



Request for Proposal- General Construction

Prepared on behalf of Energy Trust of Oregon

January 10, 2025

I. Project Summary

JLL, Inc. (herein “Manager”) has been retained by Energy Trust of Oregon or ETO (herein “Client”) to provide real estate services, including Project Management for their Tenant Improvement Project (“Project”) in Portland, OR. This is a Request for Proposal (“RFP”) for General Construction Services (GC) for Energy Trust’s Project, located at the Power and Light Building, 920 SW 6th Ave, 9th and 10th floors in Portland OR, containing approximately 20,114 rentable square feet. Design services are being provided by SERA (herein “Architect.”)

II. Milestone Dates

Milestone:	
GC RFP Issuance	Friday, January 10, 2025
Power + Light Job Walk	Wednesday, January 15, 2025 at 9:30am
RFI’s on RFP due from GC	Friday, January 17, 2025 by 3pm
RFI Answers Issued by JLL	Tuesday, January 21, 2025 by 2pm
GC Proposals Due	Friday, January 25, 2025 by 12pm
Permit Submitted	By February 4, 2025
GC Interviews	Early February (schedule to be determined)
GC Award/LOI for Preconstruction Services	mid February
GMP Pricing	mid February – mid March 2025
Permit Issuance	Estimated March 21, 2025
GMP Contract Signoff + Early Procurement Begins	March 27 – April 11, 2025
Construction Start	Estimated April 14, 2025

III. Scope of Work

The Project entails an 20,114 RSF tenant improvement. The space is currently unoccupied and will remain unoccupied throughout construction. The Landlord of the Project space is responsible for completing a demising wall on the 10th floor to create the TI space and their intention is to be complete prior to Client’s construction start. The selected General Contractor’s project scope includes demolition of existing elements and the addition of new offices, conference rooms, open work station areas, storage and work rooms, breakroom, catering kitchen and reception. Many elements of the current space will be retained and/or repurposed.

The Project will include mechanical, electrical, plumbing, and fire protection (MEPF) design-build services to be provided by the General Contractor. **The Landlord and building management has (4) mandatory subcontractors:** Otis for elevators; Northwest Control Company for building automation/controls; Johnson Controls Fire Protection LP – Simplex Grinnell for fire panel/monitoring; IES Communications for building access systems.

Please see Building Rules & Regulations attached in Exhibit 4.



The resulting contract shall be a standard AIA A107 as a Cost of Work plus Contractor's Fee with a Guaranteed Maximum Price (GMP) provided by the selected General Contractor. This contract will be directly with Energy Trust of Oregon.

IV. Construction Services

It is the intent of Client with the assistance of JLL as its Project Manager ("Manager"), to retain a General Contractor ("Contractor") on the basis of the response to this RFP. Final GMP budget and contract value will be determined thru a collaborative process with the successful Contractor, Architect, Client and Manager.

The Contractor will be required to provide construction services specifically to meet the requirements of the Client and project criteria. This shall include provision of all necessary resources to complete the work defined within this RFP. The General Contractor Scope of Services is provided in Exhibit 3.

This is a negotiated bid process. The intention of the Client is to initially engage a General Contractor for Preconstruction Services (as highlighted in Exhibit 3- Scope of Services) while the full value of the GMP contract is being refined/developed. Once full construction costs and schedule have been established (as described above), the contract will be amended to reflect the final GMP value.

V. Instructions to Contractors

This section was developed to allow the Respondent to prepare a comprehensive response to this RFP. Respondent is expected to carefully examine all requirements stipulated in this document and respond accordingly.

A. Proposals/Bids:

- Responses shall be organized in response to each question or request for information in a legible font and type size.
- Respondents shall submit their responses in electronic RFP response via email to jane.snyder@jll.com
- Responses shall include completion and submission of Exhibit 2 – Bid Form. Bid form must be in editable format (Excel). **PDF versions of the bid form will not be accepted.**
- Manager reserves the right to adjust the specifications or scope of effort stated in this document. In the event any modifications become necessary, all Respondents will be notified in writing by means of an addendum to this RFP.

B. Site Walk

Respondents are encouraged to attend the walk-thru as noted in the Milestone Schedule on Page One of this RFP. Please "RSVP" attendance to the site walk via email to jane.snyder@jll.com with the name(s) of person(s) attending and the company they represent.

C. Interpretations and Questions

Any questions concerning this RFP shall be sent via email: jane.snyder@jll.com in accordance with the milestone schedule on Page One of this RFP. These questions and their respective answers shall be available to all qualified bidders in alignment with the milestone schedule.

D. Requirements of RFP Response

All proposal responses shall be made and submitted in accordance with requirements and conditions as set forth in the RFP. All documentation submitted by Respondents to the RFP will become the property of Manager, unless otherwise requested at the time of submission.



Respondents are responsible for understanding the scope of this proposal and submitting all questions prior to submission of their proposal. No modification to the successful proposal will be allowed due to error, neglect or failure on the part of the Respondent.

Client and Manager are in no way bound to accept the lowest cost proposal and reserve the right to consider factors other than price in determining whether to accept or reject a proposal. Manager and Client reserve the right at their discretion to reject any responses or portions of responses; to solicit additional responses; and negotiate the terms and conditions with selected bidders. Client is looking for the best team to support their vision and efforts in executing the best possible project for the local staff members. Manager assumes no obligation to reimburse or in any way compensate Respondent for expenses incurred in connection with respondent's response to this document.

VI. Proposal Format

Respondent company shall provide the following required information in their response to this request for proposal:

1. Company and Staffing:

Provide overview of your Company and an outline how the project would be staffed, including a proposed management and supervising team. Provide names, resumes and background of the individuals you would assign to key management roles, and the % of each team members time dedicated to this project. Provide an organization chart listing all positions which would support the project. Proposed staffing plans should be reflected in the general conditions fee portion. Identify if your firm meets any MWESB SDVBE certifications.

2. Case Studies:

Please include (3) case studies of successful tenant improvement projects of similar size and scope that the proposed team has executed in the last 3-5 years. Please include at least (1) project that reflects LEED certification or other significant sustainability standards. Include contact information for a reference with each case study.

3. Acknowledgements of Client Insurance + Supplier Diversity Requirements

Provide acknowledgement and acceptance of Client Insurance Requirements (Exhibit 5) and Supplier Diversity Requirements (Exhibit 6), as well as details on how the Supplier Diversity Requirements will be addressed.

Please note – Client's supplier diversity procurement rules require either (i) General Contractor is a diversity certified company or (ii) General Contractor subcontracts at least 20% of the value of it's contracted services to subcontractors who are diversity certified. Mandatory subcontractors required by Landlord and building management will not be included in the calculation of any diversity subcontracting minimum in accordance with (ii) above.

4. Schedule

Provide a 1–2-page schedule outlining construction and client-vendor activities.

5. Proposed Fees + General Conditions (in Exhibit 2 - Bid Form)

Submit completed Exhibit 2. Bid Form must be submitted in editable format (Excel).

PDF versions of this bid form will not be accepted.

- 1) Provide a lump sum value for Preconstruction Services (as noted in Exhibit 3)
- 2) Provide general conditions value based on staffing and project duration.
- 3) Provide fees and mark-ups including:
 - o Overhead and Profit %
 - o GL Insurance %
 - o WC Insurance %
 - o CAT Tax %



6. AIA Contract (not included in page count)

Submit General Contractor's AIA Form for GMP contract as a part of the bid response

VII. Exhibits

Exhibit 1 - Schematic Design Documents, MEP BD, Finish Narrative

Exhibit 2 - Bid Form (General Conditions and Mark-ups)

Exhibit 3 - General Contractor Scope of Services

Exhibit 4 - Building Construction Rules & Regulations

Exhibit 5 - Client's Insurance Requirements for Selected Contractor

Exhibit 6 - Supplier Diversity Requirements



ARCHITECTURE
 URBAN DESIGN + PLANNING
 INTERIOR DESIGN

PORTLAND | OAKLAND
 SERADESIGN.COM

PRELIMINARY
 NOT FOR CONSTRUCTION

POWER & LIGHT TI

ENERGY TRUST OF OREGON
 920 SW 6TH AVE
 LEVEL 9 & 10
 PORTLAND, OR 97204

VOLUME: 1

REVISIONS

CHECKED BY: <checker>
 ISSUE DATE: 04 DEC 2024
 PROJECT NO: 2403023

COVER SHEET
G001

SCHEMATIC DESIGN

GENERAL INFORMATION

PERMIT APPLICANT: SERA DESIGN INC 503.445.7372
ON BEHALF OF ENERGY TRUST OF OREGON

PROJECT ADDRESS: 920 SW 6TH AVE, PORTLAND, OR 97204

LEGAL DESCRIPTION:
PARCEL I: R246280
LOT 5-8, BLOCK 170, THE CITY OF PORTLAND, MULTNOMAH COUNTY OF OREGON.
TAX ID #: 1S1E03BB-01000.

SEISMIC ZONE:
DESIGN CATEGORY X

BUILDING NARRATIVE

THIS SCOPE OF WORK FOR THIS PROJECT IS A PARTIAL TENANT IMPROVMENT ON LEVELS 9 AND 10 OF TEH POWER AND LIGHT BUILDING IN DOWNTOWN PORTLAND AND IS CLASSIFIED AS A LEVEL XXXX ALTERATION PER OSSC 3406.4.1. THE PROPOSED WORK ILL INCLUDE NEW OFFICES, CONFERENCE ROOMS, AMENITY SPACES, AND AN ASSEMBLY TRAINING AREA. ALL WORK PERFORMED UNDER THE CITY OF PORTLAND FACILITIES PERMIT PROGRAM, MASTER NUMBER 19-26940-FA

NO ADDITIONS OR MODIFICATIONS TO THE BUILDING EXTERIOR OR SITE ARE INCLUDED IN THIS SCOPE OF WORK.

APPLICABLE BUILDING REGULATIONS

2022 OREGON STRUCTURAL SPECIALTY CODE (OSSC) BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC) WITH 2021 AND THE 2021 INTERNATIONAL EXISTING BUILDING CODED (IEBC) WITH NEW CONSTRUCTION PROVISIONS OF THE 2021 INTERNATIONAL FIRE CODE (IFC) AND OREGON AMENDMENTS

2022 OREGON FIRE CODE (OFC) BASED ON 2021 INTERNATIONAL FIRE CODE (NOTE IF REQUIRED) 2016 CITY OF PORTLAND FIRE CODE

2022 OREGON MECHANICAL SPECIALTY CODE (OMSC) BASED ON 2021 INTERNATIONAL MECHANICAL CODE AND INTERNATIONAL FUEL GAS CODE

2021 OREGON PLUMBING SPECIALTY CODE (OPSC) BASED ON 2021 UNIFORM PLUMBING CODE

2021 OREGON ELECTRICAL SPECIALTY CODE (OESC) BASED ON 2020 NFPA 70 NATIONAL ELECTRIC CODE

2011 OREGON ELEVATOR SPECIALTY CODE

2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OEESC) BASED ON ASHRAE STANDARD 90.1-2019.

(NOTE IF REQUIRED) OREGON HOUSING AND COMMUNITY SERVICES CORE-DEVELOPMENT MANUAL (CDM) DESIGN AND CONSTRUCTION STANDARDS VERSION 3.1 (APPLIES TO WORKFORCE HOUSING ONLY)

(NOTE IF REQUIRED) 2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC) WITH OSSC CH 34 AMENDMENTS

BUILDING OCCUPANCY AND SEPARATIONS

APPLICABLE OCCUPANCY CLASSIFICATION GROUPS: A-3, B

OCCUPANCY SEPARATION (TABLE 508.4):

OCCUPANCY	REQUIRED SEPARATION
A-OCC TO B-OCC	NON-SEPARATED
S-1 OCC TO B-OCC	NON-SEPARATED

*A-OCC ACCESSORY OCCUPANCIES MEET REQUIREMENTS OF SECTION 508.2 AND ARE NOT REQUIRED TO BE SEPARATED FROM OTHER B OCCUPANCIES.

*A-OCC ACCESSORY OCCUPANCIES MEET REQUIREMENTS OF SECTION 508.2 AND ARE NOT REQUIRED TO BE SEPARATED FROM OTHER B OCCUPANCIES.

