

Structural plan review is limited to a general survey for code compliance. No review is implied nor was undertaken to verify structural adequacy.

Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation.

PROVIDE A FULL-SIZE SET OF LEGIBLE APPROVED CONSTRUCTION DOCUMENTS PRINTED IN COLOR FOR REVIEW BY INSPECTOR

Field Inspection consultation is available upon request. Call 303-739-7420 to request a consultation

This plan is reviewed to **IBC** but the existing building is NOT converted to **IBC**. The construction type listed is **UBC**. Occupancy group is **IBC**.

Building Proprietary Vendors

NONE

This plan was reviewed for adopted codes and NOT for compliance with **ADA** or **FHA** accessibility requirements. Contact 800-949-4232 (**ADA**) and 303-894-7822 x 325 (**FHA**) for federal accessibility requirements that apply to your project.

Project Team

Designer/ Space Planner

Tenant Planning Services
1660 Lincoln Street, Suite 100
Denver, Colorado 80264
Contact: Gene Summers
Phone: 303.861.4800
Fax: 303.861.1621
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Building Representative

CBRE
701 E Hampden Ave.
Suite 370
Englewood, CO 80113
Contact: Carl Holmes
Phone: 720.641.7581
email: carl.holmes@cbre.com

Mechanical Engineer

Brian Seyferth & Associates
5583 Pwnee Street
Littleton, CO 80125
Contact: Bret Marin
Phone: 303-797-7772
Email: bret@seyferth.com

Electrical Engineer

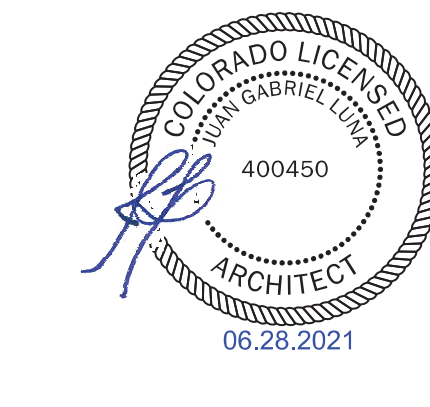
Corey Electrical Engineering
7822 S. Wheeling Court
Suite B
Englewood, CO 80112
Contact: Elizabeth Boltin
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Drawing List

A0.0	Cover Sheet
A0.1	Egress Plan
D1.0	Demolition Plan,
A1.0	Construction and Dimensioned Plan, Door Schedule, Partition Details
A2.0	Power & Communications Plan, Reflected Ceiling Plan
A3.0	Finish Treatment and Elevations Plan, Finish Treatment Schedule, Enlarged Plan, Millwork Elevations
A3.1	Millwork Elevations and Details
M1.0	Mechanical Notes and Schedules
M1.1	Mechanical Plan
P1.1	Plumbing Notes
P1.2	Plumbing Plan and Isometrics
E.0	General Notes
E.1	Electrical Plans
E.2	One Line Diagram
E.3	Panel Schedules
E.4	Comcheck

TPS
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Spec Suite #190

Dates of Record

Project Start Date: 3Mar2021

Issued On 18June2021 Issued For Tenant Review & Approval and Construction

Approvals

Construction Document Approval

Construction work shall not proceed until the Owner and the intended occupant have given approval to these Construction Documents. Approval by these parties shall be interpreted as approval of the drawings for content, scope of work, and all dimensions regarded by either party as being necessary to their operations, use of the space, furnishings, equipment installation, and any agreements between the Owner and the intended occupant.

Construction and/or initiation of construction authorized by the Owner from these Construction Documents, shall be interpreted by the Designer as approval in full of these Construction Documents by both the Owner and intended occupant.

☐ Approved - No Exceptions Taken

☐ Approved As Noted

☐ Approved As Noted - Resubmit

☐ Revise And Resubmit

Signature _____ Date _____

Abbreviations

O	diameter
centerline	
A	amperes
A/C	air conditioning
A/V	audio/ visual
ADA	Americans with Disabilities Act
AFF	above finished floor
alt.	alternate
amp.	ampere
approx.	approximately
C	conduit
CKT.	circuit
clg.	ceiling
clr.	clear
const.	construction
d.	depth/ deep
dia.	diameter
dim.	dimension
DN	down
DW	dishwasher
E	existing (device or fixture to remain)
Elev.	elevator
eq.	equal
EW/C	electric water cooler
EW/H	electric water heater
F.D.	floor drain
F.E.	fire extinguisher
F.A.	fire alarm
FEC	fire extinguisher cabinet
FHC	fire hose connection
fin.	finish or finished
ga.	gauge
gyp.	gypsum board
hd.	height/ high
H.C.	hollow core
H.M.	hollow metal
HVAC	heating, ventilating, air conditioning
I.F.	inside face
I.T.	information technology
Jan.	janitor(s)/ janitorial
J-Box	junction box
L	length/ long
mid.	manufactured
mil	millimeter
min.	minimum or minute (per context)
mm	millimeter
mw	microwave
N	new (device or fixture)
not in contract	
nom.	nominal
NTS	not to scale
O.C.	on center
O.H.	opposite hand
Occ.	occupants
ouces	ouces
P.Lam.	plastic laminate
R	relocated (device or fixture)
R.O.	rough opening
Re:	refer to:
reqd.	required
RJA	return air
room	room
RSF	Rentable Square Feet
S.C.	solid core
S.M.	surface mounted
S.Sil.	stainless steel
S/A	supply air
SOT	static dissipative tile
SF	square feet
sim.	similar
sq.yd.	square yard
std.	standard
T.O.	throughout
TBD	to be determined
th.	thickness/ thick
typ.	typical
U.L.	Underwriters Laboratory
UNO	unless noted otherwise
USF	Usable Square Feet
V	volt
VCT	vinyl composition tile
VIF	verify in field
w.	width/ wide
W.S.	work station
w/	with
WC	wallcovering
WF	water fountain

Reference Symbols

1	Keyed Note
Center Line	
Detail Reference	
Detail Number Sheet Reference	
Section Reference	
Section Number Sheet Reference	
Elevation Reference	
Elevation Number Sheet Reference	
Door Reference Tag, refer to Door Schedule	
PL1	Plastic Laminate Reference, Refer to Finish Treatment Schedule
P1	Wall Treatment Reference, Refer to Finish Treatment Schedule
C1 R81	Floor Treatments Reference, Refer to Finish Treatment Schedule

General Notes

1. GENERAL STANDARDS: All work defined herein shall be constructed in accordance with the approved drawings and specifications and shall be in compliance with all applicable codes, ordinances, and regulations. Work performed in the shop or on-site shall be performed by mechanics, craftsmen and workers skilled and experienced in the fabrication and installation of the work involved. The work shall be performed in accordance with the best established practices of the industry standard for the trade involved.

2. FEES AND PERMITS: The General Contractor shall obtain all licenses and permits required by the jurisdiction and/or its agencies, not withstanding licenses and permits that may be required of respective subcontractors. The cost of said licenses and permits shall be incurred by that contractor responsible for the procurement of same.

3. DRAWINGS AND SPECIFICATIONS: The General Contractor shall maintain a complete and current set of project documents, drawings and specifications on the job site at all times and shall include all approved shop drawings and submittals. The General Contractor shall be responsible for distribution of adequate copies of all drawings and specifications to all applicable trades. Upon completion of the work, the General Contractor shall submit one complete set of re-titled drawings to TPS indicating any and all changes, omissions, or modifications made.

4. ENGINEERED DRAWINGS: Refer to structural, mechanical, electrical and plumbing drawings (when provided) for detailed design of the structural, mechanical, electrical and plumbing systems. Portions of this work may be shown on the architectural drawings for reference to, and in coordination with, other work.

4.1. When indicated on the drawings, the General Contractor shall provide engineering drawings on a design/build basis for mechanical systems, electrical systems and plumbing. Provide one copy of all drawings to TPS for review prior to construction.

4.2. The General Contractor is responsible for required permits and approvals necessary for the work as described above. Precedence: The architectural drawings shall precede the engineered drawings (if provided) relative to device and fixture locations.

5. OMISSIONS AND DISCREPANCIES: The General Contractor shall field verify all conditions and dimensions shown on the drawings, and shall notify TPS of any discrepancies, omissions or conflicts prior to commencing with construction.

6. MATERIALS: Unless otherwise specified, all materials shall be new, unused, and in compliance with the specifications set forth in these documents. All materials used throughout the project shall be of the same brand name and quality for consistency. All materials must meet the ASTM and ANSI standards and be in compliance with all applicable codes, ordinances and regulations. Unless authorized in writing by the owner or its representative, device or component shall be removed from adjacent areas or buildings to facilitate this project.

7. MATERIAL INVENTORY: Upon award of the construction contract, and when building materials are stocked and made available for the project, coordinate with the Building Representative for purchase of materials. All materials shall be bid as if new. Do not assume use of materials from building stock.

8. SUBMITTALS/DEVIATIONS: No substitutions, variations and deviations from these documents shall be permitted without prior approval of TPS, the Building and/or Tenant's Representative. Application for any substitutions and/or variations shall be submitted to TPS by the General Contractor for approval. Application shall be made in writing accompanied with product specifications and/or samples. Five complete sets of submittals are required.

9. SHOP DRAWINGS: When requested on the drawings, the General Contractor shall prepare, review, approve and submit shop drawings to TPS. The General Contractor shall check and coordinate all product data and samples and verify all materials, field measurements and related field construction criteria contained in such submittal conforms to the requirements of the work, and the contract documents. Five complete sets of submittals are required.

10. SUBCONTRACTORS: The General Contractor shall coordinate and review the work of all subcontractors, trades and suppliers, and to make known all requirements of the contract documents, and to assure that all parties are fully aware of the requirements, regardless of whether the requirements occur in the contract documents, which might affect the work of that party. Subcontractors shall conform to the contract documents and specifications. 10.1. Subcontractors shall coordinate all installations, schedules, locations, decisions, sizes, and resolve all conflicts and interferences of their trade with other trades. 10.2. Subcontractors shall be responsible for coordinating routes of water, sprinkler, mechanical and electrical services. 10.3. Light fixtures/ fittings, diffusers/ ducts, sprinkler heads, etc., as depicted on the drawings, both above and below the ceiling, which conflict with any existing services shall be reported immediately when it becomes apparent that a conflict will prevail. All costs incurred by the General Contractor or other subcontractors for failure to report conflicts immediately shall be borne by the contractor.

11. TENANT VENDORS: The General Contractor shall be responsible for coordinating with the Tenant and the Tenant's vendors for scheduling and providing access to the space for the Tenant's movable partition systems, communications/ data processing systems, security systems, and audio/ video systems.

12. INSPECTIONS: The General Contractor shall permit and facilitate inspection, by the owner and the architect or their representatives, during the course of construction.

13. TENANT RESPONSIBILITIES: Unless specified otherwise in the contract documents, the following items are not a part of these drawings and if so desired shall be provided by the Tenant. 13.1. Furnishings, files and accessories 13.2. Portable or movable office partitions 13.3. Cakes, bins, prefabricated shelving systems 13.4. Coffee makers, microwaves, refrigerators, vending machines 13.5. Copier/ fax equipment and computer equipment 13.6. Security systems, sound systems, intercom systems 13.7. Telephone equipment including wiring/cabling 13.8. Clocks, time clocks 13.9. Connection of all equipment, furnishings and panels 13.10. Moving or relocation of Tenant's furnishings, fixtures, and equipment 13.11. Schedule and coordination of Tenant vendors

14. PROTECTION: The General Contractor shall protect the work, adjacent space/property, common areas, public utilities, and the public, and shall be responsible for any damage or injury due to neglect. Protection shall include but not be limited to the following: 14.1. Draw window coverings and wrap or bag with plastic for dust protection. 14.2. Provide plywood or masonite floor protection with tape sealed joints completely along routes used for delivery and removal of materials. 14.3. Provide and/or use protective pads at designated freight elevator cab walls and around openings. 14.4. When necessary, x-ray the floor slab to confirm locations of objects embedded in the concrete prior to making any penetrations in the slab.

15. DAMAGES: Should the General Contractor or any associated subcontractor cause damage to any adjacent fixture or structure while completing or cleaning current construction, that contractor or subcontractor shall be responsible for repair or replacement of said damaged fixture or structure.

16. INSURANCE: The General Contractor shall purchase and maintain certifications of insurance with respect to workers compensation, public liability and property damage for the limits as required by law. The certificates shall name the client and Tenant Planning Services, Inc. as additional insured. The General Contractor and subcontractors performing work on-site shall conform to the Landlord's insurance requirements.

17. GUARANTEE/WARRANTY: The General Contractor shall enforce a specific and unconditional warranty on all materials, workmanship, equipment, fixtures and sub-assemblies subject to normal use and maintenance for a period not to exceed one (1) year from date of substantial completion. Said warranty shall not be exclusive of implied or specific warranties enforced by manufacturers and/or suppliers of aforementioned materials, equipment, fixtures and/or sub-assemblies.

18. SECURITY: The General Contractor shall be responsible for securing and controlling access to the job site during construction and for disconnecting power and lighting when not in use.

19. INTERRUPTION OF SERVICES: All work requiring dangerous, toxic, or noisy operations and installations which might affect the operation of the existing tenants shall be performed during non-business hours. Coordinate with Building Management.

20. HAZARDOUS MATERIALS: TPS has no knowledge of, and shall not be held liable for, any asbestos or other hazardous materials on the project site. Prior to commencing with the work on-site, it shall be the responsibility of the General Contractor to inspect and make a good faith effort to identify the presence of asbestos, toxic or other hazardous materials should hazardous materials be discovered at any time before or during construction, stop the work immediately and report to the Building Management for further instructions before proceeding.

21. BUILDING RULES AND REGULATIONS: The General Contractor shall be responsible for consulting with the Building Representative for rules and regulations governing the building to deliver, removal of materials and debris, use of building facilities, noise restrictions, protection of existing conditions, hours of operation, building access, etc.

22. CLEANING: The General Contractor shall clean the job site and adjoining areas during construction and upon completion. Cleaning includes, but is not limited to, vacuuming carpets, wet mopping floor tile and other resilient flooring, cleaning all glass, including interior side of exterior glazing; dusting and wiping clean all lint and soiled areas on doors, millwork, window coverings, baseboard, etc.; removing all construction debris, scraps, materials and equipment; and water seal all marble, granite and ceramic tile and grout.

23. FIRE RESISTIVE STANDARDS: Conform to the following: 23.1. Materials and assemblies required to be fire resistive shall bear a label affixed to the product indicating fire resistive rating and testing agency with approved test certification number 23.2. All blocking and nailer strips used in connection with fire resistive partitions shall be fire retardant wood as defined by the Building Code. 23.3. All concealed wood shall be treated with an approved fire retardant. 23.4. Fire ratings of existing materials and/or systems which may become damaged or modified due to the work shall be maintained with a fire rating equal to or greater than the existing rating. 23.5. All pipe and conduit penetrations in fire rated partitions and floors/ceilings shall be sealed in accordance with a U.L. listed "fire stop" compatible with the material and fire rating required. 23.6. Flame-spread: minimum ratings for flame spread shall be as follows: 23.6.1. Enclosed vertical exit ways: Class I (0-25 F.S.I.) 23.6.2. Other exit ways: Class II (26-75 F.S.I.) 23.6.3. Rooms or areas: Class III (76-200 F.S.I.)

24. ARCHITECTURAL WOODWORK: Provide architectural woodwork as specified on the drawings. The "quality standards" of the architectural woodwork institute shall apply and hereby made a part of this document. All prefabricated work shall be economy grade. All other work shall be custom grade as defined by the quality standards of the AWI, unless noted otherwise.

25. SURFACE PREPARATION: Inspect existing conditions of all floor and wall surfaces for voids, holes, cracks, and other damages and make repairs. Grind and/or fill imperfections, fill holes, cracks, and other damages prior to installation. The General Contractor shall provide budget for floor prep as required. The General Contractor shall provide RH moisture testing for any concrete locations less than one year old and for all slab on grade (regardless of age) locations.

26. CLEARANCES: The General Contractor shall verify ceiling height and clearances above ceiling to the underside of structure above for installation of ductwork and diffusers; conduits and junction boxes; fire sprinkler pipes and heads, and light fixtures. All work shall be coordinated by all trades to avoid interference with methods of installation. Notify TPS of conflicts immediately and prior to commencing with construction.

27. FIRE SPRINKLER SYSTEM: In buildings equipped with fire sprinkler systems, furnish all labor, materials, fixtures, trim, equipment and services necessary for the installation of a complete and properly functioning fire sprinkler system. All work shall conform to the following: 27.1. Relocate and/or add fire sprinkler heads as required for new conditions as shown on the drawings. 27.2. Rework work and/or add to existing pipes, fittings, hangers and support as necessary for new sprinkler head locations. 27.3. Design standards, materials and workmanship shall be compatible with existing conditions. 27.4. Install new sprinkler head locations in the center of the ceiling board or section and symmetrical throughout rooms and open areas.

28. FIRE EXTINGUISHERS: Provide portable, wall mounted fire extinguishers every 75' of exit travel distance throughout limit of construction or as required by the local fire department or life safety department. Portable fire extinguishers shall comply with NFPA 10.

29. PLUMBING SYSTEM: Furnish all labor, materials, fixtures, trim, equipment and services necessary for the installation of a complete and properly functioning plumbing system. All work shall conform to the following: 29.1. Refer to drawings for specific information pertaining to materials, fixtures, etc. scheduled as new and not contained herein. 29.2. Re-use existing plumbing piping and/or fixtures and components where possible. Inspect and confirm existing conditions are within specifications. 29.3. New materials shall be compatible with existing conditions, where possible. 29.4. Provide fixtures with all anchors, supports, traps and trim, for a complete installation. 29.5. Provide stop valves on all hot and cold water connections to fixtures/SF 29.6. Caulk around all fixtures with silicone based caulking compound. 29.7. Install all fixtures level and square with surrounding enclosures. 29.8. Install escutcheons for all pipes exposed to view passing through walls, floors and ceilings. 29.9. Provide templates or cut-outs of fixtures to the millwork subcontractor for cutting of openings. 29.10. All materials and workmanship shall be in compliance with state and local codes and ordinances, and the Americans with Disabilities Act (ADA).

30. HVAC SYSTEM: Furnish all labor, materials, fixtures, trim, equipment and services necessary for the installation of a complete and properly functioning HVAC system. All work shall conform to the following: 30.1. Standards: all standards and specifications established in the base building construction documents, or as evidenced in the existing conditions of construction shall govern, unless noted otherwise. All work shall be coordinated with the building maintenance manager. Refer to base building construction documents and specifications and existing conditions of system for equipment or materials not specified on the engineered drawings or contained herein. All materials and workmanship shall be in compliance with ASHRAE and SMACNA, state and local codes and ordinances, and the Americans with Disabilities Act (ADA). 30.2. Repairs and replacement: the contractor shall verify proper operation of existing ductwork for breaks and leaks. In the event that the contractor has observed system failure or defects, notify the Owner's construction manager immediately for further direction. For bid purposes, if all HVAC equipment and associated ductwork and components are in proper operating condition. Repairs or replacement of materials and workmanship shall be performed as a separate portion of the work. 30.3. Abandoned equipment: all abandoned HVAC equipment and components within the area of construction shall be removed and all duct connections patched, capped and/or sealed. 30.4. Fire dampers shall be installed in all ducts which penetrate fire resistive partitions (one-hour rated and above). Fire dampers shall be 100% free area design. 30.5. Return air plenum: allow for transfer of air above Tenant demising partitions and spaces continuously and unobstructed to the building system return air shaft. Refer to engineered drawings (if provided) and detailed drawings for wall construction and opening size. During construction, the contractor shall place temporary filters over openings to the return air shaft. Remove filters upon completion of construction. Coordinate this work with the building maintenance manager. 30.6. Thermostats: locate thermostats so as not to interfere with the occupants' furnishings and systems, avoiding locations in the middle of walls, in traffic areas, in file/supply rooms, etc. 30.7. Air testing, adjusting, and balancing: adjust and balance terminal units, diffusers, dampers and registers to provide low air resistance and uniform air distribution. Show on the drawings (if provided). Balance work shall be performed in accordance with NEBB standards by a certified contractor. Submit a balancing report to TPS. Callibrate and adjust all thermostats.

31. FIRE/SMOKE ALARM SYSTEMS: In buildings equipped with fire and/or smoke alarm systems, furnish all labor, materials, fixtures, trim, equipment and services necessary for the installation of a complete and properly functioning fire/smoke alarm system. All work shall conform to the following: 31.1. Relocate and/or add fire alarms, smoke or heat detectors, strobe alarms, pull stations, remote indicator lights and other components of the system as required for new conditions of the space. 31.2. Rework systems to be compatible with existing design standards and conditions. 31.3. Locations and specifications of alarms shall comply with the Americans with Disabilities Act (ADA).

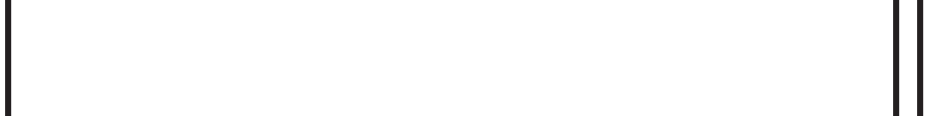
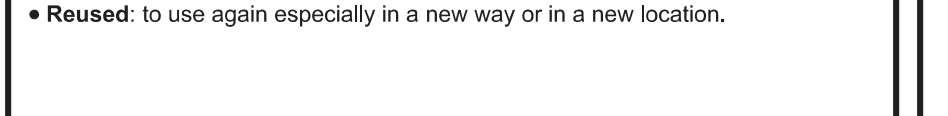
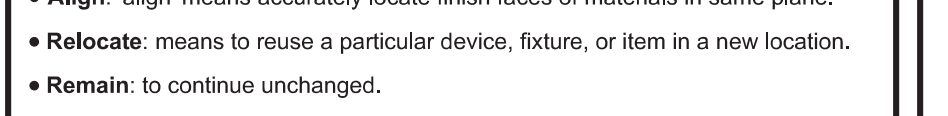
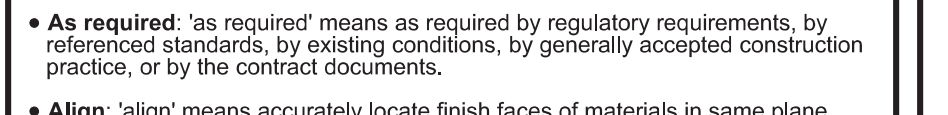
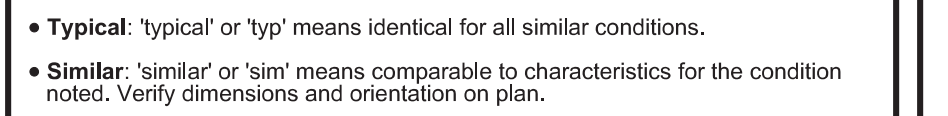
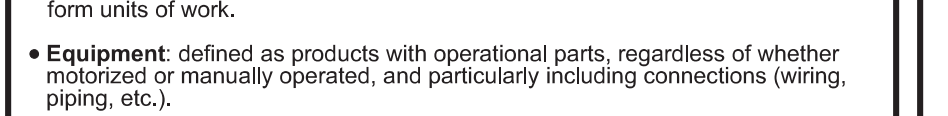
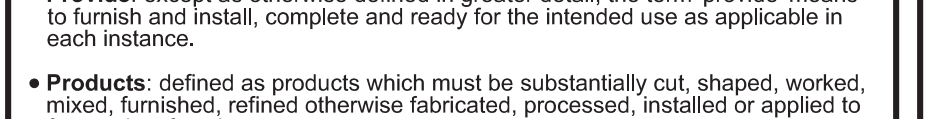
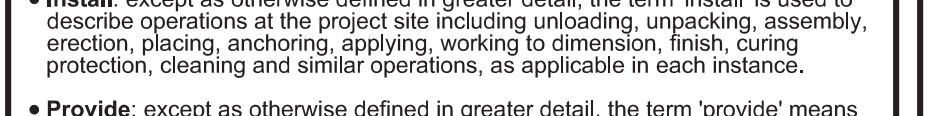
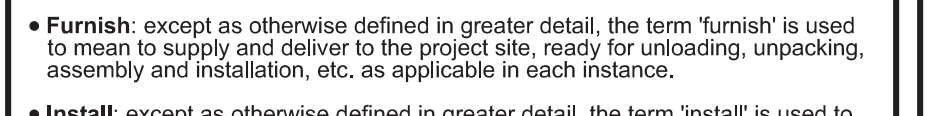
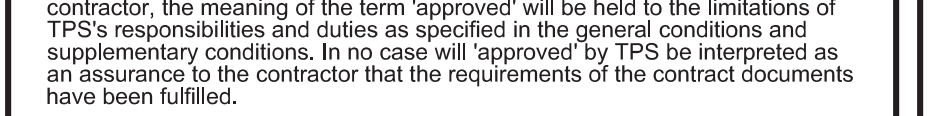
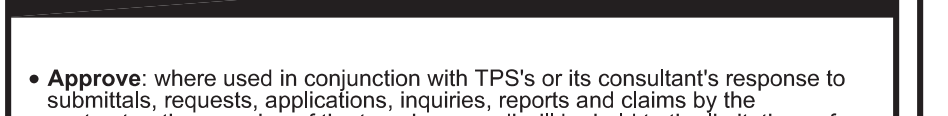
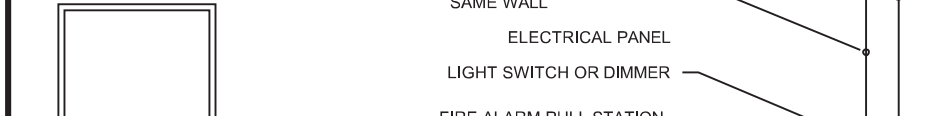
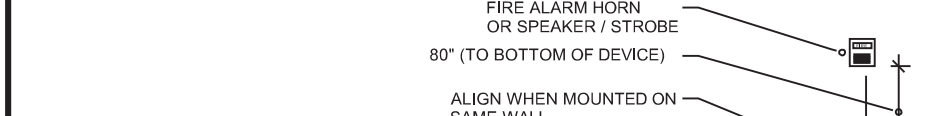
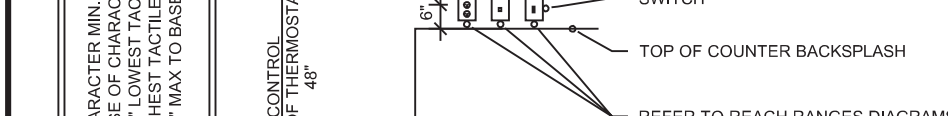
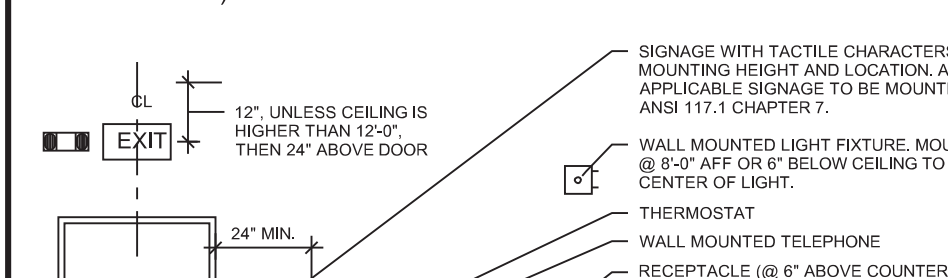
32. ELECTRICAL SYSTEM: Furnish all labor, materials, fixtures, trim, equipment and services necessary for the installation of a complete and properly functioning electrical system. All work shall conform to the following: 32.1. Standards: all standards and specifications established in the base building construction documents, or as evidenced in the existing conditions of construction shall govern, unless noted otherwise. All work shall be coordinated with the building maintenance manager. Refer to base building construction documents and specifications and existing conditions of system for equipment or materials not specified on the engineered drawings or contained herein. 32.2. All materials and workmanship shall be in compliance with the national electric code (NEC), state and local codes and ordinances, and the Americans with Disabilities Act (ADA). 32.3. Repairs and replacement: the contractor shall verify proper operation of existing panels and switch-gear. In the event that the contractor has observed system failure or defects, notify the Owner's construction manager immediately for further direction. For bid purposes, it shall be assumed that all equipment and associated components are in proper operating condition. Repairs or replacement of materials and workmanship shall be performed as a separate portion of the work. 32.4. Panels: provide new typed panel circuit directory for each panel affected.

Dimensional Conventions

1. Except where directed to place items of the work at the "approximate location shown", do not scale drawings for dimensional information. All elements of the drawings may not be drawn to exact scale. All dimensions required are shown, or may be derived from those shown on the floor plans, detail plans, elevations, sections, details, schedules, and specifications. See notes on this sheet and symbols on the "Architectural Symbols" drawing for dimensions conventions used on this project.

2. Do not scale drawings; dimensions shall govern, details shall govern over plans and elevations. Large scale plans shall govern over small scale plans. Large scale details shall govern over small scale details. If unable to locate dimensions for any item of work, consult the Architect prior to construction.

3. All heights are dimensioned from top of existing slab unless noted "AFF". (Above Finished Floor).



4. Dimensions are not adjustable, unless noted (+/-), without TPS' written approval.

5. Except where specifically noted to the contrary, all dimensions shown on the architectural drawings conform to the following conventions: A. Dimensions utilizing the "centerline" symbol are measured to: • Structural or dimensional grid lines. • Centerline of wall or partition assemblies, exclusive of any applied finish having thickness. • Centerline of door, window, cased opening and window mullion. B. Dimensions typically utilized are to the face of finished wall and are measured to: • Face of finished wall • Inside edge of finished door opening. Refer to "door schedule" for additional information. • Finish faces at the most narrow or constricted points of the section where dimension is shown when the dimension occurs across an open space. In this case, a "face of finish" dim is equivalent to a "clear" dimension. Dimension to: • Grid Line or Centerline of Column • Centerline of Mullion • Centerline of Partition

6. Where dimensions are not provided on the floor plans to locate door openings, apply the following rules, in order, to determine the location of door openings: A. Door openings may be dimensioned on drawings other than the floor plans. Refer to the sections, elevations, details, and door schedule notes for additional dimensional information. B. Where the hinge-side of a door is shown adjacent to a wall, or walls, perpendicular to the wall in which the door opening occurs, locate the hinge-side finished edge of the door opening 4 inches from the face (exclusive of any applied finish) of the closest perpendicular wall or partition assembly.

Project start date: 3/16/2021
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by: Melissa to P-1426 1411 South Potomac 426011 - Spec Suite #190 drawings construction documents 426011.cdwg
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Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation.

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Field Inspection consultation is available upon request. Call 303-739-7420 to request a consultation

Consultation for fire extinguisher placement is available upon request. Call 303-739-7420 prior to final Life Safety inspection to verify proposed locations.

Emergency Responder Radio Coverage: All New Commercial Buildings; Additions to Existing Buildings; Shall have approved radio coverage for emergency responders within the building. This building must be assessed to determine adequate in-building radio coverage at time of final frame and electrical inspection by a qualified 3rd party inspection service at the owner/developers expense. Lack of adequate in-building radio coverage may delay the issuance of a Certificate of Occupancy. Where the structure is found deficient a separate permit is required to install, repair or modify any Emergency Response Radio Coverage system. Per 2015 IFC, Section 510.

Provide a sign stating "EXIT" in raised, visual characters and braille adjacent to each door in an area of refuge, an exterior area for assisted rescue, an exit stairway or ramp, an exit passageway and the exit discharge.
2015 IBC 1013.4



1 **Egress Plan**
Level One

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



Life Safety Legend

- Room Number
- Overall Diagonal
- Exit Separation
- Common Path Of Egress

Room Schedule

100	Corridor	106	Exam
101	Waiting	107	Break Room
102	Tenant Hallway	108	M.A.
103	ADA Restroom	109	I.T./Storage
104	Exam	110	-----
105	Exam	111	Reception

Codes and Regulations

City/ County:

Aurora / Arapahoe County

Fire District:

City of Aurora Fire Rescue

Construction Classification:

II-B

Building Height / Levels:

Unknown / 4 Stories

Automatic Sprinklers Throughout

Use and Occupancy

Occupant Name:

Spec Suite #190

Occupant Use:

General Business Office

Occupancy Classification:

Business Group B

Tenant Area

Total

(approx.) Useable SF:

1,112

City of AURORA

Applicable Codes

2015 IBC (International Building Code) with Amendments

2015 IPC (International Plumbing Code)

2015 IMC (International Mechanical Code)

2015 IFC (International Fire Code)

2015 IECC (International Energy Conservation Code)

2020 NEC (National Electric Code)

2009 ICC/ANSI A117.1 Accessibility Standard

Interpretations

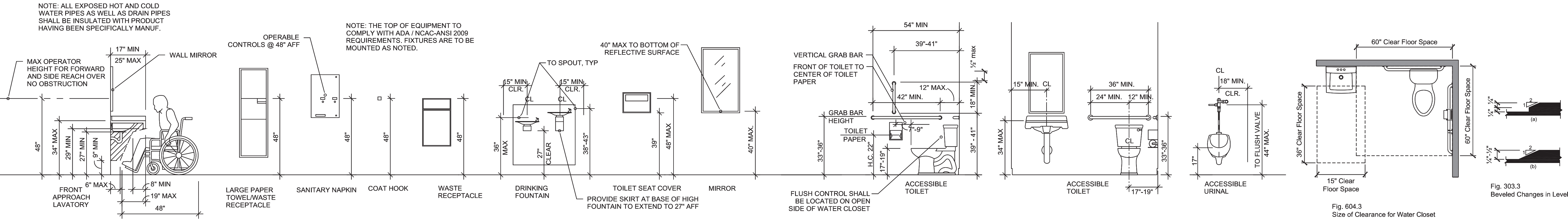
Occupancy Load Analysis

Room Name & Number	Function Per Table	Floor Area (SF)	Floor Area (SF) (Gross)	Number of Occupants
Break Room (tables and chairs)	Assembly	250	+ 15 = (net)	17
Waiting Room (tables and chairs)	uncontrolled			
(storage areas, mechanical equip rooms)	Accessory storage	30	+ 300 = (gross)	1
Remainder of Suite	Business	832	+ 100 = (gross)	9
		1112		TOTAL: 27

Means of Egress

	Required	Provided
Egress Width:	min: 34"	68"
Number of Exits:	min: 1	2
Common Path of Travel:	max: 100'	65'
Exit Access Travel Distance	max: 300'	105'

Accessible Installation Standards (n.t.s.)



