 3/32" = 1'-0"



4 SOUTH ELEVATION  
SCALE: 3/32" = 1'-0"



5 EAST ELEVATION  
SCALE: 3/32" = 1'-0"

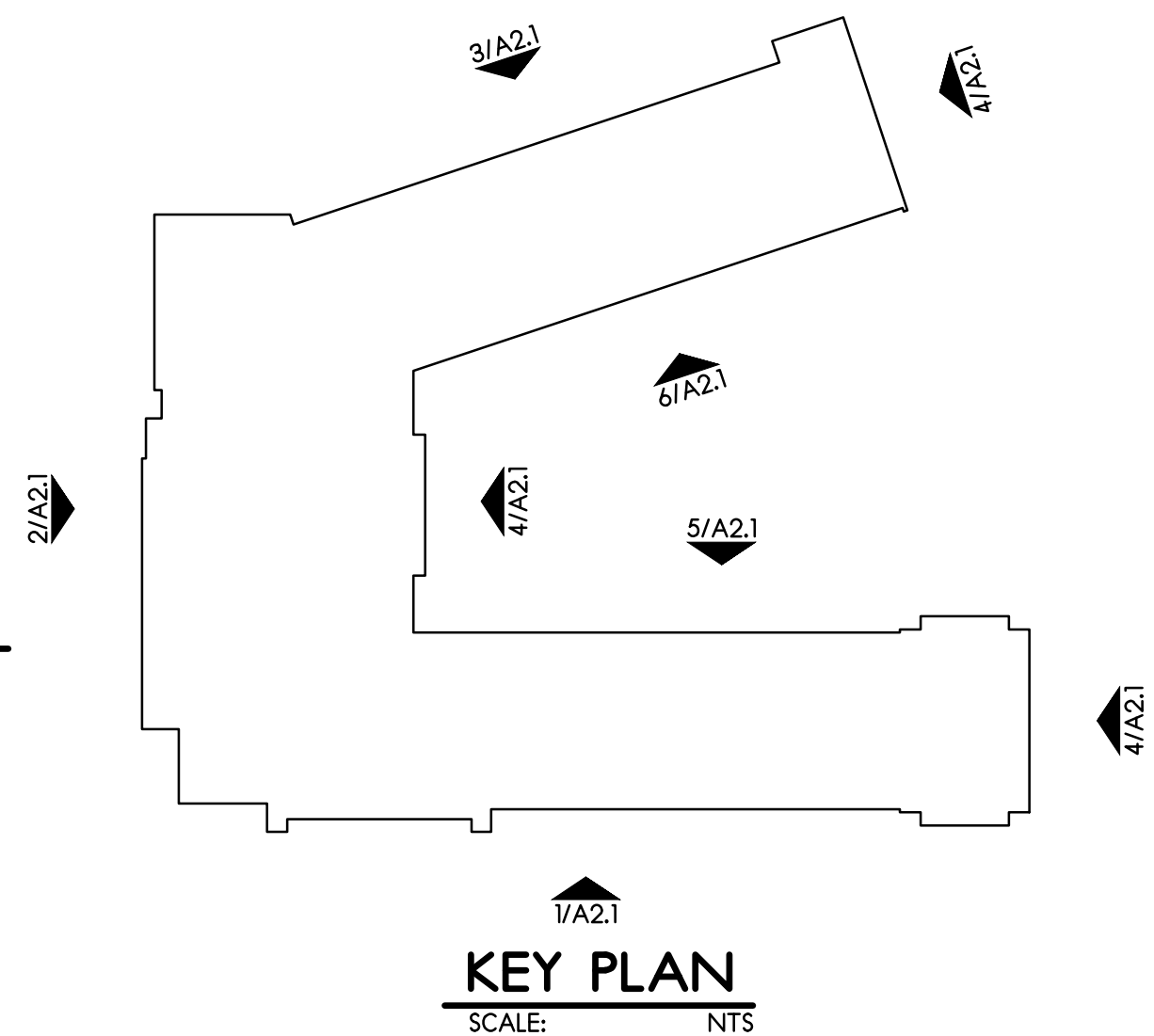


6 WEST ELEVATION  
SCALE: 3/32" = 1'-0"

ARCHITECTURAL SYMBOLS :

1/A2.1 ELEVATION CALLOUT - SEE A2.1

W3 WINDOW CALLOUT - SEE A3.1



KEY PLAN  
SCALE: NTS

GENERAL NOTES: FOR RENOVATION

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3. EXTERIOR ELEVATIONS - SEE A2.1
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5. WINDOW DETAILS - SEE A4.1

EXTERIOR ELEVATIONS

SCALE: 3/32" = 1'-0"

FAIRVIEW EARLY CHILDHOOD CENTER  
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SAT	SMN

DATE: 10-7-2016	PROJECT NUMBER
25110	
SHEET NUMBER	A2.1

1 WINDOW ELEVATIONS

SCALE: 1/4" = 1'-0"

GLASS TYPES :

- G1 - 1" CLEAR TEMPERED INSULATING GLASS  
G2 - 1" TRANSLUCENT TEMPERED INSULATING GLASS  
G3 - FIBERGLASS SANDWICH PANEL ASSEMBLY

ARCHITECTURAL SYMBOLS :

1/A2.1 ELEVATION CALLOUT - SEE A2.1

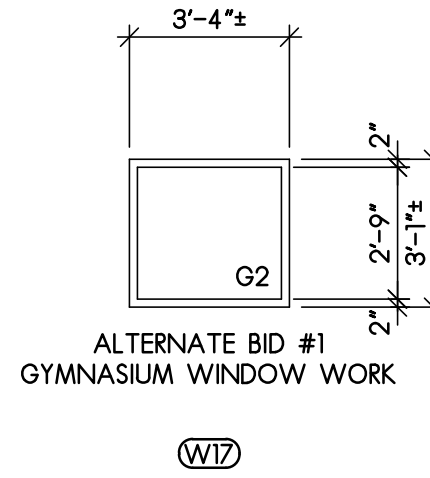
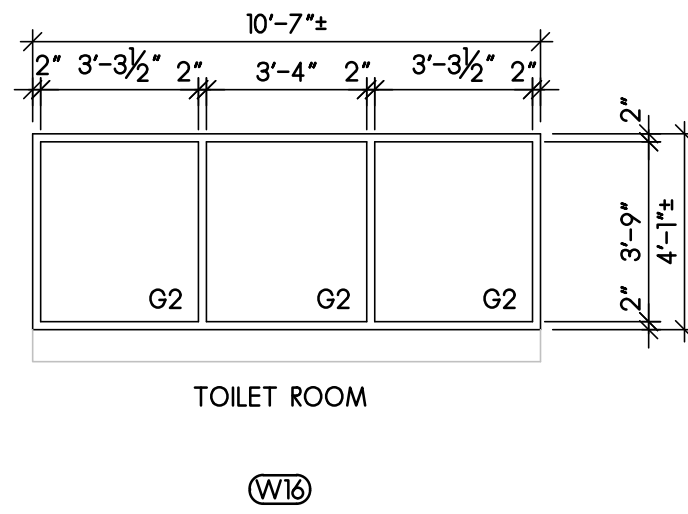
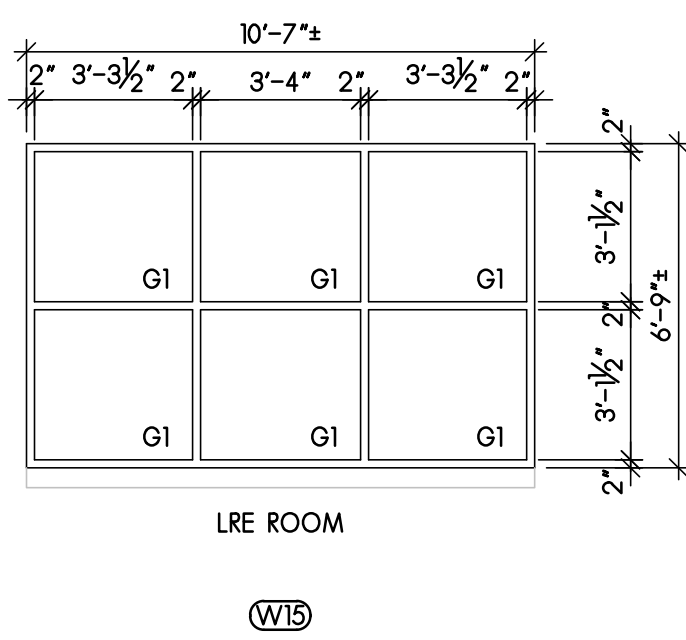
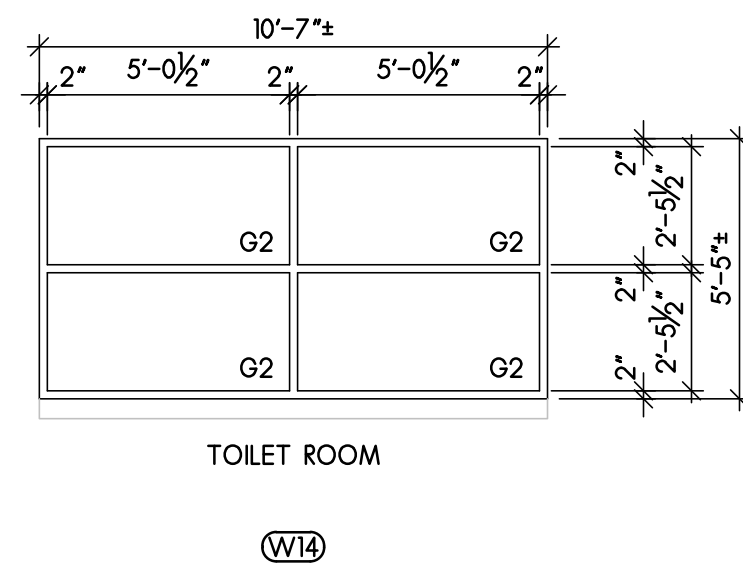
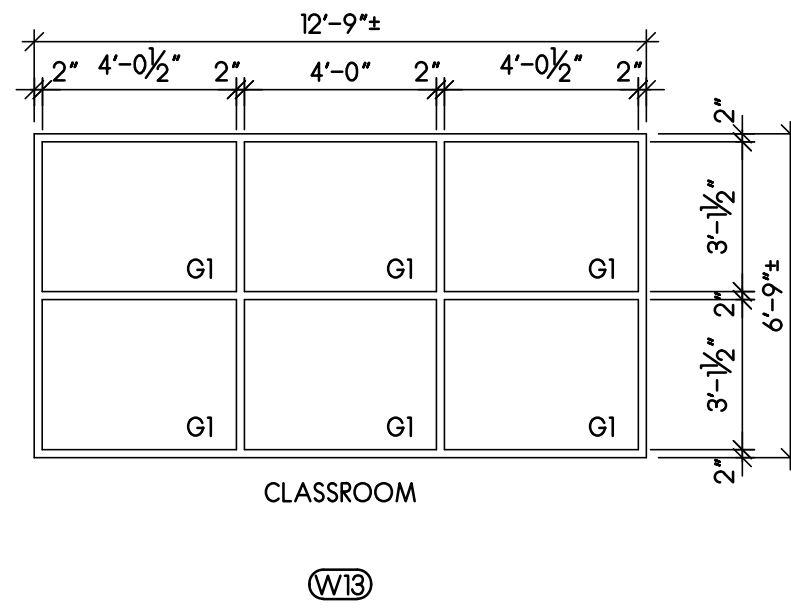
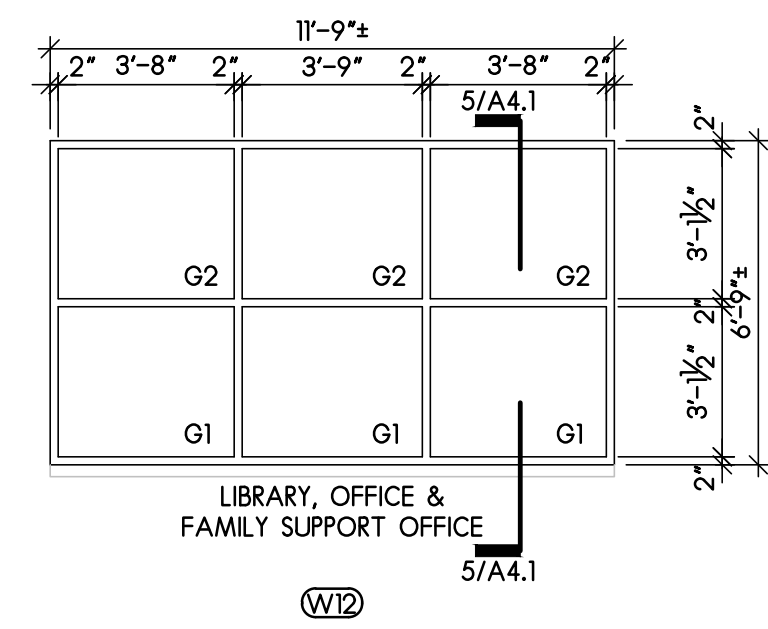
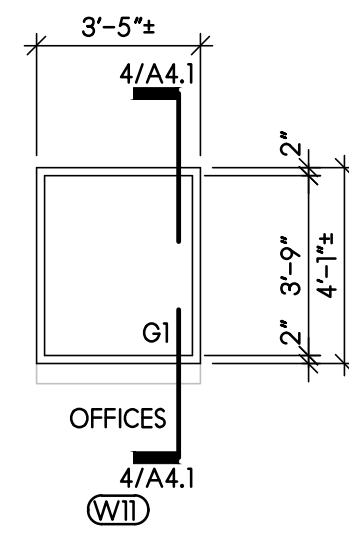
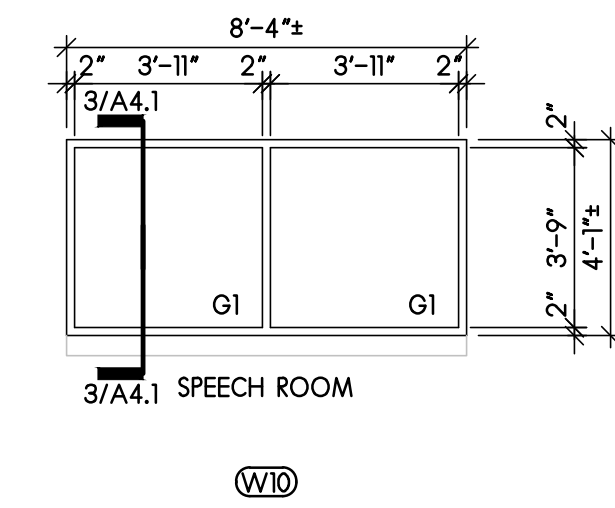
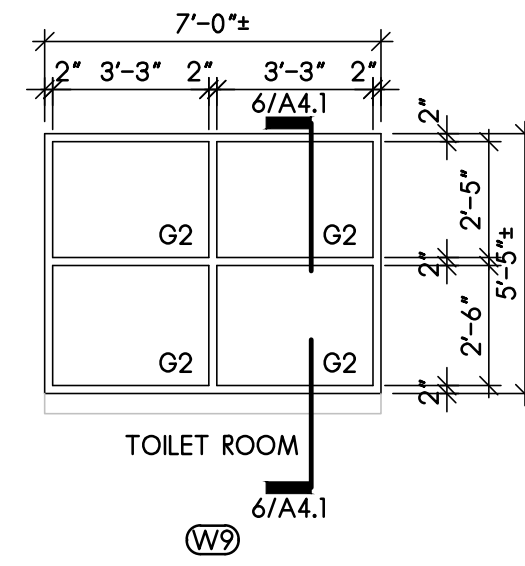
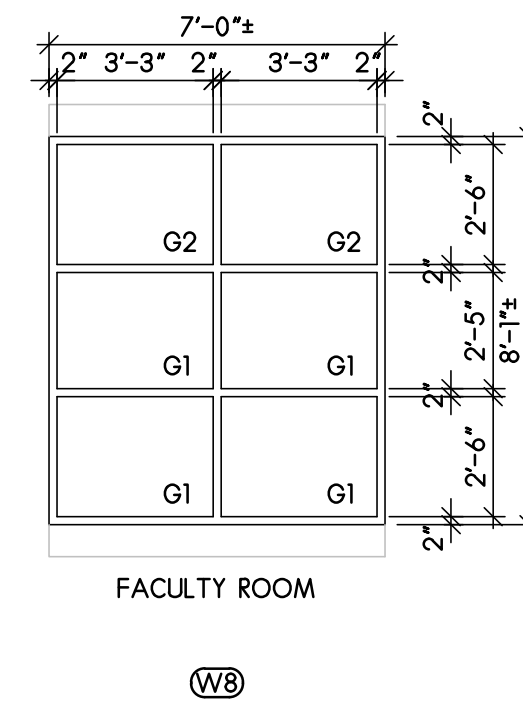
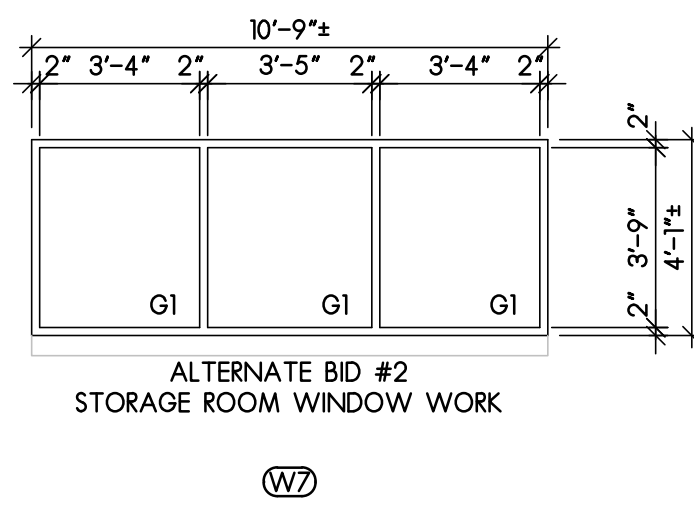
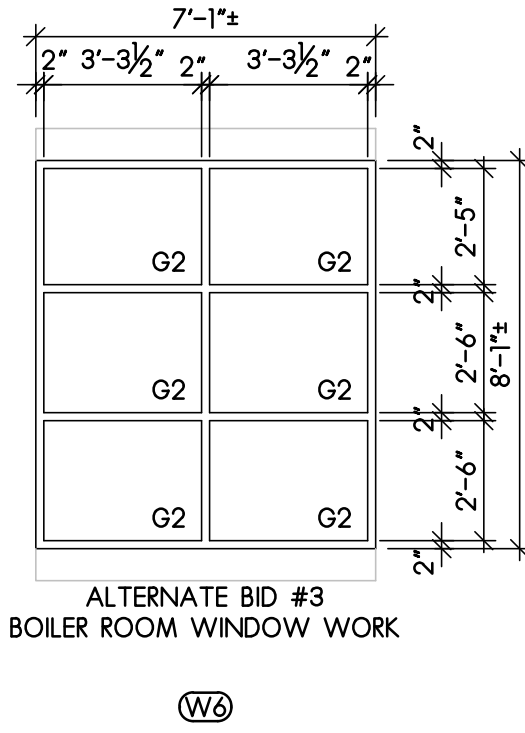
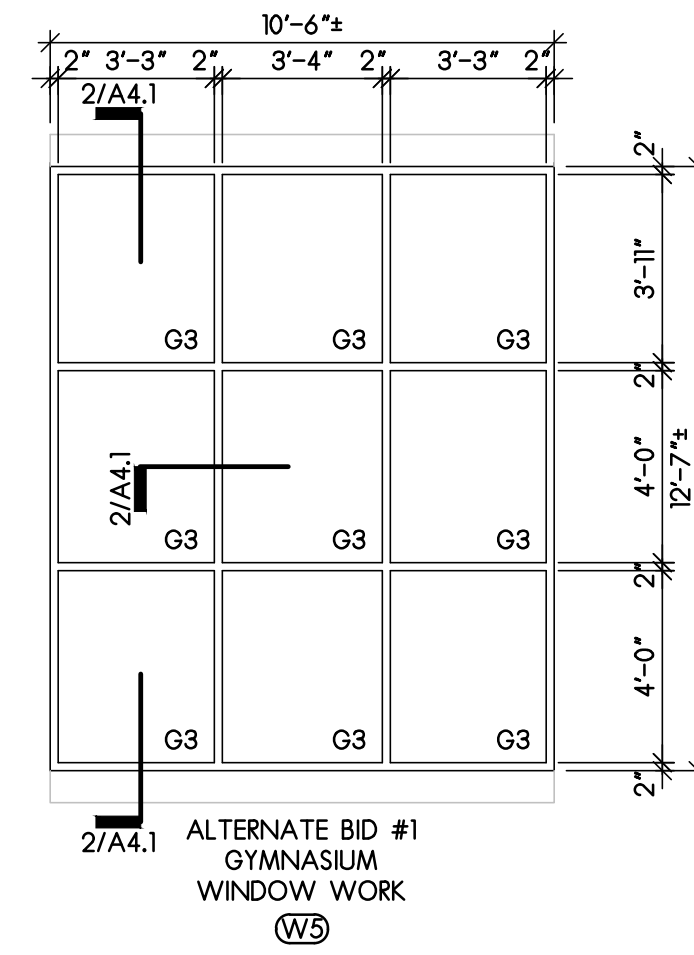
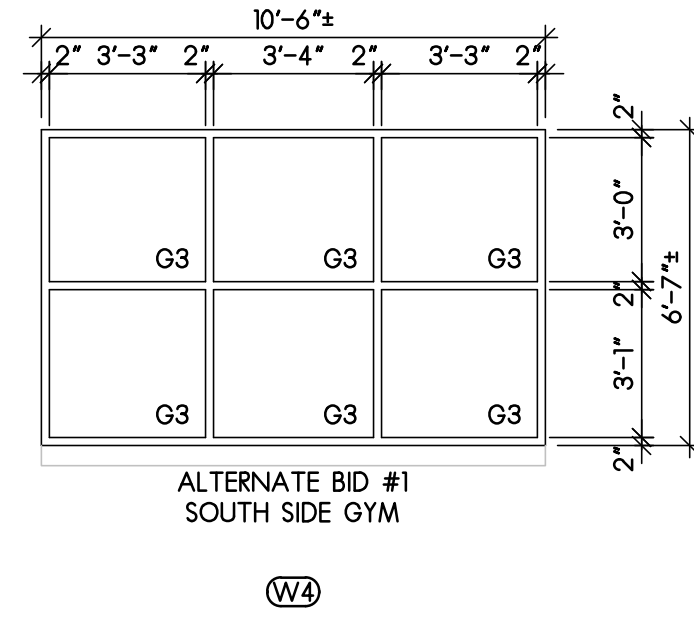
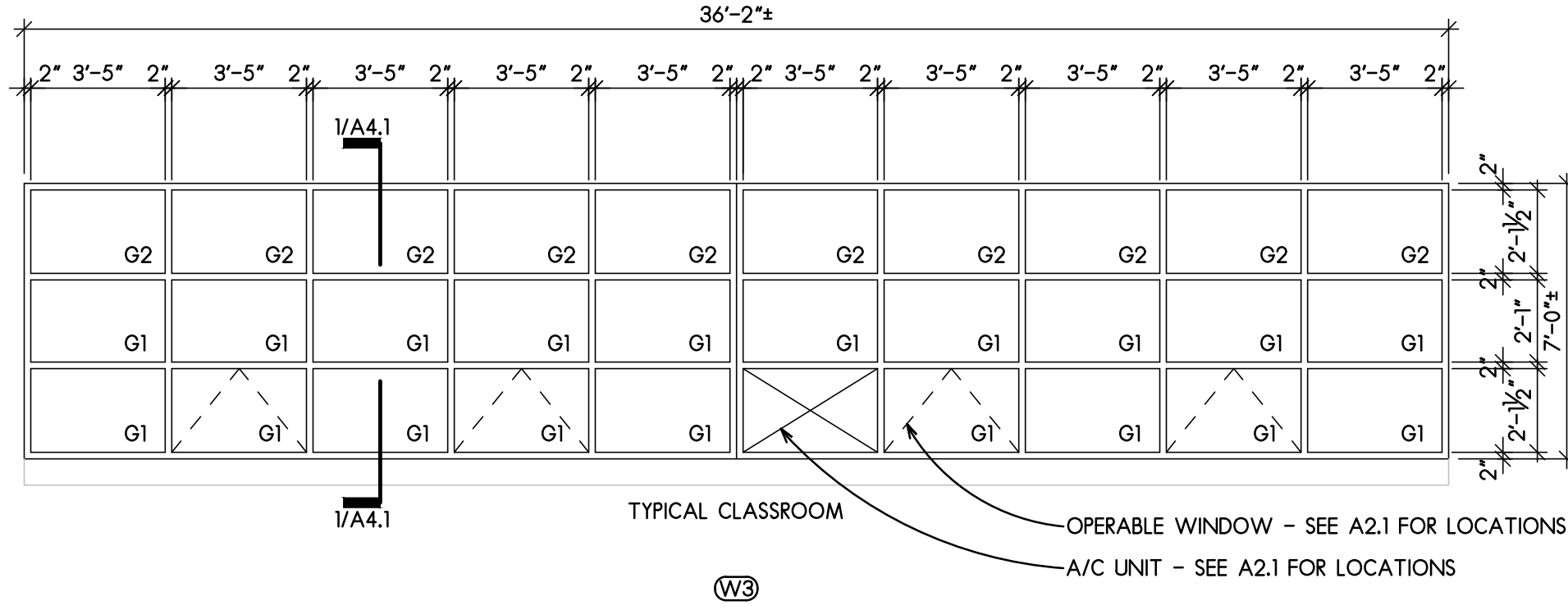
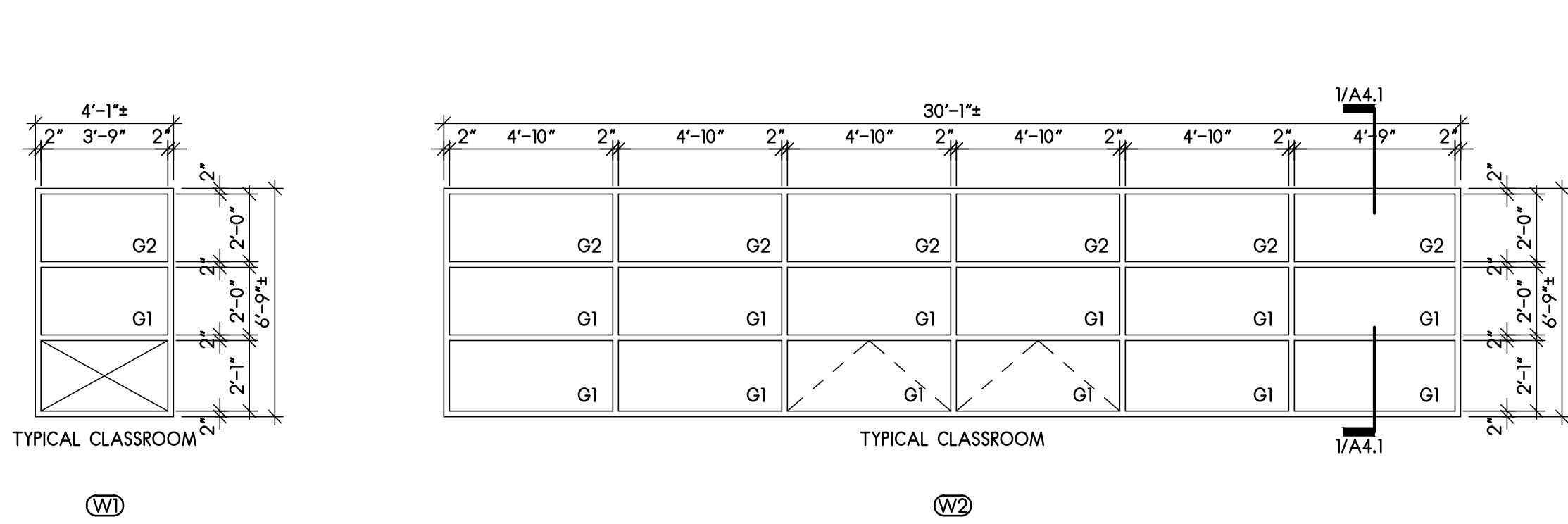
W3 WINDOW CALLOUT - SEE A3.1