ALLOWABLE AREA

ALLOWABLE AREA FACTOR PER STORY (TABLE 506.2):

B-OCC AND TYPE I-B = XXXXXX SF A₁ XXXXXX SF NS PER STORY
A-OCC TYPE AND TYPE I-B = XXXXXX SF A₁ XXXXXX SF NS PER STORY
S-OCC AND TYPE I-B = XXXXXX SF A₁ XXXXXX SF NS PER STORY

FRONTAGE INCREASE FACTORS (506.3)

	NORTH	EAST	SOUTH	WEST
FRONTAGE	XXX'	XXX'	XXX'	XXX'
PERIMETER (OPEN SPACE ≥ 20'-0")	YYY'	YYY'	YYY'	YYY'

AREA INCREASE: (SECTION 506.3.2, EQUATION 5-4; SECTION 506.3.3, EQUATION 5-5)
TOTAL FRONTAGE (F) = XXX' + XXX' + XXX' + XXX' = XXX'
TOTAL PERIMETER (P) = YYY' + YYY' + YYY' + YYY' = YYY'
CALCULATED % (P/F) = ZZ PERCENT
NARROWEST WIDTH OF 20'-0" MIN OPEN SPACE = WW'

FRONTAGE INCREASE FACTOR (I_f PER TABLE 506.3.3) = 0.XX

ALLOWABLE AREA (SECTION 506.2.3, EQUATION 5-2, SINGLE OCCUPANCY / MULTI-STORY BUILDING)

A₁ = ALLOWABLE AREA OF BUILDING
A₂ = TABULAR AREA PER STORY (NS, S13R, S13D, OR SM PER TBL 506.2)
NS = AREA FACTOR FOR NONSPRINKLERED BUILDING (REGARDLESS IF BUILDING IS SPRINKLERED)
I_f = AREA INCREASE FACTOR DUE TO FRONTAGE (SEE ABOVE)
S_a = ACTUAL NUMBER OF STORIES ABOVE GRADE (NOT TO EXCEED 3)
A₂ = ALLOWABLE AREA PER STORY

$$A_2 = (A_1 + [NS \times I_f]) \times S_a \qquad A_2 = (A_1 + [NS \times I_f] \times S_a) = XX,XXX \text{ SF}$$

$$A_2 = (A_1 + [NS \times I_f]) \times 1 \qquad A_2 = (A_1 + [NS \times I_f] \times 1) = XX,XXX \text{ SF}$$

PROPOSED BUILDING AREAS (SF)

LEVEL	OCC	TOTAL	
LEVEL 3	OCC X	XXX SF	< A ₂
LEVEL 2	OCC X	XXX SF	< A ₂
LEVEL 1	OCC X	XXX SF	< A ₂
LEVEL B	OCC X	XXX SF	
GRAND TOTAL		XXX SF	< A ₂ XX,XXX SF ALLOWABLE

BUILDING CONSTRUCTION

CHAPTER 5, 6 & 7

CONSTRUCTION TYPE: I-B

	ALLOWABLE	PROPOSED
BUILDING HEIGHT (PER TABLE 504.3)	180'-0"	UNCHANGED
NUMBER OF STORIES (PER TABLE 504.4)	12 STORIES	UNCHANGED

SUPPLEMENTAL NOTES HERE:

FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (TABLE 601)

BUILDING ELEMENT	ALLOWABLE	PROPOSED
STRUCTURAL FRAME	2 HOUR	2 HOUR
BEARING WALLS - EXTERIOR INTERIOR	2 HOUR 3 HOUR	2 HOUR 3 HOUR
NONBEARING WALLS AND PARTITIONS - INTERIOR	0 HOUR	0 HOUR
FLOOR CONSTRUCTION	2 HOUR	2 HOUR
ROOF CONSTRUCTION	1.5 HOUR	1.5 HOUR

SUPPLEMENTAL NOTES HERE:

EMERGENCY RESPONDER RADIO COVERAGE

CHAPTER 9

REQUIREMENTS: THIS BUILDING MAY REQUIRE A DISTRIBUTED ANTENNA SYSTEM (DAS) TO COMPLY WITH CONSTRUCTION FOR EMERGENCY RESPONDER RADIO COVER (OSSC 918) IF MEETING ONE OF THE FOLLOWING CRITERIA:

ANY BUILDING WITH ONE OR MORE BASEMENT OF BELOW-GRADE LEVELS.
ANY UNDERGROUND BUILDING.
ANY BUILDING MORE THAN FIVE STORIES IN HEIGHT.
ANY BUILDING 50,000 SQUARE FEET OR LARGER.
ANY BUILDING REGULATED AS A HIGH-RISE UNDERS SECTION 403.1.

FIRE PROTECTION

CHAPTER 9

	REQUIRED	PROPOSED	TYPE/CLASS
AUTOMATIC SPRINKLER SYSTEM	YES PER 903.2	YES	NFPA 13/13R
STANDPIPE SYSTEM	YES PER 905.1	YES	CLASS I / II / III
FIRE ALARM SYSTEM	YES PER 907.2	YES	NFPA 72
SMOKE DETECTION SYSTEM	YES PER 907.2	YES	NFPA 72

*PROVIDE FIRE PROTECTION PER IFC 907.

FIRE EXTINGUISHERS: CLASS A/B/C/D

FIRESTOPPING

CITY OF PORTLAND CODE GUIDE

"The General Contractor shall schedule a Firestopping Meeting with the Building Inspector and all Subcontractors that will be installing firestopping materials. Each Subcontractor will provide a list of Firestop materials/assemblies which will be used, the type of penetrations where each material/assembly will be used, and the listing and approval information (i.e., UL, ICC or other approved reporting numbers.) This information must be submitted to, and approved by, the Building Inspector prior to any installation." (See City of Portland Firestopping Program Guide at: <http://www.portlandonline.com/shared/cfm/image.cfm?id=88669>)

MEANS OF EGRESS

CHAPTER 10

EGRESS WIDTH PER OCCUPANT SERVED (SECTION 1005.3):

STAIRWAYS: (0.37/OCC) = REFER TO BUILDING EXITING TABLE ON THIS SHEET
OTHER EGRESS COMPONENTS: (0.27/OCC) = REFER TO BUILDING EXITING TABLE ON THIS SHEET
44" MINIMUM STAIRWAY WIDTH REQUIRED PER 1011.2

NUMBER OF EXITS (1006):

NUMBER OF EXITS REQUIRED PER STORY PER TABLE 1006.3. = 2

COMMON PATH OF EGRESS TRAVEL DISTANCE (TABLE 1006.2.1)
OCC XX = XXX'-0" OCC XX = XXX'-0"

ILLUMINATED EXIT SIGNS: REQUIRED PER 1013.3

EXIT ACCESS TRAVEL DISTANCE (TABLE 1017.2):
OCC XX TO OCC XXX = XXX'-0" OCC XX TO OCC XXX = XXX'-0"

EXIT ACCESS ILLUMINATION REQUIREMENT:

EGRESS LIGHTING REQUIRED ALONG THE EGRESS PATH TO THE R.O.W. PER SECTION 1008. PERFORMANCE REQUIREMENTS:

AVERAGE OF 1fc WITH A MINIMUM OF 0.1fc AT ANY POINT ON THE EGRESS PATH AT FLOOR LEVEL
LIGHT LEVEL MAY DECLINE TO AVERAGE OF 0.8fc WITH A MINIMUM OF 0.06fc AT ANY POINT ON THE EGRESS PATH AT FLOOR LEVEL AFTER 90 MINUTES OF OPERATION ON EMERGENCY POWER.
MAXIMUM TO MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40 TO 1 SHALL NOT BE EXCEEDED.
POWER PROVIDED BY BATTERY INVERTERS (EMERGENCY GENERATOR) (REFERECE ELECTRICAL DOCUMENTS)

SOUND TRANSMISSION

CHAPTER 12

BUILDING ELEMENT	REQUIRED	PROPOSED
INTERIOR WALLS AND FLOOR/CEILING ASSEMBLIES (1206.2)	STC 50 (45 FIELD)	STC XX MIN
INTERIOR FLOOR/CEILING (1206.3)	IIC 50 (45 FIELD)	IIC XX MIN

NOTES:

REFERENCE ASSEMBLIES FOR SPECIFIC ASSEMBLY SOUND TRANSMISSION INFORMATION.

INTERIOR ENVIRONMENT

CHAPTER 12

OCCUPIED ROOMS: NATURAL VENTILATION PROVIDED PER 1202.5

TOILET AND BATH ROOMS: MECHANICAL VENTILATION PROVIDED PER 1202.5.2.1

NATURAL LIGHT: NET GLAZED AREA IS GREATER THAN 8% OF FLOOR AREA OF ROOM SERVED PER 1204.2

ACCESSIBILITY IMPROVEMENTS

CHAPTER 34

AN ACCESSIBLE MEANS OF ACCESS IS PROVIDED TO ALL AREAS OF PRIMARY FUNCTION.

ACCESSIBLE UPGRADES PER IEBC 2021, OSSC CHAPTER 34 AMENDMENTS

ACCESSIBLE ELEMENT	IMPROVEMENT IN PROJECT
PARKING	(#) EXISTING PARKING SPACES: PER OSSC 1106.1 (#) ACCESSIBLE PARKING SPACES ARE REQUIRED INCLUDING (#) VAN ACCESSIBLE SPACE.
ACCESSIBLE ENTRANCE	EXISTING SITE SIDEWALKS RAMPS AND SLOPES MEET ANSI A117.1 405.1 AND 405.2 MINIMUM REQUIREMENTS. ACCESSIBLE EXISTING SLIDING ENTRY DOORS OPERATE WITH AN AUTOMATIC DOOR OPENER.
ACCESSIBLE ROUTE TO ALTERED AREA	# EXISTING ELEVATOR TO REMAIN. EXISTING (???) WITHOUT ACCESSIBILITY REMOVED. NEW (???) ARE ON ACCESSIBLE ROUTE.
ACCESSIBLE RESTROOM	# EXISTING PUBLIC TOILET ROOMS REVISED WITH THE FOLLOWING: GRAB BARS ADDED AT TOILET. TURNING SPACE AND DOOR, TOILET CLEARANCES PROVIDED.
ACCESSIBLE TELEPHONES	EXISTING OFFICE AND RESIDENT UNIT TELEPHONES ARE ACCESSIBLE. PUBLIC PHONE NOT REQUIRED.
DRINKING FOUNTAIN	(#) EXISTING DRINKING FOUNTAIN MAINTAINED, CLEAR FLOOR SPACE PROVIDED
STORAGE AND ALARMS	ACCESSIBLE STORAGE PROVIDED ON LEVEL (#)

OCCUPANT LOAD SCHEDULE

CHAPTER 10

LEVEL 09	OCC TYPE	AREA	OCC LOAD FACTOR	OCC LOAD
	A	465	15	32
	A	147	150	1
	A	175	200	1
A-OCC TOTAL		786		34
	B	2,326	15	159
	B	11,568	150	79
	B	235	150	3
B-OCC TOTAL		14,269		241
LEVEL TOTAL		15,055		275

LEVEL 10	OCC TYPE	AREA	OCC LOAD FACTOR	OCC LOAD
	A	1584	7	227
	A	193	15	13
	A	631	15	5
	A	241	200	2
	A	270	300	1
A-OCC TOTAL		2,917		248
	B	12,063	150	81
B-OCC TOTAL		12,063		81
LEVEL TOTAL		14,980		329

COMPILED	OCC TYPE	AREA	OCC LOAD
	A	3,703	282
	B	26,332	322
GRAND TOTAL		30,335	604

MINIMUM PLUMBING FIXTURE REQUIREMENTS

CHAPTER 29 AND PLUMBING CODE

LEVEL	OCCUPANCY/USE	OCCUPANTS
09	ASSEMBLY	34
09	BUSINESS	241
10	ASSEMBLY	248
10	BUSINESS	329

* PER 2022, SECTION 2902.1, PLUMBING FIXTURES SHALL BE CALCULATED BASED ON ACTUAL USE OF BUIDLING OR SPACE

604

604 OCCUPANTS: 302 MEN / 302 WOMEN

OCCUPANCY	WATER CLOSET				LAVATORIES			BATHTUBS/SHOWERS	DRINKING FOUNTAINS	
USE	LOAD	RATIO	M	RATIO	F	RATIO	M	F	U	U
ASSEMBLY (LECTURE/TRAINING)	282 (141)	1/125	1,128	1/65	2,17	1/200	.70	.70	-	1
BUSINESS	570 (285)	1/25 (50) 1/50	6,7	1/25 (50) 1/50	6,7	1/40 (80) 1/80	4,56	4,56	-	--
SUBTOTALS			7,828		8,87		5,26	5,26	-	###
REQUIRED			8		9		6	6	-	###
PROVIDED			8 W.C 1 UNISEX 6 URINALS*		6 W.C 2 UNISEX		5	4	-	4
TOTAL			13		8		5	4	-	4

* URINALS MAY REPLACE WATER CLOSETS AT A RATION OF 1 URINAL PER 2/3 WATER CLOSETS



ARCHITECTURE
URBAN DESIGN + PLANNING
INTERIOR DESIGN

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PRELIMINARY
NOT FOR CONSTRUCTION