City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: **Matt A.**
Date: **Jul 08, 2021**
2015 INTERNATIONAL CODES & 2020 NEC

Dates of Record

Project Start Date: 3/16/2021

Issued On: 18/June/2021
Issued For: Tenant Review & Approval, and Construction

Sheet Contents
Project # 426011.00 GBS
Proj Mgr MCP
Designed by MCP
Drafted by GBS
Checked by

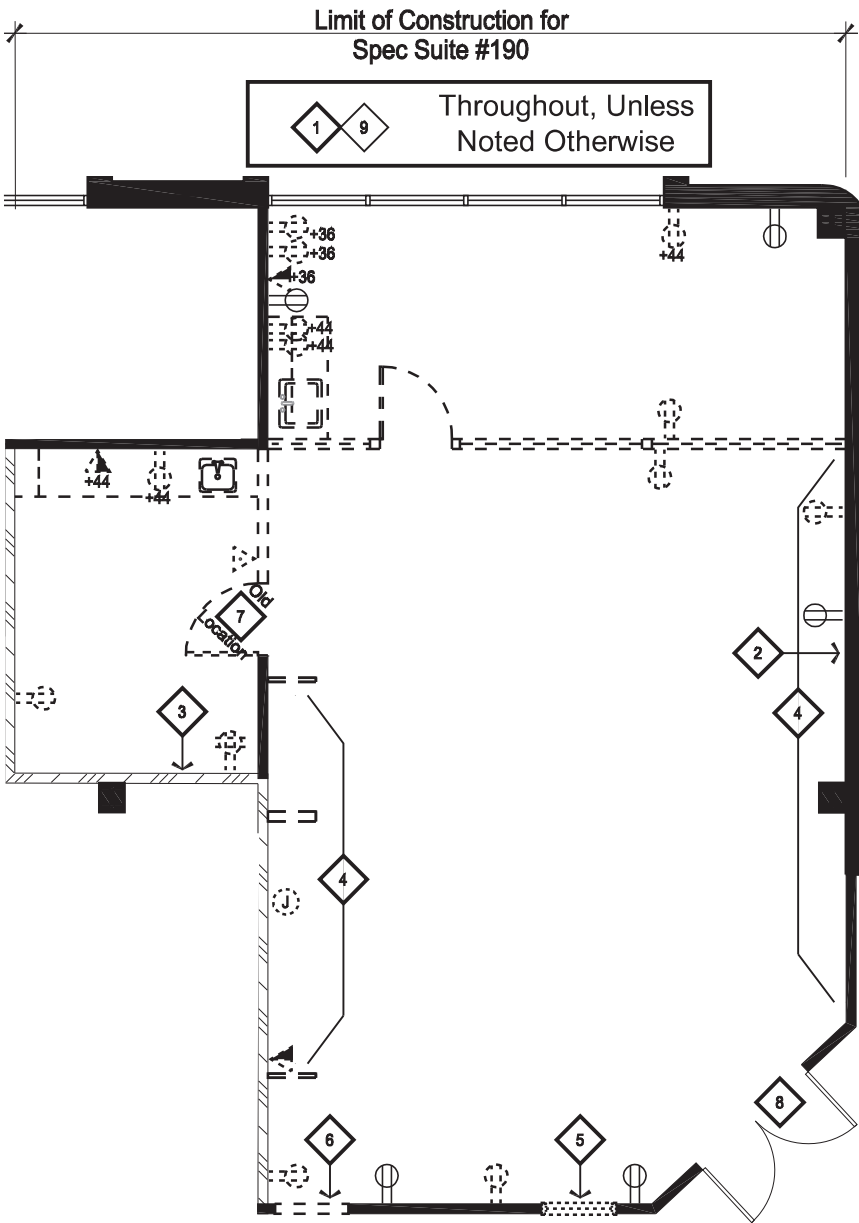
Egress Plan
A0.1

project start date: 3/16/2021
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By Melissa Campos-Palominio layout tab: D1.0
Spec Suite #190\drawings\construction documents\426011.c.dwg

1411 South Potomac • Spec Suite #190

Sheet D1.0 Plan Notes

1. Refer to General Notes for additional requirements.
2. GENERAL DEMOLITION: Demolish and remove all partitions, materials, and debris as shown on the drawings or specified otherwise herein. Removal as described shall be accomplished without storing excessive quantities of any material, rubbish, dirt, debris or waste of any kind within this demised area of construction or adjacent areas.
3. FINISH TREATMENTS scheduled to be removed are as follows: flooring, base trim, wall treatments.
4. DISPOSAL: All existing equipment, materials and fixtures not scheduled for re-use shall remain the property of the Owner. Coordinate with the Building Representative and comply with all regulations and/or requirements pertaining to removal, salvage and storage of materials demolished as scheduled.
5. RE-USE: Investigate condition of all materials scheduled for demolition and not re-used on this project. Document characteristics of each material or component and submit inventory statement to Building Representative. Include characteristics such as type, color, size, quantity, physical condition and make/model number, if possible.
6. CLEAN AND REPAIR: Verify condition of all materials scheduled for demolition and re-use where possible. Clean and/or repair materials as needed.
7. PREPARATION: Unless otherwise specified, remove all existing wall coverings, floor coverings and baseboard throughout and prepare existing surfaces for new finish treatments as scheduled. The Demolition Contractor shall scrape existing adhesives to a smooth condition. Refer to finish plans and/or schedules.
8. PATCHING: Remove all unused sleeves through the floor slab and fill/patch all penetrations.
9. ELECTRICAL DEMOLITION: Existing electrical and communications/ data wiring within partitions, raceways or above the ceiling and not scheduled for re-use shall be removed entirely, including hangers, supports, terminals, conduit and junctions from source to point of termination. Maintain circuit and/or transmission continuity to remaining devices, where necessary.
- 10.PIPES AND CONDUITS: All pipes and conduit in partitions scheduled for demolition shall be removed entirely when not scheduled for re-use.
- 11.ABANDONED APPARATUS: Abandoned electrical circuits, fixtures and devices discovered by the contractor and not scheduled for re-use shall be reported to the Building Representative for further direction.
- 12.TELEPHONE/DATA REMOVAL: Unless otherwise indicated on the drawings, remove all existing telephone equipment and/or components not currently in use.



1

Demolition Plan

Suite 190 (Inclusive of Demolition Reflected Ceiling Plan Notes)

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

North

This sheet of drawings has not been reviewed for code compliance.

Sheet Keyed Notes

1. Recycle all demolished/removed finishes and construction debris.
2. EXISTING CLEAN OUT access to remain clear where indicated. Do not cover access to clean out.
3. EXISTING FLOOR CLEAN OUT to remain where indicated. Retain access as required.
4. REMOVE SLATWALL SYSTEM. Repair gypsum as required and prepare wall to receive new finish treatment.
5. REMOVE EXISTING GLAZING assembly. Patch and paint wall as required . Match common area finish in corridor spec.
6. CUT OPENING IN EXISTING PARTITION as required for installation of new entry/exit door and frame assembly.
7. RELOCATE(D) TIMELY FRAME. Remove existing FRAME assembly at "Old Location" and set aside for reuse. Field verify existing conditions for extent of work.
8. EXISTING ENTRY/ EXIT DOOR assembly to remain. Clean and repair to 'like new' conditions as possible.
9. DEMO ALL CEILING & LIGHTING. Remove all ceiling grid & tile, gypsum board ceilings and light fixtures throughout limit of construction.

Demolition Legend

DEMO EXISTING. Partitions, door assemblies, electrical devices and/or millwork to be demolished/ removed (typ.). Return all millwork/ fixtures and/or door assemblies, not re-used in this limit of construction, to Building Management. Patch partitions and prepare to receive the scheduled finish treatments.
NOTE: At exterior curtain wall sill partitions (only), where power/ phone/ data devices are designated to be removed/ demolished, all conduit and J-boxes shall remain. Provide building standard blank face plates. All demolition of power/ phone/ data devices at interior partitions shall include removal of all associated conduit and J-boxes and patching/ painting of partitions.

EXISTING PARTITION TO REMAIN.
EXISTING PARTITIONS TO BE REWORKED. Refer to Construction Plan

Symbol Legend

Wall Mounted Fixtures/ Devices

Ⓢ Duplex electrical receptacle & face plate

"E" Existing fixture/ device to remain.

Refer to Engineering Drawings for complete specifications

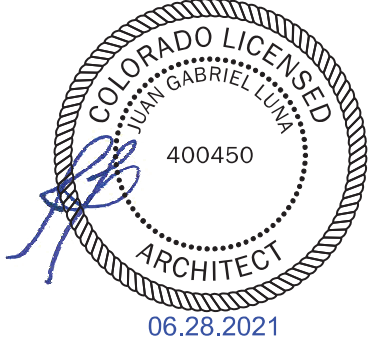
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fax (303) 861-1621
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1411 South
Potomac
Suite 190

1411 South Potomac Street
Aurora, CO 80012



Spec Suite #190

Dates of Record

Project Start Date: 3Mar2021

Issued On: 18June2021
Issued For: Tenant Review & Approval; and Construction

Sheet	Demolition Plan,
Contents	
Project #	426011.00
Proj Mgr	GBS
Designed by	MCP
Drawn by	MCP
Checked by	GBS

D1.0

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pjt create date: 6/21/2021 3:35:32 PM
By Melissa to P:\426_1411 South Potomac\426011_Spec Suite #190\drawings\construction documents\426011.c.dwg
by Melissa Campos-Palomo layout tab: A1.0

1411 South Potomac • Spec Suite #190

Sheet A1.0 Plan Notes

1. Refer to General Notes for additional requirements.
2. **DOOR ASSEMBLIES:**
 - 2.1. All assemblies shown on the drawings and not referenced to the Door Schedule are existing to remain (unless noted otherwise).
 - 2.2. Inspect, make repairs to, and clean ALL existing assemblies and components to like new conditions. Re-use existing door assemblies and/or components where possible.
 - 2.3. Provide new door assemblies and/or components as specified on the drawings. Door frames shall be securely fastened in place and the entire assembly shall be installed plumb and square with maximum diagonal distortion of 1/8". Undercut doors as needed for specified floor coverings.
3. **INSULATION and ATTENUATION:** Provide insulation or sound attenuation in walls and above suspended ceiling if indicated on the drawings. Specifications shall conform to the following:
 - 3.1. Sound attenuation in walls shall be unfaced fiberglass, 16" to 24" wide to correspond with stud width.
 - 3.2. Thermal insulation in walls shall be Kraft faced fiberglass, 16" to 24" wide, with R-13 thermal value.
 - 3.3. Sound attenuation in ceilings shall be foil faced fiberglass, 24" wide, acceptable for use in return air plenums.
4. **BACKING/BLOCKING:** Provide solid wood blocking in partitions for plumbing fixtures, door stops, wall mounted equipment (including televisions), millwork, etc., and as indicated on the drawings. Plywood backing may be used for shelving. Framing material for blocking, nailers, etc. shall be Western Douglas Fir or Hemlock.
5. **PARTITIONS:** Conform to the following:
 - 5.1. Partitions shall be erected plumb and true.
 - 5.2. Drywall partitions and joints shall be taped and finished smooth and prepared for specified finish treatment. Coat vertical joints from floor to ceiling for additional substrate to the base trim.
 - 5.3. Skim coat existing partitions as needed.
 - 5.4. All exposed corners shall be fitted with metal corner bead and top of walls at underside of suspended ceilings shall be straight and true.
 - 5.5. Provide "kickers" or metal stud support from the top of the partition to the underside of structure above for long runs and at all jambs of openings for door assemblies and at any glazed opening within 36" of the strike side of swinging doors.
6. **EXISTING LIFE SAFETY SYSTEMS:** Modify (fire alarm/smoke detection) on a **DESIGN-BUILD** basis. Conform to these drawings and documents and as required for obtaining a building permit. Refer to General Notes.

Wall Legend

- EXISTING PARTITION** to remain.
- NEW PARTIAL HEIGHT PARTITION** (Shown underneath a millwork surface). 5/8" gypsum board each side of 20 Gauge, 3½" metal studs at 24" o.c. Refer to Millwork Section Detail.
- Re: 4/A1.0
- NEW STANDARD INTERIOR PARTITION.** Non-rated assembly. 25 gauge 3-5/8" metal studs at 24" o.c. with 5/8" gypsum board each side floor to finished ceiling.
- Re: 5/A1.0
- NEW SOUND ATTENUATED PARTITION.** Non-rated assembly. 25 gauge 3-5/8" metal studs at 24" o.c. with 5/8" gypsum board each side to 6" above finished ceiling and 3-5/8" fiberglass sound attenuation batts floor to 6" above ceiling. Match Building Standard.
- Re: 6/A1.0
- EXISTING PARTITION TO BE REWORKED** as a Demising Partition: (See below)
- Re: 7/A1.0
- NEW CORRIDOR PARTITION TO STRUCTURE.** Non-rated assembly. 20 gauge 3-5/8" metal studs at 24" o.c. floor to structure above with 5/8" gypsum board floor to structure above and 3-5/8" fiberglass sound attenuation batts floor to structure. Match Building Standard.
- Re: 7/A1.0
- NEW FURRING PARTITION.** Non-rated assembly. 25 gauge 2½" metal studs at 24" o.c. with 5/8" gypsum board at exposed side floor to 6" above finished ceiling. Refer to Reflected Ceiling plan for ceiling heights.
- Re: 8/A1.0

Match existing construction. Field verify existing construction for extent of work and verify match to these partition types.

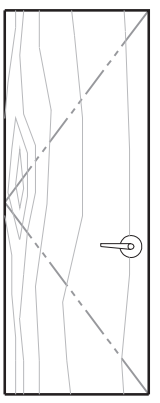
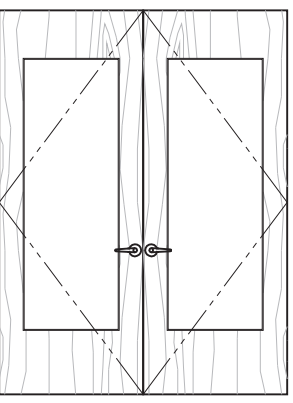
Door Schedule'

Mark	State ²	DOOR					FRAME			HARDWARE		Remarks	Mark
		Type	Leaf Size	Material	Finish	FRR ³	Material	Finish	FRR ³ Latch Func.	Additional Components			
001	E	2Fre	PR 3'-0" x 7'-0" x 1 3/4"	S.C.Wood	Stained	None	H.M.	Painted	None	2	(2)CI	Etr.	001
002	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Timely	Prefinished	None	1	CI	--	002
003	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Timely	Prefinished	None	3	--	--	003
004	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Timely	Prefinished	None	1	--	--	004
005	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Timely	Prefinished	None	1	--	--	005
006	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Timely	Prefinished	None	1	--	--	006
007	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Timely	Prefinished	None	1	--	--	007
008	N	FI	3'-0" x 6'-8" x 1 3/4"	S.C.Wood	Stained	None	Timely	Prefinished	None	2	--	--	008
009	N	FI	3'-0" x 7'-0" x 1 3/4"	S.C.Wood	Stained	None	H.M.	Painted	None	2	CI	--	009

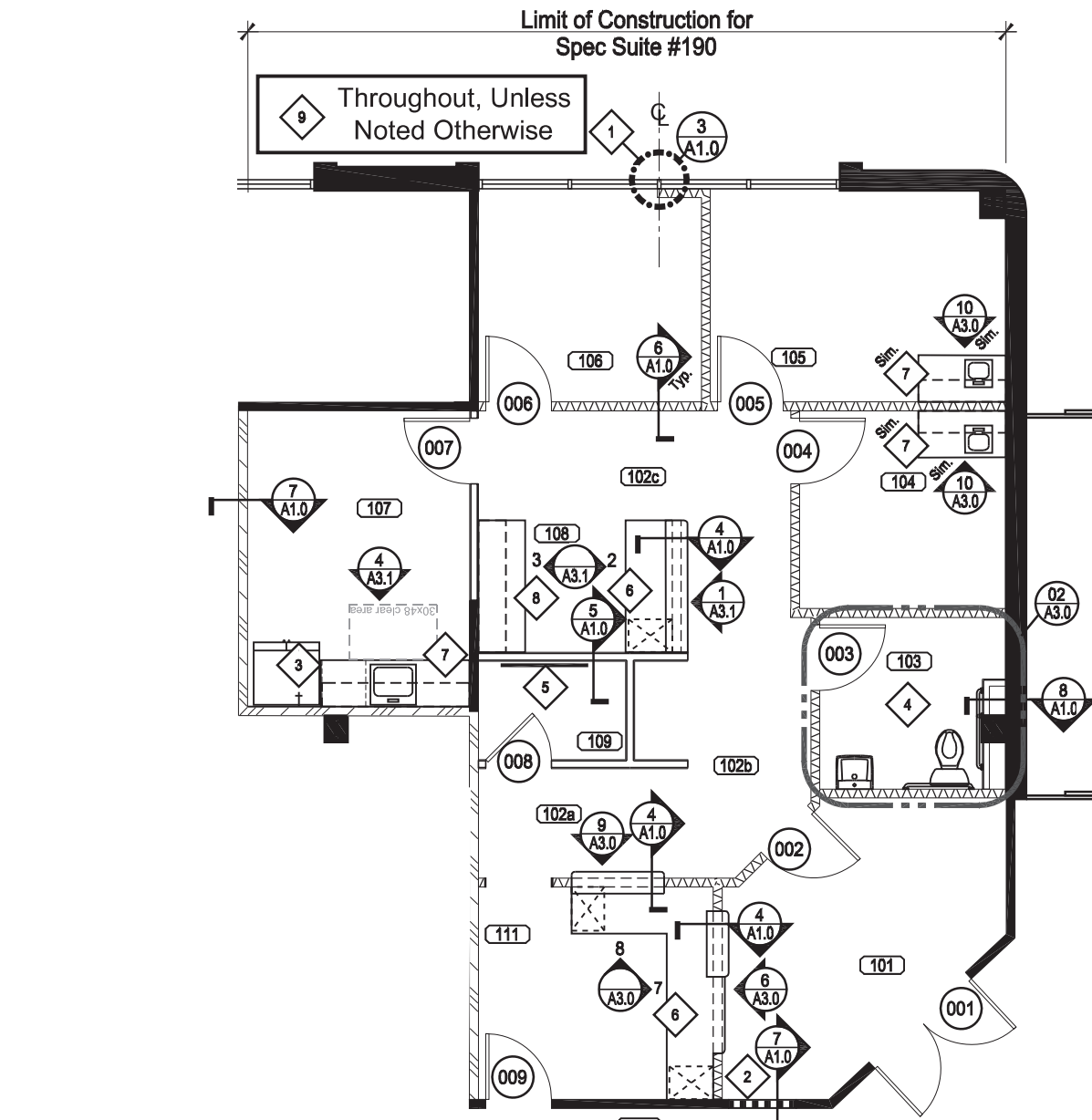
¹ The General Contractor shall field verify that all door and hardware specifications match Building Standards (unless noted otherwise) and coordinate ANY AND ALL discrepancies directly with the TPS representative (as indicated on the cover sheet Project Team list) prior to proceeding. This includes, but is not limited to, species, stain, finish, style, function, part/ product numbers, and design specifications as well as extent of inclusions / exclusions to component lists and the like. Opening force for all doors shall comply with IBC. Threshold: Maximum heights for thresholds shall comply with IBC. Glass: All full height glass doors and glass inserts shall comply with ANSI 404.2.9 and IBC.

² State:
E = Existing to remain. Assure proper working condition.
N = Provide New Door, Frame or Hardware in its entirety.
N/R = Provide New OR Relocate salvaged Door, Frame or Hardware if available. Determine available components in field.

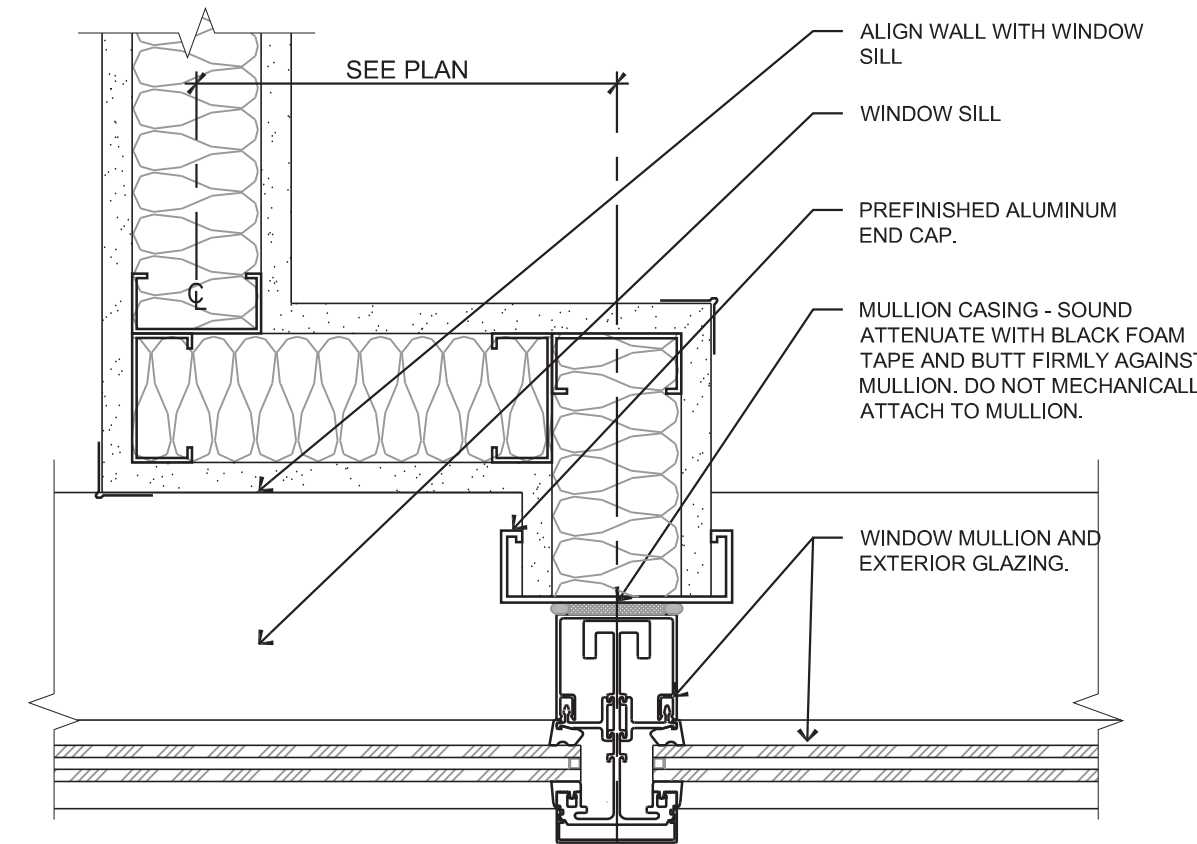
³ Rating: Minimum Fire-resistive Rating (per UL) required in minutes

Door, Frame, and Hardware Specifications	Latch Function Legend	Additional Hardware Components Legend
Wood Doors: Wood veneer interior doors shall be 1½" thick, 5-ply particle board core complying with CS 236, Type I, Density C, Class I, and with AWI standard PC-5 construction, NWWDA I.S. 1.6 Type II adhesive, solid core, flush slab style. (The General Contractor shall confirm the Building Standard specifications and match accordingly.)	Hardware shall meet Building Standard specifications. 1 Passage 2 Keyed Lockset 3 Privacy	Hardware shall meet Building Standard specifications, with Building Standard finish. CI Closer, Automatic Door (1 per leaf)
Door Frames: Entry/Exit: H.M. Interior: Timely (The General Contractor shall confirm the Building Standard specifications and match accordingly.)	Door Types	
Hardware: Hardware shall meet Building Standard specifications, with Building Standard finish. Standard hardware to be included with every door in the Door Schedule shall include: - Latchset: Lever Handle at interior and exterior (UNO), with 1" minimum throws. - Hinges - Dust Proof Strike Plate - Silencers - Wall or Door Stop The General Contractor shall provide separate cost to label all keys (locksets). Coordinate with Tenant and Building Management on labeling numbers.	 Type "FI" Standard Flush Swinging Door	 Type "2Fre" Paired French Swinging Door

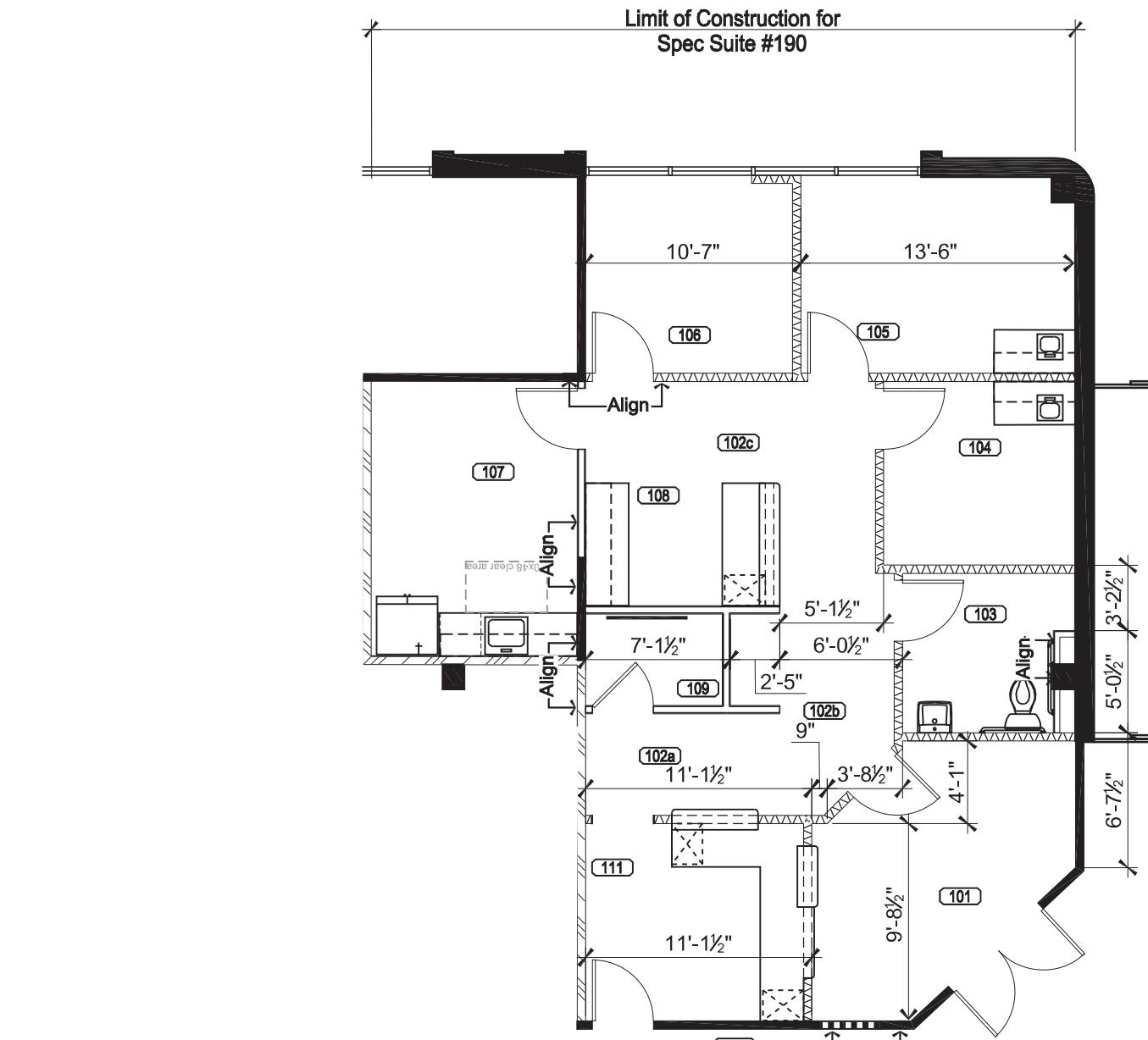
SAFETY GLAZING



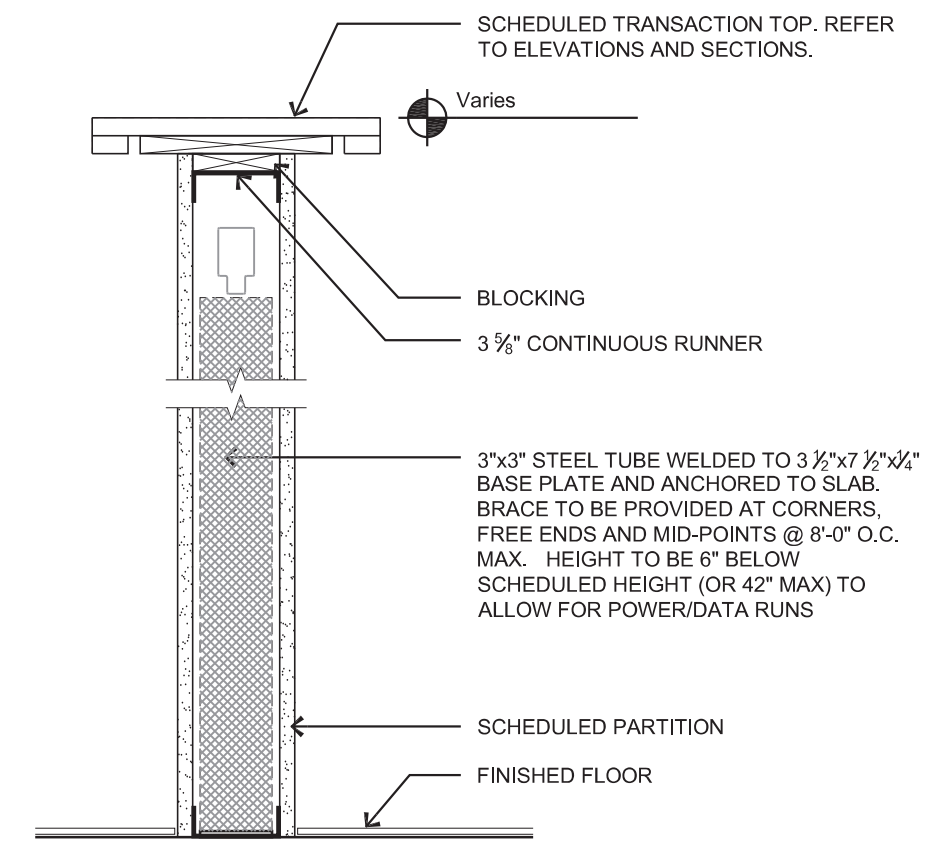
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North



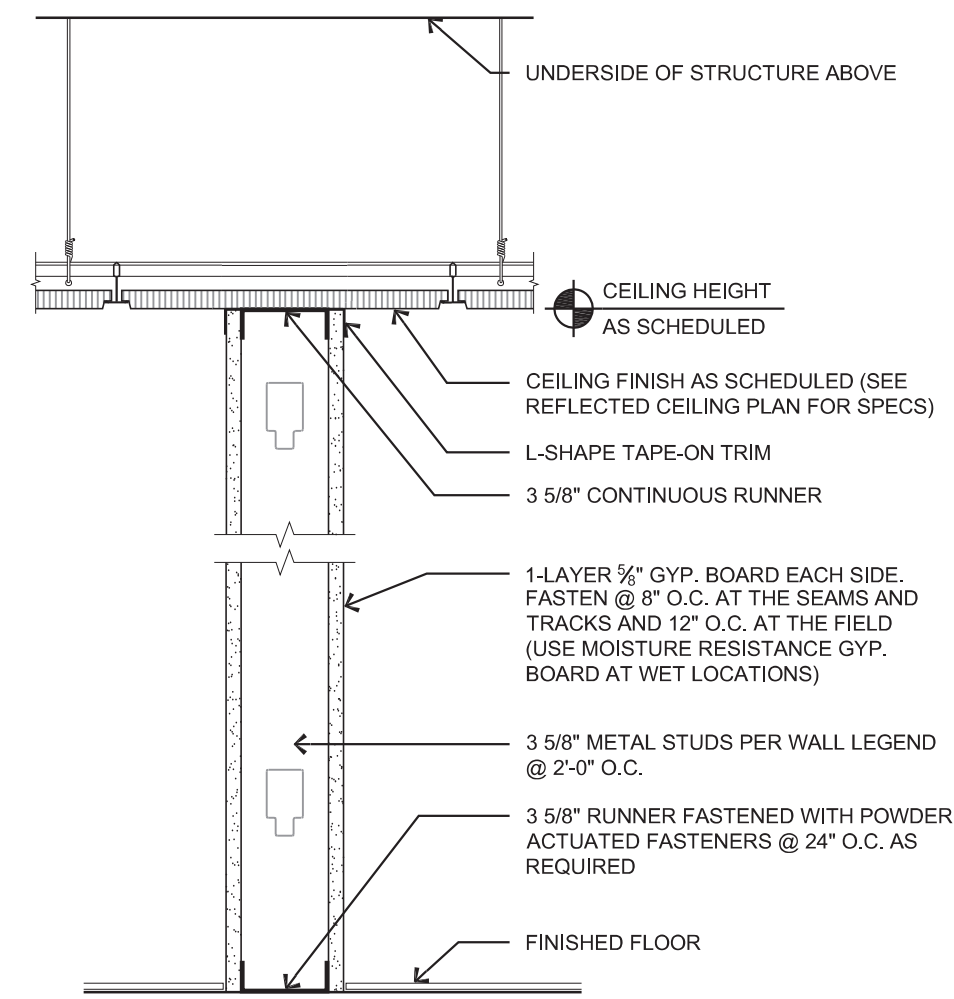
3 Partition to Mullion
Jog at Window Sill
Scale: 3" = 1'-0"



