



APPLICABLE CODES:  
 2015 INTERNATIONAL BUILDING CODE  
 2014 NATIONAL ELECTRICAL CODE  
 2015 INTERNATIONAL PLUMBING CODE  
 2015 INTERNATIONAL MECHANICAL CODE  
 2015 INTERNATIONAL ENERGY CONSERVATION CODE  
 2015 INTERNATIONAL FIRE CODE  
 2015 INTERNATIONAL FUEL GAS CODE

Occupancy: E  
 CONSTRUCTION TYPE: Vb  
 AREA "B" WILL BE SERVED BY AS AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA 13.

ALLOWABLE FLOOR AREA:	SF	Frontage Increase	Factor	Total
Per Table 506.2	E (Vb)=	28,500		

ACTUAL FLOOR AREA:	SF
Existing condition	24,934
1st and 2nd Floor Renovation Area	1,950
<b>Total</b>	<b>24,934</b>

REQUIRED FIRE WALLS: Existing condition

FIRE EXTINGUISHERS: Existing Conditions

ALLOWABLE STORIES: per table 504.4 Vb=2

ACTUAL STORIES: 2

ALLOWABLE BUILDING HEIGHT: Vb=60  
 ACTUAL BUILDING HEIGHT: 25'-4"

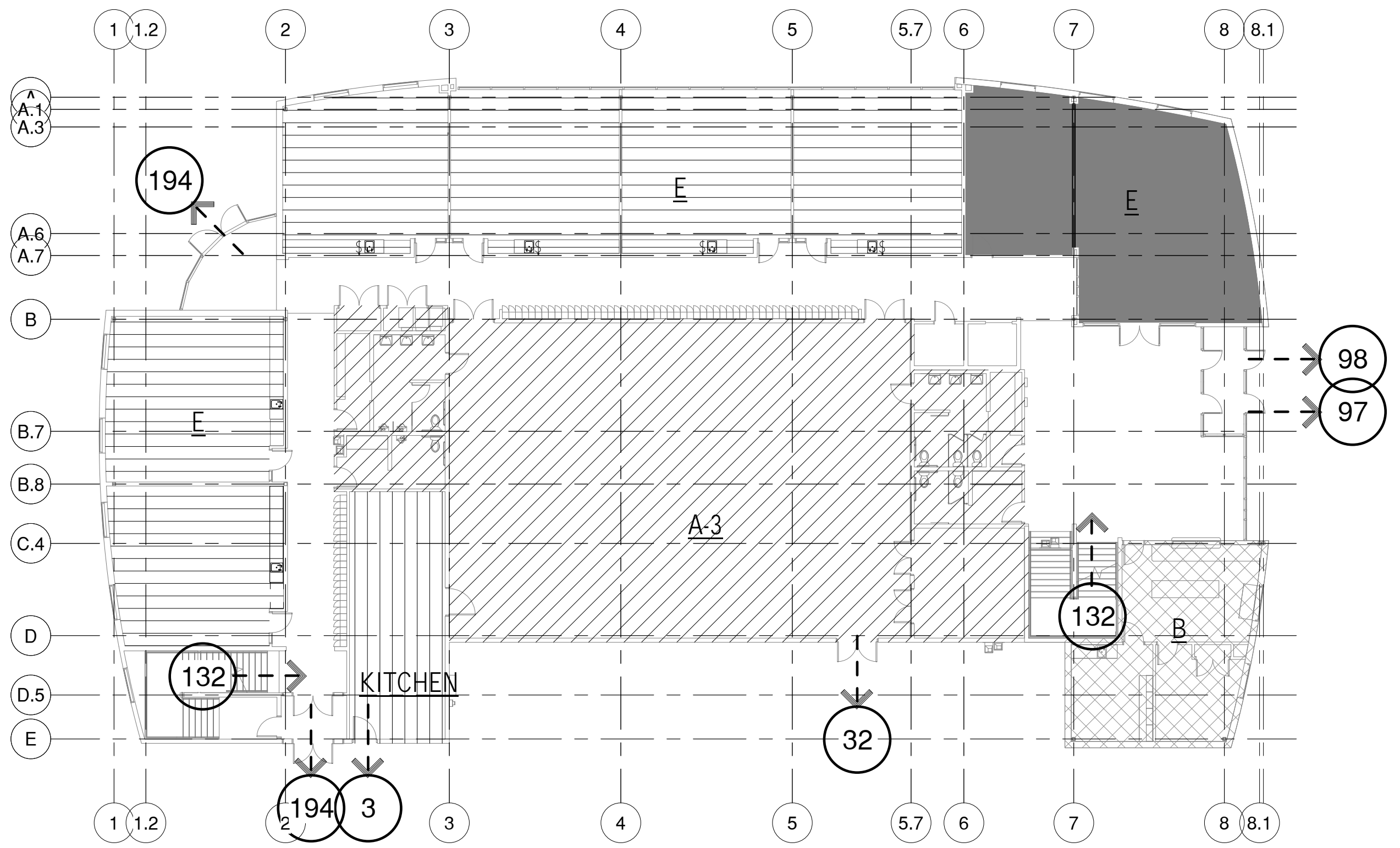
ALLOWABLE EGRESS TRAVEL DISTANCE: 250 ft  
 ACTUAL LONGEST EGRESS TRAVEL DISTANCE: 188 ft

EXITING REQUIREMENTS:	AREA FUNCTION	FLOOR AREA	FLOOR AREA PER OCC.	OCCUPANTS
Occupant load factor table 1004.1.2	E- 1st Flr	4,961	20	249
	E- 2nd Flr	5,187	20	260
	B- 1st Flr office	1,950	100	20
	B- 2nd Flr office	1,950	100	20
	Kitchen	593	200	3
	Exercise	4,654	50	94
		<b>TOTAL</b>		<b>646</b>

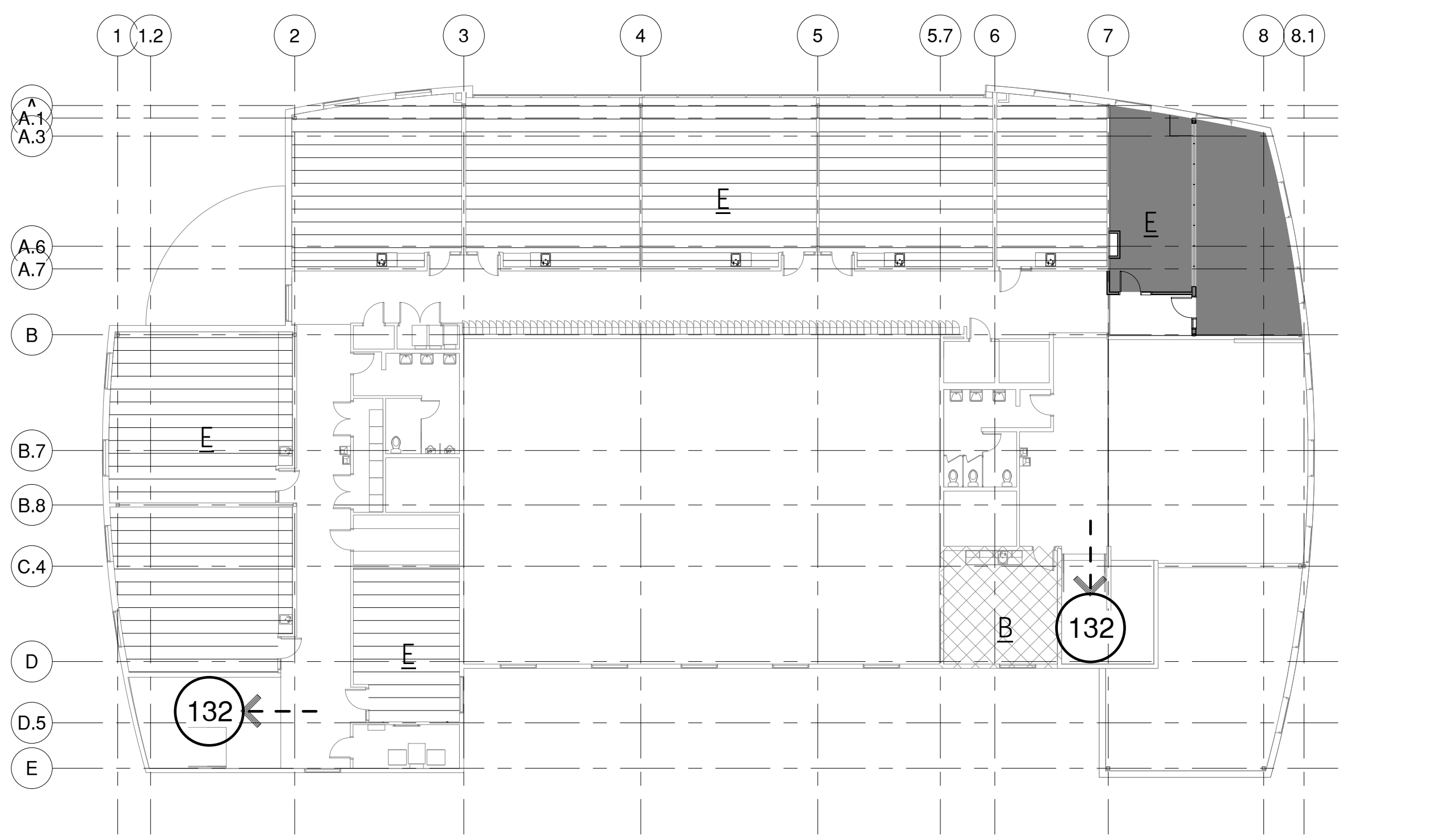
	OCCUPANTS	EXITS	WIDTH
GROUND FLOOR	346	2	69
SECOND FLOOR	260	2	52
<b>TOTAL</b>	<b>4</b>	<b>4</b>	<b>121</b>

EXITING PROVIDED:	OCCUPANTS	EXITS	WIDTH
GROUND FLOOR	346	8	256
SECOND FLOOR	260	2	120
<b>TOTAL</b>	<b>10</b>	<b>10</b>	<b>376</b>

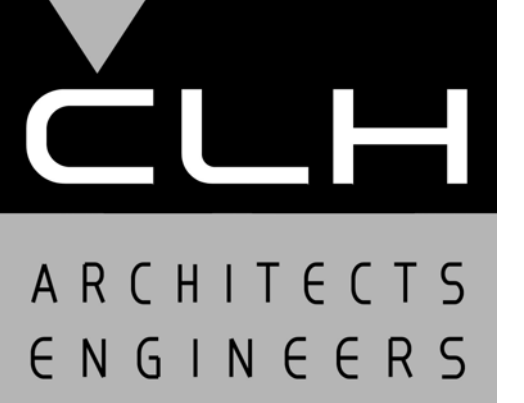
PLUMBING REQUIREMENTS:	OCCUPANCY	FIXTURE	OCCUPANTS	REQUIRED	TOTAL REQUIRED	PROVIDED
Fixture count based per table 2902.1	B- because over 15 occupancies requires 2 wc min	WATER CLOSET FACTOR 1/25- to 50	3	0.12		
	E	WATER CLOSET FACTOR 1/50	509	10.18	11	16
	B	LAVATORIES FACTOR 1/40- to 80	3	0.075		
	E	LAVATORIES FACTOR 1/50	509	10.18	11	16
	B	DRINKING FOUNTAIN FACTOR 1/100	3	0.03		
	E	DRINKING FOUNTAIN FACTOR 1/100	509	5.09	6	12
		SERVICE SINK	SERVICE SINK		1	



**C3 MAIN FLOOR PLAN**  
 1/16" = 1'-0"



**A3 SECOND FLOOR PLAN**  
 1/16" = 1'-0"



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 215 22ND ST.  
 Ogden, Utah 84401

MARK DATE DESCRIPTION

ISSUE DATE: JUNE 20, 2017  
 PROJECT NO: 17010  
 CAD DWG FILE:  
 DRAWN BY: Author  
 CHK'D BY: Checker

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 JUNE 20, 2017

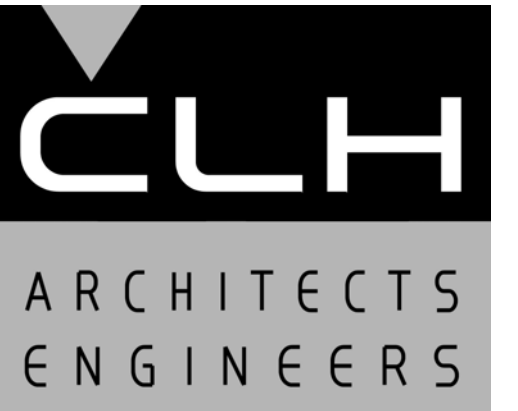
SHEET TITLE  
**CODE REVIEW & LIFE SAFETY**

SHEET NO:  
**G002**

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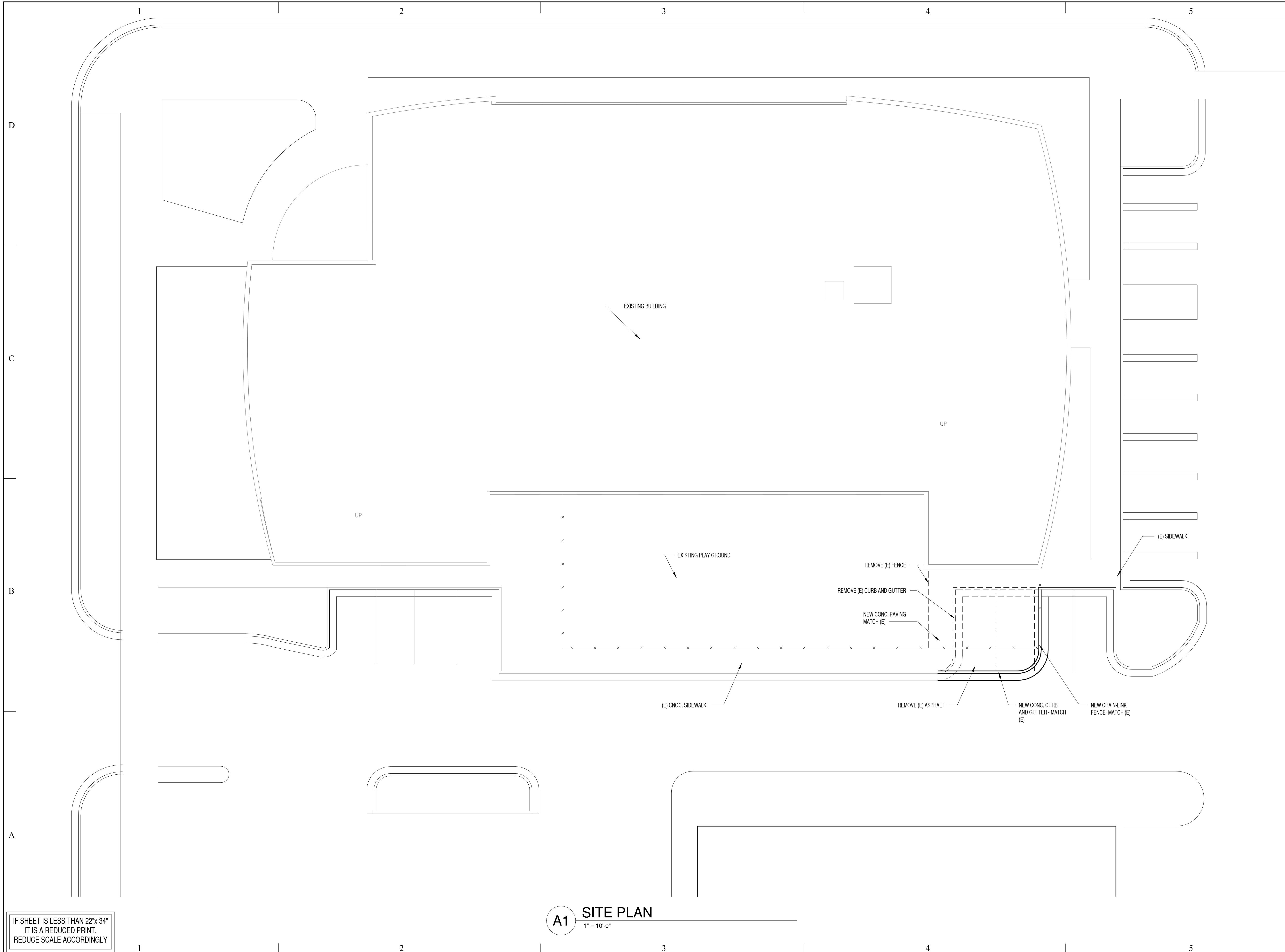
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SHEET TITLE

**SITE PLAN**

SHEET NO:

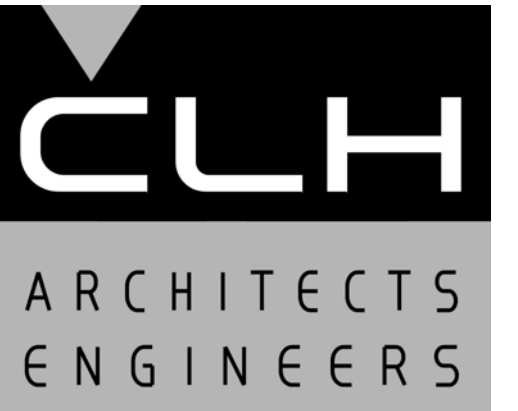
**C101**



**A1 SITE PLAN**  
1" = 10'-0"

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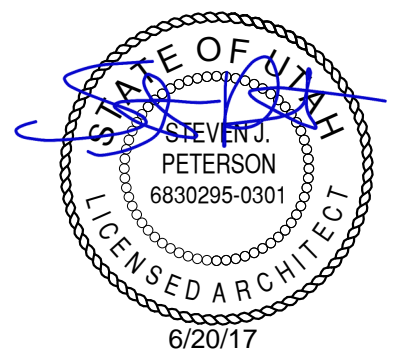
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DRAWN BY:	Author
CHK'D BY:	Checker

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JUNE 20, 2017

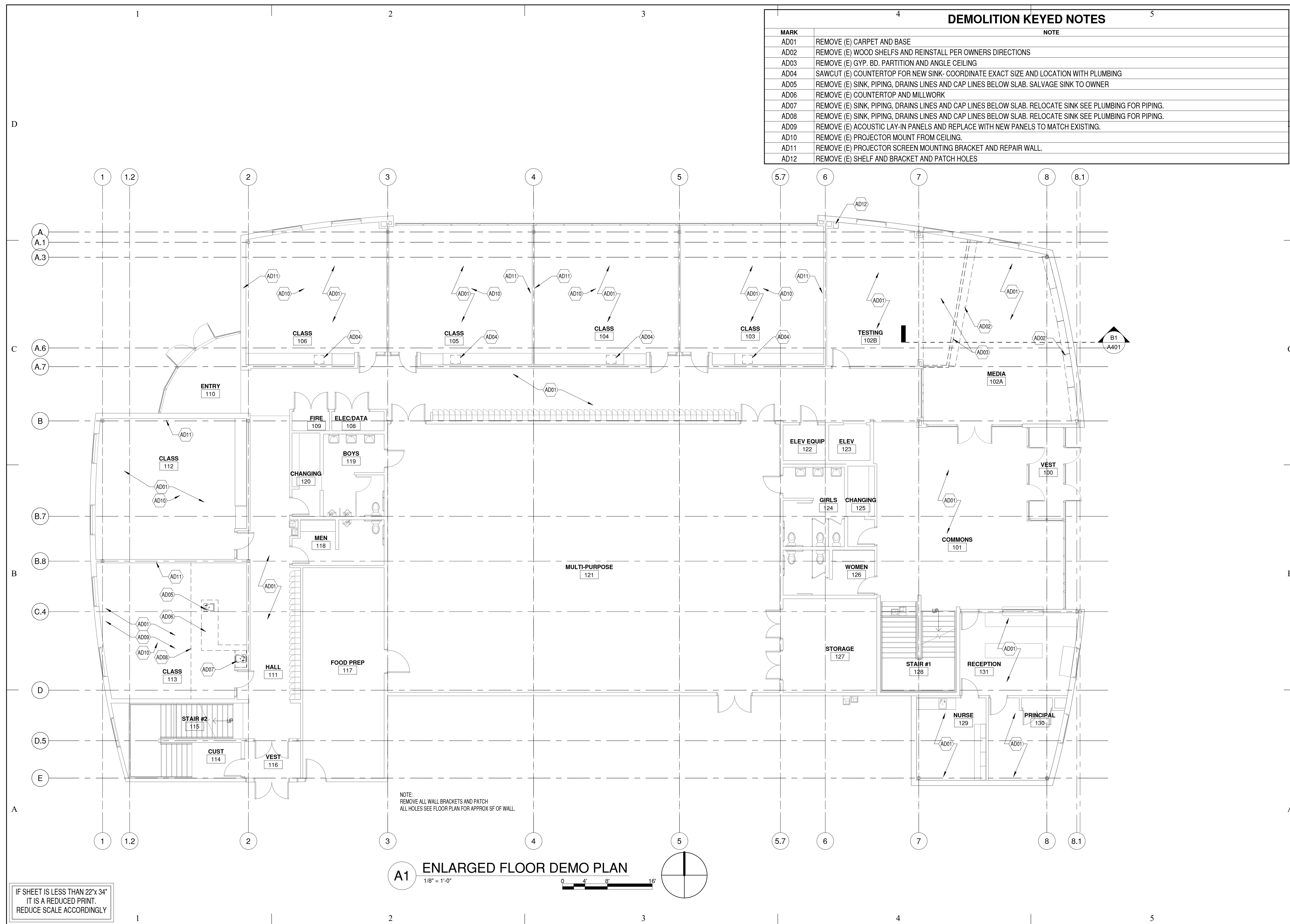
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**GROUND FLOOR  
DEMO PLAN**

SHEET NO:

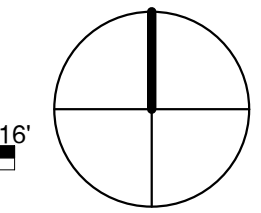
**D101**

MARK	NOTE
AD01	REMOVE (E) CARPET AND BASE
AD02	REMOVE (E) WOOD SHELVES AND REINSTALL PER OWNERS DIRECTIONS
AD03	REMOVE (E) GYP. BD. PARTITION AND ANGLE CEILING
AD04	SAWCUT (E) COUNTERTOP FOR NEW SINK- COORDINATE EXACT SIZE AND LOCATION WITH PLUMBING
AD05	REMOVE (E) SINK, PIPING, DRAINS LINES AND CAP LINES BELOW SLAB. SALVAGE SINK TO OWNER
AD06	REMOVE (E) COUNTERTOP AND MILLWORK
AD07	REMOVE (E) SINK, PIPING, DRAINS LINES AND CAP LINES BELOW SLAB. RELOCATE SINK SEE PLUMBING FOR PIPING.
AD08	REMOVE (E) SINK, PIPING, DRAINS LINES AND CAP LINES BELOW SLAB. RELOCATE SINK SEE PLUMBING FOR PIPING.
AD09	REMOVE (E) ACOUSTIC LAY-IN PANELS AND REPLACE WITH NEW PANELS TO MATCH EXISTING.
AD10	REMOVE (E) PROJECTOR MOUNT FROM CEILING.
AD11	REMOVE (E) PROJECTOR SCREEN MOUNTING BRACKET AND REPAIR WALL.
AD12	REMOVE (E) SHELF AND BRACKET AND PATCH HOLES



NOTE:  
REMOVE ALL WALL BRACKETS AND PATCH  
ALL HOLES SEE FLOOR PLAN FOR APPROX SF OF WALL.

**A1 ENLARGED FLOOR DEMO PLAN**  
1/8" = 1'-0"

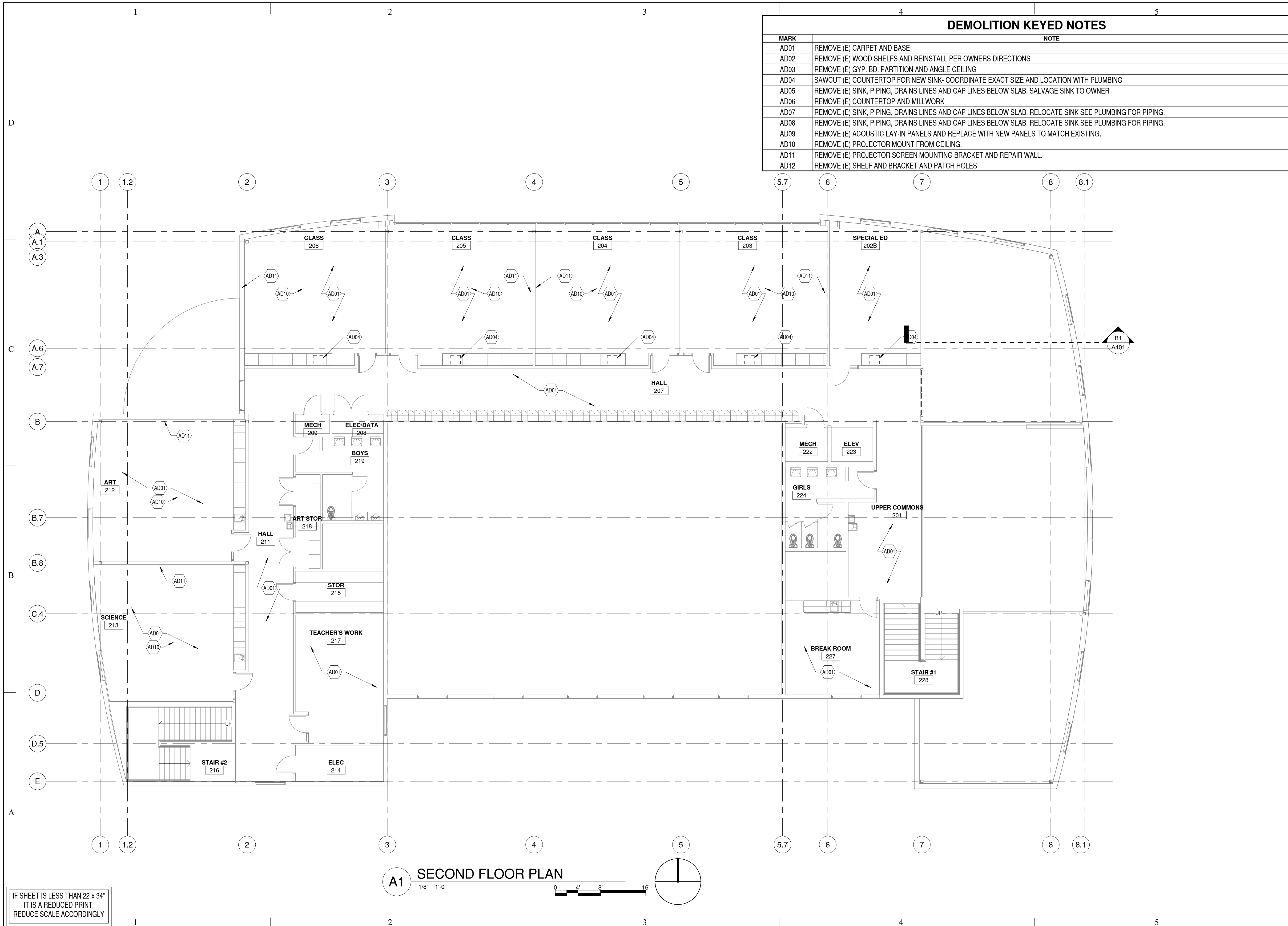


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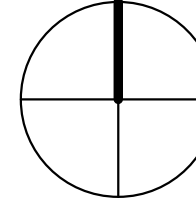
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DEMOLITION KEYED NOTES	
MARK	NOTE
AD01	REMOVE (E) CARPET AND BASE
AD02	REMOVE (E) WOOD SHELVES AND REINSTALL PER OWNERS DIRECTIONS
AD03	REMOVE (E) GYP. BD. PARTITION AND ANGLE CEILING
AD04	SAWCUT (E) COUNTERTOP FOR NEW SINK- COORDINATE EXACT SIZE AND LOCATION WITH PLUMBING
AD05	REMOVE (E) SINK, PIPING, DRAINS LINES AND CAP LINES BELOW SLAB. SALVAGE SINK TO OWNER
AD06	REMOVE (E) COUNTERTOP AND MILLWORK
AD07	REMOVE (E) SINK, PIPING, DRAINS LINES AND CAP LINES BELOW SLAB. RELOCATE SINK SEE PLUMBING FOR PIPING.
AD08	REMOVE (E) SINK, PIPING, DRAINS LINES AND CAP LINES BELOW SLAB. RELOCATE SINK SEE PLUMBING FOR PIPING.
AD09	REMOVE (E) ACOUSTIC LAY-IN PANELS AND REPLACE WITH NEW PANELS TO MATCH EXISTING.
AD10	REMOVE (E) PROJECTOR MOUNT FROM CEILING.
AD11	REMOVE (E) PROJECTOR SCREEN MOUNTING BRACKET AND REPAIR WALL.
AD12	REMOVE (E) SHELF AND BRACKET AND PATCH HOLES

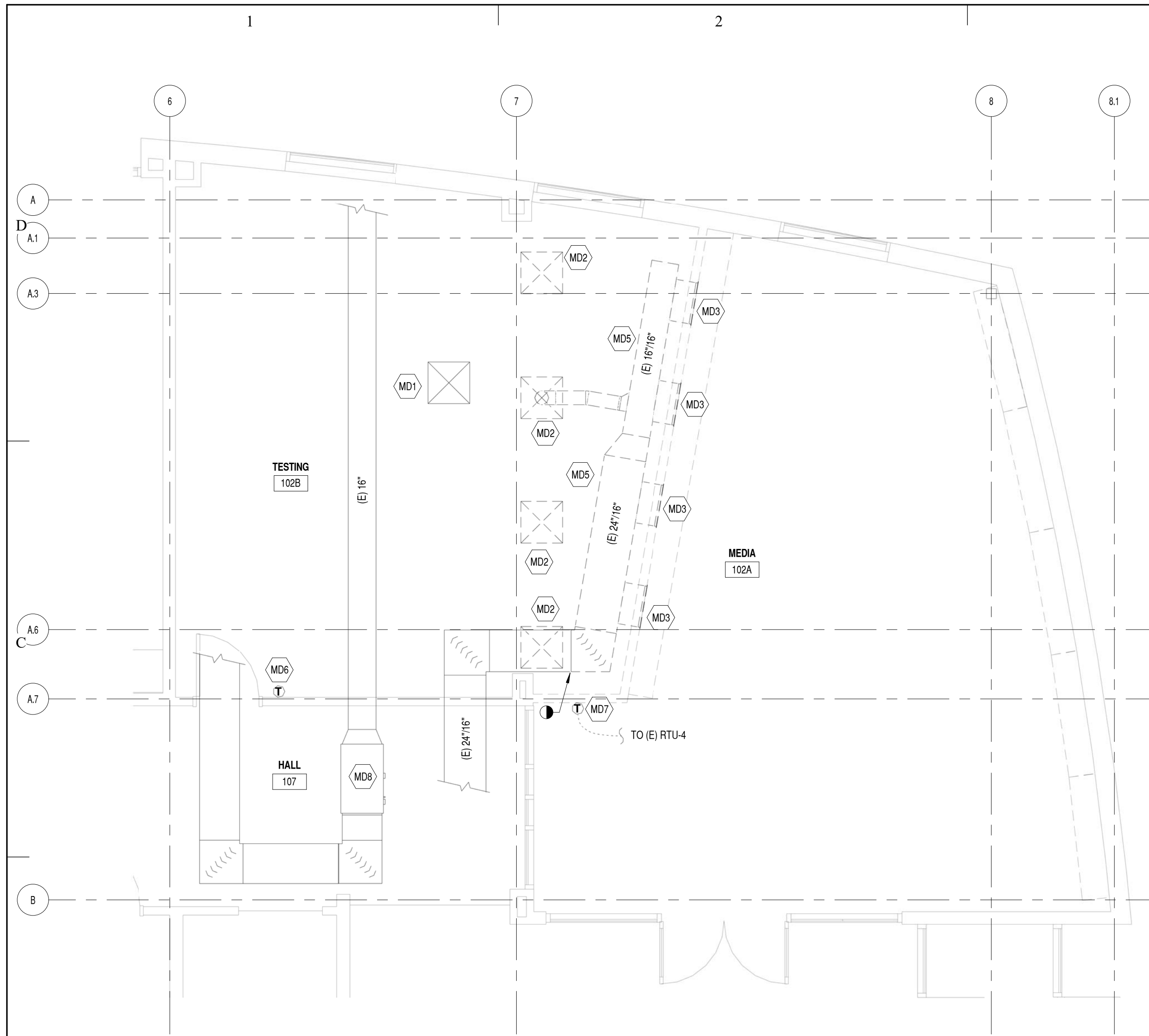
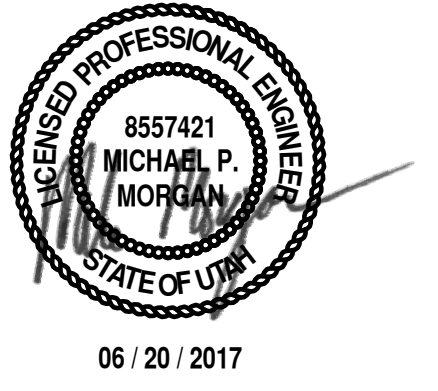


**A1 SECOND FLOOR PLAN**  
1/8" = 1'-0"



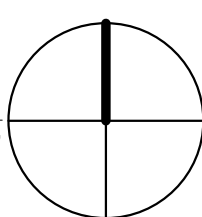
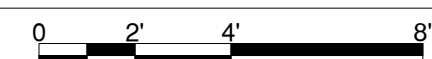
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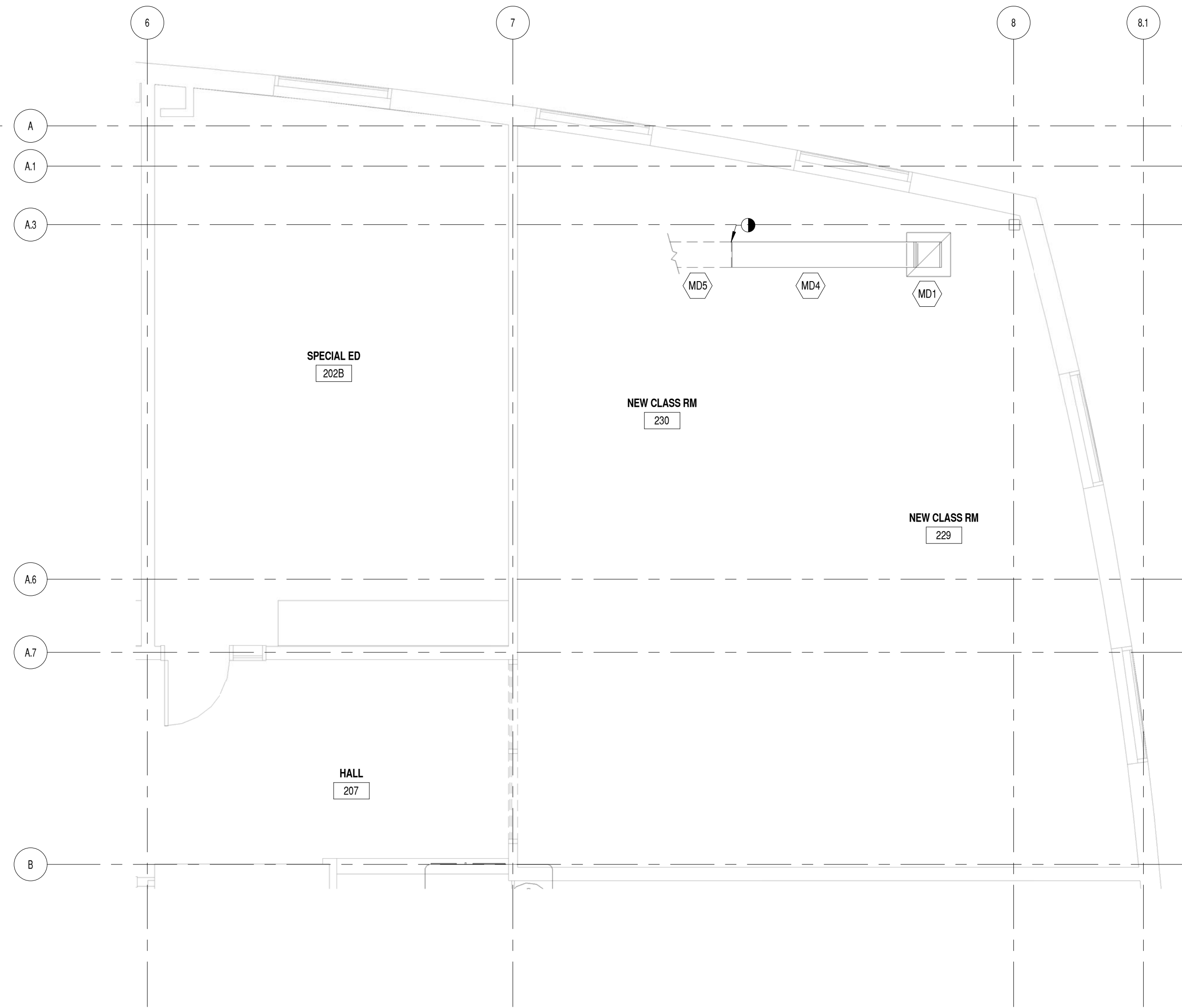
**B1** PARTIAL MAIN FLOOR MECHANICAL  
DEMOLITION PLAN

1/4" = 1'-0"



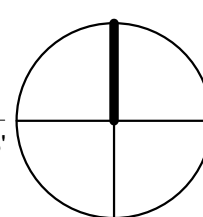
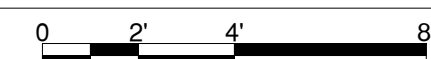
**MECHANICAL DEMOLITION KEYED NOTES**

MARK	NOTES
MD1	EXISTING DIFFUSER/GRILLE TO REMAIN.
MD2	EXISTING DIFFUSER/GRILLE TO BE RELOCATED.
MD3	EXISTING DIFFUSER/GRILLE TO BE REMOVED.
MD4	DUCTWORK TO REMAIN AND BE REUSED.
MD5	EXISTING DUCTWORK TO BE REMOVED.
MD6	EXISTING THERMOSTAT TO REMAIN.
MD7	EXISTING THERMOSTAT TO BE RELOCATED.
MD8	EXISTING INDOOR AIR HANDLING UNIT TO REMAIN.