POWER & LIGHT TI

ENERGY TRUST OF OREGON

920 SW 6TH AVE
LEVEL 9 & 10
PORTLAND, OR 97204

VOLUME: 1

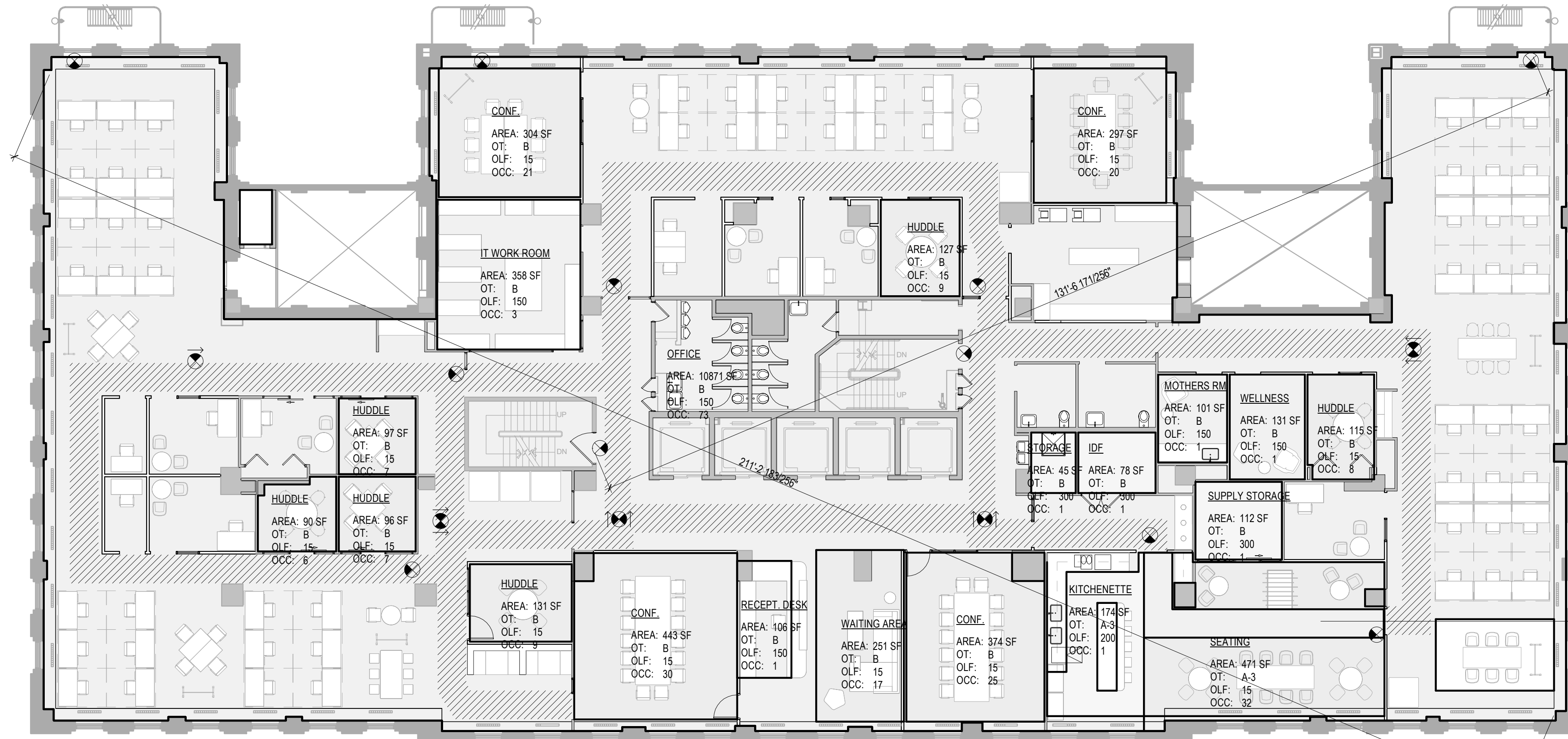
REVISIONS

CHECKED BY: <checker>
ISSUE DATE: 04 DEC 2024
PROJECT NO: 2403023

CODE COMPLIANCE
SITE PLAN AND
SUMMARY

G052

SCHEMATIC DESIGN



CIRCULATION
AREA: 140 SF
OT: A-3
OLF: 150
OCC: 1

GENERAL NOTES - CODE SUMMARY

- A. CODE SUMMARY KEYED NOTES APPLY TO G100, G300 & G400 SERIES SHEETS. ALL KEYED NOTES MAY NOT OCCUR ON THIS SHEET AND DO NOT APPLY TO ANY OTHER SHEETS EXCEPT THOSE NOTED.
- B. ALL WORK SHOWN ON THIS SHEET IS INCLUDED IN THE CONTRACT FOR CONSTRUCTION, WHETHER SHOWN ELSEWHERE OR NOT. CONTRACTOR SHALL MAKE ALLOWANCES FOR CONNECTION, HOOK UP, ETC. AS REQUIRED SO THAT ITEMS, EQUIPMENT, ETC. ARE FIT FOR INTENDED PURPOSE.
- C. SEE ELECTRICAL AND MECHANICAL PLANS FOR ADDITIONAL SYMBOLS
- D. PROVIDE LISTED FIRESTOP, CONTINUOUS AT PERIMETER GAPS OF ALL RATED CONSTRUCTION AS REQUIRED TO MAINTAIN THE SPECIFIED RATING.
- E. SQUARE FOOTAGE AREA CALCULATIONS ARE BASED ON THE BUILDING CODE DEFINITIONS OF GROSS AND NET AREAS AS USED TO DETERMINE OCCUPANT LOADS ONLY AND ARE NOT A REPRESENTATION OF LEASABLE AREA.
- F. DOCUMENTATION OF EXISTING CONDITIONS BASED ON <INSERT YEAR> CONSTRUCTION DOCUMENTS PERMIT SET.

KEYED NOTES - CODE SUMMARY

1 INSERT NOTE HERE

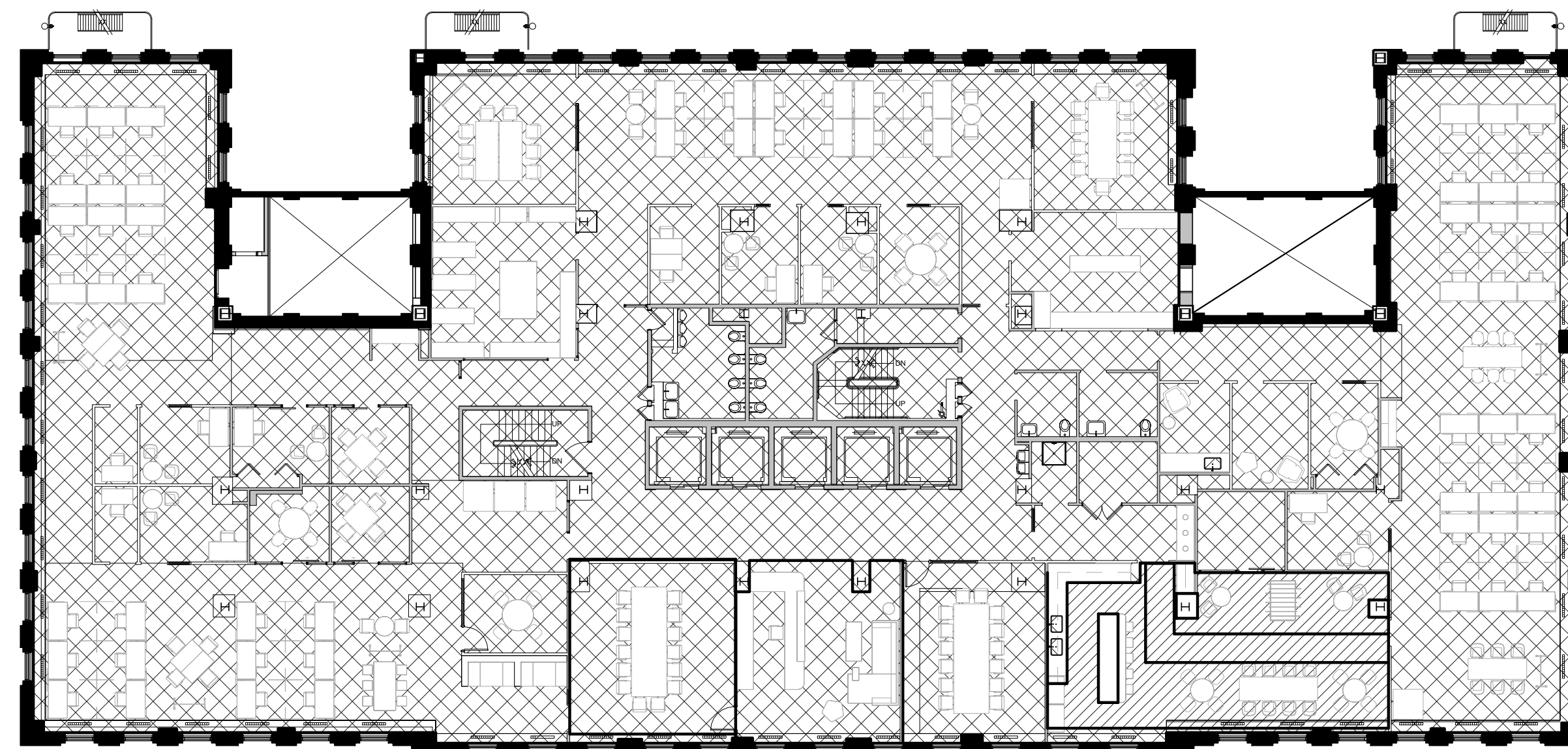
LEGEND - CODE COMPLIANCE SYMBOLS

- PROPERTY LINE
- 1/2 HOUR FIRE PARTITION
- 1 HOUR FIRE PARTITION
- 1 HOUR FIRE BARRIER
- 2 HOUR FIRE BARRIER
- 2 HOUR FIRE WALL
- 1 HOUR SMOKE BARRIER
- 1 HOUR FIRE RESISTANCE RATED CONSTRUCTION
- 2 HOUR FIRE RESISTANCE RATED CONSTRUCTION
- 3 HOUR FIRE RESISTANCE RATED CONSTRUCTION
- EXTERIOR EGRESS PATH TO ROW WITH TRAVEL WIDTH REQUIRED (PROVIDE MINIMUM ILLUMINATION FOR EXITING - REFER TO ELECTRICAL DRAWINGS).
- C.P. 'X'-XX" EGRESS PATH OF TRAVEL WITH TRAVEL WIDTH REQUIRED (PROVIDE MINIMUM ILLUMINATION FOR EXITING - REFER TO ELECTRICAL DRAWINGS).
- E.A. 'X'-XX"
- # HR ACCESSIBLE ROUTE OF TRAVEL
- 555 COMMON PATH OF EGRESS TRAVEL
- # EXIT ACCESS DISTANCE
- MH RATED SHAFT (WALL CONSTRUCTION TO MEET FIRE BARRIER REQUIREMENTS)
- OCCUPANT LOAD AT OPENING
- ▲ CUMULATIVE OCCUPANT LOAD AT OPENING
- ⊘ BUILDING EXIT
- ⊘ BUILDING CODE APPEAL
- ⊘ MAGNETIC HOLD OPEN
- ⊘ AREA REQUIRING SMOKE DETECTION
- ⊘ SPRINKLER, SEE FIRE PROTECTION DRAWINGS
- ⊘ AREA NAME
- ⊘ MANUAL PULL STATION REQUIRED
- ⊘ STANDPIPE
- ⊘ LIGHTED EXIT SIGN - SHADING INDICATES LIGHTED FACE(S) DIRECTION ARROW CORRESPONDS TO DIRECTION ARROW ON SIGN
- ⊘ LIGHTED EXIT SIGN - CEILING MOUNTED
- ⊘ LIGHTED EXIT SIGN - WALL MOUNTED
- ⊘ FIRE EXTINGUISHER
- ⊘ FIRE EXTINGUISHER AND CABINET
- ⊘ EXISTING FIRE EXTINGUISHER
- ⊘ EXISTING FIRE EXTINGUISHER AND CABINET
- ⊘ TWO-WAY ACCESSIBLE COMMUNICATIONS
- ⊘ ACCESSIBLE ENTRANCE

1 CODE COMPLIANCE PLAN - LEVEL 01
3/32" = 1'-0"

OCCUPANCY

- ▨ A-3 (ACCESSORY TO B)
- ▨ B



REVISIONS

CHECKED BY: <checker>
ISSUE DATE: 04 DEC 2024
PROJECT NO: 2403023

CODE PLAN -
LEVEL 09

G101

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SERA Design and Architecture, Inc.

12/4/2024 9:24:35 AM



ARCHITECTURE
URBAN DESIGN + PLANNING
INTERIOR DESIGN

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PRELIMINARY
NOT FOR CONSTRUCTION

POWER & LIGHT TI

ENERGY TRUST OF OREGON
920 SW 6TH AVE
LEVEL 9 & 10
PORTLAND, OR 97204

VOLUME: 1

REVISIONS

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ISSUE DATE: 04 DEC 2024
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CODE PLAN -
LEVEL 10
G102

SCHEMATIC DESIGN

GENERAL NOTES - CODE SUMMARY

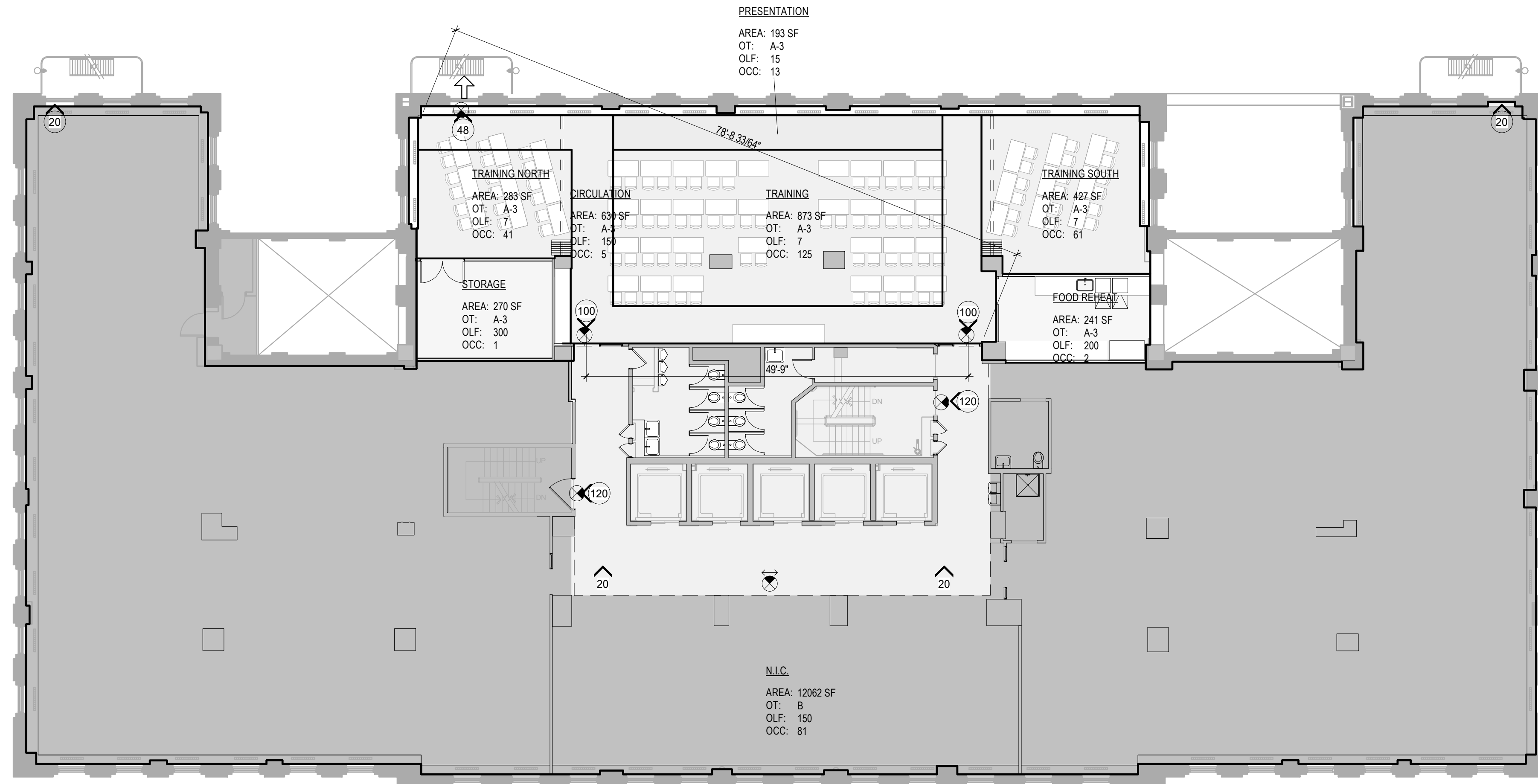
- A. CODE SUMMARY KEYED NOTES APPLY TO G100, G300 & G400 SERIES SHEETS. ALL KEYED NOTES MAY NOT OCCUR ON THIS SHEET AND DO NOT APPLY TO ANY OTHER SHEETS EXCEPT THOSE NOTED.
- B. ALL WORK SHOWN ON THIS SHEET IS INCLUDED IN THE CONTRACT FOR CONSTRUCTION, WHETHER SHOWN ELSEWHERE OR NOT. CONTRACTOR SHALL MAKE ALLOWANCES FOR CONNECTION, HOOK UP, ETC. AS REQUIRED SO THAT ITEMS, EQUIPMENT, ETC. ARE FIT FOR INTENDED PURPOSE.
- C. SEE ELECTRICAL AND MECHANICAL PLANS FOR ADDITIONAL SYMBOLS
- D. PROVIDE LISTED FIRESTOP, CONTINUOUS AT PERIMETER GAPS OF ALL RATED CONSTRUCTION AS REQUIRED TO MAINTAIN THE SPECIFIED RATING.
- E. SQUARE FOOTAGE AREA CALCULATIONS ARE BASED ON THE BUILDING CODE DEFINITIONS OF GROSS AND NET AREAS AS USED TO DETERMINE OCCUPANT LOADS ONLY AND ARE NOT A REPRESENTATION OF LEASABLE AREA.
- F. DOCUMENTATION OF EXISTING CONDITIONS BASED ON <INSERT YEAR> CONSTRUCTION DOCUMENTS PERMIT SET.