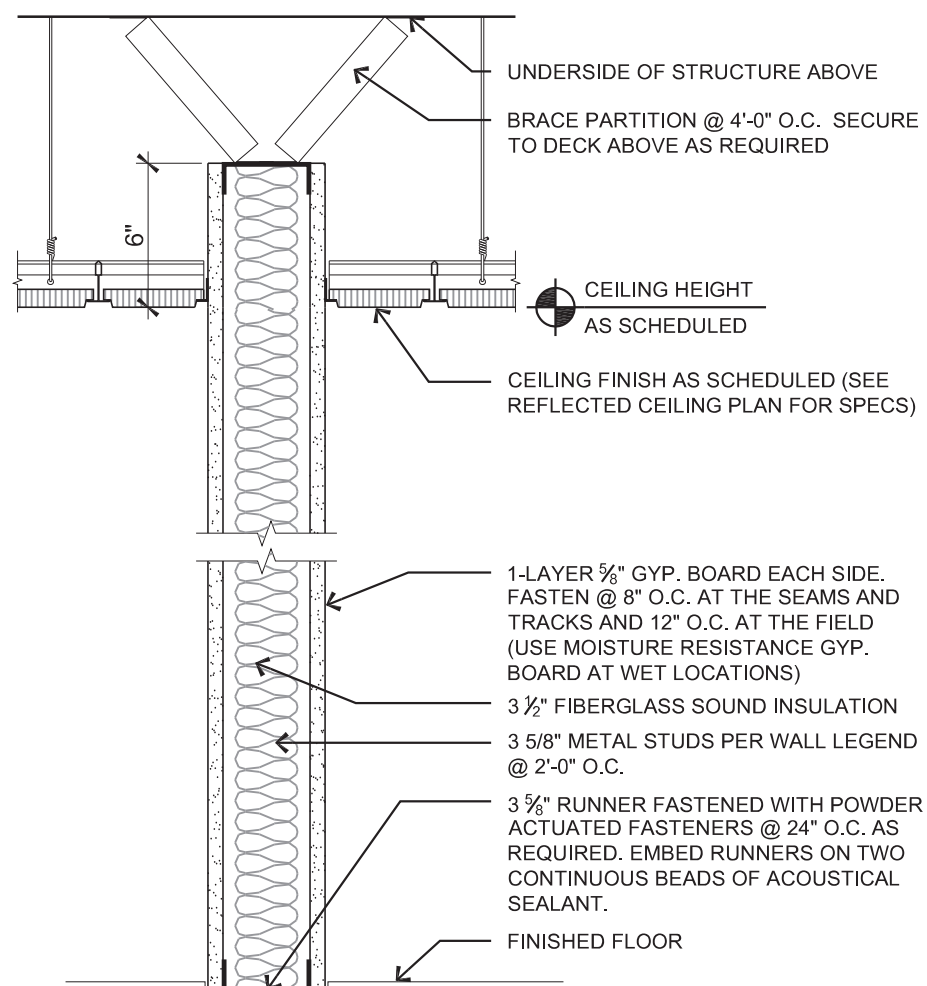
2 Dimensioned Plan
Suite 190
Scale: 1/8" = 1'-0"
North



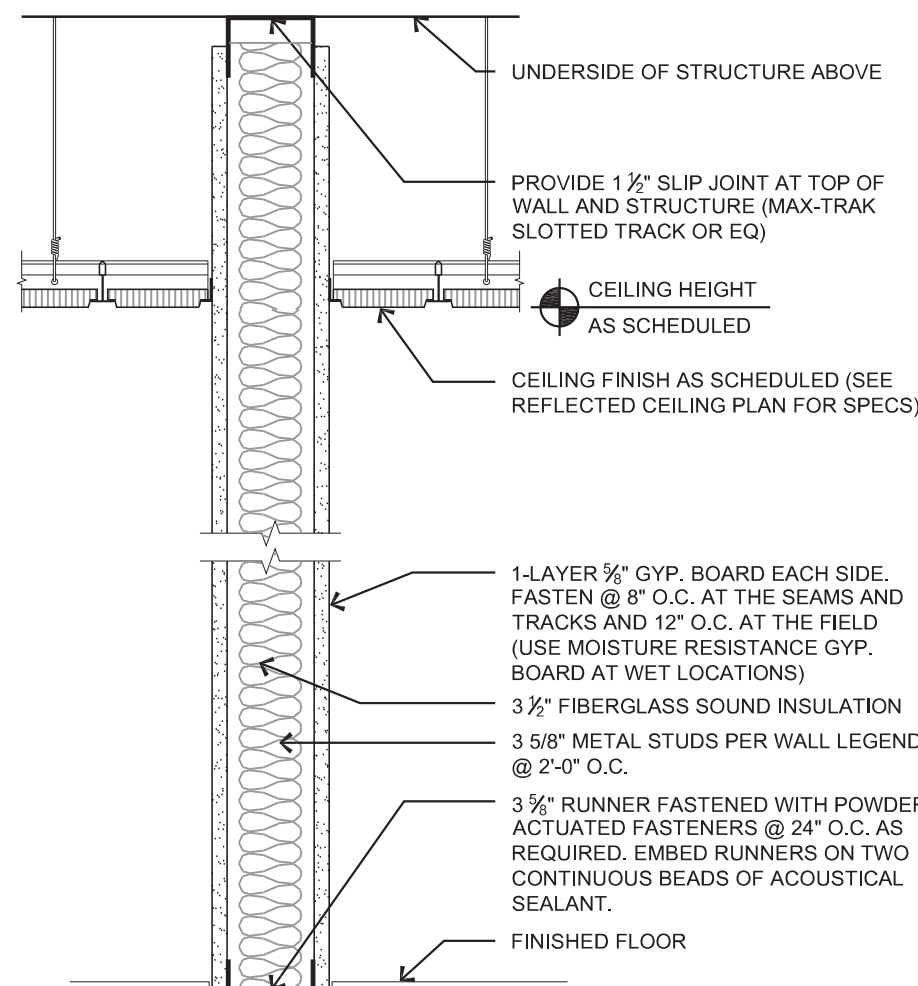
4 Partition: Partial Height
Transaction Top
Scale: 1½" = 1'-0"



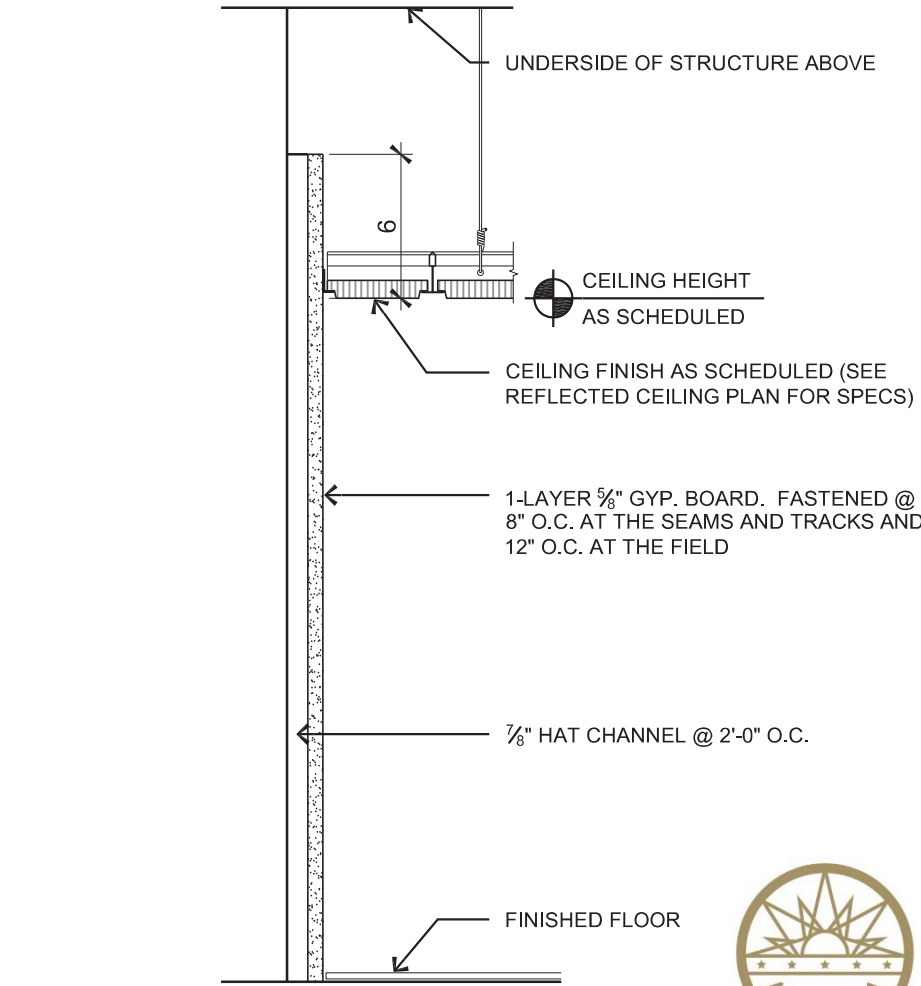
5 Partition: Interior
Ceiling
Scale: 1½" = 1'-0"



6 Partition: Interior
Above Ceiling - Sound
Scale: 1½" = 1'-0"



7 Partition: Demising and Corridor
Full Height - Sound
Scale: 1½" = 1'-0"



8 Partition: Furring
7/8" Channel
Scale: 1½" = 1'-0"

Room Schedule

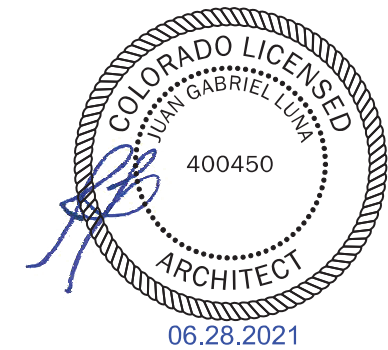
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101	Waiting	107	Break Room
102	Tenant Hallway	108	M.A.
103	ADA Restroom	109	I.T./Storage
104	Exam	110	----
105	Exam	111	Reception

Sheet Keyed Notes

- ◇ TERMINATE PARTITION AT MULLION. Use Building Standard construction method. Refer to Detail.
- ◇ INFILL open pass through/ window and prepare surface to receive new finish treatment. Match partition specifications.
- ◇ NEW WATER SUPPLY. Refer to plumbing drawings.
- ◇ NEW BARRIER FREE UNISEX RESTROOM. Refer to enlarged plan, elevations and plumbing drawings.
- ◇ NEW BACKBOARD. Provide 48" x 48" x 3/4" A/D plywood board for telephone equipment. Mount bottom of board at 48" AFF. Paint to match wall.
- ◇ NEW BUILT-IN DESK. Refer to elevations and details.
- ◇ NEW MILLWORK & PLUMBING. Refer to elevations, details and plumbing drawings.
- ◇ NEW WALL BASE & WALL CABINETS. Refer to elevations and details.
- ◇ Millwork countertops in high traffic areas throughout Limit of Construction to have 2" radius corners at all exposed edges and edge banding.

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1411 South
Potomac
1411 South Potomac Street
Aurora, CO 80012
Suite 190



Spec Suite #190

Dates of Record

Project Start Date: 3Mar2021
Issued On: 18June2021
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City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: Matt A.
Date: Jul 08, 2021
2015 INTERNATIONAL CODES & 2020 NEC

Sheet	Construction and Dimensioned	Plan,
Contents		Partition Details
Project #	426011.00	Designed by
Proj Mgr	GBS	Checked by
	MCP	GBS

A1.0

Room Schedule

100	Corridor	106	Exam
101	Waiting	107	Break Room
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103	ADA Restroom	109	I.T./Storage
104	Exam	110	----
105	Exam	111	Reception

Sheet Keyed Notes

- NEW GYPSUM BOARD CEILING. Install new gypsum board ceiling at 8'-0" AFF where indicated.
- Provide NEW FRAMED GYP. BD. SOFFIT. Refer to details.

Symbol Legend

Ceiling Mounted Fixtures/ Devices

- Building Standard 2x4 LED light fixture
- Building Standard 2x2 LED light fixture
- Recessed LED downlight fixture
- Wall Mounted Vanity Light

NOTE: all fixtures shown half shaded shall have night light egress function.

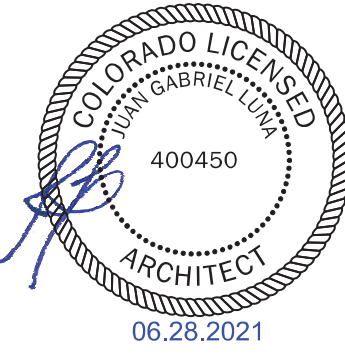
Wall Mounted Fixtures/ Devices

- Building Standard single pole switch
- Special function switches
- "D" = dimmable switch and ballast
- "3" = Three-way operation
- [lower case letters] indicate circuiting when necessary for clarification
- Duplex electrical receptacle & face plate
- Duplex electrical receptacle & face plate on dedicated circuit
- Combination telephony/ data outlet rough-in (1/2"Ø conduit) w/ double gang J-box and single gang plaster ring with pull string to above finished ceiling.
- Water supply line
- "E" Existing fixture/ device to remain.

Refer to Engineering Drawings for complete specifications

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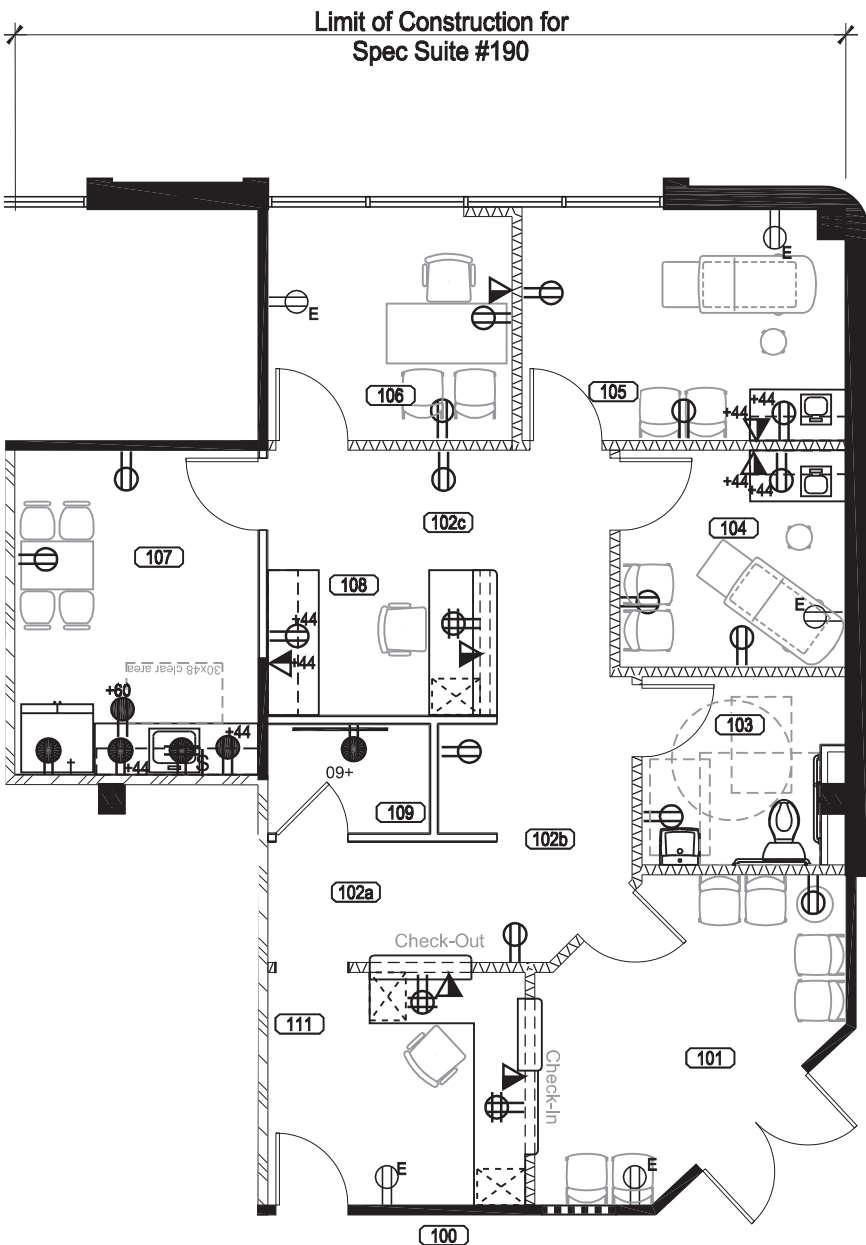
1411 South Potomac Suite 190
1411 South Potomac Street
Aurora, CO 80012



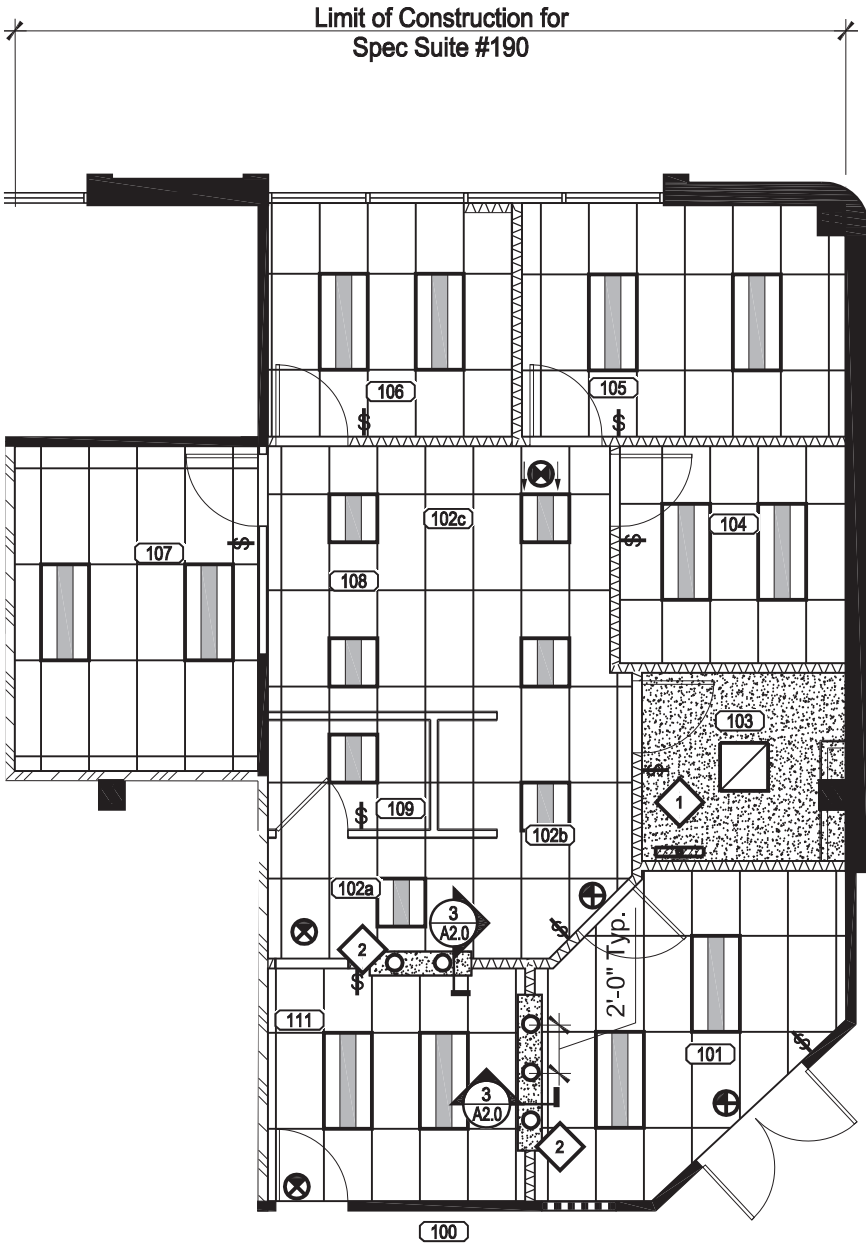
Spec Suite #190

Dates of Record
Project Start Date: 3Mar2021
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Issued For: Tenant Review & Approval; and Construction

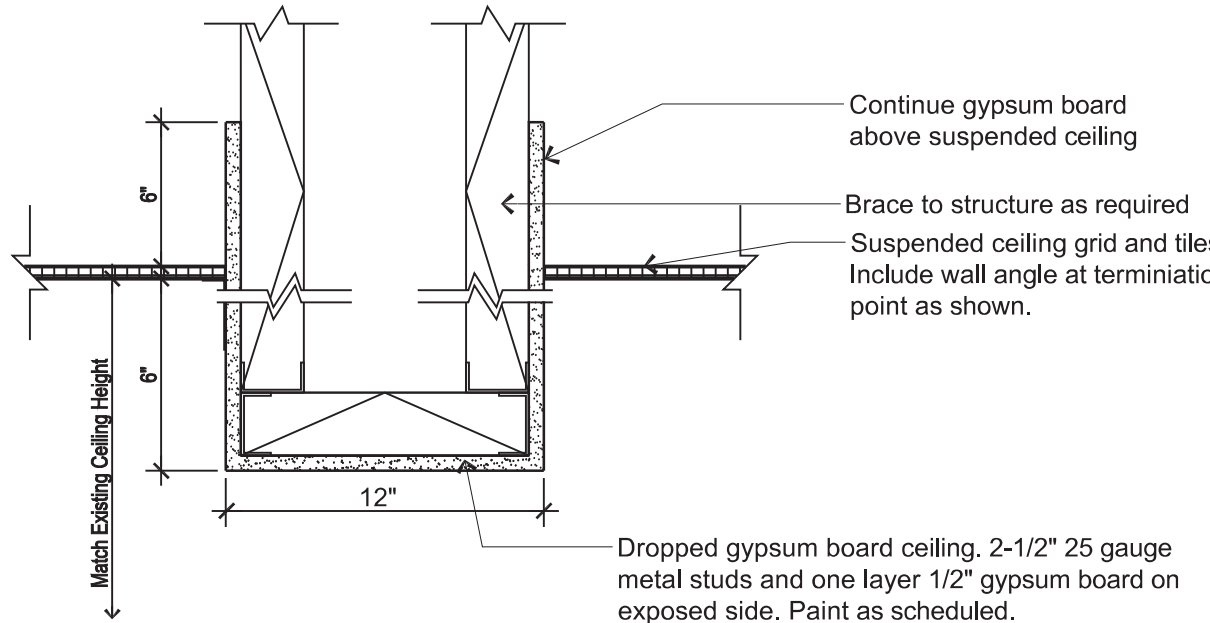
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Project #	TPS190
Designed by	TPS
Drawn by	MCP
Checked by	GBS
428611.00	GBS MCP MCP GBS