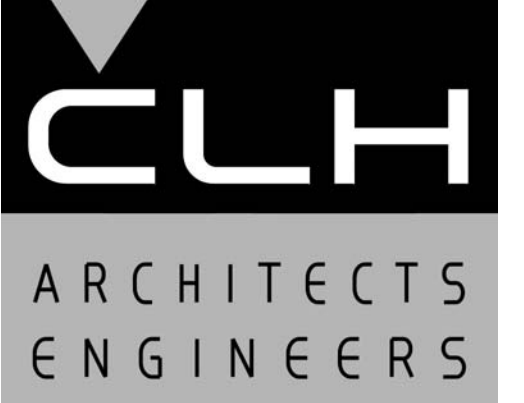
**B3** PARTIAL SECOND FLOOR  
MECHANICAL DEMOLITION PLAN

1/4" = 1'-0"



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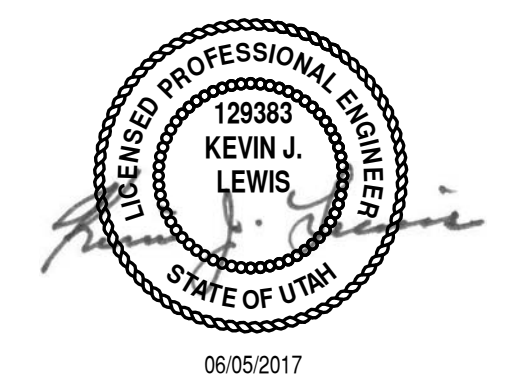
ELECTRICAL DEMOLITION KEYED NOTES	
MARK	NOTE
ED1	REMOVE DEVICE.
ED2	REMOVE FIXTURE, CEILING DEVICE, CONDUIT & WIRE. RE-INSTALL IN NEW CEILING. MAINTAIN LIGHT SWITCHES.
ED3	LIGHT FIXTURE TO REMAIN. PROVIDE NEW SWITCHING.
ED4	EXISTING CLOCK OUTLET AT 8'-0" TO REMAIN.
ED5	RELOCATE HORN / STROBE.
ED6	LIGHT FIXTURES & SWITCHING TO REMAIN.



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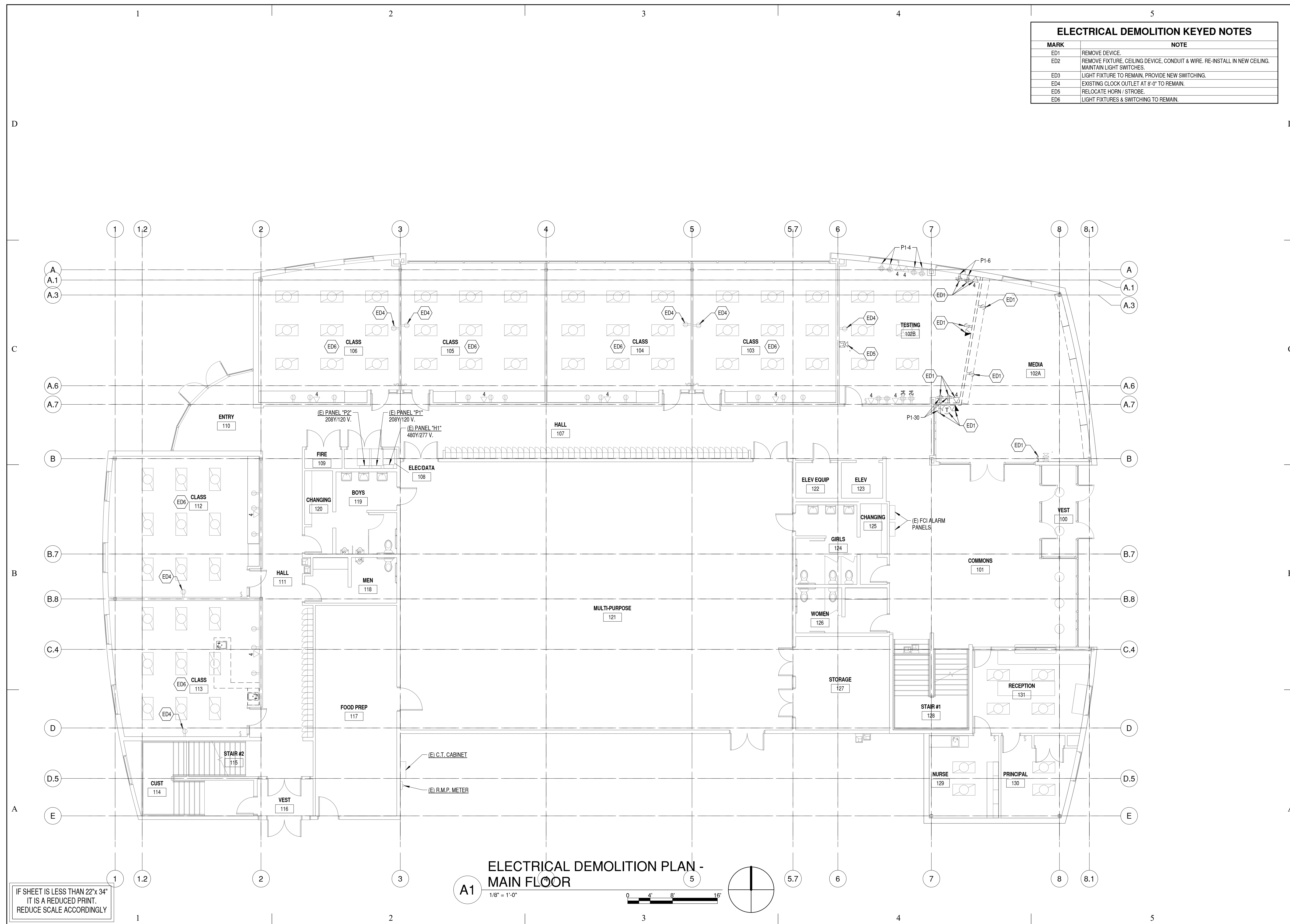
MARK	DATE	DESCRIPTION

ISSUE DATE:	JUNE 20, 2017
PROJECT NO:	17010
CAD DWG FILE:	
DRAWN BY:	J.M.S.
CHK'D BY:	K.J.L.

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JUNE 20, 2017

SHEET TITLE  
**ELECTRICAL  
DEMOLITION  
PLAN**

SHEET NO:  
**ED101**

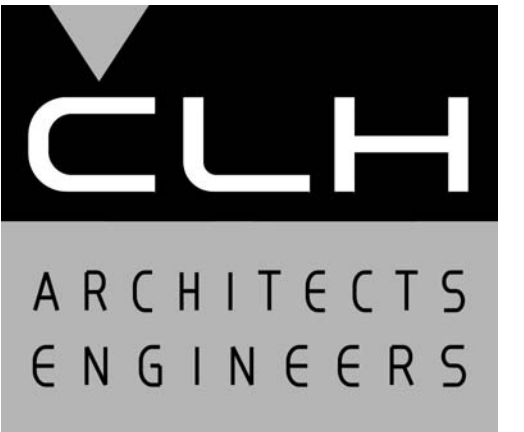


**ELECTRICAL DEMOLITION PLAN -  
MAIN FLOOR**

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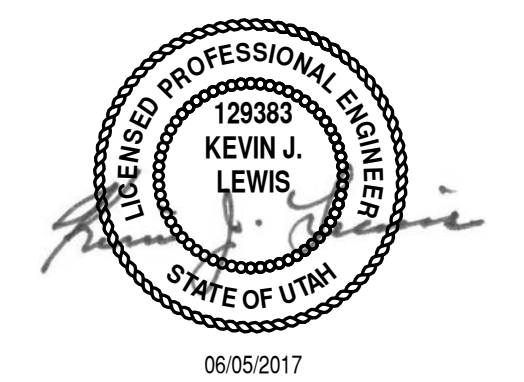
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MARK	DATE	DESCRIPTION

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DRAWN BY:	J.M.S.
CHK'D BY:	K.J.L.

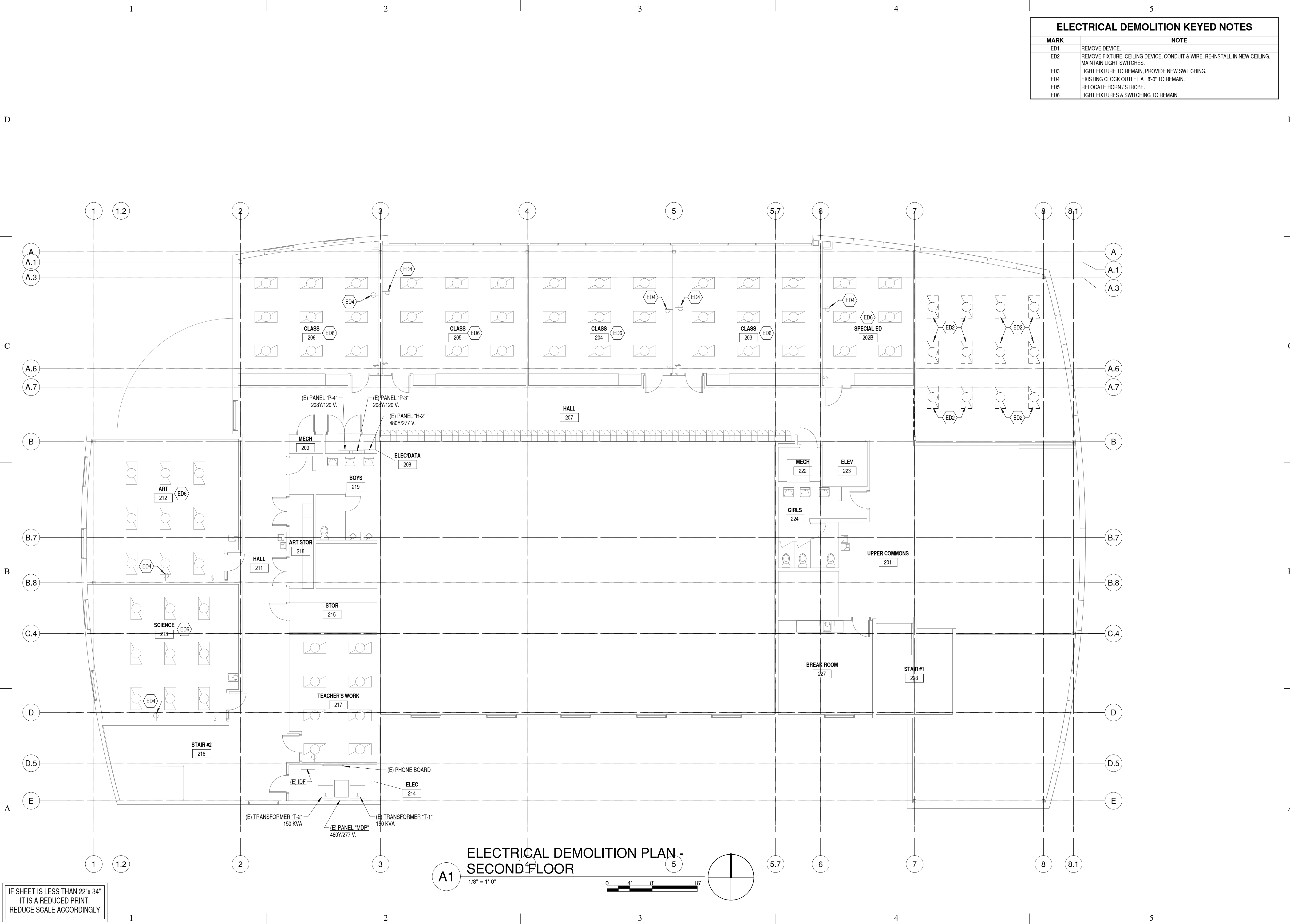
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JUNE 20, 2017

SHEET TITLE  
**ELECTRICAL  
DEMOLITION  
PLAN - SECOND  
FLOOR**

SHEET NO:

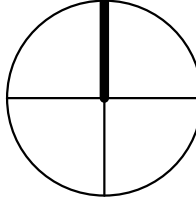
ED111

ELECTRICAL DEMOLITION KEYED NOTES	
MARK	NOTE
ED1	REMOVE DEVICE.
ED2	REMOVE FIXTURE, CEILING DEVICE, CONDUIT & WIRE. RE-INSTALL IN NEW CEILING. MAINTAIN LIGHT SWITCHES.
ED3	LIGHT FIXTURE TO REMAIN. PROVIDE NEW SWITCHING.
ED4	EXISTING CLOCK OUTLET AT 8'-0" TO REMAIN.
ED5	RELOCATE HORN / STROBE.
ED6	LIGHT FIXTURES & SWITCHING TO REMAIN.



**ELECTRICAL DEMOLITION PLAN -  
SECOND FLOOR**

1/8" = 1'-0"



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**STRUCTURAL NOTES :**

**A. GENERAL**

- THE STRUCTURAL NOTES ARE INTENDED TO COMPLEMENT THE PROJECT SPECIFICATIONS WHICH ARE PART OF THE CONSTRUCTION DOCUMENTS. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS SHALL COVER OVER THE STRUCTURAL NOTES AND TYPICAL DETAILS.
- THESE DRAWINGS (AND WHERE APPROPRIATE, ANY WRITTEN SPECIFICATIONS) ARE THE ONLY CONTRACT DOCUMENTS PROVIDED BY ARW ENGINEERS FOR THE PROJECT REPRESENTED HEREIN. NOTHING IN ANY DIGITAL MODEL OR DIGITAL FILE RELATED TO THIS PROJECT SHALL BE TAKEN TO SUPERSEDE ANY INFORMATION SHOWN IN THESE DRAWINGS (INCLUDING, BUT NOT LIMITED TO, DIMENSIONS, SIZES, ETC.).
- THE ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. THE STRUCTURAL DRAWINGS ARE SUPPLEMENTARY TO AND MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONSULTANTS DRAWINGS. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE OF CONFLICT, FOLLOW THE MOST STRINGENT REQUIREMENT AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
- SEE SPECIFICATIONS FOR REQUIRED SUBMITTALS. SUBMITTALS SHALL BE MADE IN A TIMELY MANNER AS INDICATED IN SPECIFICATIONS. REVIEW OF SUBMITTALS BY ARW ENGINEERS IS FOR GENERAL COMPLIANCE ONLY AND IS NOT INTENDED AS APPROVAL. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, AND ELEVATIONS ON SUBMITTALS AS RELATED TO DESIGN DOCUMENTS. PREPARATION OF SHOP DRAWINGS FOR STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION (I.E. DIMENSIONS, ETC.) FOUND IN THE ARCHITECTURAL, STRUCTURAL, AND OTHER CONSULTANTS DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE. IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION OF ANY AFFECTED ELEMENTS.
- THE CONTRACTOR SHALL VERIFY ALL LOCATIONS AND SIZES OF MECHANICAL EQUIPMENT OR OTHER EQUIPMENT BEFORE FABRICATING AND ERECTING STRUCTURAL ELEMENTS. SIZES AND LOCATIONS THAT DIFFER FROM THOSE SHOWN ON THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT.
- THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE ARCHITECT FOR ARCHITECT AND/OR ENGINEER APPROVAL BEFORE PROCEEDING WITH ANY CHANGES, MODIFICATIONS, OR SUBSTITUTIONS.
- OBSERVATION VISITS TO THE SITE BY ARW ENGINEERS FIELD REPRESENTATIVES SHALL NEITHER BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.
- DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS AS NOTED IN THESE DOCUMENTS.
- TYPICAL OR SIMILAR DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS ARE NOT SHOWN. TYPICAL OR SIMILAR DETAILS REFER TO THE CONDITION ADDRESSED AND ARE NOT NECESSARILY DETAILS LABELED "TYPICAL" OR "SIMILAR" IN THE PLANS AND DOCUMENTS.
- DRAWINGS AND DETAILS HAVE BEEN PREPARED WITH THE INTENT TO VISUALLY REPRESENT INFORMATION PROVIDED IN SCALE FORM; HOWEVER, CONTRACTOR/SUPPLIERS SHOULD NOT SCALE PLANS OR DETAILS FOR DIMENSIONAL INFORMATION.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING FOR ALL STRUCTURAL ELEMENTS UNTIL THE ENTIRE STRUCTURAL SYSTEM IS COMPLETED. DESIGN OF ALL SHORING AND BRACING IS BY OTHERS AT NO ADDITIONAL COST TO THE OWNER.
- ENGINEER SHALL NOT BE RESPONSIBLE FOR ACTIVITIES UNDER CONTROL OF THE CONTRACTOR SUCH AS CONSTRUCTION SITE SAFETY, MEANS, METHODS AND SEQUENCING OF CONSTRUCTION. ENGINEER SHALL NOT BE RESPONSIBLE FOR FABRICATION AND CONSTRUCTION REQUIREMENTS AS PRESCRIBED BY OSHA OR OTHER REGULATORY AGENCIES REGARDLESS OF INDICATIONS IN THESE DOCUMENTS.
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**B. STATEMENT OF SPECIAL INSPECTIONS AND SPECIAL INSPECTIONS**

- THE DESIGNATED SEISMIC/WIND SYSTEMS AND SEISMIC/WIND-FORCE-RESISTING SYSTEMS THAT ARE SUBJECT TO SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC SECTION 1705.11 AND 1705.12 ARE IDENTIFIED ON THESE DOCUMENTS WITH A CIRCLE "L". ALL OTHER ITEMS REQUIRING SPECIAL INSPECTION ARE IDENTIFIED IN THE SPECIAL INSPECTION SCHEDULE ON SHEET S003 AND S004.
- SPECIAL INSPECTIONS AND TESTING ARE TO BE PROVIDED AS REQUIRED BY IBC SECTIONS 1704 THROUGH 1705 AND OTHER APPLICABLE SECTIONS OF THE IBC. THE TYPE AND FREQUENCY OF TESTING AND SPECIAL INSPECTIONS SHALL BE AS NOTED IN THE SPECIAL INSPECTION SCHEDULE, JOB SPECIFICATIONS, AND ACCORDANCE WITH IBC SECTION 110 AND CHAPTER 17. CONTRACTOR SHALL COORDINATE AND COOPERATE WITH REQUIRED INSPECTIONS.
- ALL TESTING AND SPECIAL INSPECTION SHALL BE PROVIDED BY A QUALIFIED INDEPENDENT SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH IBC 1704 AND AS OUTLINED IN THE JOB SPECIFICATIONS. REPORTS OF FINDINGS OR DISCREPANCIES SHALL BE NOTED AND FORWARDED TO THE CONTRACTOR, ARCHITECT, ENGINEERS, AND BUILDING OFFICIAL IN A TIMELY MANNER.
- STRUCTURAL OBSERVATION VISITS SHALL BE PERFORMED BY A REPRESENTATIVE FROM ARW ENGINEERS IN ACCORDANCE WITH THE CONTRACT AS NEEDED TO OBSERVE THE CONSTRUCTION OF CRITICAL BUILDING ELEMENTS (I.E. FOOTINGS, BRACED FRAMES, MOMENT FRAMES, DRAG STRUTS AND THEIR CONNECTIONS, COLLECTORS, AND ROOF AND FLOOR DIAPHRAGMS). STRUCTURAL OBSERVATION REPORTS FOR EACH VISIT SHALL BE SENT DIRECTLY TO THE ARCHITECT FOR DISTRIBUTION TO THE CONTRACTOR AND BUILDING OFFICIAL. STRUCTURAL OBSERVATION VISITS SHALL NEITHER BE CONSTRUED AS SPECIAL INSPECTION NOR APPROVAL OF COMPLETED CONSTRUCTION.
- IN ACCORDANCE WITH IBC 1704.4, THE CONTRACTOR SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER. THE STATEMENT SHALL BE SUBMITTED PRIOR TO THE CONSTRUCTION OF ANY SEISMIC/WIND-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC/WIND SYSTEM, OR COMPONENT IDENTIFIED IN THESE DOCUMENTS WITH A CIRCLE "L".

**C. BASIS OF DESIGN**

- GOVERNING BUILDING CODE : INTERNATIONAL BUILDING CODE (IBC) 2015
- RISK CATEGORY : II
- SUSPENDED FLOOR LOADS
  - LIVE LOAD = 95 PSF CORRIDORS; 55 PSF CLASSROOMS
  - DEAD LOAD = 50 PSF
- SEISMIC DESIGN :
  - SEISMIC IMPORTANCE FACTOR,  $I_e$  : 1.0
  - SITE CLASS : D
  - MAPPED SPECTRAL RESPONSE ACCELERATIONS :  $S_s = 1.375$ ,  $S_1 = 0.497$
  - SPECTRAL RESPONSE COEFFICIENTS :  $S_{D5} = 0.916$ ,  $S_{D1} = 0.498$
  - SEISMIC DESIGN CATEGORY : D
  - BASIC SEISMIC-FORCE-RESISTING SYSTEM : SPECIAL REINF. MASONRY SHEAR WALLS
  - DESIGN BASE SHEAR :  $V_{NS} = 0.183 W$ ,  $V_{EW} = 0.183 W$
  - SEISMIC RESPONSE COEFFICIENT,  $C_s$  : 0.183
  - RESPONSE MODIFICATION FACTOR, R : 5
  - ANALYSIS PROCEDURE : EQUIVALENT LATERAL PROCEDURE

**D. FOUNDATION**

- DESIGN SOIL PRESSURE : 2500 PSF
- SOILS REPORT NOT PROVIDED
- ALL FOOTINGS SHALL BE PLACED ON MECHANICALLY COMPACTED FILL COMPACTED TO NOT LESS THAN 95% OF MODIFIED PROCTOR DENSITY (ASTM D-1557).
- UNLESS NOTED OTHERWISE, ALL CONCRETE SLABS ON EARTH SHALL BEAR ON STRUCTURAL FILL COMPACTED TO 90% OF MODIFIED PROCTOR DENSITY (ASTM D-1557).
- DESIGN AND ERECTION OF BRACINGS/SHORING IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. BRACING SHALL REMAIN IN PLACE UNTIL SUPPORTING STRUCTURAL ELEMENTS ARE IN PLACE AND HAVE ATTAINED FULL STRENGTH.
- UNLESS NOTED OTHERWISE, ALL FOOTINGS SHALL HAVE VERTICAL FACES FORMED WITH STANDARD FORMING MATERIALS (WOOD, METAL, ETC.), WITH PRIOR APPROVAL OF ARCHITECT AND ENGINEER. CONCRETE FOR FOOTINGS CAN BE PLACED IN EXCAVATED "SOIL" FORMS PROVIDED THAT THE DIMENSIONS ARE INCREASED 3" ON EACH SIDE.

**E. CONCRETE**

- ALL CONCRETE MIX DESIGNS SHALL COMPLY WITH THE PROJECT SPECIFICATIONS AND THE REQUIREMENTS LISTED BELOW :
  - FOOTINGS, GRADE BEAMS, FOUNDATION WALLS :
    - WHERE THE TOP OF THE ELEMENT IS EXPOSED OR LOCATED WITHIN 30" OF THE LOWEST ADJACENT GRADE (EXPOSURE CATEGORY F1)
      - 28 DAY COMPRESSIVE STRENGTH : 4500 PSI
      - MAXIMUM W/C RATIO : 0.45
      - MAXIMUM AGGREGATE SIZE : 1"
      - AIR CONTENT : 4.5% +/- 1.5%
    - WHERE THE TOP OF THE ELEMENT IS NOT EXPOSED OR LOCATED WITHIN 30" OF THE LOWEST ADJACENT GRADE (EXPOSURE CATEGORY F0)
      - 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
  - INTERIOR SLABS ON GRADE (EXPOSURE CATEGORY F0) :
    - 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
  - INTERIOR SUSPENDED SLABS (EXPOSURE CATEGORY F0) :
    - 28 DAY COMPRESSIVE STRENGTH : 3000 PSI
- WATER USED IN MIXING CONCRETE SHALL CONFORM TO ASTM C1602.
- NO PIPES, DUCTS, SLEEVES, ETC. SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. NO ALUMINUM PRODUCTS SHALL BE EMBEDDED IN CONCRETE. PENETRATIONS THRU STRUCTURAL CONCRETE ELEMENTS MUST BE APPROVED BY THE ENGINEER AND SHALL BE BUILT INTO THE ELEMENT PRIOR TO CONCRETE PLACEMENT.
- REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, ETC. TO BE CAST IN TO CONCRETE, AND FOR EXTENT AND LOCATION OF DEPRESSIONS, CURBS, RAMPS, ETC.

**F. ADHESIVE/MECHANICAL ANCHORS**

- ALL ADHESIVE/MECHANICAL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH AN APPROVED INDEPENDENT EVALUATION REPORT (ICC, IAPMO, OR APPROVED EQUAL), AS INDICATED BELOW, AND IN ACCORDANCE WITH ALL MANUFACTURER'S REQUIREMENTS.
- ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION.
- INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT IN ACCORDANCE WITH ACI 318-14 17.8.2.2. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO CONCRETE SHALL BE :
  - HILTI HIT-RE 500-V3 (ESR-3814), OR HILTI HIT-HY 200 (ESR-3187).
  - SIMPSON SET-XP EPOXY (ESR-2508).
  - POWERS PURE 110+ (ESR-3299), OR AC100+ GOLD (ESR-2582-COLD WEATHER).
- UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO MASONRY SHALL BE :
  - SIMPSON SET-XP ADHESIVE (IAPMO ER-0265).
  - POWERS AC100+ GOLD (ESR-3200).
  - HILTI HIT-HY 70 (ESR-2682).
- UNLESS NOTED OTHERWISE, ALL MECHANICAL ANCHORS INTO CONCRETE SHALL BE :
  - POWERS POWER-STUD- SD2 (ESR-2502).
  - SIMPSON TITEN HD (ESR-2713).
  - HILTI KWIK BOLT TZ (ESR-1917).
- UNLESS NOTED OTHERWISE, ALL MECHANICAL ANCHORS INTO MASONRY SHALL BE :
  - HILTI KWIK BOLT TZ (ESR-3785).
  - SIMPSON STRONG BOLT 2 (IAPMO ER-0240).
  - POWERS POWER-STUD- SD1 (ESR-2966).
- UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO CONCRETE SHALL BE :
  - SIMPSON TITEN HD (ESR-2713).
  - POWERS WEDGE BOLT PLUS SR-2526).
  - HILTI KWIK HUS-EZ (ESR-3027).
- UNLESS NOTED OTHERWISE, ALL SCREW ANCHORS INTO MASONRY SHALL BE :
  - SIMPSON TITEN HD (ESR-1056).
  - POWERS WEDGE BOLT+ (ESR-1678).
- ALL MASONRY CELLS WITHIN 8" OF THE ANCHOR SHALL BE SOLID GROUTED.
- THE TESTING LABORATORY WILL PERFORM VISUAL INSPECTION OF ANCHORS AND DOWELS AS SPECIFIED IN THE APPROVED INDEPENDENT EVALUATION REPORT. TENSION TESTING CAN BE REQUIRED AT THE DIRECTION OF THE STRUCTURAL ENGINEER OF RECORD OR THE SPECIAL INSPECTOR.
- IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON THAT HOLE AND SHIFT THE ANCHOR LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM SPACE OF (2) ANCHOR HOLE DIAMETERS OR 1 INCH, WHICH EVER IS LARGER, OF SOUND CONCRETE/MASONRY BETWEEN THE ANCHOR AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. AT CONTRACTOR'S OPTION, LOCATE EXISTING REINFORCEMENT PRIOR TO DRILLING/CORING. IF THE ANCHOR OR DOWEL CANNOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.
- LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS

**G. SUSPENDED CONCRETE SLABS / SLABS ON METAL DECK**

- UNLESS NOTED OTHERWISE, ALL CONCRETE SLABS ON METAL DECK SHALL BE 4" TOTAL THICKNESS. MATCH EXISTING FIELD VERIFY NORMAL WEIGHT CONCRETE WITH A WEIGHT LESS THAN 145 POUNDS PER CUBIC FOOT, REINFORCED WITH 6 X 6 - W1.4 X W1.4 WELDED WIRE FABRIC. REINFORCING STEEL SHALL BE CHAIRED TO 1" TOP COVER AT ALL BEAM LOCATIONS. EXCEPT WHERE SPECIFICALLY DETAILED, FIBER MESH MAY BE USED IN PLACE OF REINFORCEMENT IN SLABS ON DECK WHEN USED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT AND WHERE APPROVED BY THE ENGINEER. WHERE THE SLAB CONSTRUCTION IS USED TO OBTAIN A UL FIRE RATING, THE PROPOSED FIBER MESH SHALL HAVE UL ACCEPTANCE AS AN APPROVED ALTERNATIVE TO WELDED WIRE FABRIC.
- AROUND OPENINGS IN SUSPENDED CONCRETE SLABS, ADD REINFORCING BARS EQUIVALENT TO BARS CUT BY OPENING WITH HALF ON EACH SIDE OF OPENING. BARS PARALLEL TO PRINCIPAL REINFORCING SHALL RUN FULL LENGTH OF SPAN. BARS PARALLEL TO TEMPERATURE REINFORCING SHALL RUN 24" BEYOND OPENING.
- SLAB PENETRATIONS LESS THAN 6" IN ALL DIRECTIONS WITH A CLEAR SPACING OF AT LEAST 3 TIMES THE LONGEST DIMENSION, DO NOT REQUIRE SUPPLEMENTAL REINFORCING. OTHERWISE, THE PENETRATIONS SHALL BE FRAMED ON 4 SIDES WITH STEEL ANGLES 4x4x1/4 OR BENT PLATES (SEE TYPICAL DETAILS) UNLESS NOTED OTHERWISE.
- EVERY EFFORT SHALL BE MADE TO PROVIDE A LEVEL FINISHED FLOOR WHILE MAINTAINING THE MINIMUM INDICATED SLAB THICKNESS. WHEN PLACING CONCRETE, SCREEDS SHALL BE RE-SET AFTER INITIAL SCREEDING TO ACCOUNT FOR DEFLECTION DUE TO CONCRETE WEIGHT.
- CONTROL JOINTS IN SUSPENDED CONCRETE SLABS AND CONCRETE SLABS ON DECK SHALL NOT BE USED UNLESS SPECIFICALLY APPROVED AND DETAILED BY THE ENGINEER.
- SEE TYPICAL DETAILS WHEN SLABS ARE MADE COMPOSITE WITH STEEL BEAMS.
- ANY CONDUIT PLACED IN SLABS ON DECK SHALL BE SPACED NOT CLOSER THAN 18" O.C. CONDUIT LARGER THAN 3/4" DIAMETER SHALL BE PLACED IN DECK FLUTES, BUT MAY NOT BE PLACED IN FLUTES WITH REINFORCING STEEL OR HSA'S. A 1" MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN THE CONDUIT AND THE DECK. NO CONDUIT LARGER THAN 1" DIAMETER OR 1/3 THE THICKNESS OF THE CONCRETE OVER THE DECK FLUTE SHALL BE PLACED IN SLABS ON DECK. CONDUIT CROSSOVERS ARE NOT ALLOWED. SEE DETAIL 4/S201.
- WHERE CONDUIT IS CLUSTERED TOGETHER TO RISE ABOVE SLAB OR PENETRATE SLAB, PENETRATION IN SLAB MUST BE SUPPORTED AS NOTED IN NOTE G.3 ABOVE.
- CONTRACTOR SHALL PROVIDE ALL TEMPORARY SHORING, BRACING, AND GUYING AS REQUIRED DURING ERECTION AND PLACEMENT OF SUSPENDED CONCRETE SLABS ON METAL DECK.

