

WITCHITA SCHOOL TORNADO SAFE ROOM WITCHITA, KANSAS

**WITCHITA SCHOOL
TORNADO SAFE ROOM**
 WICHITA, KANSAS

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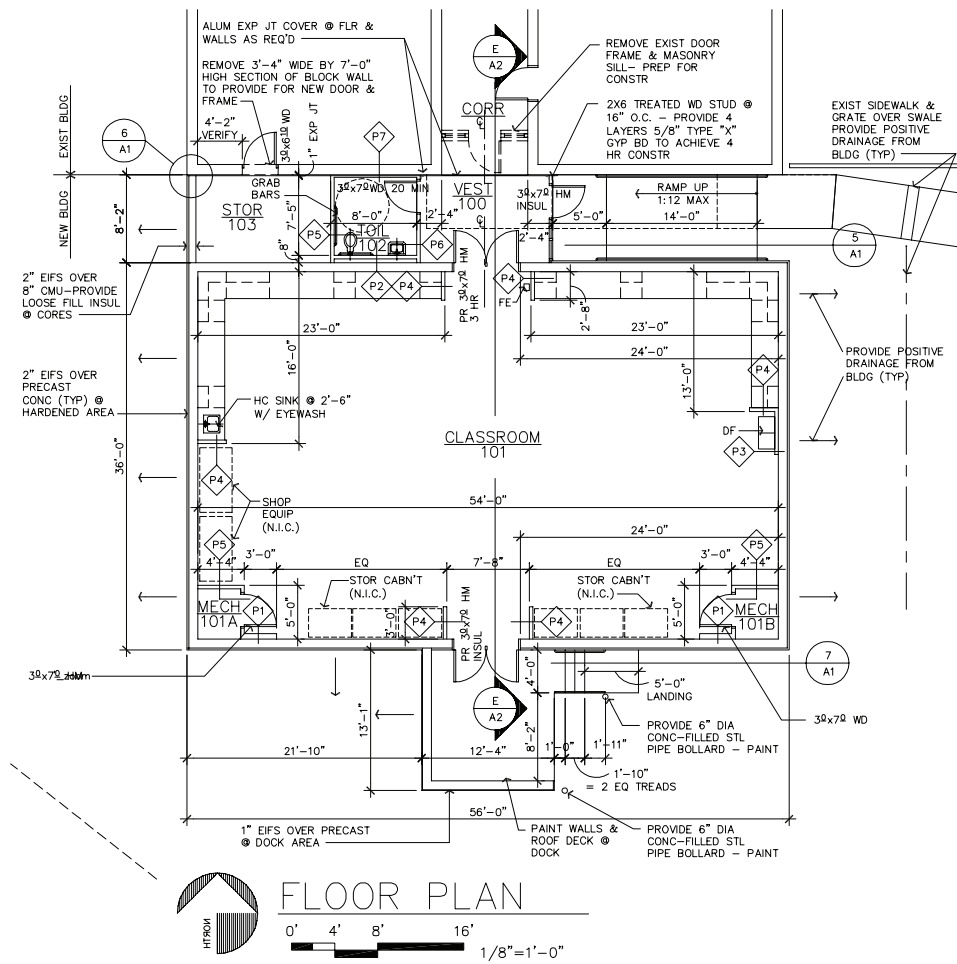
COVER SHEET

SHEET No.:
 DATE: 7 MARCH 2000
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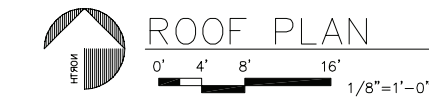


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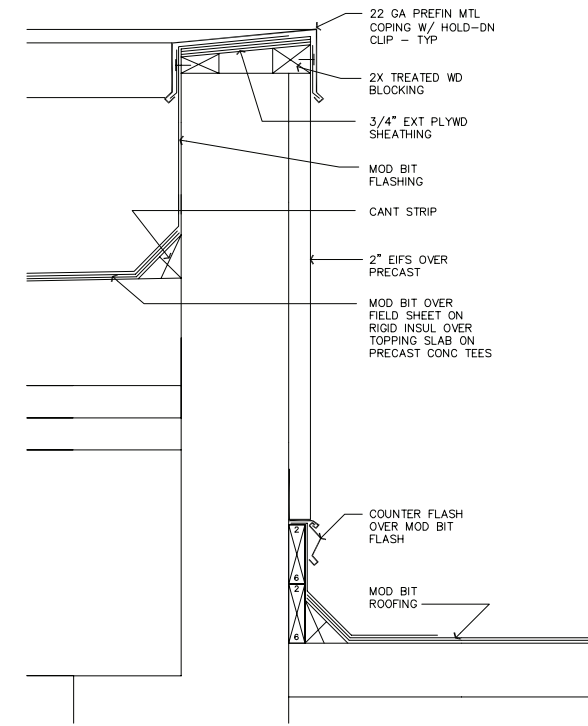
WICHITA, KANSAS



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



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



1 PARAPET DETAIL
1 1/2"=1'-0"

GENERAL NOTES:

- FINISHES-
-VEST 100 - MATCH EXIST. SAT CLG
-SHOP/SAFE ROOM 101 - NO FINISHES, SEAL CONC FLR, PAINT GYP BD, BASE @ GYP BD
-TOIL 102 - SEALED CONCRETE FLOOR, 48"H FRP ON WALLS
-STOR 103 - NO FINISHES
- PROVIDE SPACE IN NEW CABINET FOR THE FOLLOWING PER FEMA REGULATIONS:
1. FLASH LIGHTS
2. FIRST-AID KIT
3. NOAA WEATHER RADIO
- ALL COLOR SELECTIONS BY OWNER
- TORNADO SAFER AREA SHALL BE CONSTRUCTED PER THE NATIONAL PERFORMANCE CRITERIA FOR TORNADO SAFE ROOMS DATED 5/28/99

SPECIFICATION NOTES:

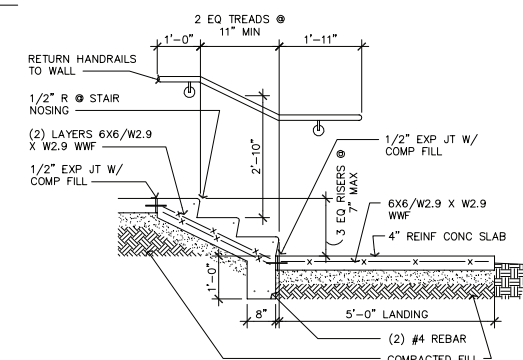
- ROOF MEMBRANE: TAMKO 102FR AWAPLAN PREMIUM FR
- ROOF INSULATION: EPS 1.50 PCF DENSITY W/ 1/2" COVER BOARD HOT MOPPED TO ROOF DECK - MAX 4'X4' SHEETS
- EIFS: DRYVIT SYSTEMS, 2" EPS INSUL, 1.0 PCF, PANZER 20 MESH, SAND FINISH, COLOR AS SELECTED BY OWNER
- METAL STUDS: 25 GAUGE
- HM DOORS: STEELDRIFT MFG, CO. 14 GA FACES, 14 GA FRAMES - ANCHOR FRAMES W/ (4) 3/8" X 6" EXP ANCHORS PER JAMB
- WOOD DOORS: WEYERHAEUSER 1 3/4" SOLID CORE W/ HARDWOOD VENEER FACES - STAIN, CLEAR FINISH IN 16 GA HM FRAME W/ STUD ANCHORS
- SUSP ACOUST CLG: ARMSTRONG NATURAL FISSURED 2'X4'
- MILLWORK: AWW CUSTOM GRADE - LAMINATE FACED, LAMINATE COUNTERTOPS & BACKSPLASHES, LAMINATE COLOR SELECTIONS BY OWNER

DOOR HARDWARE:

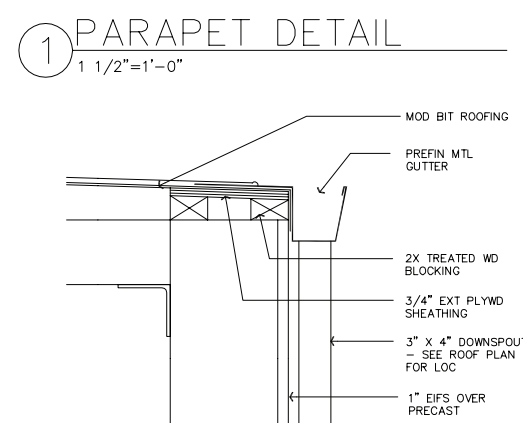
- (2) PR HM DOOR @ CLASSRM ENTRY/EXIT
-1 1/2 PR HINGES
-REMOVABLE MULLION
-CLOSER
-PANIC DEVICE
-THRESHOLD
-WEATHERSTRIPPING
- TOILET 102 WOOD DOOR
-1 1/2 PR HINGES
-CLOSER
-LEVER LOCKSET (PRIVACY FUNCTION)
-WALL MOUNTED DOOR STOP
- VEST 100 HM ENTRY DOOR
-1 1/2 PR HINGES
-CLOSER
-PANIC DEVICE
-PULL HANDLE
-THRESHOLD - CLEAR ANOD
-WEATHERSTRIPPING
- (2) WOOD DOORS @ MECH ROOMS
-1 1/2 PR HINGES
-LEVER LOCKSET (STOREROOM FUNCTION)
-DOOR STOP
-HOLD OPEN
- STORAGE 103 WOOD DOOR
-1 1/2 PR HINGES
-LEVER LOCKSET (STOREROOM FUNCTION)
-DOOR STOP

PARTITION SCHEDULE

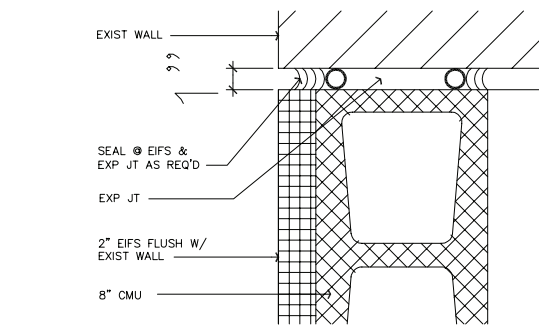
- P1 8" MTL STUD @ 16" O.C. W/ 5/8" GYP BD ON EXPOSED SIDE OF STUD - EXTEND TO 10'-0" AFF
- P2 3 5/8" MTL STUD @ 16" O.C. W/ 5/8" GYP BD ON EXPOSED SIDE OF STUD - EXTEND TO 4" ABV FIN CLG
- P3 3 5/8" MTL STUD @ 16" O.C. W/ 5/8" GYP BD EA SIDE OF STUD - EXTEND TO 10'-0" AFF
- P4 3 5/8" MTL STUD @ 16" O.C. W/ 5/8" GYP BD EA SIDE OF STUD - EXTEND TO 10'-0" AFF
- P5 3 5/8" MTL STUD @ 16" O.C. W/ 5/8" GYP BD EA SIDE OF STUD W/ SOUND BATTS - EXTEND TO STRUCT ABV
- P6 3 5/8" MTL STUD @ 16" O.C. W/ 5/8" TYPE "X" GYP BD EA SIDE OF STUD W/ SOUND BATTS - EXTEND TO 4" ABV FIN CLG
- P7 1 5/8" MTL STUD @ 16" O.C. W/ 5/8" TYPE "X" GYP BD OVER STRUCT