KEYED NOTES - CODE SUMMARY

1 INSERT NOTE HERE

LEGEND - CODE COMPLIANCE SYMBOLS

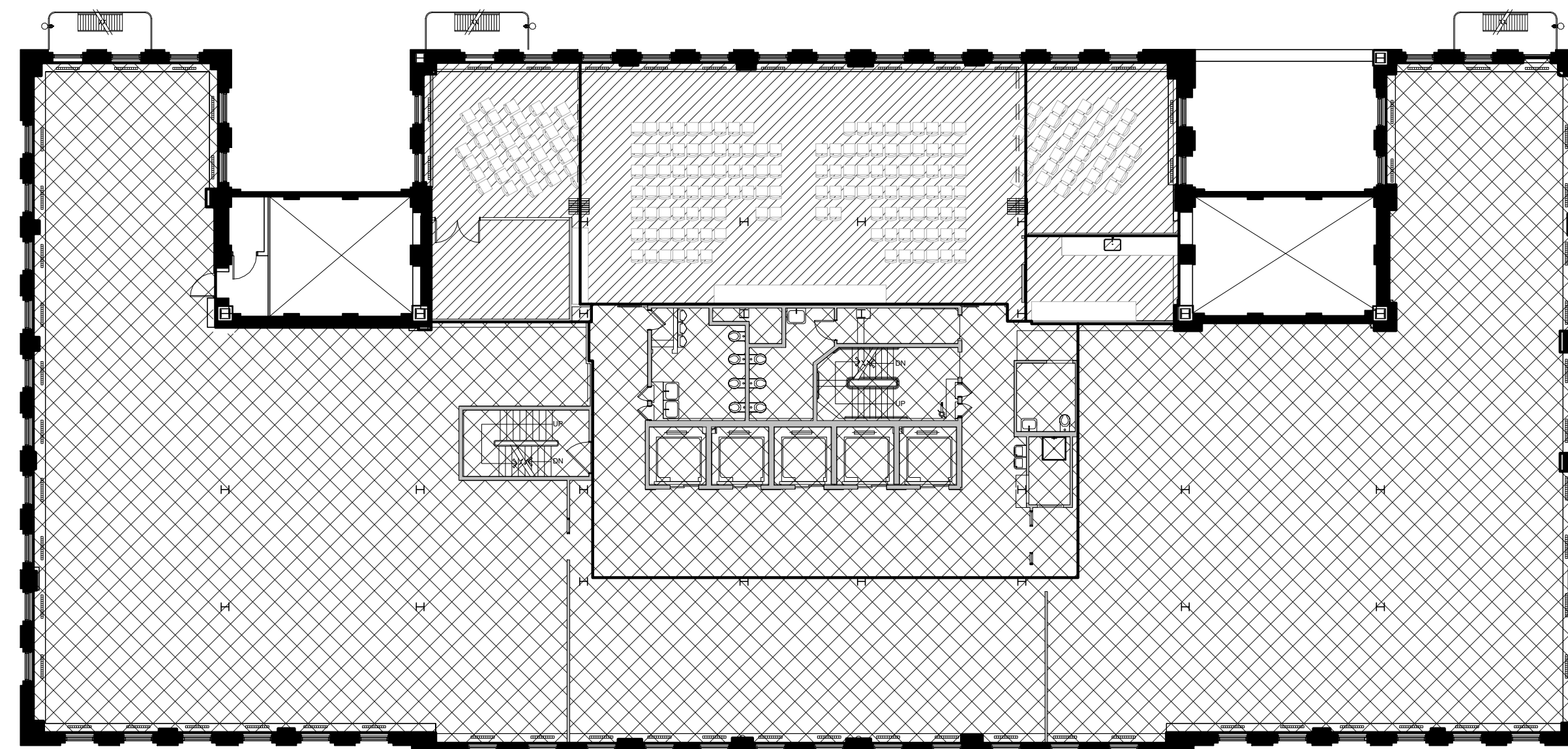
- PROPERTY LINE
- 1/2 HOUR FIRE PARTITION
- 1 HOUR FIRE PARTITION
- 1 HOUR FIRE BARRIER
- 2 HOUR FIRE BARRIER
- X - X - X - 2 HOUR FIRE WALL
- XXX-XXX-XXX- 1 HOUR SMOKE BARRIER
- XX-XX-XX- 1 HOUR FIRE RESISTANCE RATED CONSTRUCTION
- [44" cross-hatch] 2 HOUR FIRE RESISTANCE RATED CONSTRUCTION
- [44" diagonal lines] 3 HOUR FIRE RESISTANCE RATED CONSTRUCTION
- - - - - EXTERIOR EGRESS PATH TO ROW WITH TRAVEL WIDTH REQUIRED (PROVIDE MINIMUM ILLUMINATION FOR EXITING - REFER TO ELECTRICAL DRAWINGS).
- C.P. 'X'-XX" EGRESS PATH OF TRAVEL WITH TRAVEL WIDTH REQUIRED (PROVIDE MINIMUM ILLUMINATION FOR EXITING - REFER TO ELECTRICAL DRAWINGS).
- E.A. 'X'-XX" EGRESS PATH OF TRAVEL WITH TRAVEL WIDTH REQUIRED (PROVIDE MINIMUM ILLUMINATION FOR EXITING - REFER TO ELECTRICAL DRAWINGS).
- [# HR] ACCESSIBLE ROUTE OF TRAVEL
- [555] COMMON PATH OF EGRESS TRAVEL
- [#] EXIT ACCESS DISTANCE
- [MH] RATED SHAFT (WALL CONSTRUCTION TO MEET FIRE BARRIER REQUIREMENTS)
- [*] OCCUPANT LOAD AT OPENING
- [AREA] CUMULATIVE OCCUPANT LOAD AT OPENING
- [EXIT] BUILDING EXIT
- [B.C.A.] BUILDING CODE APPEAL
- [MH] MAGNETIC HOLD OPEN
- [FE] AREA REQUIRING SMOKE DETECTION
- [FE] SPRINKLER, SEE FIRE PROTECTION DRAWINGS
- [EJFE] AREA NAME
- [EJFEC] MANUAL PULL STATION REQUIRED
- [2W] STANDPIPE
- [L.E.S.] LIGHTED EXIT SIGN - SHADING INDICATES LIGHTED FACE(S) DIRECTION ARROW CORRESPONDS TO DIRECTION ARROW ON SIGN
- [L.E.S.] LIGHTED EXIT SIGN - CEILING MOUNTED
- [L.E.S.] LIGHTED EXIT SIGN - WALL MOUNTED
- [F.E.] FIRE EXTINGUISHER
- [F.E.C.] FIRE EXTINGUISHER AND CABINET
- [E.F.E.] EXISTING FIRE EXTINGUISHER
- [E.F.E.C.] EXISTING FIRE EXTINGUISHER AND CABINET
- [2W] TWO-WAY ACCESSIBLE COMMUNICATIONS
- [A.E.] ACCESSIBLE ENTRANCE



1 LEVEL 10
3/32" = 1'-0"

OCCUPANCY

- [diagonal lines] A-3
- [cross-hatch] B



GENERAL NOTES - DEMOLITION PLAN

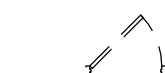
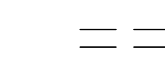
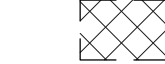




- A. DEMOLITION PLAN KEYED NOTES APPLY TO SHEETS AD100 SERIES. KEYED NOTES MAY NOT OCCUR ON THIS SHEET AND DO NOT APPLY TO OTHER SHEETS EXCEPT THOSE NOTED.
- B. COORDINATE SELECTIVE DEMOLITION WITH OWNER AND ARCHITECT WHERE REQUIRED.
- C. PRIMARY AND SECONDARY STRUCTURAL ELEMENTS, AND THEIR RELATED FIRE PROTECTION WHERE OCCURS, ARE TO REMAIN, UNO. IN THE EVENT THAT EXISTING DAMAGE IS DISCOVERED, OR NEW DAMAGE IS CAUSED BY DEMOLITION ACTIVITY NOTIFY ARCHITECT AND OWNER IMMEDIATELY.
- D. CONTRACTOR TO VERIFY ALL UTILITY AND INFRASTRUCTURE LOCATIONS PRIOR TO DEMOLITION
- E. CONTRACTOR TO PROTECT ALL AREAS ADJACENT TO DEMO WORK TO PREVENT DAMAGE TO "EXISTING TO REMAIN" ITEMS.
- F. CONTRACTOR TO PATCH AND REPAIR SUBSTRATE FLOOR AS REQUIRED WHERE CASEWORK IS REMOVED AND NEW FLOOR TO BE INSTALLED.
- G. CONTRACTOR TO PATCH AND REPAIR ALL GYPSUM WALLBOARD ADJACENT TO DEMOLISHED WALLBOARD.

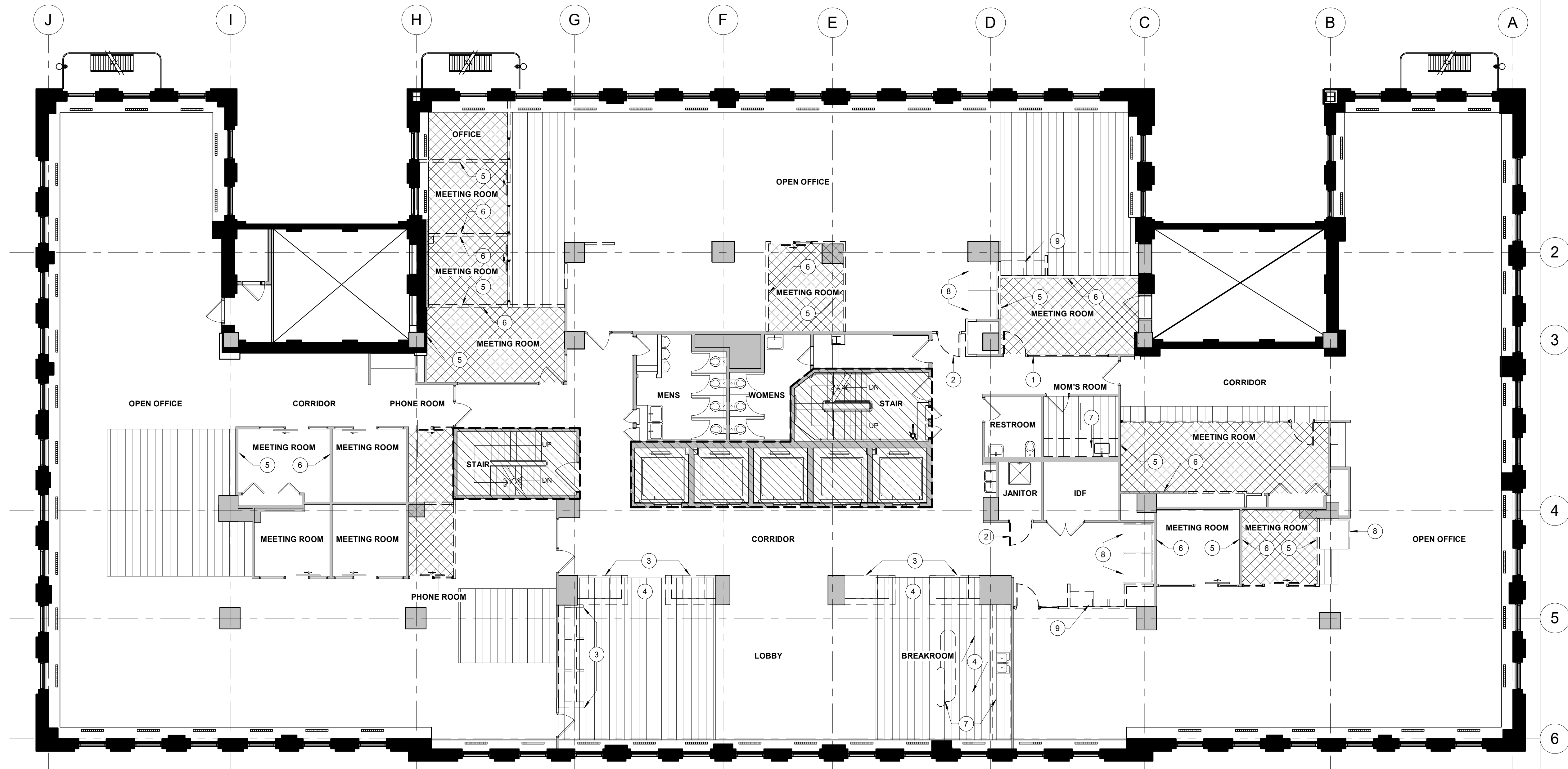
KEYED NOTES - DEMOLITION PLAN

- 1 REMOVE STOREFRONT SYTEM. PATCH AND REPAIR GYPSUM SOFFIT FOR NEW WALL
- 2 SALVAGE DOOR AND FRAME FOR REINSTALLATION
- 3 SALVAGE CASEWORK FOR REINSTALLATION
- 4 PROTECT EXISTING FLOORING IN PLACE. EXISTING FINISHES TO REMAIN UNO
- 5 REMOVE TV AND STORE FOR REINSTALL
- 6 REMOVE WHITEBOARDS AND STORE FOR REINSTALL
- 7 REMOVE CABINETRY
- 8 REMOVE PHONE BOOTH AND STORE FOR REINSTALL
- 9 PATCH AND REPAIR HARDWOOD FLOORING WITH SALVAGED MATERIAL.