GENERAL NOTES :

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2. MAIN LEVEL FLOOR PLAN - SEE A1.2
3. EXTERIOR ELEVATIONS - SEE A2.1
4. WINDOW ELEVATIONS - SEE A3.1
5. WINDOW DETAILS - SEE A4.1

WINDOW ELEVATIONS

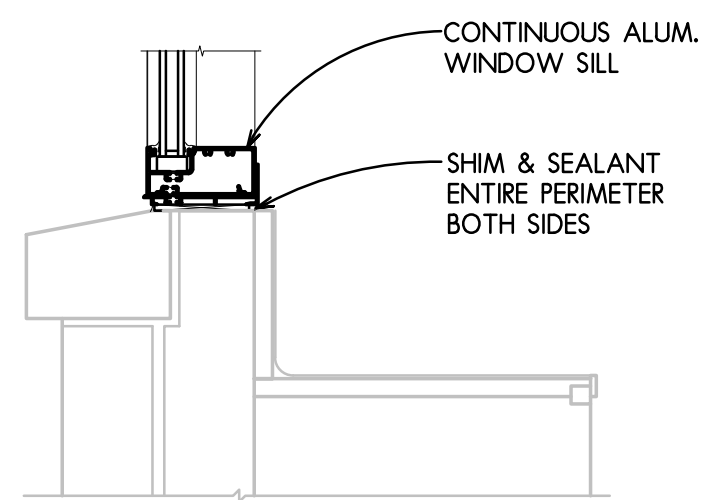
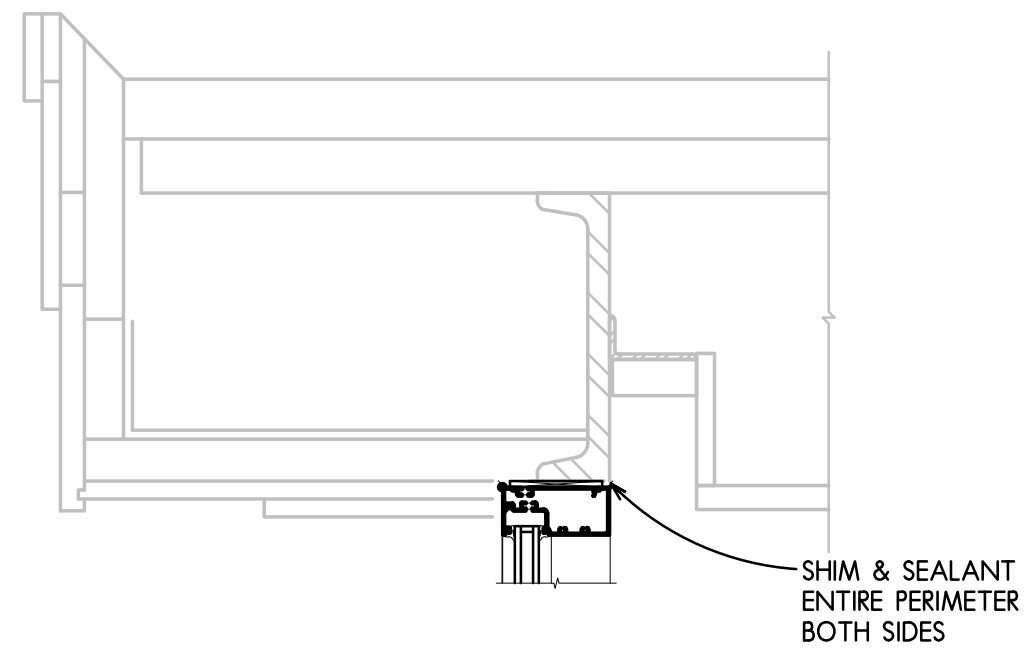
SCALE: 1/4" = 1'-0"



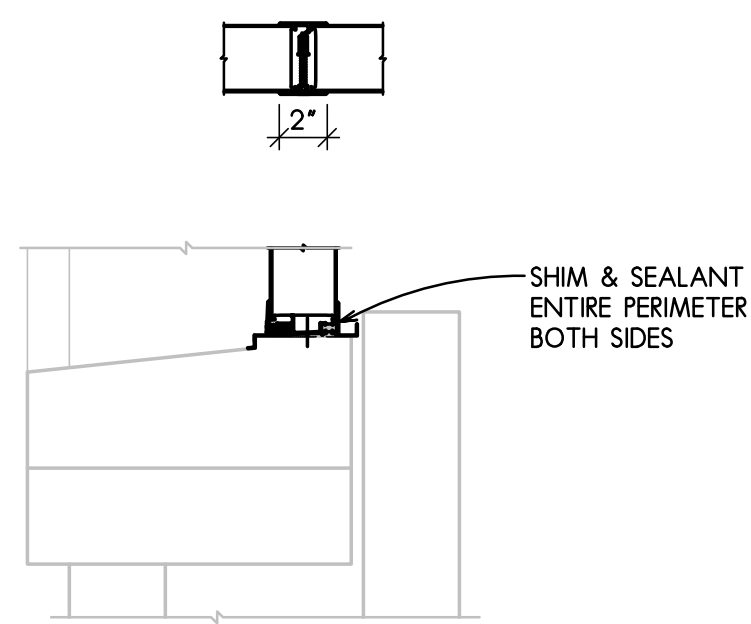
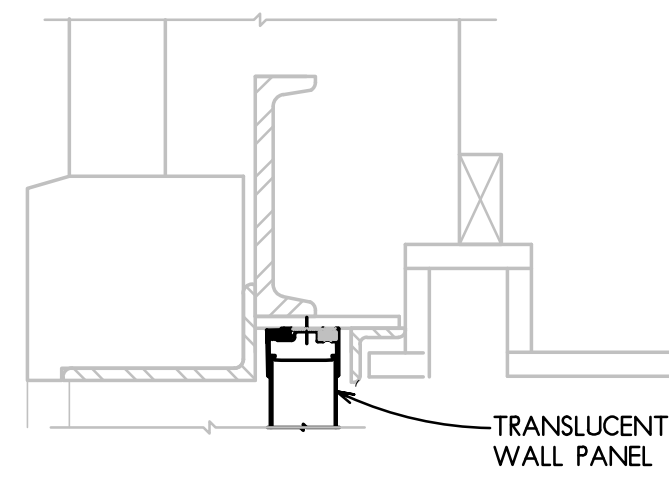
GENERAL NOTES: FOR RENOVATION

1. THE CONTRACTOR SHALL VERIFY ALL EXISTING WINDOW DIMENSIONS PRIOR TO BIDDING - THE DIMENSIONS SHOWN ON THE DRAWINGS ARE +/-.
2. PROVIDE BACKER ROD AND SEALANT AROUND ENTIRE PERIMETER OF NEW WINDOWS - BOTH SIDES OF WINDOW.
3. CONTRACTOR IS RESPONSIBLE FOR ADDING STRUCTURAL REINFORCEMENT AS REQUIRED TO MEET STRUCTURAL LOADING FOR ALL WINDOWS.
4. WINDOW CONTRACTOR TO PROVIDE APPROPRIATE SEALANT JOINT BETWEEN A/C UNIT AND METAL PANEL SURROUND AT ALL LOCATIONS.
5. PROVIDE FIRE RETARDANT TREATED WOOD SHIMS AND BLOCKING AS REQUIRED FOR WINDOW INSTALLATIONS - APPLY COATING TO WOOD BLOCKING SO AS NOT TO CHEMICALLY REACT WITH THE ALUMINUM FRAMING.
6. CONTRACTOR TO RESTORE / RESEED ANY DISTURBED GRASS AREAS BACK TO ORIGINAL CONDITION AFTER WORK IS COMPLETE.
7. WINDOW CONTRACTOR TO VERIFY EXACT SIZE AND LOCATIONS OF AIR CONDITIONER UNITS PRIOR TO FABRICATING INSULATED METAL PANEL SURROUND.
8. ALL EXPOSED LINTELS TO BE PAINTED TO MATCH WINDOW FRAMING.
9. CONTRACTOR TO PROVIDE METAL TRIM AT FLOORS, WALLS AND CEILINGS AS REQUIRED TO COVER ANY EXPOSED CONSTRUCTION.
10. INSULATED METAL PANEL COLOR TO MATCH ALUMINUM FRAMING COLOR.
11. CAULK COLOR TO MATCH FRAMING COLOR.
12. WINDOWS SHALL OPEN AS FAR AS POSSIBLE PER ORIGINAL WINDOW MANUFACTURER'S DESIGN - OWNER SHALL DETERMINE WHICH OPERABLE WINDOWS WILL REQUIRED A 4" MAXIMUM OPENING.

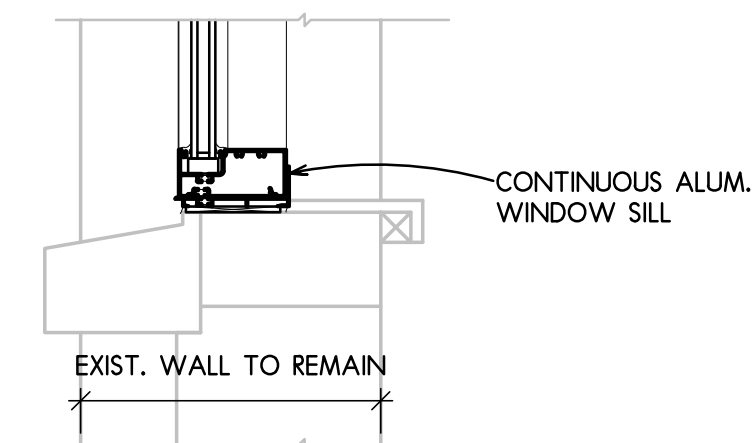
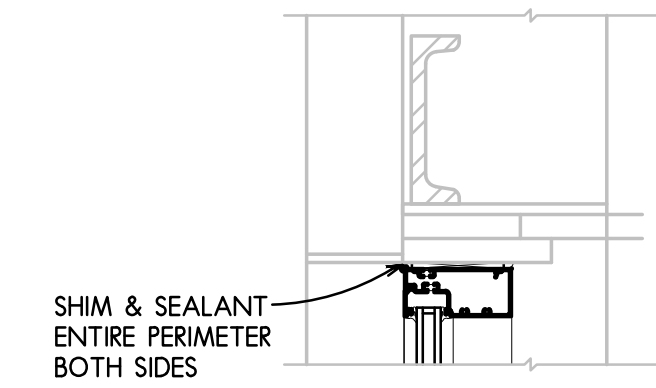




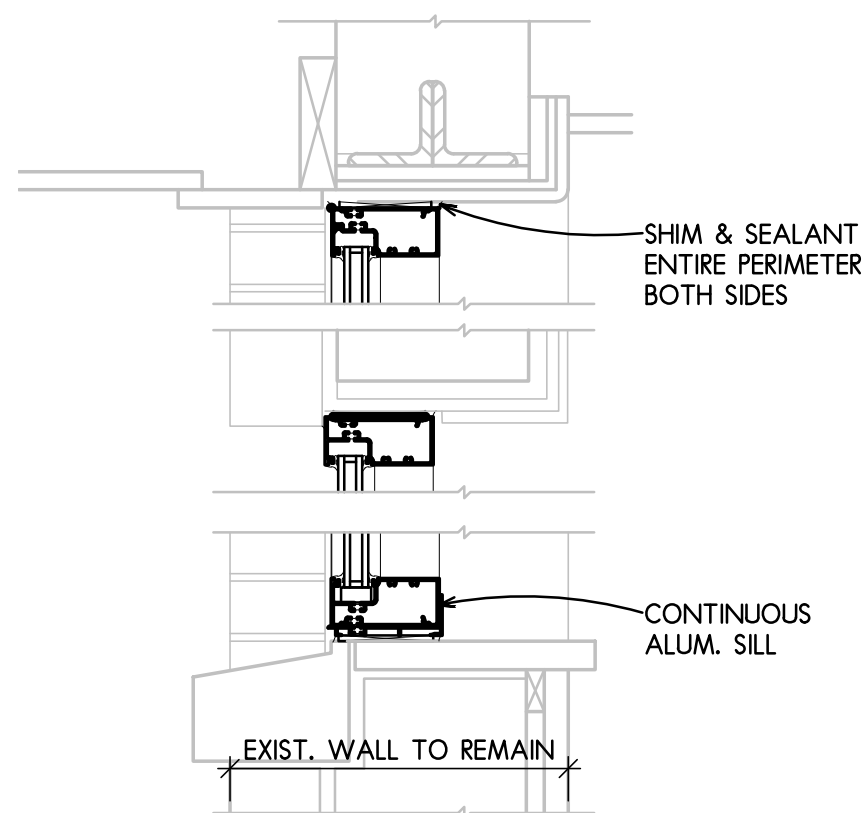
**1** TYPICAL CLASSROOM EXTERIOR WALL SECTION  
SCALE: 1 1/2" = 1'-0"



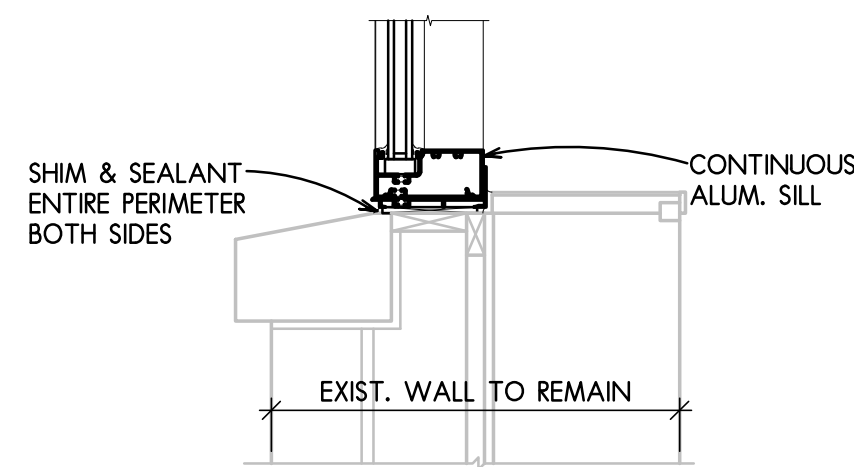
**2** SECTION THRU NORTH GYM WINDOWS  
SCALE: 1 1/2" = 1'-0"