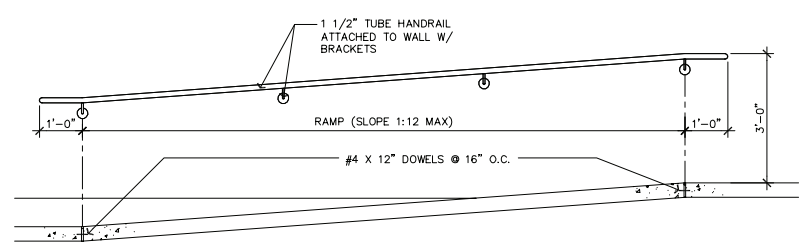
7 SECT @ DOCK STAIR
1/2"=1'-0"



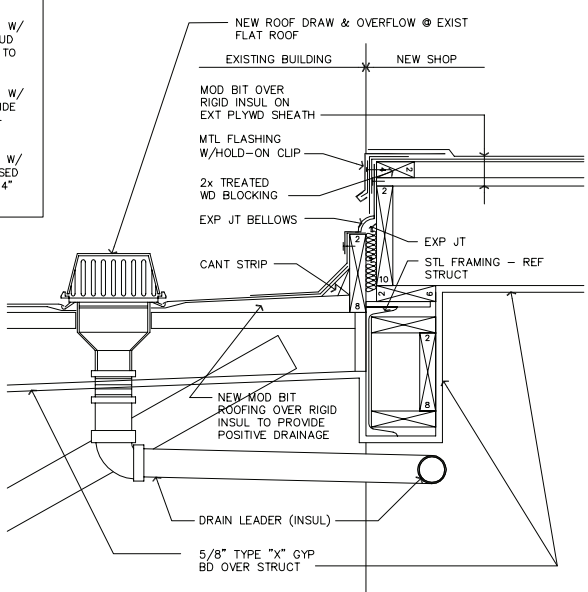
2 ROOF DETAIL @ DOCK
1 1/2"=1'-0"



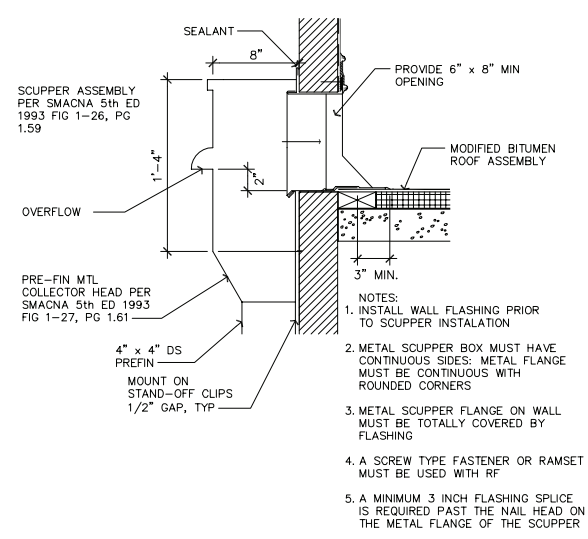
6 DETAIL @ EIFS JT
3"=1'-0"



5 DETAIL @ RAMP
1/2"=1'-0"



4 ROOF DETAIL @ EXP JT
1 1/2"=1'-0"



3 SCUPPER DETAIL
1 1/2"=1'-0"

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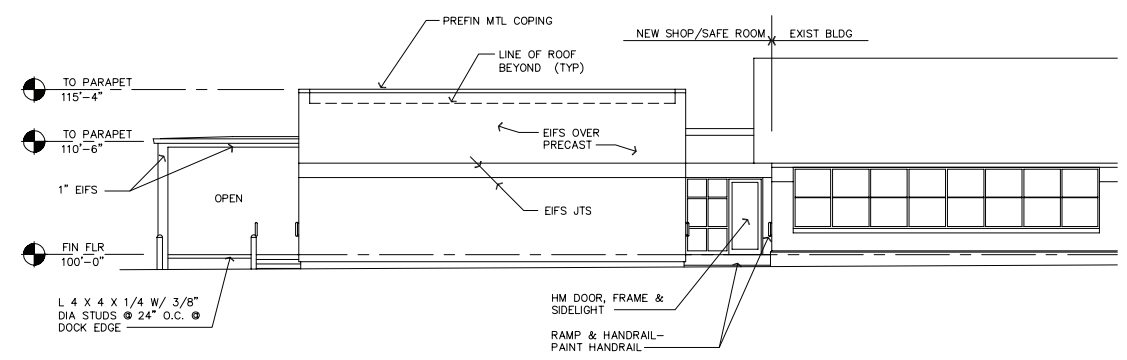
SITE & FLOOR PLAN

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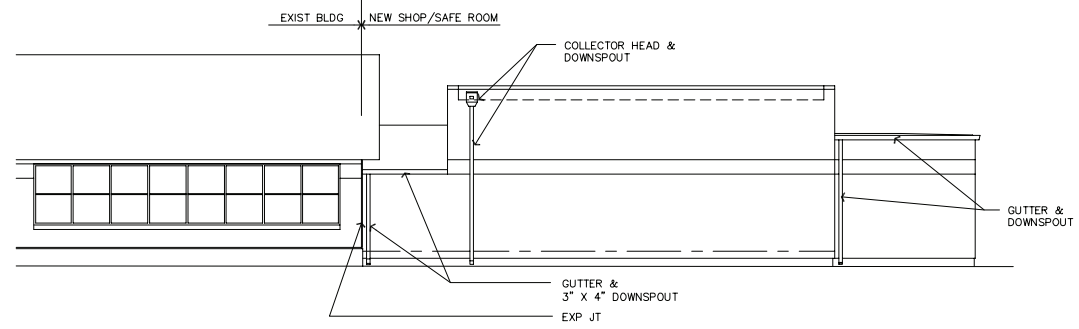


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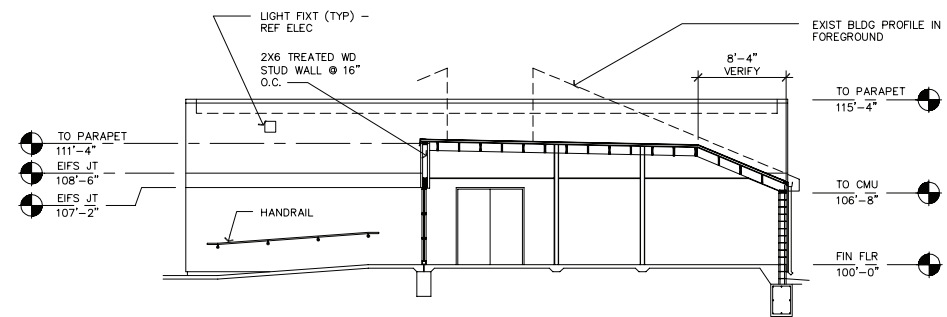
WICHITA, KANSAS



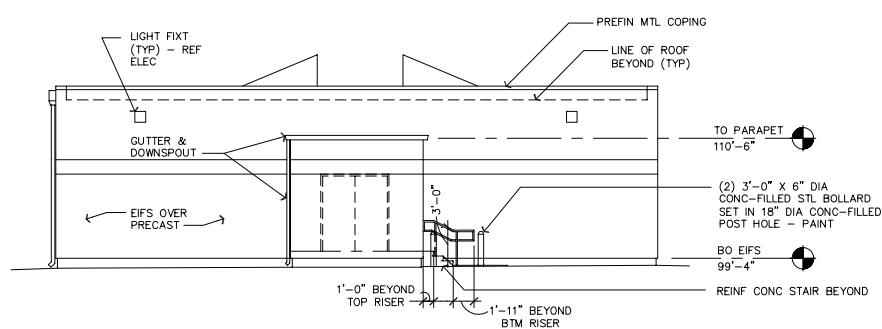
(A) BUILDING SECTION - EAST
1/8"=1'-0"



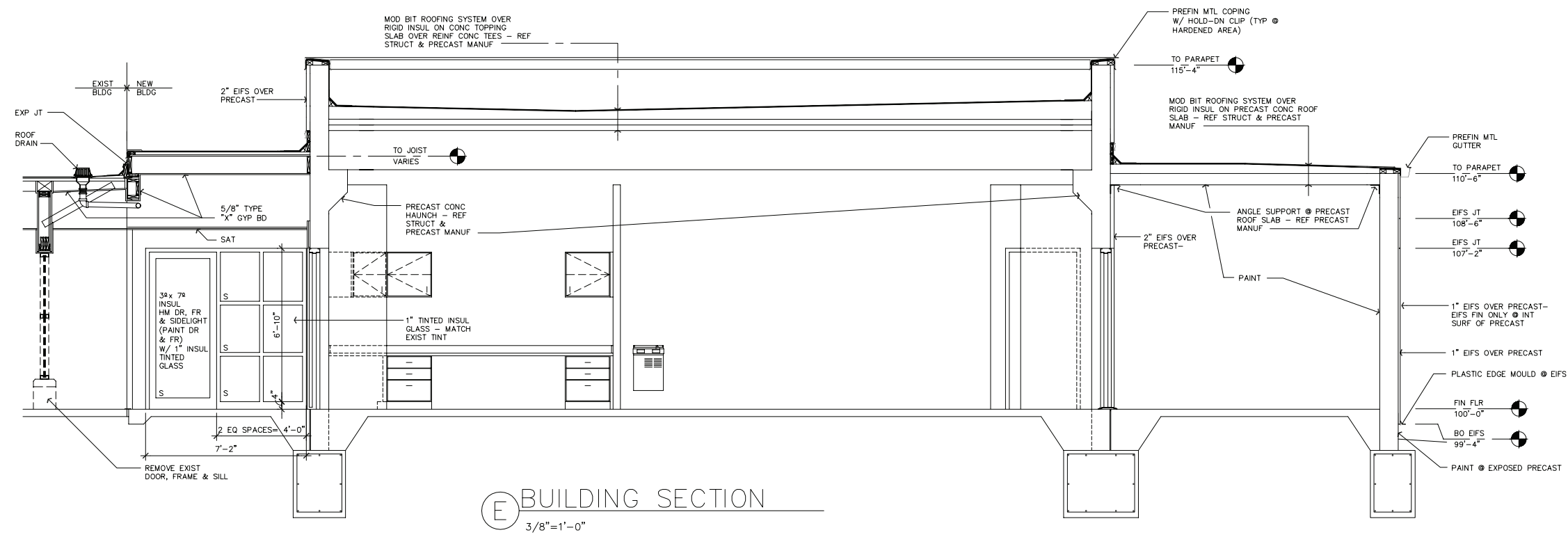
(C) BUILDING SECTION - WEST
1/8"=1'-0"