1 Power & Communications Plan
Suite 190
Scale: 1/8" = 1'-0"



2 Reflected Ceiling Plan
Suite 190
Scale: 1/8" = 1'-0"



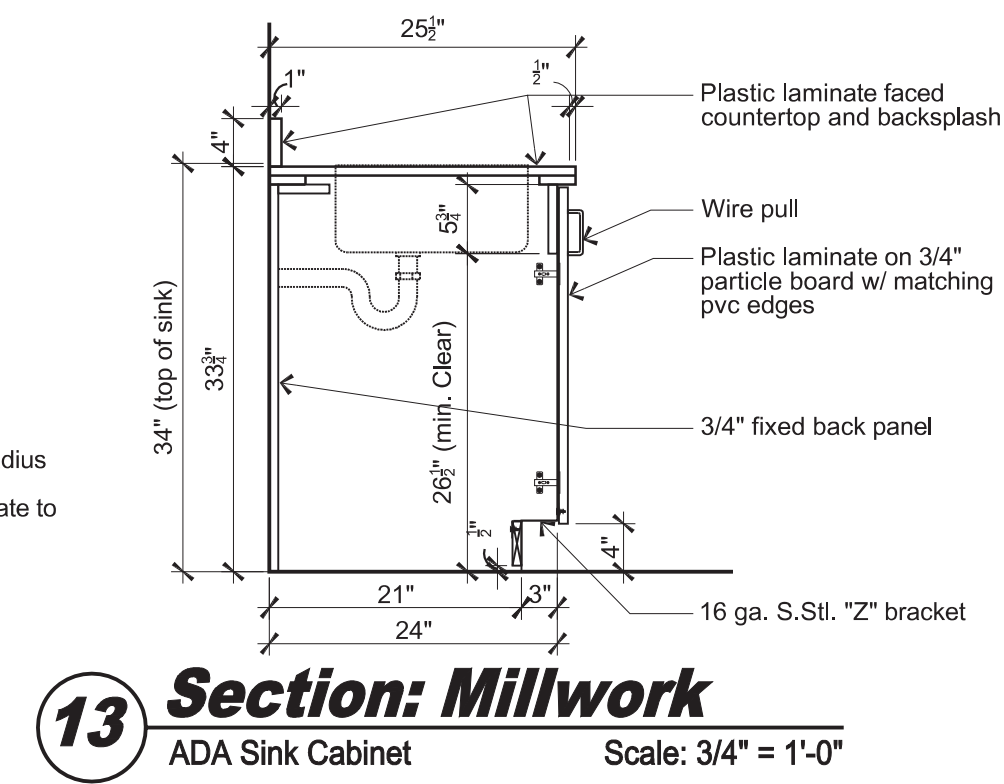
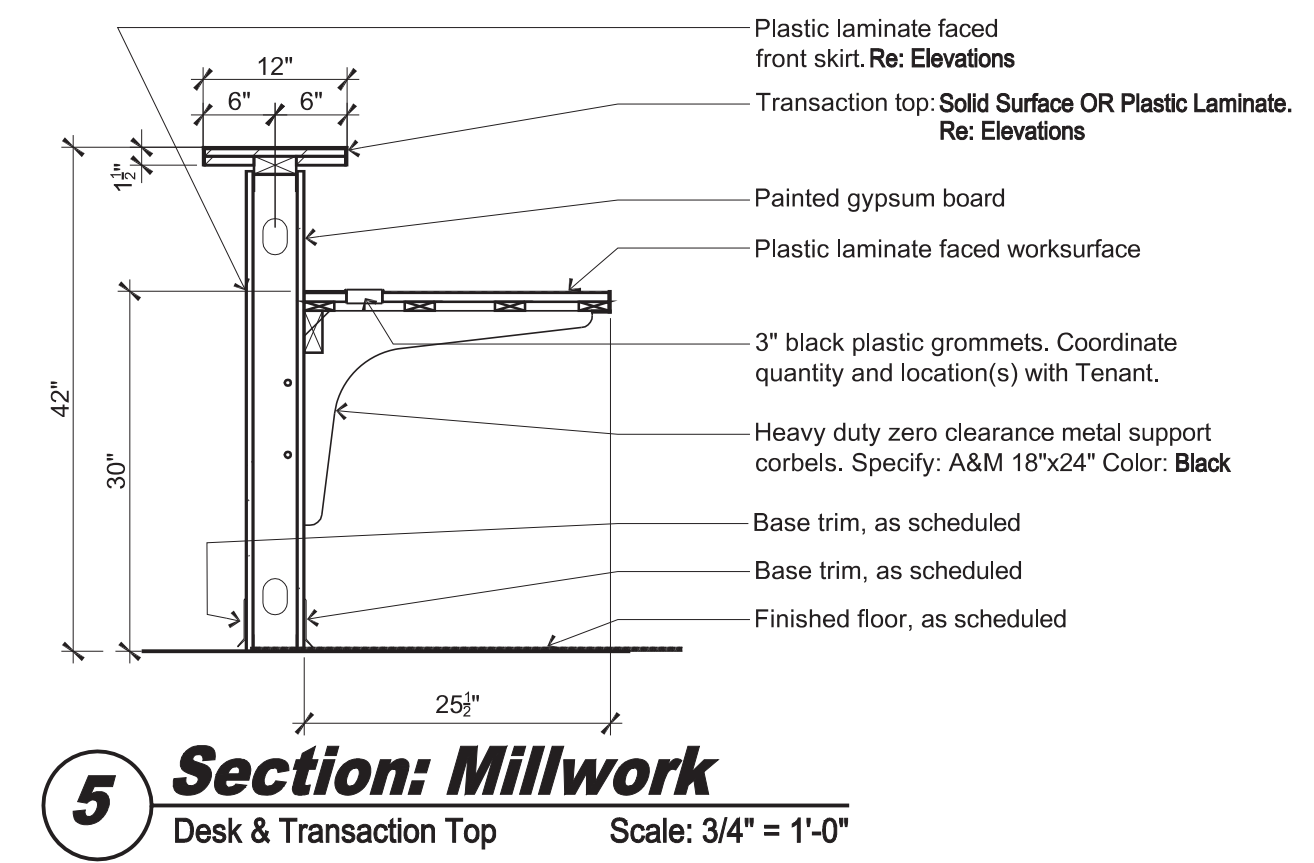
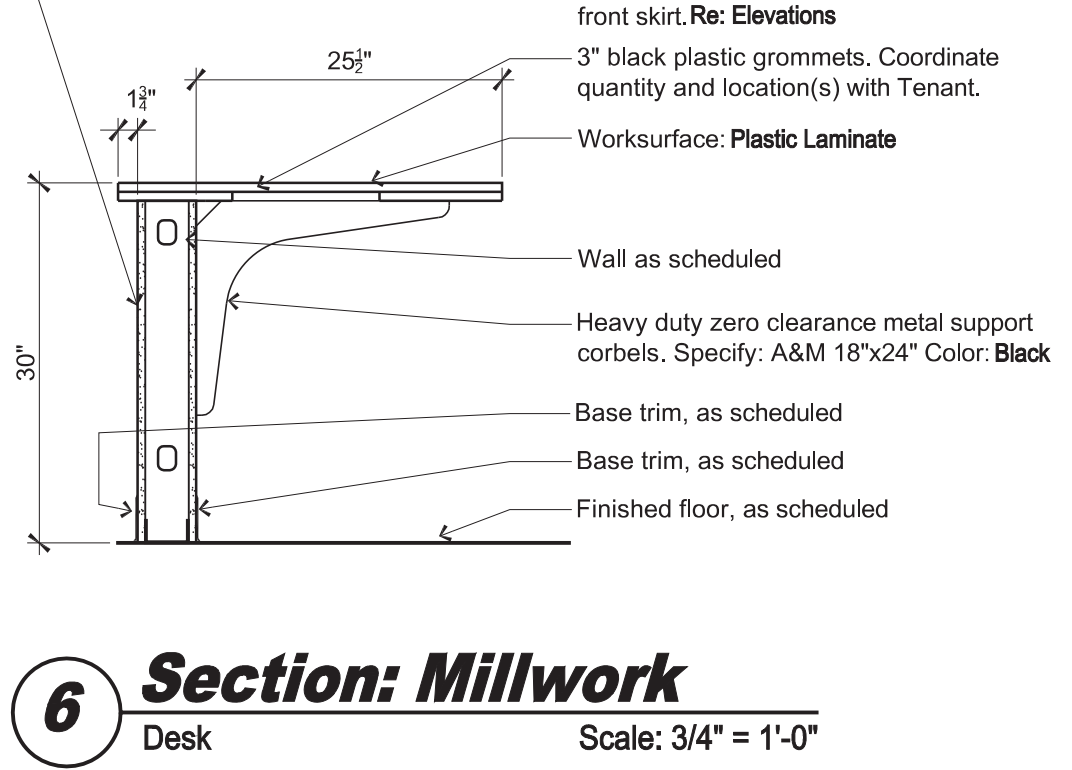
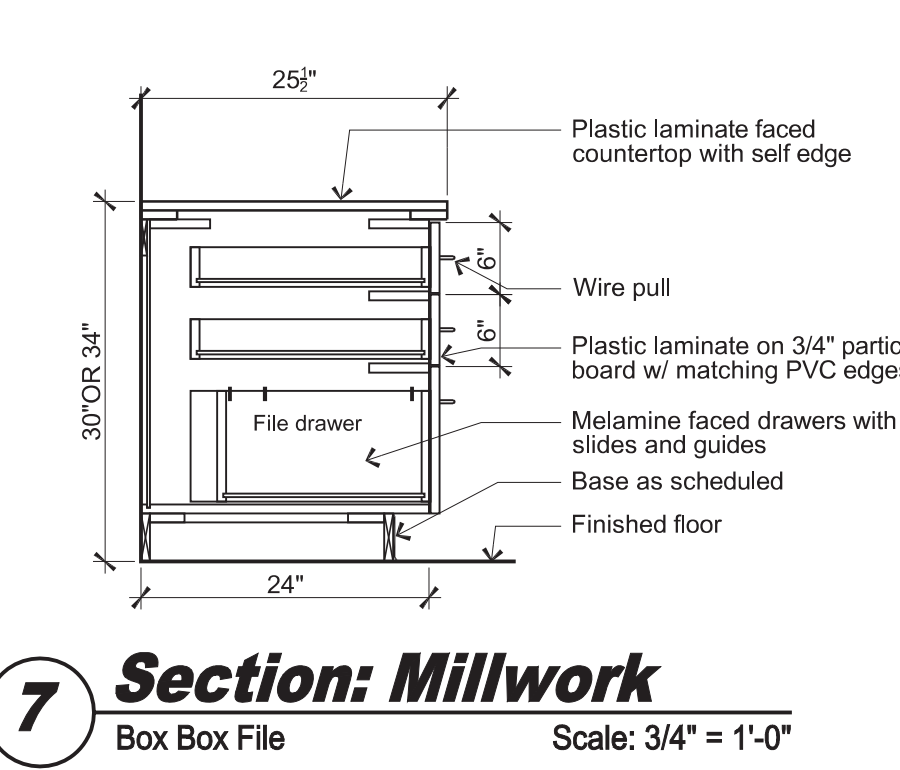
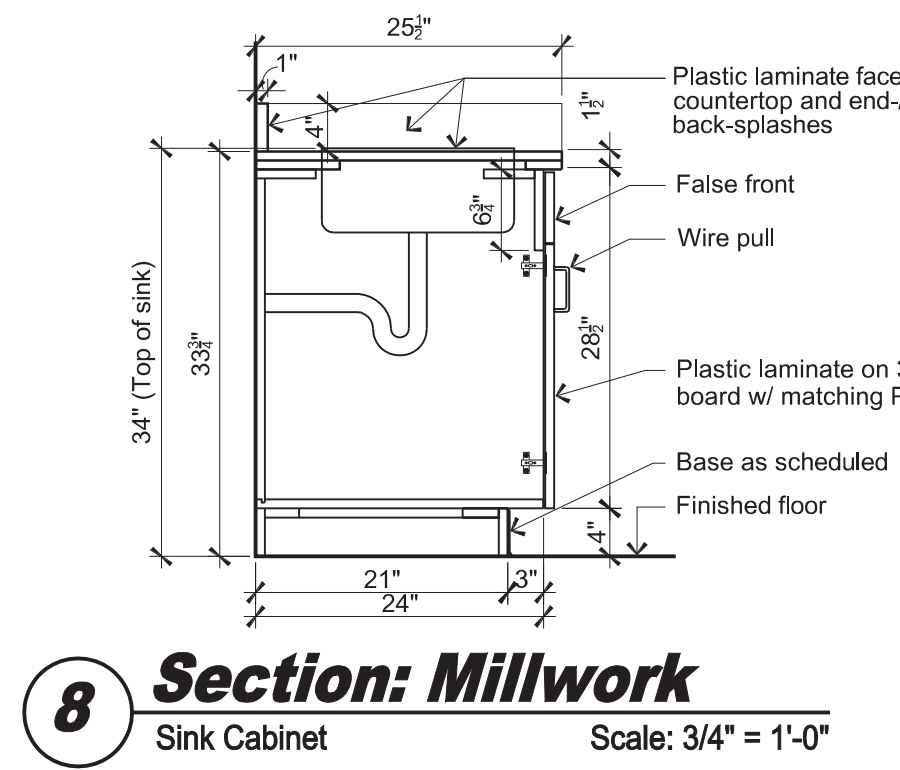
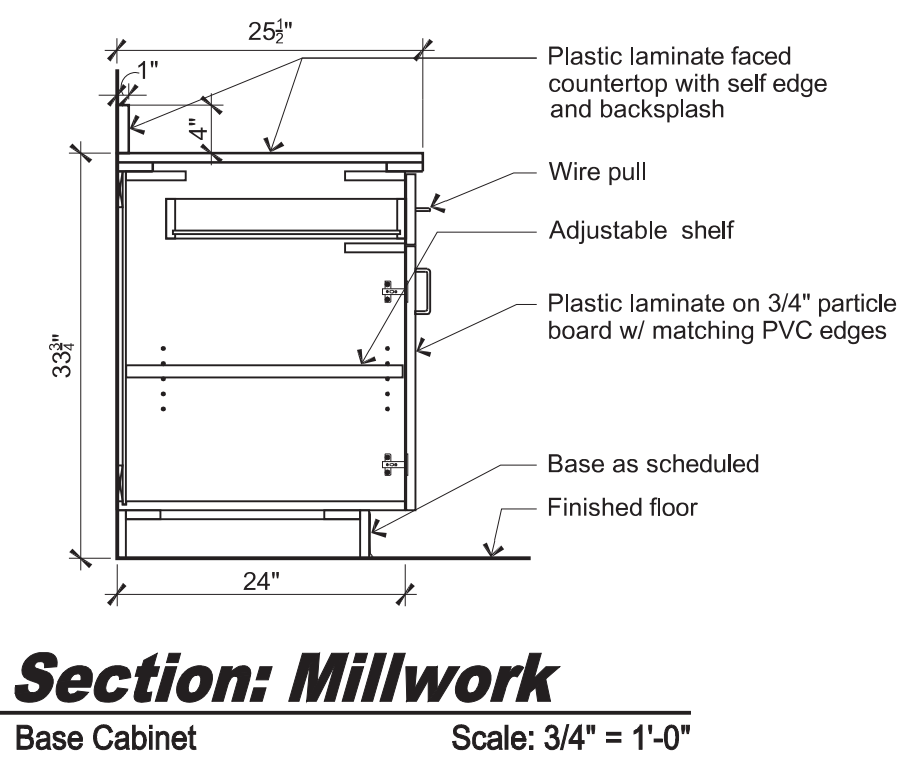
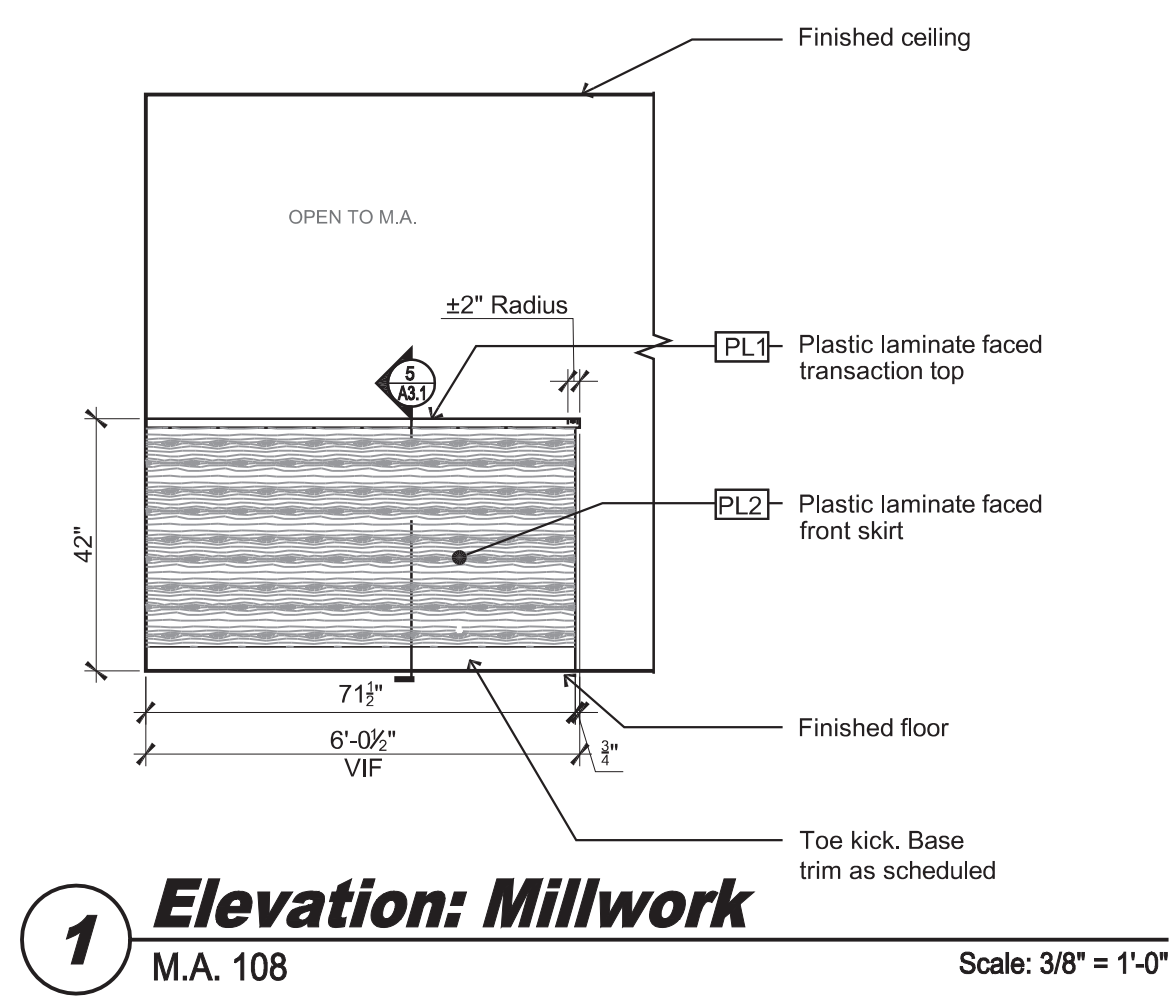
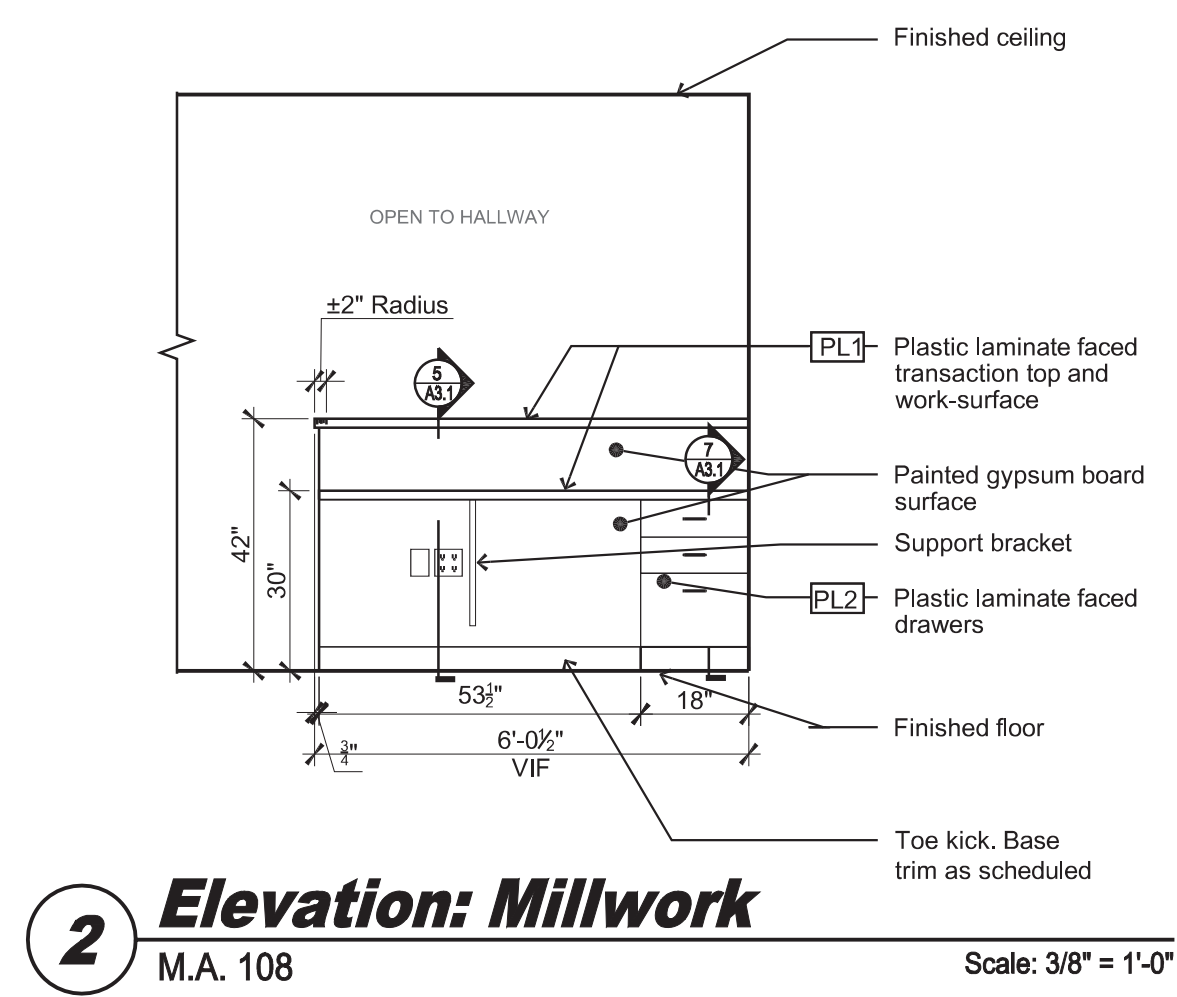
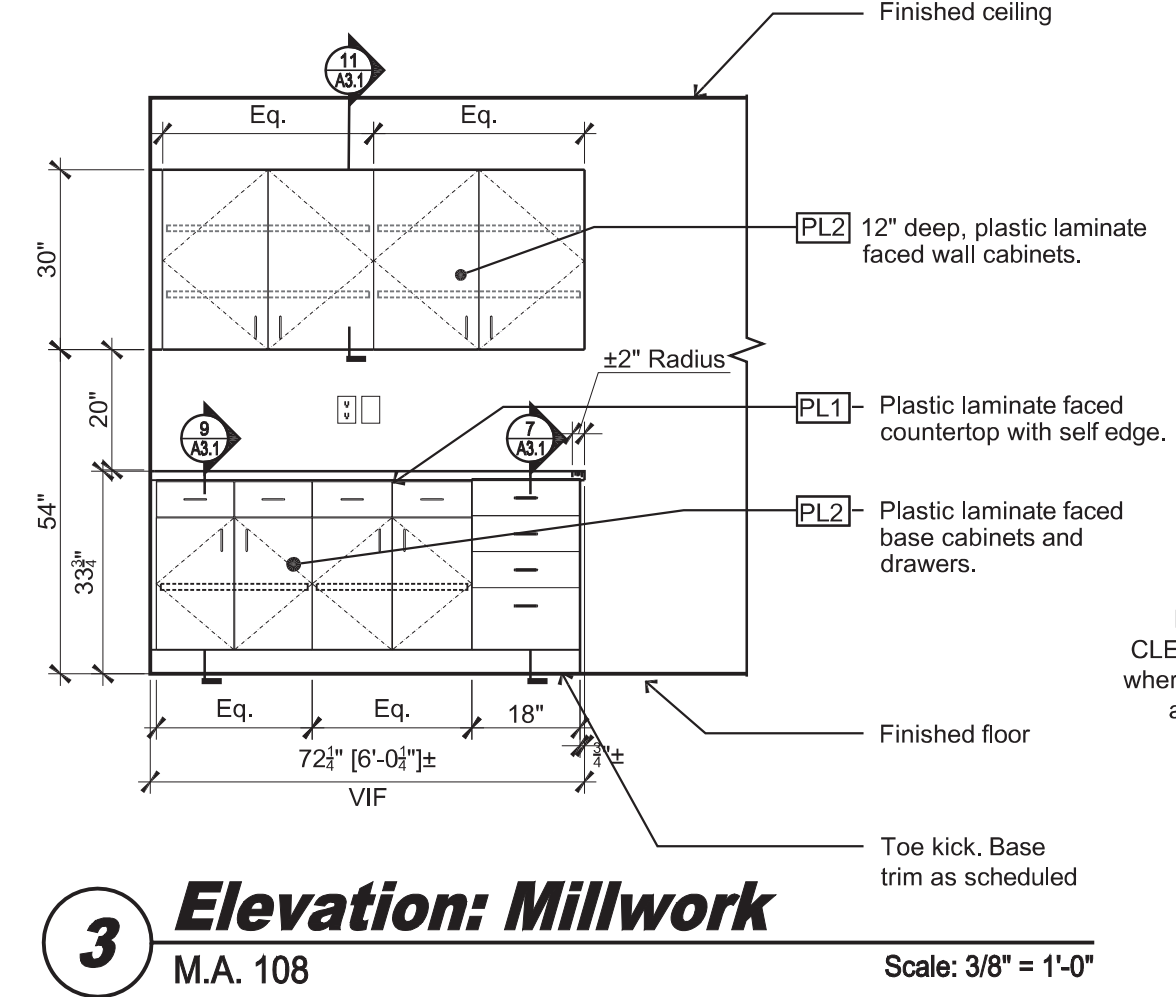
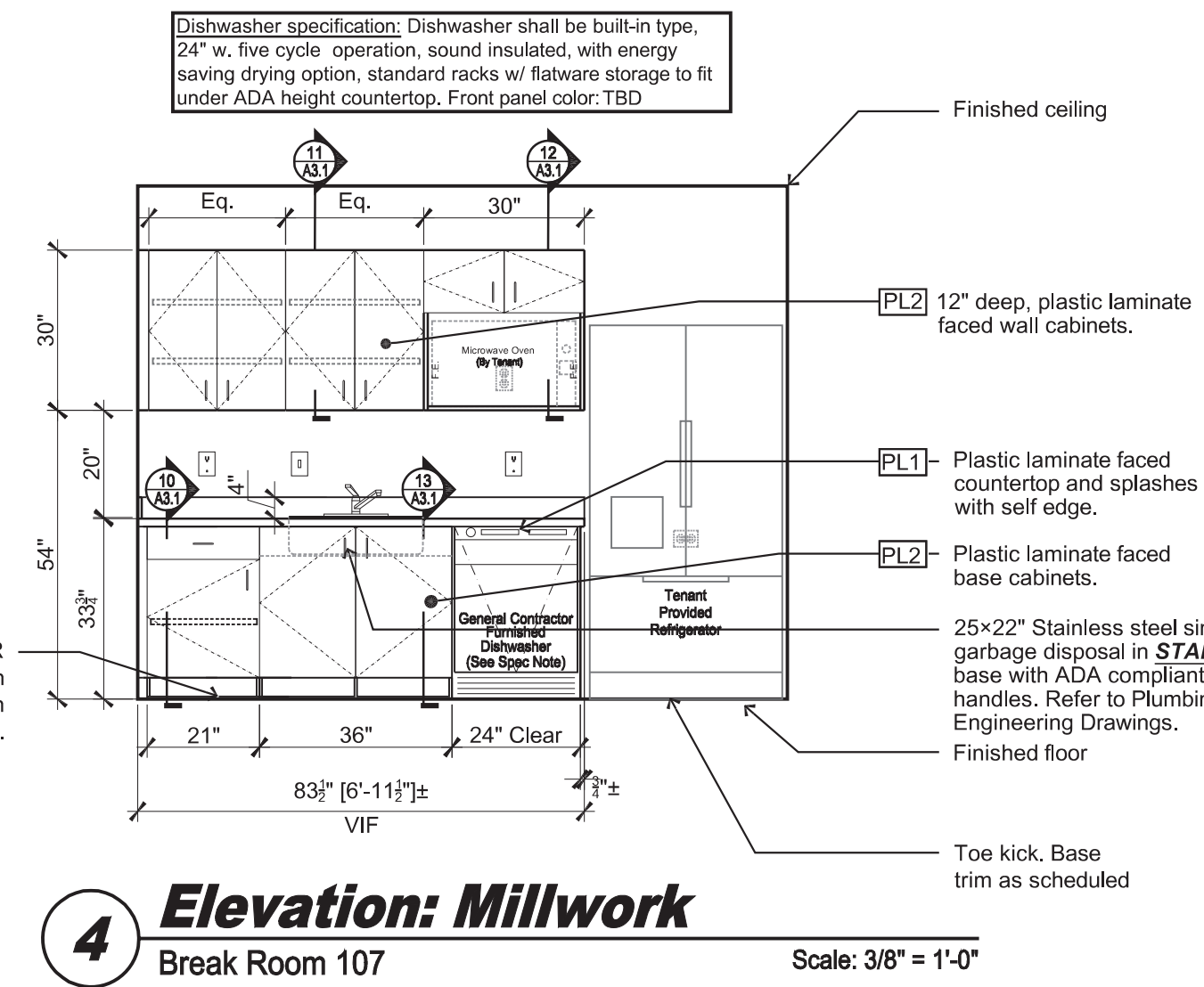
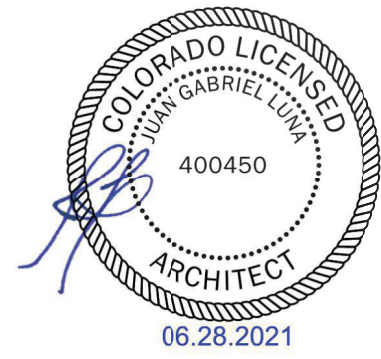
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Reception 403
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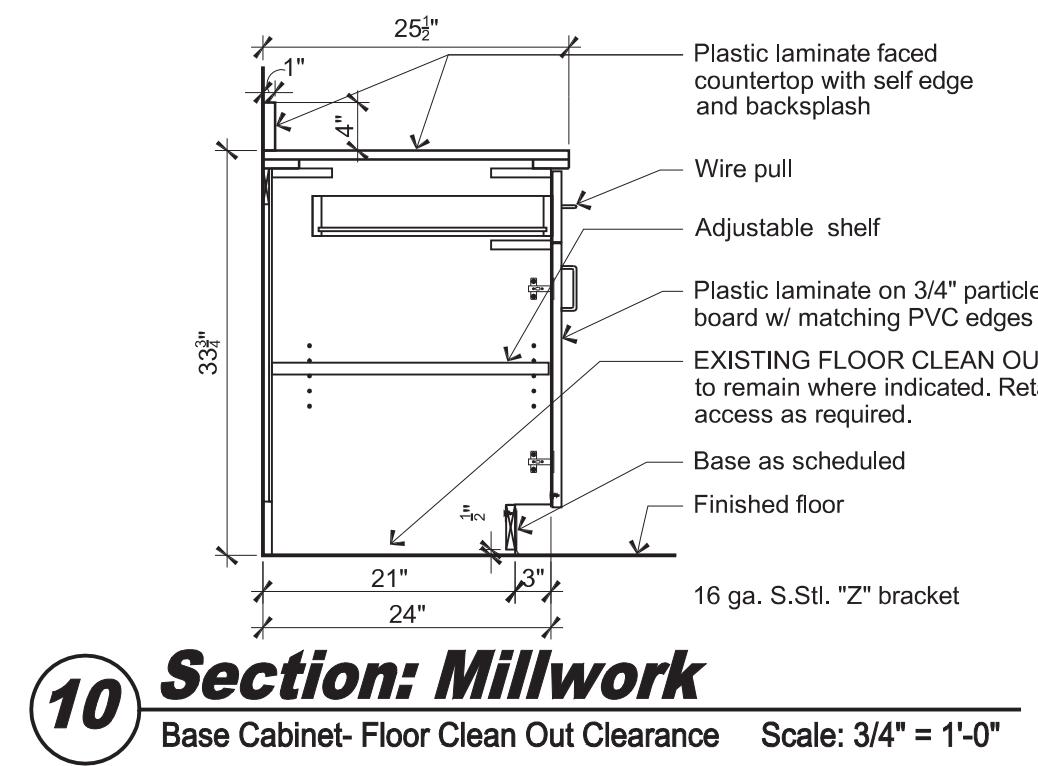
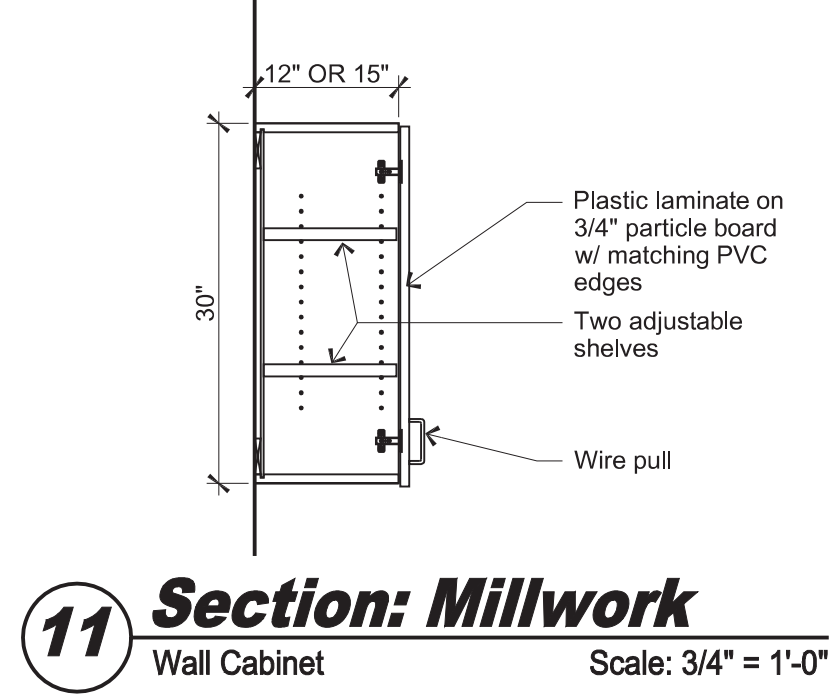
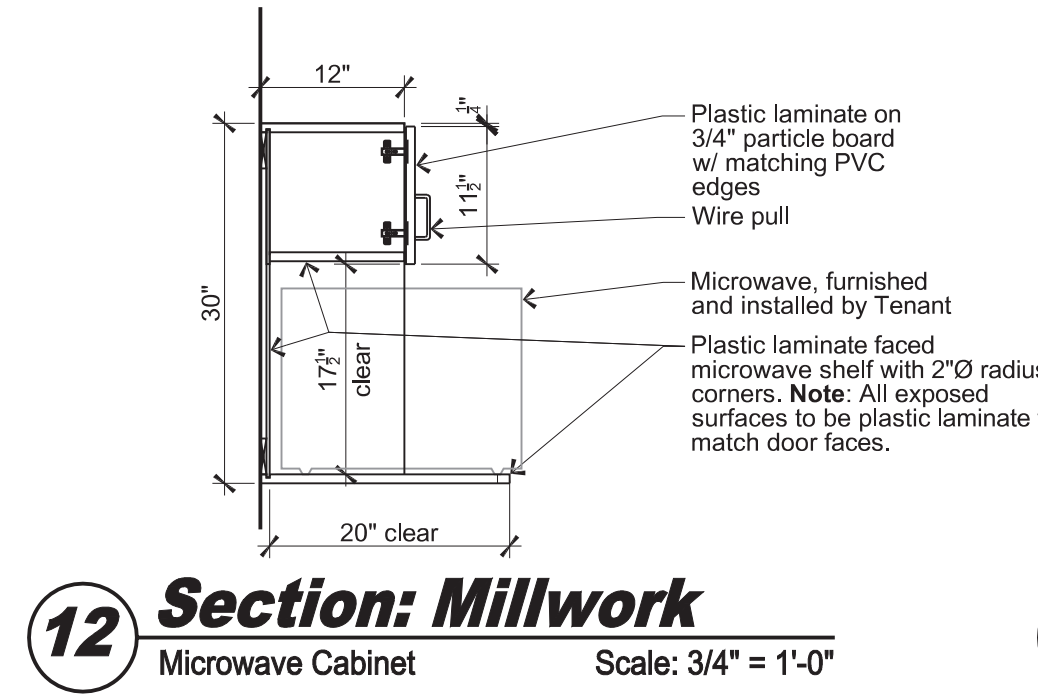
City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: **Matt A.**
Date: **Jul 08, 2021**
2015 INTERNATIONAL CODES & 2020 NEC

project start date: 3Mar2021
dwg create date: 6/21/2021 8:54:23 AM
dwg save date: 6/21/2021 8:54:23 AM
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by Melissa Campos-Palominio layout tab: A2.0

1411 South Potomac • Spec Suite #190



This plan was reviewed for adopted codes and NOT for compliance with **ADA** or **FHA** accessibility requirements. Contact 800-949-4232 (**ADA**) and 303-894-7822 x 325 (**FHA**) for federal accessibility requirements that apply to your project.



MECHANICAL GENERAL NOTES

GENERAL

SCOPE

SITE EXAMINATION

STANDARDS

CODES

PERMITS AND FEES

WARRANTY

FILTERS

DUCTWORK & ACCESSORIES

DUCT SEALANT

SUPPORTS

DAMPERS

GRILLES, REGISTERS, & DIFFUSERS

CONTROLS AND OPERATIONS

TESTING, ADJUSTING, AND BALANCING

THE INTENT OF THE SPECIFICATION AND THE DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL MECHANICAL SYSTEM. THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO COMPLETE THE MECHANICAL WORK.

THE MECHANICAL CONTRACTOR SHALL THOROUGHLY EXAMINE ALL AREAS WHERE EQUIPMENT, DUCTWORK, AND PIPING WILL BE INSTALLED AND WILL REPORT ANY CONDITION THAT, IN HIS OPINION, PREVENTS THE PROPER INSTALLATION OF THE MECHANICAL WORK.

EQUIPMENT AND MATERIALS SHALL CONFORM WITH APPROPRIATE PROVISIONS OF ARL, ASME, ASTM, UL, NEMA, ANSI, SMACNA, ASHRAE, AND NFPA, AS APPLICABLE TO EACH INDIVIDUAL UNIT OR ASSEMBLY.

ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. IN CASE OF CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATION AND THE CODES AND THE ORDINANCES, THE HIGHEST STANDARDS SHALL APPLY. THE MECHANICAL CONTRACTOR SHALL SATISFY CODE REQUIREMENTS AS A MINIMUM STANDARD WITHOUT ANY EXTRA COST TO OWNER/TENANT.

THE MECHANICAL CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, FEES AND INSPECTORS NECESSARY TO COMPLETE THE MECHANICAL WORK.

THE MECHANICAL CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY OWNER/TENANT AND WILL REPAIR OR REPLACE ANY DEFECTIVE WORK PROMPTLY AND WITHOUT CHARGE AND RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE MATERIAL AND WORKMANSHIP.

PROVIDE TWO (2) SETS OF PLEATED DISPOSABLE FILTERS. USE ONE SET UNTIL COMPLETION OF CONSTRUCTION. INSTALL ONE SET AT COMPLETION OF CONSTRUCTION. FILTERS TO BE FARR, OR SIMILAR.

ALL DUCTWORK TO BE RIGID SHEETMETAL CONSTRUCTED FROM GALVANIZED SHEET STEEL IN ACCORDANCE WITH SMACNA 1" PRESSURE CLASS DUCT CONSTRUCTION STANDARDS. ALL EXPOSED DUCTWORK TO BE ROUND, SPIRAL, OR RECTANGULAR LOCK-SEAM TYPE, AS SHOWN ON HVAC PLAN. ASSEMBLE AND INSTALL DUCTWORK IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICE FOR ACHIEVING AIR TIGHT (5% LEAKAGE) AND NOISELESS (NO OBJECTIONABLE NOISE) SYSTEMS, CAPABLE OF PERFORMING EACH INDICATED SERVICE. FURNISH ALL REQUIRED DAMPERS, TRANSITIONS, CONNECTIONS TO AIR TERMINALS, AND OTHER ACCESSORIES NECESSARY FOR A COMPLETE OPERATING SYSTEM. NO VARIATION OF DUCT CONFIGURATION OR SIZES WILL BE PERMITTED EXCEPT BY PERMISSION FROM THE ENGINEER.

SEAL ALL CONCEALED LONGITUDINAL AND TRANSVERSE JOINTS WITH A NON-HARDENING, NON-MIGRATING MASTIC OR LIQUID ELASTIC SEALANT OF A TYPE RECOMMENDED BY THE MANUFACTURER FOR SEALING JOINTS AND SEAMS IN SHEET METAL DUCTWORK. COVER ALL FIELD JOINTS, JOINTS AROUND SPIN-IN FITTINGS AND FASTENING SCREWS WITH MASTIC. DO NOT SEAL EXPOSED DUCT.

PROVIDE HOT-DIPPED GALVANIZED STEEL FASTENERS, ANCHORS, RODS, STRAPS, TRIM, AND ANGLES FOR SUPPORT OF DUCTWORK.

PROVIDE OPPOSED-BLADE, MULTI-LEAF VOLUME CONTROL DAMPERS WHERE INDICATED ON DRAWINGS AND AT POINTS ON LOW PRESSURE SUPPLY, RETURN AND EXHAUST DUCTS WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS. PROVIDE UL LISTED FIRE DAMPERS WHERE REQUIRED AND IN ACCORDANCE WITH NFPA AND LOCAL CODES. PROVIDE CONVENIENTLY LOCATED ACCESS DOORS OF AMPLE SIZE AND QUANTITY FOR SERVICING THE DAMPERS.

GRILLES, REGISTERS, & DIFFUSERS

GRILLES, REGISTERS AND DIFFUSERS SHALL BE MANUFACTURED BY PRICE. DIFFUSERS SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS AND SCHEDULES. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS ITEMS NECESSARY FOR A COMPLETE AND PROPER INSTALLATION IN THE TYPE OF CEILING AND WALLS USED IN THIS PROJECT.

CONTROLS AND OPERATIONS

CONTROL WIRING

THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL CONTROL WIRING NECESSARY FOR THE COMPLETE AND PROPER OPERATING TEMPERATURE CONTROL SYSTEM.

CONTROLS

MOUNT ALL CONTROLS @ 48" ABOVE FINISH FLOOR, UNLESS OTHERWISE NOTED.

TESTING, ADJUSTING, AND BALANCING

TESTING, ADJUSTING, BALANCING

MECHANICAL CONTRACTOR OR AN INDEPENDENT NEBB OR AABC CERTIFIED AIR BALANCE CONTRACTOR SHALL ACCURATELY BALANCE THE AIR SYSTEM TO PROVIDE AIR QUANTITIES INDICATED ON THE DRAWINGS AND IN THE SPECIFICATION. OPERATE AUTOMATIC CONTROLS SYSTEM AND VERIFY SET POINTS DURING BALANCING. SUBMIT TWO (2) COPIES OF THE BALANCE REPORT TO THE ENGINEER FOR APPROVAL. INCLUDE A COPY OF THE BALANCE REPORT AS APPROVED BY THE ENGINEER WITH APPLICATION FOR FINAL CONTRACT PAYMENT.

Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation. 2015 IBC 105.4.

OUTSIDE AIR COMPLIANCE															
DESCRIPTION	ROOM #	AREA SF	PEOPLE/1000SF	POPULATION	CFM/PERSON	AREA AIRFLOW RATE	Ez	REQUIRED OUTSIDE AIR CFM	SUPPLY AIR	% OUTSIDE AIR	OUTSIDE AIR PROVIDED	EXHAUST AIRFLOW RATE	EXHAUST REQUIRED	EXHAUST PROVIDED	REMARKS
WAITING	101	137	30	5	5.0	0.06	0.8	42	215	20%	43	0.00	0	0	
HALLWAY	102	212	0	0	0.0	0.06	0.8	16	100	20%	20	0.00	0	0	
RESTROOM	103	67	0	0	0.0	0.00	0.8	0	0	0%	0	0.00	70	75	
EXAM	104	86	5	1	5.0	0.06	0.8	13	65	20%	13	0.00	0	0	
EXAM	105	130	5	1	5.0	0.06	0.8	16	245	20%	49	0.00	0	0	
EXAM	106	100	5	1	5.0	0.06	0.8	14	340	20%	68	0.00	0	0	
BREAK ROOM	107	137	5	1	5.0	0.06	0.8	17	100	20%	20	0.00	0	0	
MA	108	58	5	1	5.0	0.06	0.8	11	60	20%	12	0.00	0	0	
IT/STORAGE	109	31	0	0	0.0	0.00	0.8	0	0	0%	0	0.00	0	0	
RECEPTION	111	104	5	1	5.0	0.06	0.8	14	70	20%	14	0.00	0	0	
TOTALS		1062		11				141	1195		239		70	75	


TRANSFER FAN SCHEDULE															
MARK	AREA SERVED	SERVICE	LOCATION	CFM	S.P. @ ALTITUDE (IN W.C.)	RPM	HP OR WATTS	PRE-FAB CURB	BACKDRAFT DAMPER	TYPE	VIB. ISOL.	MFR. & MODEL NO.	VOLTS/ PHASE	REMARKS	
TF-1	WIRING CLOSET	TRANSFER	CEILING	75	0.3	935	60W	NO		GRAVITY	CENTRIFUGAL	NO	GREENHECK SP-80-VG	120/1	1, 2
1. PROVIDE REVERSE ACTING THERMOSTAT. 2. NEW															

FAN TERMINAL UNIT SCHEDULE													
MARK	MFR. & MODEL NUMBER	AIR INLET SIZE	PRIMARY AIR		HEATING			FAN MOTOR			MCA	MAX FUSE	REMARKS
			MAX. CFM	MIN. CFM	VOLTAGE	KW	CFM	VOLTAGE	HP	FLA			
FTU-1	TRANE VFPE17	10"Ø	835	220	277/1	10.0	835	277/1	1/3	2.6	36.1	50	1
1. EXISTING TO REMAIN.													