**H. REINFORCING STEEL**

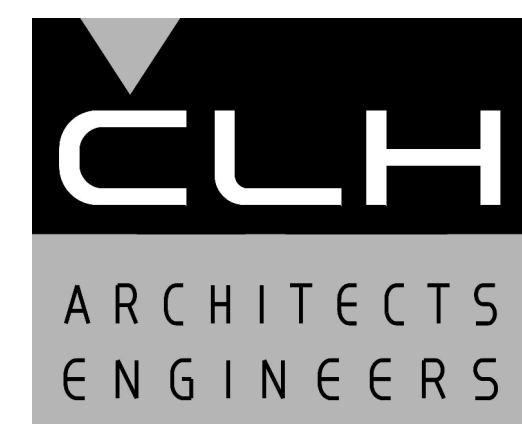
- REINFORCING BAR STRENGTH REQUIREMENTS:
  - ALL REINFORCING BARS SHALL CONFORM TO ASTM STANDARD A-615 GRADE 60 AND ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM STANDARD A-1084 AND SHALL BE SUPPLIED IN FLAT SHEETS, ADEQUATELY AND SUPPORT ALL REINFORCING STEEL AS SPECIFIED BY ACI 117, TO MAINTAIN EXACT REQUIRED POSITION.
- HEADED SHEAR STUD ASSEMBLIES SHALL CONFORM TO ASTM A1044.
- STEEL DISCONTINUOUS FIBER REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO ASTM A820 AND SHALL HAVE A LENGTH TO DIAMETER RATIO NOT SMALLER THAN 50 AND NOT GREATER THAN 100.
- HEADED DEFORMED BARS SHALL CONFORM TO ASTM A970. OBSTRUCTIONS OR INTERRUPTIONS OF THE BAR DEFORMATIONS, IF ANY, SHALL NOT EXTEND MORE THAN 2 BAR DIAMETERS FROM THE BEARING FACE OF THE HEAD.
- ALL FIELD BENT DOWELS SHALL BE GRADE 40 WITH SPACING INDICATED REDUCED BY 13.
- UNLESS NOTED OTHERWISE, REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE COVERAGE :
  - CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ..... 3"
  - EXPOSED TO EARTH OR WEATHER :
    - #6 & LARGER ..... 2"
    - #5 & SMALLER ..... 1-1/2"
- NOT EXPOSED TO WEATHER OR EARTH :
  - SLABS, WALLS, JOISTS, #11 & SMALLER ..... 3/4"
  - BEAMS, COLUMNS: MAIN REINFORCING OR TIES ..... 1-1/2"
- SLAB ON GRADE :
  - PLACE REINFORCING AT CENTER OF SLAB UNLESS INDICATED OTHERWISE.
- EXCEPT WHERE NOTED ON PLANS OR DETAILS CONTINUOUS REINFORCEMENT SHALL BE SPLICED AT POINTS OF MINIMUM STRESS BY LAPPING PER THE REBAR LAP SCHEDULE.
- REINFORCING STEEL MAY BE SPLICED WITH MECHANICAL COUPLERS THAT HAVE A TENSION CAPACITY OF AT LEAST 125% OF THE STRENGTH OF THE BAR. MECHANICAL COUPLERS SHALL BE A POSITIVE CONNECTING TYPE COUPLER, AND SHALL BE INSTALLED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT. WHERE THESE ARE USED, SPLICES ON ADJACENT BARS SHALL BE STAGGERED AT LEAST 24 INCHES ALONG THE LENGTH OF THE BARS.
- DO NOT WELD REINFORCING EXCEPT AS NOTED ON PLANS, WHERE REINFORCING IS WELDED, USE ASTM A-706 REINFORCING.
- REINFORCING BARS, TIES, AND TENDONS SHALL BE SUPPORTED BY NYLON CONES, PLASTIC-COATED TIE-WIRES, OR PLASTIC-COATED CHAIRS. REINFORCING IN FOOTINGS IS PERMITTED TO BE SUPPORTED ON CONCRETE DOBBIES.
- UNLESS NOTED OTHERWISE, HOOKS, STIRRUPS, TIES, AND OTHER BENDS IN REINFORCING STEEL SHALL MEET THE STANDARDS SET FORTH IN ACI 318/318R-14. UNLESS OTHERWISE PERMITTED BY THE ENGINEER, ALL REINFORCEMENT SHALL BE BENT COLD. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT, EXCEPT AS SHOWN ON THESE DRAWINGS OR OTHERWISE PERMITTED BY THE ENGINEER.
- UNLESS SPECIFICALLY NOTED AND/OR DETAILED IN THE STRUCTURAL DRAWINGS CONDUIT SHALL NOT BE IN CONTACT WITH REINFORCING STEEL.

**LEGEND OF SYMBOLS AND ABBREVIATIONS**

AB	= ANCHOR BOLT		FOOTING MARK
ABV	= ABOVE		TOP OF FOOTING ELEV.
ARCH	= ARCHITECT		SECTION MARK
BLW	= BELOW		SHEET NUMBER
BN	= BOUNDARY NAILING		TOP OF FOUNDATION WALL OR COLUMN PIER ELEV.
CL	= CENTERLINE		SHEAR WALL - SEE SCHEDULE
CMU	= CONCRETE MASONRY UNIT		MIN. LENGTH OF SHEAR WALL
COL	= COLUMN		FOOTING STEP
CONC	= CONCRETE		CONCRETE BEAM
DIA / Ø	= DIAMETER		ELEVATION
DBA	= DEFORMED BAR ANCHOR		FRAMING ANGLE SEE TYPICAL DETAIL
ELEV	= ELEVATION		FRAMING CHANNEL SEE TYPICAL DETAIL
EN	= EDGE NAILING		ITEMS, DETAILS, & SYSTEMS WHICH ARE PART OF THE LATERAL FORCE RESISTING SYSTEM.
FTG	= FOOTING		
FFE	= FINISHED FLOOR ELEVATION		
HSA	= HEADED STUD ANCHOR		
JBE	= JOIST BEARING ELEVATION		
MAX	= MAXIMUM		
MB	= MASONRY BEAM		
MC	= MASONRY COLUMN		
MIN	= MINIMUM		
OPP	= OPPOSITE		
PL	= PLATE		
REINF	= REINFORCING		
REQD	= REQUIRED		
SIM	= SIMILAR		
TOB	= TOP OF BEAM ELEVATION		
TOC	= TOP OF CONCRETE SLAB		
TOS	= TOP OF GIRDER ELEVATION		
TOM	= TOP OF MASONRY		
TOS	= TOP OF STEEL ELEVATION		
TP	= TYPICAL		
UNO	= UNLESS NOTED OTHERWISE		

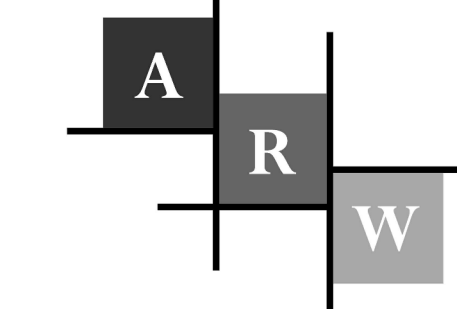
**Structural Sheet Index**

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S101	PARTIAL ADDITION PLANS
S201	DETAILS
S202	DETAILS



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**STAMP**



**CLASSROOM UPGRADES -MIDDLE D-**

215 22ND ST.  
Ogden, Utah 84401

**MARK | DATE | DESCRIPTION**

MARK	DATE	DESCRIPTION
ISSUE DATE:	JUNE 20, 2017	
PROJECT NO:	17911	
CAD DWG FILE:		
DRAWN BY:	ZT	
CHK'D BY:	ATH	

**SHEET TITLE**

**STRUCTURAL NOTES**

**SHEET NO:**

**S001**

IF SHEET IS LESS THAN 22"x 34"  
IT IS A REDUCED PRINT.  
REDUCE SCALE ACCORDINGLY

**I. STRUCTURAL STEEL**

1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING:
  - a. ANSIAISC 360-10 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", WITH "COMMENTARY" AND "SUPPLEMENTS" AS REQUIRED BY BUILDING CODE.
  - b. AISC 303-10 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" EXCLUDING THE FOLLOWING SECTIONS: 4.4, 4.4.1, AND 4.4.2.
  - c. AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".
  - d. AWS D1.1 AND 1.3, "STRUCTURAL WELDING CODE" (EXCEPT SPECIFIC ITEMS DO NOT APPLY IF THEY CONFLICT WITH AISC).
  - e. ANSIAISC 341-10 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS".
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING:
  - a. WIDE FLANGE SHAPES AND WT SHAPES - ASTM A992
  - b. OTHER SHAPES AND PLATES - ASTM A-36 (UNO)
  - c. TUBES (TS) AND HOLLOW STRUCTURAL SECTIONS (HSS) - ASTM A-500, GRADE B (SQUARE AND RECTANGULAR SHAPES FY = 46 KSI AND ROUND SHAPES FY = 42 KSI)
  - d. STAINLESS STEEL SHAPES, PLATES, AND FASTENERS - ASTM 304
  - e. DEFORMED BAR ANCHORS (DBA) - ASTM A-496, WELDED IN ACCORDANCE WITH AWS D1.1
  - f. HEADED STUD ANCHORS (HSA) - ASTM A-108, GRADE 1015 STEEL AND WELDED IN ACCORDANCE WITH AWS D1.1 FOR TYPE "B". USE 3/4" DIAMETER STUDS, UNLESS NOTED OTHERWISE.
  - g. THREADED ROD - ASTM A-449.
3. CONNECTIONS SHALL COMPLY WITH THE STRUCTURAL DRAWINGS UNLESS WRITTEN APPROVAL TO CHANGE IS GIVEN BY THE STRUCTURAL ENGINEER.
4. ALL SHOP FABRICATIONS SHALL BE PERFORMED BY AN APPROVED FABRICATOR IN ACCORDANCE WITH SECTIONS 1702 AND 1704 OF THE IBC OR WITH SHOP INSPECTION BY AN INDEPENDENT AGENCY IN ACCORDANCE WITH SECTION 1704.2.5 OF THE IBC.
5. WELDING
  - a. ALL WELDING AND CUTTING SHALL BE PERFORMED BY AWS QUALIFIED WELDERS IN ACCORDANCE WITH ANSIAAWS D1.1 (LATEST EDITION).
  - b. USE E-70XX ELECTRODES UNLESS NOTED OTHERWISE. E-60XX MAY BE USED FOR WELDING STEEL DECK.
  - c. ALL INTERSECTING STEEL SHAPES WHICH ARE NOT CONNECTED WITH BOLTS SHALL BE WELDED TOGETHER WITH A FILLET WELD ALL AROUND UNLESS NOTED OTHERWISE. WHERE WELD SIZES ARE NOT SHOWN USE THE FOLLOWING:
    1. WHERE ALL CONNECTED PARTS ARE THICKER THAN 1/4", WELD IS 1/16" LESS THAN THE THICKNESS OF THE THINNEST PART.
    2. WHERE ANY OF THE CONNECTED PARTS IS LESS THAN 1/4" THICK, WELD IS SAME AS THICKNESS OF THE THINNEST PART.
  - d. WELDING OF HSA'S AND DBA'S SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.
  - e. WHEREVER POSSIBLE, WELDS SHALL BE SHOP WELDS. SPECIAL CONSIDERATIONS, SUCH AS ITEMS WHICH MAY NEED ADJUSTMENT AT THE SITE, REQUIRE THAT SOME WELDS BE FIELD WELDS. WHERE QUESTIONS OR DISCREPANCIES OCCUR THE CONTRACTOR SHALL COORDINATE THE WORK BETWEEN THE SHOP FABRICATOR AND THE STEEL ERECTOR.
6. BOLTING
  - a. UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL TO STEEL CONNECTIONS SHALL USE HIGH STRENGTH BOLTS CONFORMING TO ASTM A-325.
  - b. UNLESS NOTED OTHERWISE, ALL BOLTING IS CLASSIFIED AS NON-SLIP CRITICAL BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN SHEAR PLANE. TIGHTEN BOLTS TO A SNUG TIGHT CONDITION WITH ALL PILES OF THE JOINT IN FIRM CONTACT.
  - c. WHERE OVERSIZED OR SLOTTED HOLES OCCUR IN THE OUTER PLY, AN ASTM F436 WASHER OR 5/16" THICK COMMON PLATE WASHER SHALL BE USED AS REQUIRED TO COMPLETELY COVER THE HOLE.
  - d. WHERE A STEEL BEAM TO BEAM CONNECTION IS NOT SHOWN, PROVIDE AN AISC STANDARD FRAMED CONNECTION SIZED FOR 1/2 OF THE TOTAL LOAD CAPACITY OF THE BEAM FOR THE SPAN AND STEEL SPECIFIED.
7. METAL DECKING
  - a. UNLESS NOTED OTHERWISE, METAL FLOOR DECK SHALL BE 22 GAUGE TYPE B FORMLOK COMPOSITE, GALVANIZED, VENTED STEEL DECK. UNLESS NOTED OTHERWISE, ATTACH TO SUPPORTING STRUCTURE WITH 3/4" DIAMETER WELDS AT 12" MAXIMUM SPACING. ATTACH SIDE SEAMS WITH BUTTON PUNCH OR SIDE SEAM SCREWS AT 12" MAXIMUM SPACING. AN HSA FIELD-WELDED THROUGH THE DECK MAY SUBSTITUTE FOR A PUDDLE WELD.
  - b. ALL DECK SHALL BE CONTINUOUS OVER 3-SPANS. WHERE NOT POSSIBLE, THE DECK SUPPLIER/CONTRACTOR SHALL PROVIDE HEAVIER GAUGE DECK AS NEEDED TO PROVIDE THE EQUIVALENT PERFORMANCE OF THE SPECIFIED DECK WITH 3-SPAN CONTINUITY. SEE TYPICAL DETAILS FOR SUPPORT OF DECK AT OPENINGS.
  - c. PROVIDE TYPICAL DETAILS FOR SUPPORT OF DECK AT OPENINGS.
  - d. PROVIDE L2"x2"x3/16" FOR DECK SUPPORT AT LOCATIONS WHERE COLUMNS EXTEND THROUGH DECK.
  - e. PAINTED STEEL DECK SHALL CONFORM TO ASTM A1008 AND GALVANIZED STEEL DECK SHALL CONFORM TO A653 GRADE G60.
  - f. BUILDING ELEMENTS MAY BE SUPPORTED BY HANGING DIRECTLY FROM METAL DECKING, PROVIDED THAT THE TOTAL WEIGHT PER CONNECTION IS LESS THAN 50 LBS AND THAT THE ATTACHMENT TO THE DECKING IS DISTRIBUTED ACROSS AT LEAST TWO RIBS AND SPACED AT LEAST 6 FEET APART IN ANY DIRECTION.
8. PROVIDE FULL DEPTH WEB STIFFENER PLATES AT EACH SIDE OF STEEL BEAMS AT ALL BEARING (EXCEPT SECONDARY FRAMING) POINTS. STIFFENER PLATES SHALL BE THICKNESS SHOWN UNLESS NOTED OTHERWISE AND SHALL BE WELDED BOTH SIDES WITH FILLET WELDS ALL AROUND. FLANGE WIDTH STIFFENER THICKNESS WELD THICKNESS
 

< 8 1/4"	1/4"	3/16"
8 1/4" < BF < 12 1/2"	3/8"	1/2"
12 1/2" < BF < 18"	1/2"	5/16"
9. FABRICATORS AND SUPPLIERS SHALL COORDINATE PAINT/FINISHES WITH REQUIREMENTS FOR DIRECT APPLIED INSULATION, FIREPROOFING, ETC. AS NOTED IN THE PROJECT SPECIFICATIONS.
10. WHEN DETERMINING THE FIRE RESISTANCE OF ASSEMBLIES, USE THE FOLLOWING: STEEL ROOF MEMBERS ARE CONSIDERED UN-RESTRAINED AND STEEL FLOOR FRAMING MEMBERS ARE CONSIDERED RESTRAINED.
11. UNLESS NOTED OTHERWISE, ALL HORIZONTAL FRAMING MEMBERS SHALL BE ERECTED WITH THE NATURAL CROWN UP.
12. UNLESS OTHERWISE SHOWN OR DETAILED IN THE PLANS, ALL STEEL COLUMNS, BEAMS, BRACES, STRUTS, ETC. SHALL BE CONTINUOUS BETWEEN CONNECTIONS OR SUPPORTS. SPLICES IN MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL BY THE ENGINEER OF RECORD. THE NUMBER IN PARENTHESES (X) IN BEAM CALLOUT INDICATES THE TOTAL NUMBER OF HSA'S THAT SHALL BE INSTALLED ON BEAM. HSA'S SHALL BE UNIFORMLY SPACED AND SHALL BE INSTALLED ON THE BOTTOM FLUTE.

**J. HELICAL PIERS**

1. HELICAL PIER FOUNDATIONS AND THEIR COMPONENTS SHALL BE CONSIDERED A "PILE FOUNDATION" AND SHALL BE SUBJECT TO CONTINUOUS SPECIAL INSPECTION AS REQUIRED BY THE SPECIAL INSPECTION SCHEDULE FOR PILE FOUNDATIONS AND PER IBC CHAPTER 17.
2. HELICAL PIER FOUNDATION SYSTEMS SHALL BE DESIGNED BY A LICENSED ENGINEER TO RESIST THE REQUIRED LOADS AS INDICATED ON THE PLANS AND SCHEDULES. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION CONCERNING REQUIREMENTS FOR DESIGN, TESTING, AND INSTALLATION OF HELICAL PIER FOUNDATIONS.
3. SHOP DRAWINGS AND CALCULATIONS PREPARED AND STAMPED BY A LICENSED ENGINEER SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION. AT A MINIMUM, SHOP DRAWINGS AND CALCULATIONS SHALL INCLUDE, BUT NOT BE LIMITED TO: PIER LAY-OUT, QUANTITIES, SHAFT AND HELIX SIZES, FOUNDATION CONNECTION REQUIREMENTS, TEST PIER REQUIREMENTS, APPLIED SAFETY FACTORS, ETC.
4. HELICAL PIER FOUNDATION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH AN ICC EVALUATION SERVICES INC. RESEARCH REPORT BY CERTIFIED HELICAL PIER INSTALLERS.
5. ALL STEEL COMPONENTS OF HELICAL PIER FOUNDATION SYSTEMS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153.
6. ALL HELICAL PIERS SHALL BE PLACED IN UNDISTURBED SOIL TO A MINIMUM DEPTH AS REQUIRED TO REACH THE SPECIFIED LOAD REQUIREMENTS NOTED ON THE PLANS, BUT NO LESS THAN 5 TIMES THE DIAMETER OF THE LARGEST HELIX BELOW THE UNDISTURBED SURFACE.
7. HELICAL PIER FOUNDATION SHALL BE DRIVEN INTO SOIL UNTIL THE REQUIRED TORQUE OR ULTIMATE LOAD RATING IS REACHED. TORQUE RESULTS AND HELICAL PIER DEPTHS SHALL BE RECORDED FOR EACH PIER AND SUBMITTED TO THE ENGINEER FOR REVIEW. ALL PIERS SHALL BE PLACED SUCH THAT THE HELICES OF ADJACENT PIERS ARE NO CLOSER THAN 3 HELICE DIAMETERS APART (BASED ON THE LARGEST HELICE USED TO ATTAIN THE REQUIRED LOAD RATING) WHEN THE PIER HAS REACHED ITS FINAL DEPTH.
9. HELICAL PIER FOUNDATIONS USED TO RESIST CYCLICAL LOADING SHALL HAVE STEEL SHIMS INSTALLED IN THE COUPLING BOXES TO REMOVE SLACK AT COUPLERS.
10. THE NUMBER AND LOCATION OF HELICAL PIERS IS SHOWN SCHEMATICALLY ON THE PLANS. HELICAL PIER SUPPLIER IS RESPONSIBLE FOR DETERMINING THE ACTUAL NUMBER AND DEPTH OF PIERS REQUIRED TO RESIST THE LOADS SHOWN ON THE PLANS. LOADS SHOWN ARE BASED ON ALLOWABLE/DESIGN LEVEL FORCES.

**K. DEFERRED SUBMITTALS**

1. DEFERRED SUBMITTALS ARE COMPLETE PACKAGES TO BE SUBMITTED FOR REVIEW THAT INCLUDE DRAWINGS AND CALCULATIONS FOR ALL ELEMENTS AND CONNECTIONS OF ITEMS LISTED BELOW. DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN.
2. DEFERRED SUBMITTAL COMPONENTS SHALL NOT BE INSTALLED UNTIL APPROVED BY THE BUILDING OFFICIAL.
3. DEFERRED SUBMITTALS SHALL INCLUDE, BUT ARE NOT LIMITED TO:
  - a. HELICAL PIERS / MICRO PILES (TO INCLUDE DETAILS SHOWING ATTACHMENT OF PIER/PILES TO EXISTING FOUNDATIONS, NEW GRADE BEAMS, ETC.).

**L. EXISTING BUILDING NOTES**

1. ARW ENGINEERS EXPRESSLY DISCLAIMS RESPONSIBILITY FOR ANY PORTION OF THE EXISTING BUILDING NOT SPECIFICALLY ADDRESSED IN THESE DRAWINGS.
2. DRAWINGS AND DETAILS HAVE BEEN PREPARED TO REFLECT THE EXISTING CONDITIONS AND CONFIGURATIONS OF STRUCTURAL ELEMENTS. HOWEVER, THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS AND ALERTING THE ENGINEER OF ANY DISCREPANCIES FOUND PRIOR TO FABRICATING OR INSTALLING STRUCTURAL ELEMENTS.
3. THE CONTRACTOR IS RESPONSIBLE FOR MAKING SURE THAT THE BUILDING AND ELEMENTS WITHIN THE BUILDING REMAIN STABLE UNTIL CONSTRUCTION IS COMPLETE. AT NO ADDITIONAL COST TO THE OWNER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHORING OR OTHER TEMPORARY SUPPORT OF STRUCTURAL MEMBERS UNTIL THE FINAL CONFIGURATION HAS BEEN COMPLETED.

BEAM CONNECTION SCHEDULE							
BEAM DEPTH	SHEAR PLATE INFORMATION			BOLTS W/ STANDARD WASHERS OVER SLOTS		WELD 'A'	COMMENTS
	PL. DIMENSIONS W/ SHORT-SLOTTED HOLES	Lev	Leh	No.	SIZE		
W8 x, W10 x	PL. 1/4" x 4"	1 1/2"	2"	2	3/4" Ø	3/16"	
W12 x	PL. 5/16" x 4"	1 1/2"	2"	3	3/4" Ø	1/4"	
W14 x 90 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	3	3/4" Ø	1/4"	
W16 x 77 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	4	3/4" Ø	1/4"	
W18 x 65 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	5	3/4" Ø	1/4"	
W21 x 73 & LIGHTER	PL. 5/16" x 4"	1 1/2"	2"	6	3/4" Ø	1/4"	

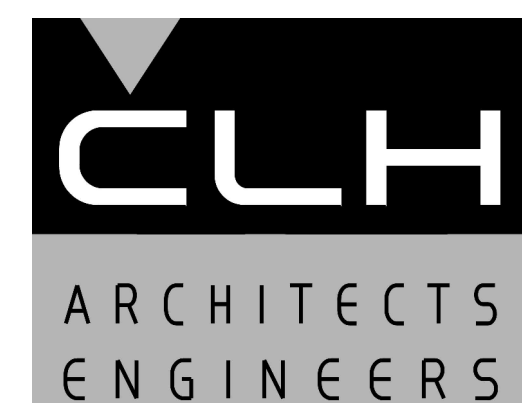
  

**SPECIAL INSPECTION SCHEDULE** 1,2  
ESTABLISHED PER 2015 IBC SECTION 110 AND CHAPTER 17

ITEM	CONTINUOUS <sup>3</sup>	PERIODIC <sup>3</sup>	REFERENCE	COMMENTS
<b>PRE-FAB CONSTRUCTION (IBC 1704.2)</b>			REFERENCE NOTES P1 & P2	P1. SPECIAL INSPECTION IS NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. PROVIDED THE FABRICATOR COMPLIES WITH IBC. P2. INSPECTION FOR PREFABRICATED CONSTRUCTION SHALL BE THE SAME AS IF THE MATERIAL USED IN THE CONSTRUCTION TOOK PLACE ON SITE. SPECIAL INSPECTION WILL NOT BE REQUIRED DURING PREFABRICATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE. (SEE NOTE 2).
<b>CONCRETE CONSTRUCTION (IBC 1705.3)</b>			SEE IBC TABLE 1705.3 - REF. NOTE C1	C1. SPECIAL INSPECTION IS NOT REQUIRED FOR CONC. ISOLATED SPREAD FOOTINGS, CONTINUOUS FOOTINGS, NON-STRUCTURAL SLABS, FOUNDATION WALLS, PATIOS, DRIVEWAYS, AND SIDEWALKS PROVIDED THE REQUIREMENTS OF IBC 1705.3 ARE MET. C2. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR VERIFICATION OF THE WELDABILITY OF REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS, AND SHEAR REINFORCEMENT. PERIODIC SPECIAL INSPECTION IS ALLOWED FOR WELDING OF OTHER ASTM A 706 REINFORCING STEEL NOT INCLUDED IN THE CONTINUOUS SPECIAL INSPECTION REQUIREMENTS NOTED ABOVE. C3. PERFORM AIR, SLUMP AND TEMP. TESTS WHEN CONCRETE SAMPLES ARE CAST. C4. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR VERIFICATION OF IN-SITU CONCRETE STRENGTH FOR POST-TENSIONED CONCRETE PRIOR TO TENSIONING TENDONS OR REMOVING SHORING OR FORMS. C5. EPOXY AND EXPANSION ANCHORS INTO MASONRY OR CONCRETE MAY BE USED ONLY WHEN APPROVED BY ARCHITECT, AND/OR ENGINEER USING AN APPROVED PRODUCT WITH CURRENT PUBLISHED ICC RESEARCH REPORT NUMBERS. COORDINATE CONTINUOUS/PERIODIC SPECIAL INSPECTION REQUIREMENTS WITH ICC REPORT.
REINFORCING STEEL PLACEMENT		●		
WELDING OF REINFORCING STEEL	●	●	REFERENCE NOTE C2	
EMBEDDED BOLTS & PLATES	●			
VERIFYING REQUIRED DESIGN MIX		●		
CONCRETE PLACEMENT / SAMPLING	●		REFERENCE NOTE C3	
CURING TEMPERATURE / TECHNIQUES		●		
PRESTRESSED CONCRETE				
APPLICATION OF PRESTRESSING FORCES	●			
GROUTING BONDED TENDONS	●		IN SEISMIC-FORCE-RESISTING SYSTEM	
ERECTION OF PRECAST MEMBERS		●		
VERIFICATION OF IN-SITU STRENGTH		●	REFERENCE NOTE C4	
EPOXY / EXPANSION ANCHOR PLACEMENT	●	●	REFERENCE NOTE C5	
<b>HELICAL PILE FOUNDATIONS (IBC 1705.9)</b>			REFERENCE NOTE HPP1	HPP1. THE APPROVED GEOTECHNICAL REPORT AND THE CONSTRUCTION DOCUMENTS SHALL BE USED TO DETERMINE COMPLIANCE.
RECORD INSTALLATION EQUIPMENT USED	●			
RECORD PILE DIMENSIONS, TIP ELEVATIONS, FINAL DEPTH, AND FINAL INSTALLATION TORQUE	●			

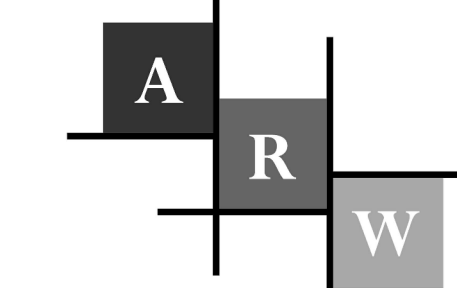
**GENERAL SPECIAL INSPECTION NOTES :**

1. THE ITEMS MARKED WITH A ● IN THE SPECIAL INSPECTION SCHEDULE SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE MATERIAL SAMPLING AND TESTING SECTION, THE PROJECT SPECIFICATIONS, AND THE SPECIFIC GENERAL NOTES SECTIONS. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT, ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL. ANY ITEMS WHICH FAIL TO COMPLY WITH THE APPROVED CONSTRUCTION DOCUMENTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF DISCREPANCIES ARE NOT CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL, ARCHITECT, AND ENGINEER PRIOR TO COMPLETION OF THAT PHASE OF WORK. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
2. ANY CONSTRUCTION OR MATERIAL THAT HAS FAILED INSPECTION SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT.
3. CONTINUOUS SPECIAL INSPECTION MEANS THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED. PERIODIC SPECIAL INSPECTION MEANS THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK. (IBC SECTION 1702)



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**STAMP**



**CLASSROOM UPGRADES -MIDDLE D-**

215 22ND ST.  
Ogden, Utah 84401

MARK	DATE	DESCRIPTION
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ISSUE DATE:	JUNE 20, 2017
PROJECT NO:	17911
CAD DWG FILE:	
DRAWN BY:	ZT
CHK'D BY:	ATH