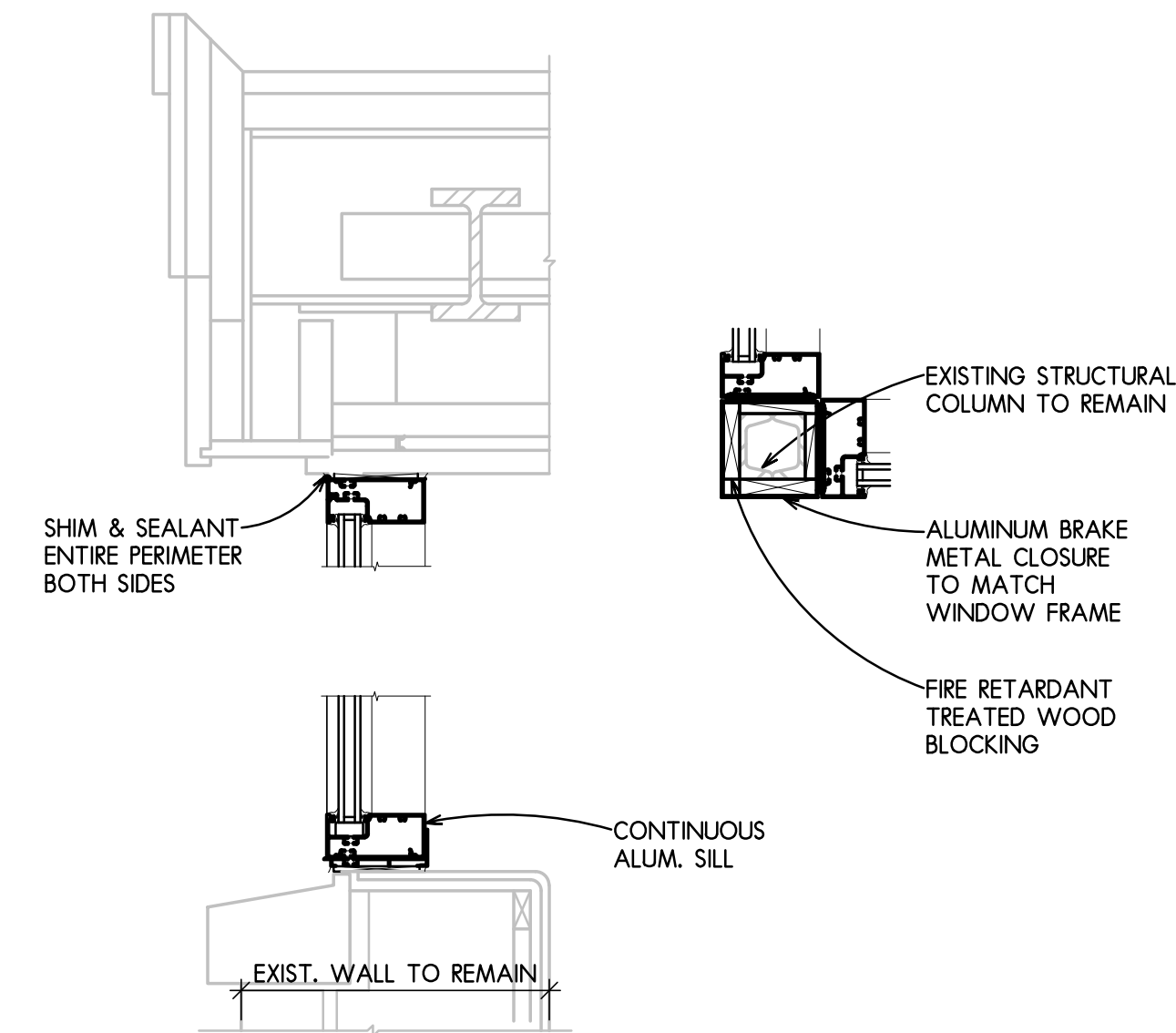
**3** SECTION THRU SPEECH ROOM WINDOW  
SCALE: 1 1/2" = 1'-0"



**4** SECTION THRU OFFICE  
SCALE: 1 1/2" = 1'-0"



**5** LIBRARY WINDOW  
SCALE: 1 1/2" = 1'-0"



**6** SECTION THRU EXTERIOR WALL OF TOILET ROOMS  
SCALE: 1 1/2" = 1'-0"

## WINDOW DETAILS

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

## FAIRVIEW EARLY CHILDHOOD CENTER HVAC AND WINDOW REPLACEMENT - ROCKFORD IL ROCKFORD PUBLIC SCHOOLS 205

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OWNER REVIEW	02-13-17
OWNER REVIEW	02-13-17
DRAWN	APPROVED
SAT	SMN

DATE:	10-7-2016
PROJECT NUMBER	25110
SHEET NUMBER	A4.1

**BOILER ROOM – GAS PIPING  
MECHANICAL DEMOLITION PLAN**

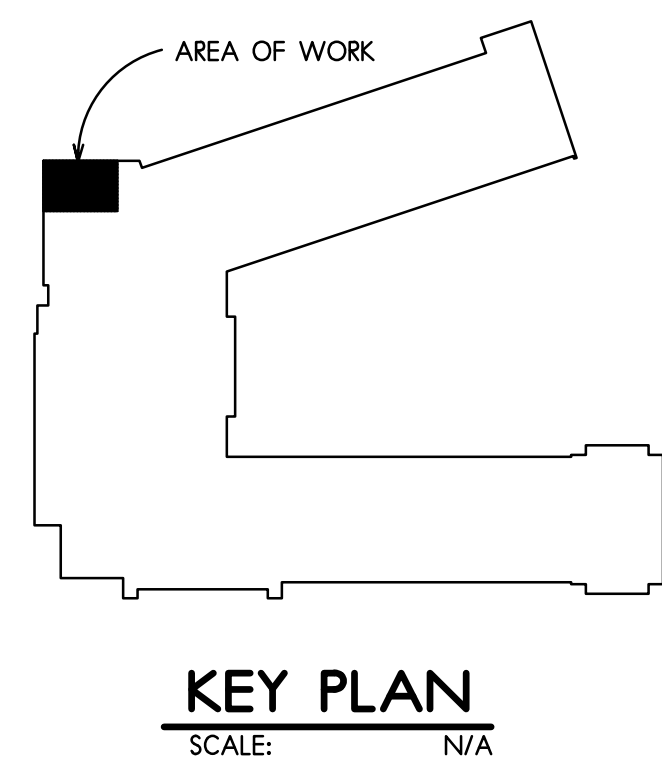
**3** SCALE: 1/4" = 1'-0"

## DEMOLITION KEYED NOTES

- 1) REMOVE EXISTING STEAM BOILER, MASONRY, REFRACTORY, STRUCTURAL SUPPORT, NATURAL GAS ATMOSPHERIC BURNER, BURNER CONTROL PANEL, CONTROLS, TRIM, RELIEF VALVES, ASSOCIATED VALVES AND PIPING, INSULATION, ETC. AS REQUIRED FOR THE INSTALLATION OF NEW BOILERS AS SHOWN ON NEW WORK PLANS
- 2) REMOVE EXISTING BOILER FEED SYSTEM, TANK, PUMPS, SUPPORTS, CONTROLS, ASSOCIATED PIPING, VALVES, CONTROLS, INSULATION, ETC....
- 3) REMOVE EXISTING CONDENSATE PUMP AND ASSOCIATED PIPING, VALVES, CONTROLS, CONCRETE PAD, ETC....
- 4) REMOVE EXISTING ABANDONED IN PLACE DOMESTIC WATER HEAT EXCHANGER AND ASSOCIATED SUPPORTS, PIPING, VALVES, CONTROLS, INSULATION, ETC....
- 5) REMOVE EXISTING BREECHING, SUPPORT, INSULATION, ETC....
- 6) REMOVE EXISTING STEAM/CONDENSATE/PUMPED CONDENSATE/MAKE-UP/DRAIN PIPING, VALVES, SUPPORTS, INSULATION, ETC....
- 7) REMOVE EXISTING CHEMICAL FEED SYSTEM.
- 8) EXISTING WATER SOFTENER TO REMAIN.
- 9) EXISTING STEAM/CONDENSATE/PIPING TO REMAIN.
- 10) EXISTING CONTROL PANEL & EQUIPMENT, AIR COMPRESSOR, CONCRETE PAD, AIR DRYER, AND ALL ASSOCIATED PNEUMATIC VALVES & CONTROLS ARE PART OF EXISTING ACTIVE SYSTEM IN THE BUILDING SHALL REMAIN.
- 11) EXISTING EMERGENCY GENERATOR.
- 12) REMOVE EXISTING STEAM SUPPLY BACK TO THIS POINT (APPROXIMATELY). PREPARE TO CONNECT WITH NEW STEAM SUPPLY AS SHOWN ON NEW WORK PLAN.
- 13) REMOVE EXISTING BOILER MAKE-UP WATER AS SHOWN BACK TO EXISTING PUMP. PREPARE TO CONNECT WITH NEW PIPING AS SHOWN ON NEW WORK FLOOR PLAN.
- 14) CAP EXISTING ROOF OPENING RESULTING FROM FLUE PIPE REMOVAL TO MATCH EXISTING SURFACE.
- 15) REMOVE EXISTING BOILER CONDENSATE RETURN AS SHOWN.
- 16) REMOVE EXISTING LOUVERS AS SHOWN. PREPARE TO REPLACE WITH NEW LOUVER OF SAME SIZE.
- 17) REMOVE EXISTING HEAT EXCHANGER, PUMPS, AND HYDRONIC PIPING ACCESSORIES FEEDING EXISTING IN-FLOOR RADIANT HEAT SYSTEM.
- 18) EXISTING STEAM SUPPLY AND CONDENSATE PIPING TO EXISTING DOMESTIC WATER GENERATOR TO BE REMOVED BACK TO MAIN.
- 19) REMOVE ALL EXISTING BOILER CONTROLS IN THEIR ENTIRETY. REMOVE ALL EXISTING PNEUMATIC TUBING BACK TO SOURCE AND CAP.
- 20) REMOVE ALL EXISTING CONTROLS ON EXISTING UNDER FLOOR RADIANT HEAT SYSTEM TO BE DEMOLISHED. REMOVE CONTROLS IN THEIR ENTIRETY. REMOVE EXISTING PNEUMATIC TUBING BACK TO SOURCE AND CAP.

**2 BOILER ROOM PIPING DIAGRAM**  
SCALE: \_\_\_\_\_ NTS

**BOILER ROOM –  
MECHANICAL DEMOLITION PLAN**



## KEYED NOTES

- CAP & ABANDON IN PLACE EXISTING HW PIPING FEEDING EXISTING UNFUNCTIONAL UNDER FLOOR RADIANT HEAT SYSTEM.
- MAINTAIN 36" SERVICE CLEARANCE IN FRONT OF ALL CONTROL PANELS.
- 6" BLIND FLANGE AND SHUT OFF GATE VALVE FOR FUTURE CONNECTION.
- 10" STEAM SUPPLY HEADER.
- 4" THICK CONCRETE HOUSE KEEPING PAD.
- 1 1/2" MAKE UP WATER. EXTEND AND CONNECT TO EXISTING CW MAKE-UP WATER WITH RPZ, FIELD LOCATED.
- BOILER SERVICE CLEARANCE AND TUBE PULL OUT SHOWN FOR PREFERENCE. FIELD COORDINATE EXACT BOILER LOCATION TO ALLOW FOR SERVICE PER MFR REQUIREMENT.
- SAW CUT EXISTING FLOOR AS REQUIRED TO RUN DRAIN LINE TO NEAREST FLOOR DRAIN AS SHOWN. PATCH FLOOR TO MATCH EXISTING.
- INTERLOCK MOTOR OPERATED DAMPER WITH BOILER OPERATION.
- 10" BOILER FLUE STACK WITH MOD THRU. ROOF. REFER TO FLUE THRU ROOF DETAIL ON SHEET M2.2.
- INTERLOCK MOTOR OPERATED DAMPER WITH PRE-1.
- COMBUSTION AIR DUCT DROP TO 24" ABOVE BOILER.
- PIPE FEED WATER PUMP AS A BACKUP FOR EITHER OF THE OTHER PUMPS. PROVIDE ALL REQUIRED VALVES, FITTINGS & CONTROLS.
- BOILER WATER LEVEL (VERIFY WITH BOILER MFR.).
- EXTEND AND CONNECT TO CW WITH RPZ.
- TEMPERATURE REGULATOR AND SOLENOID VALVES.
- REFER TO BOILER FEED WATER SYSTEM DETAIL ON SHEET M2.2 FOR MORE INFO.
- REFER TO BOILER BLOW DOWN SEPARATOR DETAIL ON SHEET M2.2 FOR MORE INFO.
- CHEMICAL FEED SYSTEM AND TANK.
- TERMINATE AUTOMATIC SURFACE BLOW DOWN SYSTEM (PROVIDED BY BOILER MFR.) AT BLOW DOWN SEPARATOR.
- TERMINATE SLOW AND QUICK OPEN BOTTOM BLOW DOWN PIPING AT BLOW DOWN SEPARATOR.
- EXTEND 2 1/2" VENT PIPE THROUGH ROOF WITH GOOSE NECK.
- CUT NEW OPENING IN EXISTING ROOF TO INSTALL NEW FAN AND FAN CURB. FLASH AROUND NEW CURB AS REQUIRED. FIELD COORDINATE AND LOCATE EXACT LOCATION WITH EXISTING STRUCTURE.
- CUT NEW OPENING IN EXISTING ROOF TO INSTALL NEW C/A INTAKE HOOD AND CURB. FLASH AROUND NEW CURB AS REQUIRED. FIELD COORDINATE AND LOCATE EXACT LOCATION WITH EXISTING STRUCTURE.
- BOILER EMERGENCY SHUT OFF SWITCH LOCATED AND WIRED PER AHJ REQUIREMENTS.
- CONNECT TO GAS-FIRED EQUIPMENT WITH GAS COCK, UNION AND DRIP LEG. COORDINATE EXACT LOCATION IN FIELD.
- STEAM FLASH RELIEF PIPE UP 10" ABOVE FEED TANK AND DISCHARGE AS SHOWN.
- 1" EQUALIZING LINE FROM BOILER MAIN SUPPLY HEADER TO VCP WITH CHECK VALVE. REFER TO MFR. SPECIFIC INSTALLATION INSTRUCTIONS.
- HVAC MAKE-UP WATER SHALL BE FEED FROM THE EXISTING WATER SOFTENER. FIELD VERIFY AND MODIFY PIPING AS REQUIRED.
- 1" STEAM SUPPLY TO SPARGE TUBE HEATER.

## STEAM TRAP (ST) SCHEDULE

PLAN NO.	ST-1 & 2	ST-3	ST-4
SERVICE	S. HEADER	SB-1	SB-2
MANUFACTURER	SPIRAX SARCO	SPIRAX SARCO	SPIRAX SARCO
MODEL	FT-15	FT-15	FT-15
TYPE	F&T	F&T	F&T
CONNECTION SIZE	1"	3/4"	3/4"
MAX PRESSURE PSI	15	15	15
CAPACITY (LBS/HR)	250	175	175
NOTES	-	-	-

NOTES: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.  
1. CAPACITY IS MEASURED IN # / HOUR AT 1/2 PSI PRESSURE DIFFERENTIAL.

## STEAM BOILER (SB) SCHEDULE

PLAN NO.	SB-1	SB-2
LOCATION	BOILER PLANT	BOILER PLANT
MANUFACTURER	CLEAVER BROOKS	CLEAVER BROOKS
MODEL	CB-50	CB-50
TYPE	FIRE TUBE	FIRE TUBE
OPERATING PRESSURE (PSI)	10	10
FIRING INPUT (MBH)	2,092	2,092
STEAM CAP. (LBS/HR)	1,725	1,725
BOILER HP	50	50
FUEL	N. GAS	N. GAS
FIRING STAGES	FULL MOD.	FULL MOD.
ELECTRICAL	208/3/60	208/3/60
HP	2.0	2.0
NOTES	1,2,3,4	1,2,3,4

NOTES: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.  
1. PROVIDE STANDARD TRIM AS SPECIFIED.  
2. PROVIDE FORCED DRAFT BURNER.  
3. MOUNT ON 4" CEB.  
4. PROVIDE W/ 10 PSIG GAS TRAIN.

## CONDENSATE VACUUM PUMP (VCP) SCHEDULE

PLAN NO.	VCP-1
LOCATION	BOILER RM
SERVICE	BUILDING
MANUFACTURER	B&G
MODEL	15VLR2-20-35
TYPE	DUPLEX
CAPACITY (EDR)	15,000
MATERIAL	CAST IRON
VOL. (GAL)	43
INLET SIZE (IN)	2
QUANTITY	2
MOUNTING	VER
GPM	22.5
DISCH. PRESS. (PSI)	20
HP/BHP	1
VOLTS/PHASE	208/3
RPM	3,500
CFM	5.4
Hg (IN)	5.5

NOTES: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.  
1. PROVIDE WITH WATER LEVEL GAUGE & COMPOUND GAUGE.  
2. PROVIDE WITH INLET STRAINER, SOLENOID VALVE, DISCHARGE VALVE, VACUUM SWITCH, AND ANGLE THERMOMETER.  
3. PROVIDE WITH CONTROL PANEL-SEE SPECS FOR REQUIREMENT.

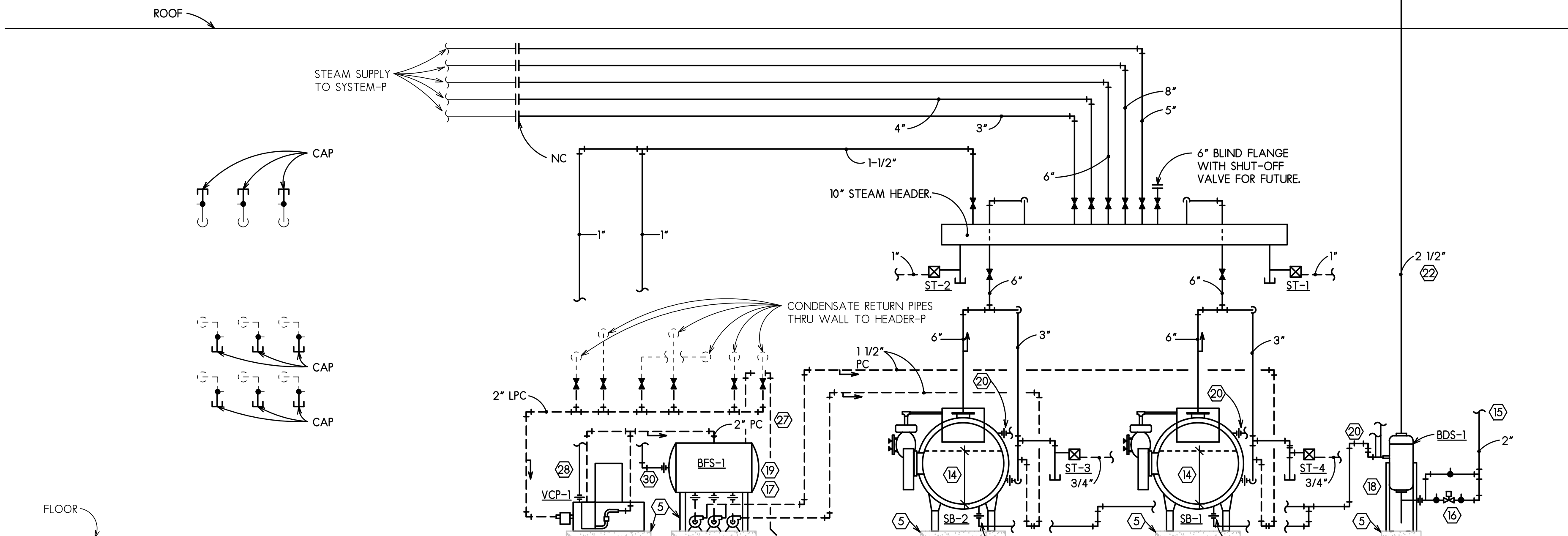
## BOILER FEED WATER SYSTEM (BFS) SCHEDULE

PLAN NO.	BFS-1
LOCATION	BOILER RM
SERVICE	BUILDING
MANUFACTURER	B&G
MODEL	15-CMHD-2.0-C35
TYPE	TRIPLEX
CAPACITY (EDR)	15,000
MATERIAL	STEEL
VOL. (GAL)	204
INLET SIZE (IN)	3
QUANTITY	3
MOUNTING	VER
GPM	22
DISCH. PRESS. (PSI)	20
HP/BHP	1/2
VOLTS/PHASE	208/3
RPM	3,500

NOTES: SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.  
1. PROVIDE WITH 3 VALVE BY-PASS AROUND MAKEUP VALVE.  
2. PROVIDE WITH AIR GAP FITTING ON MAKEUP ASSEMBLY.  
3. PROVIDE WITH LOW WATER CUTOFF, GAUGE GLASS, DIAL THERMOMETER & DISCHARGE PRESSURE GAUGE.  
4. PROVIDE INLET BASKET STRAINER AND BUTTERFLY SUCTION VALVE.  
5. PROVIDE WITH CONTROL PANEL-SEE SPECS FOR REQUIREMENT.