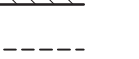









DIFFUSER SCHEDULE								
MARK	SERVICE	FACE SIZE	NECK SIZE	FIRE DAMPER	VOLUME DAMPER	MFR	MODEL	REMARKS
A	SUPPLY	-	-	-	-	-	-	EXISTING TO BE RELOCATED
B	SUPPLY	24" x 24"	6"Ø	NO	NO	PRICE	PDF	
C	SUPPLY	24" x 24"	8"Ø	NO	NO	PRICE	PDF	
D	SUPPLY	24" x 24"	8"Ø	NO	NO	PRICE	VPD-C	
R	RETURN	-	-	-	-	-	-	EXISTING TO BE RELOCATED
R1	RETURN	24" x 24"	22" x 22"	NO	NO	PRICE	PFRF	W/RAC, RETURN AIR CANOPY
E1	EXHAUST	12" x 12"	10" x 10"	NO	YES	PRICE	535	

VAV TERMINAL SCHEDULE						
MARK	MFR. & MODEL NUMBER	AIR INLET SIZE	MAX. PRIMARY AIR CFM	MIN. PRIMARY AIR CFM	DISCHARGE PLENUM SIZE	REMARKS
VAV-1	TRANE VCCE17	10"Ø	750	220	-	1
1. EXISTING TO REMAIN.						

Heating system shall be capable of maintaining 68 degrees F a 3'0" above the floor.
2015 IMC 309, IRC 303.9 and IBC 1204.1



RSN: 1555660
Permit #: 2021-2004899 -LT
City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: **Y. Munoz**
Date: **Jul 09, 2021**
2015 INTERNATIONAL CODES & 2020 NEC

LEGEND	
	DIFFUSER, SEE SCHEDULE
	GRILLE, SEE SCHEDULE
	NEW RIGID RECTANGULAR DUCTWORK
	EXISTING RIGID RECTANGULAR DUCTWORK
	NEW RIGID ROUND DUCTWORK
	EXISTING RIGID ROUND DUCTWORK
	EXPOSED SPIRAL DUCTWORK
	DUCTWORK TO BE REMOVED
	FLEX, DUCTWORK.
	THERMOSTAT TO MATCH EQUIPMENT
	CFM, BALANCE WITHIN 10%
	EQUIPMENT DESIGNATION
	SPIN-IN WITH DAMPER
	RETURN AIR ARROW
	SUPPLY AIR ARROW
	CONNECT TO EXISTING

BRIAN SEYFERTH & ASSOCIATES, INC.



PROFESSIONAL ENGINEER

5583 South Prince Street
Littleton, Colorado 80120
Phone: (303) 797-7772
Fax: (303) 797-7773

1411 South Potomac
1411 South Potomac Street
Aurora, CO 80012
Suite 190



Digitally signed by
Luis R. Cocha
Date: 2021.06.22
10:28:48 -06'00'

Spec Suite #190

Dates of Record
Project Start Date: #####
Issued On Issued For
22 June 2021 Tenant's Review & Approval:
and Construction

Sheet
Contents
MECHANICAL NOTES
AND SCHEDULES
Project Team
Project Number
Sheet
Mark
BM/BS
21297
M1.0

Room Schedule			
100	Corridor	106	Exam
101	Waiting	107	Break Room
102	Tenant Hallway	108	M.A.
103	ADA Restroom	109	I.T./Storage
104	Exam	110	----
105	Exam	111	Reception

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Digitally signed by Luis
R. Cocha
Date: 2021.06.22
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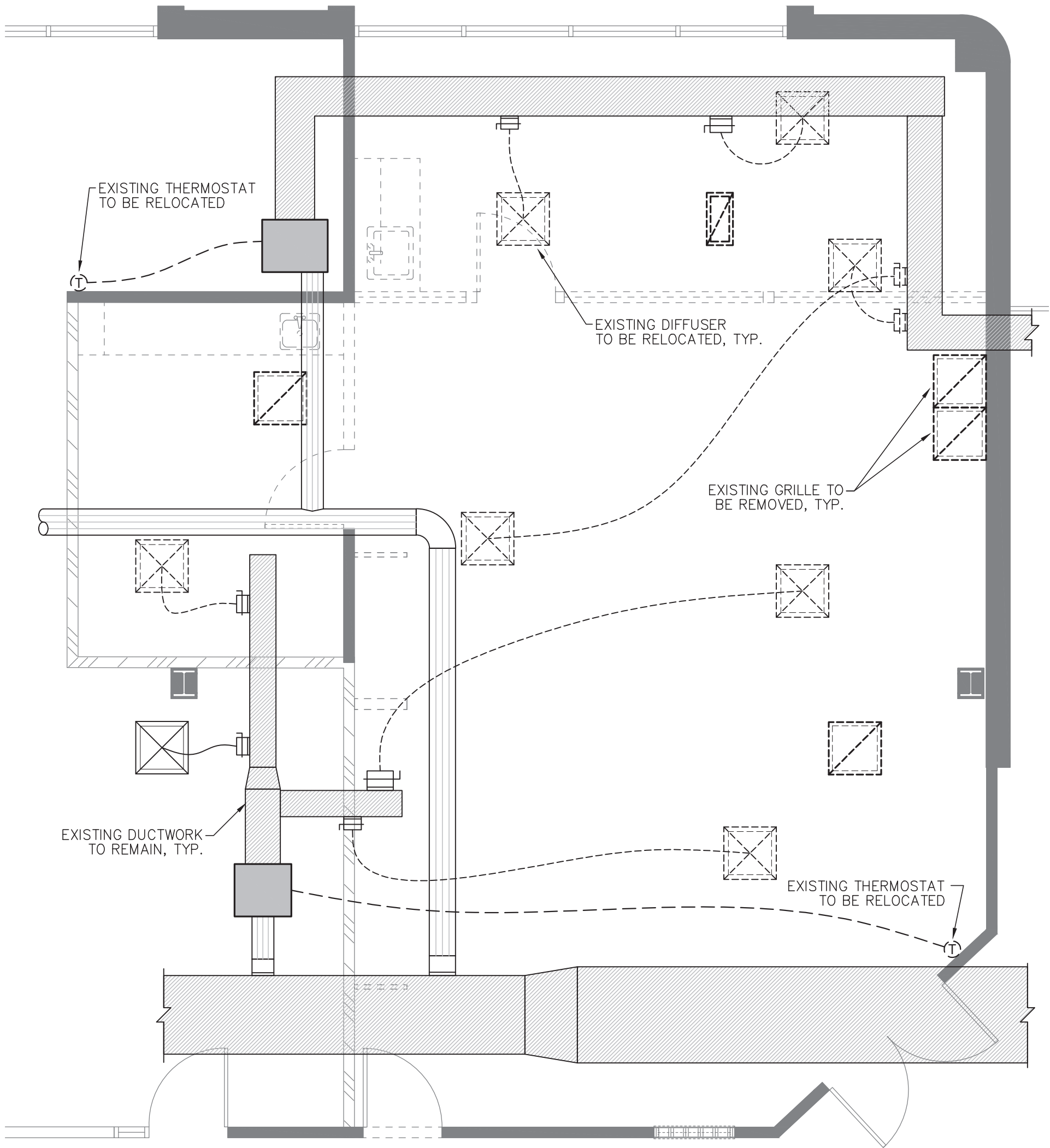
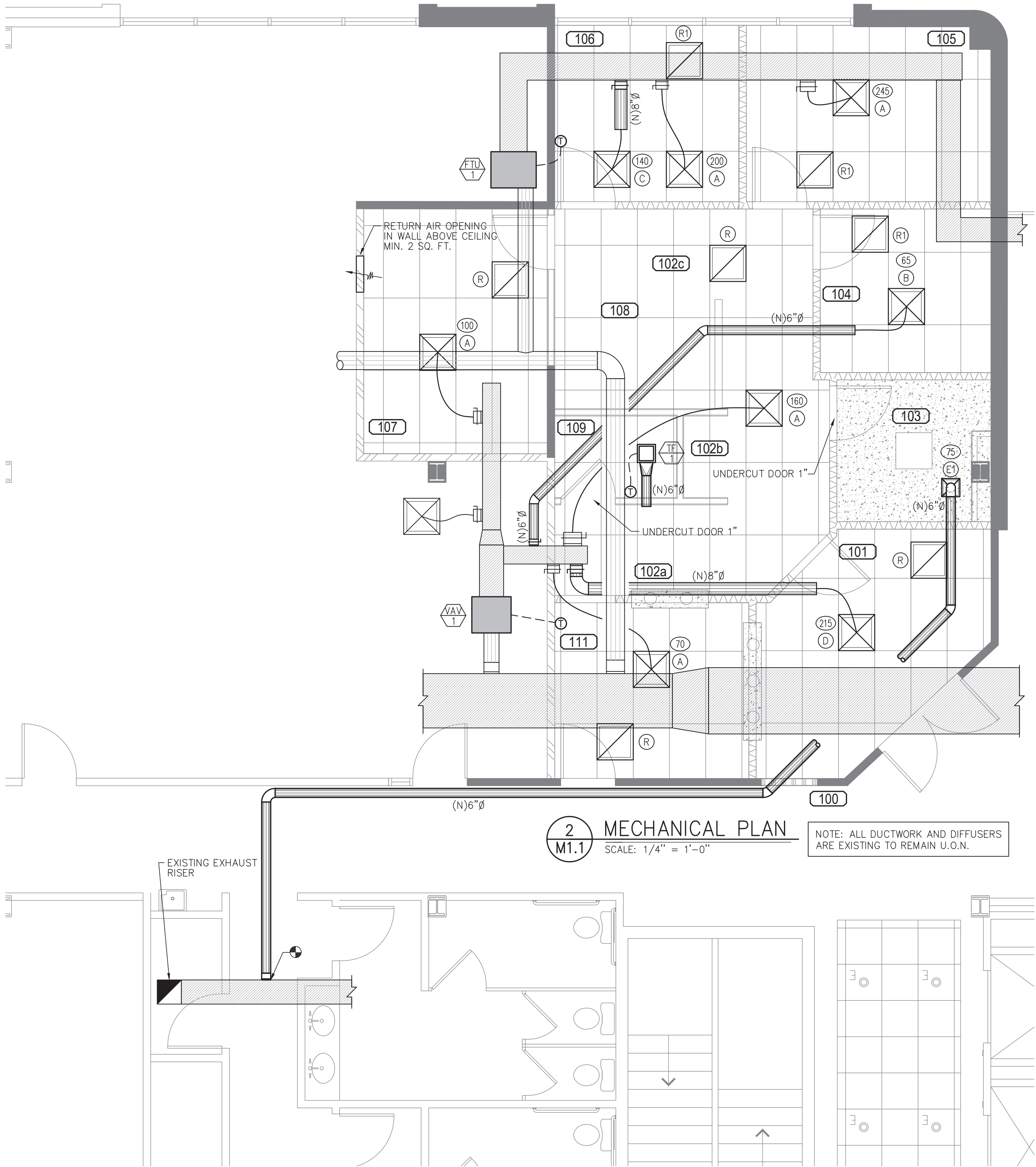
Spec Suite #190

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City of Aurora Building Division
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Sheet Contents
MECHANICAL PLAN
Project Team BM/BS
Project Number 21297
Sheet Mark M1.1



Provide proof of a flame spread less than 26 and a smoke development less than 50 for any material used in a plenum.
2015 IMC 602.2.1

Plastic fire sprinkler piping exposed within a plenum shall be used only in wet pipe systems and shall have a maximum: peak optical density of 0.50; average optical density of 0.15; flame spread of 5 feet in accordance with UL 1887. Piping shall be listed and labeled.
2015 IMC 602.2.1.2

PLUMBING GENERAL NOTES	
<p>GENERAL</p> <p>SCOPE THE INTENT OF THE SPECIFICATION AND THE DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATIONAL PLUMBING SYSTEM. THE PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO COMPLETE THE PLUMBING WORK.</p> <p>SITE EXAMINATION THE PLUMBING CONTRACTOR SHALL THOROUGHLY EXAMINE ALL AREAS WHERE FIXTURES, EQUIPMENT, AND PIPING WILL BE INSTALLED AND WILL REPORT ANY CONDITION THAT, IN HIS OPINION, PREVENTS THE PROPER INSTALLATION OF THE PLUMBING WORK.</p> <p>STANDARDS EQUIPMENT AND MATERIALS SHALL CONFORM WITH APPROPRIATE PROVISIONS OF ASME, ASTM, UL, NEMA, ANSI, ASHRAE, NFPA, AS APPLICABLE TO EACH INDIVIDUAL UNIT OR ASSEMBLY.</p> <p>CODES ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. IN CASE OF CONFLICT BETWEEN THE DRAWINGS/SPECIFICATIONS AND THE CODES AND ORDINANCES, THE HIGHEST STANDARD SHALL APPLY. THE PLUMBING CONTRACTOR SHALL SATISFY CODE REQUIREMENTS AS A MINIMUM STANDARD WITHOUT ANY EXTRA COST.</p> <p>PERMITS AND FEES THE PLUMBING CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, FEES AND INSPECTIONS NECESSARY TO COMPLETE THE PLUMBING WORK.</p> <p>WARRANTY THE PLUMBING CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY OWNER AND WILL REPAIR OR REPLACE ANY DEFECTIVE WORK PROMPTLY AND WITHOUT CHARGE AND RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE MATERIALS AND WORKMANSHIP.</p> <p>PIPING</p> <p>SOIL, WASTE AND VENT PIPING SOIL, WASTE AND VENT PIPING 10" AND SMALLER SHALL BE SERVICE WEIGHT, HUBLESS, CAST IRON PIPE AND FITTINGS CONFORMING WITH THE REQUIREMENTS OF CISPI STD 301, ASTM A888 OR ASTM A74, WITH NEOPRENE GASKET AND STAINLESS STEEL SHIELD AND CLAMP. PROVIDE HUB-TYPE PIPE AND FITTINGS BELOW GRADE WHERE REQUIRED BY LOCAL CODES. PIPE AND FITTINGS SHALL BE MARKED WITH THE CISPI TRADEMARK. HORIZONTAL RUNS SHALL DRAIN AT A GRADE OF 1/4 INCH PER FOOT WHERE POSSIBLE BUT IN NO CASE LESS THAN 1/8" PER FOOT. COORDINATE WITH LOCAL AUTHORITIES FOR DRAINAGE REQUIREMENTS FOR EQUIPMENT DESIGNATED WITH INDIRECT WASTE TO FLOOR DRAINS. PROVIDE PIPED DRAIN TO SANITARY IF REQUIRED BY LOCAL JURISDICTION.</p> <p>DOMESTIC WATER PIPING DOMESTIC WATER PIPING 2" AND SMALLER SHALL BE COPPER TUBE WITH WROUGHT COPPER SWEAT FITTINGS JOINED WITH LEAD FREE SOLDER. PROVIDE TYPE "L" COPPER TUBE ABOVE GRADE AND TYPE "K" BELOW GRADE. PRESS-FIT FITTINGS ARE NOT PERMITTED.</p> <p>HANGERS & SUPPORTS THE PLUMBING CONTRACTOR SHALL FURNISH ALL PIPE SUPPORTS REQUIRED FOR HIS EQUIPMENT AND MATERIAL. HANGERS AND PIPE ATTACHMENTS TO BE FACTORY FABRICATED WITH GALVANIZED COATINGS; NONMETALLIC COATED FOR HANGERS IN DIRECT CONTACT WITH COPPER TUBING.</p> <p>CONNECTIONS INSTALL UNIONS ADJACENT TO EACH VALVE AND AT FINAL CONNECTION TO EACH PIECE OF EQUIPMENT. INSTALL DIELECTRIC COUPLINGS TO CONNECT PIPING MATERIALS OF DISSIMILAR METALS. SCREW JOINT STEEL PIPING UP TO AND INCLUDING 1-1/2". WELD PIPING USE LEAD FREE SOLDER FOR SOLDERING DOMESTIC WATER COPPER PIPE.</p>	<p>CLEANOUTS PROVIDE J.R. SMITH OR EQUIVALENT FLOOR AND WALL CLEANOUTS AS INDICATED ON THE DRAWINGS OR WHERE REQUIRED IN ALL SOIL, WASTE, AND DRAIN LINES. IN AREAS WITH CERAMIC TILE OR CARPETED FLOORING, PROVIDE CLEANOUTS WITH SQUARE, ADJUSTABLE, NICKEL BRONZE TOP. IN AREAS WITH RESILIENT FLOORING, PROVIDE CLEANOUTS WITH SQUARE, ADJUSTABLE, NICKEL BRONZE TOP WITH TILE RECESS. CLEANOUTS SHALL BE SAME SIZE AS PIPE EXCEPT THAT CLEANOUTS LARGER THAN 4" WILL NOT BE REQUIRED. WHERE CLEANOUTS OCCUR IN WALLS OF FINISHED AREAS, THEY SHALL BE CONCEALED BEHIND CHROME PLATED ACCESS COVERS.</p> <p>INSTALLATION INSTALL PIPING FREE OF SAGS AND BENDS. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS. INSTALL SLEEVES FOR PIPES PASSING THROUGH CONCRETE AND MASONRY WALLS. GYPSUM-BOARD PARTITIONS, CONCRETE FLOOR, AND ROOF SLABS. SEAL PIPE PENETRATIONS THROUGH RATED CONSTRUCTION WITH FIRESTOPPING SEALANT MATERIAL. UNDERGROUND WATER AND SEWER LINES SHALL BE LAID IN SEPARATE TRENCHES WITH A MINIMUM HORIZONTAL SPACING AS REQUIRED BY CODE, EXCAVATED TO THE PROPER DEPTH AND GRADED TO PRODUCE THE REQUIRED FALL.</p> <p>TESTING ALL PIPES SHALL BE TESTED BY AN APPROVED METHOD BEFORE THEY ARE BACKFILLED OR CONCEALED.</p> <p>VALVES</p> <p>GENERAL PLUMBING CONTRACTOR TO PROVIDE VALVES WHERE INDICATED ON PLANS AND AS NECESSARY FOR PROPER SYSTEM OPERATION AND COMPONENT ISOLATION. INSTALL VALVES FOR EACH FIXTURE AND ITEM OF EQUIPMENT. PROVIDE BRAIDED STAINLESS STEEL HOSE (UNLESS OTHERWISE NOTED) BETWEEN VALVE AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. LOCATE SHUT-OFF VALVES ADJACENT TO EQUIPMENT FOR EASY ACCESS SUCH THAT VALVES CAN BE REACHED WITHOUT MOVING EQUIPMENT.</p> <p>VALVES PROVIDE VALVES FOR WORKING PRESSURE IN WATER PIPING OF 125 PSI OR GREATER.</p> <p>INSULATION</p> <p>WATER PIPING PROVIDE THERMAL INSULATION ON ALL HOT & COLD WATER PIPING. USE SELF-SEALING CLOSED CELL FOAM OR JACKETED FIBERGLASS INSULATION WITH MANUFACTURER APPROVED ADHESIVES, SEALERS, AND COATINGS. ALL MATERIALS USED SHALL NOT EXCEED 25 FOR FLAME SPREAD, 50 FOR FUEL CONTRIBUTED, OR 50 FOR SMOKE DEVELOPED.</p> <p>SAFETY COVERS INSTALL NO-SCALD SAFETY COVERS WITH INSULATED FOAM LINER AND TAMPER PROOF STRAP AT ALL EXPOSED HOT WATER & WASTE PIPING.</p> <p>MISC PLUMBING FIXTURES</p> <p>WATER HEATER PROVIDE AN A.O. SMITH OR EQUIVALENT, GLASS-LINED, ENERGY EFFICIENT, WATER HEATER, WITH CAPACITY AS INDICATED IN THE PLANS. PROVIDE INSTALLATION COMPLETE WITH FITTINGS AS SHOWN IN THE DRAWINGS. PROVIDE HEAT TRAPS ON BOTH SUPPLY AND DISCHARGE TO WATER HEATER.</p> <p>OWNER FURNISHED CONTRACTOR INSTALLED PLUMBING FIXTURES/EQUIPMENT (E.G., ICE MAKER, ETC.)</p> <p>THE PLUMBING CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO EQUIPMENT INCLUDING REQUIRED MATERIAL SUCH AS PIPING, VALVES, FILTERS, TRAPS, CHECKS VALVES, VACUUM BREAKERS, AND FLEXIBLE AND RIGID TUBING.</p> <div>ALL FLEXIBLE SUPPLY LINES TO BE BRAIDED STAINLESS STEEL WITH METAL COUPLINGS.</div>

MINIMUM HYDRONIC & DOMESTIC HOT WATER PIPE INSULATION THICKNESS (IN INCHES)							
FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY BTU - IN./((H - FT² - °F)°F)	MEAN RATING TEMPERATURE, °F	LESS THAN 1	1 TO < 1-1/2	1-1/2 TO < 4	4 TO < 8	≥ 8
201 - 250	0.27 - 0.30	150	2.5	2.5	2.5	3.0	3.0
141 - 200	0.25 - 0.29	125	1.5	1.5	2.0	2.0	2.0
105 - 140	0.21 - 0.28	100	1.0	1.0	1.5	1.5	1.5
40 - 60	0.21 - 0.27	75	0.5	0.5	1.0	1.0	1.0

PROVIDE INSULATION FOR PIPING
THAT SERVES HEATING OR
COOLING SYSTEMS MIN. R-VALUE
PER 2015 IECC, TABLE C403.2.10

PIPE HANGER SPACING REQUIREMENTS			
MATERIAL	SIZE	MAX HORIZONTAL SPACING	MAX VERTICAL SPACING
ABS	ALL	4'	10'
CAST IRON < 10'	ALL	5'	15'
CAST IRON - 10'	ALL	10'	15'
COPPER	< 1-1/2	6'	10'
COPPER	≥ 1-1/2	10'	10'
PEX	ALL	32"	10'
PVC	ALL	4'	10'

PIPE SIZE EQUIVALENTS				
DESIGN SIZE	NOMINAL COPPER TUBE	NOMINAL PEX	NOMINAL BLACK IRON	CSST EHD
½"	½"	½"	½"	18
¾"	¾"	1"	¾"	23
1"	1"	1¼"	1"	31
1¼"	1¼"	1½"	1¼"	37
1½"	1½"	2"	1½"	47
2"	2"	-	2"	60

Code violations that are found during inspection are required to be corrected. Permit issuance does not grant approval of a code violation. 2015 IBC 105.4.

PLUMBING FIXTURE SCHEDULE								
MARK	DESCRIPTION	MANUFACTURER	MODEL	CW	HW	TW	W	REMARKS
P100	WATER CLOSET	TOTO	CST454CEFG	1/2"			3"	COLOR WHITE, W/ OPEN SEAT, 17" FLOOD RIM W/ FLUIDMASTER PRO45B FILL VALVE
P103	LAVATORY	KOHLER	K-2005				1 1/4"	COLOR WHITE
P104	LAVATORY FAUCET	DELTA	501-DST	1/2"		1/2"		
P105	BREAK ROOM SINK	ELKAY	LRAD2521				2"	PROVIDE IN-SINK-ERATOR DISPOSER BADGER V, 1/2 HP
P106	SINK FAUCET	DELTA	400LF-HDF	1/2"	1/2"			
P110	WATER HEATER	A.O. SMITH	DEL-10	3/4"	3/4"			120V, 1500W, PROVIDE WATTS LFN36 VAC. RELIEF VALVE.
P111	EXPANSION TANK	AMTROL	ST-12	1/2"				
P112	HOT WATER RECIRC PUMP	BELL & GOSSETT	E3-4-/B-PRZ		1/2"			W/ ADJUSTABLE TEMP SENSOR & E3 TIMER, 120V/ 10W
P114	BELOW SINK TEMPERING VALVE	WATTS	LFUSG-B	1/2"	1/2"	1/2"		
P122	FLOOR DRAIN	JR SMITH	2005Y0205(A) NB				2"	W/ QUAD CLOSE TRAP SEAL -JR SMITH 2692-02
P129	WATER ROUGH-IN BOX	IPS WATERTITE	AB9700HA	3/8"				W/ WATER HAMMER ARRESTOR. PROVIDE ASSE 1022 BACKFLOW PREVENTER
P144	EXAM ROOM SINK	ELKAY	BLR15				2"	
P145	FAUCET	DELTA	27C4944	1/2"	1/2"			

Faucets or lavatories located in restrooms intended for public use shall be of the metering type or self-closing. 2016 COA Sec 22-326

BRIAN SEYFERTH & ASSOCIATES, INC.



PROFESSIONAL ENGINEER

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1411 South Potomac
1411 South Potomac Street
Aurora, CO 80012
Suite 190

Digitally
signed by
Luis R.
Cocha
Date:
2021.06.22
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Spec Suite #190

Dates of Record
Project Start Date: #####
Issued On Issued For
22 June 2021 Tenant's Review & Approval;
and Construction

RSN: 1555660
Permit #: 2021-2004899 -LT



City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: Y. Munoz
Date: Jul 09, 2021
2015 INTERNATIONAL CODES & 2020 NEC

Sheet PLUMBING NOTES
Contents

Project Team BM/BS
Project Number 21297
Sheet
Mark

P1.1

Room Schedule			
100	Corridor	106	Exam
101	Waiting	107	Break Room
102	Tenant Hallway	108	M.A.
103	ADA Restroom	109	I.T./Storage
104	Exam	110	----
105	Exam	111	Reception

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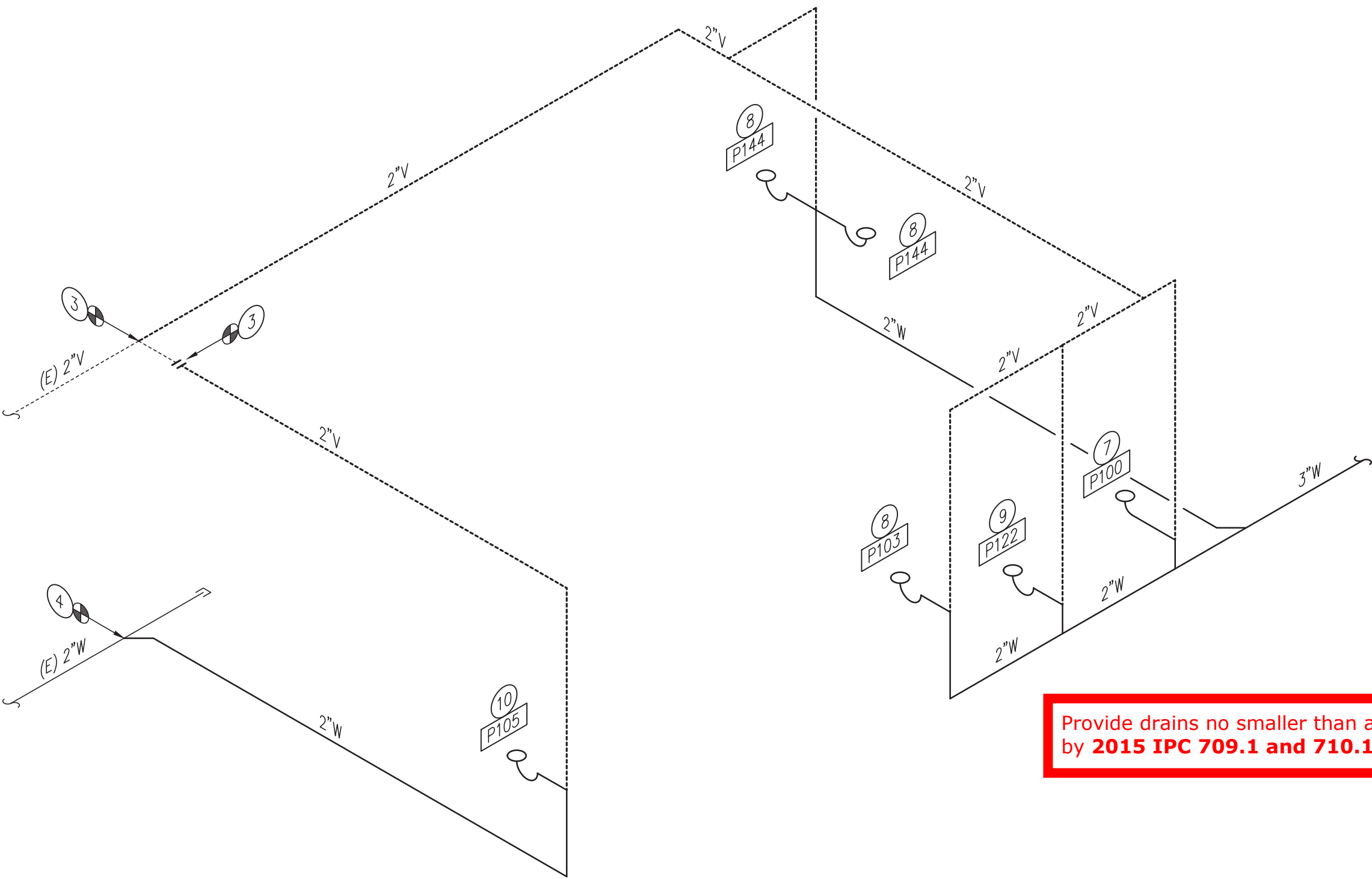
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PLUMBING PLAN
AND ISOMETRICS
BM/BS
21297
P1.2

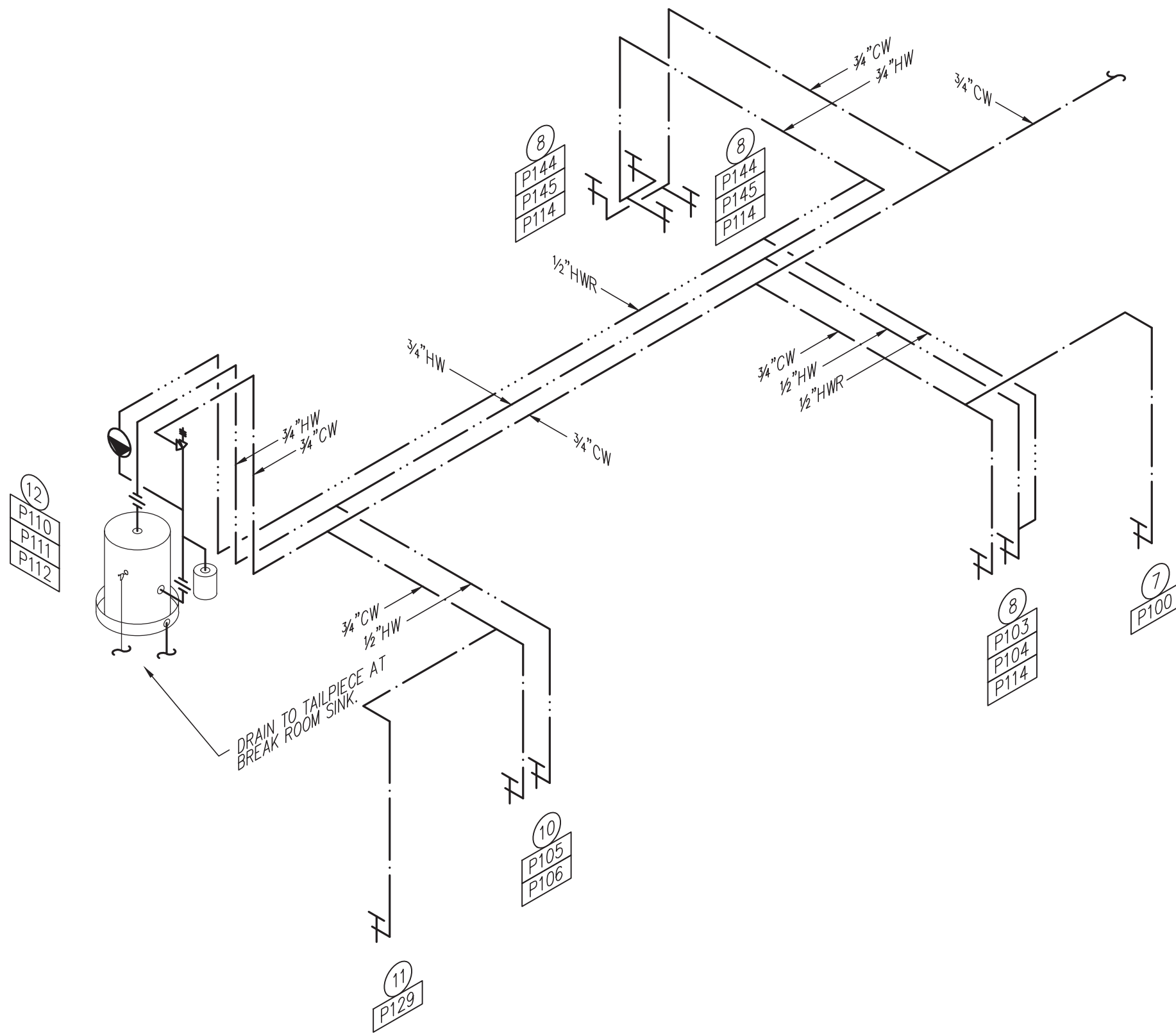
PLUMBING PLAN NOTES

- 1 REMOVE (E) SINK. CAP PIPING.
- 2 REMOVE (E) ABANDONED WATER HEATER.
- 3 CONNECT TO (E) 2"V.
- 4 CONNECT TO (E) 2"W. FIELD VERIFY EXACT LOCATION.
- 5 CONNECT TO (E) 4"W RISER. FIELD VERIFY EXACT LOCATION.
- 6 CONNECT TO (E) 2" WATER RISER. FIELD VERIFY EXACT LOCATION.
- 7 3"W, 2"V, 1/2" CW TO TOILET.
- 8 2"W, 2"V, 1/2" CW AND HW TO SINK. PROVIDE BELOW COUNTER TEMPERING VALVE.
- 9 2"W AND 2"V TO FLOOR DRAIN.
- 10 2"W, 2"V, 1/2" CW AND HW TO SINK.
- 11 1/2" CW TO WATER ROUGH-IN BOX.
- 12 1/2" CW AND HW TO WATER HEATER.