(B) BUILDING SECTION - NORTH
1/8"=1'-0"



(D) BUILDING SECTION - SOUTH
1/8"=1'-0"



(E) BUILDING SECTION
3/8"=1'-0"

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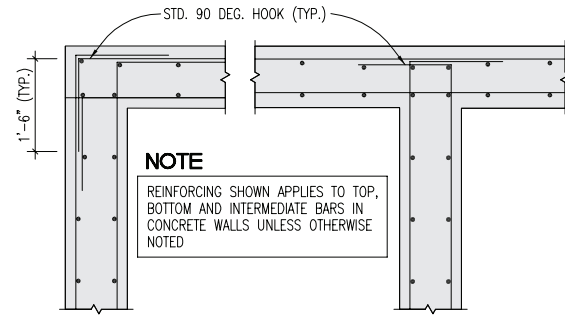
ELEVATIONS & SECTIONS

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G. MISCELLANEOUS

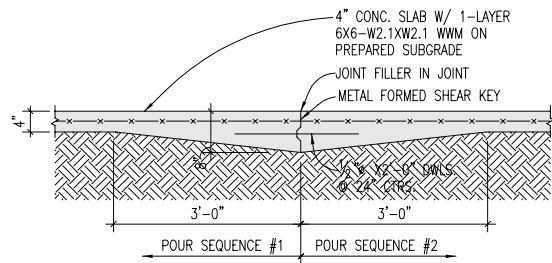
- CONCRETE PADS FOR MECHANICAL AND ELECTRICAL EQUIPMENT ON FLOORS SHALL BE 3 1/2" HIGH UNLESS OTHERWISE NOTED AND REINFORCED WITH #3 BARS ON 12" CENTERS, EACH WAY, 1 1/2" FROM TOP OF SLAB. WHEN THE PAD EXCEEDS 10" IN THICKNESS, REINFORCE WITH #3 BARS ON 12" CENTERS EACH WAY, TOP AND BOTTOM. ANCHOR PAD TO SLAB WITH #4 DOWELS AT 24" CENTERS, EACH WAY, CAST OR EPOXIED INTO SUPPORTING SLAB.
- CONTRACTOR SHALL SUPPLY ALL ITEMS FOR ATTACHING MECHANICAL AND ELECTRICAL EQUIPMENT TO THE BUILDING STRUCTURE TO RESIST ALL LOADS INCLUDING SEISMIC FORCES. ATTACHMENT SHALL BE MADE SO AS NOT TO OVERSTRESS STRUCTURAL MEMBERS. COORDINATE THE ATTACHMENTS AND LOCATIONS OF THE EQUIPMENT WITH THE STRUCTURAL SHOP DRAWINGS. REFER TO THE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- SUBSTITUTION OF EXPANSION ANCHORS FOR ADHESIVE ANCHORS, EPOXY ANCHORS OR EMBEDDED ANCHORS SHOWN ON THE DRAWINGS WILL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER IN ADVANCE.
- THE CONTRACTOR SHALL PROVIDE THE FOLLOWING ADDITIONAL SERVICES:
 - VERIFICATION OF ALL DIMENSIONS, ELEVATIONS, OPENING SIZES, AND MECHANICAL EQUIPMENT WEIGHTS PRIOR TO STARTING WORK.
 - REMOVE ALL ABANDONED FOUNDATIONS, UTILITIES, PIPELINES, ETC. THAT INTERFERE WITH NEW CONSTRUCTION.
 - REVIEW AND APPROVE ALL SHOP DRAWINGS PRIOR TO SUBMITTAL, NOTING CHANGES MADE WHICH DO NOT COMPLY WITH DESIGN DRAWINGS.
 - PROVIDE TEMPORARY BRACING AND SHORING TO PREVENT EXCESSIVE DEFLECTIONS AND DAMAGE DURING CONSTRUCTION. DESIGN OF TEMPORARY BRACING AND SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.



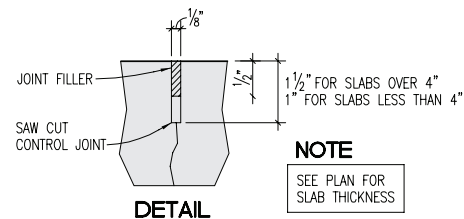
1 TYP. CORNER AND INTERSECTION REINF. NO SCALE

H. REQUIRED STRUCTURAL INSPECTIONS

- INSPECTIONS BY THE BUILDING OFFICIAL.
 - FOUNDATION INSPECTION AFTER EXCAVATION AND SOIL PREPARATION, BUT PRIOR TO PLACING REINFORCING. AGAIN, AFTER REINFORCING PLACEMENT AND PRIOR TO CONCRETE PLACEMENT.
 - CONCRETE SLAB ON GRADE/UNDERFLOOR INSPECTION SHALL BE MADE AFTER ALL UNDERFLOOR EQUIPMENT IS IN PLACE, BUT PRIOR TO CONCRETE PLACEMENT OR OTHER FLOORING PLACEMENT.
 - FRAMING INSPECTION SHALL BE MADE AFTER ALL ROUGH MECHANICAL, ELECTRICAL, AND PLUMBING EQUIPMENT IS IN PLACE, BUT PRIOR TO FIREPROOFING OR WALL COVERING IS INSTALLED.
 - FINAL INSPECTION SHALL BE MADE WHEN THE CONTRACTOR HAS COMPLETED THE BUILDING AND IT IS READY FOR OCCUPANCY.
- IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING CODE, THE OWNER WILL PROVIDE QUALIFIED PERSONNEL TO PERFORM THE FOLLOWING SPECIAL INSPECTIONS AND REPORT THE FINDINGS TO THE ENGINEER. THIS DOES NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY TO PERFORM THE WORK IN ACCORDANCE WITH THE DESIGN DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR 24 HOURS IN ADVANCE OF ALL INSPECTIONS.
 - EXCAVATIONS, GRADING AND EARTH FILL SHALL BE INSPECTED IN ACCORDANCE WITH THE CODE.
 - FOUNDATION INSPECTION DURING THE PLACEMENT OF PILING, DRILLED PIERS, GRADE BEAMS, FOOTINGS, RETAINING WALLS, AND SLABS ON GRADE. ALL EMBEDDED BOLTS SHALL BE INSPECTED.
 - FRAMING INSPECTIONS DURING THE ERECTION OF ALL STEEL FRAMING MEMBERS. INSPECTIONS OF ALL DECKING PLACEMENT AND ATTACHMENTS.
 - DUCTILE-MOMENT RESISTING STEEL FRAMES SHALL HAVE WELDS INSPECTED IN ACCORDANCE WITH THE CODE.
 - HIGH-STRENGTH BOLTS SHALL BE INSPECTED DURING INSTALLATION AND TIGHTENING IN ACCORDANCE WITH THE CODE.
 - ALL REINFORCING STEEL SHALL BE INSPECTED PRIOR TO CONCRETE PLACEMENT. ALL PRESTRESSING SHALL BE INSPECTED DURING STRESSING AND DURING GROUTING.
 - DUCTILE MOMENT-RESISTING CONCRETE FRAMES AS REQUIRED IN THE CONCRETE CODE.
 - STRUCTURAL MASONRY SHALL BE INSPECTED DURING PLACEMENT IN ACCORDANCE WITH THE CODE.
 - SPRAY-APPLIED FIREPROOFING INSPECTIONS SHALL BE MADE IN ACCORDANCE WITH THE CODE.



2 SLAB CONSTRUCTION JOINT (CJ) 3/4" = 1'-0"



3 TYPICAL SLAB SAWN JOINT (SJ) NO SCALE

TABLE A - REINFORCEMENT TENSION LAPS, EMBEDMENT AND HOOK LENGTHS ①

$f_y = 60000 \text{ psi}$ $f'_c = 3000 \text{ psi}$ ② ③

BAR SIZE (d)	CLEAR SPACING (S) (in) ④			EMBEDMENT & CLASS A LAP (in) ⑤⑥⑦			CLASS B LAP (in) ⑥⑧			HOOK (in) ⑨						
	2d	3d	5d	TOP BAR ⑩	OTHER BARS		TOP BAR ⑩	OTHER BARS								
				2d < S < 3d	S ≥ 3d ⑪	S ≥ 5d ⑫	2d < S < 3d	S ≥ 3d ⑪	S ≥ 5d ⑫							
3	3/4	1 1/8	1 7/8	16	16	16	13	13	13	21	21	21	16	16	16	9
4	1	1 1/2	2 1/2	22	22	22	17	17	17	28	28	28	22	22	22	11
5	1 1/4	1 7/8	3 1/8	27	27	27	21	21	21	35	35	35	27	27	27	14
6	1 1/2	2 1/4	3 3/4	35	32	32	27	25	25	46	42	42	35	32	32	17
7	1 3/4	2 3/8	4 3/8	48	38	38	37	29	29	63	49	49	48	38	38	20
8	2	3	5	63	45	43	49	35	33	82	59	56	63	45	43	22
9	2 1/4	3 3/8	5 5/8	80	57	48	62	44	37	104	74	63	80	57	48	25
10	2.54	3.81	6.35	102	73	58	78	56	45	132	94	76	102	73	58	28
11	2.82	4.23	7.05	125	89	71	96	69	55	162	116	93	125	89	71	31