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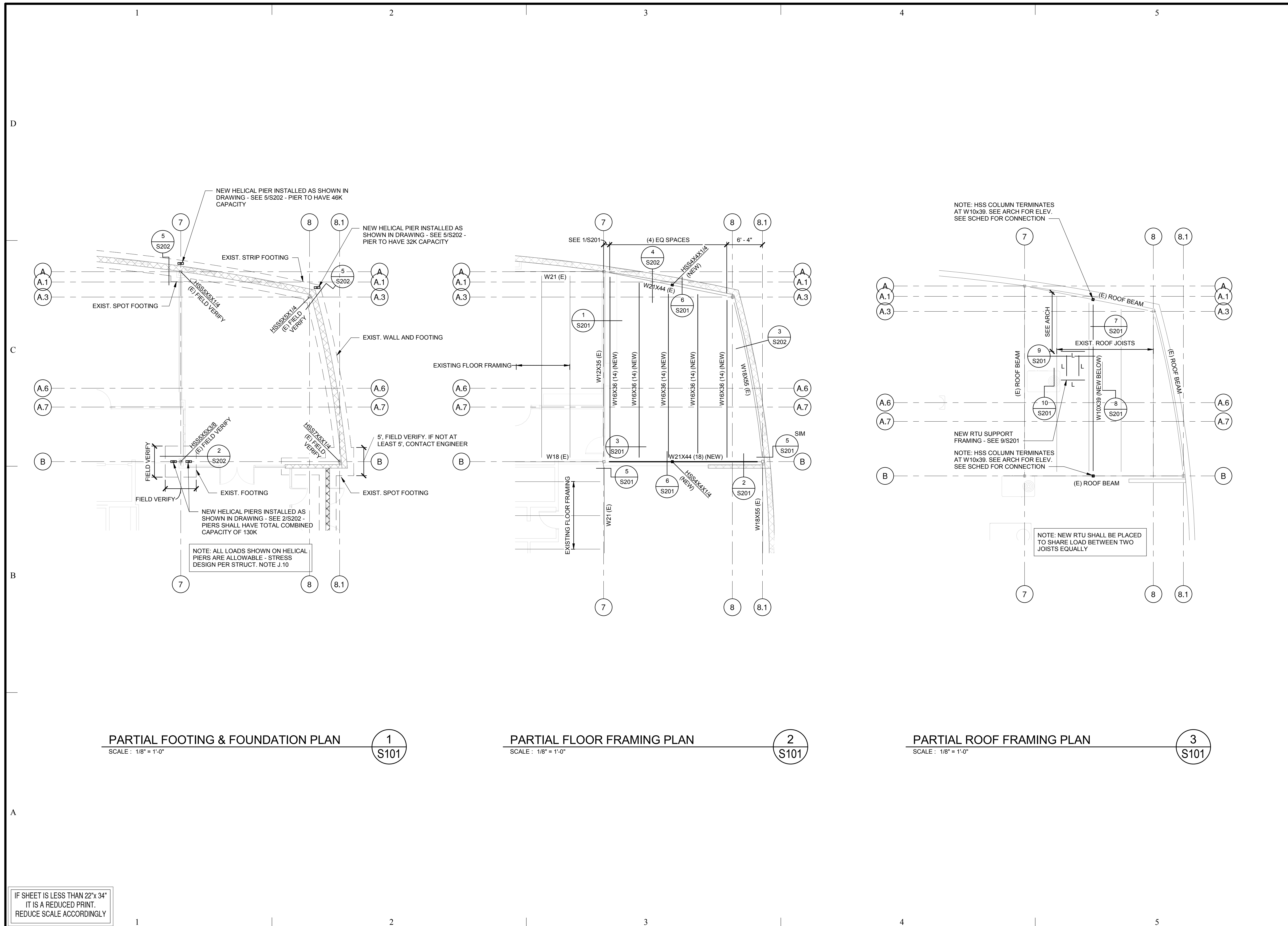
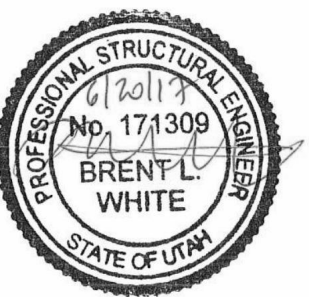
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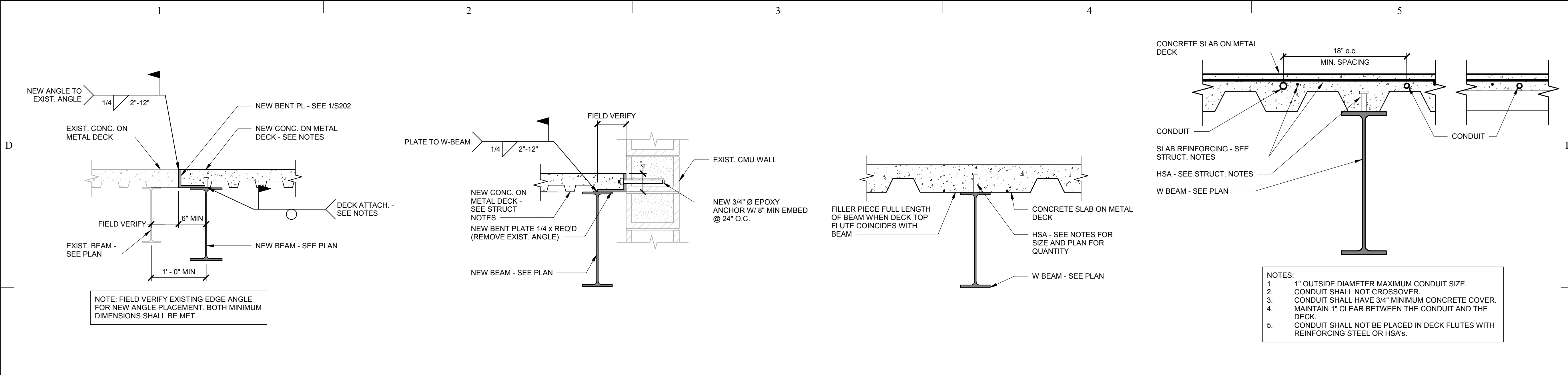
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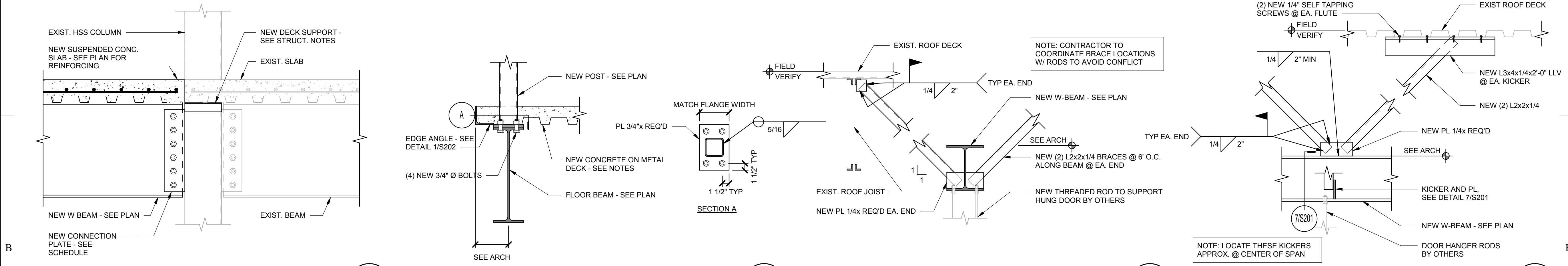


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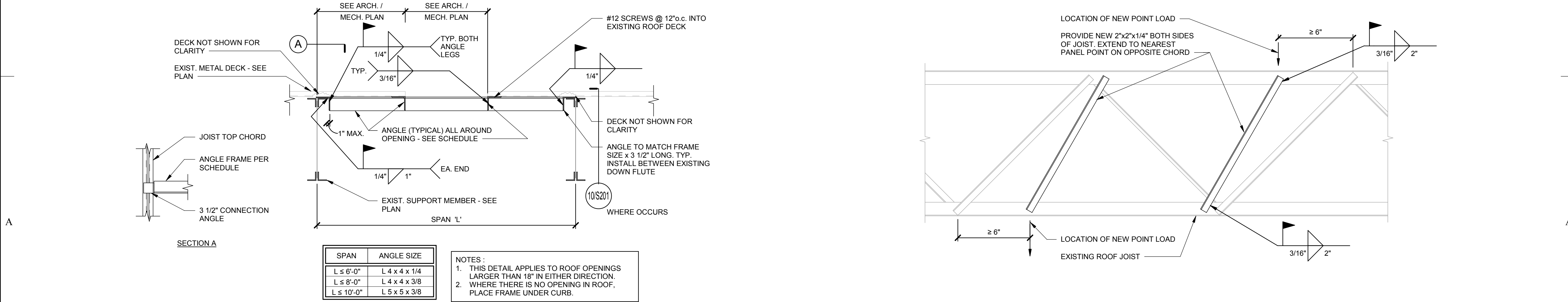


- NOTES:
- 1" OUTSIDE DIAMETER MAXIMUM CONDUIT SIZE.
  - CONDUIT SHALL NOT CROSSOVER.
  - CONDUIT SHALL HAVE 3/4" MINIMUM CONCRETE COVER.
  - MAINTAIN 1" CLEAR BETWEEN THE CONDUIT AND THE DECK.
  - CONDUIT SHALL NOT BE PLACED IN DECK FLUTES WITH REINFORCING STEEL OR HSA's.

1 S201 DETAIL SCALE: NONE  
 2 S201 DETAIL SCALE: NONE  
 3 S201 TYP. COMPOSITE BEAM SCALE: NONE  
 4 S201 CONDUIT PLACEMENT IN SLABS ON METAL DECK SCALE: NONE



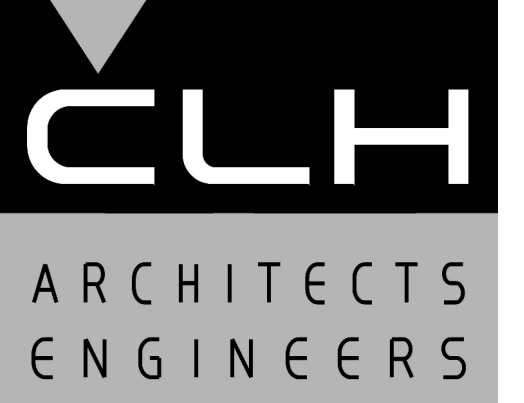
5 S201 TYP. BEAM INTO COLUMN SCALE: NONE  
 6 S201 DETAIL SCALE: NONE  
 7 S201 DETAIL SCALE: NONE  
 8 S201 DETAIL SCALE: NONE



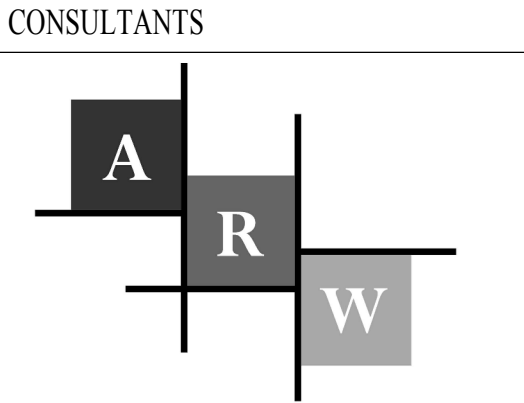
SPAN	ANGLE SIZE
L ≤ 6'-0"	L 4 x 4 x 1/4
L ≤ 8'-0"	L 4 x 4 x 3/8
L ≤ 10'-0"	L 5 x 5 x 3/8

NOTES:  
 1. THIS DETAIL APPLIES TO ROOF OPENINGS LARGER THAN 18" IN EITHER DIRECTION.  
 2. WHERE THERE IS NO OPENING IN ROOF, PLACE FRAME UNDER CURB.

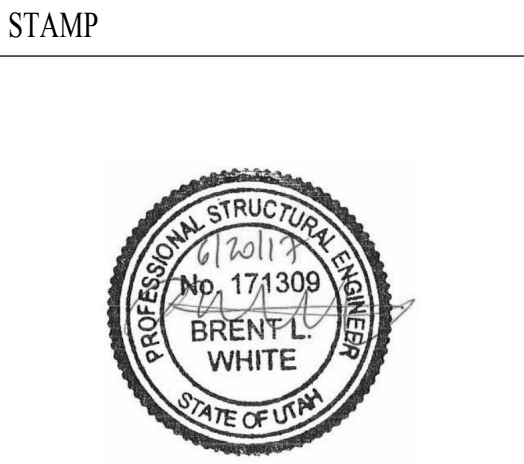
9 S201 TYP. FRAMING @ ROOF OPENINGS & ROOFTOP EQUIPMENT @ EXIST. ROOF SCALE: NONE  
 10 S201 TYPICAL JOIST UPGRADE DETAIL SCALE: NONE



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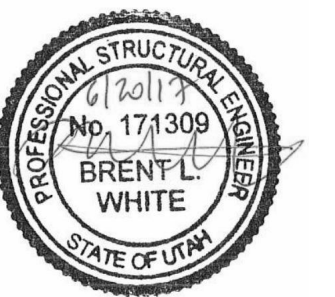
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DETAILS

SHEET NO:

S201

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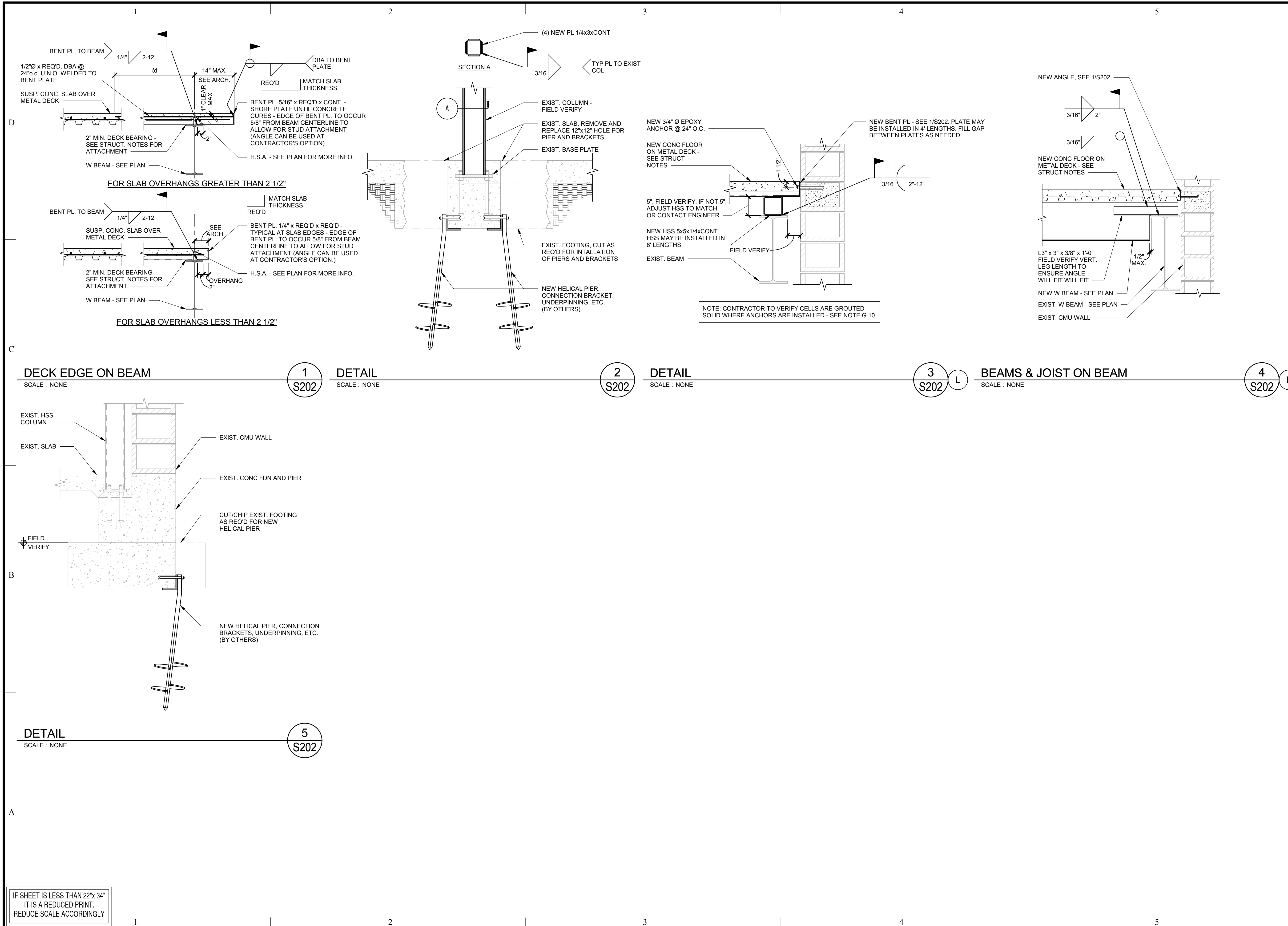
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SHEET TITLE

**DETAILS**

SHEET NO:

**S202**



**ARCHITECTURAL NOTES**

- THE ARCHITECTURAL DRAWINGS ARE THE PRIMARY CONTRACT DOCUMENTS. ANY CONFLICTS BETWEEN ARCHITECTURAL DRAWINGS AND EXISTING CONDITIONS AND/OR DRAWINGS OF OTHER DISCIPLINES SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO ANY WORK. ITEMS AND DIMENSIONS BETWEEN EXISTING AND NEW PORTIONS OF THE PROJECT SHALL BE VERIFIED TO ENSURE COORDINATION.
- THE CONTRACTOR SHALL SUBMIT ANY PROPOSED CHANGES OR MODIFICATIONS OF THE CONTRACT DOCUMENTS, IN WRITING, TO THE ARCHITECT BEFORE PROCEEDING WITH ANY ACTION.
- WHERE SPECIFIC DETAILS ARE NOT PROVIDED, TYPICAL OR SIMILAR INDUSTRY STANDARD DETAILS SHALL APPLY. IF FURTHER DETAIL IS REQUIRED CONTACT ARCHITECT.
- DETAILS ARE PROVIDED FOR VISUAL REPRESENTATION OF DESIGN INTENT. OFTEN THE DETAILS ARE BASED ON A BASIS-OF-DESIGN PRODUCT AND/OR MATERIAL AND MAY BE DIAGRAMMATIC IN NATURE.
- IF A DIFFERENT PRODUCT OR MATERIAL FROM THAT INDICATED ON THE DRAWINGS OR SPECIFICATIONS IS SUBSTITUTED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALTERNATE DETAILS AS REQUIRED FOR THE ARCHITECT TO REVIEW.
- GENERALLY, DIMENSIONS SHOWN OF ARCHITECTURAL DRAWINGS ARE TAKEN FROM THE CORE STRUCTURE FACE (IE. CONCRETE WALL=FACE OF WALL; STUD WALL=FACE OF STUD).
- ANY ADDITIONAL BLOCKING, BRACING, TRIM, FLASHING, SEALANTS, ETC. REQUIRED FOR INSTALLATION OF COMPLETE SYSTEMS. PERTAINING TO DOORS, WINDOWS, OPENINGS, PENETRATIONS, ETC. ARE EXPECTED TO BE PROVIDED AND INSTALLED BY THE CONTRACTOR.
- ASSUME ALL GYP. BD. WALLS TO HAVE TOPSET RUBBER BASE INSTALLED UNLESS NOTED OTHERWISE.
- PROVIDE SEALANT OR TRIM AS APPROPRIATE WHERE DISSIMILAR MATERIALS COME IN CONTACT.
- PROVIDE FLOORING TRANSITION WHERE DISSIMILAR FLOORING MATERIALS OCCUR.
- PAINT ALL MISCELLANEOUS SURFACES, SUPPORTS, METALS, ETC. IF PERMANENTLY ATTACHED TO PAINTED SURFACE OR EXPOSED TO THE ELEMENTS.

**SYMBOLS**

1	View Name 1/8" = 1'-0"	VIEW TITLE
		GRAPHIC SCALE
		NORTH ARROW w/ TRUE NORTH
		GRID INDICATOR
		SECTION CALLOUT
		DETAIL CALLOUT
		DETAIL CALLOUT
		ELEVATION CALLOUT
		LEVEL / ELEVATION CALLOUT
		SPOT ELEVATION CALLOUT
		ROOF SLOPE INDICATOR
		ROOM TAG
		DOOR TAG
		WALL TAG
		WINDOW TAG
		DEMOLITION KEYNOTE
		FIRE RISER

**ABBREVIATIONS**

& L #	AND ANGLE AT POUND OR NUMBER	JAN JST JT	JANITOR JOIST JOINT
AC A.F.F. ALUM APPROX ARCH ASPH	ACOUSTICAL ABOVE FINISH FLOOR ALUMINUM APPROXIMATE ARCHITECTURAL ASPHALT	K.O. LAM LAV	KNOCK OUT LAMINATE LAVATORY
BD BITUM BLDG BLKG BRG BTM	BOARD BITUMINOUS BUILDING BLOCKING BEARING BOTTOM	MAX MAS MECH MEMB MTL MFTR MH MIN MISC M.O. MTD	MAXIMUM MASONRY MECHANICAL MEMBRANE METAL MANUFACTURER MANHOLE MINIMUM MISCELLANEOUS MASONRY OPENING MOUNTED
C C.I. C.J. C.L. CLG CLR C.M.U. C.O. C.O.T.G. COL CONC CONN CONSTR CONT C.T. CTR	TOP OF FINISH CONCRETE CAST IRON CONTROL JOINT CENTER LINE CEILING CLEAR CONCRETE MASONRY UNIT CLEAN OUT CLEAN OUT AT GRADE COLUMN CONCRETE CONNECTION CONSTRUCTION CONTINUOUS CERAMIC TILE CENTER	N N.I.C. NO of # NOM N.T.S.	NORTH NOT IN CONTRACT NUMBER NOMINAL NOT TO SCALE
D.C.W. D.H.W. D.F. DTL DIA DIM DISP DN DRN DS DWG	DOMESTIC COLD WATER DOMESTIC HOT WATER DRINKING FOUNTAIN DETAIL DIAMETER DIMENSION DISPENSER DOWN DRAIN DOWNSPOUT DRAWING	O.C. O.D. OFF OH OPNG OPP	ON CENTER OUTSIDE DIAMETER (DIM) OFFICE OVERHEAD OPENING OPPOSITE
E EA E.I.F.S. E.J. EL ELEC ENGR EQ EQUIP (E) EXP EXT	EAST EACH EXTERIOR INSULATION FINISH SYSTEM EXPANSION JOINT ELEVATION ELECTRICAL ENGINEER EQUAL EQUIPMENT EXISTING EXPANSION EXTERIOR	PL PLAM PLYWD P.O.C. PNL PR PT	PLATE PLASTIC LAMINATE PLYWOOD POINT OF CONNECTION PANEL PAIR POINT
F.A. F.D. FDN F.E. F.E.C. FIN FLR FLASH FLUOR F.O. F.R. FT FTG FUT	FIRE ALARM FLOOR DRAIN FOUNDATION FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET FINISH FLOOR FLASHING FLUORESCENT FACE OF FIRE RATED FOOR OR FEET FOOTING FUTURE	Q.T. RAD R.D. REF REIN REQD RESIL RFG RM RS R.O.	QUARRY TILE RADIUS ROOF DRAIN REFERENCE REINFORCED REQUIRED RESILIENT ROOFING ROOM RESINOUS FLOORING ROUGH OPENING
GA GALV GND GR G.W.B. GYP	GAUGE GALVANIZED GROUND GRADE GYPSUM WALL BOARD GYPSUM	S SCH SECT SHT SHT SIM SPECS SQ S.S. S.ST STD STL STR SUSP SYM SYS	SOUTH SCHEDULE SECTION SHEET SIMILAR SPECIFICATION SQUARE SANITARY SEWER STAINLESS STEEL STANDARD STEEL STORAGE STRUCTURAL SUSPENDE SYMMETRICAL SYSTEM
H.B. HC H.M. HORIZ HGT	HOSE BIBB HANDICAP HOLLOW METAL HORIZONTAL HEIGHT	TLT TRTD T & B T.O. TRANS TYP	TOILET (ROOM) TREATED (PRESERVATIVE) TOP & BOTTOM TOP OF TRANSFORMER TYPICAL
I.D. IN INSUL INT	INSIDE DIAMETER (DIM) INCH. INCHES INSULATION INTERIOR	U.N.O. UT VERT VEST W w WC WD WO WP	UNLESS NOTED OTHERWISE URINAL VERTICAL VESTIBULE WEST WITH WATER CLOSET WOOD WITHOUT WATERPROOF



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JUNE 20, 2017

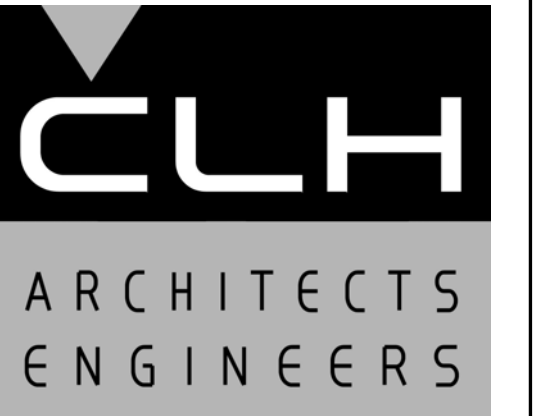
SHEET TITLE

**ARCHITECTURAL  
NOTES**

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**A001**

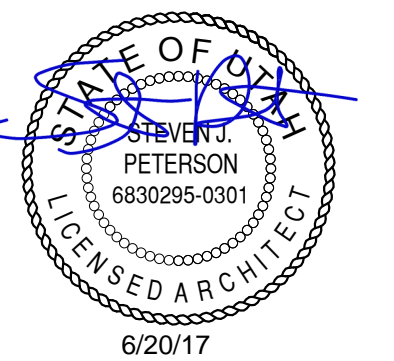
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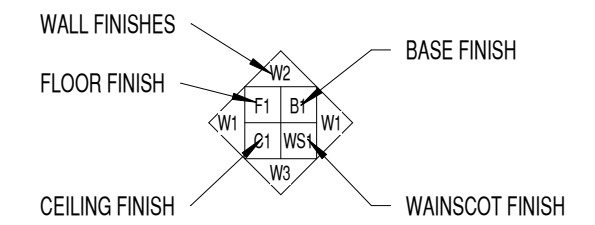
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SHEET TITLE  
**GROUND FLOOR  
PLAN**

SHEET NO:

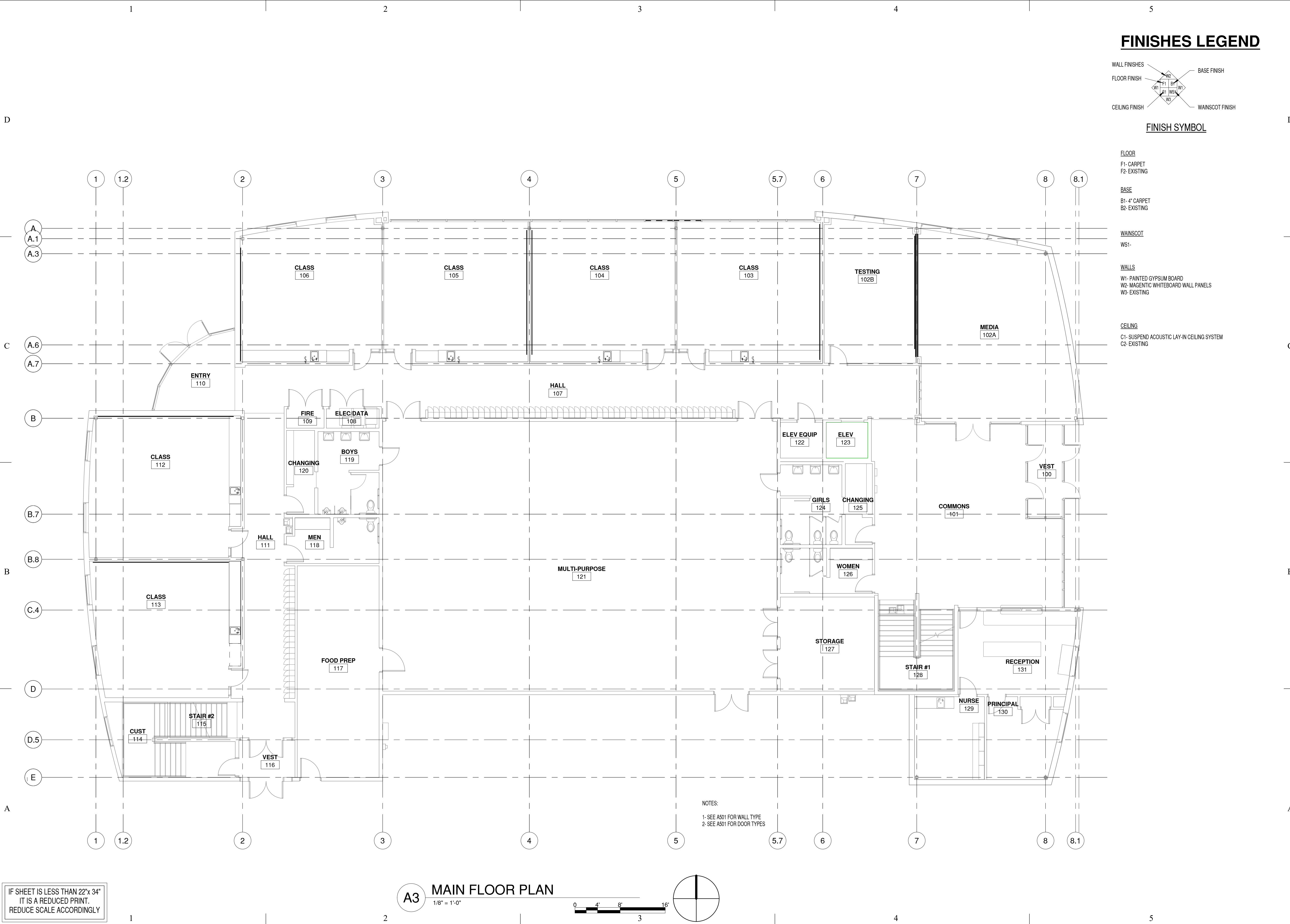
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**FINISHES LEGEND**



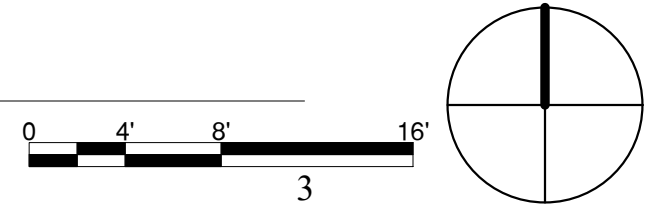
**FINISH SYMBOL**

- FLOOR**  
F1- CARPET  
F2- EXISTING
- BASE**  
B1- 4" CARPET  
B2- EXISTING
- WAINSCOT**  
WS1-
- WALLS**  
W1- PAINTED GYPSUM BOARD  
W2- MAGNETIC WHITEBOARD WALL PANELS  
W3- EXISTING
- CEILING**  
C1- SUSPEND ACOUSTIC LAY-IN CEILING SYSTEM  
C2- EXISTING



NOTES:  
1- SEE A501 FOR WALL TYPE  
2- SEE A501 FOR DOOR TYPES

**A3 MAIN FLOOR PLAN**  
1/8" = 1'-0"



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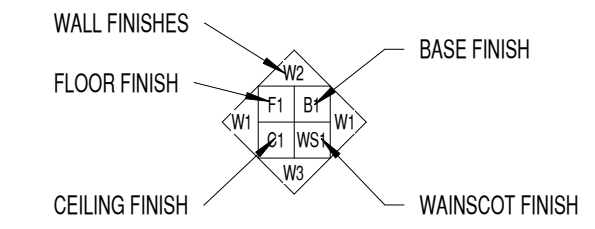
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**SECOND FLOOR  
PLAN**

SHEET NO:

**A102**

**FINISHES LEGEND**

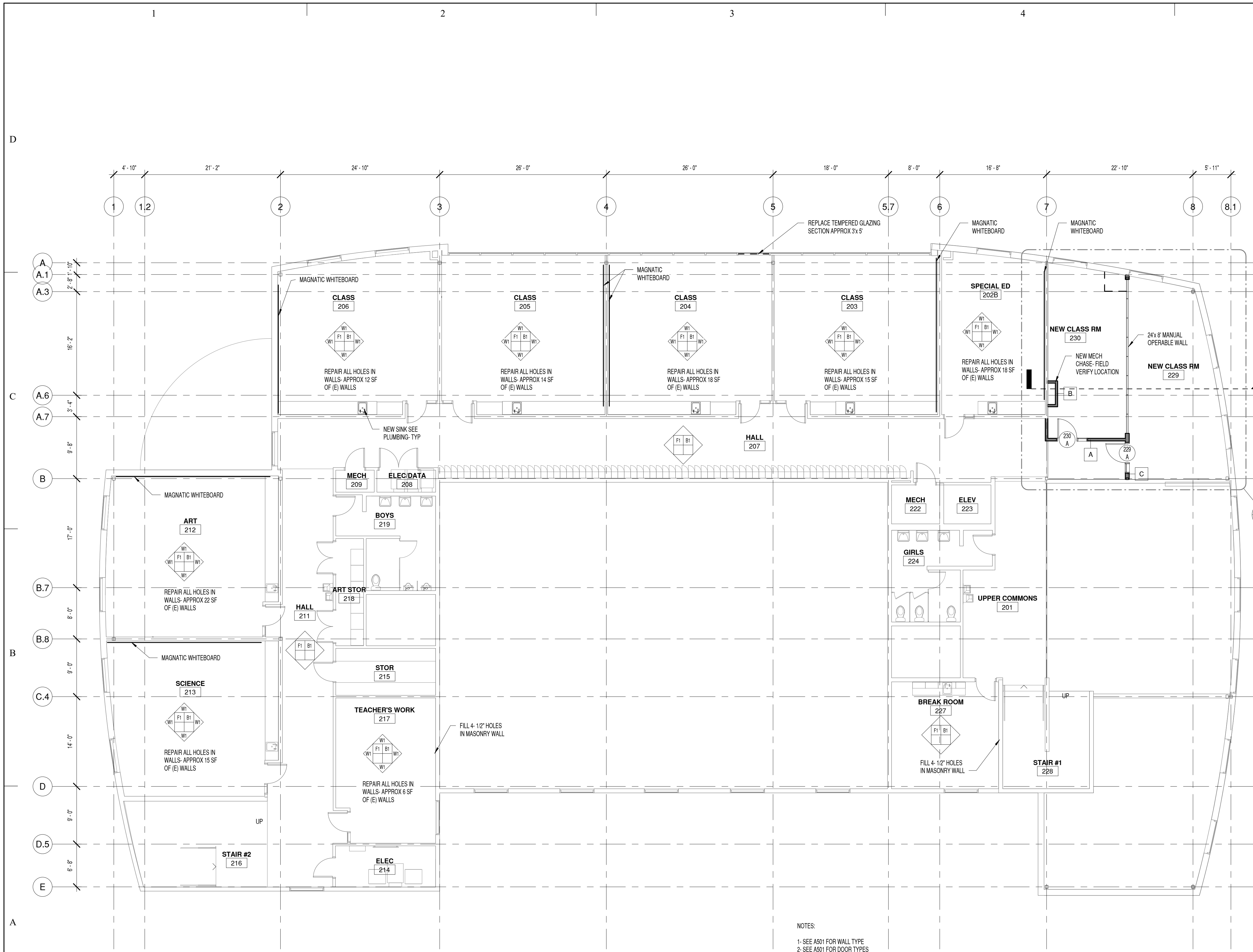


**FINISH SYMBOL**

- FLOOR**  
F1- CARPET  
F2- EXISTING
- BASE**  
B1- 4" CARPET  
B2- EXISTING
- WAINSCOT**  
WS1-
- WALLS**  
W1- PAINTED GYPSUM BOARD  
W2- MAGNETIC WHITEBOARD WALL PANELS  
W3- EXISTING
- CEILING**  
C1- SUSPEND ACOUSTIC LAY-IN CEILING SYSTEM  
C2- EXISTING