LEGEND - DEMOLITION PLAN

SEE A001 FOR ADDITIONAL ARCHITECTURAL SYMBOL CONVENTIONS

-  EXISTING DOOR TO BE REMOVED
-  EXISTING TO BE REMOVED
-  EXISTING MATERIAL TO BE REMOVED
SCOPE OF DEMO COORDINATION
-  EXISTING WOOD FLOORING TO BE
REMOVED AND STORED FOR REINSTALL
-  EXISTING TO REMAIN
-  EXISTING DOOR TO REMAIN
-  NOT IN CONTRACT / WORK LIMIT LINE



1 DEMOLITION PLAN - LEVEL 09
1/8" = 1'-0"

GENERAL NOTES - DEMOLITION PLAN

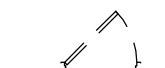
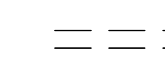
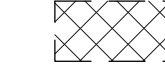




- A. DEMOLITION PLAN KEYED NOTES APPLY TO SHEETS AD100 SERIES. KEYED NOTES MAY NOT OCCUR ON THIS SHEET AND DO NOT APPLY TO OTHER SHEETS EXCEPT THOSE NOTED.
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- D. CONTRACTOR TO VERIFY ALL UTILITY AND INFRASTRUCTURE LOCATIONS PRIOR TO DEMOLITION
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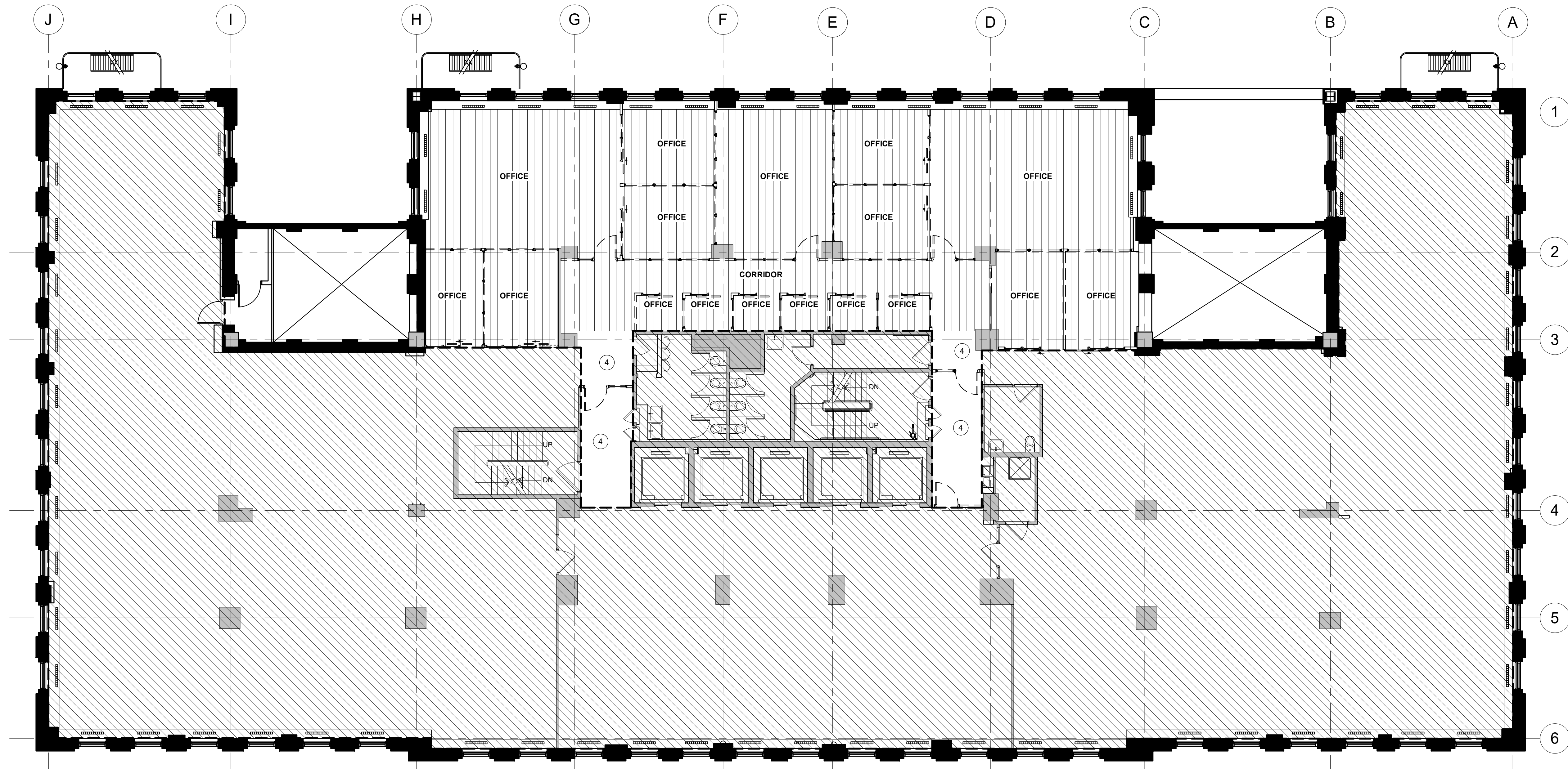
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- 8 REMOVE PHONE BOOTH AND STORE FOR REINSTALL
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LEGEND - DEMOLITION PLAN

SEE A001 FOR ADDITIONAL ARCHITECTURAL SYMBOL CONVENTIONS

-  EXISTING DOOR TO BE REMOVED
-  EXISTING TO BE REMOVED
-  EXISTING MATERIAL TO BE REMOVED SCOPE OF DEMO COORDINATION
-  EXISTING WOOD FLOORING TO BE REMOVED AND STORED FOR REINSTALL
-  EXISTING TO REMAIN
-  EXISTING DOOR TO REMAIN
-  NOT IN CONTRACT / WORK LIMIT LINE



1 DEMOLITION PLAN - LEVEL 10
1/8" = 1'-0"

GENERAL NOTES - DEMOLITION CEILING PLAN

- A. DEMOLITION RCP KEYED NOTES APPLY TO AD200 SERIES SHEETS. KEYED NOTES MAY NOT OCCUR ON THIS SHEET AND DO NOT APPLY TO OTHER SHEETS EXCEPT THOSE NOTED.
- B. ALL REMOVED LIGHT FIXTURES TO BE SALVAGED FOR REINSTALLATION.
- C. CONTRACTOR TO PATCH AND REPAIR ADJACENT WALLS AT REMOVED SOFFITS OR GB CEILINGS.

KEYED NOTES - DEMOLITION CEILING PLAN

- 1 INSERT NOTE HERE

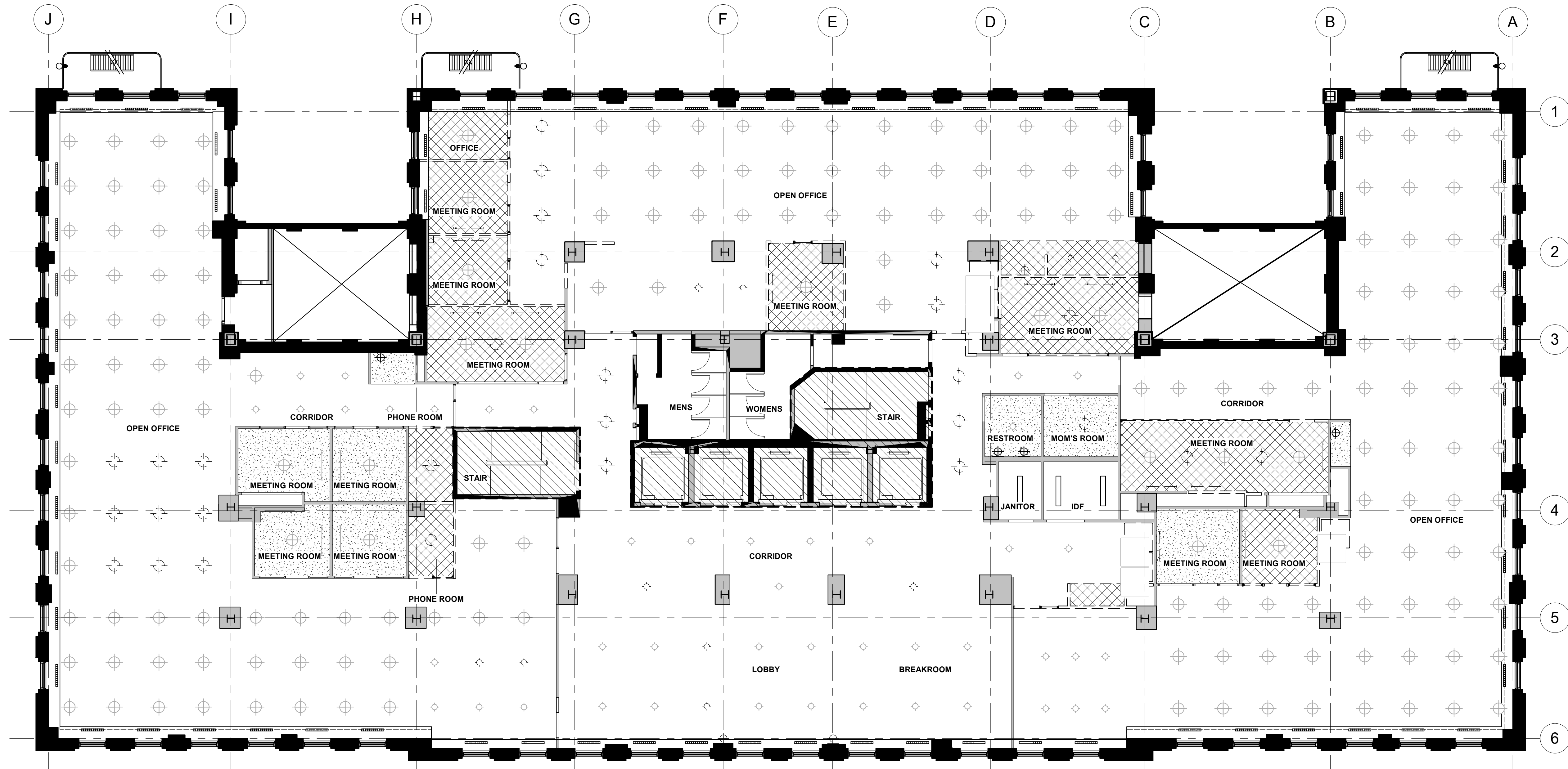
LEGEND - DEMOLITION CEILING PLAN

SEE A001 FOR ADDITIONAL ARCHITECTURAL SYMBOL CONVENTIONS

- EXISTING TO BE REMOVED
- EXISTING MATERIAL TO BE REMOVED
- EXISTING FT GB CEILING TO REMAIN
- NOT IN CONTRACT / WORK LIMIT LINE

LEGEND - LIGHT FIXTURE SYMBOLS

SYMBOL	DESIGNATION	DESCRIPTION
	P	EXISTING PENDANT TO REMAIN
	P	EXISTING PENDANT TO BE REMOVED & STORED
	S	EXISTING SURFACE DOWNLIGHT TO REMAIN
	S	EXISTING SURFACE DOWNLIGHT TO BE REMOVED & STORED
	W	EXISTING WALL SCONCE TO REMAIN
	W	EXISTING WALL SCONCE TO BE REMOVED & STORED
	L	EXISTING SUSPENDED LINEAR STRIP TO REMAIN
	L	EXISTING SUSPENDED LINEAR STRIP TO BE REMOVED & STORED
	L	EXISTING SUSPENDED LINEAR TO REMAIN
	EX	EMERGENCY EXIT LIGHT
	EX	SURFACE EMERGENCY EXIT SIGN
	EX	WALL EMERGENCY EXIT SIGN



1 DEMOLITION CEILING PLAN - LEVEL 09
1/8" = 1'-0"

GENERAL NOTES - DEMOLITION CEILING PLAN

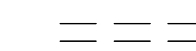
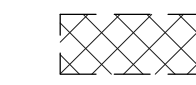


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- B. ALL REMOVED LIGHT FIXTURES TO BE SALVAGED FOR REINSTALLATION.
- C. CONTRACTOR TO PATCH AND REPAIR ADJACENT WALLS AT REMOVED SOFFITS OR GB CEILINGS.