NOTES FOR USE WITH TABLE A

- LENGTHS SHOWN CONFORM WITH NON-SEISMIC PROVISIONS OF ACI 318-89 FOR UNCOATED BARS NOT ENCLOSED BY CLOSELY SPACED SPIRALS OR TIES. DEVELOPMENT OF REINFORCEMENT NOT COVERED BY THE TABLE SHALL CONFORM WITH ACI 218-89.
- MULTIPLY LENGTHS SHOWN BY 0.87 FOR 4000 PSI CONCRETE, BUT LENGTH OF LAP SHALL NOT BE LESS THAN 12 INCHES.
- MULTIPLY LENGTHS SHOWN BY 1.3 FOR LIGHTWEIGHT AGGREGATE CONCRETE.
- BAR CLEAR SPACING IS THE CENTER TO CENTER BAR SPACING MINUS TWO BAR DIAMETERS WHEN ALL BARS ARE LAPPED AT THE SAME LOCATION. WHEN BAR LAPS ARE STAGGERED TO LAP HALF THE BARS AT THE SAME LOCATION, THE BAR CLEAR SPACING IS TWICE THE CENTER TO CENTER BAR SPACING MINUS TWO BAR DIAMETERS. WHEN ALL BARS ARE EMBEDDED AT THE SAME LOCATION, THE BAR CLEAR SPACING IS THE CENTER TO CENTER BAR SPACING MINUS ONE BAR DIAMETER.
- CLASS A LAP LENGTHS APPLY WHEN BAR LAPS ARE STAGGERED TO LAP HALF THE BARS AT THE SAME LOCATION OR WHEN BARS ARE LAPPED AT A LOCATION OF MINIMUM STRESS IN THE BARS.
- LAP AND EMBEDMENT LENGTHS SHOWN APPLY WHEN BAR MINIMUM CONCRETE COVER OVER BARS CONFORMS WITH VALUES GIVEN IN THE TABLE FOR "CONCRETE COVER". THESE COVER VALUES CONFORM WITH ACI 318-89.
- CLASS A LAP AND EMBEDMENT LENGTH HAVE SAME VALUE.
- CLASS B LAP LENGTHS APPLY WHEN ALL BARS ARE SPLICED AT A LOCATION OF MAXIMUM STRESS IN THE BARS.
- HOOK LENGTH GIVEN IS THE STRAIGHT LINE DISTANCE FROM THE LOCATION OF MAXIMUM STRESS IN THE BAR TO THE OUTSIDE END OF THE HOOK. MULTIPLY LENGTHS GIVEN BY 0.7 FOR HOOKS WITH SIDE COVER NORMAL TO THE HOOK NOT LESS THAN 2 1/2 INCHES AND FOR 90 DEGREE HOOKS COVER ON BAR EXTENSION BEYOND HOOK NOT LESS THAN 2 INCHES.
- TOP BARS ARE HORIZONTAL REINFORCEMENT PLACED SO THAT MORE THAN 12 INCHES OF CONCRETE IS CAST BELOW THE REINFORCEMENT.
- MULTIPLY LAP AND EMBEDMENT LENGTHS GIVEN BY 2.0 FOR BARS WITH CLEAR SPACING OF TWO BAR DIAMETERS OR LESS, OR CONCRETE COVER OF ONE BAR DIAMETER OR LESS.
- MINIMUM CONCRETE COVER FROM FACE OF MEMBER TO EDGE BAR SHALL NOT BE LESS THAN TWO AND ONE HALF BAR DIAMETERS.

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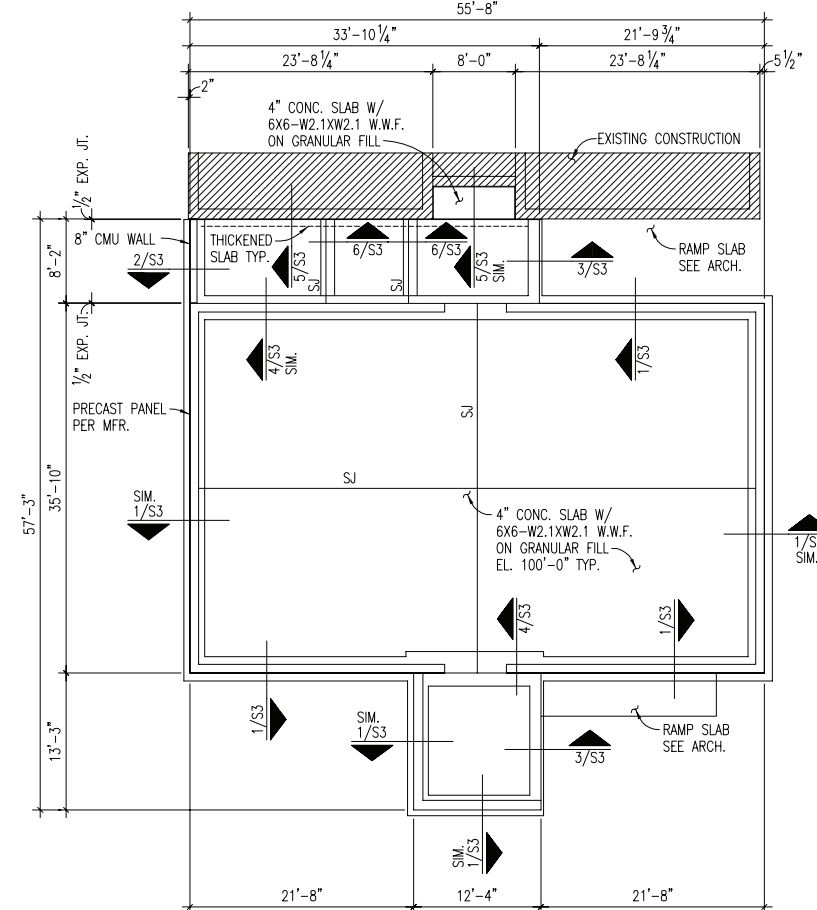
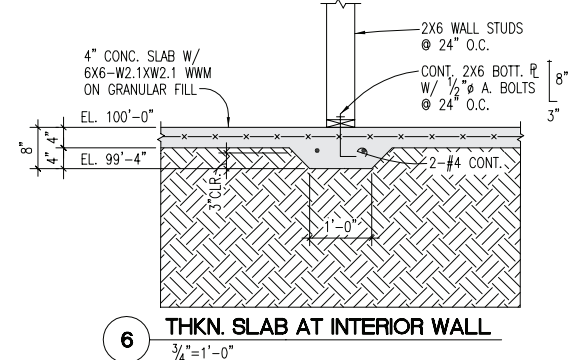
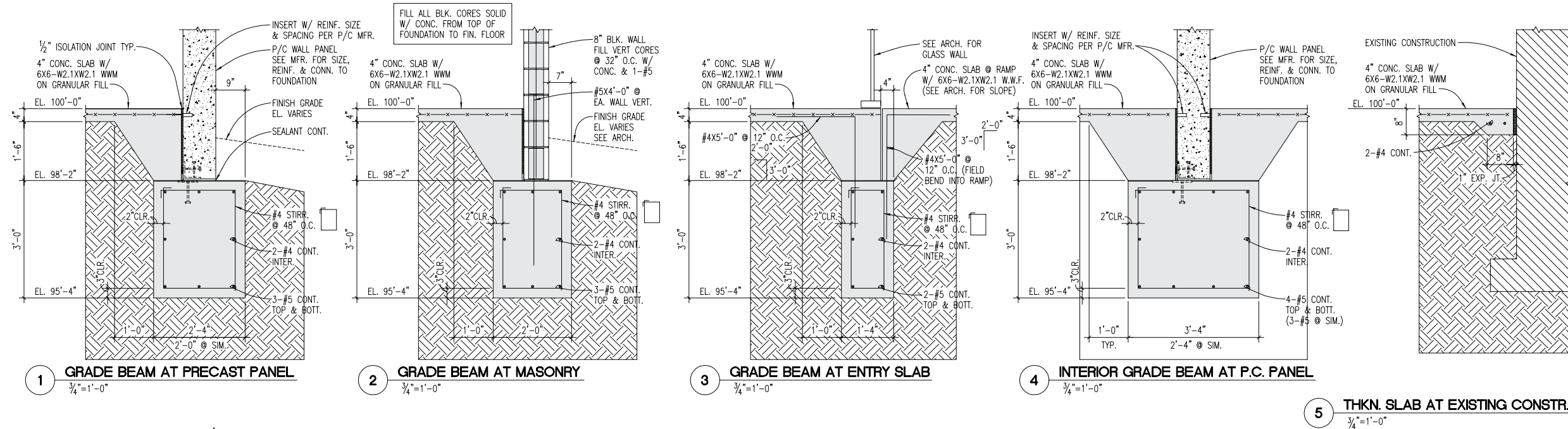
STRUCTURAL NOTES