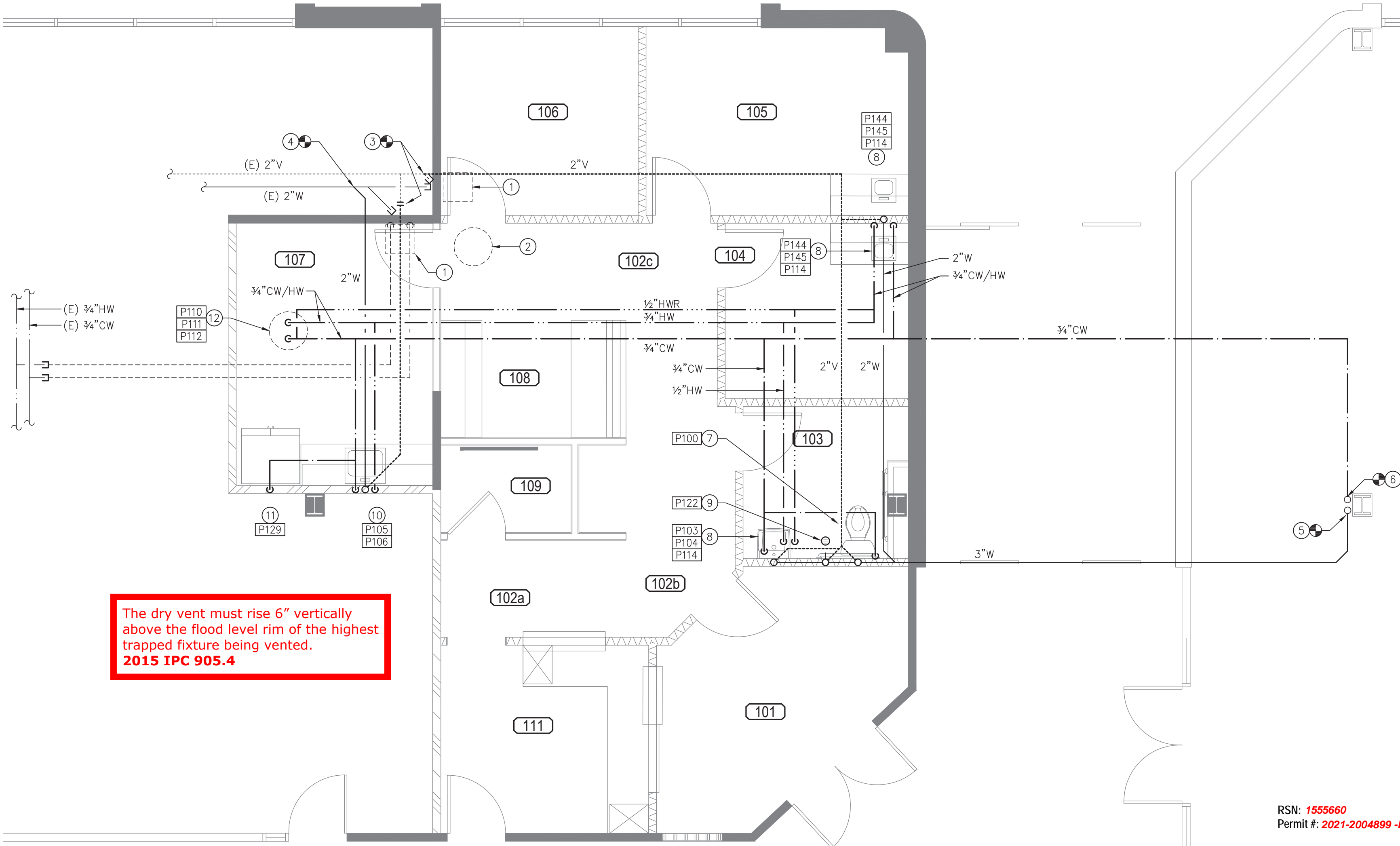


Provide drains no smaller than allowed
by 2015 IPC 709.1 and 710.1(1)

3 WASTE PIPING ISOMETRIC
P1.2 SCALE: NTS



2 PLUMBING ISOMETRIC
P1.2 SCALE: NTS

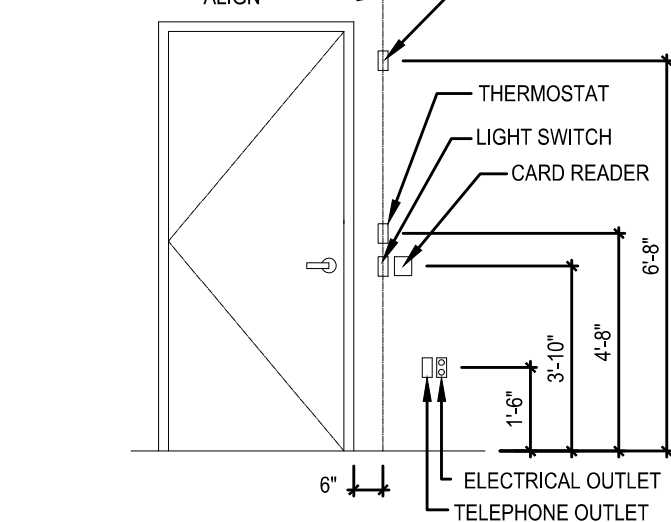


The dry vent must rise 6" vertically
above the flood level rim of the highest
trapped fixture being vented.
2015 IPC 905.4

1 PLUMBING PLAN
P1.2 SCALE: 1/4" = 1'-0"

ELECTRICAL GENERAL NOTES - APPLICABLE TO ALL ELECTRICAL SHEETS

1. PRIOR TO SUBMITTING BIDS THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE TO VERIFY EXISTING ELECTRICAL CONDITIONS AND UTILITIES. THE CONTRACTOR SHALL LIGHT FIXTURES, ELECTRICAL DEVICES, COMMUNICATION DEVICES, FIRE ALARM DEVICES, AND ELECTRICAL EQUIPMENT. NOTIFY THE ARCHITECT AND ENGINEER OF ANY EXISTING CONDITIONS WITHIN THE SCOPE OF WORK AS SHOWN ON THE CONSTRUCTION DOCUMENTS. SUBMISSION OF A BID PROPOSAL WILL BE CONSIDERED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR MOBILIZATION, LABOR, EQUIPMENT, AND/OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.
2. THE ELECTRICAL CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL TRADES WHOMSE WORK RELATES TO OR IS DEPENDENT ON ELECTRICAL WORK TO BECOME FULLY INFORMED OF THE EXTENT AND CHARACTER OF THEIR SPECIFIED WORK AND BE ABLE TO COORDINATE IT WHILE AVOIDING POSSIBLE INTERFERENCE WITH THE ELECTRICAL WORK.
3. IT IS THE INTENTION OF THESE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. WHEREVER THE WORD "PROVIDE" IS USED, IT SHALL MEAN "FURNISH AND INSTALL COMPLETE AND READY FOR USE." "REPLACE" SHALL MEAN TO PUT NEW IN PLACE OF EXISTING. THE ARCHITECTURAL GENERAL AND SPECIAL CONDITIONS FOR THE WORK OF THIS PROJECT AND BASE BUILDING SPECIFICATIONS SHALL BE PART OF THE ELECTRICAL SPECIFICATIONS. THE ELECTRICAL CONTRACTOR SHALL EXAMINE THE GENERAL AND SPECIAL CONDITIONS BEFORE SUBMITTING A BID.
4. ALONGSIDE SUBMISSION OF THE BID, THE ELECTRICAL CONTRACTOR SHALL GIVE WRITTEN NOTICE TO THE ARCHITECT/ENGINEER OF ANY NECESSARY ITEMS OR WORK THAT HAVE BEEN OMITTED FROM THE DRAWINGS OR SPECIFICATIONS. IN THE ABSENCE OF SUCH WRITTEN NOTICE, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROVED SATISFACTORY FUNCTIONING OF THE ENTIRE SYSTEM WITHOUT EXTRA COMPENSATION.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE AND SATISFACTORY ELECTRICAL INSTALLATION IN ACCORDANCE WITH THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INCIDENTAL ITEMS REQUIRED, AS A PART OF THIS ELECTRICAL INSTALLATION. THE INSTALLATION SHALL BE SO MADE THAT ITS SEVERAL COMPONENT PARTS WILL FUNCTION TOGETHER AS A WORKABLE SYSTEM AND SHALL BE LEFT WITH ALL PARTS ADJUSTED AND IN WORKING ORDER.
6. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LOCAL FEES, PERMITS, AND SERVICES OF INSPECTION AUTHORITIES REQUIRED BY ELECTRICAL WORK FOR THIS ELECTRICAL CONSTRUCTION. FILE ALL NECESSARY PLANS, PREPARE ALL DOCUMENTS, AND OBTAIN ALL NECESSARY APPROVALS REQUIRED BY ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL REMAIN EXPOSED TO VIEW UNTIL APPROVED BY THE INSPECTION AUTHORITY.
7. ELECTRICAL CONTRACTOR SHALL FULLY COORDINATE WITH OWNER REPRESENTATIVES. ALL ELECTRICAL WORK PERFORMED UNDER THIS CONTRACT SHALL CONFORM WITH LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE, INTERNATIONAL BUILDING CODE, LOCAL BUILDING AND FIRE DEPARTMENT REQUIREMENTS. PERFORM WORK IN ACCORDANCE WITH REQUIREMENTS OF OWNER REPRESENTATIVE.
8. ELECTRICAL CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY CHANGES REQUIRED BY THE BUILDING MANAGEMENT AND TENANT REPRESENTATIVES.
9. BEFORE STARTING WORK, ELECTRICAL CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ARCHITECT/ENGINEER FIVE (5) SETS OF SHOP DRAWINGS, BROCHURES, INSTALLATION INSTRUCTIONS, AND DESCRIPTIVE EQUIPMENT DATA RELATED TO SPECIFIED EQUIPMENT, WIRING DEVICES, AND ACCESSORIES FOR APPROVAL. ELECTRONIC SUBMITTALS (PDF OR SIMILAR) ARE ACCEPTABLE WITH PRIOR APPROVAL FROM THE ARCHITECT. THE CONTRACTOR SHALL IDENTIFY ANY "LONG LEAD TIME" ITEMS WHICH MAY IMPACT THE OVERALL PROJECT SCHEDULE. ALL BIDS SHALL INCLUDE COSTS ASSOCIATED WITH THE PURCHASE AND DELIVERY OF EQUIPMENT TO MEET THE PROJECT SCHEDULE. NO EQUIPMENT SHALL BE ORDERED, PURCHASED, OR INSTALLED PRIOR TO THE APPROVAL OF SHOP DRAWINGS, BROCHURES, INSTALLATION INSTRUCTIONS, AND SCHEDULES. APPROVAL BY THE ARCHITECT/ENGINEER IS INTENDED TO ESTABLISH CONFORMANCE WITH THE PROJECT DESIGN CONCEPT AND THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.
10. THE NAMING OF THE MANUFACTURER OR BRAND WITH CATALOG NUMBER OR OTHER PRODUCT IDENTIFICATION WITHOUT THE WORDS "OR EQUAL" IN THE SPECIFICATIONS OR NOTES SHALL INDICATE THAT IT IS THE ONLY PRODUCT APPROVED FOR PURCHASE. IF THE WORDS "OR EQUAL" ARE USED THEY SHALL BE INTERPRETED AS ESTABLISHING A QUALITY OR PERFORMANCE STANDARD FOR THE MATERIAL OR PRODUCT TO BE PURCHASED. THIS SHALL INDICATE THAT THE ELECTRICAL CONTRACTOR IS NOT RESTRICTED TO THE USE OF THE NAMED AND IDENTIFIED PRODUCT IF A SUBSTITUTE APPROVED BY THE ARCHITECT/ENGINEER IS AVAILABLE. HOWEVER, WHERE A SUBSTITUTION IS REQUESTED, IT WILL BE PERMITTED ONLY WITH THE WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER. NO SUBSTITUTE MATERIAL OR PRODUCT SHALL BE ORDERED, FABRICATED, SHIPPED OR PROCESSED IN ANY MATTER PRIOR TO THE APPROVAL OF THE ARCHITECT/ENGINEER. THE ELECTRICAL CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ADDITIONAL EXPENSES AS REQUIRED MAKING CHANGES FROM THE ORIGINAL MATERIAL OR PRODUCT SPECIFIED.
11. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF ELECTRICAL WORK. LOCATION, INSTALLATION, AND SHALL BE SUBJECT TO MINOR MODIFICATIONS AS DIRECTED BY THE GENERAL CONTRACTOR AND OWNER REPRESENTATIVES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXACT FITTING OF ALL MATERIALS, EQUIPMENT, ETC., IN THE RESIDORIAL AND TENANT SPACE. ALL DIMENSIONS SHALL BE VERIFIED ON THE JOB.
12. DRAWINGS SHALL NOT BE SCALED FOR ROUGH-IN MEASUREMENTS OR USED AS SHOP DRAWINGS, WHERE DIMENSIONS ARE SHOWN IN DETAIL. THESE DIMENSIONS ARE TO BE FIELD-VERIFIED BY THE ELECTRICAL CONTRACTOR AGAINST EXISTING FIELD CONDITIONS, INSTALLATION REQUIREMENTS OF OTHER TRADES, AND THE MANUFACTURER'S SUBMITTALS FOR EQUIPMENT TO BE INSTALLED. SHOULD ANY CONFLICTS ARISE WHICH CANNOT BE EASILY RESOLVED IN THE FIELD WITHOUT CHANGING THE DESIGN INTENT, THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY.
13. WHILE ALL WORK IS IN PROGRESS, EXCEPT FOR SHORT DESIGNATED INTERVALS DURING WHICH CONNECTIONS ARE TO BE MADE, CONTINUITY OF SERVICE TO ALL EXISTING SYSTEMS SERVING OCCUPIED SPACES SHALL BE MAINTAINED. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH OWNER AT ALL TIMES FOR ALL NEW-TO-EXISTING CONNECTIONS, SYSTEM SHUTDOWNS, AND RESTART-UP.
14. ANY WORK WHICH WILL AFFECT THE BUILDING OCCUPANTS, INCLUDING, BUT NOT LIMITED TO WORK WHICH GENERATES EXCESSIVE NOISE, DUST, SMOKE, OR INCONVENIENCE TO BUILDING OCCUPANTS, SHALL BE PERFORMED AFTER BUSINESS HOURS. UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE BUILDING MANAGER OR OWNER.
15. ELECTRICAL ITEMS AFFECTED BY REMODEL WORK ARE SHOWN ON DRAWINGS ALONG WITH EXISTING ELECTRICAL INSTALLATION SHOWN WITH LIGHT LINE WEIGHT. EXISTING ELECTRICAL INSTALLATION SHOWN IS NOT NECESSARILY ALL-INCLUSIVE. RETAIN CIRCUIT CONTINUITY FOR EXISTING ELECTRICAL LIGHT FIXTURES, AND DEVICES THAT ARE TO REMAIN. SUCH EQUIPMENT SHALL BE RECONNECTED TO EXISTING CIRCUITS OR CONNECTED TO NEW CIRCUIT(S) AS INDICATED ON DRAWINGS. ENSURE ALL ELECTRICAL DEVICES IN WORK AREA ARE FULLY FUNCTIONAL. FOR DEVICES OR JUNCTION BOXES LOCATED IN WALLS, THEY MUST REMAIN IN PLACE FOR CIRCUIT CONTINUITY. PROVIDE BLANK COVER PLATE TO MATCH WALL PLATES STYLE IN THE AREA OF WORK. FOR ALL OTHER UNUSED JUNCTION BOXES, REMOVE WIRING AND PROVIDE BLANK COVER PLATE, OR COORDINATE WITH GENERAL CONTRACTOR FOR PATCHING OF WALL TO MATCH ADJACENT SURFACE AS DIRECTED BY ARCHITECT. WHERE EXISTING DEVICES CONFLICT WITH NEW WALL CONSTRUCTION, RELOCATE EXISTING DEVICE AND REMOVR GROUTRY AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY. DEVICES MAY ONLY BE REMOVED WITH PRIOR APPROVAL FROM THE DESIGN TEAM AND BUILDING MANAGEMENT. COORDINATE FINAL DIRECTIONS WITH ARCHITECT PRIOR TO DEMOLITION.
16. REPORT ANY EXISTING DAMAGED EQUIPMENT OR SYSTEMS TO THE OWNER PRIOR TO BEGINNING THE PROJECT.
17. BEFORE ANY EQUIPMENT IS INSTALLED, DETERMINE THAT SAID EQUIPMENT WILL PROPERLY FIT WITHIN THE SPACE LOCATED. INSTALL ALL EQUIPMENT AND MATERIALS IN SUCH A MANNER AS TO PROVIDE REQUIRED ACCESS FOR SERVICING AND MAINTENANCE. ALLOW AMPLE SPACE FOR REMOVAL OF ALL PARTS THAT REQUIRE REPLACEMENT OR SERVICING.
18. MINIMUM WORKING CLEARANCES PER THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE SHALL BE PROVIDED ABOVE AND IN FRONT OF ALL ELECTRICAL EQUIPMENT.
19. ALL CIRCUIT BREAKER LUGS SHALL BE RATED FOR A MINIMUM OF 75 DEGREES CELSIUS.
20. ALL MATERIALS AND EQUIPMENT SHALL BE NEW, UNMAYNAGED, BEAR THE UL LABEL WHERE APPLICABLE, AND BE NOT REQUIRED TO BE IN EACH SPECIFIC LOCATION. ANY INCIDENTAL ACCESSORIES NECESSARY TO COMPLETE THE WORK IN ALL RESPECTS AND MAKE IT READY FOR OPERATION, EVEN IF NOT SPECIFICALLY SPECIFIED, SHALL BE FURNISHED, DELIVERED, AND INSTALLED BY THE ELECTRICAL CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE CLIENT.
21. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF A SYSTEM OR EQUIPMENT, SHALL BE INCLUDED IN THE ELECTRICAL CONTRACTOR'S ESTIMATE, AS IF SPECIFIED HEREIN OR SHOWN.
22. ALL NEW, RELOCATED AND EXISTING MATERIALS, IN CEILING PLENUMS NOT ENCLOSED IN CONDUIT SHALL HAVE CLASS F RAME SPREAD AND SMOKE DEVELOPMENT RATINGS AS REQUIRED FOR USE IN OPEN PLENUMS. REMOVE AND REPLACE ALL EXISTING MATERIALS IN WORK AREA NOT IN COMPLIANCE.
23. COORDINATE THE INSTALLATION OF ELECTRICAL MATERIALS AND EQUIPMENT ABOVE AND BELOW CEILINGS WITH SUSPENSION SYSTEM, MECHANICAL EQUIPMENT, AND OTHER BUILDING COMPONENTS. ALL COMPONENTS SHALL BE LOCATED AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE CEILING CAVITY SPACE CAREFULLY WITH ALL TRADES.
24. NEUTRALS, RACEWAYS, AND NON-CURRENT CARRYING PARTS OF ELECTRICAL EQUIPMENT AND ASSOCIATED ENCLOSURES SHALL BE GROUNDED IN FULL ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. PROVIDE HAND WIRE GROUND CONNECTIONS TO ALL DEVICES AND SEPARATE, CONTINUOUS, INSULATED GROUND WIRE IN EACH CIRCUIT (#12 CU MINIMUM "GREEN" TRACER GROUND). COORDINATE EQUIPMENT GROUNDING CONDUCTOR WIRE SIZE WITH MANUFACTURER REQUIREMENTS.
25. CONDUIT JOINTS SHALL BE CUT SQUARE, THREADED, REAMED SMOOTH, AND DRAWN UP TIGHT. BENDS OR OFFSETS SHALL BE MADE WITH AN APPROVED BENDER OR HICKORY OR HUB-TO-PIPE CONDUIT FITTINGS. THE NUMBER OF BENDS PER RUN SHALL CONFORM TO THOSE STATED IN CURRENT NEC.
26. WHERE POSSIBLE ALL WIRING SHALL BE RUN CONCEALED. ALL HOME RUNS SHALL BE EMT. CONCEALED CONDUIT SYSTEMS SHALL BE RUN IN A DIRECT LINE WITH LONG SWEEP BENDS AND IN OFFSETS. EXPOSED CONDUIT RUNS SHALL BE PARALLEL TO AND AT RIGHT ANGLES TO BUILDING LINES, USING CONDUIT FITTINGS FOR ALL TURNS AND OFFSETS. ALL CONDUITS SHALL BE SUPPLIED WITH PULL WIRES AND BUSHINGS.
27. "MC" AND "AC" TYPE CABLE WITH INTERNAL GROUND WIRES SHALL BE PERMITTED FOR BRANCH CIRCUIT WIRING WHERE APPROVED IN WRITING BY BUILDING MANAGEMENT AND THE LOCAL BUILDING AND FIRE DEPARTMENT. ELECTRICAL CODE AND LOCAL BUILDING DEPARTMENT REQUIREMENTS. USE LISTED AND APPROVED TYPE COUPLINGS AND CONNECTORS. PROVIDE CONDUIT SUPPORTS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE AS A MINIMUM.
28. ALL ROOF PENETRATIONS SHALL BE SEALED WATER TIGHT, PROVIDE FLASHING AND COUNTER FLASHING AS REQUIRED. COORDINATE ROOFING WORK WITH THE GENERAL CONTRACTOR.
29. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL JUNCTION AND PULL BOXES TO PROVIDE ACCESS POINTS FOR PULLING AND FEEDING CONDUITS INTO A RACEWAY SYSTEM. JUNCTION AND PULL BOXES AND THEIR COVERS SHALL BE FORMED FROM SHEET STEEL AND SHALL BE FINISHED IN GRAY ENAMEL PAINT. BOXES SHALL BE IN INDUSTRY STANDARD SIZES. OUTLET BOXES WITH THE CORRECT FITTING FOR THE APPLICATION SHALL BE LOCATED AT EACH CONDUCTOR SPLICE POINT, AT EACH OUTLET, SWITCH POINT, OR JUNCTION POINT, AND AT EACH PULL POINT FOR THE CONNECTION OF CONDUIT AND OTHER RACEWAYS. OUTLET BOXES FOR CONCEALED WIRING SHALL BE MADE FROM GALVANIZED OR OXIDUM-PLATED SHEET STEEL, AND THEY SHALL HAVE A DEPTH OF AT LEAST 1.5 INCHES, WHETHER SINGLE OR GANGED. THE BOXES SHALL BE LARGE ENOUGH SIZE TO ACCOMMODATE THE NUMBER OF WIRING DEVICES AND CONDUCTORS AS SPECIFIED IN THE FILL SCHEDULE OF THE CURRENT NEC. SECURE BOXES WITH MOUNTING BRACKET, BRACES, HANGER OR BOX MOUNTING SUPPORT.
30. ALL NEW SWITCHES, POWER OUTLETS, TELEPHONE OUTLETS, FIRE ALARM DEVICES, AND COMMUNICATIONS OUTLETS SHALL MEET THE REQUIREMENTS FOR AMERICANS WITH DISABILITIES (ADA) MOUNTING HEIGHTS AND ORIENTATIONS, TYPICAL UNLESS OTHERWISE NOTED. RECEPTACLES SHALL BE A MINIMUM OF 18" A.F.F. AND SWITCHES A MAXIMUM OF 48" A.F.F. TO CEILING, TYPICAL UNLESS OTHERWISE NOTED.
31. ALL WALL MOUNTED OUTLETS SHALL BE OFFSET SO THEY ARE NOT BACK TO BACK, FOR SOUND TRANSMISSION PURPOSES. A HORIZONTAL DISTANCE OF AT LEAST 6 INCHES SHALL SEPARATE OUTLET BOXES ON OPPOSITE SIDES OF WALLS AND PARTITIONS. MOUNT ELECTRICAL AND COMMUNICATIONS OUTLETS ON WALLS AS CLOSE TOGETHER AS POSSIBLE.
32. WIRING DEVICES SHALL BE SPECIFICATION GRADE. MINIMUM DEVICE RATING SHALL BE 20 AMPS FOR ALL WIRING DEVICES UNLESS SPECIFICALLY NOTED OTHERWISE. DEVICES WITH DEDICATED CIRCUITS SHALL BE RATED AS REQUIRED BY CIRCUIT LOAD. ISOLATED GROUND RECEPTACLES SHALL BE ORANGE. MATCH COLOR AND TYPE TO EXISTING BUILDING STANDARD. PROVIDE MATCHING NYLON COVER PLATES FOR ALL OUTLETS. ELECTRICAL CONTRACTOR SHALL VERIFY ALL OUTLETS WITH ARCHITECTURAL PLANS AND TENANT BEFORE ORDERING AND PURCHASING OF MATERIALS.
33. FIRE RESISTIVE WALLS AND PARTITIONS MAY HAVE OPENINGS FOR STEEL ELECTRICAL OUTLET BOXES NOT EXCEEDING 16 SQUARE INCHES IN AREA. PROVIDE THE AGGREGATE AREA OF SUCH OPENINGS IS NOT MORE THAN 100 SQUARE INCHES FOR ANY 100 SQUARE FEET OF WALL. A HORIZONTAL DISTANCE OF AT LEAST 24 INCHES SHALL SEPARATE OUTLET BOXES ON OPPOSITE SIDES OF FIRE RESISTIVE WALLS AND PARTITIONS.
34. ALL JUNCTION BOX COVERS SHALL BE INDICIBLY LABELED WITH PANEL DESIGNATION AND BRANCH CIRCUIT NUMBER OF EACH WIRE WITHIN THE JUNCTION BOX. PANELS/DISCONNECTS/TRANSFORMERS AND SIMILAR MUST BE LABELED WITH THEIR SOURCE AND WITH CALCULATED AC VALUE/DATE.
35. ALL WIRING SHALL BE COPPER, TYPE THHN OR THWN INSULATION, UNLESS SPECIFICALLY NOTED OTHERWISE. MINIMUM WIRE SIZE SHALL BE #12 AWG. CONDUCTORS SHALL BE FACTORY COLOR-CODED WITH WIRE COLOR CODING AS REQUIRED BY THE NATIONAL ELECTRICAL CODE AND USING STANDARD CONDUCTOR COLOR CODES:
- | | |
|----------------|----------------|
| 120/208 VOLTS: | 277/480 VOLTS: |
| B: BLACK | A: BROWN |
| R: RED | B: ORANGE |
| C: BLUE | G: GREEN |
| W: WHITE | N: NEUL |
| GRD: GREEN | GRD: GREEN |
| ISO. G: GREEN | Y/WHITE STRIPE |
36. RECEPTACLES FOR COMPUTERS, COPIERS, AND PRINTERS, WHICH ARE SEMI-DEDICATED, DEDICATED, OR ISOLATED, SHALL HAVE A SEPARATE NEUTRAL AND DEDICATED GROUND CONDUCTOR RUN FROM THE BRANCH CIRCUIT PANEL BOARD.
37. ALL JOINTS OR SPLICES FOR 10 AWG. CONDUCTORS OR SMALLER SHALL BE MADE WITH UL-APPROVED WIRE NUTS, OR COMPRESSION-TYPE CONNECTORS.
38. ALL JOINTS OR SPLICES FOR CONDUCTORS 8 AWG AND LARGER SHALL BE MADE WITH A MECHANICAL COMPRESSION OR BOLTED CONNECTOR. AFTER THE CONDUCTORS HAVE BEEN MADE MECHANICALLY AND ELECTRICALLY SECURE, THE ENTIRE JOINT OR SPLICE SHALL BE COVERED WITH 3M SCOTCH BRAND NO. 33 TAPE OR APPROVED EQUAL TO MATCH THE COLOR OF THE JOINT OR SPLICE EQUAL TO THE VALUE OF THE CONDUCTOR INSULATION. ALL CONNECTORS SHALL BE UL APPROVED.
39. ALL NEW MULTI-WIRE BRANCH CIRCUITS SHALL INCLUDE SEPARATE NEUTRAL CONDUCTORS OR BREAKER TIES AS REQUIRED BY CURRENT NEC SECTION 210.4 (B).
40. VOLTAGE DROP: THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT VOLTAGE DROP FOR FEEDERS TO DISTRIBUTION EQUIPMENT DOES NOT EXCEED 2% AND VOLTAGE DROP IN BRANCH CIRCUITING DOES NOT EXCEED 3% FOR OVERALL VOLTAGE DROP OF 5% (MAXIMUM). FEEDERS LISTED ON SCHEDULES AND THE ELECTRICAL ONE-LINE DIAGRAM ARE A BASE FEEDER/BRANCH CIRCUIT SIZE AND SHALL BE ADJUSTED AS NEEDED BASED ON ACTUAL LENGTHS OF CONDUCTORS.
41. ELECTRICAL CONTRACTOR SHALL USE SHARE NEUTRAL CONDUCTOR WITHIN FURNITURE SYSTEMS TO A #10 AWG CONDUCTOR. ELECTRICAL CONTRACTOR TO CONSIDER THE NEUTRAL CONDUCTOR AS A CURRENT CARRYING CONDUCTOR WHEN FEEDING ELECTRONIC LOADS.
42. ALL LIGHT FIXTURES SHALL BE SUPPORTED INDEPENDENTLY FROM STRUCTURE. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF LIGHT FIXTURES AND ELECTRICAL DEVICES.
43. FOR ALUMINUM CONDUCTOR TERMINATIONS, ALUMINUM BI-METALLIC PIN CONNECTORS ARE REQUIRED UNLESS COMPACT CONDUCTORS ARE USED. THESE CONNECTORS SHALL BE UL LISTED PER UL 468B AND RATED FOR USE UP TO 600V AND TEMPERATURE UP TO 90°C. CONNECTORS SHALL BE INSTALLED WITH MANUFACTURER'S SPECIFIED CRIMPING TOOLS AND DIES.



TYPICAL DETAIL FOR DEVICES AT DOOR LOCATION

SCALE: NONE

FIRE ALARM SYSTEM

1. GENERAL CONTRACTOR SHALL SOLICIT BIDS FROM BUILDING OWNER'S DESIGNATED FIRE ALARM CONTRACTOR FOR DESIGN AND INSTALLATION OF AN APPROVED FIRE ALARM SYSTEM AND DEVICES WHICH SHALL COMPLY WITH ALL APPLICABLE CODES AND ALL REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. (GENERAL CONTRACTOR SHALL VERIFY WITH BUILDING MANAGEMENT/OWNER CONCERNING DESIGNATED FIRE ALARM CONTRACTOR).
2. REQUIRED MODIFICATIONS TO EXISTING FIRE ALARM SYSTEM SHALL BE PROVIDED ON A DESIGN/BASIC BY FIRE ALARM CONTRACTOR. PRIOR TO BIDDING, FIRE ALARM CONTRACTOR SHALL FIELD VERIFY EXISTING FIRE ALARM SYSTEM CAPABILITY AND FIRE ALARM DEVICE LOCATIONS IN THIS SCOPE OF WORK. IF REQUIRED BY LOCAL JURISDICTION, FIRE ALARM SYSTEM SHALL BE UPGRADED TO MEET CURRENT CODES. FIRE ALARM CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS AND EQUIPMENT BROCHURES TO AUTHORITIES HAVING JURISDICTION, SUCH AS FIRE DEPARTMENT, BUILDING DEPARTMENT, ETC., AS REQUIRED, FOR REVIEW AND APPROVAL. CONTRACTOR SHALL ALSO PROVIDE THE ENGINEER WITH ONE (1) SET OF DRAWINGS, CALCULATIONS AND EQUIPMENT SUBMITTALS FOR HIS REVIEW AND RECORD.
3. IF REQUIRED, RELOCATE EXISTING SMOKE DETECTORS, REMOTE INDICATOR LIGHTS, FIRE ALARM HORNS, STROBES, SPEAKERS, ETC., BASED ON REMODELLED AREA MODIFICATION AND RECONNECT TO EXISTING SYSTEM AS REQUIRED. NEW FIRE ALARM DEVICES SHALL BE OF THE SAME MANUFACTURER AS THE EXISTING DEVICES AND SHALL BE COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM. PROVIDE ADDITIONAL CONDUCTORS, ZAM'S IAM'S AND OTHER EQUIPMENT NECESSARY IN ORDER TO EXPAND SYSTEM AS REQUIRED. PROVIDE SYNCHRONIZING MODULES FOR EXISTING FIRE ALARM SYSTEMS. PROVIDE EXISTING FIRE ALARM DEVICES THAT ARE NOT CURRENTLY BUILDING STANDARD OR COMPATIBLE WITH NEW BUILDING STANDARD FIRE ALARM DEVICES. PRIOR TO PURCHASING FIRE ALARM DEVICES, PROVIDE CUT SHEETS, SHOP DRAWINGS AND SEQUENCE OPERATION TO BUILDING MANAGEMENT AND FIRE PREVENTION BUREAU FOR THEIR APPROVAL AND TO ENGINEER FOR HIS REVIEW.
4. PROVIDE NEW BUILDING STANDARD FIRE ALARM STROBES, ADA HIGH INTENSITY, COMPLIANT WITH EXISTING NEW FIRE ALARM SYSTEM AS REQUIRED. MODIFY EXISTING FIRE ALARM CIRCUIT CONDUCTORS AND FIRE ALARM PANELS PER

COMMUNICATIONS SYSTEMS

1. ELECTRICAL CONTRACTOR SHALL FULLY FIELD COORDINATE COMMUNICATIONS SYSTEM INSTALLATION (DEVICES AND CABLING) WITH TENANT REPRESENTATIVE PRIOR TO ROUGH IN AND PURCHASING OF MATERIALS.
2. AT TELEPHONE AND DATA SERVICE POINT FOR EACH MODULAR FURNITURE GROUPING, THE ELECTRICAL CONTRACTOR SHALL PROVIDE 4" SQUARE DEEP STEEL JUNCTION BOX WITH TWO 1" CONDUITS (OR AS OTHERWISE SPECIFIED ON PLAN, OR BY DATA/TELECOMMUNICATIONS CONTRACTOR) WITH PULL WIRE. STUB CONDUITS ABOVE CEILING LINE AND PROVIDE PLASTIC BUSHINGS ON CONDUIT ENDS. CABLING SHALL BE PULLED AND WIRED BY OTHERS. COORDINATE ALL WORK WITH DATA/TELECOMMUNICATIONS CONTRACTOR PRIOR TO ROUGH-IN.
3. ALL DATA AND TELECOMMUNICATIONS CABLING SHALL BE INSTALLED BY TENANT'S VENDOR.
4. FOR EACH NEW SINGLE TELEPHONE/DATA OR TV CABLE OUTLET SHOWN MOUNTED IN WALL, ELECTRICAL CONTRACTOR SHALL PROVIDE A 4" SQUARE DOUBLE-GANG STEEL JUNCTION BOX WITH SINGLE-GANG PLASTER RING AND A 3/4" CONDUIT (OR AS OTHERWISE SPECIFIED BY SYSTEM INSTALLER) WITH PULL WIRE. STUB CONDUIT 6" INTO CEILING SPACE AND PROVIDE PLASTIC BUSHINGS. CABLING SHALL BE PULLED BY OTHERS. COORDINATE ALL WORK WITH DATA/TELECOMMUNICATIONS CONTRACTOR PRIOR TO ROUGH-IN.
5. IF REQUESTED, ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED AND UNUSED DATA/TELECOMMUNICATIONS CABLING, CONDUIT, JUNCTION BOXES, AND

RECORD DOCUMENTS

1. RECORD DOCUMENTS: THE ELECTRICAL CONTRACTOR SHALL MAINTAIN ACCURATE RECORDS OF ALL DEVIATIONS IN WORK AS INSTALLED FROM WORK SPECIFIED ON THE DRAWINGS OR IN THE SPECIFICATIONS AND IDENTIFY ORIGIN OF CHANGE.
2. KEEP A COMPLETE SET OF RECORD DOCUMENT PRINTS IN CUSTODY DURING ENTIRE PERIOD OF CONSTRUCTION AT THE CONSTRUCTION SITE. ON COMPLETION OF THE PROJECT, TWO COMPLETE SETS OF MARKED-UP PRINTS SHOWING THESE DEVIATIONS SHALL BE DELIVERED TO GENERAL CONTRACTOR AND ARCHITECT/ENGINEER. THIS CONTRACT WILL NOT BE CONSIDERED COMPLETED UNTIL THESE RECORD DRAWINGS HAVE BEEN RECEIVED AND REVIEWED BY THE ENGINEER.