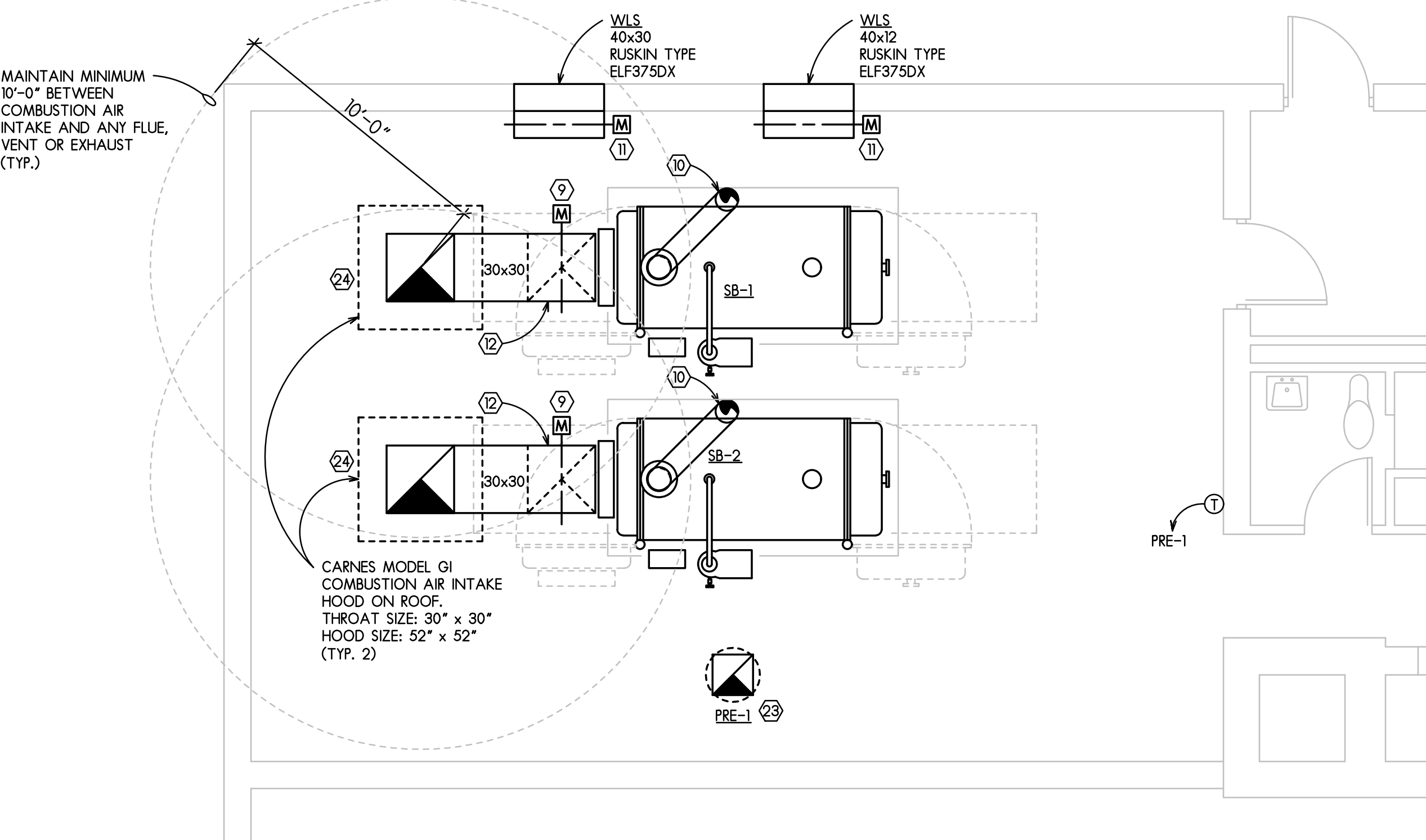
## BOILER ROOM - GAS PIPING MECHANICAL NEW WORK PLAN

SCALE: 1/4" = 1'-0"



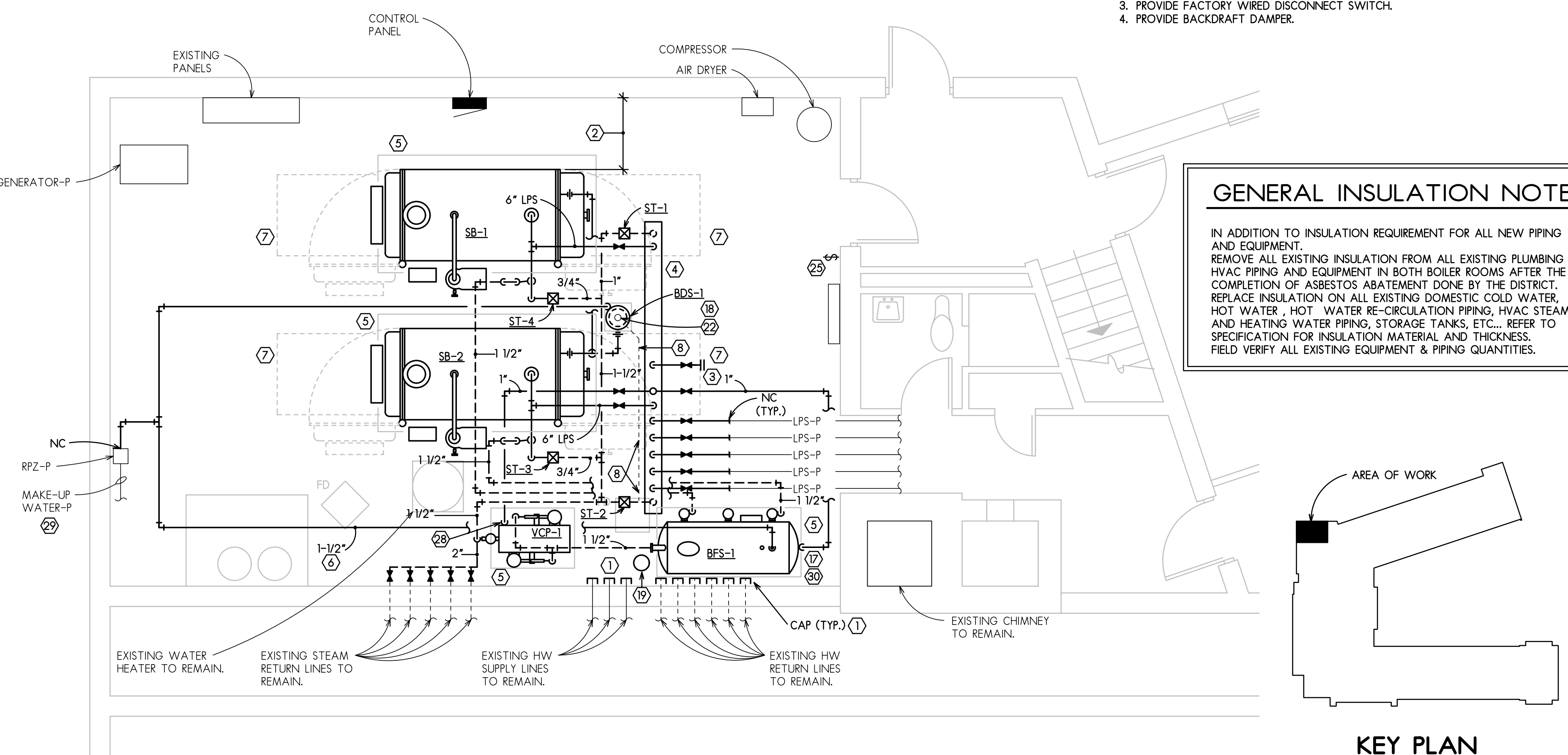
## BOILER ROOM PIPING DIAGRAM

SCALE: NTS



## BOILER ROOM - HVAC NEW WORK PLAN

SCALE: 1/4" = 1'-0"



## GENERAL INSULATION NOTES

IN ADDITION TO INSULATION REQUIREMENT FOR ALL NEW PIPING AND EQUIPMENT, REMOVE ALL EXISTING INSULATION FROM ALL EXISTING PLUMBING & HVAC PIPING AND EQUIPMENT IN BOTH BOILER ROOMS AFTER THE COMPLETION OF ASBESTOS ABATEMENT DONE BY THE DISTRICT. REPLACE INSULATION ON ALL EXISTING DOMESTIC COLD WATER, HOT WATER, HOT WATER RE-CIRCULATION PIPING, HVAC STEAM AND HEATING WATER PIPING, STORAGE TANKS, ETC., REFER TO SPECIFICATION FOR INSULATION MATERIAL AND THICKNESS. FIELD VERIFY ALL EXISTING EQUIPMENT & PIPING QUANTITIES.

## KEY PLAN

SCALE: N/A

## BOILER ROOM - MECHANICAL NEW WORK PLAN

SCALE: 1/4" = 1'-0"

## MECHANICAL NEW WORK PLANS

SCALE: AS NOTED

FAIRVIEW EARLY CHILDHOOD CENTER  
HVAC AND WINDOW REPLACEMENT - ROCKFORD IL  
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ISSUED FOR:	DATE	DESIGNED	DATE	DRAWN	APPROVED
MECHANICAL REVIEW	02-28-2017	02-28-2017	02-28-2017	PM	RAS
PROJECT NUMBER	25110	SHEET NUMBER	M1.1		

DATE: 10-7-2016  
PROJECT NUMBER: 25110  
SHEET NUMBER: M1.1

Larson & Darby Group  
Architects Engineers Interiors  
Rockford Office - 4401 Harmon Ave., Suite 300, Rockford, IL 61052 Tel: (815) 444-0297 Fax: (815) 220-9607



HVAC PIPING LEGEND

———— LPS ————	LOW PRESSURE STEAM
----- LPC -----	LOW PRESSURE CONDENSATE
----- PC -----	PUMP CONDENSATE

PIPING SYMBOLS

	DIRT POCKET
	SPOOL PIECE
	Y-TYPE STRAINER
	Y-TYPE STRAINER WITH BALL DRAIN VALVE
	Y-TYPE STRAINER WITH CAPPED DRAIN VALVE
	EXPANSION JOINT
	FLEXIBLE CONNECTION
	PIPE ANCHOR
	PIPE GUIDE
	UNION
	BLIND FLANGE
	CAPPED END
	HOSE END DRAIN (TO BE CAPPED)
	THERMOMETER OR TEMPERATURE GAUGE
	PRESSURE AND TEMPERATURE TEST PLUG
	PRESSURE GAUGE ASSEMBLY WITH NEEDLE VALVE
	MANUAL AIR VENT VALVE
	AUTO AIR VENT VALVE
	(PIPE DISCHARGE TO DRAIN)
	DIRECTION OF FLOW
	PITCH DOWN IN DIRECTION OF ARROW
	TEE CONNECTION, BOTTOM
	TEE CONNECTION, TOP
	OFFSET
	ELBOW TURNED UP OR TEE UP & DOWN
	ELBOW TURNED DOWN
	VALVE IN VERTICAL RISER
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	PUMP (IN SCHEMATIC)

VALVE SYMBOLS

	ANGLE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CIRCUIT SETTER
	GATE VALVE
	GLOBE VALVE
	HOSE END BALL DRAIN VALVE
	HOSE END GATE DRAIN VALVE
	NEEDLE VALVE
	PLUG VALVE OR COCK
	PRESSURE REDUCING VALVE
	PRESSURE REDUCING STATION
	RELIEF VALVE
	SOLENOID VALVE
	SILENT CHECK VALVE
	SWING CHECK VALVE
	THREE WAY CONTROL VALVE
	TWO WAY CONTROL VALVE
	VERTICAL LIFT CHECK VALVE

DUCT AND EQUIPMENT SYMBOLS

	ROUND DUCT ELBOW TURNED DOWN
	RECTANGULAR ELBOW TURNED DOWN, SUPPLY OR OUTSIDE AIR DUCT
	RECTANGULAR ELBOW TURNED DOWN, EXHAUST OR RETURN AIR DUCT
	WALL LOUVER & SCREEN (BOTTOM OF DUCT TO DRAIN TOWARD LOUVER)
	RECTANGULAR METAL DUCT: 1) FIRST DIMENSION IS SIDE SHOWN 2) ALL DUCTWORK SIZES SHOWN ARE NET FREE INSIDE DIMENSIONS 3) GALVANIZED SHEET METAL UNLESS NOTED
	ROUND DUCT (SEE NOTES ABOVE)
	ROUND DUCT ELBOW TURNED UP
	RECTANGULAR ELBOW TURNED UP, SUPPLY OR OUTSIDE AIR DUCT
	RECTANGULAR ELBOW TURNED UP, EXHAUST OR RETURN AIR DUCT
	MOTOR OPERATED DAMPER PROVIDE CEILING & DUCT ACCESS

CONTROL SYMBOLS

ARROWS INDICATE THE UNIT BEING CONTROLLED	
	DUCT SMOKE DETECTOR, (SEE ELECTRICAL DWG)
	THERMOSTAT
	SENSOR
	HUMIDISTAT
	ELECTRIC ACTUATOR (MOTOR)
	SMOKE DAMPER ACTUATOR
	CO MONITOR
	FREON MONITOR
	SWITCH ON WALL
	OPOSED BLADE DAMPER
	PARALLEL BLADE DAMPER
	INLINE CENTRIFUGAL FAN WITH MOTOR ON SIDE, AND ADJUSTABLE FLEXIBLE CONNECTIONS (AFC)
	CENTRIFUGAL FAN

DEMOLITION GENERAL NOTES

1. VERIFY EXACT SIZE AND LOCATION OF THE EXISTING UTILITIES BEFORE START OF DEMOLITION.
2. RELOCATE, REMOVE AND ADJUST ALL MECHANICAL AND ASSOCIATED ELECTRICAL ITEMS AS REQUIRED TO COORDINATE WITH NEW WORK.
3. ALL MECHANICAL ITEMS SHOWN ON DEMOLITION PLANS ARE EXISTING AND ARE SHOWN IN SCHEMATIC FORM ONLY.
4. IN AREAS WHERE EXISTING CONSTRUCTION IS REMOVED AND NO ADDITIONAL CONSTRUCTION IS INDICATED, PATCH ADJACENT CONSTRUCTION TO MATCH EXISTING.
5. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF ALL EQUIPMENT.
6. CONNECTIONS TO, AND SHUTDOWNS OF, THE EXISTING SYSTEMS SHALL BE COORDINATED WITH OWNER AS TO CREATE MINIMAL INTERFERENCE WITH OWNERS OPERATION AND RESULTING DOWNTIME OF EXISTING SERVICES. CONTRACTORS SHALL SUBMIT TO OWNER FOR REVIEW AND APPROVAL OF THE PROPOSED PHASING PLAN FOR CONNECTING NEW TO EXISTING SERVICES.
7. CONTRACTOR SHALL COMPLY WITH GENERAL CONDITIONS AND PROTECTION PROVISIONS SPECIFIED.
8. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS BEFORE BEGINNING WORK. CONTRACTOR SHALL PROTECT EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY EXISTING UTILITIES AND SERVICES DAMAGED SHALL BE REPAIRED AT NO EXPENSE TO OWNER. THE CONTRACTOR SHALL TEMPORARILY MOVE OR TAKE EQUIPMENT OUT OF SERVICE AS NECESSARY TO COMPLETE WORK. SUCH SERVICES SHALL BE REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.

DEMOLITION DEFINITIONS:

CERTAIN ABBREVIATIONS OF SYMBOLS, WHEN APPLIED TO PRESENT (OR EXISTING) LINE, DEVICE OR EQUIPMENT, SHALL HAVE FOLLOWING MEANINGS:

NC	NEW CONNECTION TO PRESENT PIPING, DEVICE, MANHOLE, SEWER, DUCT, WIRING, EQUIPMENT, ETC. INSTALL, TEST, COVER, PAINT, ETC. SAME AS NEW WORK. IF IN SEWER MANHOLE, PROVIDE FLOW CHANNEL IN BOTTOM.
VL	VERIFY EXACT LOCATION IN FIELD. THIS NOTE APPLIES TO ALL PRESENT OR EXISTING UTILITIES AND CONSTRUCTION WHETHER CALLED FOR OR NOT.
P	TO REMAIN UNCHANGED. IF CHANGE CANNOT BE AVOIDED, CHANGE "P" TO "PXR", AT NO INCREASE IN CONTRACT PRICE. VERIFY LOCATION.
PX	TO BE COMPLETELY REMOVED, INCLUDING UNNEEDED CONNECTIONS, PIPING, DUCTS, WIRING, BASES, ETC. OF EVERY KIND. OTHER DISTURBED WORK OF EVERY KIND RESTORED, PATCHED, TESTED, COVERED, PAINTED, ETC. TO EQUAL ORIGINAL CONDITION. REMOVED MATERIALS MUST NOT BE REUSED UNLESS OTHERWISE SPECIFIED OR DIRECTED BY ARCHITECT.

HVAC ABBREVIATIONS

AAV	AUTOMATIC AIR VENT	F & BP	FACE AND BYPASS	MTD	MOUNTED	TFB	TO FLOOR BELOW
AFC	ADJUSTABLE FLEXIBLE CONNECTION	F & TT	FLOAT AND THERMOSTAT TRAP	MTG	MOUNTING	T-STAT	THERMOSTAT
AFF	ABOVE FINISHED FLOOR	FBO	FURNISHED BY OTHERS	MZ	MULTI-ZONE	TSP	TOTAL STATIC PRESSURE
APD	AIR PRESSURE DROP	FC	FORWARD CURVE	NBS	NATIONAL BUREAU OF STANDARDS	TYP	TYPICAL
ASC	ABOVE SUSPENDED CEILING	FCU	FAN COIL UNIT	NEG	NEGATIVE	UL	UNDERWRITERS LABORATORIES
AV	ANGLE VALVE	FFA	FROM FLOOR ABOVE	NEMA	NATIONAL ELEC. MFR. ASSOC.	UN	UNION
AV-T	AIR VALVE AT TOP	FFB	FROM FLOOR BELOW	NC	NEW CONNECTION	VEL	VELOCITY
BDD	BACKDRAFT DAMPER	FLA	FULL LOAD AMPS	N.C.	NORMALLY CLOSED	VOL	VOLUME
BFV	BUTTERFLY VALVE	FLG	FLANGE	NK	NECK	WB	WET BULB
BOD	BOTTOM OF DUCT	FFM	FEET PER MINUTE	N.O.	NORMALLY OPEN	WC	WATER COLUMN
BTU	BRITISH THERMAL UNIT	FT	FOOT	NPT	NATIONAL PIPE THREAD	WG	WATER GAUGE
BTUH	BTU PER HOUR	FTG	FITTING	OA	OUTSIDE AIR	WLS	WALL LOUVER AND SCREEN
BTU	BTU	GC	GENERAL CONTRACTOR	OAD	OUTSIDE AIR DAMPER	WN	WINTER
CA	COMBUSTION AIR	GA	GAUGE	OAI	OUTSIDE AIR INTAKE	WPD	WATER PRESSURE DROP
CAD	COMBUSTION AIR DAMPER	GAL	GALLON	PC	PLUMBING CONTRACTOR	WTD	WATER TEMPERATURE DROP
CEB	CONCRETE EQUIPMENT BASE	GLV	GLOBE VALVE	PD	PRESSURE DROP		
CFM	CUBIC FEET PER MINUTE	GPM	GALLONS PER MINUTE	PH	PHASE		
CIRC	CIRCULATION	GN	GOOSENECK	PNEU	PNEUMATIC		
CKV	CHECK VALVE	GV	GATE VALVE	POS	POSITIVE		
CL	CLOSE, CLOSED	HP	HORSE POWER	PRE	POWER ROOF EXHAUSTER (AIR)		
CLG	COOLING	HTG	HEATING	PRESS	PRESSURE		
CUH	CABINET UNIT HEATER	HTR	HEATER	PR	POWER ROOF INTAKE (AIR)		
CUV	CLASSROOM UNIT VENTILATOR	HVAC	HEATING, VENTILATION AND	PRV	PRESSURE REDUCING VALVE		
CV	FLOW COEFFICIENT		AIR CONDITIONING	PS	PRESSURE SWITCH		
Δ (DELTA)	DIFFERENTIAL, DIFFERENCE	HX	HEAT EXCHANGER	PSD	PUMP SUCTION DIFFUSER		
D	DROP	HZ	HERTZ	PSI	POUNDS PER SQUARE INCH		
DB	DRY BULB	ID	INSIDE DIAMETER	PSIG	POUNDS PER SQUARE INCH (GAUGE)		
DIA	DIAMETER	IF	INLINE FAN	PTAC	PACKAGE TERMINAL AC		
DPR	DAMPER	IN	INCH	PWE	POWER WALL EXHAUSTER		
DR	DRAIN	IP	INLINE PUMP	R	RISE		
DWG	DRAWING	KW	KILOWATT	RA	RETURN AIR		
EA	EXHAUST AIR DUCT	LAT	LEAVING AIR TEMPERATURE	RECIRC	RECIRCULATION		
EAG	EXHAUST AIR GRILLE	LB	POUND	REQD	REQUIRED		
EAR	EXHAUST AIR REGISTER	LGTH	LENGTH	RPM	REVOLUTIONS PER MINUTE		
EAT	ENTERING AIR TEMPERATURE	LPS	LOW PRESSURE BOILER	SCFM	STANDARD CUBIC FEET PER MINUTE		
EC	ELECTRICAL CONTRACTOR	LPR	LOW PRESSURE RETURN	SP	STATIC PRESSURE		
ESP	EXTERNAL STATIC PRESSURE	LPS	LOW PRESSURE SUPPLY	SPD	SPEED		
EWI	ENTERING WATER TEMPERATURE	LR	LONG RADIUS	SPEC	SPECIFICATION		
EF	EXHAUST FAN	MAX	MAXIMUM	SS	STAINLESS STEEL		
ELEC	ELECTRIC OR ELECTRONIC	MBH	1000 BTU/HOUR	STD	STANDARD		
ENCL	ENCLOSURE	MCC	MOTOR CONTROL CENTER	SYS	SYSTEM		
ENGR	ENGINEER	MECH	MECHANICAL	TC	TEMPERATURE CONTROL		
EQUIP	EQUIPMENT	MFR	MANUFACTURER	TCC	TRACTOR		
ET	EXPANSION TANK	MIN	MINIMUM	TEMP	TEMPERATURE		
F	FAHRENHEIT	MOD	MOTOR OPERATED DAMPER	TFA	TO FLOOR ABOVE		

GENERAL NOTES

1. DRAWINGS ARE GENERALLY DIAGRAMMATIC. EACH CONTRACTOR SHALL MAKE REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS SUCH AS OFF SETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND THE BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. FOR PRESENT CONSTRUCTION, VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING TO AVOID CONFLICT. IT IS INTENDED THAT ALL EQUIPMENT, MATERIAL, DEVICES, ETC. SHALL BE LOCATED SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS, NOTWITHSTANDING THE FACT THAT LOCATIONS INDICATED BY THESE DRAWINGS MAY BE DISTORTED FOR CLARNESS OF PRESENTATION.  
  