KEYED NOTES - DEMOLITION CEILING PLAN








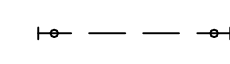




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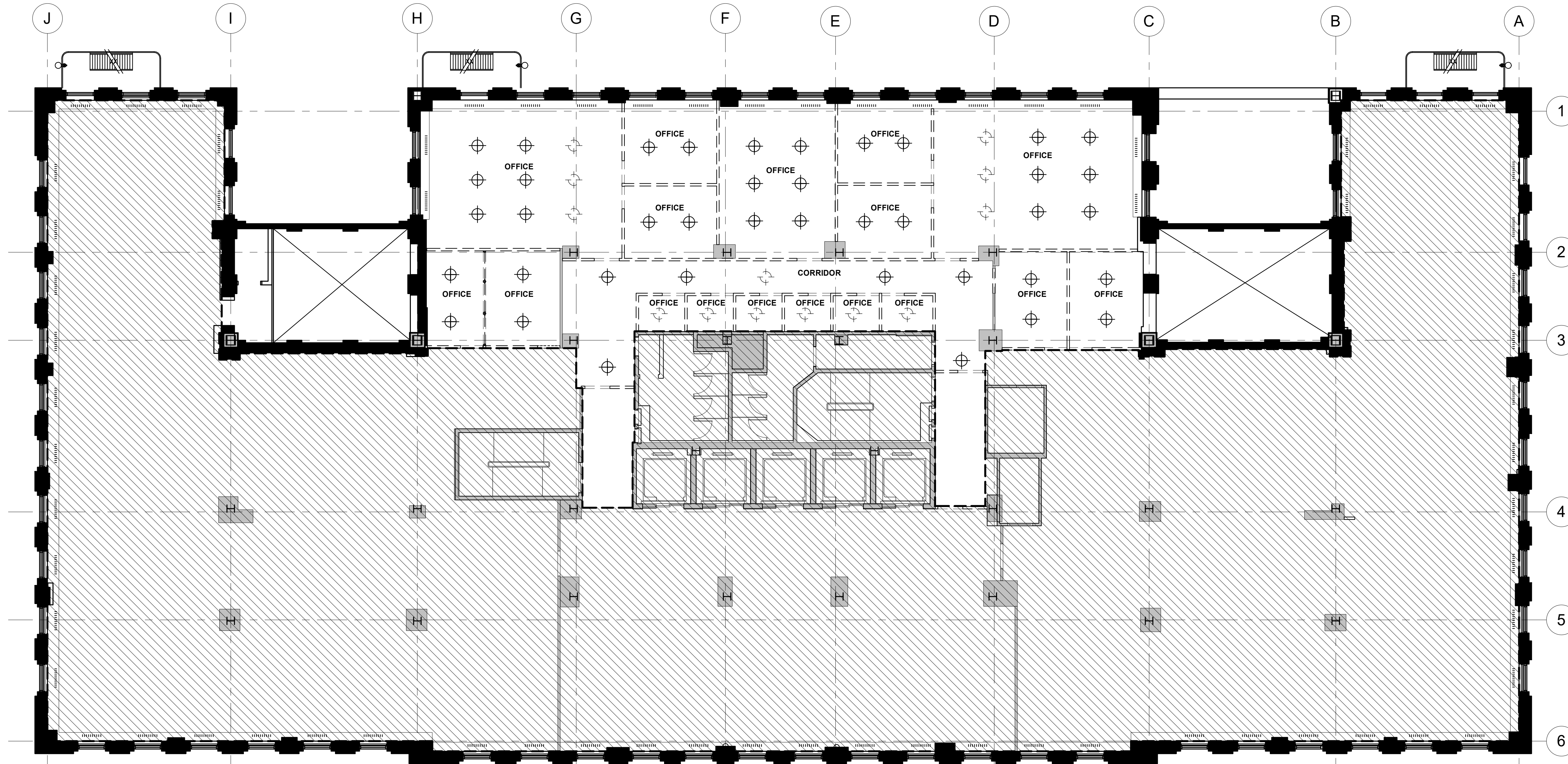
LEGEND - DEMOLITION CEILING PLAN

SEE A001 FOR ADDITIONAL ARCHITECTURAL SYMBOL CONVENTIONS

-  EXISTING TO BE REMOVED
-  EXISTING MATERIAL TO BE REMOVED
-  EXISTING PT GB CEILING TO REMAIN
-  NOT IN CONTRACT / WORK LIMIT LINE

LEGEND - LIGHT FIXTURE SYMBOLS

SYMBOL	DESIGNATION	DESCRIPTION
	P	EXISTING PENDANT TO REMAIN
	P	EXISTING PENDANT TO BE REMOVED & STORED
	S	EXISTING SURFACE DOWNLIGHT TO REMAIN
	S	EXISTING SURFACE DOWNLIGHT TO BE REMOVED & STORED
	W	EXISTING WALL SCONCE TO REMAIN
	W	EXISTING WALL SCONCE TO BE REMOVED & STORED
	L	EXISTING SUSPENDED LINEAR STRIP TO REMAIN
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	EX	EMERGENCY EXIT LIGHT
	EX	SURFACE EMERGENCY EXIT SIGN
	EX	WALL EMERGENCY EXIT SIGN



 1 DEMOLITION CEILING PLAN - LEVEL 10
1/8" = 1'-0"



ARCHITECTURE
URBAN DESIGN + PLANNING
INTERIOR DESIGN

PORTLAND | OAKLAND
SERADESIGN.COM

PRELIMINARY
NOT FOR CONSTRUCTION

POWER & LIGHT TI

ENERGY TRUST OF OREGON
920 SW 6TH AVE
LEVEL 9 & 10
PORTLAND, OR 97204

VOLUME: 1

REVISIONS

CHECKED BY: CM
ISSUE DATE: 04 DEC 2024
PROJECT NO: 2403023

DEMOLITION
CEILING PLAN -
LEVEL 10

AD202

SCHEMATIC DESIGN

LEGEND - PLUMBING FIXTURE SYMBOLS

PLAN	ELEVATION	DESCRIPTION
		LAVATORY, UNDERCOUNTER MOUNTED
		LAVATORY, OVERCOUNTER MOUNTED
		LAVATORY, WALL MOUNTED
		SINK, UNDERCOUNTER MOUNTED
		SINK, OVERCOUNTER MOUNTED
		SERVICE SINK, WALL MOUNTED
		MOP SINK
		DRINKING FOUNTAIN, DOUBLE
		DRINKING FOUNTAIN, DOUBLE WITH BOTTLE FILLER
		WATER CLOSET, FLOOR MOUNTED
		WATER CLOSET, TANKLESS, FLOOR MOUNTED
		WATER CLOSET, WALL MOUNTED
		URINAL, WALL MOUNTED
		FLOOR DRAIN
		FLOOR SINK

LEGEND - ELECTRICAL FIXTURE SYMBOLS

PLAN	ELEVATION	DESCRIPTION
		OUTLET - DUPLEX
		OUTLET - DUPLEX - GFI
		OUTLET - QUAD
		OUTLET - QUAD - GFI
		PHONE
		DATA
		OUTLET - TV
		SWITCH
		3 WAY SWITCH
		4 WAY SWITCH
		J BOX
		ALARM STROBE
		DOORBELL
		SMOKE DETECTOR
		THERMOSTAT
		ALARM HORN AND STROBE
		OUTLET - DUPLEX - FLOOR
		OUTLET - QUAD - FLOOR
		J BOX - FLOOR
		OUTLET - DATA - FLOOR
		OUTLET - PHONE - FLOOR

FINISH AND MATERIAL CODES

ACT-#	SUSPENDED ACOUSTICAL CEILING
AWCS-#	ACOUSTICAL WALL OR CEILING SYSTEM
BR-#	BRICK
CHW-#	CABINET HARDWARE
CMU-#	CONCRETE MASONRY UNIT
CONC-#	CONCRETE
CORK-#	CORK
CPT-#	CARPET
CTP-#	COUNTERTOP
EP-#	EPOXY PAINT
F-#	FABRIC
FAF-#	FLUID - APPLIED FLOORING
FCP-#	FIBER CEMENT PANEL
FCS-#	FIBER CEMENT SIDING
FRP-#	FIBERGLASS REINFORCED PLASTIC PANELING
GL-#	GLAZING
GLF-#	GLAZING FILM
HPC-#	HIGH-PERFORMANCE COATING
MIR-#	MIRROR
MTL-#	METAL
MTLB-#	METAL BASE
MTLC-#	METAL CEILING
MTLP-#	METAL PANELING
P-#	PAINT
PL-#	PLASTIC LAMINATE
RAF-#	RESILIENT ATHLETIC FLOORING
RB-#	RESILIENT BASE
RF-#	RESILIENT FLOORING
SS-#	STAINLESS STEEL
SSF-#	SIMULATED STONE FABRICATIONS
ST-#	STONE CLADDING
STN-#	STAIN
T-#	TILE
TF-#	THERMOFILM
TZ-#	TERRAZZO
VDB-#	VISUAL DISPLAY BOARD
VP-#	VENEER PLASTERING
WCV-#	WALL COVERING
WD-#	WOOD
WDB-#	WOOD BASE
WDC-#	WOOD CEILING
WDF-#	WOOD FLOORING
WDP-#	WOOD PANELING
WS-#	WOOD SIDING
WOM-#	WALK OFF MAT
WP-#	WALL PROTECTION
WT-#	WINDOW TREATMENT

LEGEND - MATERIAL SYMBOLS

	ACOUSTIC CEILING TILE		PLASTER OR STUCCO
	ALUMINUM		PLASTIC
	CARPET		PLYWOOD
	CONCRETE		SHAFTWALL
	PRECAST CONCRETE		SHINGLE
	FIREPROOFING		STEEL
	GYPSON BOARD		STONE
	GLULAM WOOD		TILE
	INSULATION - FOAM BOARD		WOOD
	INSULATION - MINERAL FIBER		WOOD FRAMING
	INSULATION - FOAMED IN PLACE		WOOD BLOCKING
	INSULATION - BATT OR ACOUSTIC		EXISTING
	MORTAR OR GROUT		NOT IN CONTRACT / WORK LIMIT LINE

LEGEND - CONVENTIONS AND SYMBOLS

	DRAWING TITLE DRAWING IDENTIFICATION
	DRAWING SCALE DRAWING NUMBER
	PROJECT NORTH NORTH ARROW SEE CIVIL FOR TRUE NORTH
	PROJECT GRID/COLUMN LINE
	PROJECT GRID/COLUMN LINE (E)
	LEVEL INFORMATION LEVEL 1 134'-0"
	ELEVATION NUMBER EXTERIOR ELEVATION A301 SHEET NUMBER
	ELEVATION NUMBER INTERIOR ELEVATION A601 SHEET NUMBER
	DETAIL NUMBER DETAIL CALLOUT A101 SHEET NUMBER
	SECTION NUMBER BUILDING SECTION A101 SHEET NUMBER
	SECTION NUMBER WALL OR PARTIAL SECTION A101 SHEET NUMBER
	WALL (E)
	WALL
	WORK LIMIT LINE
	ROOM NAME
	ROOM TAG 101 ROOM NUMBER
	ASSEMBLY TYPE - REFER TO ASSEMBLIES ASSEMBLY TAG 325MS
	DOOR DOOR NUMBER - REFER TO DOOR SCHEDULE S202-2
	DOOR (E)
	KEYED NOTE R-1
	HANDRAIL/GUARD TAG
	WINDOW TYPE - REFER TO WINDOW SCHEDULE WINDOW TAG C.5
	OPPOSITE HAND WHERE OCCURS OPH
	GLAZING TAG GLAZING TYPE TAG REFER TO SCHEDULE OF FINISHES GLASS SYMBOL GL-1
	FINISH TAG MATERIAL DESIGNATION REFER TO SCHEDULE OF FINISHES CPT-2
	FURNITURE TAG FURNITURE DESIGNATION REFER TO FURNITURE SCHEDULE QUANTITY IF GREATER THAN ONE FF-## x2
	EQUIPMENT TAG EQUIPMENT DESIGNATION REFER TO EQUIPMENT SCHEDULE EQ-##
	SPOT ELEVATION (E)
	SPOT ELEVATION
	SPOT ELEVATION - SURVEY
	REVISION NUMBER 1
	DRAWING REVISION
	REVISION CLOUD

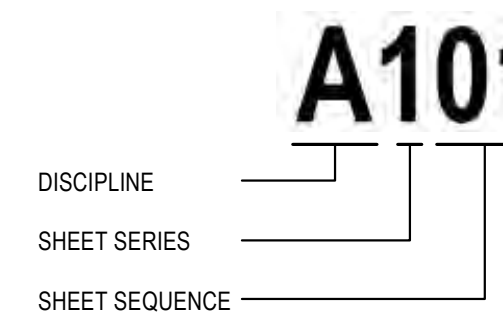
DIMENSIONING NOTES

- DO NOT SCALE DRAWINGS FOR ELEMENT SIZES OR LOCATIONS. DIMENSIONS ARE INDICATED IN THE DRAWINGS.
- INTERIOR WALLS ARE DIMENSIONED TO FACE OF STUD, UNLESS NOTED OTHERWISE.
- EXTERIOR WALLS ARE DIMENSIONED TO FACE OF EXTERIOR SHEATHING AND/OR CLADDING, UNLESS NOTED OTHERWISE.
- DIMENSIONS MEASURED FROM AN EXISTING WALL ARE MEASURED FROM FACE OF EXISTING FINISH.
- THE TERM "EQUAL" OR "EQ" IS USED IN LIEU OF ACTUAL DIMENSIONS WHERE EQUAL SPACING OF ELEMENTS IS REQUIRED.
- THE TERM "CLEAR" OR "CLR" IS USED TO DENOTE A MINIMUM DIMENSIONAL REQUIREMENT BETWEEN FOREMOST PROTRUDING COMPONENTS OF BUILDING ELEMENTS. NOTE THAT ACTUAL SPACING COULD BE GREATER.
- THE TERM "+/-" IS USED TO DENOTE A FLEXIBLE PORTION OF THE DIMENSION STRING.
- WALLS SHOWN CENTERED ON A COLUMN GRID LINE AS INDICATED BELOW ARE TO BE LOCATED SO THAT THE CENTERLINE OF WALL ASSEMBLY COINCIDES TO THAT OF THE GRID, UNLESS NOTED OTHERWISE.
- THE TERM "DP" IS USED TO INDICATE A DIMENSION POINT REFERENCED FROM ANOTHER LOCATION IN THE DRAWINGS. DIMENSIONS MAY NOT BE REPEATED.
- DOORS AND OPENINGS IN WALLS:
 - DOORS LOCATED BY A PERPENDICULAR HINGE SIDE WALL, AND NO WALL WITHIN 12" OF THE LATCH SIDE, ARE TO BE INSTALLED 4" FROM THE FINISH SURFACE OF THE WALL TO THE FACE OF DOOR AT A 90 DEGREE OPEN POSITION, UNLESS NOTED OTHERWISE. THIS CONDITION IS TYPICAL AND MAY NOT BE DIMENSIONED.
 - DOORS REQUIRING CLEAR FLOOR AREAS MAY INDICATE MINIMUM DISTANCES TO BE MAINTAINED TO THEIR CRITICAL JAMB, (18" AT THE LATCH PULL SIDE AND 12" AT THE LATCH PUSH SIDE), UNLESS NOTED OTHERWISE. ACTUAL DISTANCE MAY BE GREATER.
 - OPENINGS LOCATED BY A WALL AT A RIGHT ANGLE ARE TO BE INSTALLED 4" FROM THE FINISH SURFACE OF THE PERPENDICULAR WALL TO THE CLEAR OPENING, UNLESS NOTED OTHERWISE.
 - OPENINGS NOT LOCATED BY A WALL AT A RIGHT ANGLE WILL BE DIMENSIONED TO THE JAMB CLEAR OPENING.