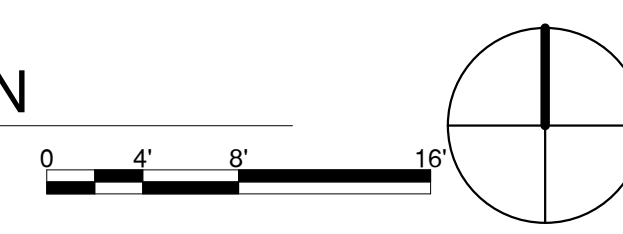
**DOORS**

- DOOR 229 A AND 230 A  
3x7 WOOD SOLID PANEL TO MATCH (E)  
3 PAIR BALL BEARING HINGES  
1 CLOSER WITH MAGNETIC HOLD OPEN  
1 CLASS ROOM LOCKSET  
SEE A1/A501 FOR FRAME LAYOUT



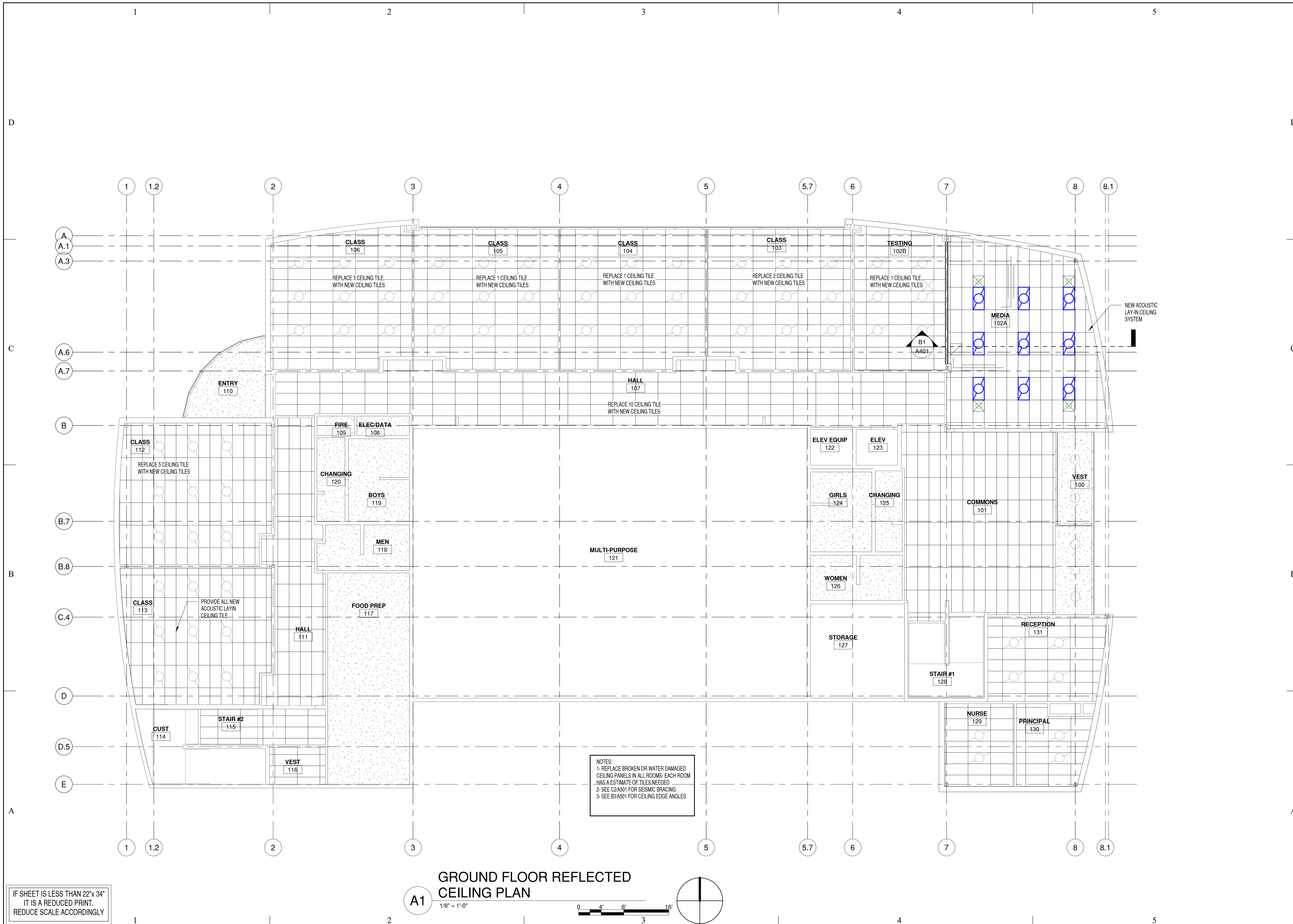
NOTES:  
1- SEE A501 FOR WALL TYPE  
2- SEE A501 FOR DOOR TYPES

**A3 SECOND FLOOR PLAN**  
1/8" = 1'-0"



IF SHEET IS LESS THAN 22"x 34"  
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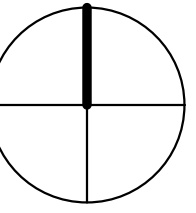


NOTES:  
1- REPLACE BROKEN OR WATER DAMAGED  
CEILING PANELS IN ALL ROOMS- EACH ROOM  
HAS A ESTIMATE OF TILES NEEDED  
2- SEE C2/A501 FOR SEISMIC BRACING  
3- SEE C3/A501 FOR CEILING EDGE ANGLES

**GROUND FLOOR REFLECTED  
CEILING PLAN**

**A1**

1/8" = 1'-0"



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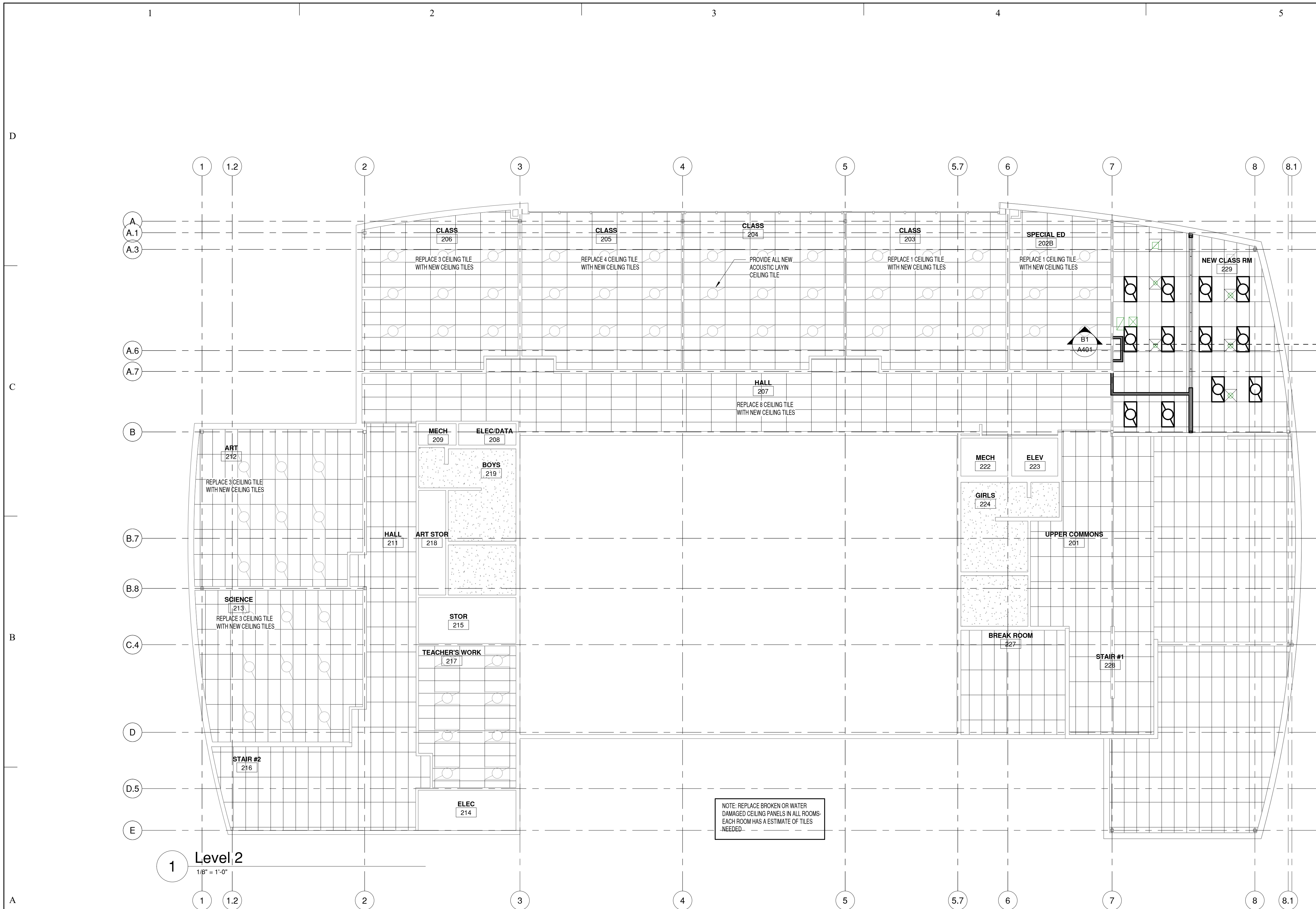
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DRAWN BY:	Author
CHK'D BY:	Checker

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SHEET TITLE  
**SECOND FLOOR  
REFLECTED  
CEILING PLAN**

SHEET NO:

A104

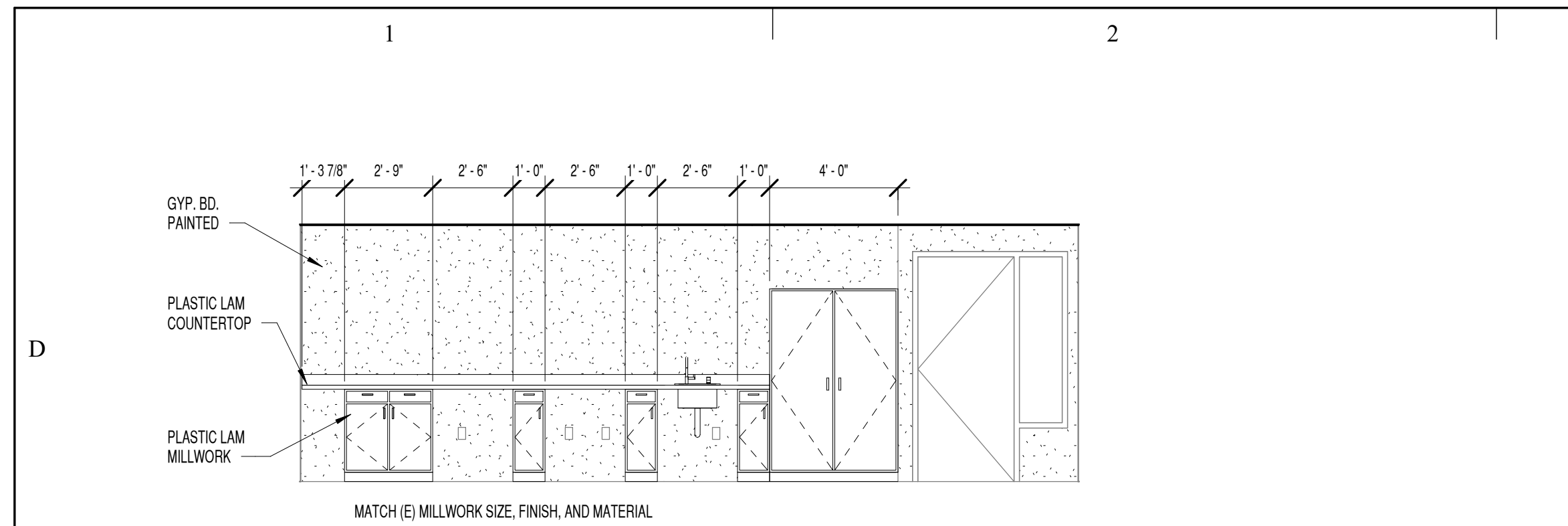


NOTE: REPLACE BROKEN OR WATER  
DAMAGED CEILING PANELS IN ALL ROOMS-  
EACH ROOM HAS A ESTIMATE OF TILES  
NEEDED.

1 Level 2  
1/8" = 1'-0"

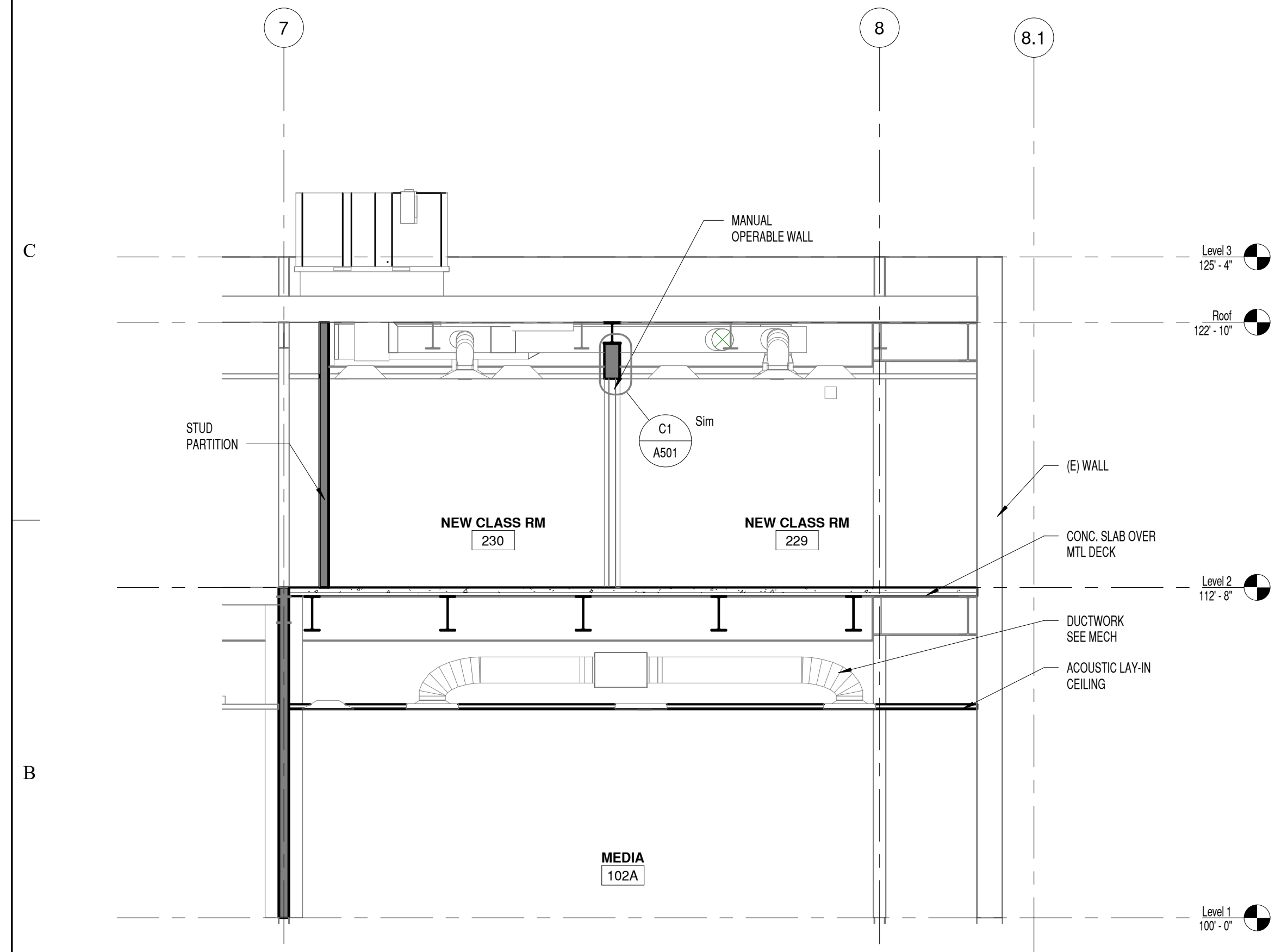
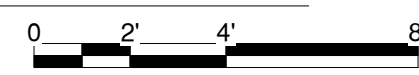
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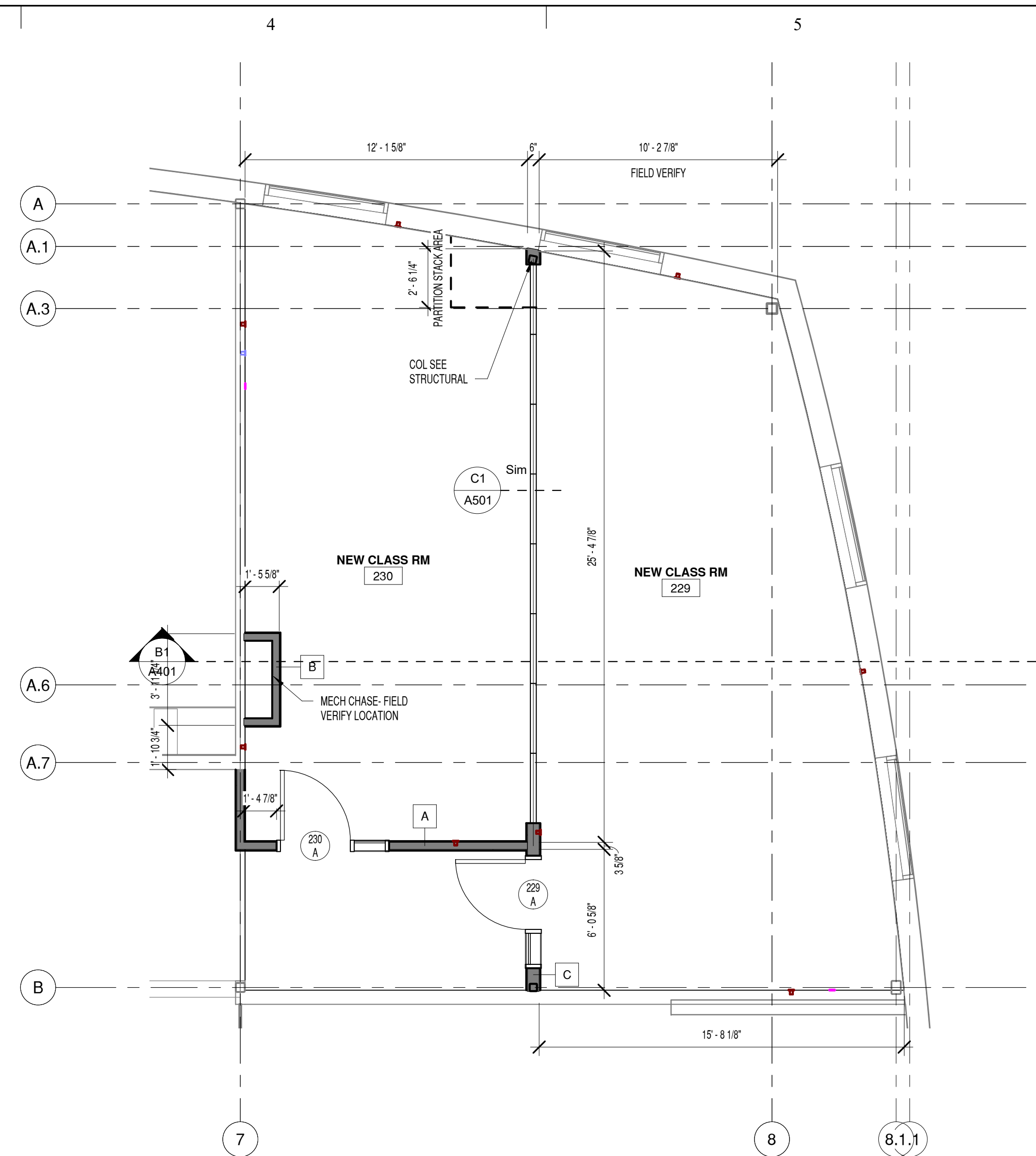
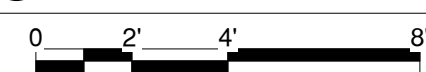
**D1 INTERIOR ELEV**

1/4" = 1'-0"



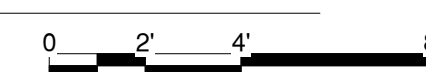
**B1 BUILDING SECTION**

1/4" = 1'-0"



**B4 ENLARGED PLAN**

1/4" = 1'-0"



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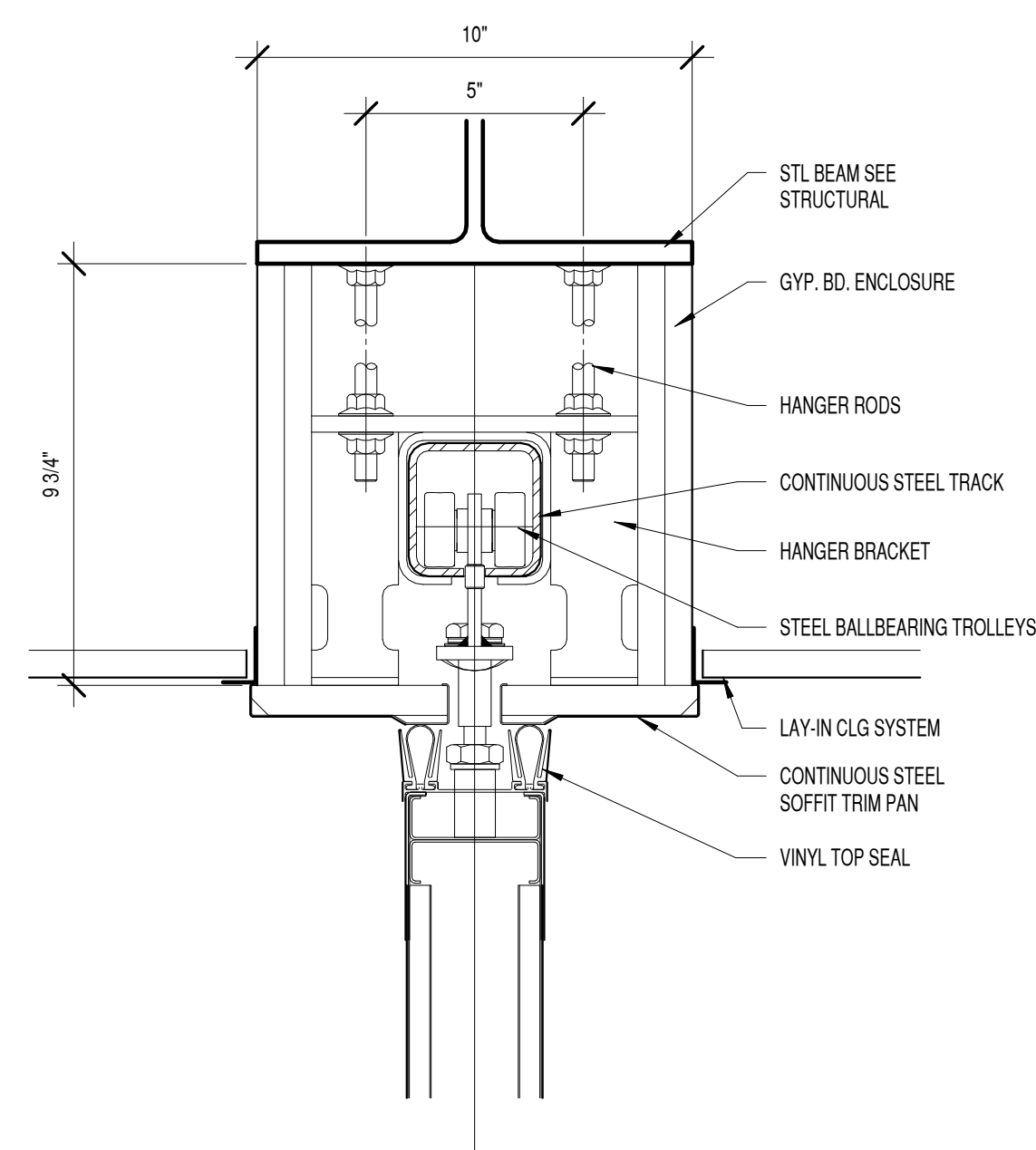
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SHEET TITLE

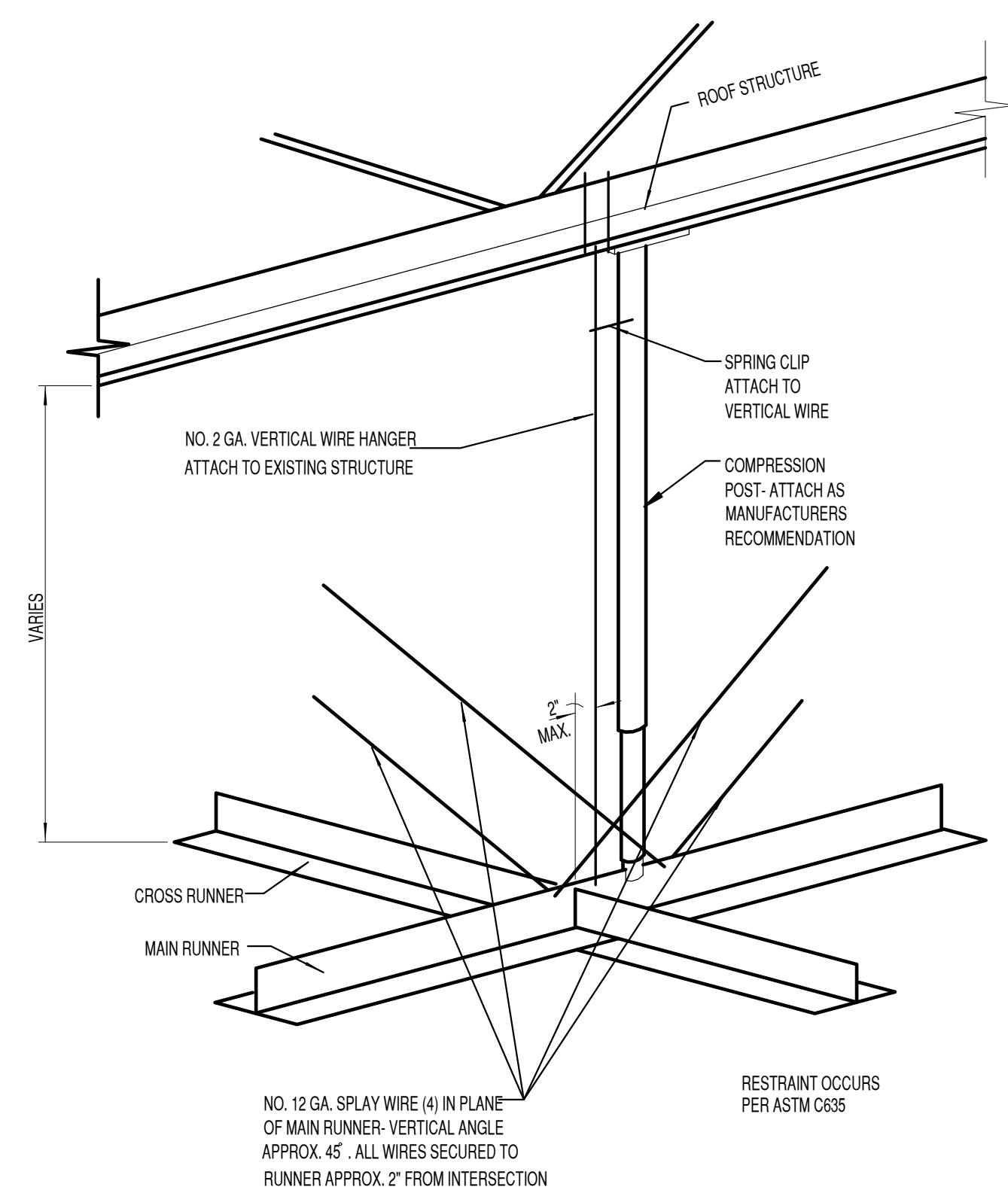
**DETAILS**

SHEET NO:

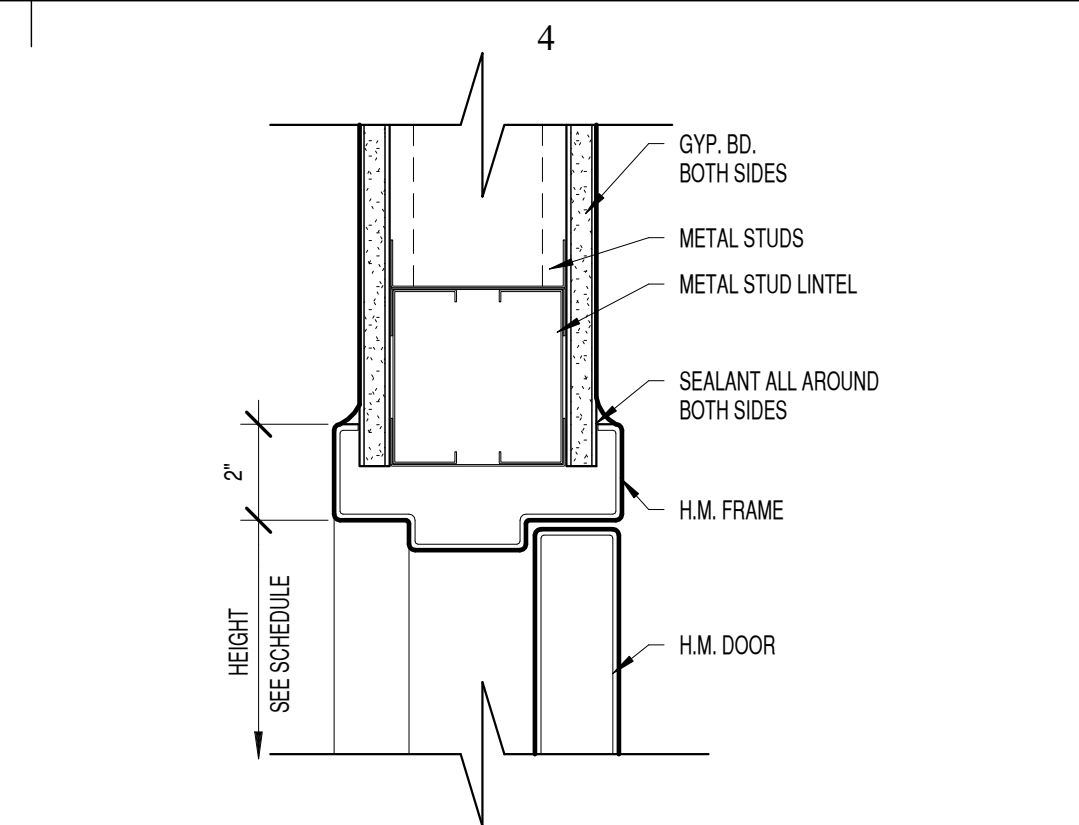
**A501**



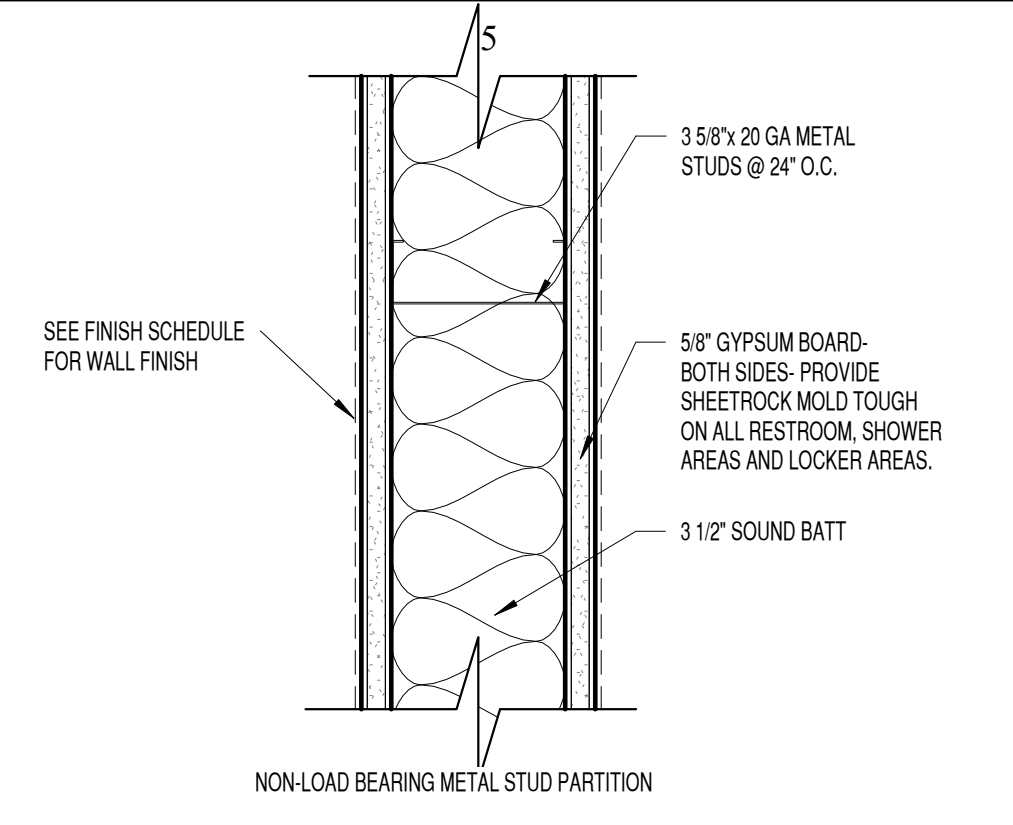
**C1 OPERABLE PARTITION HEAD**  
3" = 1'-0" 0 3" 6" 9"