ELECTRICAL SYMBOLS LEGEND

LIGHTING			POWER		
SYMBOL	DESCRIPTION		SYMBOL	DESCRIPTION	
	SURFACE	SHADING INDICATES CONNECTION TO EMERGENCY CIRCUIT OR 90-MINUTE BATTERY BACKUP 2x4" LIGHT FIXTURE 2x2" LIGHT FIXTURE 1x4" LIGHT FIXTURE NARROW 4" FIXTURE		WALL	JUNCTION BOX DUPLEX RECEPTACLE DEDICATED DUPLEX RECEPTACLE DOUBLE DUPLEX RECEPTACLE DEDICATED DOUBLE RECEPTACLE SPECIAL PURPOSE RECEPTACLE
	RECESSED			CEILING	
	EXIT SIGN			FLOOR	
	EMERGENCY BATTERY PACK FIXTURE				
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	NARROW PENDANT FIXTURE		STRIP FIXTURE		FLOOR SURFACE DUPLEX
	PENDANT FIXTURE		UNDER CABINET FIXTURE		FLOOR SURFACE DUPLEX
	WALL BRACKET		PENDANT FIXTURE		FLOOR SURFACE DUPLEX
	DOWNLIGHT FIXTURE		WALL WASH FIXTURE		
	WALL MOUNTED FIXTURE		POLE MOUNTED OUTDOOR FIXTURE		
	TRACK LIGHTING		REMOTE EMERGENCY LIGHT HEAD		
	PHOTOCCELL				

SWITCHING			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
S	SINGLE POLE SWITCH	Sd	DIMMER SWITCH
S2	DOUBLE POLE SWITCH	Sk	KEYED SWITCH
S3	THREE WAY SWITCH	Sto	THERMAL OVERLOAD SWITCH
S4	FOUR WAY SWITCH	Sts	GANGED SWITCHES
WALL	CEILING		
Sm	OCCUPANCY SENSOR FOR LIGHTING CONTROLS		

ABBREVIATIONS			
ABBR.	DESCRIPTION		
AFF	ABOVE FINISHED FLOOR		
AC	ABOVE COUNTER		
GFI	GROUND FAULT CIRCUIT INTERRUPTER		
GND	GROUND		
IG	ISOLATED GROUND		
NL	NIGHT LIGHT		
RL	RELOCATED DEVICE OR EQUIPMENT		
WP	WEATHER PROOF		
EM	EMERGENCY		
HD	HEAVY DUTY		
TR	TAMPER RESISTANT		
EG	EGRESS LIGHTING		
X	AUTOMATICALLY CONTROLLED DEVICE		

COMMUNICATION		
SYMBOL	DESCRIPTION	
	WALL	COMBINATION DATA/ TELEPHONE OUTLET CRT OR DATA OUTLET TELEPHONE OUTLET TV OUTLET
	CEILING	
	FLOOR	
	CLG.	
	CLG.	
	CLG.	

CIRCUITING	
SYMBOL	DESCRIPTION
	HOMERUN, SOLID 120/208 V, OPEN 277/480 V
	CIRCUIT RUN CONCEALED IN WALL OR CEILING
	CIRCUIT RUN CONCEALED IN FLOOR OR GRADE
	CONDUIT RISER, TURNED UP, TURNED DOWN
	UNDERGROUND ELECTRICAL

- MANUFACTURER'S REQUIREMENTS. MOUNT STROBES +80" A.F.F. OR 6" BELOW THE CEILING, WHICHEVER IS LOWER. REPLACE EXISTING STROBE LIGHTS WITH NEW BUILDING STANDARD STROBE LIGHTS, AND ENSURE ALL STROBE LIGHTS ARE SYNCHRONIZED.
5. FIRE ALARM CONTRACTOR SHALL FURNISH DUCT DETECTORS (120V OR 24V), WITH REMOTE INDICATING LIGHT AND TEST SWITCH, FOR ALL MECHANICAL AIR-MOVING SYSTEMS, WHERE REQUIRED BY CODE OR LOCAL AUTHORITIES. DETECTORS SHALL BE OF THE SAME MANUFACTURER AS EXISTING OR NEW FIRE ALARM SYSTEM. MECHANICAL CONTRACTOR SHALL INSTALL DETECTORS IN THE MECHANICAL DUCTWORK, AS REQUIRED BY CODE, TO FACILITATE MOTOR SHUTDOWN UPON DETECTION OF SMOKE. ELECTRICAL CONTRACTOR SHALL HANG DETECTORS TO THE FAN MOTOR (THROUGH A POWER-INTERRUPTING RELAY) FOR SHUTDOWN UPON DETECTION OF SMOKE; AND IF REQUIRED BY CODE, THE FIRE ALARM CONTRACTOR SHALL CONNECT TO FIRE ALARM SYSTEM AS TROUBLE ALARM. COORDINATE ALL REQUIREMENTS AND SPECIFICATIONS WITH BUILDING ENGINEER OR BUILDING FIRE ALARM REPRESENTATIVE. SUBMIT DRAWINGS AND EQUIPMENT CUT SHEETS FOR ENGINEERS' REVIEW AND FIRE DEPARTMENT APPROVAL.
6. IF A PRE-ACTION DRY PIPE SPRINKLER SYSTEM IS REQUIRED FOR THIS PROJECT, THE PRE-ACTION FIRE ALARM SYSTEM CONTROL PANEL SHALL BE ANNUNCIATED ON THE BUILDING MAIN FIRE ALARM CONTROL PANEL (FACP) IN THE FIRE COMMAND CENTER (FCC).
7. IF THE PROJECT REQUIRES A UPS SYSTEM AND COMPUTER ROOM AIR CONDITIONING (CRAC) UNITS, THE UPS SYSTEM AND CRAC UNITS SHALL BE CONNECTED TO THE BUILDING FIRE ALARM SYSTEM AND TO THE PRE-ACTION FIRE ALARM CONTROL PANEL. THE UPS SYSTEM, CRAC UNITS, AND FIRE/SMOKE DAMPERS SERVING THE COMPUTER ROOM SHALL BE SHUT DOWN UPON ACTIVATION OF FIRE ALARM SYSTEM. PROVIDE INTERFACIAL WIRING AS REQUIRED. PROVIDE WIRING FROM CRAC UNIT TO MOISTURE SENSORS OR SILE MONITORING SYSTEM IF IT IS PROVIDED UNDER MECHANICAL CONTROL AND ALARM SECTION. THE CRAC UNITS SHALL SHUT DOWN AND ALARM UPON DUCT DETECTOR ACTIVATION AS PART OF UL SYSTEM. COORDINATE ALL OF THE ABOVE WITH APPROPRIATE UPS, PDU AND CRAC UNIT MANUFACTURERS.

- ASSOCIATED WIRING LOCATED IN THE CEILING SPACE BACK TO POINT OF ORIGIN, UNLESS THE TENANT DATA/TELECOMMUNICATIONS CONTRACTOR IS CONTRACTED TO REMOVE THE DATA/TELECOMMUNICATIONS CABLING UNDER A SEPARATE CONTRACT. THE GENERAL CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE CONTRACTOR FOR THE REMOVAL OF THE PHONE/DATA CABLING. PRIOR TO DISCONNECTING AND REMOVING ANY EQUIPMENT, DEVICES OR CABLING, THE APPROPRIATE CONTRACTOR SHALL COORDINATE WITH OWNER AND ARCHITECT TO ENSURE EQUIPMENT SHALL BE REMOVED.
6. ELECTRICAL CONTRACTOR SHALL VERIFY QUANTITY AND TYPE OF DATA/PHONE/AUDIO/VIDEO PORTS TO BE INCLUDED IN FLOOR POKE-THRU DEVICES WITH DATA/TELECOMMUNICATIONS CONTRACTOR PRIOR TO ORDERING.
7. VERIFY ALL SPECIFIC COMPUTER AND COMMUNICATIONS EQUIPMENT REQUIREMENTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH IN. COORDINATION SHALL INCLUDE MOUNTING HEIGHTS, CONNECTION TYPE, AND POWER REQUIREMENTS. ALL CONNECTIONS FOR COMPUTER AND COMMUNICATIONS EQUIPMENT SHALL BE IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S AND SUPPLIER'S RECOMMENDATIONS.

MECHANICAL SYSTEM

1. ELECTRICAL CONTRACTOR SHALL REVIEW MECHANICAL AND PLUMBING DRAWINGS AND SCHEDULES FOR VERIFICATION OF THE EQUIPMENT USED, WIRING AND ADDITIONAL INSTALLATION REQUIREMENTS PRIOR TO PROVIDING REQUIRED ROUGH-INS. STARTERS/DISCONNECT SWITCHES, WHEN EQUIPMENT DELIVERED TO JOB SITE, ELECTRICAL CONTRACTOR SHALL VERIFY THIS DATA WITH EQUIPMENT NAMEPLATES OR MANUALS IF SIGNIFICANT DISCREPANCIES OCCUR CONTACT ELECTRICAL ENGINEER FOR REVISION OF THE CONSTRUCTION DOCUMENTS.
2. PROVIDE ALL REQUIRED OUTLETS; HEAVY-DUTY SAFETY DISCONNECT SWITCHES, FUSES AND CONNECTIONS FOR ALL MECHANICAL EQUIPMENT UNLESS PROVIDED BY MECHANICAL CONTRACTOR AS SPECIFICALLY DIRECTED ON MECHANICAL DRAWING OR SPECIFICATION REQUIREMENTS.
3. ELECTRICAL POWER WIRING IN CONNECTION WITH THE AUTOMATIC TEMPERATURE CONTROL SYSTEM, WHERE SHOWN ON THE ELECTRICAL DRAWINGS, SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. THE AUTOMATIC TEMPERATURE CONTROL SYSTEM, SHALL BE PERFORMED BY THE MECHANICAL CONTRACTOR.

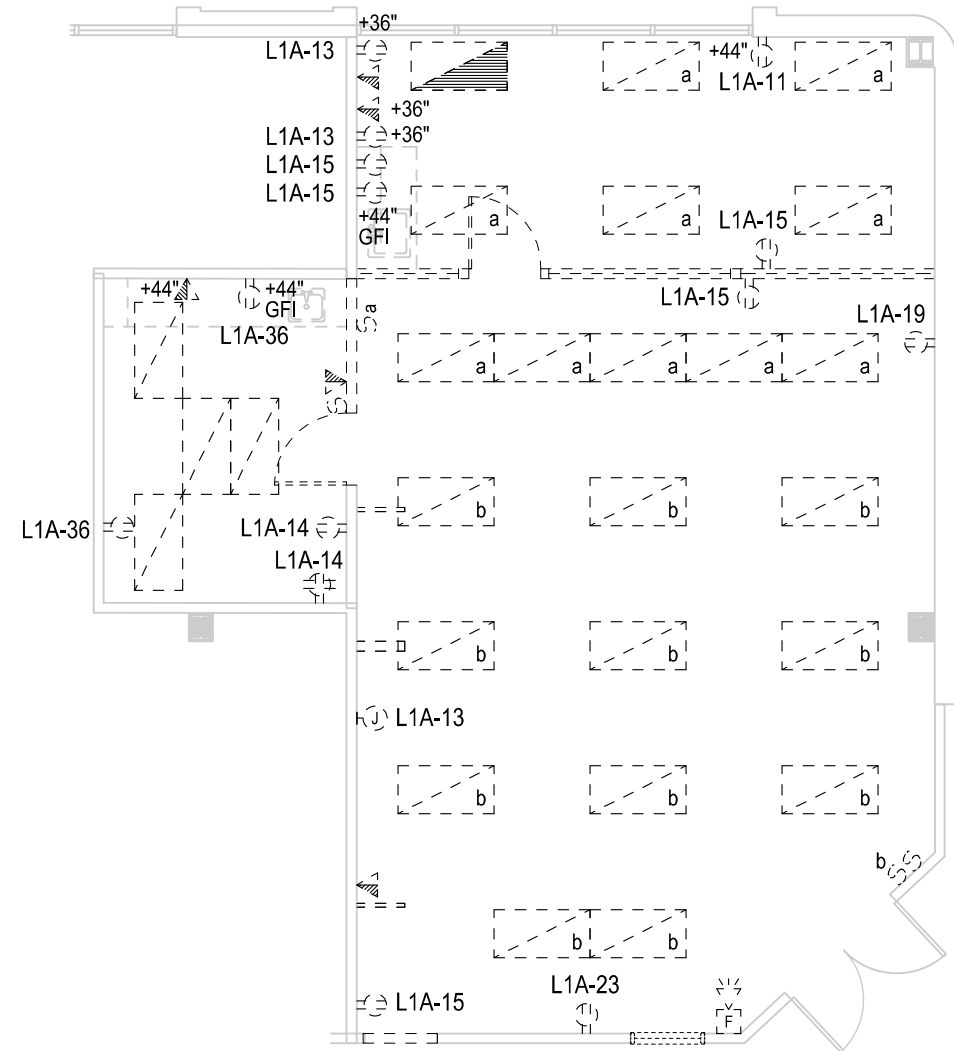
DEMOLITION

1. DURING THE DEMOLITION PHASE OF THIS CONTRACT, IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO VERIFY DEMOLITION SCOPE AND ITEMS WITH ARCHITECTURAL AND ELECTRICAL DRAWINGS. EXISTING LIGHT FIXTURES, ELECTRICAL DEVICES, EQUIPMENT AND CEILING DEVICES SHALL BE CAREFULLY REMOVED EITHER AS SHOWN ON THE DEMOLITION DRAWINGS AS BEING REMOVED, OR AS REQUIRED FOR THE WORK UNDER THIS CONTRACT. THESE ITEMS SHALL BE TAGGED, PROTECTED FROM DAMAGE, AND STORED AS DIRECTED BY THE BUILDING MANAGEMENT/OWNER, ARCHITECT OR ENGINEER.
2. DEMOLITION OF ABANDONING ANY ELECTRICAL AND COMMUNICATIONS CONDUIT, WIRING, CABLING, OR DEVICE MEANS TO REMOVE IN ITS ENTIRETY. REMOVE UNUSED CONDUITS FROM CEILING SPACES IN AREAS OF WORK. ABANDONED OUTLET JUNCTION BOXES ARE TO BE REMOVED AND COVERED WITH NEW GYPSUM BOARD. ABANDONED POKE THRU OUTLETS SHALL HAVE COVER PLATES AND BE FILLED WITH FIRE RATED FOAM SEALANT TO MAINTAIN FIRE RATING OF FLOOR.
3. EXISTING LIGHT FIXTURES IN WORK AREA, NOTED ON DRAWINGS TO BE RE-USED SHALL BE THOROUGHLY CLEANED AND/OR REFINISHED TO MATCH NEW.
4. CONTRACTOR SHALL REMOVE SWITCHES, DATA/TELEPHONE OUTLETS, AND ELECTRICAL OUTLETS SCHEDULED FOR DEMOLITION. ALL UNUSED POWER WIRING SHALL BE REMOVED BACK TO JUNCTION BOX IN CEILING SPACE OR TO THE ELECTRICAL PANEL FEEDING THE CIRCUIT. THE SPARE CIRCUIT BREAKER SHALL BE SWITCHED TO THE "OFF" POSITION AND NOTED ON PANEL DIRECTORY AS SPARE WITH THE JUNCTION BOX LOCATION IF APPLICABLE.
5. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR RINGING OUT ALL CIRCUITS WHICH MAY BE AFFECTED BY THIS PROJECT TO MAINTAIN CIRCUIT CONTINUITY AND TO PREVENT OVERLOADING OF ANY SINGLE CIRCUIT. CONTRACTOR SHALL ENSURE THAT CIRCUITS SHARED BETWEEN PROJECT AREA AND EXISTING TENANTED SPACES REMAIN INTACT PER ORIGINAL DESIGN INTENT. CORRECT ANY MISLABELED J-BOX COVERS WITH ACCURATE PANEL/BRANCH CIRCUIT IDENTIFICATION. REFER TO DETAIL NOTES OF THIS PROJECT THAT APPLY TO WORK TO BE PERFORMED UNDER THIS CONTRACT. CIRCUIT BREAKERS FOR ALL UNUSED CIRCUITS SHALL BE TURNED TO THE "OFF" POSITION AND LABELED AS SPARE ON REVISED PANEL DIRECTORIES.
6. PROVIDE NEW JUNCTION BOXES, NEW CONDUIT AND WIRING AS REQUIRED TO REPAIR, REROUTE AND RECONNECT CONDUCTORS THAT ARE DAMAGED, DISTURBED OR OTHERWISE ADVERSELY AFFECTED BY THE DEMOLITION AND REMODEL WORK.
7. THE LOCATIONS OF EXISTING LIGHTING FIXTURES, POWER DEVICES AND WIRING, ETC., SHOWN ON THE DRAWINGS HAS BEEN TAKEN FROM EXISTING DRAWINGS AND ARE, THEREFORE, ONLY AS ACCURATE AS THAT INFORMATION. ALL EXISTING CONDITIONS SHALL BE VERIFIED AT THE FIELD WITH NECESSARY ADJUSTMENT BEING MADE TO THE DRAWING INFORMATION.
8. ALL FLOOR AND WALL PENETRATIONS WHERE ELECTRICAL DEVICES AND RACEWAY HAVE BEEN REMOVED MUST BE REPAIRED AND SEALED TO MAINTAIN THE REQUIRED FIRE RATING. ALL LUMINAIRES PENETRATING A ONE HOUR FIRE RATED ENCLOSURE SHALL BE PROPERLY TENDED TO MAINTAIN FIRE RATING OF THE ENCLOSURE. ALL CONDUITS PENETRATING A ONE HOUR FIRE RATED WALL OR CEILING SHALL BE FIRE STOPPED WITH A U.L. LISTED FIRE STOPPING COMPOUND SEALANT.
9. MAINTAIN LIGHTING CIRCUIT AND SWITCHING CONTROL CONTINUITY IN VACANT AND NON-VACANT SUITES THAT ARE ADJACENT TO PROJECT.
10. MAINTAIN RECEPTACLE CIRCUIT CONTINUITY THROUGH WALLS WHICH ARE TO BE DEMOLISHED AND THROUGH RECEPTACLES WHICH ARE TO BE REMOVED.
11. OWNER HAS RIGHT OF FIRST REFUSAL FOR ALL REMOVED EQUIPMENT, FIXTURES, DEVICES, AND CONDUCTORS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE STORAGE AND/OR DISPOSAL OF ALL SUCH ITEMS WITH OWNER/PROPERTY MANAGEMENT PRIOR TO REMOVAL FROM SITE.

WARRANTY

1. PROVIDE COMPLETE WARRANTY INFORMATION FOR EACH ITEM, WHICH SHALL INCLUDE NAME OF PRODUCT OR EQUIPMENT; DATE OF BEGINNING OF WARRANTY OR BOND; DURATION OF WARRANTY OR BOND; AND NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF MANUFACTURER/SERVICING PERSONNEL, AS WELL AS PROCEDURES FOR FILING A CLAIM AND OBTAINING WARRANTY SERVICES.
2. THE CONTRACTOR SHALL WARRANT ALL MATERIALS, WORKMANSHIP AND THE SUCCESSFUL OPERATION OF ALL EQUIPMENT AND APPARATUS INSTALLED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE ENTIRE WORK AS IDENTIFIED IN THE GENERAL CONDITIONS.

FIRE ALARM AND SECURITY	
SYMBOL	DESCRIPTION
	THERMOSTAT
	DUCT DETECTOR
	MOTION SENSOR
	HEAT DETECTOR
	FIRE ALARM CONTROL PANEL
	MANUAL PULL STATION
	REMOTE LAMP
	FIRE/SMOKE DAMPER
	ANNUNCIATOR PANEL
	CARD READER
	SECURITY CAMERA</



SEPARATE FIRE ALARM PERMIT REQUIRED:
Due to the proposed work the general contractor is required to obtain the services of a fire alarm contractor to determine if a separate alarm permit is required. If it is determined that the spacing of the fire alarm devices is not in compliance, then a separate fire alarm permit is required. Approval of the documents is required prior to system installation or any request for inspection. A certificate of occupancy or final approval cannot be issued by the Building Division without this fire protection system. **2015 IFC, Section 105.7.8.**

Install electrical connections per 2020 NEC 110.14, Identify disconnects per 2020 NEC 110.22 and provide working space around Electrical equipment per 2020 NEC 110.26

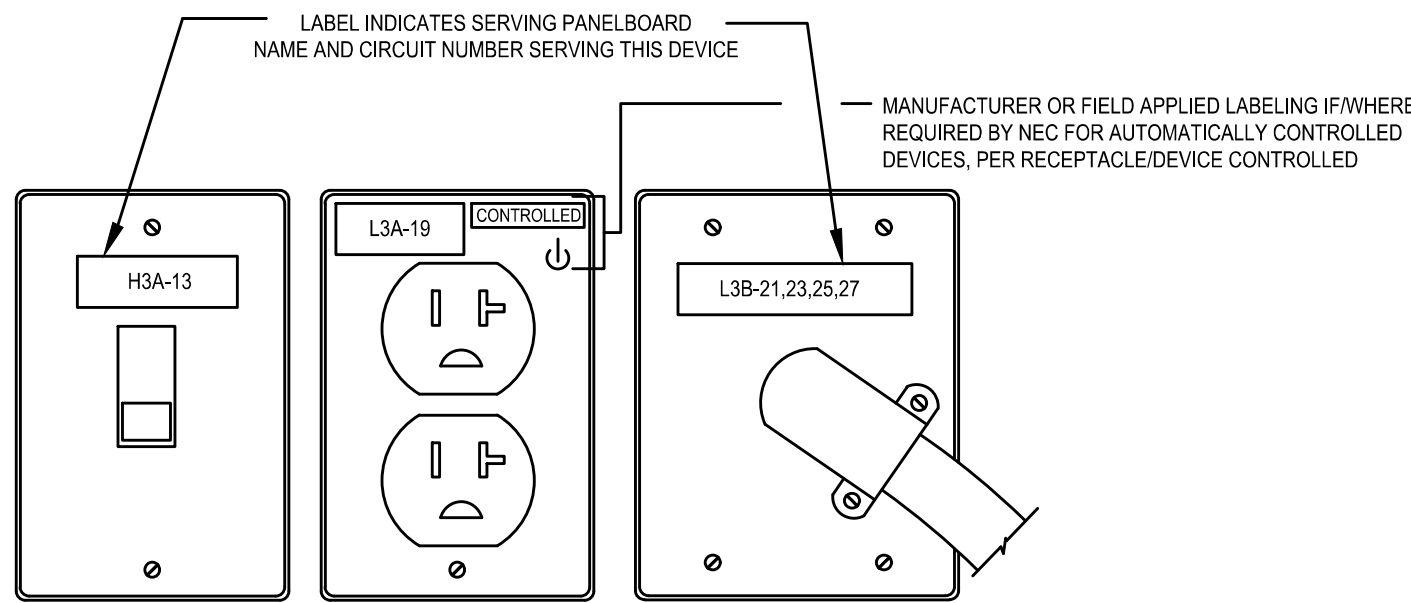


DEMOLITION PLAN

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

GENERAL NOTES:

- REMOVED ITEMS SHOWN AS DASHED AND LIGHT.
- E.C. TO REMOVE ALL ABANDONED CONDUIT/CABLING/WIRING FROM SPACE INCLUDING ABOVE THE CEILING BACK TO SOURCE. ANY CIRCUITS MADE SPARE TO BE TURNED OFF AND LABELED AS SUCH WITH NEW TYPED PANEL SCHEDULES.
- RETURN LIGHTING FIXTURES NOT REUSED TO PROPERTY MANAGEMENT STOCK.
- PROTECT CIRCUITS AFFECTED BY DEMOLITION THAT HAVE DEVICES REMAINING AFTER DEMOLITION.
- PROTECT ANY DEMOLISHED FIRE ALARM DEVICES AND EXIT SIGNS FOR RELOCATION. RETURN ANY UNUSED DEVICES TO BUILDING MANAGEMENT.



TYPICAL DEVICE LABELING DETAIL

SCALE: NONE

GENERAL NOTES:

- E.C. TO PROVIDE DESCRIPTION OF USE/FUNCTION OF ANY/ALL CONTROLLED RECEPTACLES TO TENANT.

2015 IECC CONTROL MATRIX

SPACE TYPE	MAN. ON	MAN. OFF	MAN. DIM	OV.RD. SW. (T/C)	T/C OFF	OCC. SENS. ON	OCC. SENS. OFF	12PM-6AM DIM 30% DOWN	DAY. LTG. DIM	90-MIN BATT/ GEN/RTA	EXT. PHOTO CELL	REMARKS:
PRIVATE OFFICE/EXAM ROOM	X	X		**	**			X				
OPEN OFFICE AREA	X	X	*	**	**			X		X		DUAL LEVEL CONTROL THIS AREA. ONLY 50% TO BE AUTO ON. SEPARATE SWITCH FROM OTHER ZONES
DAYLIGHT ZONES	X	X	*	**	**			X				
WALK IN COOLER/FREEZER	X	X	*	**	**	X	X					
TRAINING/CLASS/CONFERENCE/BREAK/COPYWORK/LAB/LOCKER	X	X	*	**	**			X				
STORAGE/CLOSETS/DATA	X	X	*	**	**			X				
HALLWAYS/Lobbies	X	X	*	**	**	X	X					
ENTRY VESTIBULES/STAIRWELLS	X	X	*	**	**							NIGHTLIGHT BASED ON SAFETY/SECURITY EXCEPTION
RESTROOMS	X	X	*	**	**	X	X					
ELECTRICAL/MECHANICAL ROOMS	X	X	*	**	**	X	X					PROVIDE OVERRIDE SWITCH FOR SENSOR CONTROL
COMMERCIAL KITCHEN	X	X	*	**	**	X	X					
PHARMACY/GYM/LIBRARY	X	X	*	**	**	X	X					DUAL LEVEL CONTROL THIS AREA. ONLY 50% TO BE AUTO ON. EACH AISLE INDEPENDENT
WAREHOUSE - AISLES	X	X	*	**	**	X	X					DUAL LEVEL CONTROL THIS AREA. ONLY 50% TO BE AUTO ON. DUAL LEVEL CONTROL MINIMUM, UNLESS DIMMED
WAREHOUSE - OPEN AREA	X	X	*	**	**	X	X					DUAL LEVEL CONTROL THIS AREA. ONLY 50% TO BE AUTO ON.
RETAIL RESTAURANT SEATING	X	X	*	**	**							
SPECIFIC APPLICATION CONTROL	X	X	*	**	**							
FACTORY/INDUSTRIAL	X	X	*	**	**	X	X					DUAL LEVEL CONTROL THIS AREA. ONLY 50% TO BE AUTO ON.
EXTERIOR SITE LIGHTING									X		X	
EXTERIOR FAÇADE/WALL PACKS						X	X				X	
LOADING DOCK						X	X				X	
EXTERIOR EG WALLPACKS						X	X			X	X	
INTERIOR EG NON-NL				**	**	X**	X**			X	X	UL924/SWITCHED LEADS UL924/SWITCHED LEADS. SENSOR IN PARALLEL WITH TC

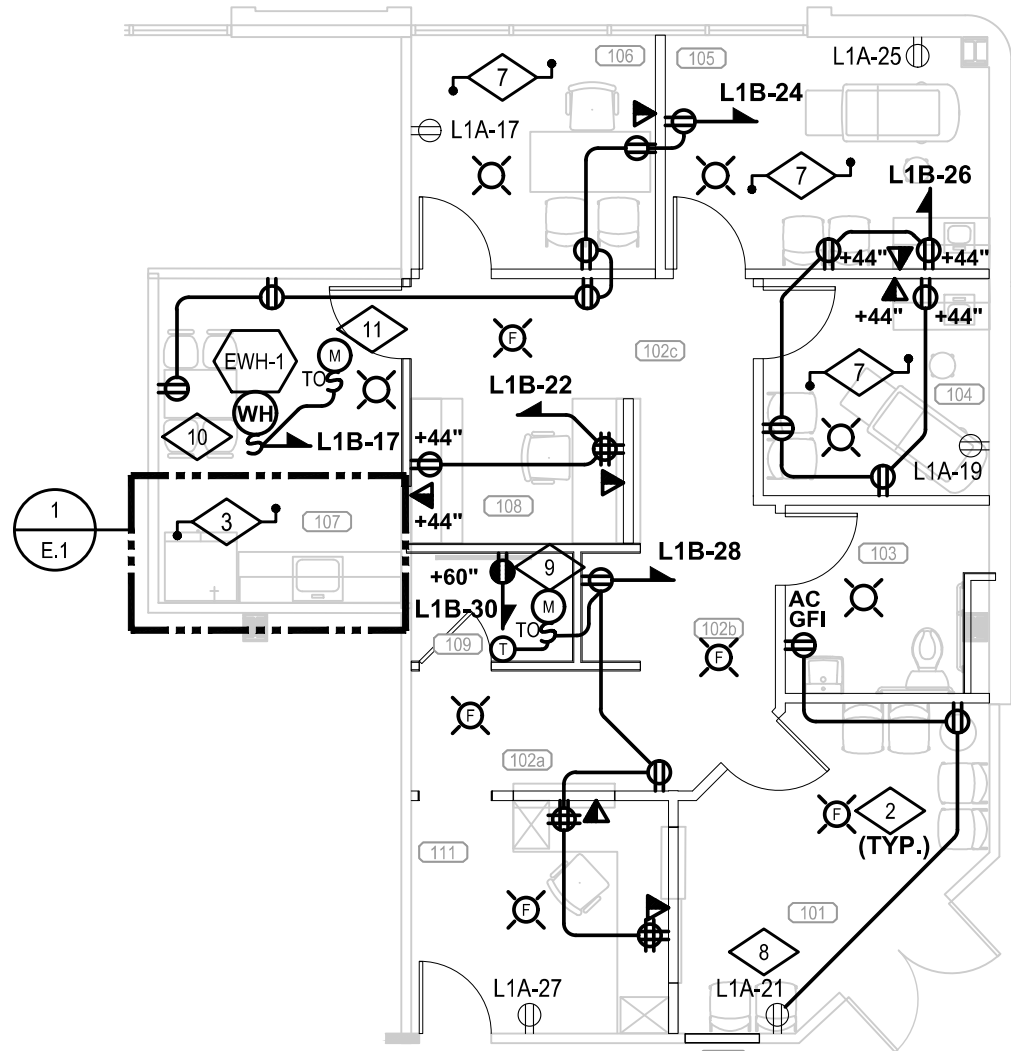
INTERIOR EG NL, EXIT SIGNS / FIXTURES DESIGNATED NL

NOTE: E.C. TO PROVIDE SHOP DRAWINGS AND SUBMITTALS THROUGH THE APPROPRIATE LIGHTING CONTROLS MANUFACTURER REPRESENTATIVE TO MEET THE ABOVE CONTROL INTENT. SEE OCCUPANCY/VACANCY/DAYLIGHT SENSOR SCHEDULE ON COVERSHEET FOR MORE DETAILS. PROVIDE ADDITIONAL POWER PACKS WHERE CONTROLLING MULTIPLE/ADDITIONAL VOLTAGES.