EACH CONTRACTOR SHALL CHECK DRAWINGS OF THE OTHER TRADES TO VERIFY SPACES IN WHICH THEIR WORK WILL BE INSTALLED IS CLEAR OF OBSTRUCTIONS. MAINTAIN MAXIMUM HEADROOM AND IF SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY ARCHITECT BEFORE PROCEEDING WITH THE INSTALLATION.  
  
FURNISH ALL TRADES ADVANCE INFORMATION ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, EQUIPMENT, FRAMES, BOXES, SLEEVES AND OPENINGS NEEDED FOR WORK, AND ALSO FURNISH INFORMATION AND SHOP DRAWINGS TO PERMIT TRADES AFFECTED TO INSTALL THEIR WORK PROPERLY AND WITHOUT DELAY.  
  
WHERE THERE IS EVIDENCE THAT WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, ALL TRADES SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE SATISFACTORY ADJUSTMENTS.
2. HVAC CONTRACTOR TO REVIEW, PRIOR TO BIDDING, ALL DRAWINGS TO COORDINATE VARIOUS WORK AS CALLED FOR. CONTRACTOR SHALL CAREFULLY CHECK ALL DRAWINGS FOR ALL TRADES AND ANY LACK OF COORDINATION BETWEEN HIS WORK AND DRAWINGS FOR JOB CONDITIONS SHALL BE IMMEDIATELY REPORTED TO ARCHITECT.
3. ALL SHEETMETAL DUCTWORK SHALL BE CONSTRUCTED TO THE LATEST SMACNA STANDARDS.
4. SHEETMETAL DUCT SIZES MAY BE ALTERED TO FIT JOB CONDITIONS, BUT NET FREE AREAS MUST BE MAINTAINED. INCREASE SHEETMETAL DUCT SIZE TO ALLOW FOR DUCT LINING WHERE USED. WRAP ALL DUCTWORK EXCEPT AS NOTED.
5. ALL DUCTWORK TO BE HELD TIGHT TO STRUCTURAL ROOF JOISTS, BEAMS, ETC., AS CLEARANCE IS MINIMAL. COORDINATE WITH OTHER CONTRACTORS TO AVOID CONFLICT.
6. CONTRACTOR SHALL PROVIDE ALL DUCT DROPS AND OFFSETS TO AVOID INTERFERENCES WITH JOISTS, OTHER DUCTS, LIGHTS, PIPES, ETC.
7. HEATING, VENTILATING, AIR CONDITIONING AND ELECTRICAL DESIGNS ARE BASED ON THE REQUIREMENTS FOR THE SPECIFIED EQUIPMENT MANUFACTURER. CONDUITS, DISCONNECTS, BREAKERS, FUSES AND WIRE SIZES ARE SELECTED ON THE BASIS OF SPECIFIED EQUIPMENT MANUFACTURER. INCREASED CURRENT REQUIREMENTS NECESSITATING LARGER WIRE, BREAKERS, FUSES, SWITCHES, ETC. TO ACCOMMODATE ANY ALTERNATE OR SUBSTITUTE MANUFACTURER'S EQUIPMENT OTHER THAN AS SHOWN ON DRAWINGS OR SCHEDULES SHALL BE PROVIDED WITHOUT INCREASE IN CONTRACT PRICE BY THE CONTRACTOR FURNISHING EQUIPMENT.

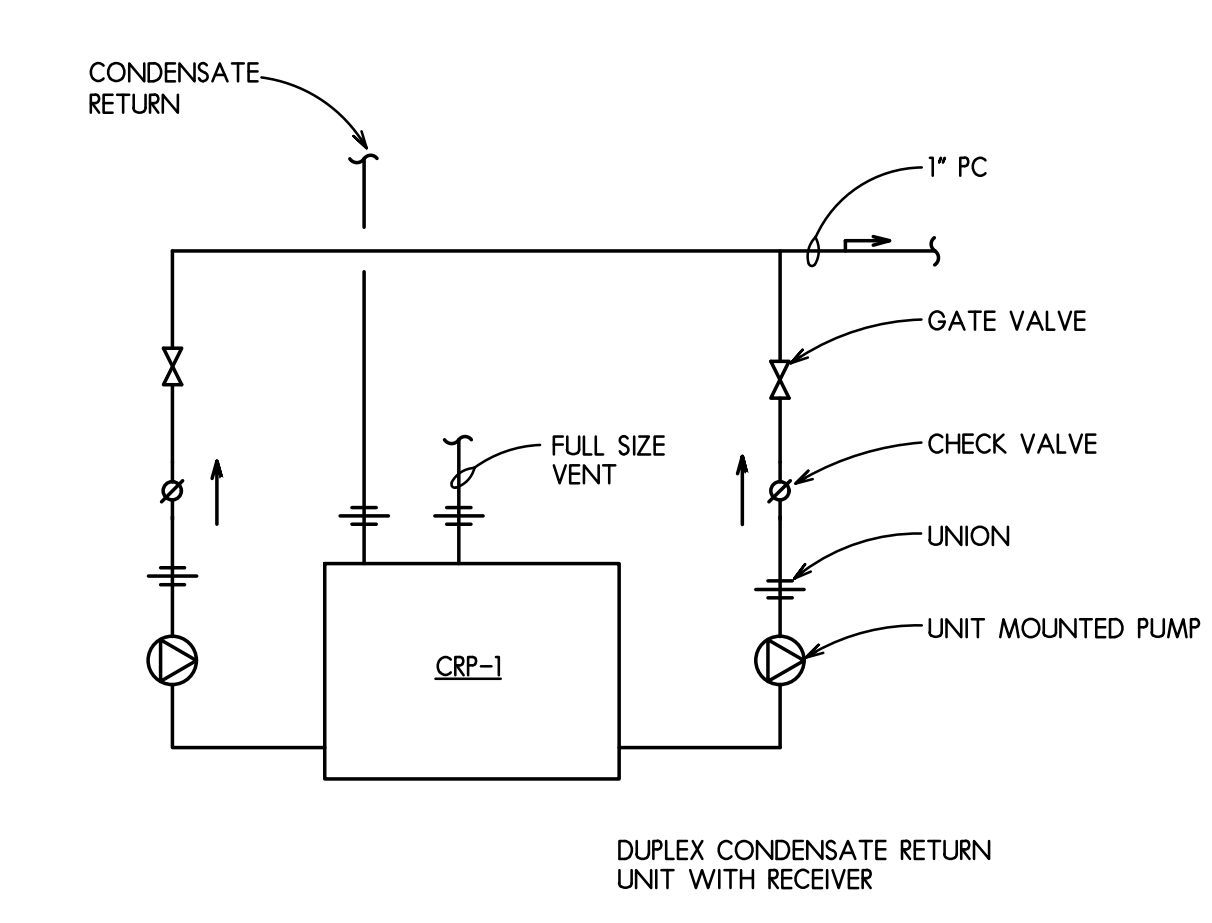
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ENGINEERING REVIEW	02-23-2017
DESIGN	
DRAWN	APPROVED
PM	RAS

DATE: 10-7-2016	PROJECT NUMBER	SHEET NUMBER
	25110	M2.1

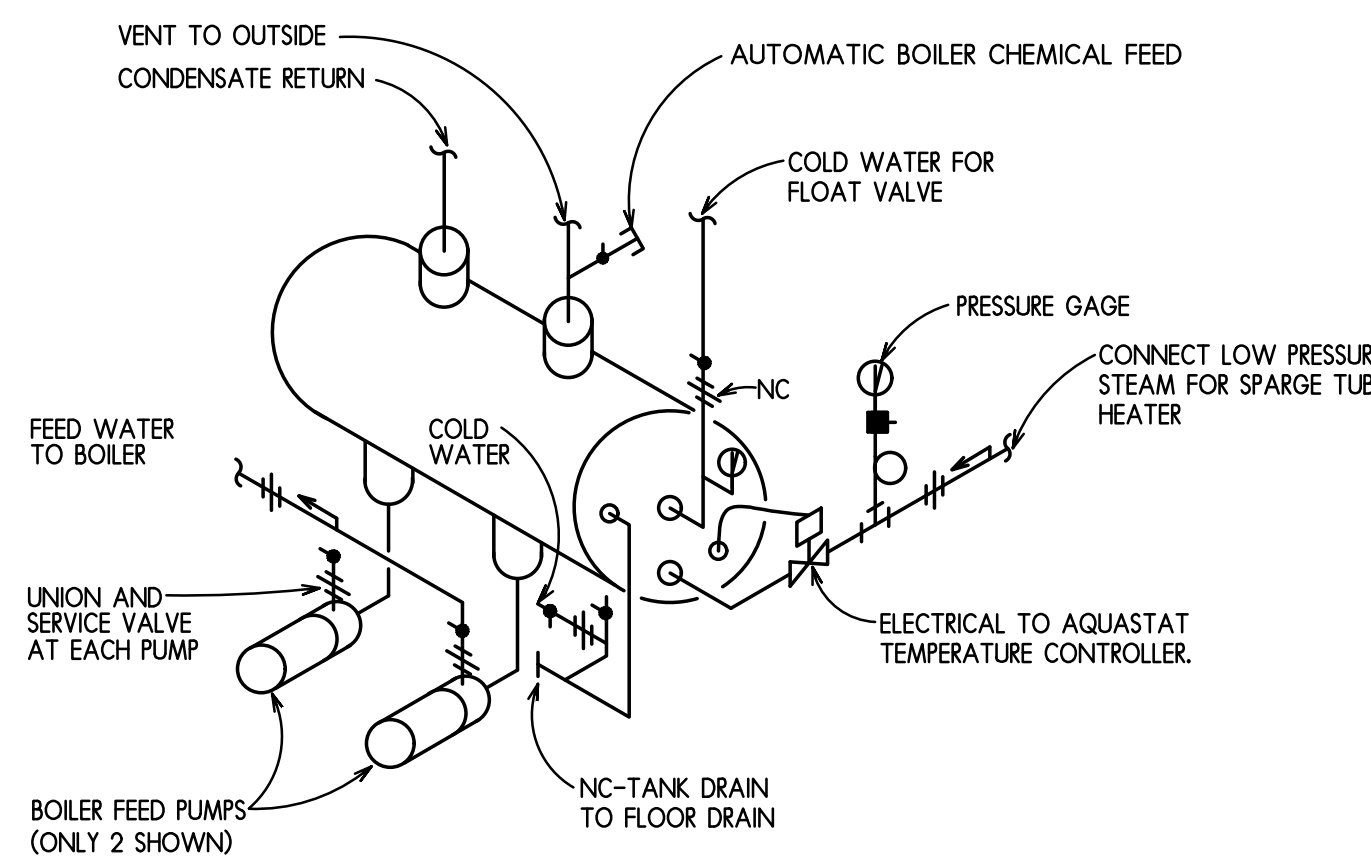
MECHANICAL, SYMBOLS, NOTES & ABBREVIATIONS

SCALE:

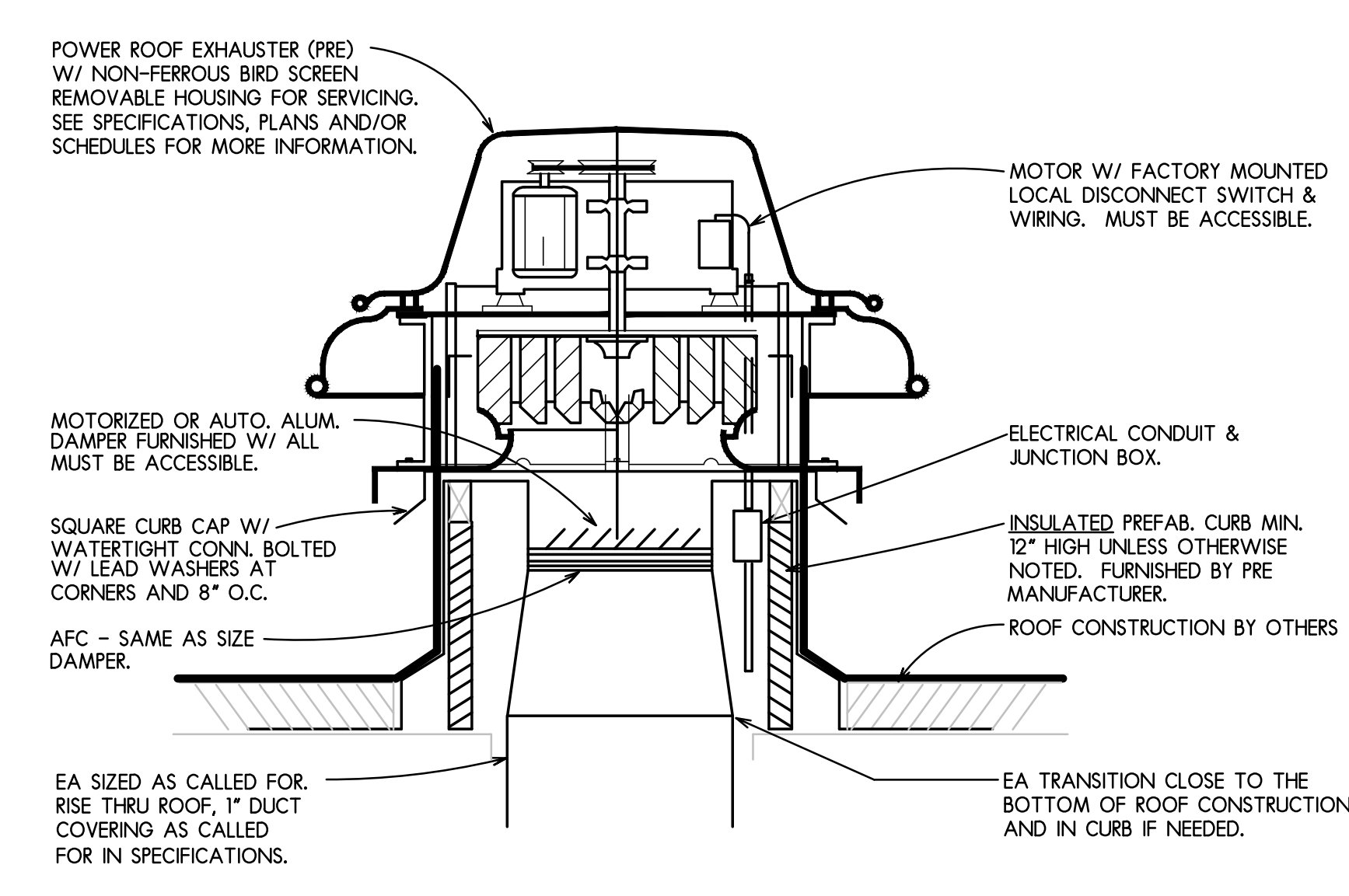
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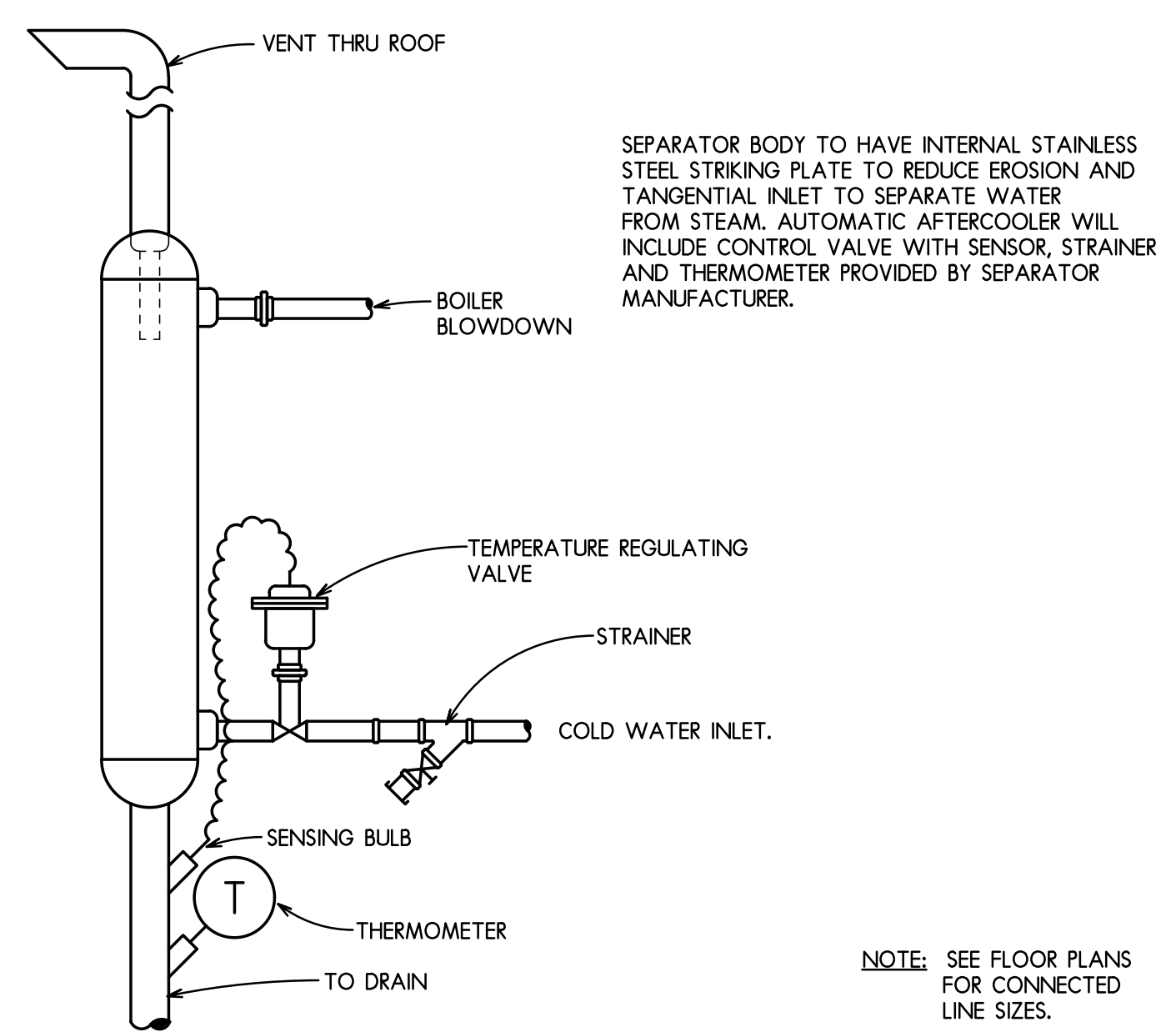
1 CONDENSATE RECEIVER PIPING DETAIL  
NTS