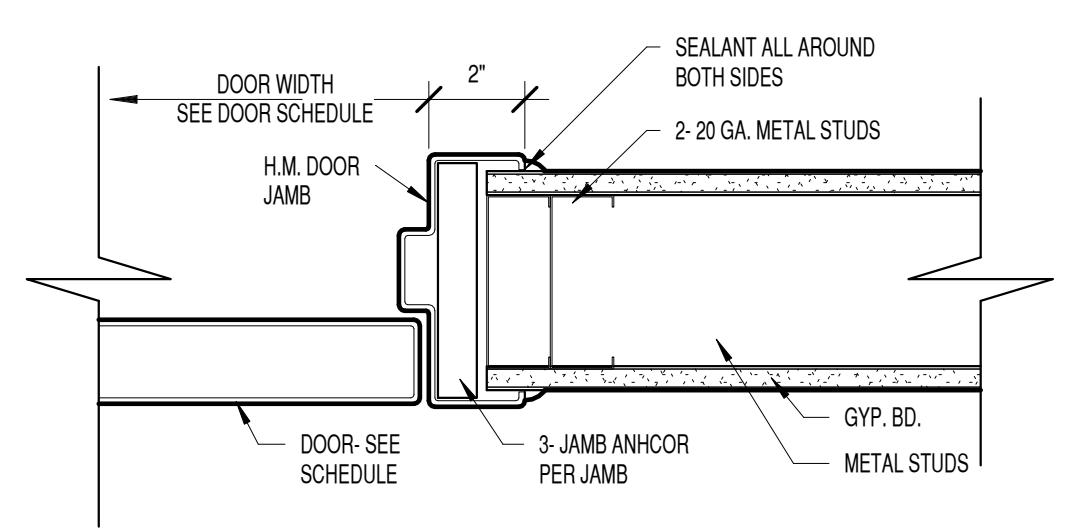
**C2 SEISMIC BRACE**  
1 1/2" = 1'-0" 0 1/2" 1" 1 1/2"



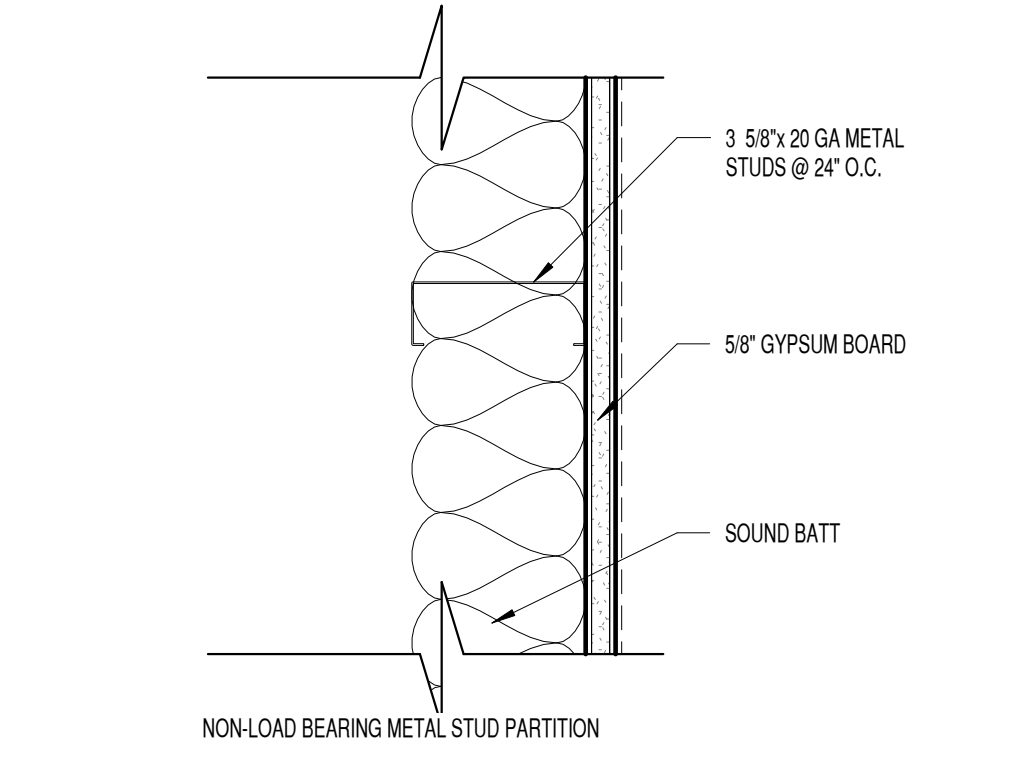
**D4 DOOR HEAD- MTL STUDS**  
3" = 1'-0" 0 3" 6" 9"



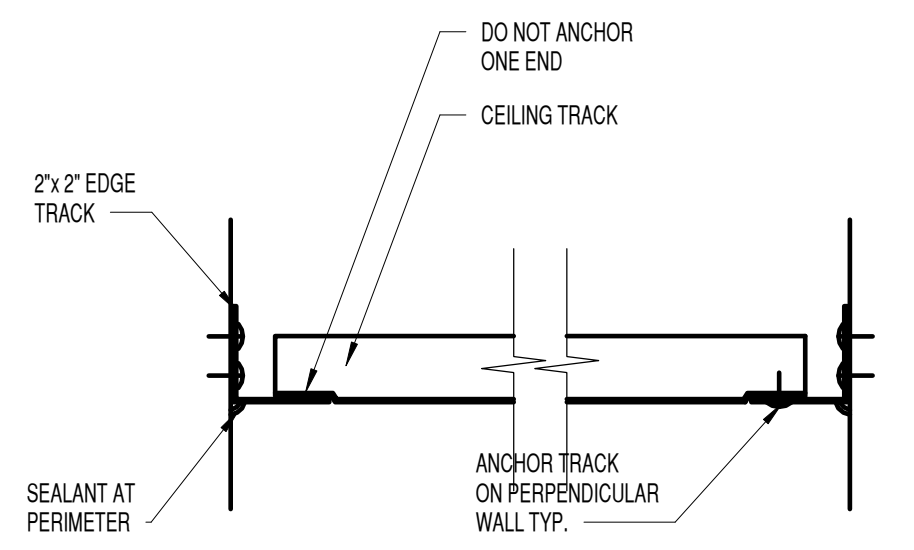
**D5 WALL TYPE "A"**  
3" = 1'-0" 0 3" 6" 9"



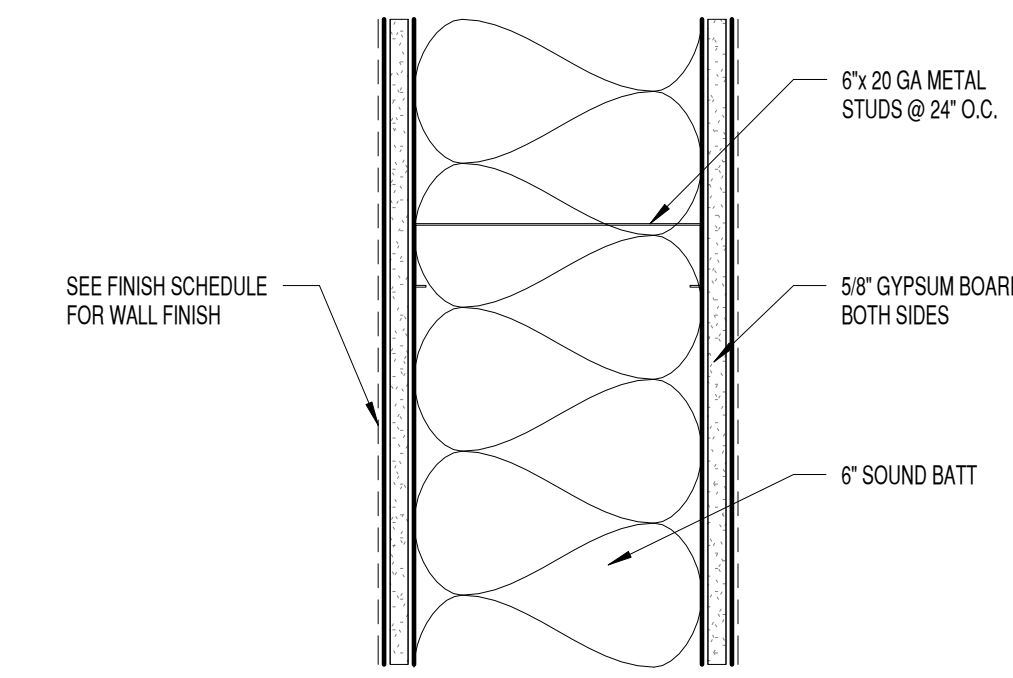
**C4 DOOR JAMB- MTL STUDS**  
3" = 1'-0" 0 3" 6" 9"



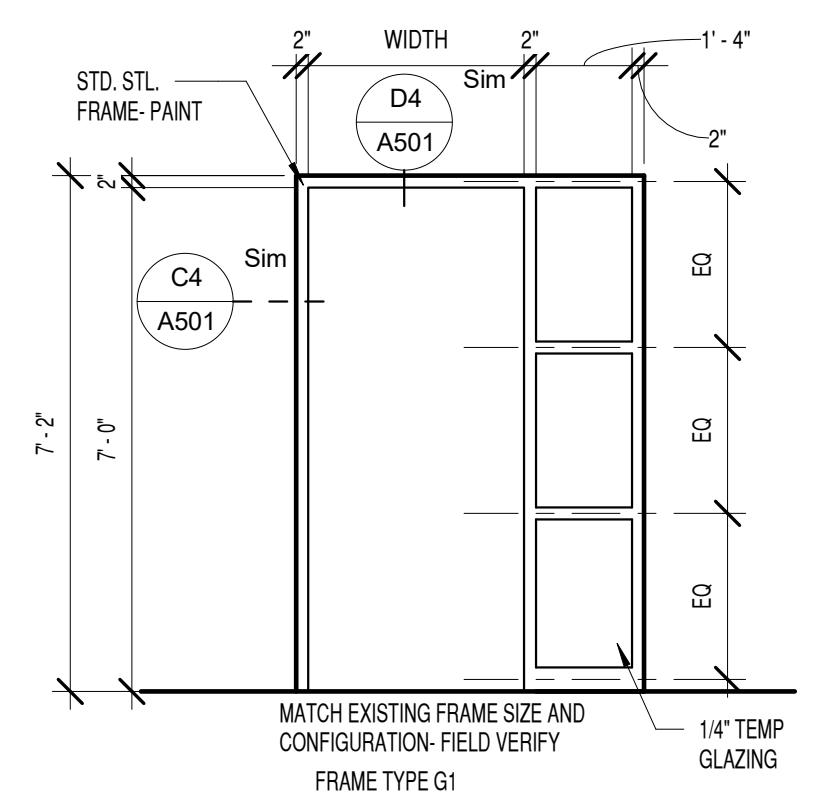
**C5 WALL TYPE "B"**  
3" = 1'-0" 0 3" 6" 9"



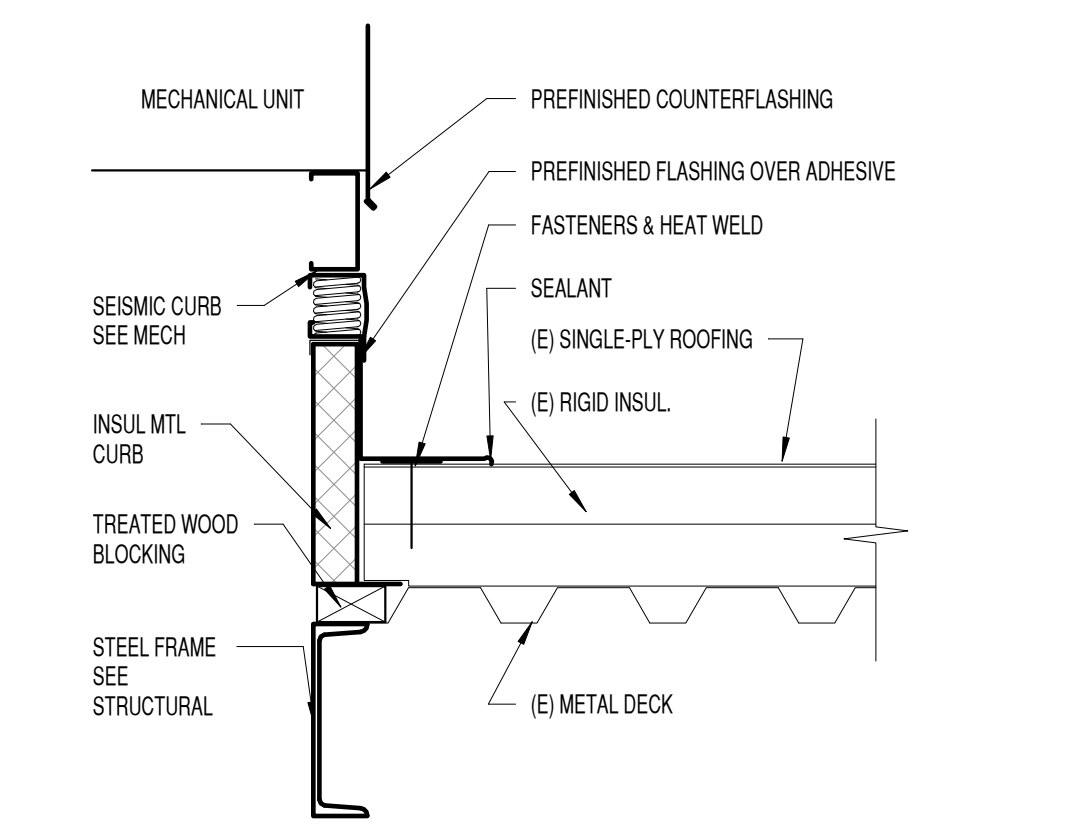
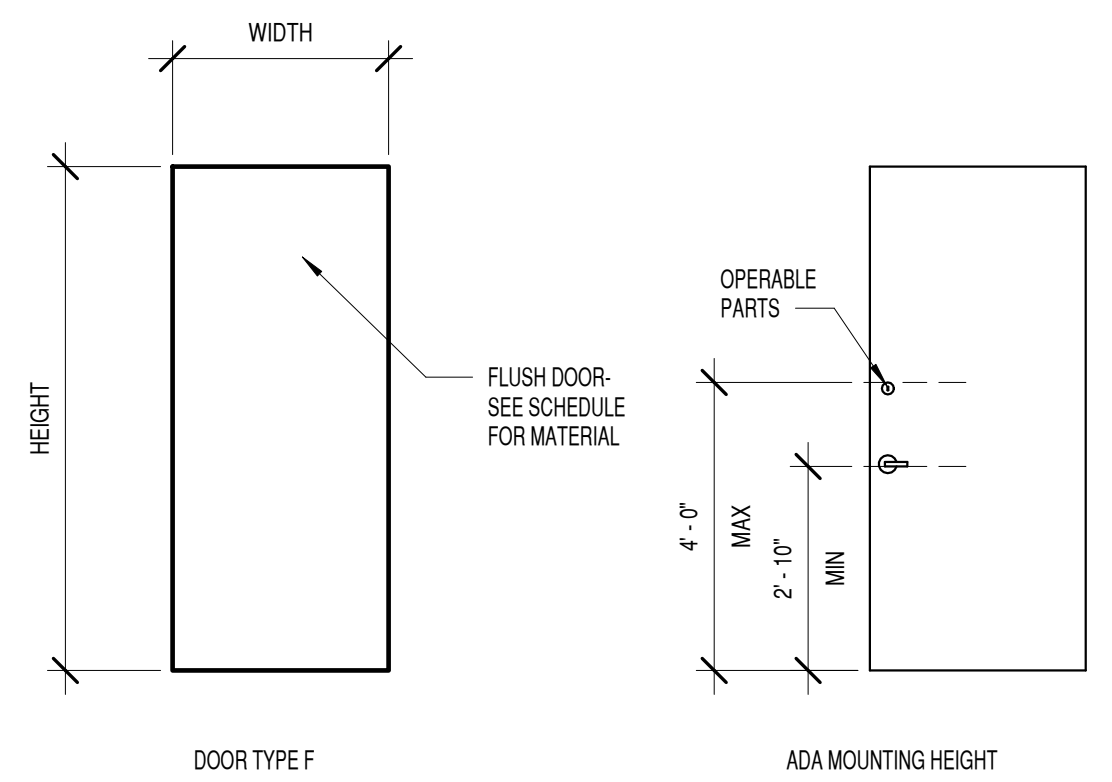
**B3 CEILING TRACK**  
3" = 1'-0" 0 3" 6" 9"



**B5 WALL TYPE "C"**  
3" = 1'-0" 0 3" 6" 9"



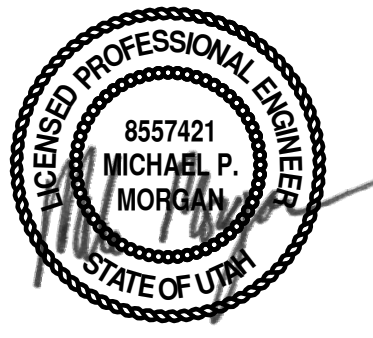
**A2 DOOR AND FRAME TYPES**  
3/8" = 1'-0" 0 2" 4" 6"



**A4 MECH. UNIT CURB**  
1 1/2" = 1'-0" 0 1/2" 1" 1 1/2"

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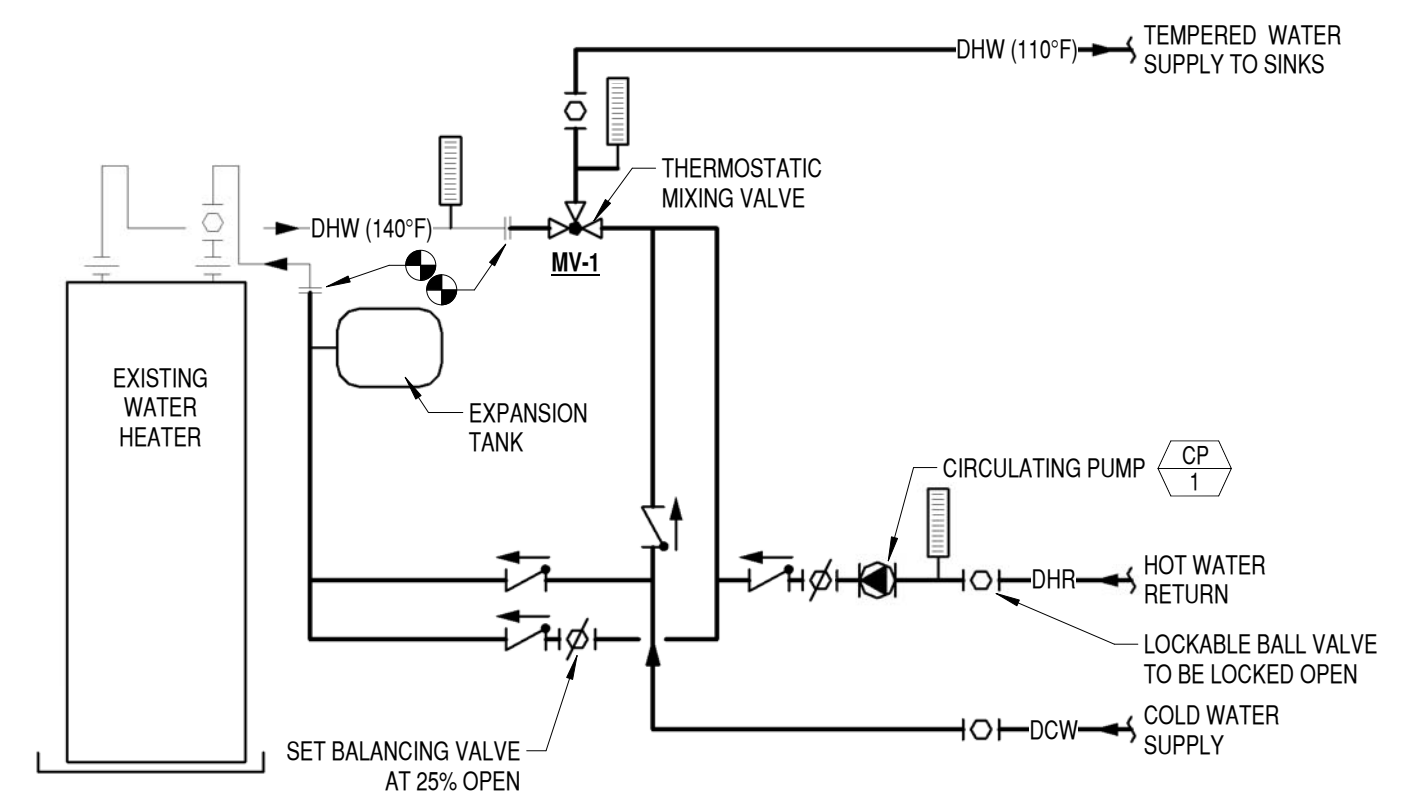
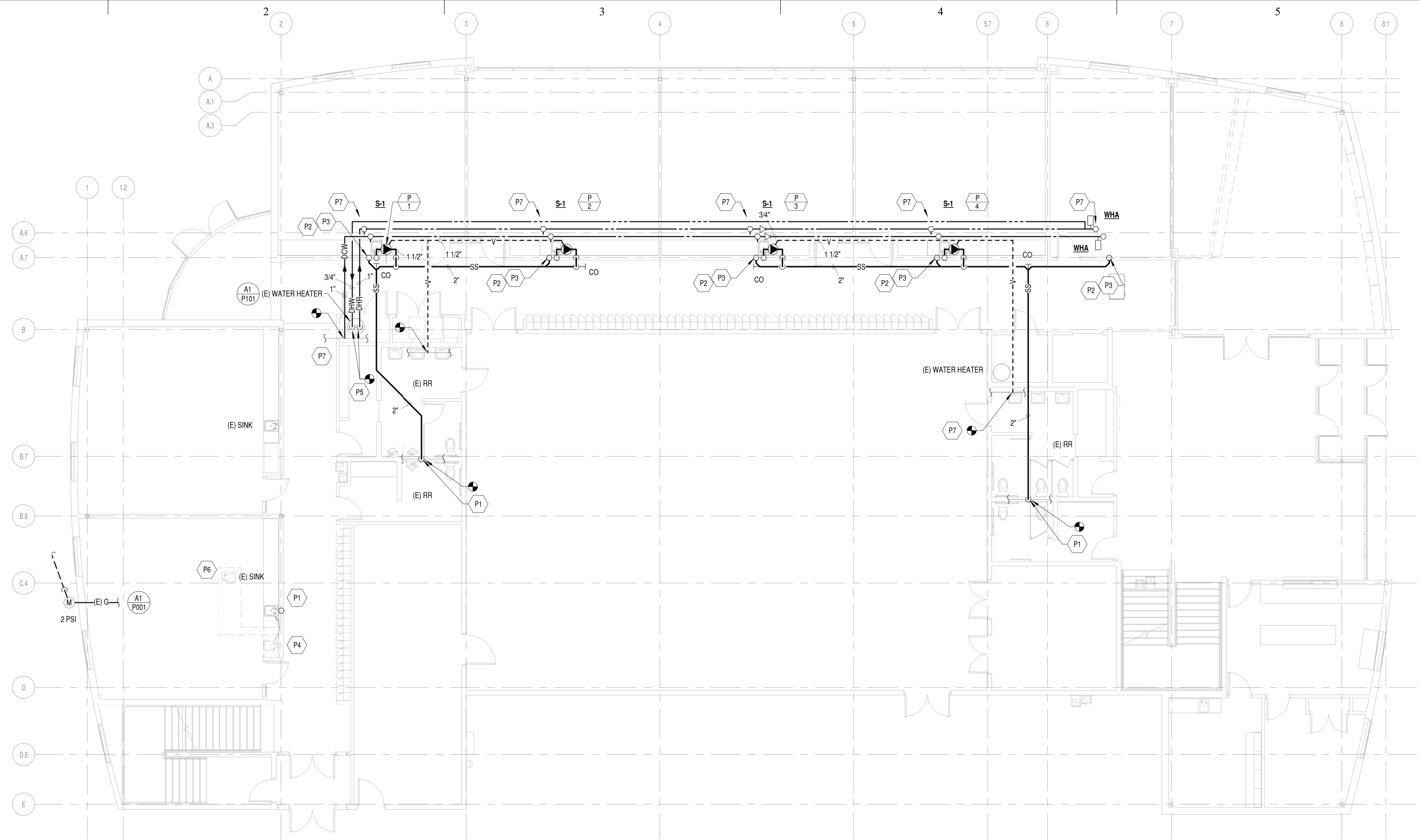
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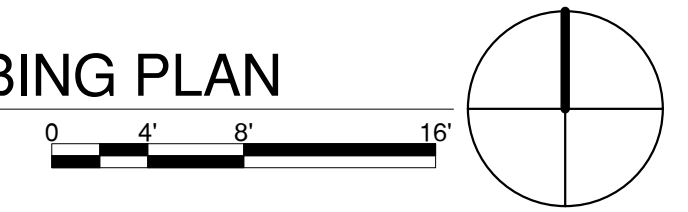
SHEET TITLE  
**MAIN FLOOR  
PLUMBING  
PLAN**

SHEET NO:  
**P101**



**A1**  
**HOT WATER RECIRCULATION  
SCHEMATIC**  
NO SCALE

**B1**  
**MAIN FLOOR PLUMBING PLAN**  
1/8" = 1'-0"



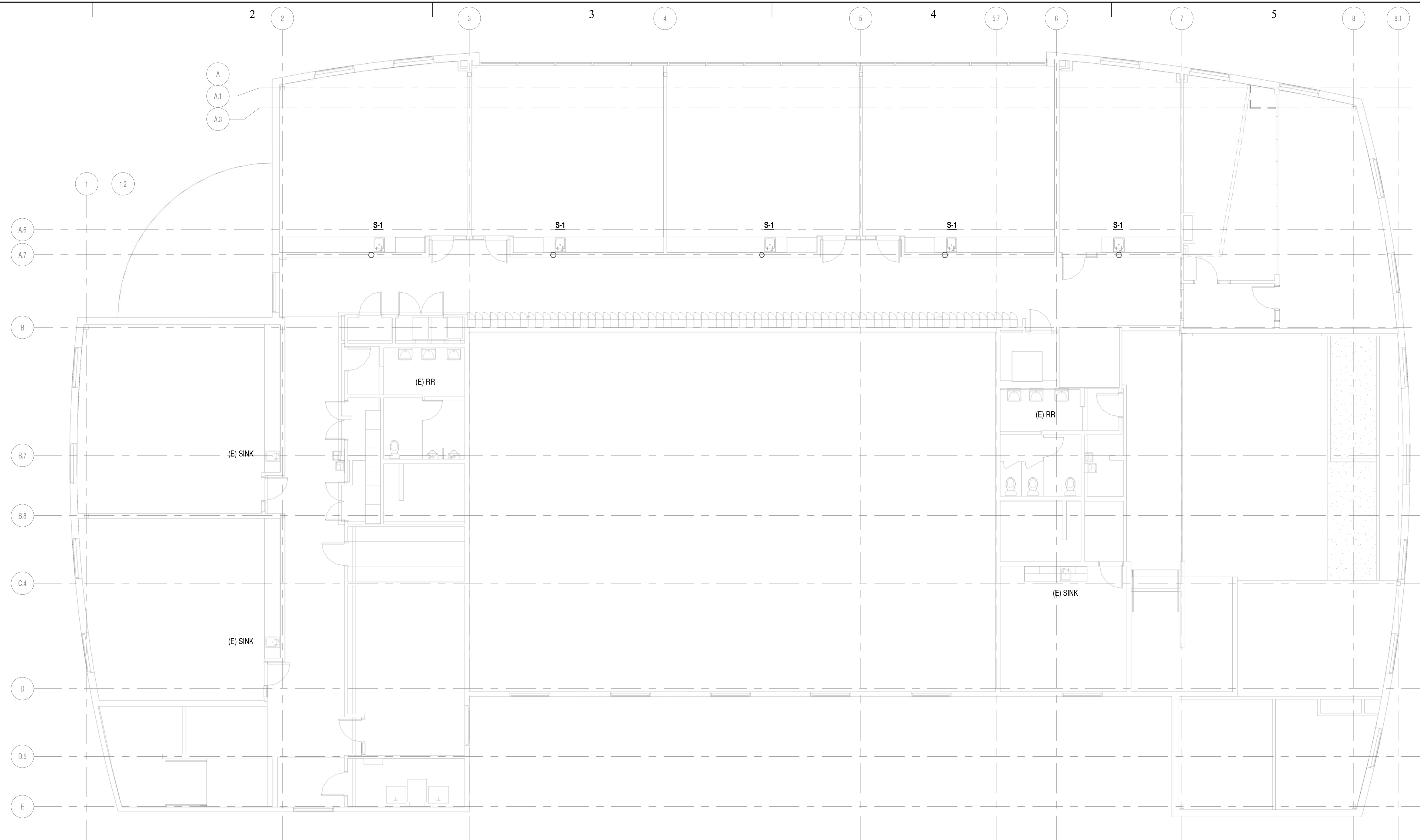
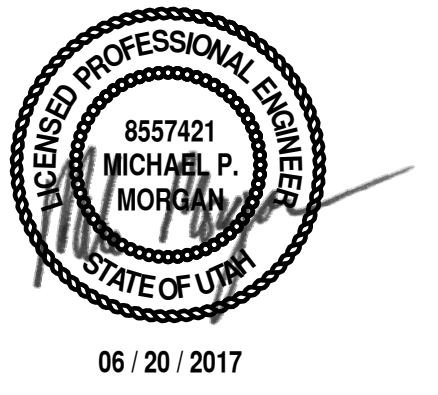
**PLUMBING KEYED NOTES**

MARK	NOTE (not all notes apply to this sheet)
P1	PIPE DOWN WALL TO CONNECT INTO (E) BELOW GRADE SEWER.
P2	INSTALL NEW LINE SIZE SANITARY SEWER CHECK VALVE.
P3	CORE DRILL THRU UPPER CONCRETE DECK FOR NEW SINK ON SECOND FLOOR.
P4	RELOCATE (E) SINK AND UTILITIES TO NEW LOCATION IN COUNTER.
P5	SEE DETAIL A1/P101
P6	(E) SINK TO BE REMOVED AND RETURNED TO OWNER. UTILITIES TO BE CAPPED AS CLOSE TO MAIN AS POSSIBLE.
P7	WATER SUPPLY UP AND DOWN TO NEW SINK (S-1).

**NOTE:**  
LOCATION OF EXISTING UTILITIES  
ARE ESTIMATED. CONTRACTOR TO  
FIELD VERIFY EXISTING LOCATION.

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**B1** SECOND FLOOR PLUMBING PLAN  
1/8" = 1'-0"  
0 4' 8' 16'

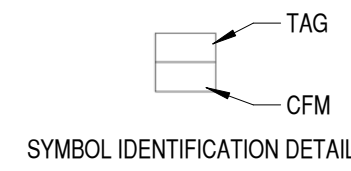
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PACKAGE HVAC UNIT SCHEDULE																						
MARK	MANUFACTURER & MODEL	DESCRIPTION	AREA SERVED	REFRIG	ACFM	OUTSIDE AIR CFM	EXTERNAL STATIC PRESSURE (IN)	FAN RPM	HEATING GAS				UNIT ELECTRICAL				COOLING COIL			DIMENSIONS LxWxH (IN)	WEIGHT (LBS)	NOTES
									EDB	LDB	INPUT MBH	OUTPUT MBH	MCA	MOP	VOLTS/PHASE	EER RATING	EDB/EWB (°F)	LDB/LWB (°F)	TOTAL MBH			
/RTU 22	TRANE YHC037	DOWNFLOW	NEW CLASSROOM 229 & NEW CLASSROOM 230	R-410A	1150	370	0.750	879	65	140	83.2	66.6	11.4	15.0	460/3	17.5	84/60	53/48	31.6	70 x 44 x 36	544	SEISMIC CURB, ECONOMIZER

NOTE: ALL PERFORMANCE BASED ON SITE ELEVATION OF 4200 FT ABOVE SEA LEVEL.