ABBREVIATIONS

---	NONE
&	AND
@	APPROXIMATELY
±	CENTERLINE
∅	DIAMETER
#	NUMBER
'	INCH(ES)
'	FOOT (FEET)
ACSF	ACCESS FLOORING
ADJ	ADJACENT
AFF	ABOVE FINISH FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
B/	BOTTOM OF
BOB	BOTTOM OF BEAM
BOT	BOTTOM
BOS	BOTTOM OF STEEL
CODE	APPLICABLE REGULATIONS GOVERNING CONTRACT SCOPE OF WORK, SEE CODE COMPLIANCE SUMMARY SHEETS
CJ	CONTROL JOINT
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
DP	DIMENSION POINT
DS	DOWN SPOUT
DW	DISHWASHER
DWG	DRAWING
(E)	EXISTING
EJ	EXPANSION JOINT
EQ	EQUAL
ETR	EXISTING TO REMAIN
EXP	EXPOSED STRUCTURE
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF EL	FINISH FLOOR ELEV
F/	FACE OF
FOB	FACE OF BEAM
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FOW	FACE OF WALL
GA	GAUGE
GB	GYPSUM BOARD
GALV	GALVANIZED
HB	HOSE BIB
HS	HEAT STRENGTHENED
ID	INSIDE DIAMETER
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MO	MASONRY OPENING
MW	MICROWAVE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OAE	OR APPROVED EQUAL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFD	OVERFLOW DRAIN
OFICI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFIOI	OWNER FURNISHED, OWNER INSTALLED
OPH	OPPOSITE HAND
OTS	OPEN TO STRUCTURE
PFN	PREFINISHED (ALTERNATE PREFIN)
PLAS	PLASTER
ROP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFRIGERATOR
RO	ROUGH OPENING
ROW	RIGHT OF WAY
SF	SQUARE FOOT (FEET)
SHTHG	SHEATHING
SIM	SIMILAR
SST	STAINLESS STEEL (BASE, WALL PANEL, OR COVERING)
STN	STAIN
T	TEMPERED
T/	TOP OF
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOD	TOP OF STEEL DECK
TOP	TOP OF PARAPET
TOS	TOP OF STEEL
TOW	TOP OF WALL
T/M	TO MATCH
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD

SHEET NUMBER - KEY



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SYMBOLS AND ANNOTATION
A001

SCHEMATIC DESIGN

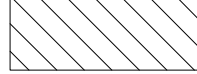

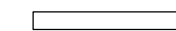
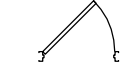

GENERAL NOTES - FLOOR PLAN

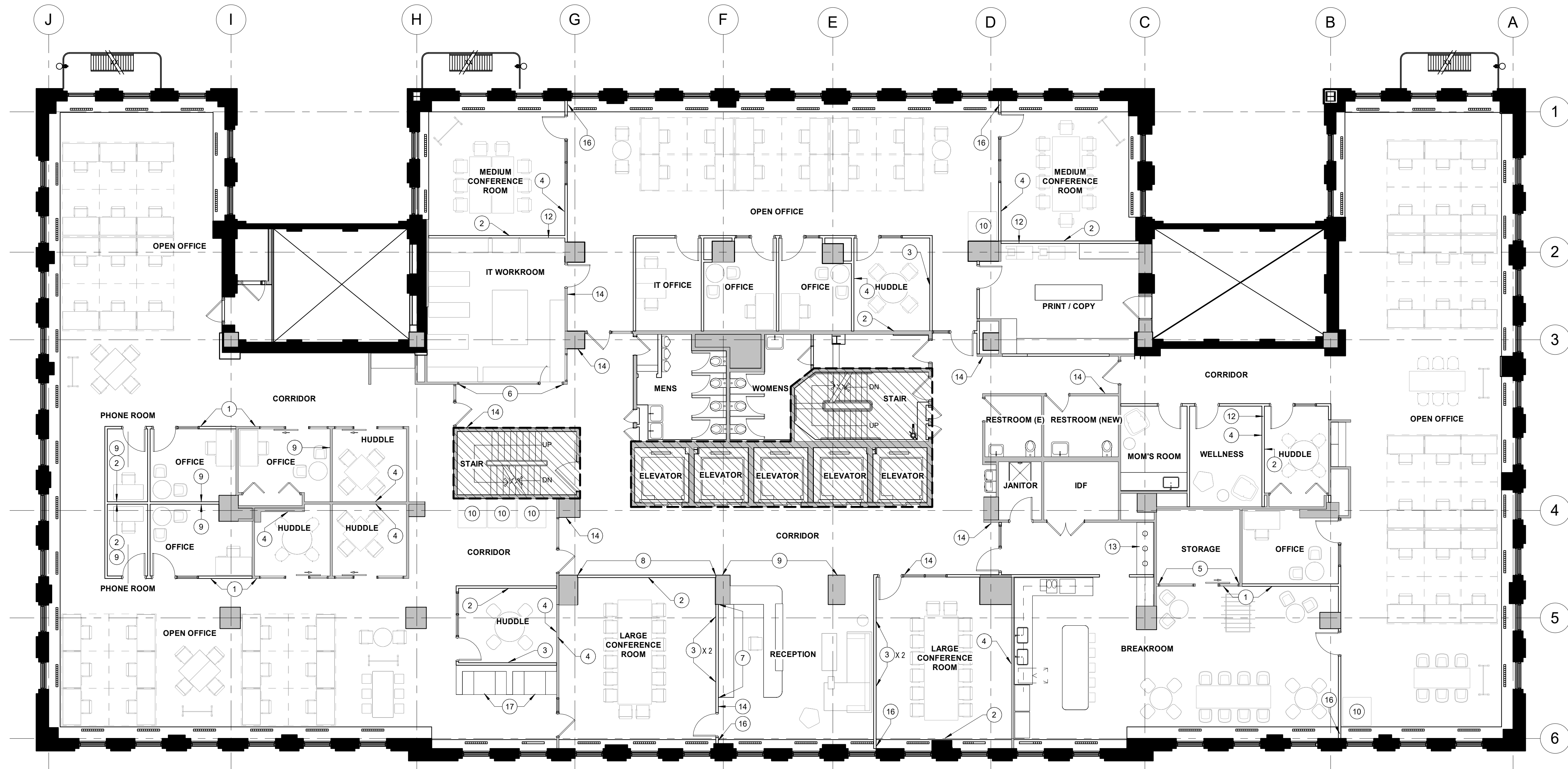
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- B. SEE SHEET A002 AND A003 FOR ASSEMBLIES
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- E. SEE SHEET G801 AND G802 FOR ACCESS INFORMATION AND REQUIREMENTS
- F. ALL NEW WALLS TO TERMINATE AT UNDERSIDE OF STRUCTURE ABOVE.
- G. SEE FINISH NARRATIVE FOR
 - a. DOORS AND RELITES
 - b. WALL, FLOOR AND BASE FINISHES
 - c. CASEWORK FINISHES
 - d. SPECIALTY EQUIPMENT
- H. WHERE FLOORING DOES NOT CONTINUE BELOW REMOVED INFRASTRUCTURE, PATCH WITH SALVAGED MATERIAL.

KEYED NOTES - FLOOR PLAN

- 1 ALIGN
- 2 REINSTALL EXISTING TV. PROVIDE BLOCKING AS REQUIRED.
- 3 REINSTALL EXISTING WHITE BOARD. PROVIDE BLOCKING AS REQUIRED.
- 4 ACOUSTIC WALL PANEL TO RUN FULL LENGTH OF WALL
- 5 FULLY OPAQUE FILM ON STOREFRONT GLAZING AND DOOR. SEE FINISH NARRATIVE.
- 6 SEMI TRANSPARENT FILM ON STOREFRONT GLAZING AND DOOR. SEE FINISH NARRATIVE.
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- 8 HIGH QUALITY CUSTOM WALL GRAPHIC TBD
- 9 ADD ALT. WALL COVERING TO RUN FULL HEIGHT OF WALL. SEE FINISH NARRATIVE.
- 10 REINSTALL EXISTING PHONE BOOTHS
- 11 NEW FOLDING WALL WITH INTEGRATED DOOR. SEE FINISH NARRATIVE FOR BASIS OF DESIGN AND STRUCTURAL REQUIREMENTS.
- 12 NEW WALL WITH STC RATING OF 53-55
- 13 TRASH & RECYCLING CASEWORK WITH FINISHED EDGE GROMMETS IN SOLID SURFACE COUNTER
- 14 NEW CARD READER
- 15 NEW BUILT-IN CASEWORK WITH STANDARD AWM LOWER CABINETS AND SOLID SURFACE COUNTERTOP.
- 16 NEW WALL TO BE CONSTRUCTED AROUND EXISTING VENT.
- 17 REINSTALL SALVAGED BANQUETTES.

LEGEND - FLOOR PLAN

-  NOT IN CONTRACT / WORK LIMIT LINE
-  EXISTING TO REMAIN
-  NEW WALL
-  EXISTING DOOR TO REMAIN
-  NEW DOOR



1 FLOOR PLAN - LEVEL 09
1/8" = 1'-0"



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FLOOR PLAN -
LEVEL 09
A101

SCHEMATIC DESIGN



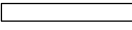


GENERAL NOTES - FLOOR PLAN

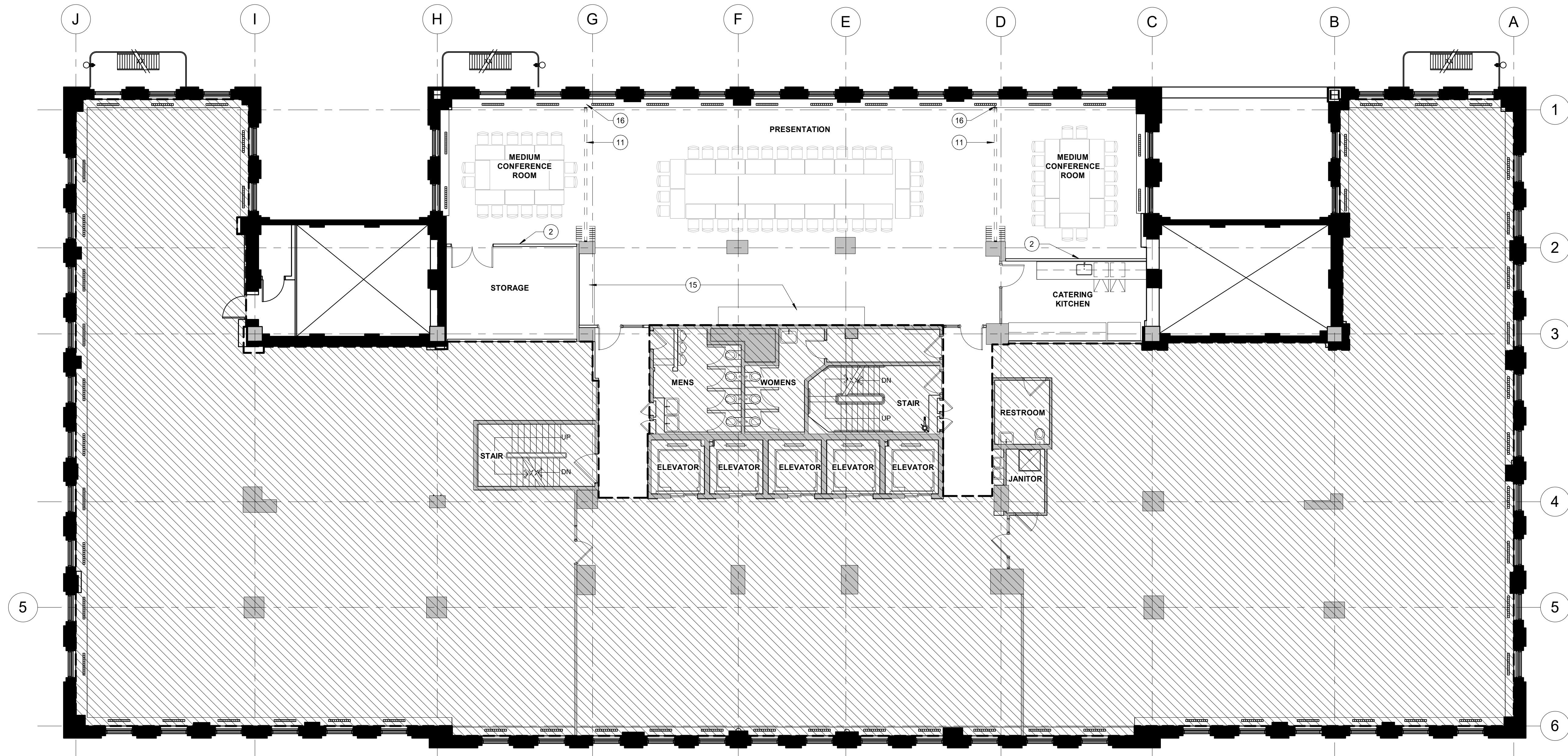
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LEGEND - FLOOR PLAN