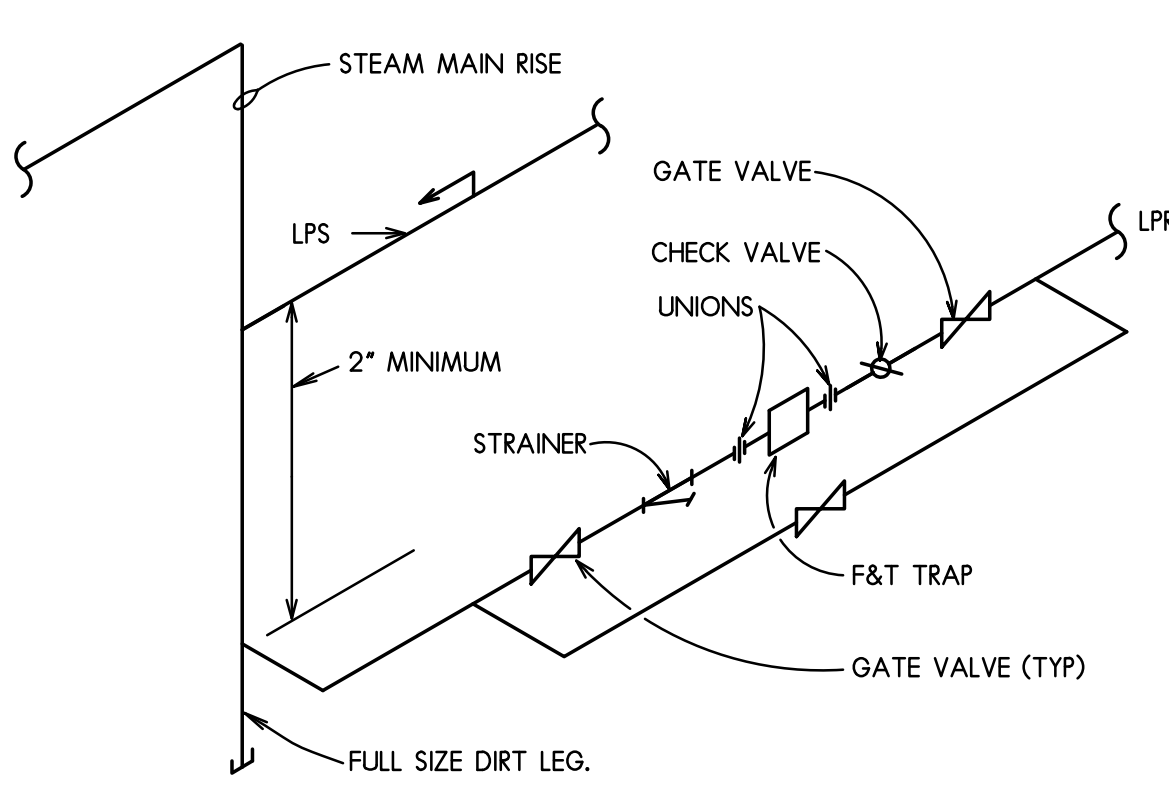
2 BOILER FEED TANK AND PUMPS  
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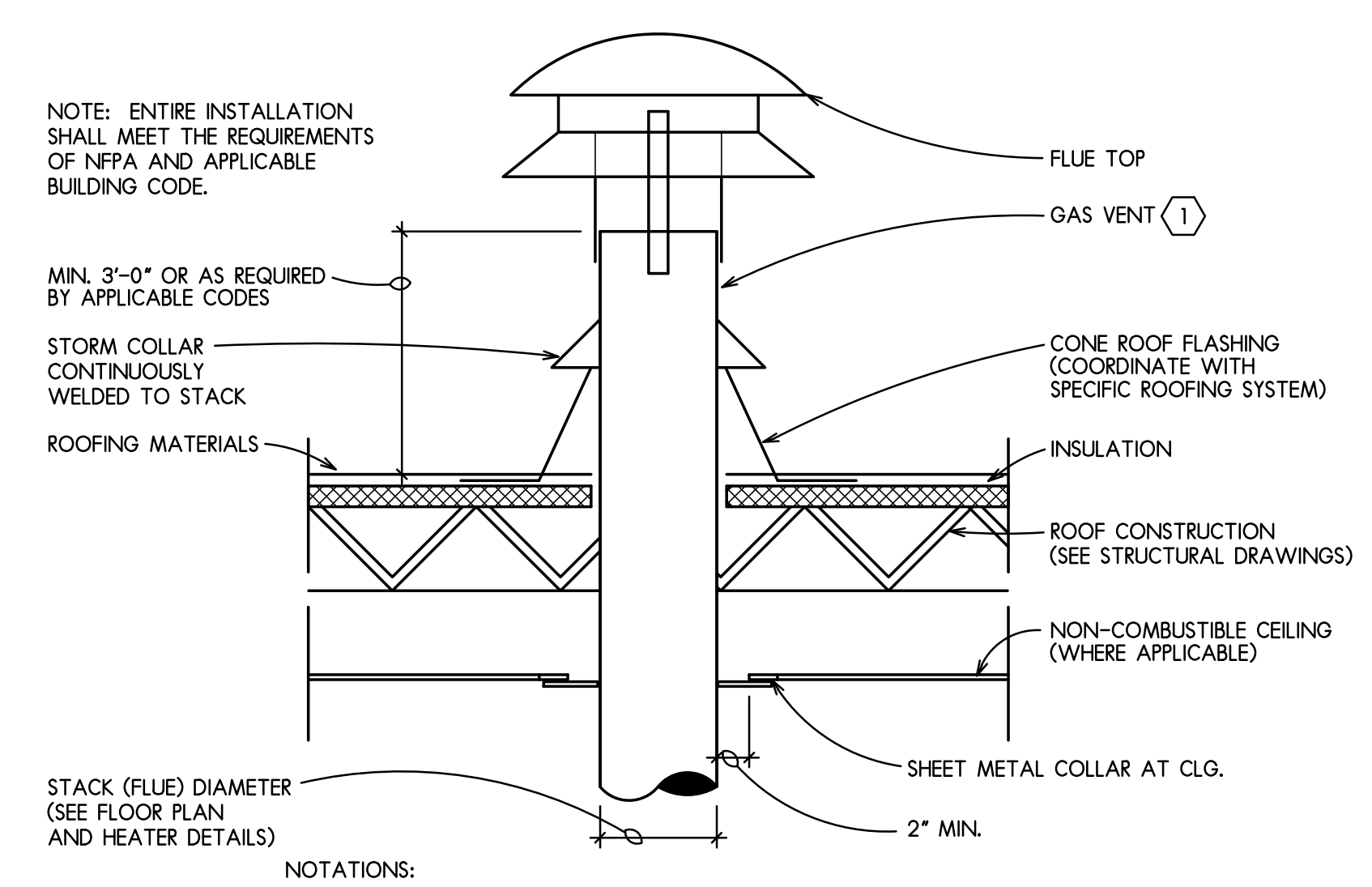
3 POWER ROOF EXHAUSTER (PRE) DETAIL  
NTS



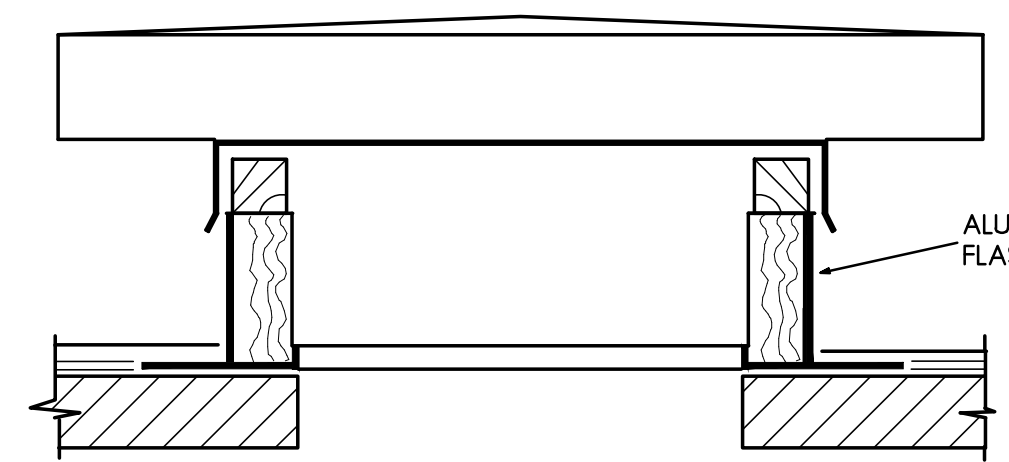
4 BLOWDOWN SEPARATOR DETAIL  
NO SCALE



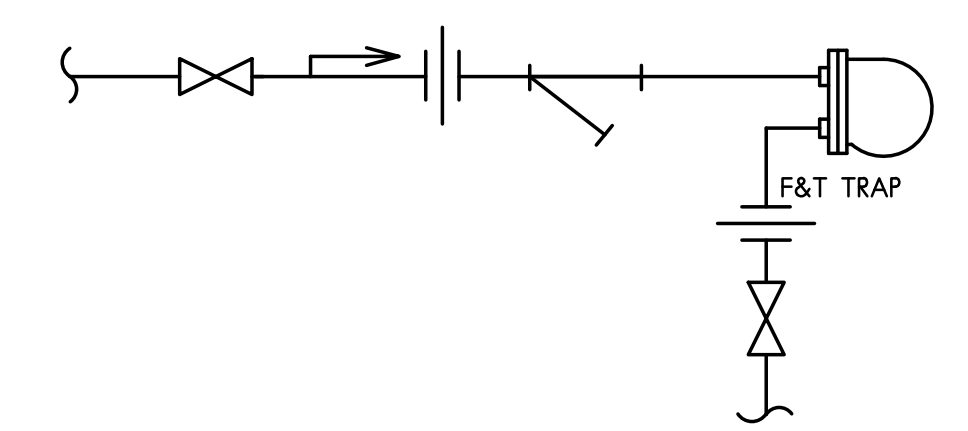
5 STEAM MAIN RISE OR END OF MAIN DRIP & TRAP DETAIL  
NTS



6 FLUE THRU ROOF  
NO SCALE



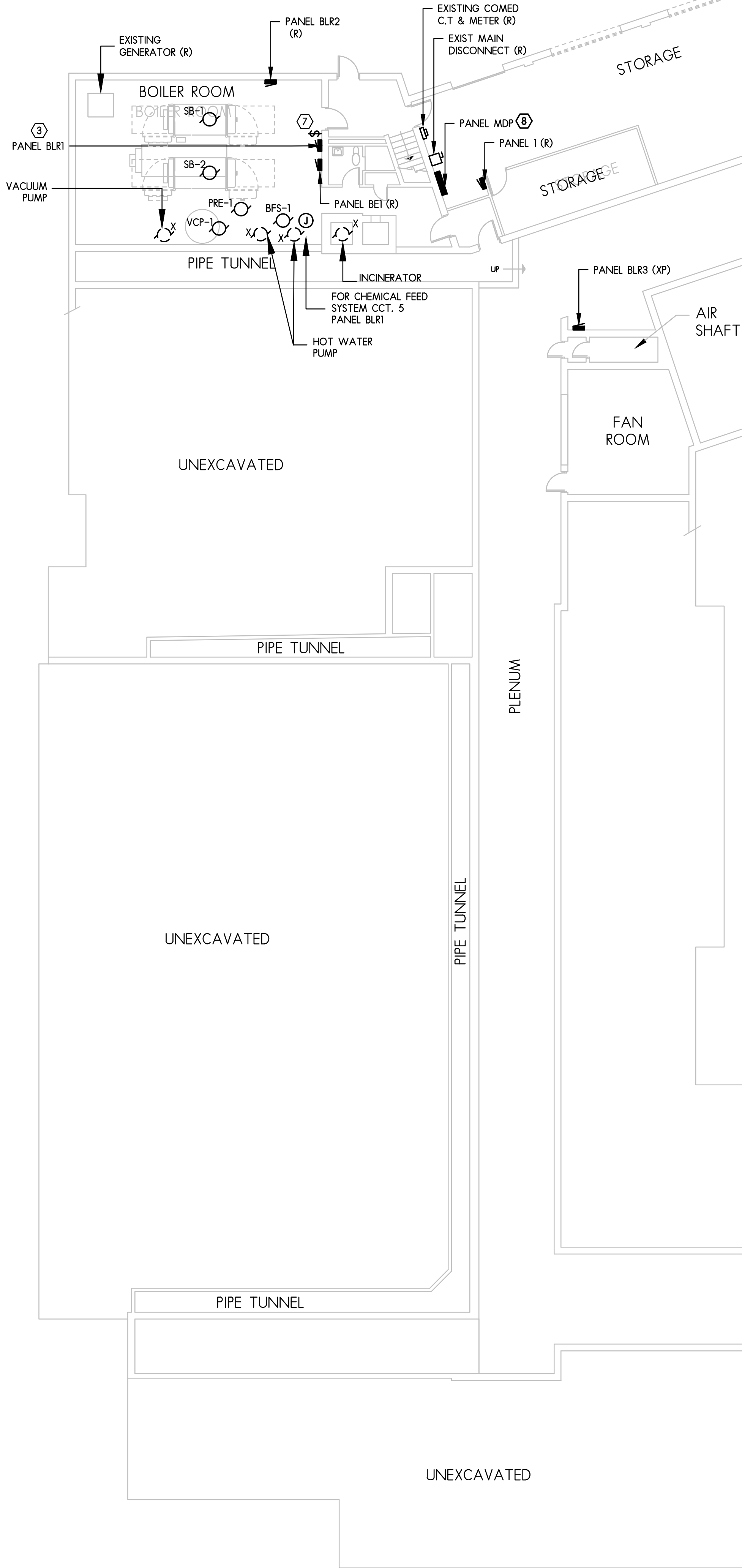
7 ROOF CURB DETAIL  
NTS



8 STEAM TRAP CONNECTION DETAIL  
NTS



MOTOR AND EQUIPMENT SCHEDULE															
EQUIP. TAG	DESIGNATED TAG	LOAD					CONDUIT & WIRE SIZE	SOURCE OF POWER		PROTECT (AMPERES)	STARTER		DISCONNECT (AMP.)		NOTES
		VOLTS	PHASE	H.P.	AMP	KVA		PANEL	CCT. NO.		SIZE	TYPE	SIZE	TYPE	
BFS-1	BOILER FEED WATER SYSTEM (TRIPLEX)	208	3	0.5			3 #12, 1 #12G - 3/4" C.	BLR1	13/15/17	20-3P	WE		20A-3P	TOGGLE	①
			3	0.5			3 #12, 1 #12G - 3/4" C.	BLR1	19/21/23	20-3P	WE		20A-3P	TOGGLE	①
			3	0.5			3 #12, 1 #12G - 3/4" C.	BLR1	25/27/29	20-3P	WE		20A-3P	TOGGLE	①
VCP-1	CONDENSATE VACUUM PUMP	208	3	2@1			3 #12, 1 #12G - 3/4" C.	BLR1	14/16/18	20-3P	WE		20A-3P	TOGGLE	②
SB-1	STEAM BOILER	208	3	2			3 #12, 1 #12G - 3/4" C.	BLR1	26/28/30	20-3P	WE		20A-3P	TOGGLE	
SB-2	STEAM BOILER	208	3	2			3 #12, 1 #12G - 3/4" C.	BLR1	31/33/35	20-3P	WE		20A-3P	TOGGLE	
PRE-1	POWER ROOF EXHAUSTER	120	1	0.25			2 #12, 1 #12G - 1/2" C.	BLR1	5	20-1P					



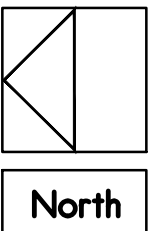
KEYED NOTES:

- BOILER FEED SYSTEM SHALL CONSIST OF FACTORY ASSEMBLED PUMPING SYSTEM INCLUDING FACTORY MOUNTED AND FACTORY WIRED CONTROL PANEL TO SERVE THREE PUMPS. PROVIDE THREE SEPARATE FEEDS FROM PANEL BLR1 TO CONTROL PANEL TO SERVE THREE PUMPS. PROVIDE DISCONNECT SWITCH FOR EACH FEED. ALL WIRING FROM CONTROL PANEL TO PUMPS SHALL BE PRE-WIRED FROM CONTROL PANEL.
- CONDENSATE VACUUM PUMP SYSTEM SHALL CONSIST OF FACTORY ASSEMBLED PUMPING SYSTEM INCLUDING FACTORY MOUNTED AND FACTORY WIRED CONTROL PANEL TO SERVE TWO PUMPS. PROVIDE ONE FEED FROM PANEL BLR1 TO CONTROL PANEL TO SERVE BOTH PUMPS. PROVIDE DISCONNECT SWITCH AHEAD OF CONTROL PANEL. ALL WIRING FROM CONTROL PANEL TO PUMPS SHALL BE PRE-WIRED FROM CONTROL PANEL.
- REPLACE EXISTING PANEL WITH NEW AS INDICATED IN PANEL SCHEDULE ON THIS SHEET.
- DISCONNECT EXISTING LOAD FROM OLD PANEL AND RE-FEED FROM NEW PANEL.
- THIS PANEL DOES NOT HAVE NAME TAG. PROVIDE LABEL ON PANEL READING NAME TAG INDICATED IN THIS DOCUMENT. THE EXISTING INDICATED CIRCUIT BREAKERS ARE BASED UPON THE SURVEY AT THE TIME OF DESIGN. VERIFY ALL EXISTING CIRCUIT BREAKERS AND UNLESS NOTED OTHERWISE PROVIDE NEW CIRCUIT BREAKERS TO MATCH EXISTING.
- TRACE ALL WIRING FOR THIS PANEL BACK TO SOURCE. PROVIDE SCHEMATIC DIAGRAM INDICATING FEEDER INFORMATION (CONDUIT AND WIRE QUANTITY AND WIRE SIZES) AND RATING OF OVER CURRENT PROTECTION IN SOURCE PANEL.
- BOILER EMERGENCY SHUT OFF SWITCH TO BE PROVIDED UNDER DIVISION 23, BUT TO BE WIRED UNDER DIVISION 26. COORDINATE ALL REQUIREMENTS AT JOBSITE.
- CURRENTLY TWO DISCONNECTS (ONE LABELED AS 100A-3P BREAKER #7 AND ONE LABELED AS 30A EMERGENCY SYSTEM DISCONNECT) ARE LOCATED OUTSIDE AND LEFT OF THIS PANEL. THEY ARE FED FROM THIS PANEL. REMOVE THESE DISCONNECTS AND FEED THE LOAD SERVED BY THESE DISCONNECTS FROM NEW BREAKERS IN PANEL MDP.