REGISTER, GRILLE AND DIFFUSER SCHEDULE											
MARK	MANUFACTURER & MODEL	DESCRIPTION	MATERIAL	FINISH	FRAME	DAMPER	MAX NC	MAX CFM	MAX APD	NECK SIZE	NOTES
S-1	TITUS TMS	CEILING LOUVERED SUPPLY DIFFUSER	ALUMINUM	STD WHITE #26	LAY-IN	IN DUCT TAKE-OFF	19	279	0.064	8"ø	
S-2	TITUS TMS	CEILING LOUVERED SUPPLY DIFFUSER	ALUMINUM	STD WHITE #26	LAY-IN	IN DUCT TAKE-OFF	18	382	0.051	10"ø	
R-1	TITUS PAR	CEILING LOUVERED RETURN GRILLE	STEEL	STD WHITE #26	LAY-IN	IN DUCT TAKE-OFF	20	500	0.09	12 x 12"	



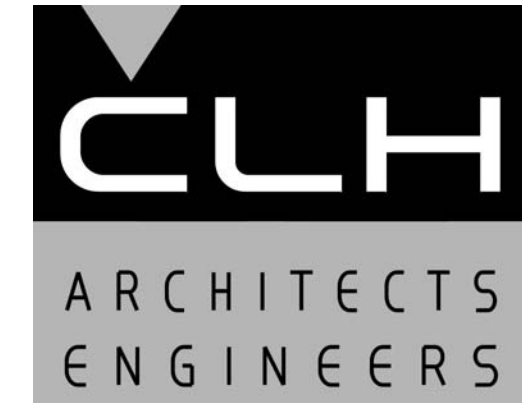
DUCT INSULATION SCHEDULE		
DUCT TYPE	DUCT LOCATION	INSULATION R-VALUE
SUPPLY, RETURN	NOT WITHIN CONDITIONED SPACE	R-6
SUPPLY, RETURN	OUTSIDE BUILDING ENVELOPE	R-8

NOTES:  
REQUIREMENTS APPLIED TO THE DUCT TYPE LISTED, WHETHER HEATED OR MECHANICALLY COOLED. MECHANICALLY COOLED DUCTS REQUIRING INSULATION SHALL HAVE A VAPOR RETARDER, WITH A PERM RATING NOT GREATER THAN 0.5 AND ALL JOINTS SEALED.  
INSULATION TYPES: MINIMUM DENSITIES AND OUT OF PACKAGE THICKNESS. NOMINAL R-VALUES ARE FOR THE INSULATION AS INSTALLED AND DO NOT INCLUDE AIR FILM RESISTANCE.

### MECHANICAL GENERAL NOTES:

- ALL EQUIPMENT MANUFACTURERS SHOWN AS A BASIS OF DESIGN. NOT INTENDED TO SOLE SOURCE EQUIPMENT MANUFACTURER.
- ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST STATE ADOPTED EDITION OF THE INTERNATIONAL MECHANICAL CODE AND SMACNA.
- MECHANICAL PLANS ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE THEIR WORK WITH OTHER TRADES, AND ACTUAL JOB SITE CONDITIONS. CONTRACTOR TO FIELD VERIFY QUANTITIES AND DIMENSIONS.
- CONTRACTOR TO PROVIDE ALL NECESSARY MATERIALS, DUCTWORK, HANGERS, FITTINGS, OFFSETS, INSULATION AND ACCESSORIES LOGICALLY REQUIRED FOR A COMPLETE FUNCTIONAL AIR DELIVERY SYSTEM.
- DUCT DIMENSIONS ON DRAWINGS ARE INSIDE DIMENSIONS. MINIMUM DUCTWORK GAUGE TO BE 26 GAUGE.
- CONTRACTOR SHALL COORDINATE ALL SUPPLY DIFFUSER PLACEMENTS.
- ALL SQUARE ELBOWS IN SUPPLY AND RETURN DUCTWORK SHALL HAVE SINGLE THICKNESS TURNING VANES.
- INSULATED FLEXIBLE DUCT NOT TO EXCEED 4 FEET IN LENGTH.
- CONNECTIONS TO SUPPLY DIFFUSERS TO BE MADE WITH A RIDGED CONNECTION SO THAT CLEAR AND UNOBSTRUCTED AIRFLOW IS ACHIEVED.
- CONTRACTOR TO FURNISH FILTERS.
- CONTRACTOR TO FURNISH AND INSTALL CONDENSATE P-TRAP ON ALL NEW AIR HANDLERS PER DETAILS SHOWN ON DRAWING.
- ALL PIPING THAT COMES IN CONTACT WITH A DISSIMILAR METAL TO BE PROTECTED AGAINST GALVANIC CORROSION.
- REMOTE CONCEALED CEILING CABLE CONTROL SYSTEM REQUIRED FOR ALL MANUAL VOLUME DAMPERS IN HARD LID CEILING APPLICATIONS.
- SEISMIC SUPPORTS ARE NOT REQUIRED FOR HVAC DUCTWORK IF DUCTS ARE SUSPENDED FROM HANGARS 12 INCH OR LESS IN LENGTH.
- REFER TO STRUCTURAL DETAILS FOR ALL EQUIPMENT AND DUCT PENETRATIONS THROUGH ROOF. IF DETAIL IS NOT PRESENT THEN CONTACT ENGINEER.
- ALL EXPOSED DUCTWORK TO HAVE ALL LABELS AND WRITING REMOVED FROM DUCT.
- AFTER AIR AND HYDRONIC SYSTEM BALANCING HAS BEEN COMPLETED, MARK ALL BALANCING DAMPER AND BALANCING VALVES TO PERMANENTLY INDICATE FINAL POSITION; IE AN ARROW OR DRAWING AN OUTLINE OF BALANCING HANDLE POSITION.

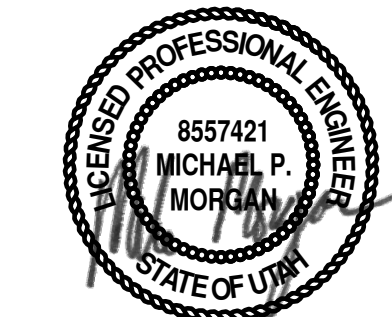
MECHANICAL LEGEND	
SYMBOL	DESCRIPTION
	MANUAL VOLUME CONTROL DAMPER
	EXHAUST AIR DUCT - UP / DOWN
	RETURN/OUTSIDE AIR DUCT - UP / DOWN
	SUPPLY AIR DUCT - UP / DOWN
	MITERED ELBOW W/ TURNING VANES
	FLEX DUCT (MAX. LENGTH 4 FT.)
	GAS PIPING
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CALIBRATED BALANCING VALVE
	PRESSURE REDUCING VALVE (PRV)
	CHECK VALVE
	DIRECTION OF FLOW
	BLIND FLANGE OR CAP
	PIPING DOWN
	PIPING UP
	PIPING TEE DOWN
	FLANGE
	UNION
	THERMOSTAT
	EQUIPMENT SYMBOL
	DETAIL SYMBOL
	SHEET KEYNOTE
	POINT OF CONNECTION
	POINT OF DISCONNECTION
	AIRFLOW DIRECTION
	ABOVE FINISH FLOOR
	EXISTING
	NOT IN CONTRACT
	NORMALLY OPEN
	NORMALLY CLOSED
	THROUGH
	TYPICAL



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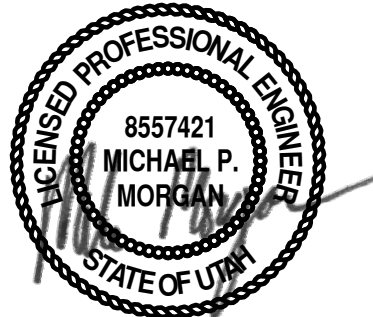
SHEET TITLE

MECHANICAL  
SCHEDULES

SHEET NO:

M001

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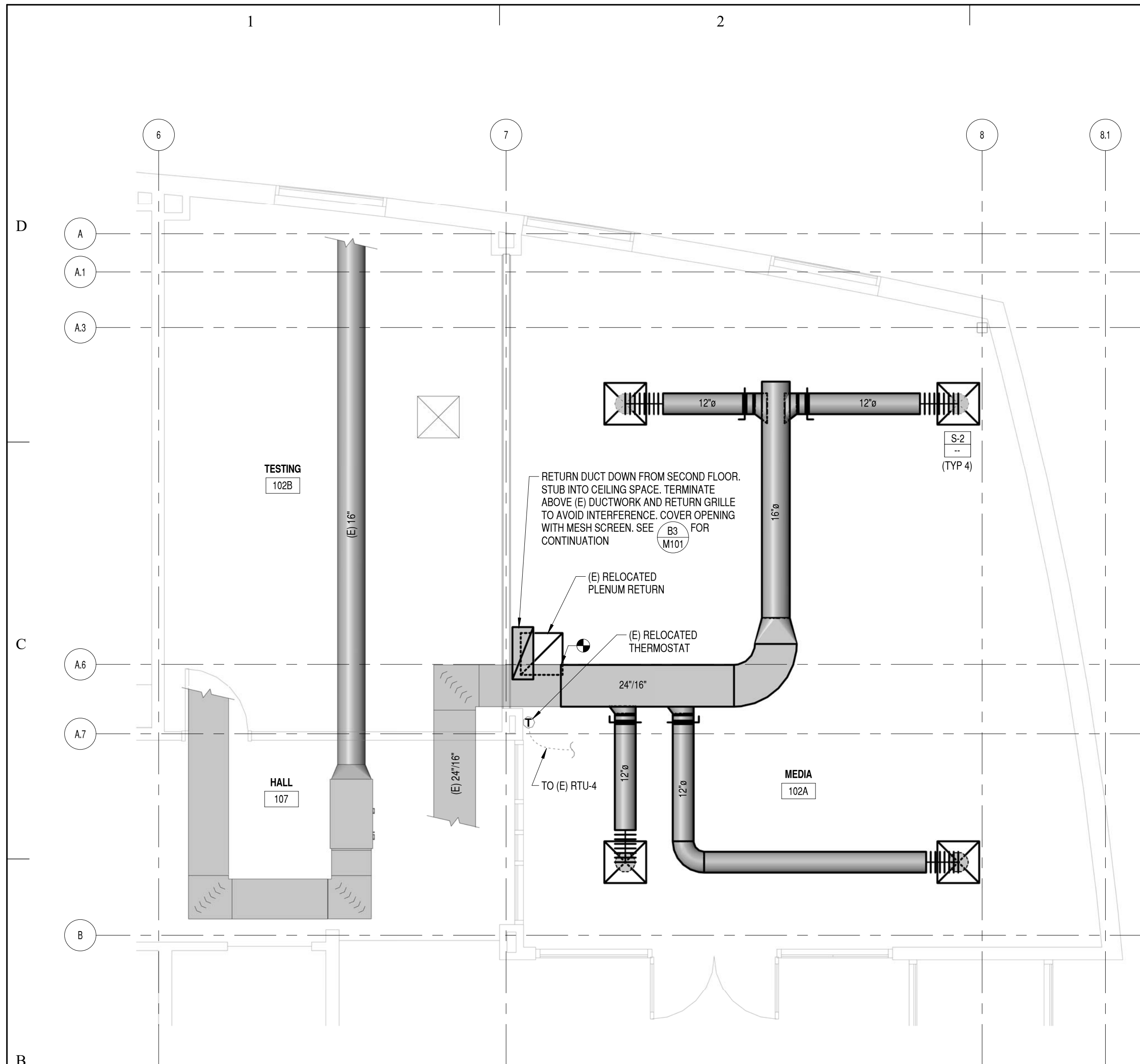
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JUNE 20, 2017

SHEET TITLE

**MECHANICAL  
PLANS**

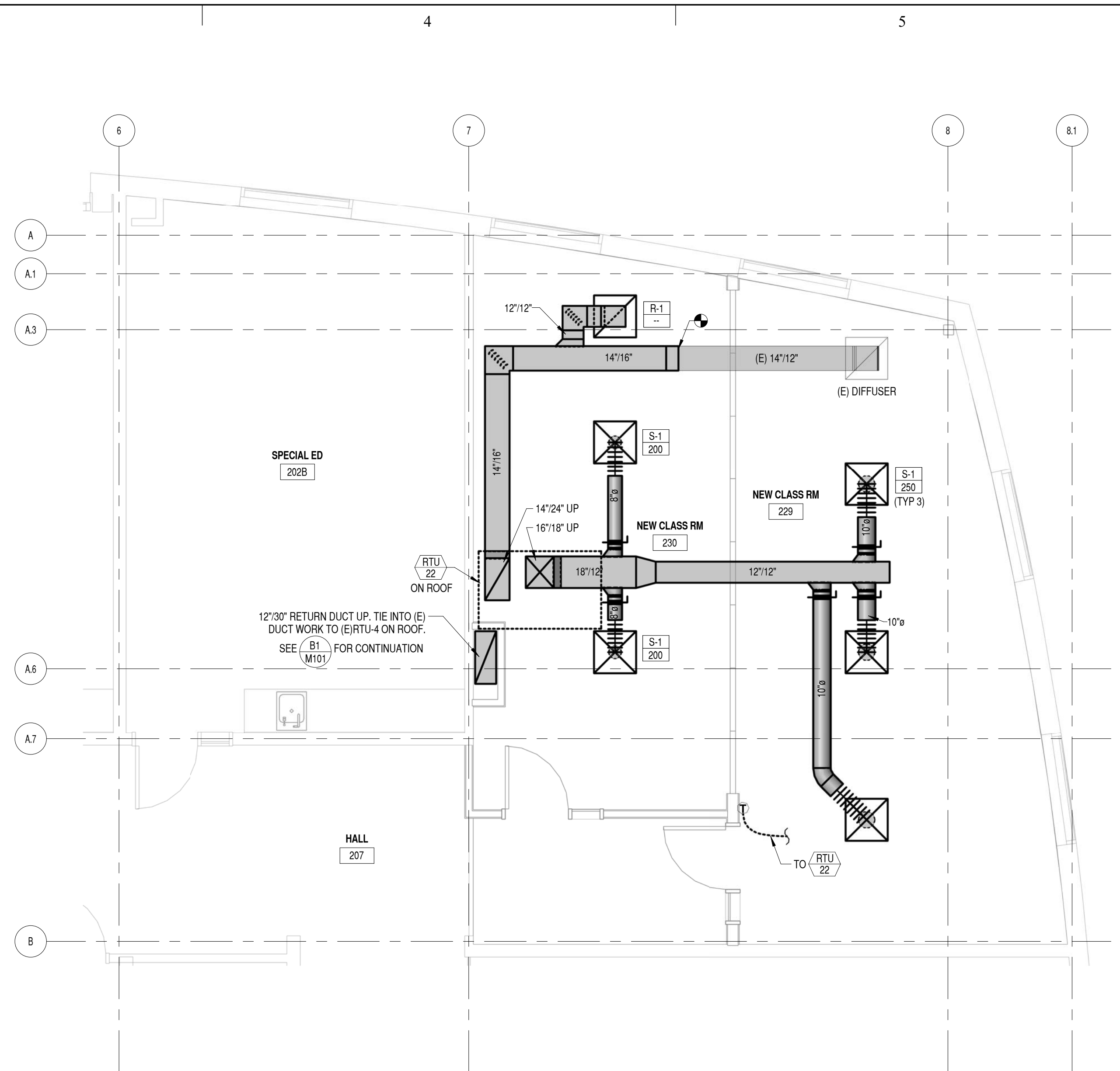
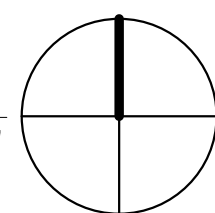
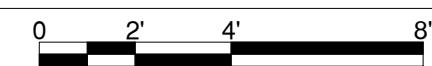
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**M101**



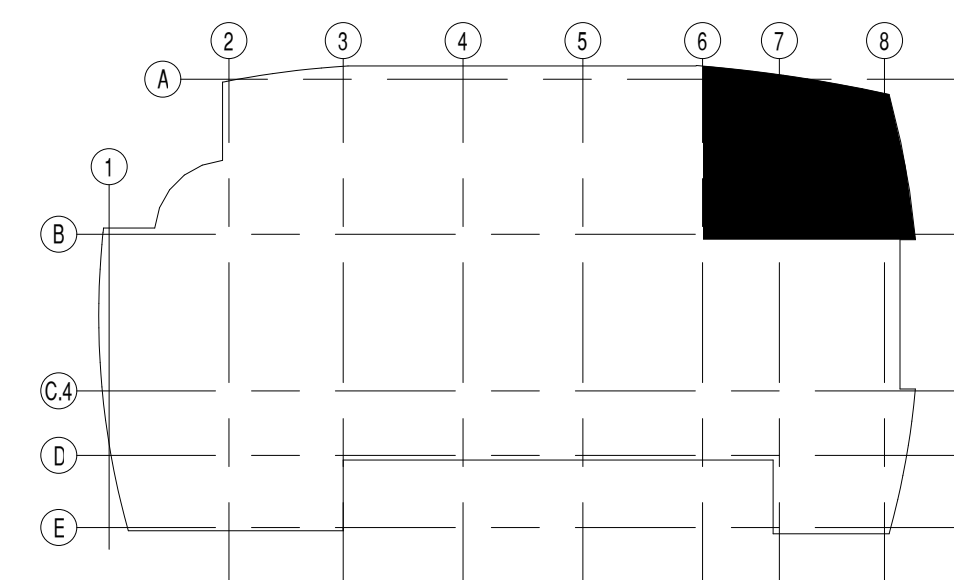
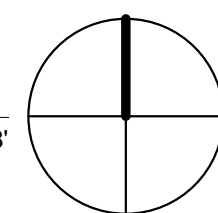
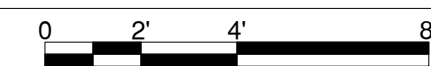
**B1** PARTIAL MAIN FLOOR MECHANICAL PLAN

1/4" = 1'-0"

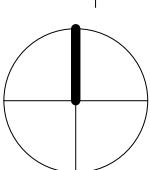


**B3** PARTIAL SECOND FLOOR MECHANICAL PLAN

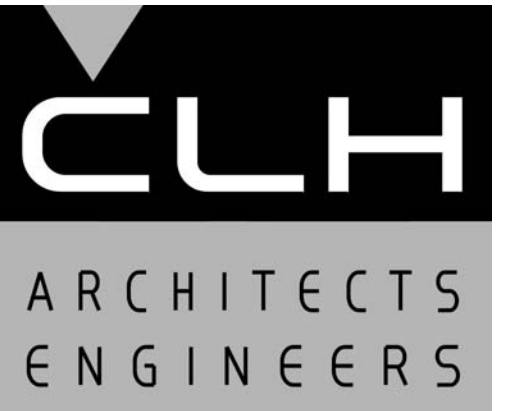
1/4" = 1'-0"



**KEY PLAN**



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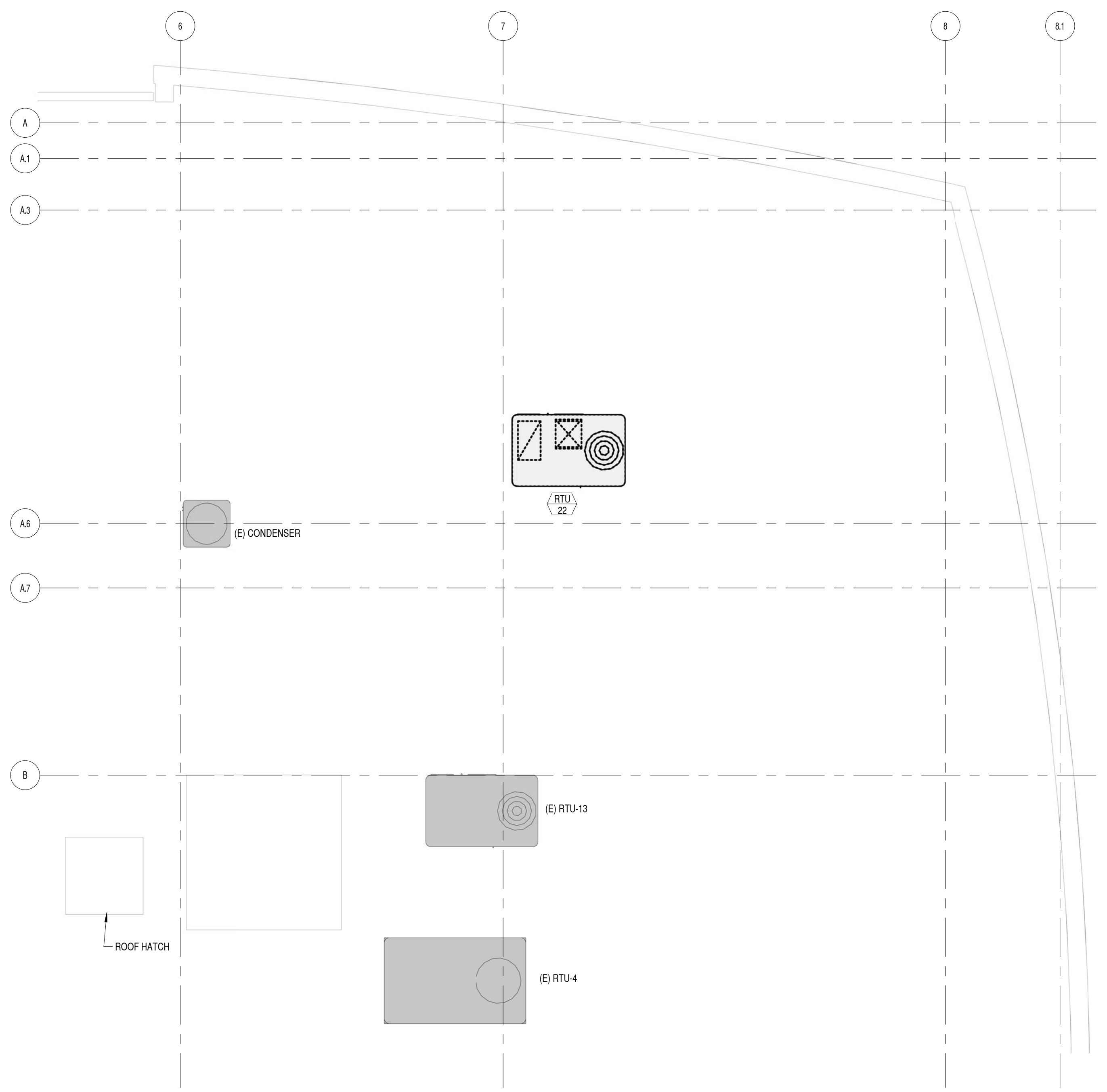
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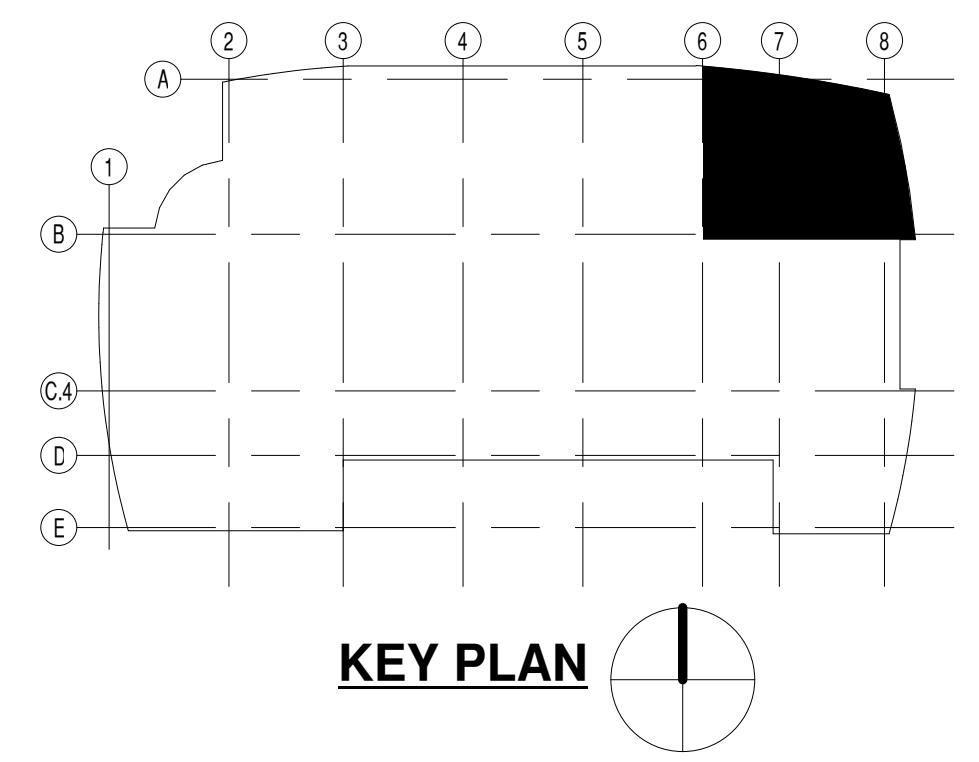
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SHEET TITLE  
**MECHANICAL  
ROOF PLAN**

SHEET NO:  
**M102**



**A3 PARTIAL MECHANICAL ROOF PLAN**  
1/4" = 1'-0"  
0 2' 4' 6'



IF SHEET IS LESS THAN 22"x 34"  
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**LIGHTING**

- EXISTING LIGHT FIXTURE
- RELOCATED LIGHT FIXTURE
- FIXTURE - RECESSED, SURFACE OR PENDANT MOUNT, NUMBER INDICATES FIXTURE TYPE
- FIXTURE - RECESSED OR SURFACE MOUNT WITH EMERGENCY BATTERY PACK, NUMBER INDICATES FIXTURE TYPE
- NUMBER INDICATES FIXTURE TYPE, NL (NIGHT LIGHT) POWERED AT ALL TIMES
- FIXTURE - CHAIN, RECESSED, SURFACE OR PENDANT HUNG, NUMBER INDICATES FIXTURE TYPE
- SMALL LIGHT FIXTURE
- EXIT LIGHT, TOP MOUNTED, DARKENED AREA REPRESENTS LETTERED FACE
- EXIT LIGHT, WALL MOUNTED, DARKENED AREA REPRESENTS LETTERED FACE
- EXIT LIGHT, TOP MOUNTED, ARROW INDICATES DIRECTION OF EGRESS
- EXIT LIGHT, WALL MOUNTED, ARROW INDICATES DIRECTION OF EGRESS

**SWITCHES (+48" UNLESS NOTED)**

- SINGLE POLE SWITCH
- OCCUPANCY SENSOR WALL SWITCH
- SWITCH WITH PILOT LAMP
- SPECIAL SWITCHING, CONTROLS LIGHT FIXTURE WITH SAME SUBSCRIPT
- FLUORESCENT / LED DIMMER / OCCUPANCY SWITCH
- MOTION SENSOR WATT STOPPER DT-305 w/1-BZ-150 OR EQUIVALENT
- MOTION SENSOR SLAVE WATT STOPPER DT-305 OR EQUIVALENT
- LIGHTING RELAY POWER PACK
- DAY LIGHTING SENSOR

**CIRCUITING**

- WIRING CONCEALED IN CEILING OR WALL
- WIRING CONCEALED IN FLOOR
- WIRING EXISTING
- CROSSLINES INDICATE NUMBER OF #12 CONDUCTORS. GROUND IS REPRESENTED BY CROSSLINE WITH DOT ON TOP. OTHER CONDUCTORS AND CONDUIT AS INDICATED.
- BRANCH CIRCUIT HOMERUN TO PANELBOARD; NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATION IDENTIFIES PANEL AND CIRCUIT NUMBER(S).

**PANELBOARDS AND POWER EQUIPMENT**

- FLUSH MOUNTED PANELBOARD AND CABINET
- SURFACE MOUNTED PANELBOARD AND CABINET
- CIRCUIT BREAKER DISCONNECT
- SAFETY DISCONNECT SWITCH - UNFUSED
- MANUAL MOTOR STARTER
- MAGNETIC MOTOR STARTER
- COMBINATION STARTER & DISCONNECT SWITCH
- FUSED DISCONNECT
- MOTOR OUTLET, HORSEPOWER AS INDICATED
- REFERS TO MECHANICAL OR OWNERS EQUIPMENT ITEM SEE SCHEDULES

**RECEPTACLES (+18" UNLESS NOTED)**

- DUPLEX RECEPTACLE, NEMA 5-20R, GROUNDING TYPE
- QUAD RECEPTACLE (DOUBLE DUPLEX), NEMA 5-20R, GROUNDING TYPE
- DUPLEX RECEPTACLE, 5-20R, GROUNDING TYPE, RECESS MOUNTED IN THE FLOOR
- DUPLEX RECEPTACLE, 5-20R, GROUNDING TYPE, RECESS MOUNTED IN THE CEILING
- JUNCTION BOX
- GROUND ROD - 3/4" x 10'-0"

**FIRE ALARM / MNS SYSTEM**

- MANUAL PULL STATION (+48" AFF)
- FIRE ALARM - STROBE SPEAKER/HORN, NUMBER INDICATES STROBE CANDELLA RATING MOUNT NO HIGHER THAN 6'-6" AFF
- FIRE ALARM - STROBE ONLY, NUMBER INDICATES STROBE CANDELLA RATING
- FIRE ALARM - STROBE SPEAKER/HORN WATER PROOF
- CEILING MOUNTED FIRE ALARM STROBE SPEAKER/HORN, NUMBER INDICATES STROBE CANDELLA RATING
- SMOKE DETECTOR
- SMOKE DETECTOR SLEEPING ROOM
- DUCT SMOKE DETECTOR
- FAN SHUTDOWN RELAY
- FIRE/SMOKE DAMPER- 120 VOLT

**COMMUNICATIONS SYSTEMS**

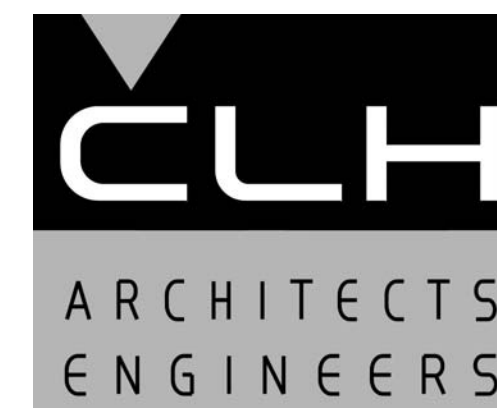
- TELEPHONE OUTLET w/ 3/4" C. TO ACCESSIBLE CEILING. PROVIDE 1 EA. CAT. 6, 4 PAIR CABLE ON SINGLE GANG PLATE w/MODULAR JACKS, 2-RJ45
- TELEPHONE FLOOR BOX, ROUTE PHONE AND DATA CABLES TO ACCESSIBLE CEILING
- DATA OUTLET w/ 3/4" C. TO ACCESSIBLE CEILING. PROVIDE 2 EA. CAT. 6, 4 PAIR CABLES ON SINGLE GANG PLATE w/MODULAR JACKS, 2-RJ45
- TELEPHONE / DATA OUTLET w/ 3/4" C. TO ACCESSIBLE CEILING. PROVIDE 1 EA. CAT. 6 AND 2 EA. CAT 6 - 4 PAIR CABLE ON SINGLE GANG PLATE w/MODULAR JACKS, 4-RJ45.
- TELEPHONE / DATA OUTLET w/ 3/4" C. TO ACCESSIBLE CEILING. PROVIDE 1 EA. CAT. 6 AND 2 EA. CAT 6 - 4 PAIR CABLE ON SINGLE GANG PLATE w/MODULAR JACKS, 4-RJ45 FLOOR MOUNTED.
- CEILING MOUNTED DATA OUTLET VGA / HDMI
- WIRELESS DATA ACCESS POINT. PROVIDE CAT. 6 CABLE TO OWNER FURNISHED DEVICE
- TELEPHONE TERMINAL BACKBOARD
- LOCAL AREA NETWORK
- TELEPHONE OR DATA FLOOR OR WALL MOUNT 19 INCH IDF RACK, 72" TALL
- SPEAKER - CEILING SURFACE MOUNT
- WALL SPEAKER/HORN

**ONE-LINE DIAGRAM**

- TRANSFORMER
- FUSE
- MOLDED CASE CIRCUIT BREAKER
- DISCONNECT SWITCH
- CIRCUIT BREAKER TRIP SETTING
- CIRCUIT BREAKER FRAME SIZE

**ABBREVIATIONS**

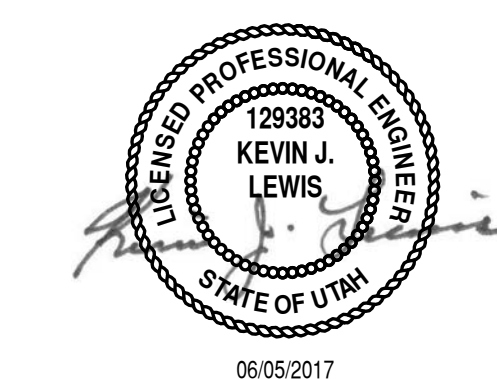
- KEYED NOTE CALLOUT - NUMBER AS INDICATED
- 3R NEMA 3R ENCLOSURE
- 12 NEMA 12 ENCLOSURE
- 4 NEMA 4 ENCLOSURE
- 4X NEMA 4X ENCLOSURE
- A AMPERE
- AFF ABOVE FINISHED FLOOR
- AIC AMPERES INTERRUPTING CAPACITY
- APPROX APPROXIMATELY
- BC BARE COPPER
- C CONDUIT
- CB CIRCUIT BREAKER
- CKT CIRCUIT
- CO CONDUIT ONLY
- CONC CONCRETE
- CT CURRENT TRANSFORMER
- CU COPPER
- DTC DATA TERMINAL CABINET
- (E) EXISTING
- EMT ELECTRICAL METALLIC TUBING
- EXP EXPLOSION PROOF
- FA FIRE ALARM
- FLR FLOOR
- FT FEET
- GFI GROUND FAULT CIRCUIT-INTERRUPTER
- GRD or GRD GROUND
- HPF HIGH POWER FACTOR
- IMC INTERMEDIATE METAL CONDUIT
- IN INCHES
- KVA KILOVOLT AMPERE
- LAN LOCAL AREA NETWORK
- MAX MAXIMUM
- MDP MAIN DISTRIBUTION PANELBOARD
- MIN MINIMUM
- (N) NEW
- NEC NATIONAL ELECTRICAL CODE
- NEMA NATIONAL ELECTRICAL MANUFACTURING ASSOCIATION
- NIC NOT IN CONTRACT
- NL NIGHT LIGHT ON UNSWITCHED CIRCUIT
- OFOI OWNER FURNISHED OWNER INSTALLED
- OFCI OWNER FURNISHED CONTRACTOR INSTALLED
- O.C. ON CENTER
- O.H. OVERHEAD
- PA PUBLIC ADDRESS
- PT POTENTIAL TRANSFORMER
- RM ROOM
- RGC RIGID GALVANIZED CONDUIT
- TC TERMINAL CABINET
- TTB TELEPHONE TERMINAL BOARD
- TYP TYPICAL
- UON UNLESS OTHERWISE NOTED
- V VOLT
- W WATT
- w/ WITH
- WP WEATHERPROOF
- XFMR TRANSFORMER
- +12' MOUNTING HEIGHT ABOVE FINISHED FLOOR OR GRADE



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MARK	DATE	DESCRIPTION

ISSUE DATE:	JUNE 20, 2017
PROJECT NO:	17010
CAD DWG FILE:	
DRAWN BY:	J.M.S.
CHK'D BY:	K.J.L.