* MANUAL DIMMING WHERE REQUIRED BY PLANS.

** OVERRIDE SWITCH AND TIME CLOCK CONTROL WHERE/IF NOTED ON PLANS.

*** PROVIDE SECOND OCCUPANCY POWER PACK WHERE CONTROLLED IN ROOMS WITH VACANCY SENSORS.



POWER PLAN

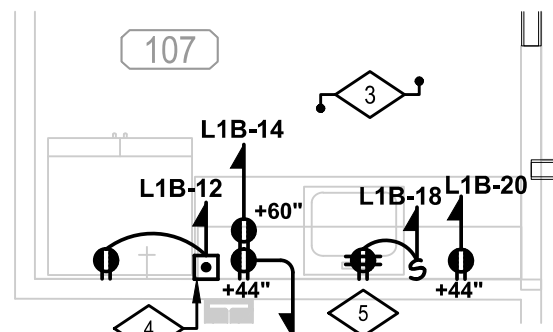
SCALE: 1/8"=1'-0"

GENERAL NOTES:

- NEW AND RELOCATED ITEMS SHOWN AS BOLD
- EXISTING ITEMS SHOWN AS LIGHT
- REPLACE ALL EXISTING NON-WHITE DEVICES AND COVER PLATES WITH BUILDING STANDARD COLOR. CONFIRM COLOR WITH BUILDING MANAGEMENT PRIOR TO REPLACEMENT.

DETAIL NOTES

- E.C. TO PROVIDE ADHESIVE LABEL WITH CIRCUIT NUMBER ON RECEPTACLES. COORDINATE STYLE OF LABEL WITH PROPERTY MANAGEMENT PRIOR TO INSTALLING. SEE TYPICAL DEVICE LABELING DETAIL.
- NEW FIRE ALARM DEVICE. SEE FIRE ALARM GENERAL NOTES.
- E.C. TO ENSURE RECEPTACLES WITHIN 6' OF SINK EDGE HAVE ACCESSIBLE GFCI PROTECTION. PROVIDE IF NEEDED.
- PROVIDE ABOVE COUNTER DEADFRONT GFI DEVICE AHEAD OF KITCHEN OUTLET TO PROVIDE AN ACCESSIBLE GFI PROTECTION FOR KITCHEN DEVICE. PROVIDE ADHESIVE LABEL TO COVER INDICATING DEVICE SERVED, P&S MODEL 2085 OR EQUAL.
- PROVIDE HALF SWITCHED GFI QUADRIplex OUTLET. SWITCHED HALF FOR DISPOSAL, UNSWITCHED FOR DISHWASHER. PROVIDE GROMMETS AND CORD AND CAPS AS NECESSARY.
- E.C. TO PROVIDE TAMPER RESISTANT RECEPTACLES IN ALL OFFICES, WAITING ROOMS, PATIENT CARE SPACES, AND CORRIDORS THROUGHOUT PER NEC 406.12.
- PROVIDE/ENSURE HOSPITAL-GRADE RECEPTACLES FOR ALL DEVICES IN THIS ROOM. ALL BRANCH CIRCUITS IN THIS AREA SHALL BE RUN ENTIRELY IN EMT CONDUIT IN ORDER TO UTILIZE CONDUIT AS REDUNDANT GROUND (PER NEC 517.13) OR PROVIDE GREEN HOSPITAL-GRADE AC/MC CABLE FOR REDUNDANT GROUND. PROVIDE GFCI DEVICES THROUGHOUT. PROVIDE EQUIPMENT GROUNDING CONDUCTOR THROUGHOUT.
- CONNECT TO EXISTING CIRCUIT SHOWN.
- NEW 60W TRANSFER FAN CONNECTED TO M.C. SUPPLIED LINE VOLTAGE THERMOSTAT. THERMOSTAT WIRED/INSTALLED BY E.C. CONNECT FAN THROUGH THERMAL SWITCH USING 2-#12 CU AND #12 GND IN 3/4". SEE MECHANICAL PLANS FOR DETAILS. COORDINATE FINAL LOCATION WITH ARCHITECT/TENANT.
- NEW 1500W WATER HEATER. 120V. CONNECT THROUGH NEW DISCONNECT SWITCH USING 2-#12 CU AND #12 GND IN 3/4". SEE PLUMBING PLANS FOR DETAILS. COORDINATE FINAL LOCATION WITH ARCHITECT/TENANT.
- NEW 10W RECIRCULATION PUMP. 120V. CONNECT THROUGH THERMAL SWITCH USING 2-#12 CU AND #12 GND IN 3/4". SEE PLUMBING PLANS FOR DETAILS. COORDINATE FINAL LOCATION WITH PLUMBING DRAWINGS.



ENLARGED BREAK AREA 107 POWER PLAN

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

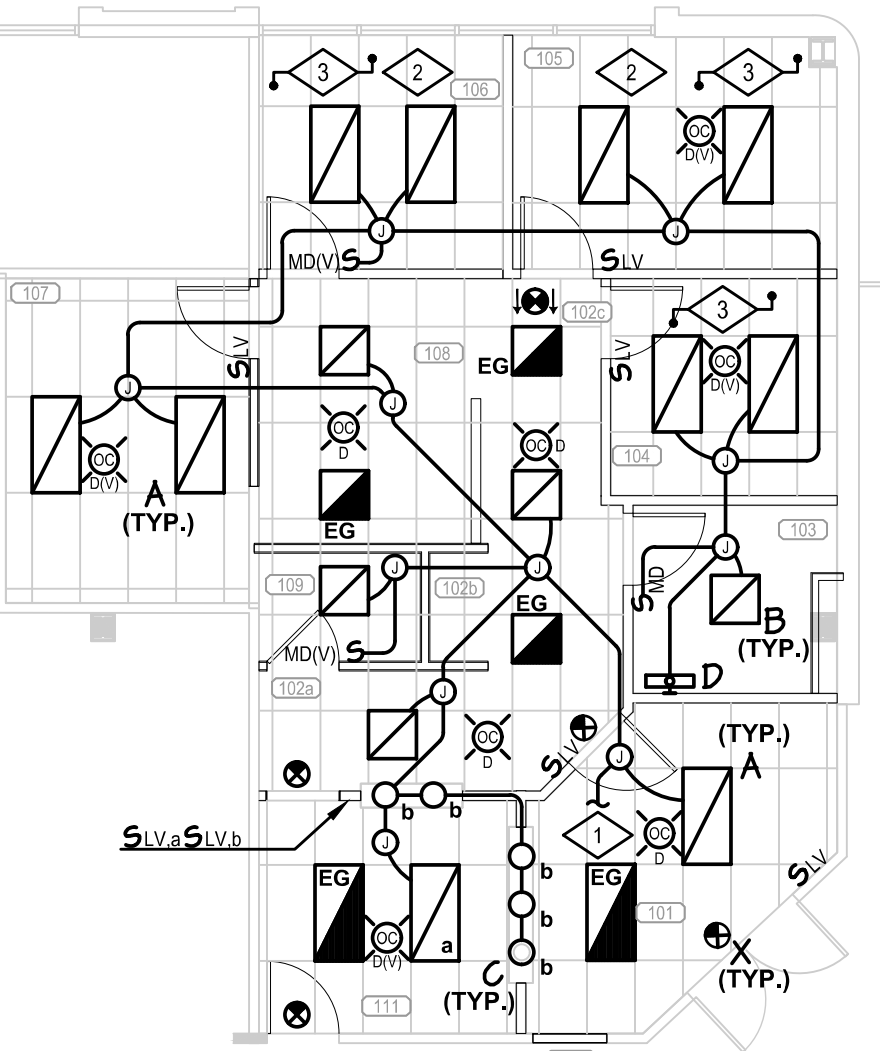
Provide Emergency Illumination Equipment That complies with 2020 NEC 700.12(F) or NEC 700.

Suspended Ceiling Systems and the Luminaires They support shall meet the requirements of 410.36(B) 2020 NEC

Wiring in air handling space must comply with 2020 NEC 300.22. Firestop penetrations per 2020 NEC 300.21. Secure and support equipment per 2020 NEC 300.11.

Room Schedule

100	Corridor	106	Exam
101	Waiting	107	Break Room
102	Tenant Hallway	108	M.A.
103	ADA Restroom	109	LT/Storage
104	Exam	110	---
105	Exam	111	Reception



LIGHTING PLAN

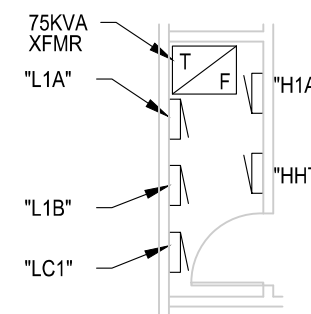
SCALE: 1/8"=1'-0"

GENERAL NOTES:

- NEW AND RELOCATED ITEMS SHOWN AS BOLD
- EXISTING ITEMS SHOWN AS LIGHT
- LOWER CASE LETTERING INDICATED ON SWITCHES AND FIXTURES IF SHOWN. WHICH SWITCHES CONTROL WHICH FIXTURES.
- REPLACE ALL EXISTING NON-WHITE DEVICES AND COVER PLATES WITH BUILDING STANDARD COLOR. CONFIRM COLOR WITH BUILDING MANAGEMENT PRIOR TO REPLACEMENT.

DETAIL NOTES

- CONNECT TO LOCAL LIGHTING CIRCUIT. E.C. TO VERIFY NO MORE THAN 70% LOAD ON A SINGLE 277V LIGHTING CIRCUIT.
- DAYLIGHT DIMMING NOT APPLIED. FIXTURES IN DAYLIGHT ZONE ARE LESS THAN 150W TOTAL PER SPACE.
- PROVIDE/ENSURE HOSPITAL-GRADE RECEPTACLES FOR ALL DEVICES IN THIS ROOM. ALL BRANCH CIRCUITS IN THIS AREA SHALL BE RUN ENTIRELY IN EMT CONDUIT IN ORDER TO UTILIZE CONDUIT AS REDUNDANT GROUND (PER NEC 517.13) OR PROVIDE GREEN HOSPITAL-GRADE AC/MC CABLE FOR REDUNDANT GROUND. PROVIDE GFCI DEVICES THROUGHOUT. PROVIDE EQUIPMENT GROUNDING CONDUCTOR THROUGHOUT.

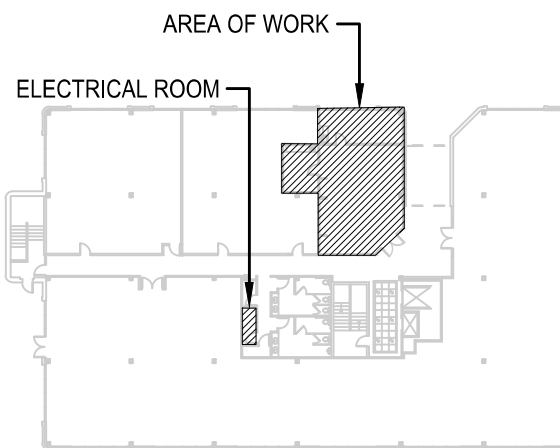


ELECTRICAL ROOM LAYOUT

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



City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: **Bobby McKinzie**
Date: **Jul 09, 2021**
2015 INTERNATIONAL CODES & 2020 NEC



KEY PLAN

1411 South Potomac
1411 South Potomac Street
Aurora, CO 80012
Suite 190



Spec Suite #190

Dates of Record

Project Start Date: 3 Mar 2021

Issued On: Issued For:
06.17.2021 Tenant's Review & Approval;
and Construction

Sheet Contents ELECTRICAL PLANS

Project Team EB,AW
Project Number 21099
Sheet Mark **E.1**



Dates of Record

Project Start Date: 3 Mar 2021

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Issued For: Tenant's Review & Approval, and Construction

Sheet
Contents

Project Team
Project Number
Sheet
Mark

ONE-LINE
DIAGRAM

EB,AW
21099

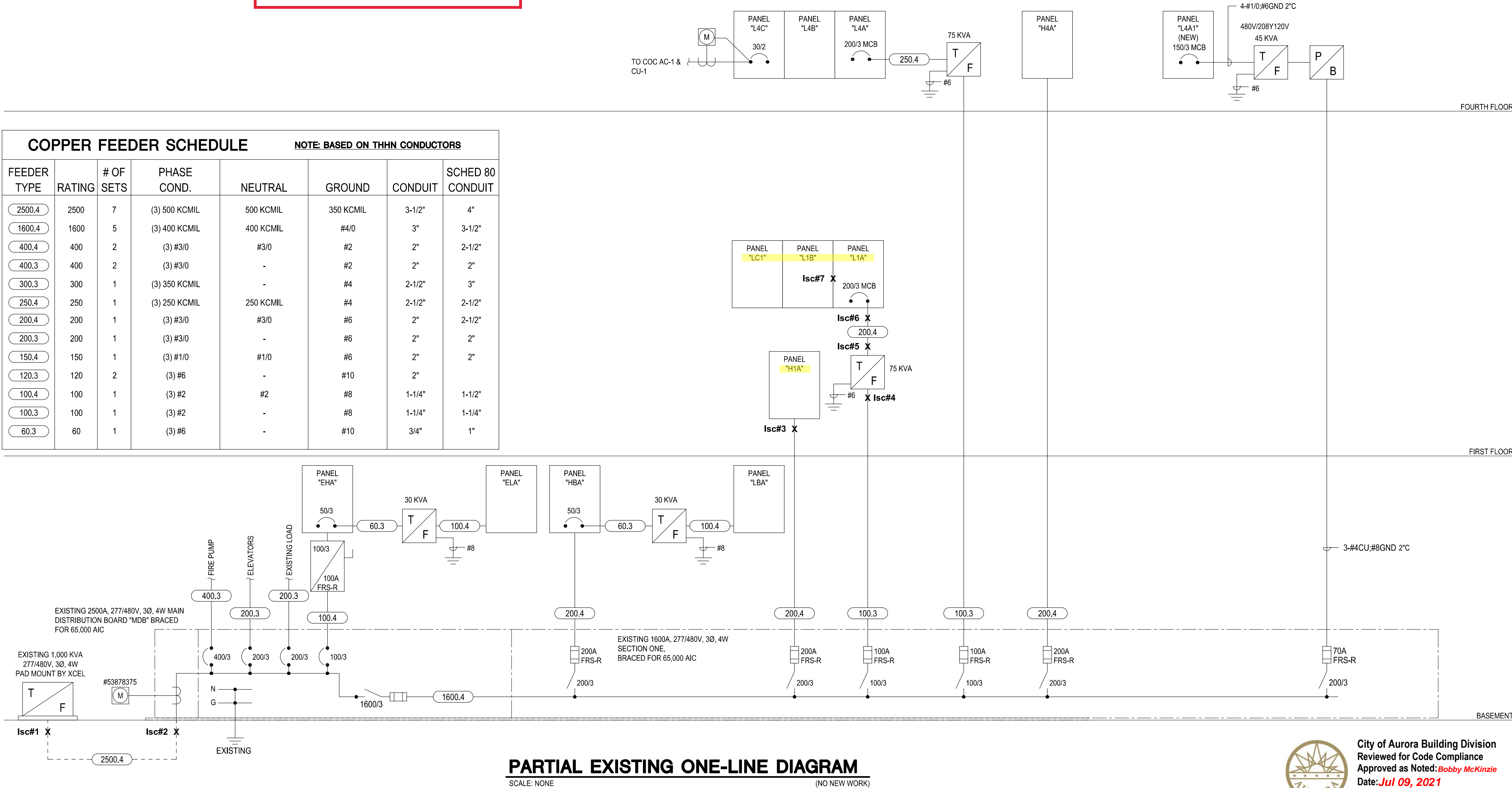
E.2

Install electrical connections per 2020 NEC 110.14, Identify disconnects per 2020 NEC 110.22 and provide working space around Electrical equipment per 2020 NEC 110.26

Service Equipment shall be permanently And legibly marked to show the available Fault current and date. 2020 NEC 110.24(A)(B)

3 PHASE - FAULT CURRENT CALCULATIONS												
Maximum Available Fault Current (I _{sc}) I _{sca} = (I _{sc} x M) where M = 1 / (1 + f), and f = (1.73 x L x I _{sc}) / (C x n x V _p) (note: type 0 for 1/0 AWG, 00 for 2/0 AWG, 000 for 3/0 AWG, 0000 for 4/0 AWG)												
Isc Point	Fault Location	Equipment AIC rating	Distance, feet (L)	Wire Size	Wires / Ph (n)	CU (X); AL ()	Raceway Steel (X); PVC ()	Voltage Primary (Vp)	Voltage Secondary (Vs)	Wire Factor (C)	Upstream fault value (I _{sc})	Fault Value at Equipment (I _{sc})
1	Utility Transformer 1000 kVA											
2	MDB	65,000	200	500	7	X		480		186942	22,600	20,786
3	PANEL "H1A"	14,000	90	000	1	X	X	480		12843	20,786	13,625
4	BEFORE 75kVA XFMR	NA	90	2	1	X	X	480		5906	20,786	9,700
5	AFTER 75 kVA XFMR	NA						480	208	9,700	3,238	75
6	PANEL L1A	10,000	10	000	1	X	X	208		12843	3,238	3,171
7	PANEL L1B	10,000	5	000	1	X	X	208		12843	3,171	3,139

COPPER FEEDER SCHEDULE						
NOTE: BASED ON THHN CONDUCTORS						
FEEDER TYPE	RATING	# OF SETS	PHASE COND.	NEUTRAL	GROUND	SCHED 80 CONDUIT
2500.4	2500	7	(3) 500 KCMIL	500 KCMIL	350 KCMIL	3-1/2"
1600.4	1600	5	(3) 400 KCMIL	400 KCMIL	#4/0	3"
400.4	400	2	(3) #3/0	#3/0	#2	2"
400.3	400	2	(3) #3/0	-	#2	2"
300.3	300	1	(3) 350 KCMIL	-	#4	2-1/2"
250.4	250	1	(3) 250 KCMIL	250 KCMIL	#4	2-1/2"
200.4	200	1	(3) #3/0	#3/0	#6	2"
200.3	200	1	(3) #3/0	-	#6	2"
150.4	150	1	(3) #1/0	#1/0	#6	2"
120.3	120	2	(3) #6	-	#10	2"
100.4	100	1	(3) #2	#2	#8	1-1/4"
100.3	100	1	(3) #2	-	#8	1-1/4"
60.3	60	1	(3) #6	-	#10	3/4"



PARTIAL EXISTING ONE-LINE DIAGRAM
SCALE: NONE (NO NEW WORK)



City of Aurora Building Division
Reviewed for Code Compliance
Approved as Noted: Bobby McKinzie
Date: Jul 09, 2021
2015 INTERNATIONAL CODES & 2020 NEC

SUPPLIED FROM:		200A FUSED BUCKET IN MDB										
PANEL "H1A" (EXISTING)												
FLUSH		M.C.B.		VOLTAGE		277		/		480 V		
SURFACE		BUS		MLO		X		I.G. BAR		NA		
		200 A CU						A.I.C.		14 K		
								MANF.		SQUARE D		
								C.B.		BOLT ON		
TYPE	DESCRIPTION	BKR	CIR	LOAD (VOLT AMPS) / PHASE			CIR	BKR	DESCRIPTION	TYPE		
				A	B	C						
L	EXISTING LOAD	20	1	1500	4155		2	50	EXISTING LOAD	M		
L	EXISTING LOAD	20	3		1500	4155	4	50	EXISTING LOAD	M		
L	EXISTING LOAD	20	5			1500	6	50	EXISTING LOAD	M		
L	EXISTING LOAD	20	7	1500	4155		8	50	EXISTING LOAD	M		
L	EXISTING LOAD	20	9		1500	4155	10	50	EXISTING LOAD	M		
L	EXISTING LOAD	20	11			1500	12	80	EXISTING LOAD	M		
L	EXISTING LOAD	20	13	1500	4986		14	80	EXISTING LOAD	M		
L	EXISTING LOAD	20	15		1500	4986	16	80	EXISTING LOAD	M		
L	EXISTING LOAD	20	17			1500	18	80	EXISTING LOAD	M		
L	EXISTING LOAD	20	19	1500	0		20	-	BLANK			
	BLANK	-	21		0	0	22	-	BLANK			
	BLANK	-	23				24	-	BLANK			
	BLANK	-	25	0	0		26	-	BLANK			
	BLANK	-	27		0	0	28	-	BLANK			
	BLANK	-	29				30	-	BLANK			
	BLANK	-	31	0	0		32	-	BLANK			
	BLANK	-	33		0	0	34	-	BLANK			
	BLANK	-	35				36	-	BLANK			
	BLANK	-	37	0	0		38	-	BLANK			
	BLANK	-	39				40	-	BLANK			
	BLANK	-	41				42	-	BLANK			
				19296	17796		18627					
LOAD TYPE		CONNECTED KVA			TOTAL ALL PHASES		DEMAND KVA			TOTAL ALL PHASES		
		A	B	C			A	B	C			
LIGHTING / EV CHARGERS		6.0	4.5	4.5	15.0		7.5	5.6	5.6	19		
RECEPTACLE (10KVA OR LESS)		0.0	0.0	0.0	0.0		100%	0.0	0.0	0		
RECEPTACLE (OVER 10KVA)		0.0	0.0	0.0	0.0		50%	0.0	0.0	0		
HVAC/MOTOR		8.3	8.3	9.1	25.8		100%	8.3	8.3	26		
MOTOR (LARGEST)		5.0	5.0	5.0	15.0		125%	6.2	6.2	19		
KITCHEN EQUIPMENT		0.0	0.0	0.0	0.0		100%	0.0	0.0	0		
MISCELLANEOUS		0.0	0.0	0.0	0.0		100%	0.0	0.0	0		
TOTAL KVA		19.3	17.8	18.6	55.7		TOTAL KVA	22.0	20.2	63		
WITH GROUND BUS					TOTAL AMPS		79.6	72.8	75.8	76		
LEGEND		L = LTG / EV R = RECEPTACLE M = HVAC / MOTOR K = KITCHEN G = MISCELLANEOUS										
MAX PERCENT DIFFERENCE BETWEEN PHASES (A,B,C): 8%												
PANEL SHOWN FOR REFERENCE ONLY.												

SUPPLIED FROM:		75KVA TRANSFORMER										
PANEL "L1A" (EXISTING)												
FLUSH		M.C.B.		VOLTAGE		120		/		208 V		
SURFACE		BUS		MLO		I.G. BAR		3		W		
X		200 A		FEED TRM		A.I.C.		10 K		SQUARE D		
		200 A CU		L1B						C.B. BOLT ON		
TYPE	DESCRIPTION	BKR	CIR	LOAD (VOLT AMPS) / PHASE			CIR	BKR	DESCRIPTION	TYPE		
				A	B	C						
R	CORR REC	20	1	1080	360		2	20	RR AC, GFI REC	R		
R	CORR REC	20	3		1080	0	4	-	BLANK			
M	CHILLER	20	5			1000	6	20	WATER HEATER	G		
R	EXISTING LOAD	20	7	720	1500		8	20	WATER HEATER	G		
R	EXISTING LOAD	20	9		720	720	10	20	190 REC	R		
SPARE		20	11			0	12	20	190 REC	R		
SPARE		20	13	0	0		14	20	SPARE			
SPARE		20	15		0	720	16	20	190 REC	R		
R	EXISTING LOAD	20	17			720	18	20	190 REC	R		
R	EXISTING LOAD	20	19	720	720		20	20	190 REC	R		
R	190 REC	20	21		540	720	22	20	190 REC	R		
SPARE		20	23			0	24	20	190 REC	R		
R	EXISTING LOAD	20	25	720	720		26	20	190 REC	R		
R	190 REC	20	27		180	720	28	20	190 REC	R		
R	EXISTING LOAD	20	29			720	30	20	190 REC	R		
M	EXISTING LOAD	30	31	1000	720		32	20	190 REC	R		
M	-	2P	33		1000	720	34	20	190 REC	R		
	BLANK	-	35			0	36	20	SPARE			
	BLANK	-	37	0	720		38	20	190 REC	R		
	BLANK	-	39		0	720	40	20	190 REC	R		
	BLANK	-	41			0	42	20	190 REC	R		
				L1A	8980	7840	7540					
				L1B	13410	11630	13550					
				TOTAL	22390	19470	21090					
LOAD TYPE		CONNECTED KVA			TOTAL ALL PHASES		DEMAND KVA			TOTAL ALL PHASES		
		A	B	C			A	B	C			
LIGHTING / EV CHARGERS		0.0	0.0	0.0	0.0		125%	0.0	0.0	0		
RECEPTACLE (10KVA OR LESS)		3.3	3.3	3.3	10.0		100%	3.3	3.3	10		
RECEPTACLE (OVER 10KVA)		9.8	10.9	7.1	27.8		50%	4.9	5.4	14		
HVAC/MOTOR		0.0	1.0	0.1	1.1		100%	0.0	1.0	1		
MOTOR (LARGEST)		1.0	1.0	1.0	3.0		125%	1.3	1.3	4		
KITCHEN EQUIPMENT		3.0	1.8	3.4	8.2		65%	2.0	1.1	5		
MISCELLANEOUS		5.3	1.5	6.2	12.9		100%	5.3	1.5	13		
TOTAL KVA		22.4	19.5	21.1	63.0		TOTAL KVA	16.7	13.7	47		
WITH GROUND BUS					TOTAL AMPS		139.0	113.9	138.3	130		
LEGEND		L = LTG / EV R = RECEPTACLE M = HVAC / MOTOR K = KITCHEN G = MISCELLANEOUS										
		MAX PERCENT DIFFERENCE BETWEEN PHASES (A,B,C): 13%										
1 CIRCUIT REVISED THIS CONTRACT.												

SUPPLIED FROM:		FEED THRU FROM L1A															
PANEL "L1B" (EXISTING)		M.C.B.		VOLTAGE		120		/		208 V		3		4		W	
FLUSH		BUS		MLO		X		I.G. BAR		NA		MANF.		SQUARE D		C.B.	
SURFACE		X		200 A CU		FEED THRU		LC1		A.I.C.		10 K		BOLT ON			
TYPE	DESCRIPTION	BKR	CIR	LOAD (VOLT AMPS) / PHASE						CIR	BKR	DESCRIPTION	TYPE				
				A		B		C									
R	140 WAITING RM REC	20	1	720	500					2	20	RESTROOM DOOR OPENERS	G				
R	140 RECEPTION REC	20	3			720	720			4	20	OFFICE DIRECTOR'S BOARD	R				
R	140 REC	20	5					720	1000	6	20	140 DISPOSAL	K				
R	140 EXAM REC	20	7	720	1000					8	20	140 AC REC BREAK	K				
R	140 OFFICE REC	20	9			720	750			10	20	140 FRIDGE	K				
R	140 BATHROOM REC	20	11					720	750	12	20	190 - FRIDGE 107	K				
R	140 OFFICE REC	20	13	720	1000					14	20	190 - MW 107	K				
R	140 SUMP PUMP	20	15			1000	1000			16	20	190 - AC, GFI BREAK 107	K				
MG	190 WATER HEATER	20	17					1570	1650	18	20	190 - DW, DISP 107	K				
R	140 EXAM REC	20	19	720	1000					20	20	190 - AC, GFI BREAK 107	K				
R	140 MA STATION REC	20	21			720	540			22	20	190 - REC 102C	R				
G	VESTIBULE HEATER	30	23					1500	1080	24	20	190 - REC 105-7	R				
G	-	2P	25	1500	900					26	20	190 - REC 104-5	R				
G	EXISTING LOAD	30	27			1500	1080			28	20	190 - REC 102C	R				
G	-	/	29					1500	180	30	20	190 - DED REC 109	G				
G	-	3P	31	1500	0					32	-	BLANK					
	BLANK	-	33			0	0			34	-	BLANK					
	BLANK	-	35					0	0	36	-	BLANK					
	BLANK	-	37	0	0					38	-	BLANK					
	BLANK	-	39			0	0			40	-	BLANK					
	BLANK	-	41					0	0	42	-	BLANK					
				L1B	10280	8750	10670										
				LC1	3130	2880	2880										
				TOTAL	13410	11630	13550										
LOAD TYPE		CONNECTED KVA			TOTAL ALL PHASES		FACTOR		DEMAND KVA			TOTAL ALL PHASES					
		A	B	C					A	B	C						
LIGHTING / EV CHARGERS		0.0	0.0	0.0	0.0		125%		0.0	0.0	0.0	0					
RECEPTACLE (10KVA OR LESS)		3.3	3.3	3.3	10.0		100%		3.3	3.3	3.3	10					
RECEPTACLE (OVER 10KVA)		3.3	4.1	2.1	9.4		50%		1.7	2.0	1.0	5					
HVAC/MOTOR		0.0	0.0	0.0	0.0		100%		0.0	0.0	0.0	0					
MOTOR (LARGEST)		0.0	1.0	0.1	1.1		125%		0.0	1.3	0.1	1					
KITCHEN EQUIPMENT		3.0	1.8	3.4	8.2		65%		2.0	1.1	2.2	5					
MISCELLANEOUS		3.8	1.5	4.7	9.9		100%		3.8	1.5	4.7	10					
TOTAL KVA		13.4	11.6	13.6	38.6				TOTAL KVA	10.7	9.2	31					
									TOTAL AMPS	89.1	77.0	87					
WITH GROUND BUS										94.5							
LEGEND		L = LTG / EV		R = RECEPTACLE		M = HVAC / MOTOR		K = KITCHEN		G = MISCELLANEOUS							
		MAX PERCENT DIFFERENCE BETWEEN PHASES (A.B.C.): 14%															



COMcheck Software Version 4.1.5.1 Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: SPEC SUITE 190
Project Type: Alteration

Construction Site:
1411 S POTOMAC ST
SUITE 190
AURORA, CO 80012

Owner/Agent:
MESSI CAMPOS
TPS DESIGN
1660 LINCOLN STREET
SUITE 100
DENVER, CO 80264
720-828-7311
MELUSSA@TPS.DESIGN

Designer/Contractor:
ELIZABETH BOTKIN
COREY ELECTRICAL ENGINEERING
7922 S WHEELING COURT
SUITE B
ENGLEWOOD, CO 80112
303-696-1257
EBOTKIN@COREYENG.COM

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B X C)
1-Office	1112	0.79	878
Total Allowed Watts =			878

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Office (1112 sq.ft.)				
LED 1: A-2x4: Other:	1	12	32	380
LED 2: B-2x2: Other:	1	8	27	217
LED 3: C-DOWNLIGHT: Other:	1	6	12	60
LED 4: D: VANITY: Other:	1	1	75	75
Total Proposed Watts =				732

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

ELIZABETH BOTKIN
Name - Title
Signature
Date

Project Title: SPEC SUITE 190
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Report date: 06/11/21
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COMcheck Software Version 4.1.5.1 Inspection Checklist

Energy Code: 2018 IECC

Requirements: 100.0% were addressed directly in the COMcheck software
Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req. ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [P14] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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Section # & Req. ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2.2 [EL22] ¹	Spaces required to have light reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern ≥ 50 percent.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.1.1 [EL18] ¹	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces ≤ 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.1.2 [EL19] ¹	Occupancy sensors control function in warehouses; in warehouses, the lighting in aiseways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.2.1.3 [EL20] ¹	Occupant sensor control function in open plan office areas. Occupant sensor controls in open office spaces ≥ 300 sq.ft. have controls: 1) configured so that general lighting can be controlled separately in control zones with floor areas ≤ 600 sq.ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by $> 80\%$ of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.2.2.1 [EL21] ¹	Each area not served by occupancy sensors (per C405.2.1) have time switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Lighting controlled by occupancy sensors.

Project Title: SPEC SUITE 190
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Section # & Req. ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3.1 [EL23] ¹	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3.2 for applicable spaces. C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.2.4 [EL26] ¹	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.4 [EL27] ¹	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.3 [EL6] ¹	Exit signs do not exceed 5 watts per face.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.6 [EL26] ¹	Low voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.7 [EL27] ¹	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.8.2.1 [EL28] ¹	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.9 [EL29] ¹	Total voltage drop across the combination of feeders and branch circuits $\leq 5\%$.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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Section # & Req. ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [F117] ¹	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.4.1 [F149] ¹	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Interior Lighting fixture schedule for values.
C408.1.1 [F157] ¹	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.2.5.1 [F16] ¹	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.3 [F133] ¹	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

Project Title: SPEC SUITE 190
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Project Title: SPEC SUITE 190
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Mechanical Compliance Certificate

Project Information

Energy Code: 2015 IECC
Project Title: Spec Suite 190
Location: Aurora, Colorado
Climate Zone: 5b
Project Type: Alteration

Construction Site:
1411 S Potomac
Aurora, CO 80012

Owner/Agent:

Designer/Contractor:
Brian Seyferth & Associates
5583 S Prince St
Littleton, CO 80120

Mechanical Systems List

Quantity System Type & Description

1	P110: Electric Storage Water Heater, Capacity: 10 gallons w/ Circulation Pump Proposed Efficiency: 3.00 SL, %/h (if > 12 kW), Required Efficiency: 3.00 SL, %/h (if > 12 kW)
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Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2015 IECC requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title

Signature

Date

Digitally
signed by
Luis R.
Cocha
Date:
2021.06.22
10:29:51
-06'00'



RSN: **1555660**

Permit #: **2021-2004899 -LT**



Inspection Checklist

Energy Code: 2015 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR3] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6] ³	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.1, C404.6.2 [PL3] ¹	Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.3 [PL7] ³	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.7 [PL8] ³	Water distribution system that pumps water from a heated-water supply pipe back to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41] ³	Thermally ineffective panel surfaces of sensible heating panels have insulation $\geq R-3.5$.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.6.2 [ME115] ³	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.8 [ME116] ³	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.2.1 [ME53] ³	Air outlets and zone terminal devices have means for air balancing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.5, C403.5.1, C403.5.2 [ME123] ³	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2..	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C404.3 [FI11] ³	Heat traps installed on supply and discharge piping of non-circulating systems.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.4 [FI25] ²	All piping insulated in accordance with section details and Table C403.2.10.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.1 [FI12] ³	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. System return pipe is a dedicated return pipe or a cold water supply pipe.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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