Panel BLR1				PLUS GROUND BUS ⑤ ⑥			Project Number: 25110	
Voltage: 120/208V, 3PH, 4W							Mounting: SURFACE	
Mains: 225A M.L.O.							Min. AIC: 22KA	
C K T	BRKR (A/P)	DESCRIPTION	PH. A LOAD (VA)	PH. B LOAD (VA)	PH. C LOAD (VA)	DESCRIPTION	BRKR (A/P)	C K T
1	20	④ CIRCULATING PUMP					30	2
3	20	④ DRAFT IND. HOT WATER HEATER				GYM DOOR ④		4
5	20	PRE-1 AND CHEMICAL FEED SYSTEM			667			6
7	20						40	8
9		JOHANSON SERVICE (AIR COMPRESSOR ) ④				FEED NEW PANEL ON EAST WALL ④		10
11								12
13	20		319 1200				20	14
15		BFS-1 (A)		319 1200		VCP-1		16
17					319 1200		3	18
19	20		319			SPACE		20
21		BFS-1 (B)		319		SPACE		22
23					319	SPACE		24
25	20		319 940				20	26
27		BFS-1 (C)		319 940		SB-1		28
29				319 940			3	30
31	20		940			EXISTING LOAD ④	70	32
33		SB-2		940				34
35					940		3	36
37		SPARE				SPACE		38
39		SPARE				SPACE		40
41		SPARE				SPACE		42
Connected Load Phase A:			4.04 KVA					
Connected Load Phase B:			4.04 KVA					
Connected Load Phase C:			4.70 KVA	Maximum connected Amps				35.47

BASEMENT POWER PLAN  
AND SCHEDULES

SCALE: 3/32" = 1'-0"

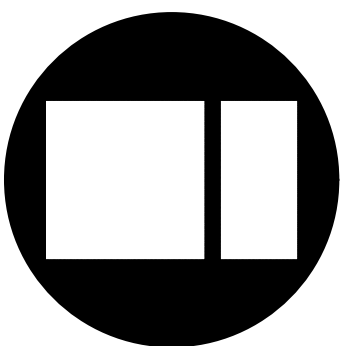


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DATE: 10-7-2016	PROJECT NUMBER	SHEET NUMBER
	25110	E1.0H

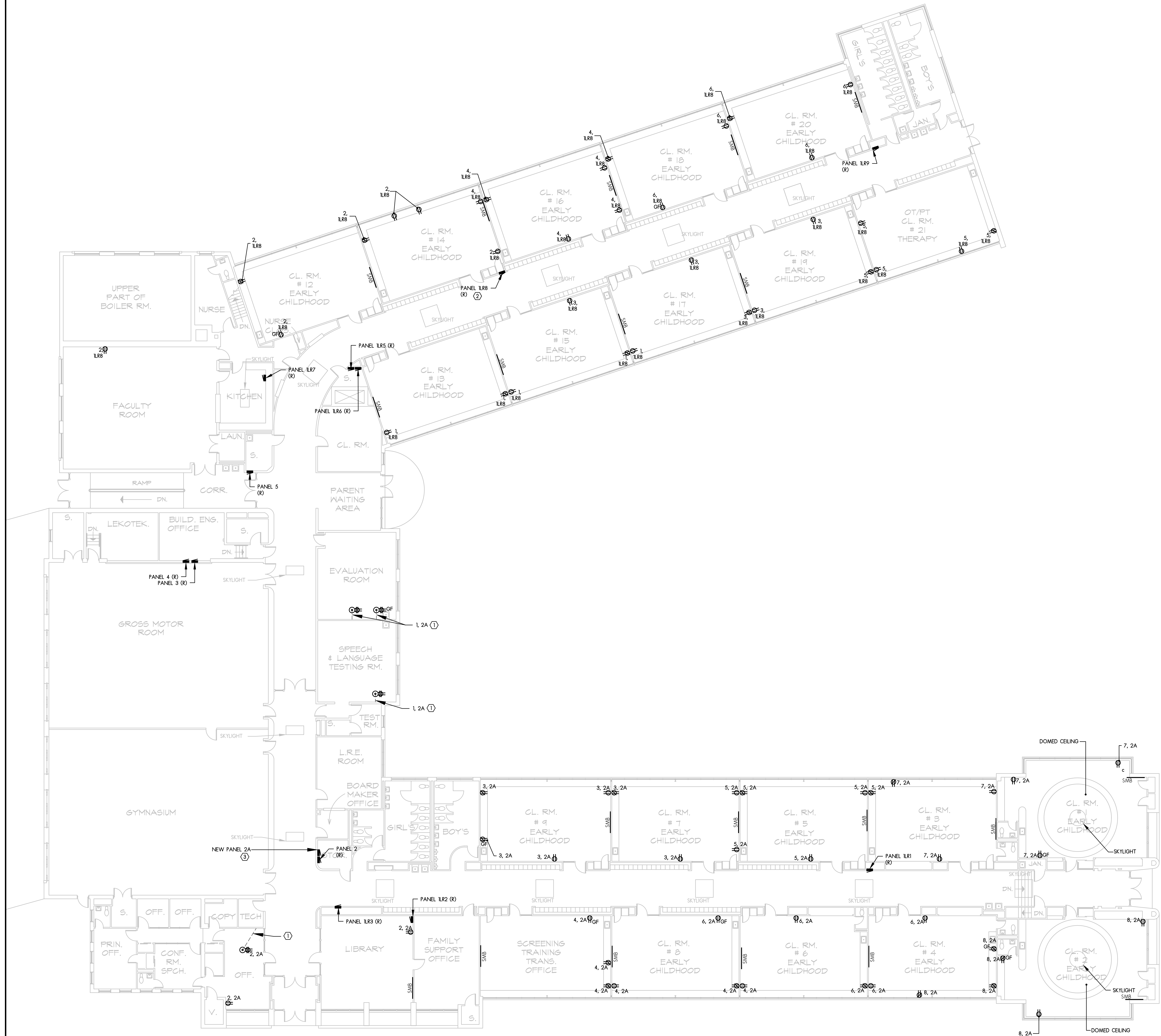
FAIRVIEW EARLY CHILDHOOD CENTER  
HVAC AND WINDOW REPLACEMENT - ROCKFORD IL  
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Larson & Darby Group  
Architects Engineers Interiors  
Rockford Office - 4407 Harmon Ave., Suite 200, P.O. Box 5207, Rockford, IL 61052  
Tel: (815) 424-0739 Fax: (815) 220-9607





GENERAL NOTES:

THE FOLLOWING NOTES APPLY TO ALL SHEETS UNLESS NOTED OTHERWISE

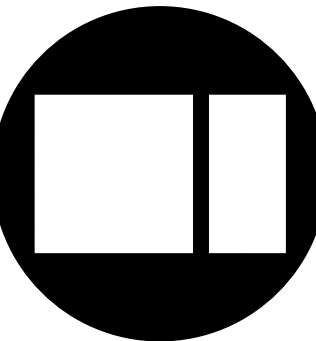
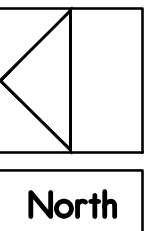
- A. ITEMS INDICATED BY THE LETTER "R" ARE EXISTING AND SHALL REMAIN AS IS SHOWN UNDER BASE BID.
- B. COORDINATE EXACT LOCATIONS OF NEW OUTLETS AT JOB SITE.
- C. WHERE PANELS AND SWITCHBOARD ARE PLANNED TO BE REPLACED ENSURE THAT THEY FIT IN EXISTING SPACE. IF NOT, CONSULT ARCHITECT/ENGINEER. ALSO AS MUCH AS POSSIBLE, PROVIDE MAXIMUM ADDITIONAL BUSSED SPACE, SO THAT ADDITIONAL BREAKERS CAN BE ADDED IN THE FUTURE. PROVIDE EQUIPMENT SUBMITTAL BASED UPON MAXIMUM UTILIZATION OF EXISTING AVAILABLE SPACE.
- D. WHERE LOAD IS ADDED/DELETED, UPDATE PANEL DIRECTORY ACCORDINGLY. PROVIDE NEW DIRECTORY WHERE NEW PANEL IS PROVIDED.
- E. WHERE REPLACEMENT OF LIGHTING FIXTURES, REPLACEMENT OF PANELS, SWITCHBOARD, ADDITION OF RECEPTACLES AND OTHER ELECTRICAL RENOVATION SHALL AFFECT CONDITION OF ADJACENT OR ADJOINING MATERIALS SUCH AS BUT NOT LIMITED TO: WALLS, CEILING, MILLWORK, CABINETRY AND FLOORS ETC. REQUIRED CUTTING IN WALLS, CEILING, MILLWORK, CABINETRY AND FLOORS FOR ELECTRICAL RENOVATION SHALL BE PERFORMED BY DIVISION 26 CONTRACTOR AND COORDINATED WITH GENERAL CONTRACTOR. GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY AND REQUIRED PATCHING, FINISHING AND PAINTING AND/OR REPLACEMENT OF MATERIALS ETC.
- F. RECEPTACLES IN CLASSROOMS AND IN OFFICES SHALL BE PROVIDED UNDER ALTERNATE E2. NOTE THAT THE RECEPTACLES THAT ARE ADJACENT TO OUTDOOR AIR HANDLING UNITS SHALL BE PROVIDED AS PART OF BASE BID SINCE IT IS REQUIRED BY NEC.

KEYED NOTES:

- ① ROUTE CONDUITS IN FLOOR. EXPOSED CONDUIT OR POWER POLE IS NOT ALLOWED.
- ② PROVIDE 6-20A-1P CIRCUIT BREAKER IN EXISTING SPACE IN THIS PANEL TO SERVE NEW RECEPTACLES.
- ③ PANEL 2A AND ITS FEED FROM PANEL 2 SHALL BE PROVIDED UNDER ALTERNATE E2. PROVIDE 100A-3P CIRCUIT BREAKER IN PANEL 2 SHALL BE PART OF BASE BID. VERIFY EXACT LOCATION FOR THIS PANEL AT JOBSITE.

ELECTRICAL NEW WORK PLAN

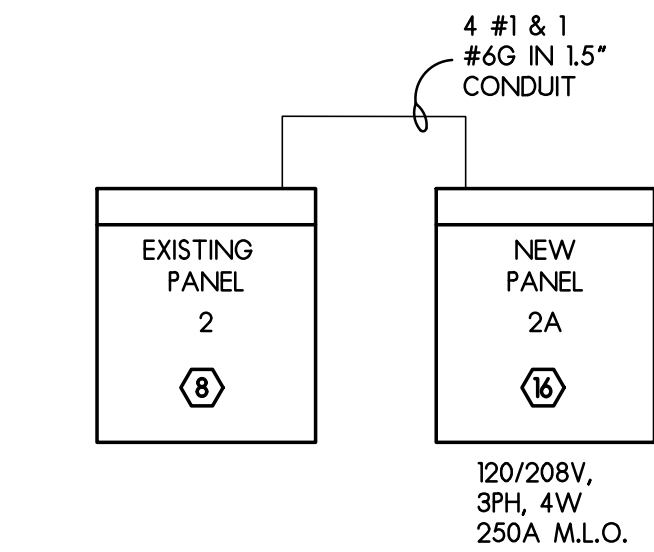
SCALE: 3/32" = 1'-0"





PANEL SCHEDULE ③④⑤⑥										
PANEL NAME	MOUNTING	VOLTAGE	PHASE & WIRE	CIRCUIT BREAKERS	SPACES	SPARE	MLO (AMP)	MCB (AMP)	A.I.C	REMARKS
BLR1	SURFACE			REFER TO PANEL SCHEDULE						②
BLR2	SURFACE	120/208	3/4	9-20A-1P, 1-15A-3P	12		100			①
BLR3-E	SURFACE	125/250	3/4	1-40A-3P, 1-70A-3P 1-20-3P, 5-20-1P 1-30A-1P	3		225			②
BLR3-N	SURFACE	120/208	3/4	1-40A-3P, 1-70A-3P 1-20-3P, 11-20-1P 1-30A-1P	3		225		14000	
BE1	SURFACE	120/208	3/3	21-20A-1P	3		"100"			①
1	SURFACE	120/208	3/4	1-150A-3P, 1-125A-3P 1-50-2P, 1-20A-1P	9			225		①
2	SURFACE	120/208	3/4	2-20A-1P, 3-30A-2P 5-20A-2P	12		250			①
3	FLUSH	120/208	3/4	16-20A-1P	4			70		①
4	FLUSH	120/208	3/4	30-20A-1P				50		①
5	FLUSH	120/208	3/4	36-20A-1P, 2-40A-3P 1-30A-2P	2			125		①②
1LR1	FLUSH	120/208	3/4	36-20A-1P, 2-20A-2P	2			125		①
1LR2	SURFACE		3/4	4-20A-2P	4					①
1LR3	FLUSH	120/208	3/4	39-20A-1P, 1-60A-3P	4			200		①
1LR5	SURFACE	120/208	3/4	2-20A-2P, 5-30A-2	4		125			①
1LR6	SURFACE	120/208	3/4	5-20A-2P, 1-30A-2P 2-20A-1P, 1-15A-1P	9		100			①
1LR7	SURFACE	—	—	1-20A-2P, 4-20A-1P	10		—	—		①
1LR8	FLUSH	120/208	3/4	22-20A-1P	8			70		①⑤
1LR9	FLUSH	120/208	3/4	20-20A-1P, 1-20A-2P	2			70		①

DISTRIBUTION PANEL MDP ⑭			
VOLTAGE: 120/208 V		MAIN TYPE: MLO	
PHASE: 3PH,4W		OCP TYPE: CIRCUIT BREAKER	
		BUS AMP: 600AMP	
		FAULT DUTY: 22,000 AMP	
CCT. NO.	LOAD DESCRIPTION	DEVICE RATING (AMP)	
		FRAME	TRIP
1	⑬	100-3P	50-3P
2	⑬	100-3P	40-3P
3	⑬	100-3P	100-3P
4	⑬	100-3P	100-3P
5	⑬	100-3P	100-3P
6	⑬	100-3P	100-3P
7	⑬	200-3P	125-3P
8	⑬	200-3P	125-3P
9	⑬	200-3P	125-3P
10	⑬	200-3P	200-3P
11	⑬	100-3P	⑫
12	⑬	100-3P	⑫
13	SPACE ⑭	200-3P	
14	SPACE ⑭	200-3P	
15	SPACE ⑭	200-3P	
16	SPACE ⑭	200-3P	



① SCHEMATIC DIAGRAM

Panel 2A					Project Number: 25110		
Voltage: 120/208V, 3PH, 4W					Mounting: SURFACE		
Mains: 100A M.L.O.					Min. AIC: 10,000 KA		
C K T	BRKR (A/P)	DESCRIPTION	PLUS GROUND BUS			BRKR (A/P)	C K T
			PH. A LOAD (VA)	PH. B LOAD (VA)	PH. C LOAD (VA)		
1	20	RECEPTACLES	540			20	1
3	20	ELEVATION, SPEECH ROOM	540			20	2
5	20	RECEPTACLES		1080		20	3
7	20	ROOMS 7, 9		900		20	4
9	20	RECEPTACLES			1080	20	5
11	20	ROOMS 3, 5			720	20	6
13	20	RECEPTACLES	1080			20	7
15	20	ROOM 1, 3	1080			20	8
17	20	SPARE				20	9
19	20	SPARE				20	10
21	20	SPARE				20	11
23	20	SPARE				20	12
25	20	SPARE				20	13
27	20	SPARE				20	14
29	20	SPARE				20	15
31	20	SPARE				20	16
33	20	SPARE				20	17
35	20	SPARE				20	18
37	20	SPARE				20	19
39	20	SPARE				20	20
41	20	SPARE				20	21
RECEPTACLES						20	22
OFFICE, LIBRARY						20	23
RECEPTACLES						20	24
ROOMS 8, AND SCREENING ROOMS						20	25
RECEPTACLES						20	26
ROOMS 4, 6						20	27
RECEPTACLES						20	28
ROOMS 2, 4						20	29
SPARE						20	30
SPARE						20	31
SPARE						20	32
SPARE						20	33
SPARE						20	34
SPARE						20	35
SPARE						20	36
SPARE						20	37
SPARE						20	38
SPARE						20	39
SPARE						20	40
SPARE						20	41
SPARE						20	42
Connected Load Phase A:			3.24 KVA	Maximum connected Amps			19.49
Connected Load Phase B:			1.98 KVA				
Connected Load Phase C:			1.80 KVA				

ELECTRICAL  
EQUIPMENT AND PANELS SCHEDULE

SCALE:

N/A

KEYED NOTES:

- ① EXISTING PANEL SHALL REMAIN.
- ② REPLACE THIS PANEL WITH NEW.
- ③ SOME OF THE EXISTING PANELS DO NOT HAVE NAME TAGS. PROVIDE LABELS ON PANELS READING NAME TAG INDICATED IN THIS DOCUMENT. THE EXISTING INDICATED CIRCUIT BREAKERS ARE BASED UPON THE SURVEY AT THE TIME OF DESIGN. VERIFY ALL EXISTING CIRCUIT BREAKERS AND PROVIDE NEW CIRCUIT BREAKERS TO MATCH EXISTING, UNLESS DIFFERENT RATED CIRCUIT BREAKERS ARE NOTED TO BE NEEDED.
- ④ TRACE ALL WIRING FOR PANEL BACK TO SERVICE. PROVIDE SCHEMATIC DIAGRAM FOR ALL PANELS INDICATING FEEDER INFORMATION (CONDUIT AND WIRE QUANTITY AND WIRE SIZES) AND RATING OF OVERCURRENT PROTECTION IN DISTRIBUTION PANEL OR IN SWITCHBOARD. PROVIDE A COMPLETE FORMAL SCHEMATIC DIAGRAM IN ACCORDANCE WITH INDUSTRY STANDARDS. THE FORMAT OR WIRING DIAGRAM SHALL BE ACCEPTABLE TO ENGINEER AND OWNER.
- ⑤ AT THE END OF PANEL NAME "E" INDICATES EXISTING AND "N" INDICATES NEW. FOR EXAMPLE: BLR2E INDICATES CHARACTERISTICS OF EXISTING PANEL BLR2 AND BLR2(N) INDICATES THE CHARACTERISTICS OF NEW PANEL BLR2. PROVIDE NAME TAG ON NEW PANELS WITHOUT "N". FOR EXAMPLE: NEW PANEL BLR2(N) SHALL HAVE LABEL BLR2.
- ⑥ ALL NEW PANELS SHALL HAVE GROUND BAR IN ADDITION TO PHASE & NEUTRAL BARS. SOME OF THE EXISTING PANELS MAY HAVE DOUBLE LUGS TO FEED ANOTHER PANEL. PROVIDE DOUBLE LUGS FOR NEW REPLACEMENT PANEL AS REQUIRED TO FEED SUB-FEED ANOTHER PANEL. VERIFY NEED FOR DOUBLE LUGS AT JOBSITE.
- ⑦ THIS PANEL IS SPLIT BUS PANEL ONE PANEL HAS 36 POLES AND THE 2ND PANEL HAS 6 POLES.
- ⑧ PROVIDE 1-100A-3P CIRCUIT BREAKER IN EXISTING SPACES TO FEED PANEL 2A FROM IT.
- ⑨ NOT USED.
- ⑩ THIS BREAKER SHALL SERVE POWER FOR EMERGENCY SYSTEM.
- ⑪ THIS BREAKER SHALL SERVE LOAD WHICH IS SERVED BY AN EXTERNAL BREAKER #7.
- ⑫ VERIFY OVERCURRENT PROTECTION IN EXISTING SWITCHES MENTIONED IN NOTE 1 ON SHEET ELO. PROVIDE CIRCUIT BREAKERS IN MDP OF THE SAME RATING AS CURRENT OVERCURRENT PROTECTION.
- ⑬ TRACE THE LOAD FED FROM THIS CIRCUIT BREAKER. PROVIDE NEW LABEL INDICATING LOAD SERVED.
- ⑭ THIS PANEL SHALL BE AS MUCH FULL HEIGHT AS (90") AS PRACTICAL, BUT IT MUST FIT IN EXISTING SPACE. PROVIDE AS MUCH BUSSED SPACES AS POSSIBLE.
- ⑮ CURRENTLY THERE ARE 8 SPACES IN THIS PANEL. PROVIDE ADDITIONAL CIRCUIT BREAKERS AS INDICATED IN NOTE 5 ON SHEET ELL.
- ⑯ PANEL "2A" AND ITS FEED FROM PANEL 2 SHALL BE PROVIDED UNDER ALTERNATE EL. PROVIDE 100A-3P CIRCUIT BREAKER IN PANEL "2" UNDER BASE BID.

FAIRVIEW EARLY CHILDHOOD CENTER  
HVAC AND WINDOW REPLACEMENT - ROCKFORD IL  
ROCKFORD PUBLIC SCHOOLS 205

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ISSUED FOR:	DATE
DESIGN	02-28-16
REVIEW	02-28-16
APPROVED	
DRAWN	

DATE: 10-7-2016	PROJECT NUMBER: 25110	SHEET NUMBER: E2.0H
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GENERAL ELECTRICAL NOTES

1. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ADDITIONAL GENERAL NOTES WHICH WILL APPLY HERE.

2. DO NOT SCALE DRAWINGS.

3. NOTES ON DRAWINGS SHALL APPLY TO ALL SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.

4. THE CONTRACTOR MUST VISIT THE SITE TO FAMILIARIZE HIMSELF WITH THE EXISTING SITE AND BUILDING CONDITIONS WHICH WILL BE AFFECTED DURING CONSTRUCTION PRIOR TO SUBMITTING HIS BID PROPOSAL. CONTRACTOR IS CAUTIONED THAT THE PROJECT IS A REMODELING JOB AND IT IS ASSUMED THAT HE HAS INCLUDED FUNDS IN HIS BID TO COVER UNFORESEEN ITEMS WHICH MUST BE MOVED, RELOCATED OR ADJUSTED TO FIT HIS WORK. NO EXTRA COMPENSATION WILL BE ALLOWED FOR ANY EXTRA WORK CAUSED BY FAILURES TO VISIT, EXAMINE OR VERIFY.

5. ALL EXISTING EQUIPMENT IS TO REMAIN OPERATIONAL DURING CONSTRUCTION PERIOD. ALL TEMPORARY WIRING OR REROUTING OF CIRCUITRY TO ACHIEVE THIS IS BY THE ELECTRICAL CONTRACTOR. SHUTDOWN OF EXISTING SERVICES SHALL ONLY BE PERMITTED UPON WRITTEN APPROVAL FROM THE OWNER AND THEN ONLY FOR THAT DATE AND DURATION AGREED UPON. INCLUDE ALL PREMIUM TIME CHARGES IN THE BASE BID.

6. EXISTING CONDUIT IN SAME PLACE MAY BE REUSED WHERE POSSIBLE. PULL NEW WIRE AS REQUIRED. ALL UNUSED CONDUIT, WIRE, JUNCTION BOXES, ETC. WILL BE REMOVED. RELOCATED EXISTING CONDUIT SHALL NOT BE ALLOWED.

7. BOXES LOCATED ON OPPOSITE SIDES OF NON-FIRE RATED WALLS SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY. BOXES ON OPPOSITE SIDES OF FIRE RATED WALL SHALL BE OFFSET A MINIMUM OF 24" HORIZONTALLY. "THRU THE WALL" BOXES SHALL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.

8. ELECTRICAL CONTRACTOR SHALL VERIFY TOTAL CONNECTED LOAD/HP WITH ALL OTHER TRADES PRIOR TO WIRING OF ALL OTHER TRADES' EQUIPMENT. MAKE ANY CHANGES TO OVERCURRENT DEVICES AND FEEDER SIZE PER ELECTRICAL CODE AS REQUIRED.