SHEET No.: S-2

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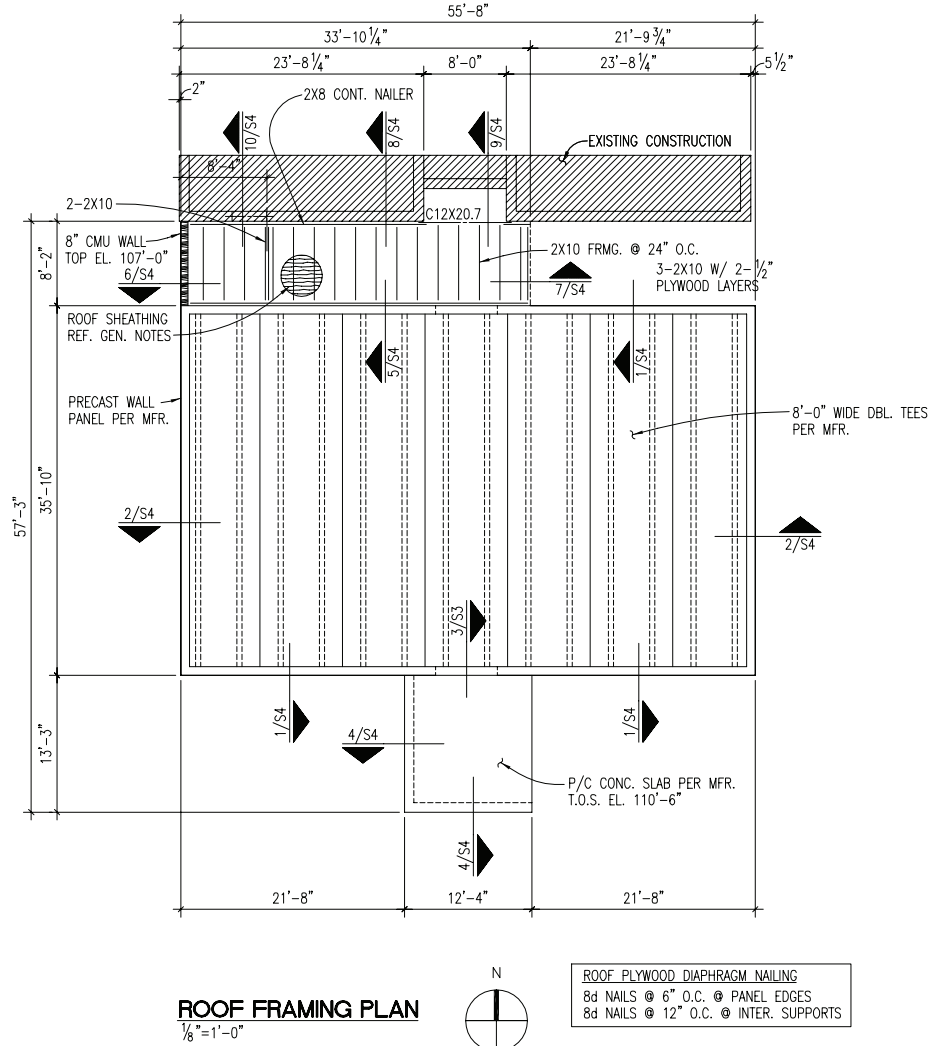
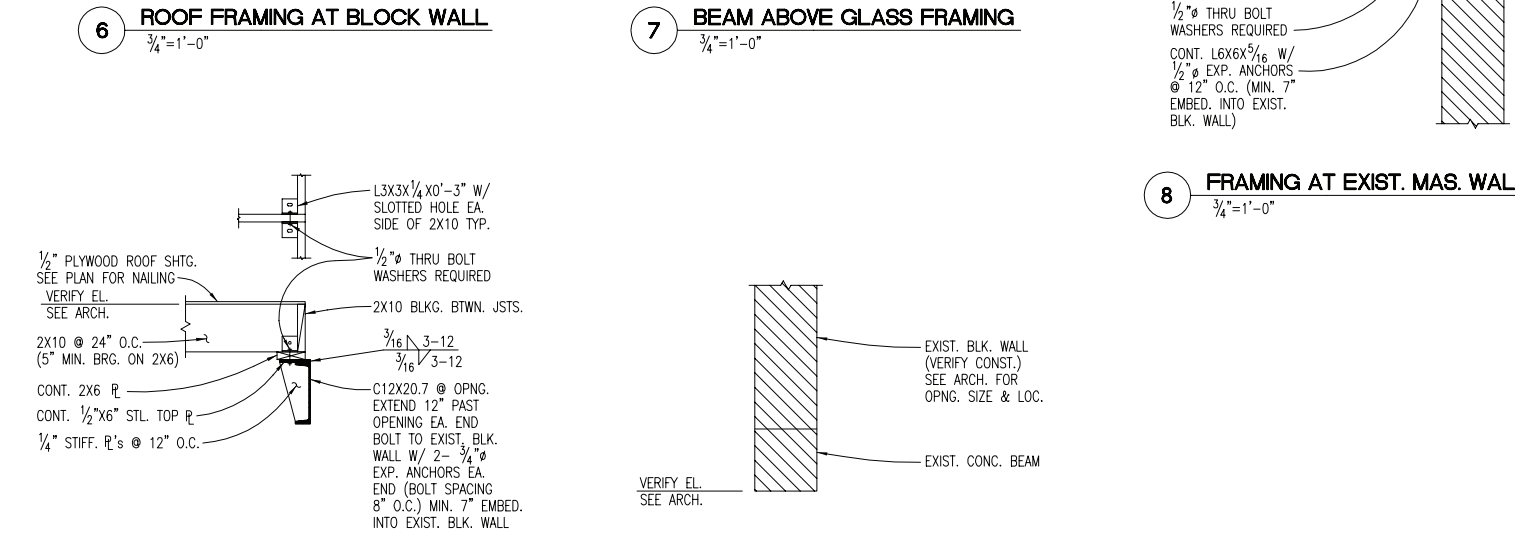
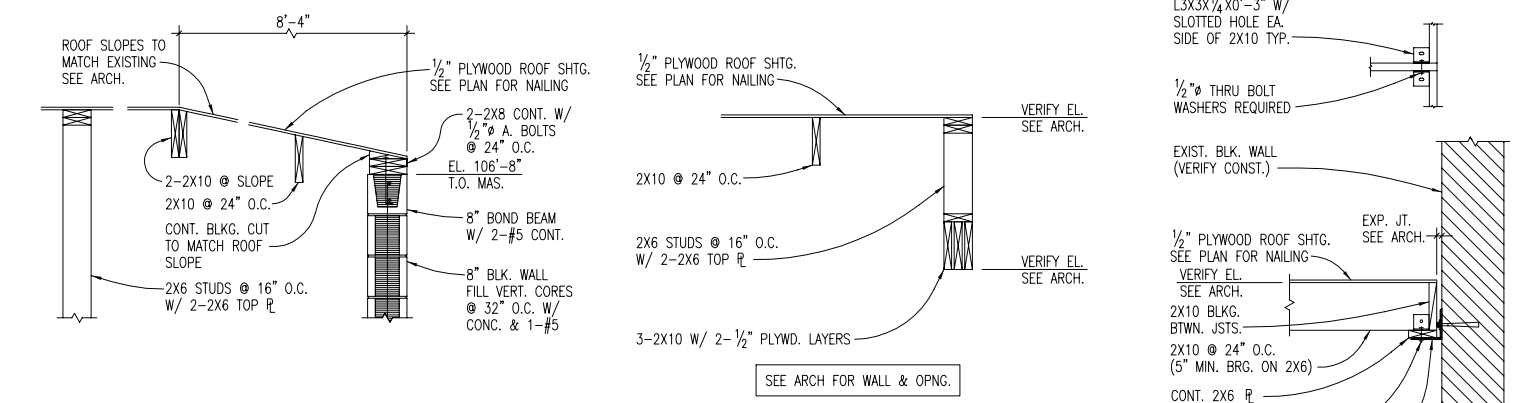
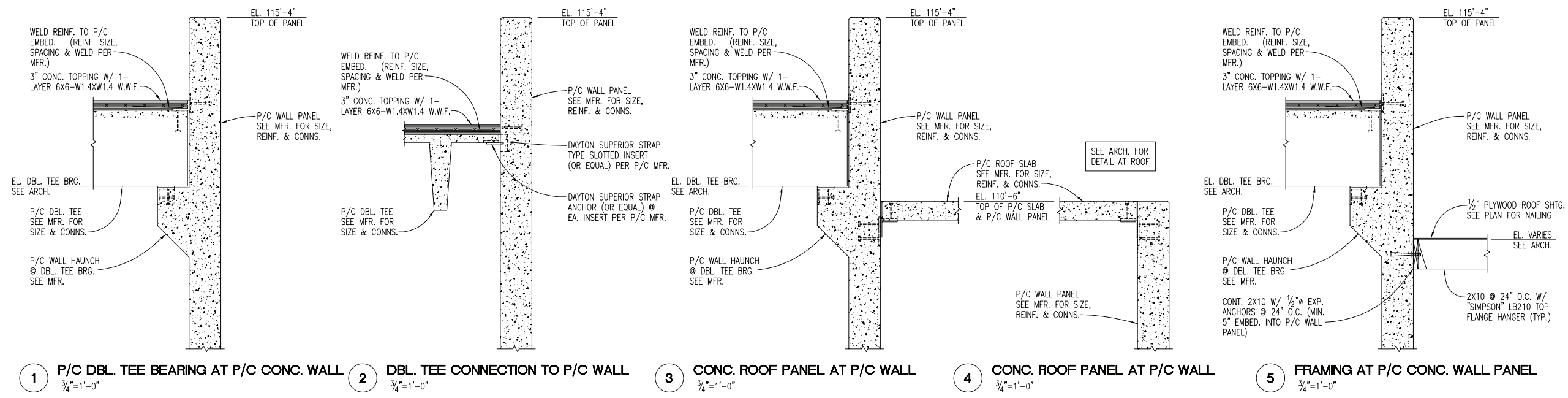
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FOUNDATION DETAILS	
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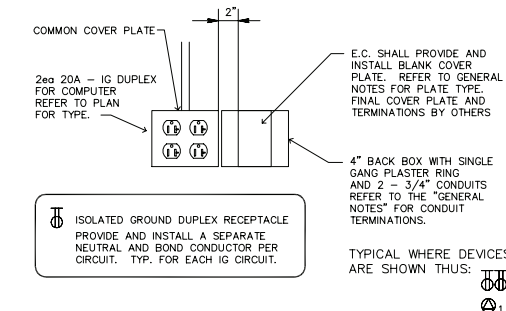
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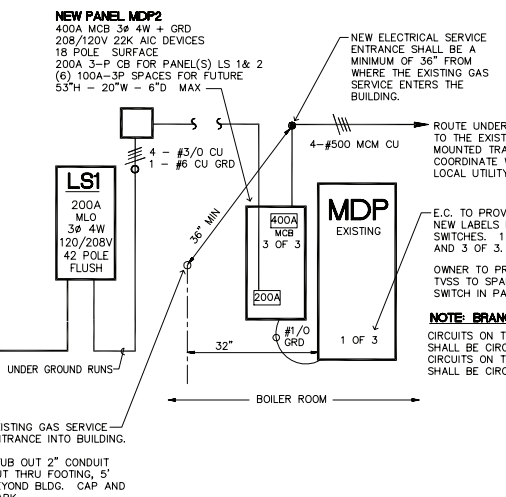
Designers shall not be obligated or liable for actual, incidental, consequential, or other damages of or to users of shelters or any other person or entity arising out of or in connection with the use, condition, and/or performance of shelters built from this design or from the maintenance thereof.