PERMIT SET  
JUNE 20, 2017

SHEET TITLE

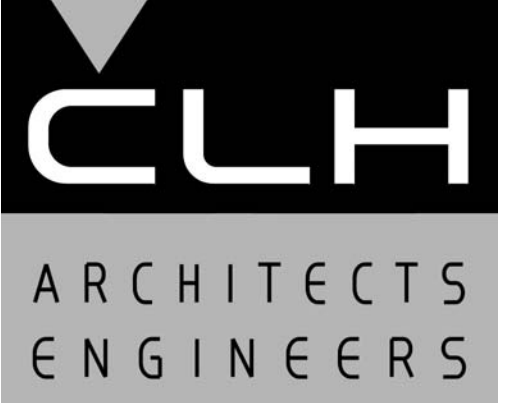
**ELECTRICAL  
LEGEND**

SHEET NO:

**E001**

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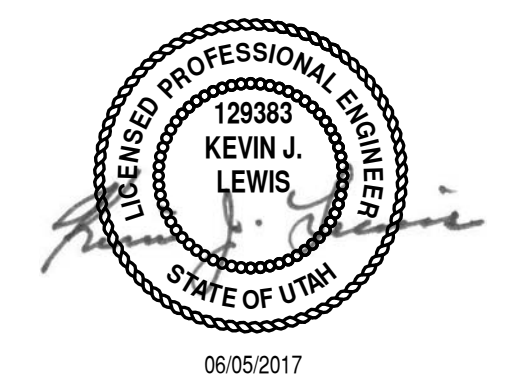
ELECTRICAL LIGHTING KEYED NOTES	
MARK	NOTE
EL1	RE-INSTALL LIGHT FIXTURES USING EXISTING CIRCUITS.
EL2	CONNECT EXISTING SWITCH TO RE-INSTALLED, RELOCATED LIGHT FIXTURES.
EL3	EXTEND EXISTING LIGHTING CIRCUIT TO NEW LIGHT FIXTURES.



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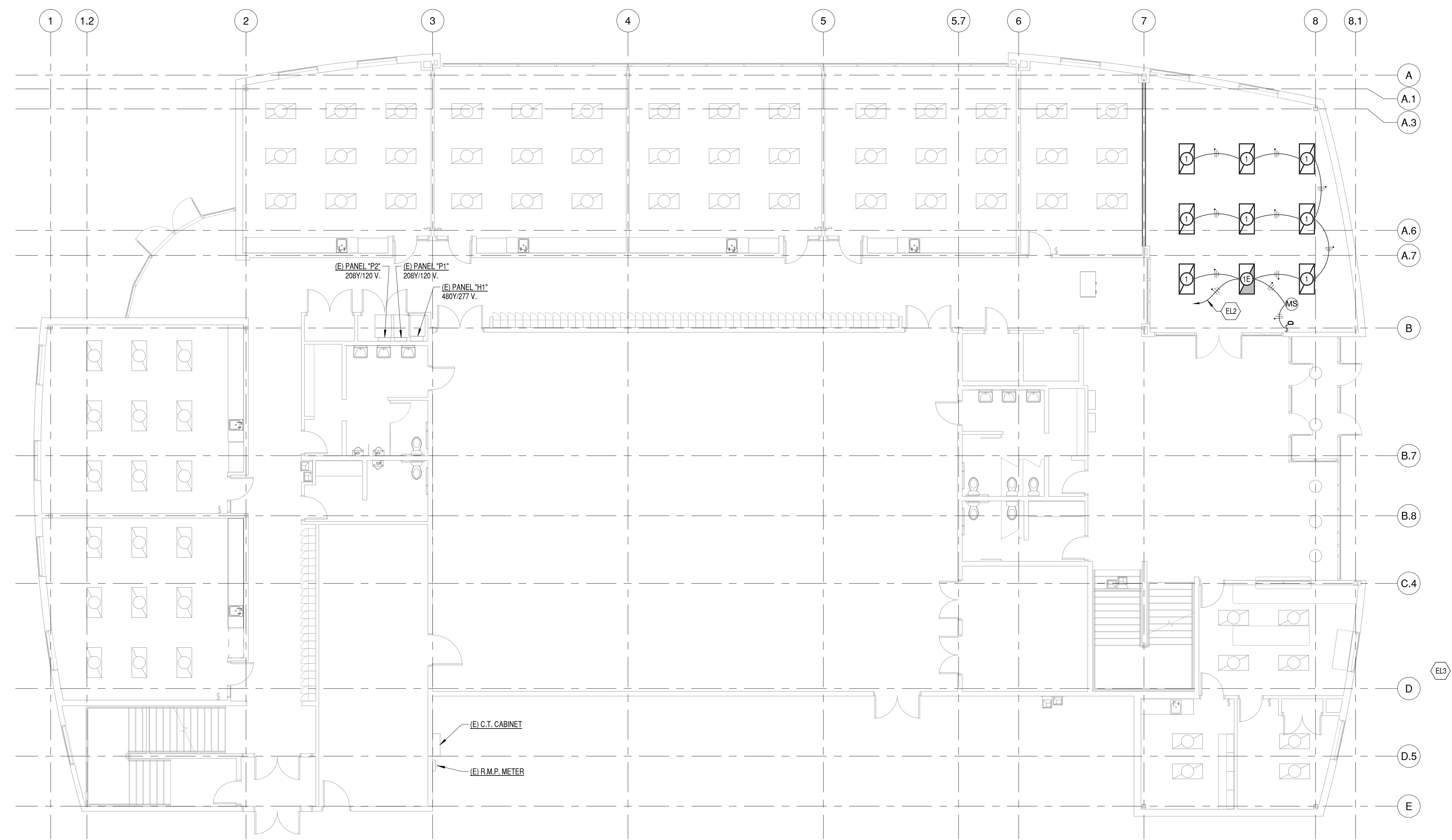
ISSUE DATE:	JUNE 20, 2017
PROJECT NO:	17010
CAD DWG FILE:	
DRAWN BY:	J.M.S.
CHK'D BY:	K.J.L.

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JUNE 20, 2017

SHEET TITLE  
**ELECTRICAL  
LIGHTING PLAN  
- MAIN FLOOR**

SHEET NO:

**EL101**



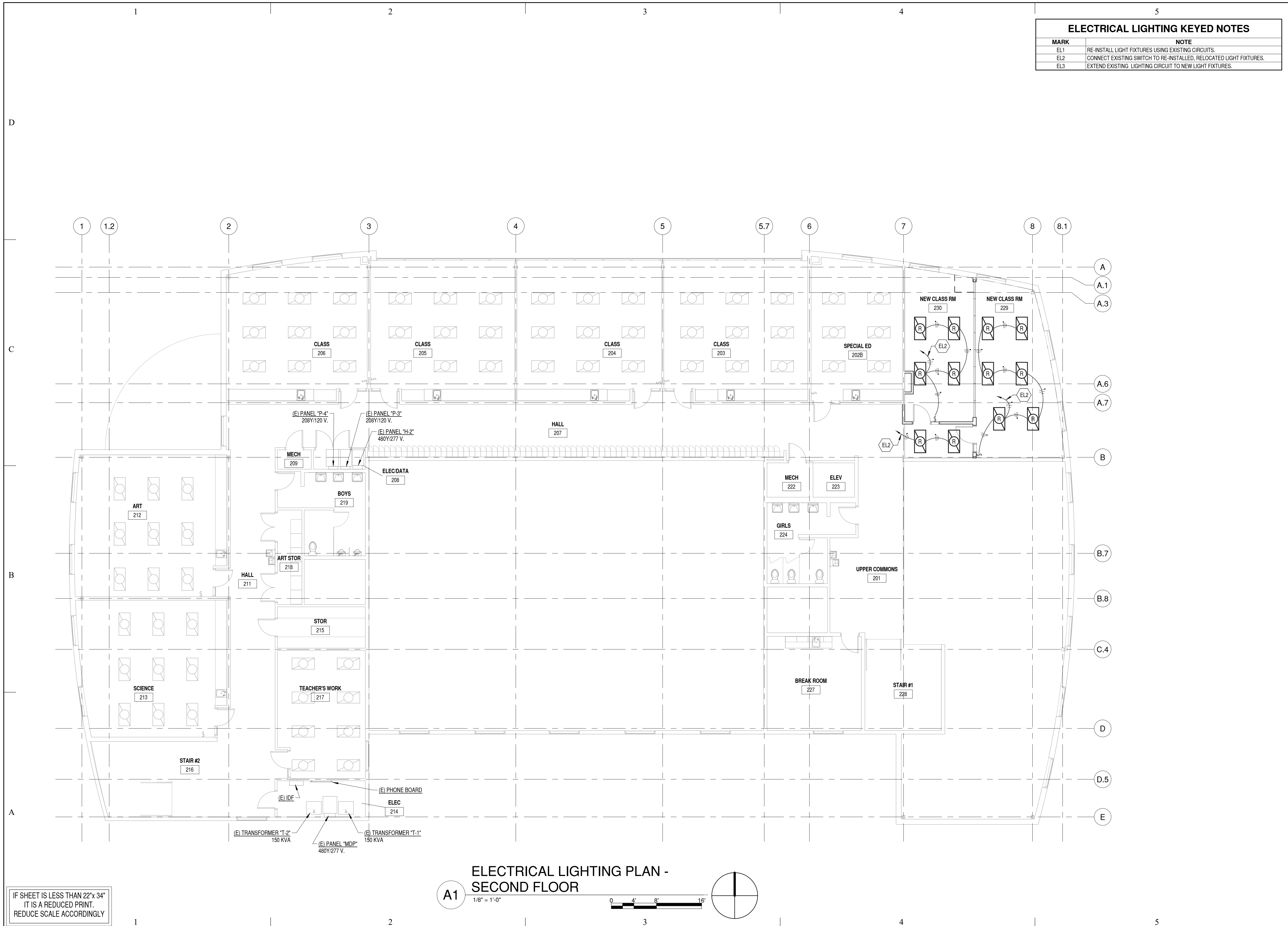
**A1** ELECTRICAL LIGHTING PLAN -  
MAIN FLOOR  
1/8" = 1'-0"

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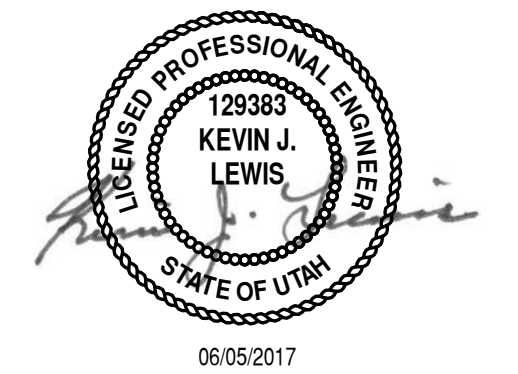
ELECTRICAL LIGHTING KEYED NOTES	
MARK	NOTE
EL1	RE-INSTALL LIGHT FIXTURES USING EXISTING CIRCUITS.
EL2	CONNECT EXISTING SWITCH TO RE-INSTALLED, RELOCATED LIGHT FIXTURES.
EL3	EXTEND EXISTING LIGHTING CIRCUIT TO NEW LIGHT FIXTURES.



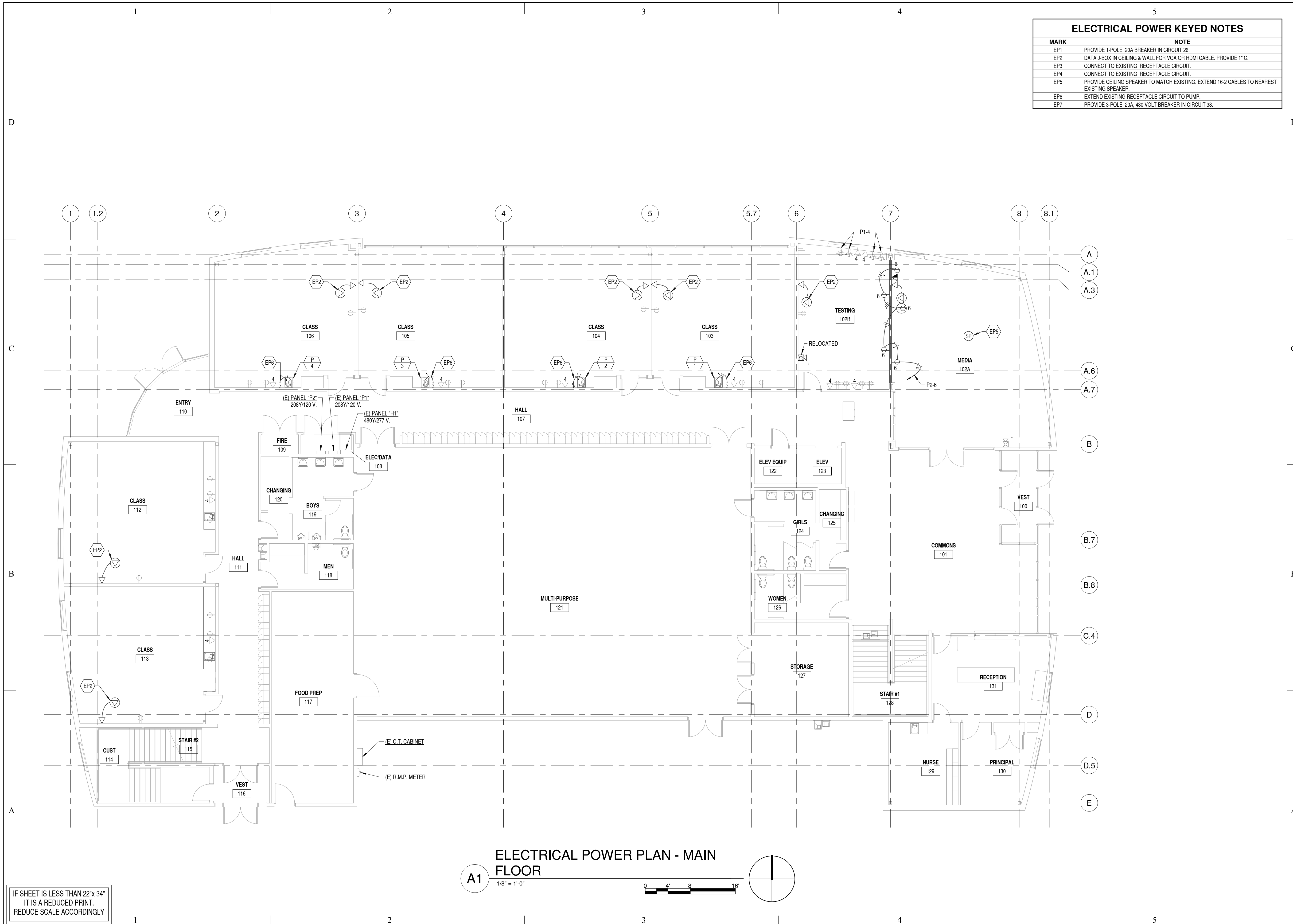
**A1** ELECTRICAL LIGHTING PLAN -  
SECOND FLOOR  
1/8" = 1'-0"

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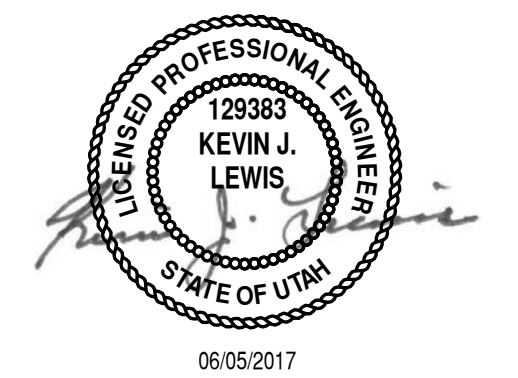
ELECTRICAL POWER KEYED NOTES	
MARK	NOTE
EP1	PROVIDE 1-POLE, 20A BREAKER IN CIRCUIT 26.
EP2	DATA J-BOX IN CEILING & WALL FOR VGA OR HDMI CABLE. PROVIDE 1" C.
EP3	CONNECT TO EXISTING RECEPTACLE CIRCUIT.
EP4	CONNECT TO EXISTING RECEPTACLE CIRCUIT.
EP5	PROVIDE CEILING SPEAKER TO MATCH EXISTING. EXTEND 16-2 CABLES TO NEAREST EXISTING SPEAKER.
EP6	EXTEND EXISTING RECEPTACLE CIRCUIT TO PUMP.
EP7	PROVIDE 3-POLE, 20A, 480 VOLT BREAKER IN CIRCUIT 38.



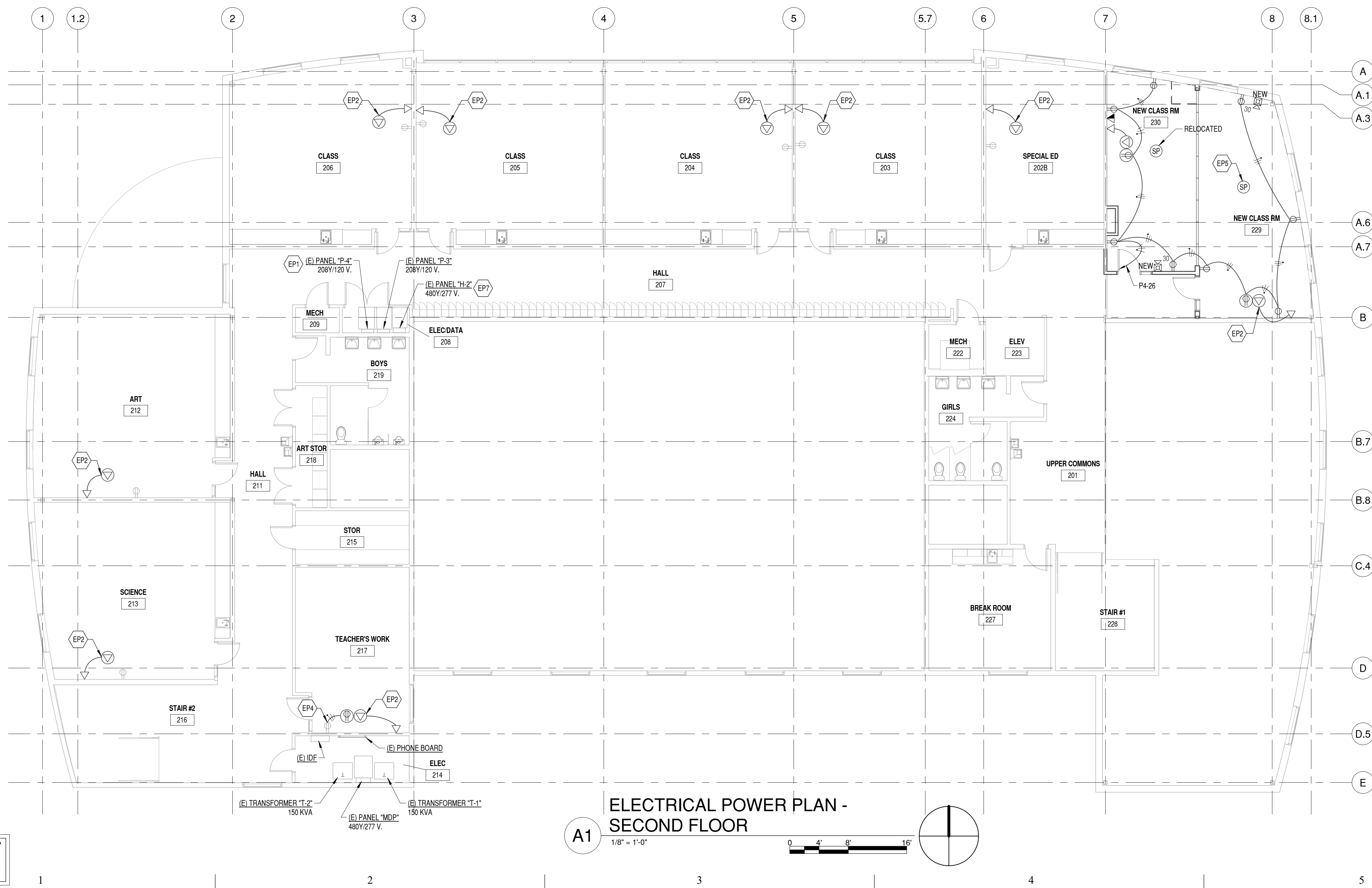
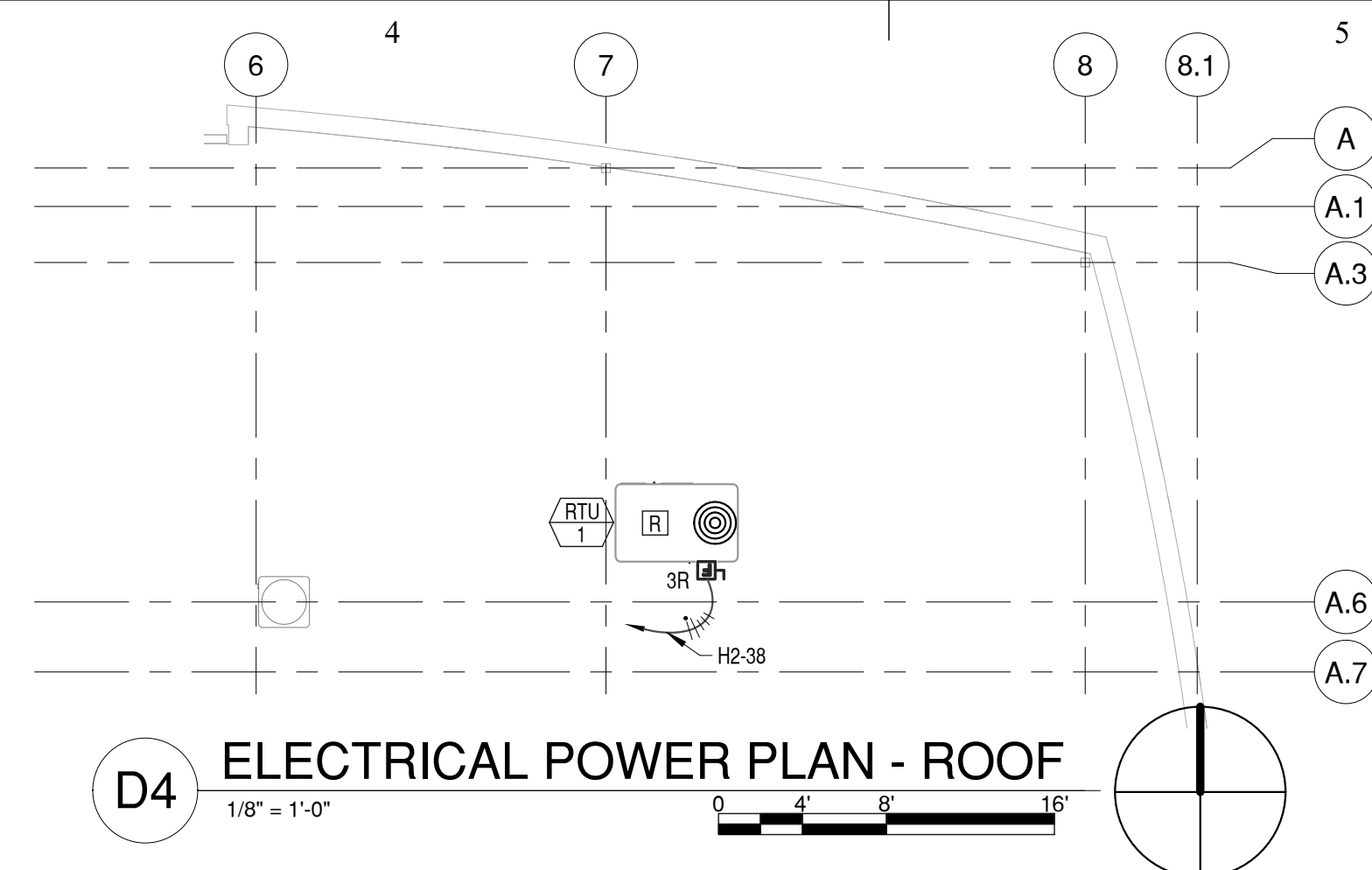
**A1** ELECTRICAL POWER PLAN - MAIN FLOOR  
1/8" = 1'-0"

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REDUCE SCALE ACCORDINGLY

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ELECTRICAL POWER KEYED NOTES	
MARK	NOTE
EP1	PROVIDE 1-POLE, 20A BREAKER IN CIRCUIT 26.
EP2	DATA J-BOX IN CEILING & WALL FOR VGA OR HDMI CABLE. PROVIDE 1" C.
EP3	CONNECT TO EXISTING RECEPTACLE CIRCUIT.
EP4	CONNECT TO EXISTING RECEPTACLE CIRCUIT.
EP5	PROVIDE CEILING SPEAKER TO MATCH EXISTING. EXTEND 16-2 CABLES TO NEAREST EXISTING SPEAKER.
EP6	EXTEND EXISTING RECEPTACLE CIRCUIT TO PUMP.
EP7	PROVIDE 3-POLE, 20A, 480 VOLT BREAKER IN CIRCUIT 38.



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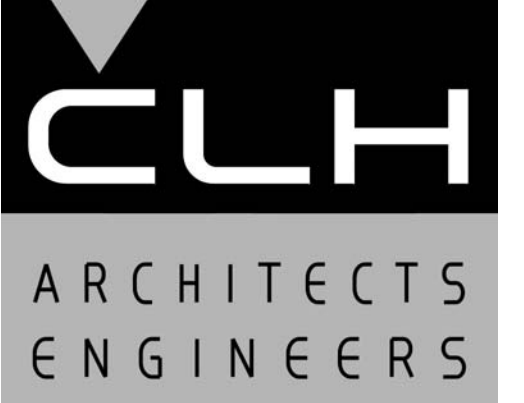
CONDUIT AND CONDUCTOR SCHEDULE (COPPER)					
TYPE	AMPS (1)	CONDUIT SIZE (3)	CONDUCTOR		NOTES
			QTY	SIZE (1) GND (2)	
1	20	0.75	2	12	12
2	20	0.75	3	12	12
3	20	0.75	4	12	12
4	30	0.75	2	10	10
5	30	0.75	3	10	10
6	30	0.75	4	10	10
7	40	0.75	2	8	10
8	40	0.75	3	8	10
9	40	0.75	4	8	10
10	55	0.75	2	6	8
11	55	0.75	3	6	8
12	55	1	4	6	8
13	70	1	2	4	8
14	70	1	3	4	8
15	70	1.25	4	4	8
16	85	1.25	2	3	8
17	85	1.25	3	3	8
18	85	1.25	4	3	8
19	95	1.25	3	2	6
20	95	1.25	4	2	6
21	110	1.25	3	1	6
22	110	1.5	4	1	6
23	150	1.5	3	1/0	6
24	150	2	4	1/0	6
25	175	2	3	2/0	6
26	175	2	4	2/0	6
27	200	2	3	3/0	6
28	200	2	4	3/0	6
29	230	2.5	3	4/0	4
30	230	2.5	4	4/0	4
31	255	2.5	3	250	4
32	255	2.5	4	250	4
33	310	2.5	3	350	3
34	310	3	4	350	3
35	380	3	3	500	3
36	380	4	4	500	3
37	400	2 EA 2	3	3/0	3
38	400	2 EA 2	4	3/0	3
39	420	3	3	600	2
40	420	4	4	600	2
41	460	2 EA 2	3	4/0	2
42	460	2 EA 2.5	4	4/0	2
43	510	2 EA 2.5	3	250	1
44	510	2 EA 2.5	4	250	1
45	620	2 EA 2.5	3	350	1/0
46	620	2 EA 3	4	350	1/0
47	760	2 EA 3	3	500	1/0
48	760	2 EA 4	4	500	1/0
49	820	2 EA 3	3	600	2/0
50	820	2 EA 4	4	600	2/0
51	855	3 EA 2.5	3	300	2/0
52	855	3 EA 3	4	300	2/0
53	1000	3 EA 3	3	400	2/0
54	1000	3 EA 3	4	400	2/0
55	1140	3 EA 3	3	500	3/0
56	1140	3 EA 4	4	500	3/0
57	1240	4 EA 2.5	3	350	3/0
58	1240	4 EA 3	4	350	3/0
59	1260	3 EA 3	3	600	3/0
60	1260	3 EA 4	4	600	3/0
61	1675	5 EA 3	4	400	4/0
62	1680	4 EA 4	4	600	4/0
63	2010	6 EA 3	4	400	250
64	2100	5 EA 4	4	600	250
65	2520	6 EA 4	4	600	350
66	2660	7 EA 4	4	500	350
67	2940	7 EA 4	4	600	400
68	3040	8 EA 4	4	500	400
69	4180	11 EA 4	4	500	500
70	4200	10 EA 4	4	600	500

NOTES:	
1	CONDUCTOR SIZE USING NEC TABLE 310-16; 60 DEG. C UP TO #1 AWG PER NEC 110.14(C)(1)(A)
2	SIZED USING NEC TABLE 250.122
3	CONDUIT SIZED FOR THHN OR THWN OR THWN-2 IN RNC (SCH 40)

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LIGHTING FIXTURE SCHEDULE														NOTE: ALL INTERIOR & EXTERIOR LIGHTING CONTROLS TO BE COMMISSIONED			
NO.	DESCRIPTION	VOLTS	MTG.	LENS	FINISH	LAMPS			BALLASTS			MAXIMUM INPUT WATTS	MANUFACTURER & CATALOG NUMBER (NO SUBSTITUTIONS WITHOUT PRIOR APPROVAL)	DETAILS			
						TYPE	NO. OF LAMPS	WATTS/LAMP TYPE	S	E	O				NO. PER LUMINAIRE		
1	LED RECESSED	120/277	CEILING RECESSED	ACRYLIC	WHITE	*			1	LED 4000K		*		1	34	LITHONIA 2BLT4-40L-ADP-EZ1-LP840	
1E	LED RECESSED	120/277	CEILING RECESSED	ACRYLIC	WHITE	*			1	LED 4000K		*		1	34	LITHONIA 2BLT4-40L-ADP-EZ1-LP840-EL14L	
2	-	-	-	-	-	*			-	-		*		-	-	-	
3	-	-	-	-	-	*			-	-		*		-	-	-	

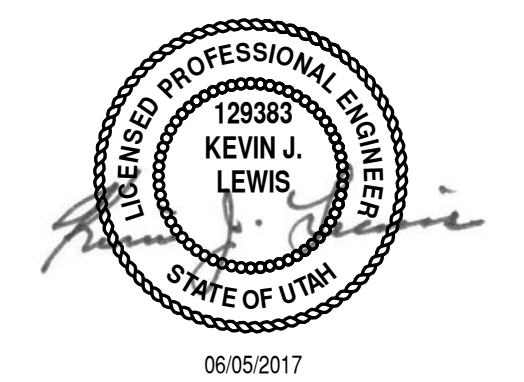
EQUIPMENT SCHEDULE															
CRKT.	EQUIP. NO.	DESCRIPTION	VOLTS	PHASE	WATTS H.P.	BRK	STARTERS SIZE	CONTROL H.O.A.	P.B.	PILOT GRN	RED	CONTACTS N.O.	N.C.	CONTROL TRANS.	REMARKS
(E)	P 1	SINK PUMP	120	1	1/3 HP	20	\$								MOTOR RATED SWITCH
(E)	P 2	SINK PUMP	120	1	1/3 HP	20	\$								MOTOR RATED SWITCH
(E)	P 3	SINK PUMP	120	1	1/3 HP	20	\$								MOTOR RATED SWITCH
(E)	P 4	SINK PUMP	120	1	1/3 HP	20	\$								MOTOR RATED SWITCH
H2 -38	RTU 1	ROOF TOP UNIT	480	3	9.5 KW	20	F								NEMA 3R, FUSE PER MANUFACTURER
-		-	-	-	-	-									-



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SHEET TITLE

ELECTRICAL  
SCHEDULES

SHEET NO:

EP601