9. ELECTRICAL CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION, THIS CONTRACTOR SHALL ADJUST RECEPTACLES, OUTLETS OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.

10. ALL EXPOSED CABLES IN PLENUM CEILING SHALL BE APPROVED FOR PLENUM APPLICATION.

11. PROVIDE SLEEVES/CONDUITS FOR LOW VOLTAGE CABLES WHEN THEY TRAVERSE ABOVE NON ACCESSIBLE CEILING SPACE. ALSO, PROVIDE SLEEVES THROUGH MASONRY WALLS FOR LOW VOLTAGE CABLES. VERIFY SLEEVE/CONDUIT SIZE REQUIREMENTS AND LOCATION WITH THE CONTRACTOR INSTALLING LOW VOLTAGE SYSTEM.

12. UNLESS NOTED OTHERWISE, THE CONDUITS AND BACK BOXES SHALL BE CONCEALED WITHIN ALL DRY WALLS AND NEW MASONRY WALLS. SURFACE METAL RACEWAY SHALL BE USED FOR DEVICES ON EXISTING MASONRY WALLS. AS MUCH AS PRACTICAL, WHEREVER FEASIBLE, INSTALL CONDUITS BEHIND A WALL IN AN UNFINISHED ROOM AND PENETRATE INTO AN ELECTRICAL DEVICE TO BE INSTALLED IN FINISHED AREA. IF THIS IS NOT FEASIBLE, PROVIDE SURFACE METAL RACEWAY. IN THE ROOM WHERE ELECTRICAL DEVICE NEEDS TO BE INSTALLED, THE SURFACE METAL RACEWAY SHALL BE ROUTED IN THE CORNER AND/OR ADJACENT TO WINDOW, DOOR FRAMEWORK ETC. SO IT IS AS INCONSPICUOUS AS POSSIBLE. FOR SAKE OF SIMPLICITY ONLY THE TERM "CONDUIT" IS USED IN MOST CASES IN THIS DOCUMENT. HOWEVER, BASED UPON ABOVE, THE SURFACE METAL RACEWAY AND CONDUIT SHALL BE USED, AS APPLICABLE. WHERE SURFACE METAL RACEWAY IS USED ONE TWO CHANNEL RACEWAY WITH DIVIDER CAN BE USED (FOR POWER & LOW VOLTAGE) WHERE APPLICABLE.

13. SOME DEVICES SHALL BE FLUSH MOUNTED (IN DRY WALLS AND EXISTING MASONRY WALLS CONSTRUCTION) AND SOME SHALL BE SURFACE MOUNTED (ON EXISTING MASONRY WALLS). VERIFY REQUIREMENT BEFORE ORDERING ANY MATERIAL.

14. WHERE POWER AND LOW VOLTAGE OUTLETS (SUCH AS DATA OUTLETS) ARE SHOWN TOGETHER ON DRAWINGS, PROVIDE THEM ADJACENT TO EACH OTHER.

15. PROVIDE CONCRETE PAD FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT. (SUCH AS SWITCHBOARDS, PANELS, TRANSFORMER, ETC.)

16. THE EXISTING EQUIPMENT IS SHOWN BASED UPON THE INFORMATION OBTAINED THROUGH BRIEF SURVEY OF THE FACILITY. CONTRACTOR IS TO SURVEY THE EXISTING FACILITY IN ORDER TO DETERMINE THE FULL EXTENT OF WORK AND BE COMPLETELY FAMILIAR WITH ALL THE EXISTING CONDITIONS INCLUDING PLUMBING, HVAC, ELECTRICAL, ETC.. THE ARCHITECT/ENGINEER AND OWNER ASSUME NO RESPONSIBILITY IN RESPECT TO THE ACCURACY OF SUCH INFORMATION SHOWN ON THE DRAWINGS. CONTRACTOR SHALL MAKE ADEQUATE ALLOWANCE IN HIS BID FOR SOME DEVIATIONS TO SUCH INFORMATION.

17. WHERE EXISTING CONDITIONS PREVENT PROPER INSTALLATION OF PROPOSED WORK, REROUTE, EXTEND OR ALTER EXISTING WORK SO AS TO ACCOMMODATE PROPOSED WORK REQUIREMENTS.

18. CIRCUIT NUMBERS SHOWN FOR EXISTING PANELS ARE FOR REFERENCE ONLY. USE NEXT AVAILABLE CIRCUITS AND PROVIDE APPROPRIATE SIZE BREAKERS.

19. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ELECTRICAL EQUIPMENT & DEVICES. THE ELECTRICAL DRAWINGS ARE FOR CONCEPT ONLY.

20. IN GENERAL, DASHED LINES INDICATE EXISTING ITEMS TO BE REMOVED, LIGHT SOLID LINES INDICATE ITEMS TO REMAIN AND DARK SOLID LINES INDICATE NEW ITEMS.

21. WHERE EXISTING WIRING DEVICE (SUCH AS RECEPTACLE, SWITCH, ETC.) IS INDICATED TO REMAIN, REUSE EXISTING JUNCTION BOX, RACEWAY, BUT PROVIDE NEW DEVICE AND ASSOCIATED COVERPLATE. RECONNECT THIS DEVICE TO NEW CIRCUIT AS INDICATED.

22. THE SYSTEMS PROVIDED BY THIS CONTRACTOR SHALL BE COMPLETELY OPERATIONAL REGARDLESS OF OMISSION OF MINOR ITEMS, SUCH AS CIRCUIT NUMBER FOR RELAY, A CIRCUIT NUMBER NEXT TO A LIGHTING FIXTURE, ETC.

23. ALL OUTDOOR DEVICES SUCH AS RECEPTACLES, DISCONNECTS, JUNCTION BOXES, ETC. SHALL BE OUTDOOR TYPE.

24. WHERE A NEW WALL IS TO BE BUILT PERPENDICULAR TO EXISTING WALL AND IF THERE IS AN EXISTING RECEPTACLE ON THE EXISTING WALL, RELOCATE THIS RECEPTACLE AS REQUIRED.

25. PROVIDE TYPED PANEL DIRECTORY INDICATING LOAD SERVED.

26. UNO, ALL OVERCURRENT PROTECTION DEVICES 800 AMP AND LARGER SHALL BE 100% RATED.

27. AS REQUIRED EXTEND EXISTING RECEPTACLES WHERE EXISTING WALLS ARE FURRED OUT. REFER TO ARCHITECTURAL DRAWINGS FOR EXTENT OF THIS WORK.

28. DUE TO THE SMALL SCALE AND INTERFERENCE OF EXISTING EQUIPMENT, EACH AND EVERY ITEM IS NOT SHOWN. SHOWN INFORMATION IS INTENDED AS A GUIDE. CONTRACTOR SHALL VERIFY INFORMATION AND CONDITIONS IN THE FIELD.

29. ALL RECEPTACLES LOCATED WITHIN 6" OF SOURCE OF WATER (SUCH AS SINK) AND ALL OUTDOOR RECEPTACLES SHALL BE GFI TYPE, WHETHER SPECIFICALLY INDICATED OR NOT.

30. WHERE THE OUTLETS ARE SHOWN ON FURNITURE/DESK THEY SHALL BE PROVIDED EITHER UNDER THE DESK OR AS A PART OF MILLWORK AS INDICATED ON ARCHITECTURAL DRAWINGS. PROVIDE CONDUITS AND WIRING UNDER OR WITHIN THE FURNITURE/DESK. THE QUANTITY AND LOCATION OF INDICATED OUTLETS IS APPROXIMATE. COORDINATE EXACT REQUIREMENTS WITH ARCHITECT AND MILLWORK VENDOR. IF FURNITURE/DESK IS NEXT TO WALL, THE ROUGH-IN SHALL BE PROVIDED FROM WALLS. IF FURNITURE/DESK IS FREE STANDING, THE ROUGH-IN SHALL BE PROVIDED FROM FLOOR. THE POWER POLE IS NOT ALLOWED UNLESS SPECIFICALLY INDICATED.

31. PROVIDE EXPANSION FITTINGS FOR ALL ELECTRICAL RACEWAYS AT EVERY EXPANSION JOINT. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR LOCATION OF EXPANSION JOINTS.

32. COORDINATE THE INSTALLATION OF ELECTRICAL EQUIPMENT SUCH AS PANELS, SWITCHBOARD, WITH OTHER TRADES SUCH THAT NO DUCTWORK, PIPING ETC. IS LOCATED ABOVE THEM.

33. UNLESS NOTED OTHERWISE, PROVIDE WIREGUARDS FOR ALL SURFACE MOUNTED DEVICES (SUCH AS FIRE ALARM PULL STATIONS, HORN/STROBES, CLOCKS, SPEAKERS, BATTERY PACKS, EXIT SIGNS, LIGHTING FIXTURES ETC.) LOCATED IN GYMNASIUM.

34. ELECTRICAL CONTRACTOR SHALL VERIFY SIZE OF ALL EXISTING OPENINGS, DOORS, ETC., FOR REMOVING EQUIPMENT AND MATERIAL OUT OF BUILDING. ELECTRICAL CONTRACTOR SHALL PROVIDE ANY NEW OR ENLARGED OPENINGS IN EXISTING BUILDING CONSTRUCTION REQUIRED TO FACILITATE EXITING OF HIS EQUIPMENT/MATERIAL AND RESTORE SUCH OPENINGS TO THEIR ORIGINAL STATE AFTER COMPLETION.

35. VERIFY QUANTITY AND SIZE OF LUGS PROVIDED IN OTHER TRADES' EQUIPMENT (FOR EXAMPLE, CHILLER, ELEVATOR, FIRE PUMP ETC.) BEFORE STARTING ANY WORK ASSOCIATED WITH SUCH EQUIPMENT. IF THEIR LUGS CANNOT ACCOMMODATE THE CABLES INDICATED IN ELECTRICAL DOCUMENT, PROVIDE LUG FITTINGS TO ACCOMMODATE CHANGE IN THE CABLES. PROVIDE SUCH FITTINGS IN A JUNCTION BOX AS CLOSE AS POSSIBLE TO THEIR EQUIPMENT. IF ALLOWED BY THE EQUIPMENT MANUFACTURER, SUCH FITTINGS MAY BE INSTALLED IN THEIR EQUIPMENT RATHER THAN IN A SEPARATE JUNCTION BOX.

36. MAIN SERVICE ENTRANCE EQUIPMENT SHALL HAVE LABEL FOR SERVICE ENTRANCE TYPE, AND SHALL BE GROUNDED PER ELECTRICAL CODE.

37. PROVIDE SEPARATE DEDICATED GROUNDING CONDUCTOR IN EACH FEEDER AND BRANCH CIRCUIT WIRING CIRCUIT.

38. THE ELECTRICAL DRAWINGS SHOW DIRECT PRINCIPLE WORK WHICH MUST BE ACCOMPLISHED UNDER THIS CONTRACT. INDIRECT AND INCIDENTAL WORK WILL ALSO BE NECESSARY DUE TO CHANGES AFFECTING EXISTING ARCHITECTURAL, MECHANICAL, PLUMBING OR OTHER SYSTEMS. SUCH INCIDENTAL WORK IS ALSO PART OF THIS CONTRACT. INSPECT THOSE AREA, AND ASCERTAIN WORK NEEDED AND DO THAT WORK IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS, AT NO ADDITIONAL COST.

39. PROVIDE REMOTE TEST AND INDICATING STATION IN A READILY ACCESSIBLE AND VISIBLE SPACE FOR EACH DUCT SMOKE DETECTOR. VERIFY ITS EXACT LOCATION WITH OWNER.

40. WHERE "VIT" IS INDICATED NEXT TO A DEVICE, CONTRACTOR SHALL VERIFY ITS REQUIREMENT IN FIELD. THIS INCLUDES VERIFICATION OF DEVICE TYPE, LOCATION, WIRING CONDUIT AND CIRCUIT BREAKER ETC. PROVIDE APPROPRIATE DEVICE, WIRING, CONDUIT, CIRCUIT BREAKER ETC. AS REQUIRED.

41. PROVIDE RED PLASTIC SIGN AT MAIN WATER SERVICE METER INDICATING "MAIN GROUND LOCATION."

42. PROVIDE ARC-FLASH LABELS ON NEW EQUIPMENT IN ACCORDANCE WITH NEC.

43. WHERE EQUIPMENT DEVICES ARE INDICATED TO BE REMOVED, REMOVE ACCESSIBLE, UNUSABLE CONDUITS & WIRING. IF CONDUITS ARE NOT ACCESSIBLE THEY MAY BE ABANDONED. MAINTAIN CONTINUITY TO THE LOAD WHICH IS TO REMAIN.

44. PROVIDE PULL STRINGS IN ALL CONDUITS FOR LOW VOLTAGE CABLES FOR TELE/DATA SOUND SYSTEM, SECURITY SYSTEM ETC.

45. WHERE EXISTING HVAC EQUIPMENT IS SHOWN TO BE REMOVED, REMOVE ITS ASSOCIATED STARTER, DISCONNECT SWITCH, CONDUIT WIRING ETC. FIELD VERIFY LOCATION OF STARTER, DISCONNECT, ETC.

46. PROVIDE GROUND BUS BAR IN EACH PANEL WHETHER SPECIFICALLY INDICATED OR NOT.

47. ARMORED (BX) CABLES ARE NOT ALLOWED.

GENERAL ELECTRICAL SYMBOLS

- ①

JUNCTION BOX- EXPOSED OR IN CEILING
- ①+

JUNCTION BOX - WALL MOUNTED

POWER SYMBOLS

- WALL

FLOOR BOX

POKE THROUGH

ABOVE COUNTER

QUADPLEX RECEPTACLE
- DUPLEX RECEPTACLE
- JUNCTION BOX WITH FLEXIBLE CONDUIT TO FINAL EQUIPMENT OR FURNITURE SYSTEM POWER CONNECTION
- WP

XX

ADJACENT LETTERS IN THE SYMBOLS ABOVE INDICATE THE FOLLOWING:

"GFI" RECEPTACLE HAS GROUND FAULT CIRCUIT INTERRUPTER

"WVP" RECEPTACLE HAS WATERPROOF COVER

"XX" RECEPTACLE CIRCUIT NUMBER
- SPECIAL PURPOSE OUTLET - SEE SCHEDULE  
"XX" INDICATES OUTLET TAG
- PUSH-BUTTON STATION
- PUSH PLATE STATION
- 2P

\$

MANUAL MOTOR CONTROL

"K" KEY OPERATED

"P" PILOT LIGHT

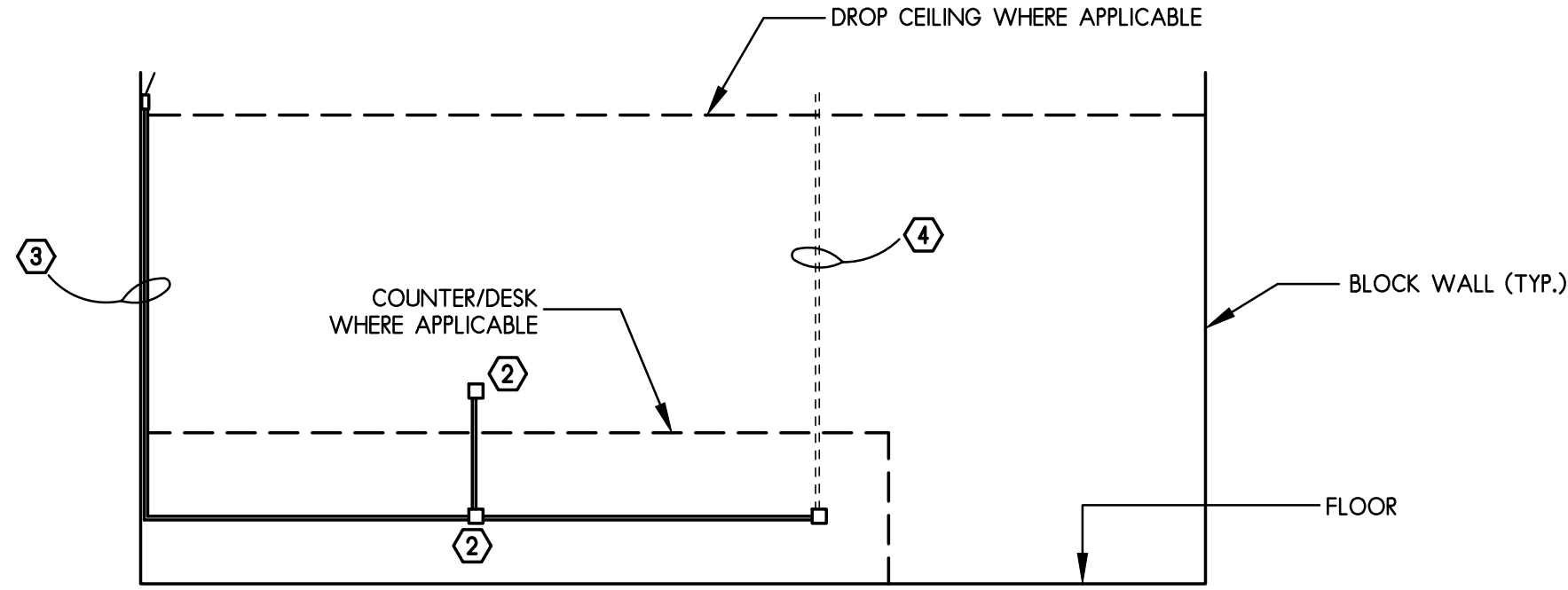
"T" THERMAL OVERLOAD PROTECTION
- MOTOR - SEE SCHEDULE, "XX" INDICATES TAG
- FUSED DISCONNECT SWITCH, "AS" INDICATES AMPERE RATING OF SWITCH AND "AF" INDICATES AMPERE RATING OF FUSE
- NON-FUSED DISCONNECT SWITCH, CIRCUIT BREAKER IN ENCLOSURE,
- SURFACE MOUNTED DISTRIBUTION PANELBOARD
- SURFACE MOUNTED NORMAL BRANCH CIRCUIT PANELBOARD
- RECESSED MOUNTED NORMAL BRANCH CIRCUIT PANELBOARD
- TRANSFORMER
- LIGHT RELAY/POWER PACK
- GROUNDING ELECTRODE CONDUCTOR
- POWER METER

ELECTRICAL ABBREVIATIONS

AC	ABOVE COUNTER	NC	NORMALLY CLOSED
AF	ABOVE FINISHED FLOOR	NEC	NATIONAL ELECTRICAL CODE
AIC	AVAILABLE INTERRUPTING CAPACITY	N	NIGHT LIGHT
ATS	AUTOMATIC TRANSFER SWITCH	NO	NORMALLY OPEN
C	CONDUIT	PH	PHASE (Ø)
EC	ELECTRICAL CONTRACTOR	PNL	PANEL
EF	EXHAUST FAN	R	REMAIN
EM	EMERGENCY	SW	SWITCH
EDH	ELECTRIC DUCT HEATER	TTC	TELEPHONE TERMINAL
ESJH	ELECTRIC SUSPENDED UNIT HEATER	UNO	CABINET
ETR	EXISTING TO REMAIN	U	UNIT VENTILATOR
EWC	ELECTRIC WATER COOLER	V	VOLTS
EWV	ELECTRIC WATER HEATER	VIF	VERIFY IN FIELD
EX	EXISTING	W	WIRE
FBO	FURNISHED BY OTHERS	WE	WITH EQUIPMENT
FLA	FULL LOAD AMPS	WP	WEATHER PROOF
FVNR	FILL VOLTAGE NON-REVERING	X	EXISTING TO BE REMOVED
GF	GROUND FAULT INTERRUPTER	XR	EXISTING TO BE RELOCATED
GRD	GROUND	XN	EXISTING RELOCATED IN NEW LOCATION
HP	HORSEPOWER	XP	EXISTING TO BE REPLACED
JB	JUNCTION BOX		
KW	KILOWATTS		
KVA	KILO VOLT AMPERES		
LTO	LIGHTING		
MAX	MAXIMUM		
MC	MECHANICAL CONTRACTOR		
MFG	MANUFACTURER		
MIN	MINIMUM		
MTO	MOUNTED		
MY	MERCURY VAPOR		

KEYED NOTES:

- ① THIS DETAIL INDICATES CONCEPT FOR ROUTING WIREMOLD. IN GENERAL, CONDUIT AND WIREMOLD SHALL BE INSTALLED AS INCONSPICUOUS AS POSSIBLE. IN CASE OF A FINISHED AREA (SUCH AS CORRIDOR) INSTALL CONDUIT FROM BEHIND THE BLOCKED WALL RATHER THAN EXPOSED IN FINISHED AREAS.
- ② TYPICAL RECEPTACLE OUTLET.
- ③ ROUTE WIREMOLD ALONG THE CORNER OR EDGE OF ROOM SO THEY ARE LESS NOTICABLE.
- ④ ROUTING OF WIREMOLD IN MIDDLE OF WALL IS PROHIBITED.



① TYPICAL ROUTING OF WIREMOLD  
SCALE: 1/4" = 1'-0"

ELECTRICAL- SCHEDULES, SYMBOLS, NOTES & ABBREVIATIONS

SCALE: NONE