GENERAL NOTES

- ALL WORK SHALL COMPLY WITH LOCAL, STATE AND NATIONAL CODES.
- THE ELECTRICAL CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTIONS AND CERTIFICATES REQUIRED.
- THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, TOOLS, TRANSPORTATION, AND EQUIPMENT REQUIRED FOR THE COMPLETE, PROPER AND SUBSTANTIAL INSTALLATION OF ALL ELECTRICAL WORK INDICATED OR REQUIRED FOR A COMPLETE WORKING INSTALLATION OF ALL ELECTRICAL SYSTEMS.
- REFER TO ARCHITECTURAL, STRUCTURAL AND MECHANICAL PLANS FOR RELATED INFORMATION.
- REFER TO MECHANICAL PLANS AND SPECIFICATIONS FOR EXACT LOCATION OF MECHANICAL EQUIPMENT AND T-STAT LOCATIONS. FUSING OF MECHANICAL EQUIPMENT AS PER NAME PLATE DATA ON EQUIPMENT.
- ALL LINE VOLTAGE WIRING SHALL BE COPPER IN STEEL CONDUIT & STEEL BOXES, UNLESS SPECIFICALLY NOTED OTHERWISE. EACH CONDUIT CONTAINING LINE VOLTAGE SHALL CONTAIN A GREEN, INSULATED GROUND CONDUCTOR. ALL CONDUITS ROUTING SHALL BE INSTALLED PARALLEL AND PERPENDICULAR. ALL CONDUIT PENETRATIONS OF FIRE RATED WALLS SHALL BE SEALED WITH AN APPROPRIATELY RATED FIRE STOP MATERIAL.
- STRAIGHT RUNS UNDERGROUND / IN SLAB CONDUIT MAY BE SCHEDULE 40 PVC, 3/4" MINIMUM WITH STEEL ELLS, BENDS AND RISERS. ALL RISERS PENETRATING SLAB OR EXTING FROM EARTH SHALL BE RIGID STEEL. NO EXCEPTIONS.
- ALL CONDUITS STUBBED OUT OF BUILDING, SHALL BE CAPPED AND MARKED.
- ALL CONDUITS STUBBED INTO THE CEILING CAVITY FOR MECHANICAL CONTROLS, FIRE ALARM, DATA, COMMUNICATIONS, TELEVISION, CLOCKS, INTERCOM, ETC. SHALL BE PROVIDED WITH A PRESS ON, INSULATING BUSHING. ARLINGTON INDUSTRIES # EMT SERIES OR EQUAL.
- VERIFY ALL OUTLET LOCATIONS ON JOB, PRIOR TO ROUGH-IN.
- EXTERIOR EXPOSED CONDUIT RUNS WILL NOT BE PERMITTED. (EXCEPT FOR SERVICE ENTRANCES POWER/TELEPHONE OR NOTED OTHERWISE ON PLAN.)
- REFER TO ARCHITECTURAL PLANS/SPECIFICATIONS FOR A DETAILED DESCRIPTION OF ALL ALTERNATES. ELECTRICAL WORK MAY BE INVOLVED THAT DOES NOT SHOW ON THE ELECTRICAL PLANS.
- ALL NEW CONDUIT SHALL BE INSTALLED CONCEALED INSIDE CONSTRUCTION. ANY NEW SURFACE MOUNTED RACEWAYS, IN FINISHED AREAS, SHALL BE APPROVED IN WRITING BY THE ARCHITECT PRIOR TO INSTALLATION. NO EXCEPTIONS. SURFACE MOUNTED RACEWAY IN NON-SHOP FINISHED AREAS SHALL BE WIREMOLD #500/700 RACEWAY. RUNS SHALL BE PARALLEL/PERPENDICULAR TO STRUCTURE. FASTEN TO WALLS (ANCHORS IN SOLID WALLS / TOGGLE ANCHORS IN HOLLOW WALLS) EVERY 36". E.C. RESPONSIBLE FOR PAINTING RACEWAYS TO MATCH SURROUNDINGS, EITHER FOR EXISTING AREAS AND/OR NEW CONSTRUCTION. EMT CONDUIT IS ACCEPTABLE INSIDE NEW SHOP/CLASS ROOM AREA.
- E.C. SHALL VISIT SITE TO DETERMINE : 1.) EXISTING CONDITIONS. 2.) THE EXTENT OF DEMOLITION. ANY CONFLICTS BETWEEN PLANS/SPECIFICATIONS AND ACTUAL EXISTING CONDITIONS THAT AFFECT CONSTRUCTABILITY, SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BID. NO EXCEPTIONS.
- ALL PANELS SHALL BE PANELBOARD CONSTRUCTION WITH BOLT-IN CIRCUIT BREAKERS, COPPER BUS AND COPPER GROUND BUS.
- TELEPHONE OUTLETS: EMPTY 4" SQUARE BOX WITH A SINGLE GANG PLASTER RING AND BLANK PLATE. PROVIDE 3/4" C. WITH PULL WIRE FROM OUTLET TO ABOVE ACCESSIBLE CEILING. CONDUCTORS, CONDUIT INSTALLATION AND TERMINATIONS NOT IN CONTRACT.
- CRT/DATA OUTLETS: EMPTY 4" SQUARE BOX WITH A SINGLE GANG PLASTER RING AND BLANK PLATE. PROVIDE 3/4" C. WITH PULL WIRE FROM OUTLET TO ABOVE ACCESSIBLE CEILING. CONDUCTORS, CONDUIT INSTALLATION AND TERMINATIONS NOT IN CONTRACT.
- COLOR OF DEVICES/PLATES: MATCH EXISTING TYPE OF PLATES: MATCH EXISTING
- MECHANICAL/TEMPERATURE CONTROL WIRING NEED NOT BE INSTALLED IN CONDUIT ABOVE ACCESSIBLE CEILING, UNLESS SPECIFICALLY NOTED OTHERWISE. REFER TO THE MECHANICAL PLANS AND SPECIFICATIONS. CONDUIT IS REQUIRED FOR VERTICAL RUNS IN WALLS AND WHERE EXPOSED. ALL CONDUIT REQUIRED, SHALL BE PROVIDED AND INSTALLED BY THE E.C. REQUIRED CONDUCTORS AS FOLLOWS:
 - ALL LINE VOLTAGE SUPPLY (CONSTANT) POWER WIRING SHALL BE PROVIDED AND INSTALLED, IN CONDUIT, BY THE E.C.
 - ALL LOW VOLTAGE CONTROL (SWITCHED) WIRING, WIRING INSTALLATION AND TERMINATIONS SHALL BE PROVIDED AND INSTALLED BY THE M.C./T.C.C. (LINE VOLTAGE CONTROL WIRING SHALL BE INSTALLED IN CONDUIT. CONDUIT FOR LINE VOLTAGE CONTROL WIRING - BY E.C.)
- "BACK TO BACK" MOUNTING OF DEVICES IN WALLS IS NOT ALLOWED. MINIMUM OF ONE STUD SPACE BETWEEN DEVICES.
- E.C. IS RESPONSIBLE FOR THE RELOCATION OF ALL ELECTRICAL DEVICES, EXISTING OR NEW, DUE TO ANY ARCHITECTURAL MODIFICATIONS. REFER TO THE ARCHITECTURAL PLANS, SPECIFICATIONS AND ADDENDA FOR: NEW DOOR LOCATIONS, WALL REMOVAL, WALL ADDITIONS, CEILING MODIFICATIONS, ETC.
- REFER TO THE ARCHITECTURAL PLANS/SPECIFICATIONS FOR A COMPLETE, DETAILED LIST OF ALL ALTERNATES.
- THE MOUNTING HEIGHTS OF THE ELECTRICAL DEVICES ARE TO THE CENTER OF THE DEVICE. REFER TO THE SYMBOL LIST. SPECIAL MOUNTING HEIGHTS ARE SHOWN ADJACENT TO THE DEVICE. ALL MOUNTING HEIGHTS LISTED ARE FROM ABOVE FINISHED FLOOR. (AFF) EXCEPTION: E.C. SHALL COORDINATE THE MOUNTING OF FLUSH MOUNTED DEVICES IN MASONRY BLOCK WALLS WITH THE MASONRY CONTRACTOR. MOUNTING HEIGHTS WILL BE DETERMINED BY ACTUAL BLOCK CONFIGURATION. MOUNT DEVICES SUCH THAT THE EDGE OF THE COVER PLATE IS EVEN WITH THE TOP OR BOTTOM OF THE BLOCK. DO NOT OVERLAP JOINT. MOUNT DEVICES IN A SINGLE BLOCK.
- E.C. SHALL PROVIDE AND INSTALL A SINGLE GANG BOX, 48" AFF WITH 1/2" CONDUIT TO ABOVE ACCESSIBLE CEILING FOR T-STATS. REFER TO THE MECHANICAL PLANS FOR PLACEMENT OF T-STATS.
- REFER TO THE MECHANICAL ADDENDA FOR THE ADDITION, DELETION OR REVISION OF MECHANICAL EQUIPMENT.
- DO NOT MOUNT DISCONNECT SWITCHES ON ACCESSIBLE PANELS FOR RTU'S, AHU'S, ETC. E.C. SHALL PROVIDE AND INSTALL PROPER SUPPORTS TO MOUNT SWITCH, CLEAR OF ALL ACCESSIBLE PANELS.
- REFER TO THE ARCHITECTURAL PLANS FOR THE EXTENT OF ALL DEMOLITION.
- E.C. IS RESPONSIBLE FOR RETAINING THE CONTINUITY OF EACH EXISTING BRANCH CIRCUIT. SPECIAL ATTENTION SHALL BE GIVEN TO THOSE CIRCUITS WHICH WILL BE ALTERED DUE TO THE DEMOLITION AND/OR NEW CONSTRUCTION.
- E.C. SHALL COORDINATE ANY "DOWN TIME" OF ANY SYSTEM WITH THE OWNER. THIS INCLUDES BUT NOT LIMITED TO: EMERGENCY LIGHTING, FIRE ALARM SYSTEM, COMMUNICATION SYSTEM, DATA SYSTEM, NORMAL POWER, ETC. E.C. SHALL INFORM OWNER, IN WRITING, 5 WORKING DAYS PRIOR TO "SCHEDULED SHUT-DOWNS". LIFE SAFETY SYSTEMS SUCH AS FIRE ALARM AND EMERGENCY LIGHTING MUST REMAIN ACTIVE AT ALL TIMES WHEN THE SPACE IS OCCUPIED.
- EACH BRANCH CIRCUIT SHALL HAVE IT'S OWN SEPARATE NEUTRAL. DO NOT COMBINE MULTIPLE BRANCH CIRCUITS WITH A COMMON NEUTRAL.

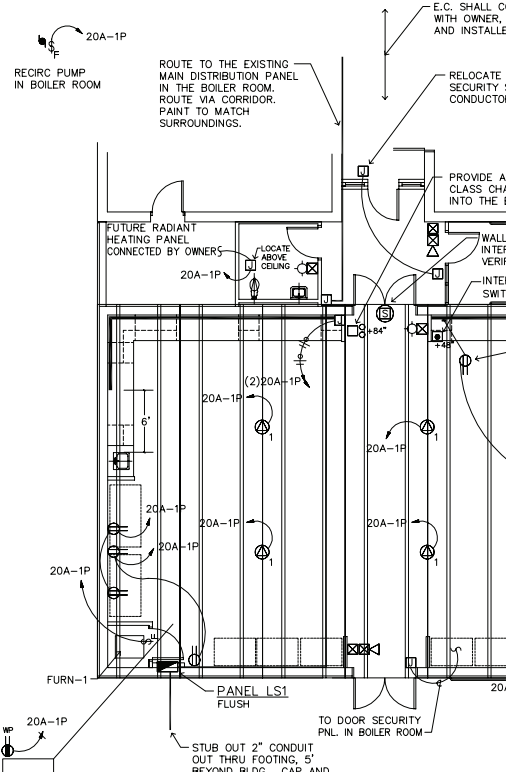


WORK STATION DETAIL



DISTRIBUTION DIAGRAM

E.C. SHALL VISIT SITE TO VERIFY ACTUAL CONDITIONS AND CONDUIT ROUTING



POWER PLAN

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

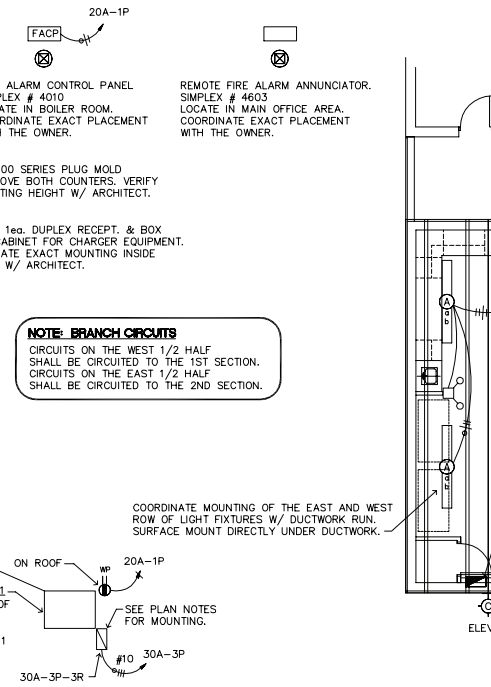
LIGHT FIXTURE SCHEDULE

SYMBOL	MFG. & CATALOG NUMBER	VOLT	LAMPS	MOUNTING
A	LITHONIA # 8TLB332-120ES	120	3 - F032/741	18" STEM SET
B	WILLIAMS # 50G-S24-2320C-SWKA125-ET8	120	2 - F032/741	TROFFER
C	LITHONIA # TWH-70S-120	120	1 - LU70	WALL @ 12'
D	LITHONIA # TWH-100S-120	120	1 - LU100	WALL @ 12'
F	PATTON # 989W WHITE 3 SPEED/REVERSIBLE	120	NONE	36" PENDANT
	SURE-LITE # CAX-7-1/2-70-R-120/277	120	FURNISHED W/UNIT	CEILING
	SURE-LITE # CAX-7-1/2-70-R-120/277	120	FURNISHED W/UNIT	WALL
	SURE-LITE # RD-3 (MINI HEADS)	FURNISHED W/UNIT	FURNISHED W/UNIT	RECESSED CLG
	SURE-LITE # XR11-215 (WG = WIRE GUARD)	FURNISHED W/UNIT	FURNISHED W/UNIT	WALL

- SPECIFICATION GRADE TROFFER EQUALS: WILLIAMS SERIES 50, LITHONIA SERIES 2SP-APAF, METALUX SERIES 20C, COLUMBIA SERIES 4000-PAF. ENTIRE FIXTURE SHALL BE POST PAINTED INCLUDING SOCKET RAILS, BALLAST COVER, END PLATES, DOOR FRAME, ETC. LENS: .125 NOMINAL THICK EQUAL TO KSH-12.
- EXIT SIGN EQUALS: PRESCOLITE "COMPASS" SERIES LITHONIA "SIGNATURE" SERIES
- ALL SUBSTITUTIONS SHALL BE REVIEWED AT SHOP DRAWINGS FOR ACCEPTANCE OR REJECTION. ATTENTION SHALL BE GIVEN TO LAMPS, VOLTAGE, MOUNTING, PHYSICAL DIMENSIONS, FINISHES, PHOTOMETRICS, ETC.
- SURFACE MOUNTED FIXTURES MOUNTED TO A "T" BAR CEILING GRID SHALL BE FASTENED TO THE GRID IN FOUR PLACES TO INSURE RIGID SUPPORT.
- CONNECT TO UNSWITCHED LEG OF LOCAL AREA LIGHTING CIRCUIT. REFER TO THE LIGHTING PLANS FOR EXIT SIGN FACE AND ARROW DIRECTIONS. PROVIDE BATTERY FOR EXITS AND EGRESS FIXTURES.
- ALL HID FIXTURES SHALL BE "BURNED-IN" AS PER LAMP MANUFACTURER'S RECOMMENDATIONS TO INSURE PROPER LAMP LIFE.
- ALL FLUORESCENT FIXTURES SHALL BE SUPPLIED WITH INSTANT START, 20K HZ ELECTRONIC BALLAST(S). ACCEPTED BALLASTS: MOTOROLA/GE G-IN SERIES, ADVANCE REL/VEL P SERIES, EQUAL BY PENNSYLVANIA AND UNIVERSAL. BALLASTS SHALL BE COMPATIBLE WITH LAMPS.
- FIXTURES DESIGNATED "d.b." SHALL BE SWITCHED FOR DUAL LEVEL ILLUMINATION. OUTBOARD LAMPS SEPARATE FROM INBOARD LAMPS. E.C. OPTION: MASTER / SLAVE FIXTURES (CONSIDER ODD NUMBER OF FIXTURES WITHIN AN AREA) OR PROVIDE EACH FIXTURE WITH 2 BALLASTS.

SCOPE OF WORK

- INTERCOM SYSTEM: E.C. SHALL PROVIDE CONDUIT, BOXES AND WIRING FOR THE NEW INTERCOM EQUIPMENT. DEEP WIREMOLD BOX FOR THE CALL-IN SWITCH. SHALLOW WIREMOLD BOX FOR THE SPEAKER. WIRING FROM THE NEW CLASSROOM TO THE EXISTING MASTER INTERCOM IN THE OFFICE AREA. USE EXISTING INTERCOM RACEWAYS WHERE POSSIBLE. ALLOW 36" OF CONDUCTORS AT TERMINATION POINTS FOR OWNER CONNECTIONS. OWNER SHALL PROVIDE AND INSTALL: CALL-IN/PRIVACY SWITCH, SURFACE SPEAKER, AND CONNECTIONS TO MASTER.
- SECURITY SYSTEM: E.C. SHALL RELOCATE DOOR SWITCH FROM THE EXISTING SOUTH EXTERIOR DOOR TO THE NEW EAST EXTERIOR DOOR (APPROX 10' TO THE S.E.). E.C. TO PROVIDE AND INSTALL -BOX, CONDUIT/WIREMOLD, AND CONDUCTORS FROM THE NEW SET OF DOUBLE DOORS (SOUTH) TO THE EXISTING SECURITY PANEL IN THE BOILER ROOM. ALLOW 36" OF CONDUCTORS AT TERMINATION POINTS FOR OWNER CONNECTIONS. VERIFY CONDUCTOR TYPE W/ OWNER. OWNER SHALL PROVIDE AND INSTALL: SECURITY DEVICES AND CONNECTIONS.
- FIRE ALARM: PROVIDE AND INSTALL A NEW SIMPLEX 4010 FACD AND NECESSARY NEW DEVICES AS SHOWN ON PLAN. PROVIDE AND INSTALL NECESSARY WIRING AND CONNECTIONS AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. CONNECT THE NEW AND EXISTING FIRE ALARM SYSTEMS TOGETHER. EITHER SYSTEM SHALL ACTIVATE THE OTHER. LOCATE FACD AND SMOKE DETECTOR IN THE PRINCIPALS OFFICE ON NORTH WALL, EAST OF DOOR.



LIGHTING PLAN

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

SYMBOL LIST

SYMBOL	DESCRIPTION	MOUNTING
AFF	ABOVE FINISHED FLOOR	
CT	MOUNTED ABOVE COUNTER TOP	VERIFY HT.
EM	CONNECTED TO EMERGENCY POWER	
NL	NIGHTLIGHT, WIRE FOR CONTINUOUS OPERATION	
WP	WEATHER PROOF	
3R	NEMA 3R ENCLOSURE	
TB	TELEPHONE TERMINAL BOARD	
a,b,c,d	SWITCH DESIGNATION (LIGHTS, FANS ETC.)	
E.C. M.C. G.C. T.C.C.	ELECTRICAL CONTRACTOR, MECHANICAL CONTRACTOR, GENERAL CONTRACTOR, TEMP. CONTROL CONTRACTOR	
	SWITCHES (2-POLE, 3-WAY, 4-WAY, PILOT, KEY)	4'-0" AFF ON EQUIPMENT
	FUSTAT IN BUSS FUSETRON BOX COVER UNIT W/ SW.	4'-0" AFF
	MOTOR SPEED CONTROL, SIZE AS INDICATED	1'-4" AFF
	WORK STATION - SEE DETAIL	1'-4" AFF
	20 A. 125 V. IG DUPLEX RECEPTACLE FOR COMPUTER HUBBELL # IG 5362 ORANGE. SEPARATE NEUTRAL AND BOND CONDUCTORS PER CIRCUIT. IG CONDUCTORS IN SEPARATE RACEWAY SYSTEM.	1'-4" AFF
	20 A. 125 V. DUPLEX GROUNDED RECEPTACLE	1'-4" AFF
	20 A. 125 V. DUPLEX GFI RECEPTACLE - 5 mA FEED THRU PROTECTION TO NORMAL RECEPTACLES IS NOT ACCEPTABLE.	1'-4" AFF
	20 A. 125V. 1/2 SWITCHED DUPLEX RECEPTACLE	1'-4" AFF
	20 A. 125 V. DOUBLE DUPLEX GROUNDED RECEPTACLE	1'-4" AFF
	20 A. 125 V. SINGLE DUPLEX GROUNDED RECEPTACLE FOR DRINKING FOUNTAIN. CONCEAL BEHIND FOUNTAIN	HORIZONTAL
	15 A. 125 V. CLOCK RECEPTACLE	6'-6" AFF
	MOTOR JUNCTION BOX	
	SPECIAL DEVICE AS NOTED	
	CONDUIT RUN 1/2" CONDUIT	WALL, CEILING
	CONDUIT RUN 3/4" CONDUIT MINIMUM	FLOOR, EARTH
	CONDUIT RUN W/ 3 HOTS, 1 NEUTRAL, & 1 GROUND	
	TO PANEL - CIRCUIT AS INDICATED (20A-1P. BREAKER UNLESS OTHERWISE INDICATED)	
	PARTIAL CIRCUIT	
	120/208 V. 3# 4W. CIRCUIT BREAKER PANELBOARD	6'-0" TO TOP
	FUSED DISCONNECT SWITCH - HEAVY DUTY	
	MAGNETIC MOTOR STARTER	6'-0" TO TOP
	FLUORESCENT FIXTURE - AND FIXTURE DESIGNATION	CEILING
	SEE WORKSTATION DETAIL, THIS SHEET.	
	FIRE ALARM MANUAL PULL STATION	4'-0" AFF
	FIRE ALARM UNIT - COMBINATION AUDIO/VISUAL 80" AFF OR 6" BELOW THE CEILING WHICHEVER IS LOWER. 30/110 cd	AS PER ADA
	FIRE ALARM UNIT - STROBE ONLY 80" AFF OR 6" BELOW THE CEILING WHICHEVER IS LOWER. 30/110 cd	AS PER ADA
	FIRE ALARM CONTROL PANEL - SIMPLEX 4010	

WITCHITA SCHOOL TORNADO SAFE ROOM

WICHITA, KANSAS

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ELECTRICAL PLAN

SHEET No.: E-1
DATE: 7 MARCH 2000
REVISED: _____ REV. NO. _____



SYMBOL SCHEDULE

MARK	DESCRIPTION	MARK	DESCRIPTION	MARK	DESCRIPTION
W	WASTE PIPING (W)	AV	AIR VENT	FSD	FIRE & SMOKE DPR
CD	CONDENSATE DRAIN (CD)	BV	BALL VALVE	CRD	CEILING RADIATION DAMPER
RLP	RAIN LEADER PIPING	F.D.	FLOOR DRAIN	RAG	RETURN AIR GRILLE
CW	COLD WATER PIPING (CW)	VR	VENT THRU ROOF	WPL	WEATHERPROOF LOUVER
HW	HOT WATER PIPING (HW)			SR	SUPPLY REGISTER
HRP	HOT WATER RECIRCULATING PIPING	ER	EXHAUST REGISTER		
VP	PLUMBING VENT (V)	M.C.	MECHANICAL CONTRACTOR	EG	EXHAUST GRILLE
G	GAS PIPING	G.C.	GENERAL CONTRACTOR	CD	CEILING DIFFUSER
GV	GATE VALVE	E.C.	ELECTRICAL CONTRACTOR	T	THERMOSTAT
CV	CHECK VALVE	SAD	SUPPLY AIR DUCT	NT	NIGHT THERMOSTAT
BV	BALANCING VALVE	RAD	RETURN AIR DUCT	OT	VERRIDE TIMER
GC	GAS COCK	FAD	FRESH AIR DUCT		
UN	UNION	EAD	EXHAUST AIR DUCT		
WH	WALL HYDRANT	FDR	FIRE DAMPER (F.D.R.)		
CO	CLEANOUT	MD	MANUAL DAMPER (MD)		

NOTE:

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
P-1	HC WATER CLOSET	2"	--	4"	2"
P-2	HC LAVATORY	2"	2"	1 1/2"	1 1/2"
P-3	SINK	2"	2"	1 1/2"	1 1/2"
P-4	HC DRINKING FOUNTAIN	2"	--	1 1/2"	1 1/2"

NOTE:

EVAPORATOR COIL SCHEDULE

MARK	CFM	COOLING BTUH @ ARI	MIN. ROWS	FACE AREA	REFRIG. SUCTION	REFRIG. LIQUID	CONDENSATE DRAIN	USED WITH	MAX. S.P.	REMARKS
EC-1	1450	43,500	3	5.50	1" OD	2" OD	1"	FURN-1	0.25"	

NOTE: MUST BE ARI LISTED W/ACCU FURNISHED

FURNACE SCHEDULE

MARK	CFM	EXT. S.P.	BTUH @ ARI	REC'D MIN	BLOWER MOTOR	FLUE SIZE	FILTERS	GAS CONN.	O.A. CFM	REMARKS			
FURN-1	1450	0.5"	80,000	75,000	65,000	1/3 1075	115/60/1#	2" PVC	TA	20x25x2	3/4"	225	

NOTE: * OUTPUT

AIR COOLED CONDENSING UNIT SCHEDULE

MARK	TOTAL BTUH @ ARI	REC'D MIN	TOTAL FLA.	COMPRESSOR	CONDENSER FAN AMPS	SEER	MIN. CIRCUIT AMPS	REC. FUSE SIZE	REMARKS
ACCU-1	43,500	43,000	14.9	208/60/3#	1.7	10.05	20	30	

NOTE:

EXHAUST FAN SCHEDULE

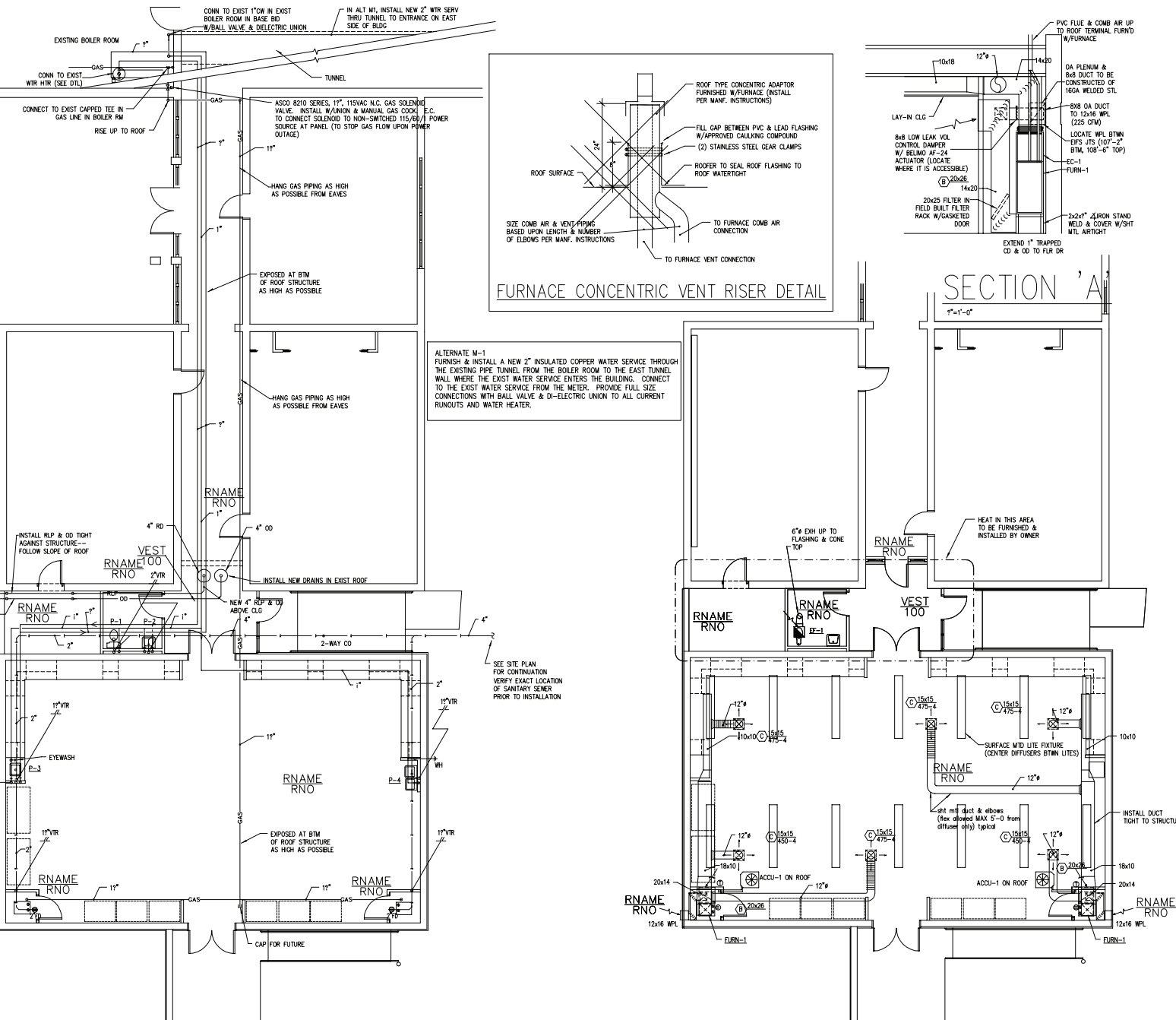
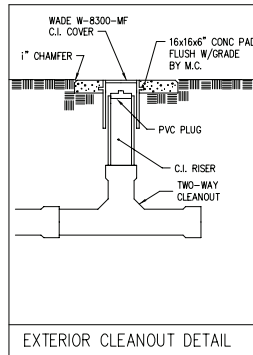
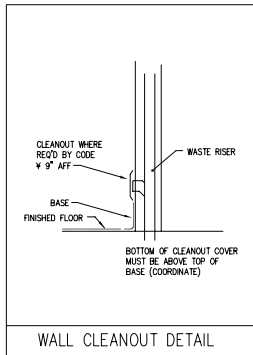
MARK	CFM	S.P.	H.P.	FAN R.P.M.	TIP SPEED	CURRENT	DRIVE	REMARKS
EF-1	100	1/4"	60W	1100	--	115/60/1#	DIRECT	COOK LITTLE SEM

NOTE:

DIFFUSER & GRILLE SCHEDULE

MARK	STYLE	DAMPER	REMARKS
A	SR	OBD	
B	RAG	---	
C	TDC	OBD	KRUEGER SH SERIES

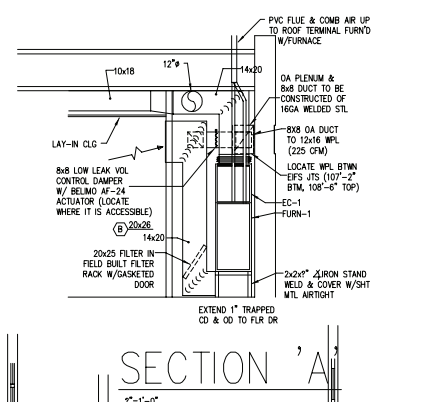
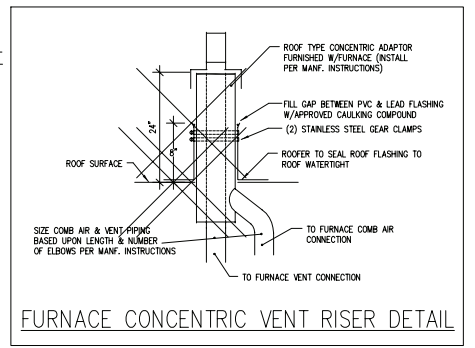
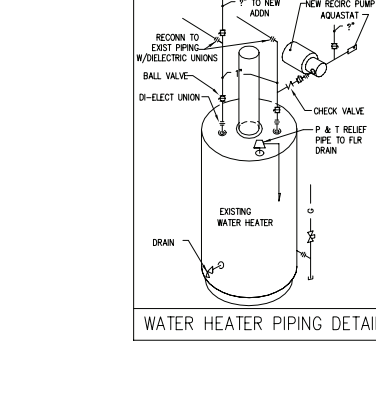
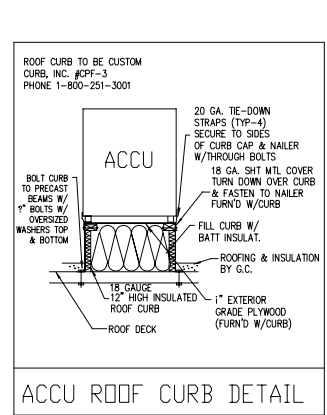
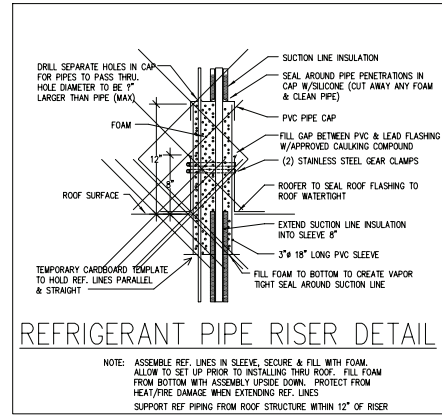
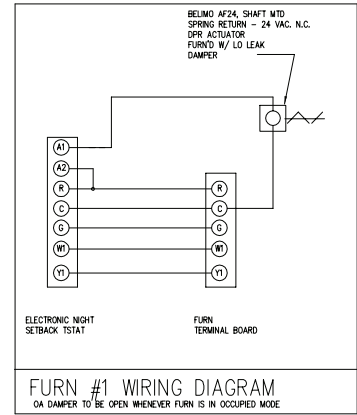
MARK SIZE CFM-#WAYS
 CD-CEILING DIFF
 CBD-CURVED BLADE DIFF
 RAG-RETURN AIR GR
 ER-EXHAUST REG
 SR-SUPPLY REG
 FR-FLOOR REG
 TG-TRANSFER GR
 RAC-RETURN AIR GR
 ER-EXHAUST REG
 EG-EXHAUST GR
 FRAG-FLOOR GR



PLUMBING PLAN



HVAC PLAN



ALTERNATE M-1
 FURNISH & INSTALL A NEW 2" INSULATED COPPER WATER SERVICE THROUGH THE EXISTING PIPE TUNNEL FROM THE BOILER ROOM TO THE EAST TUNNEL WALL WHERE THE EXIST WATER SERVICE ENTERS THE BUILDING. CONNECT TO THE EXIST WATER SERVICE FROM THE METER. PROVIDE FULL SIZE CONNECTIONS WITH BALL VALVE & DI-ELECTRIC UNION TO ALL CURRENT RUNOUTS AND WATER HEATER.

WITCHITA SCHOOL TORNADO SAFE ROOM

WICHITA, KANSAS

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PLUMBING PLAN
 SHEET No.: P-1
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