-  NOT IN CONTRACT / WORK LIMIT LINE
-  EXISTING TO REMAIN
-  NEW WALL
-  EXISTING DOOR TO REMAIN
-  NEW DOOR



1 FLOOR PLAN - LEVEL 10
1/8" = 1'-0"



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FLOOR PLAN -
LEVEL 10
A102

SCHEMATIC DESIGN

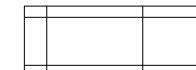

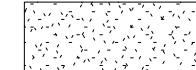
GENERAL NOTES - RCP

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- D. CENTER LIGHT FIXTURES/JUNCTION BOXES IN ROOM, UNO.
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


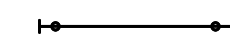

KEYED NOTES - REFLECTED CEILING PLAN

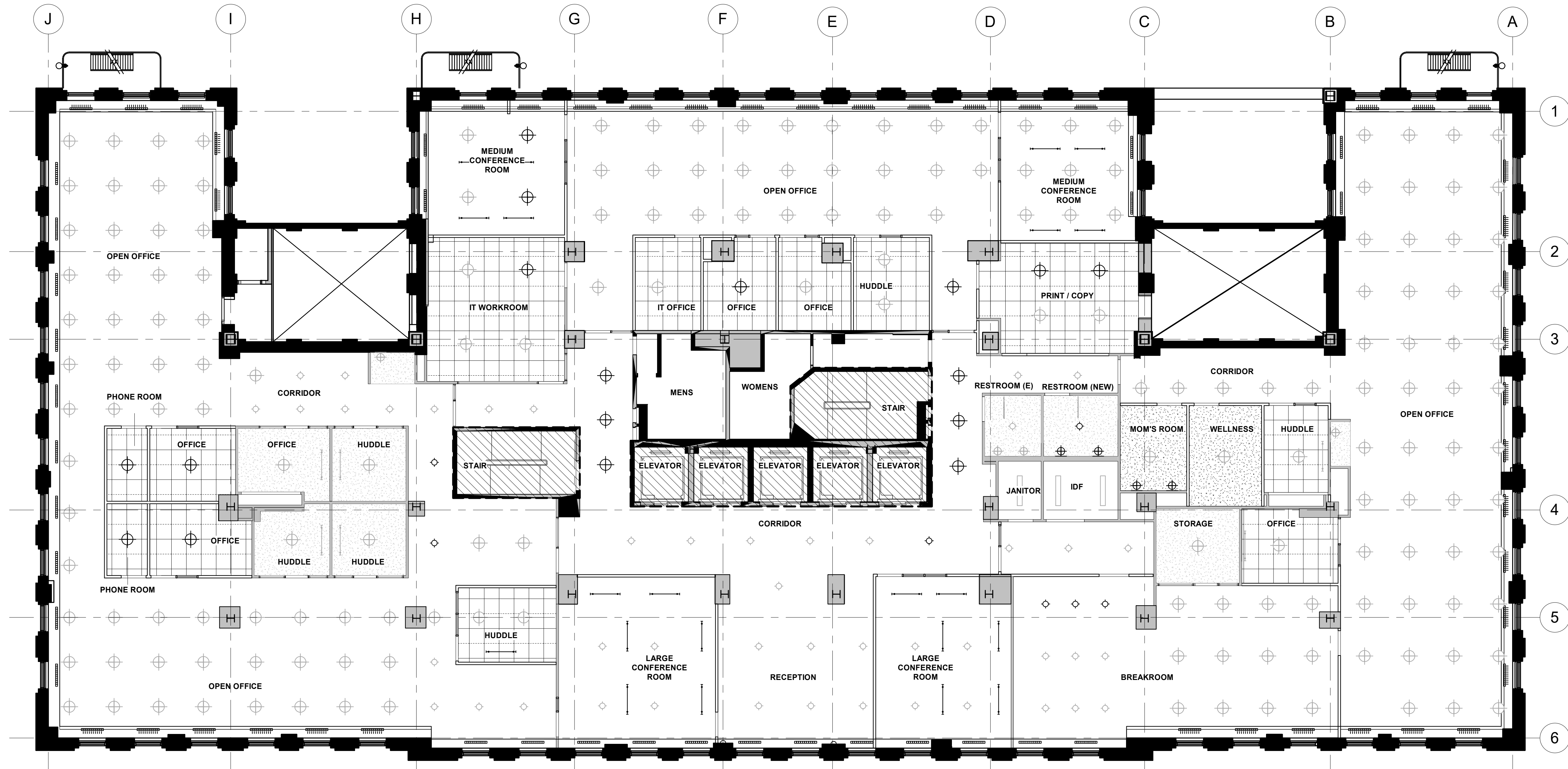
- 1 ALIGN
- 2 CEILING MOUNTED PROJECTOR SCREEN. SEE FINISH NARRATIVE.

LEGEND - REFLECTED CEILING PLAN

-  NEW ACOUSTIC CEILING TILE 2' x 4'
-  EXISTING PT GB CEILING 8' AFF UNO
-  NEW PT GB CEILING 8' AFF UNO

LEGEND - LIGHT FIXTURE SYMBOLS

SYMBOL	DESIGNATION	DESCRIPTION
	P	EXISTING PENDANT TO REMAIN
	P	RELOCATED EXISTING PENDANT
	S	EXISTING SURFACE DOWNLIGHT TO REMAIN
	S	RELOCATED EXISTING SURFACE DOWNLIGHT
	W	EXISTING WALL SCONCE TO REMAIN
	W	RELOCATED EXISTING WALL SCONCE
	T	NEW SUSPENDED TRACK LIGHT
	L	EXISTING SUSPENDED LINEAR STRIP TO REMAIN
	L	NEW SUSPENDED LINEAR STRIP
	L	EXISTING SUSPENDED LINEAR TO REMAIN



1 REFLECTED CEILING PLAN - LEVEL 09
1/8" = 1'-0"

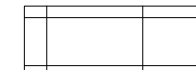

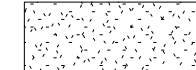
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









KEYED NOTES - REFLECTED CEILING PLAN

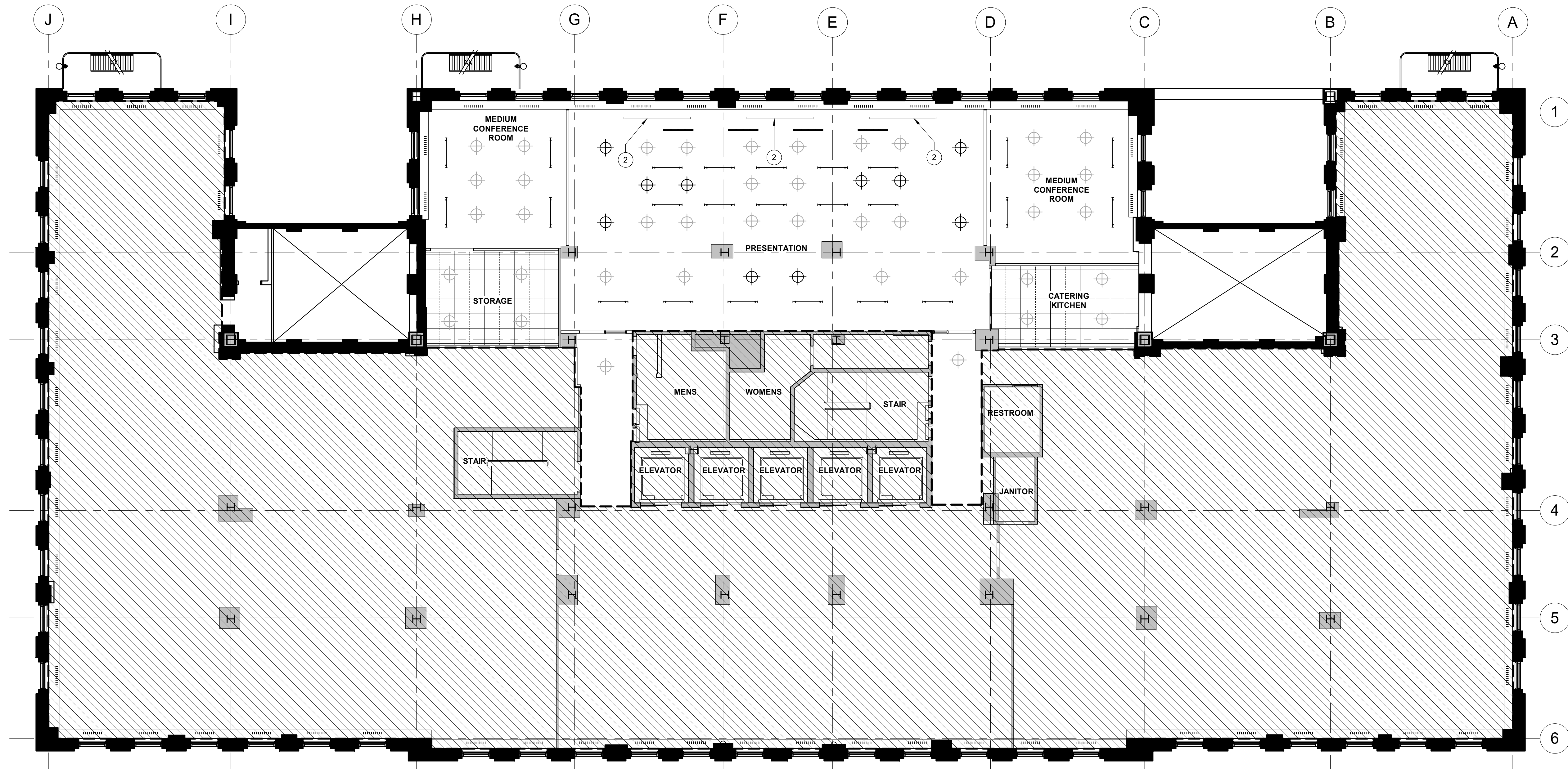
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LEGEND - REFLECTED CEILING PLAN

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-  EXISTING PT GB CEILING 8' AFF UNO
-  NEW PT GB CEILING 8' AFF UNO

LEGEND - LIGHT FIXTURE SYMBOLS

- | SYMBOL | DESIGNATION | DESCRIPTION |
|---|-------------|---|
|  | P | EXISTING PENDANT TO REMAIN |
|  | P | RELOCATED EXISTING PENDANT |
|  | S | EXISTING SURFACE DOWNLIGHT TO REMAIN |
|  | S | RELOCATED EXISTING SURFACE DOWNLIGHT |
|  | W | EXISTING WALL SCONCE TO REMAIN |
|  | W | RELOCATED EXISTING WALL SCONCE |
|  | T | NEW SUSPENDED TRACK LIGHT |
|  | L | EXISTING SUSPENDED LINEAR STRIP TO REMAIN |
|  | L | NEW SUSPENDED LINEAR STRIP |
|  | L | EXISTING SUSPENDED LINEAR TO REMAIN |



1 REFLECTED CEILING PLAN - LEVEL 10
1/8" = 1'-0"



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REFLECTED
CEILING PLAN -
LEVEL 10

A202

SCHEMATIC DESIGN

Energy Trust of Oregon TI

Basis of Design Narrative

December 2, 2024

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Project Directory

Owner	Energy Trust of Oregon	
Architect	SERA Architects 600 SW 10 th Ave Suite 500 Portland, OR 97205 503-445-7372	
	Misti Nelmes SERA Architects Project Manager	
Mechanical and Electrical Engineer	PAE 151 SW 1st Avenue Suite 300 Portland, Oregon 97204 503-226-2921	
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	Tim Elley, PE, LEED AP Project Manager Tim.elley@pae-engineers.com	
	Forest Tanier-Gesner, PE Regenerative Design Engineer Forest.tanier-gesner@pae-engineers.com	
	Jarren Parthemer, PE Electrical Engineer Jarren.parthemer@pae-engineers.com	
	Abe Boudouris, PE Mechanical Engineer Abe.boudouris@pae-engineers.com	



1.0 Project Description

1.1 Building Description

The project is a tenant fit out on two floors of the Power and Light Building in downtown Portland. The entire 9th floor (~15,000-sf), and a portion of the 10th floor (~3000-sf), is included. The 9th floor scope includes renovation of existing office, conference, and break room space for a new layout of similar program. A single user restroom is also added to the floor. The 10th floor scope includes renovation of existing multi-occupant office space into three large conference rooms that can open into a single event space with supporting storage room and catering prep room.

1.2 Engineer of Record

It shall be the responsibility of the selected contractors to perform all calculations and prepare complete design drawings signed and sealed for permit construction. The contractors will be the Engineer of Record. The contractor shall assist the Architect, other Consultants and other Contractors in developing, coordinating and completing the design. Participate in coordination meetings, provide value engineering ideas, provide constructability feedback and support the design team to meet the project goals.

The Documents provided by PAE are not complete design documents. The Contractor shall make provisions for a complete scope of work. Change orders for any scope items not fully defined in these SD documents are not anticipated, unless the Owner initiates a material change in scope.

CODE COMPLIANCE

The contractors shall be responsible for completing and submitting the lighting and mechanical code compliance forms for permit. Subcontractor shall attend code meetings with the City as required.

PROJECT CLOSEOUT

Upon completion of the project, the contractor shall provide the owner with as-built drawings and operation and maintenance manuals. The work shall be guaranteed for a period of one (1) year following date of substantial completion.

ACOUSTICS

The contractor shall coordinate with the architect and/or acoustical consultant for acoustical requirements. Absent of an acoustical consultant, contractor shall follow industry standards.



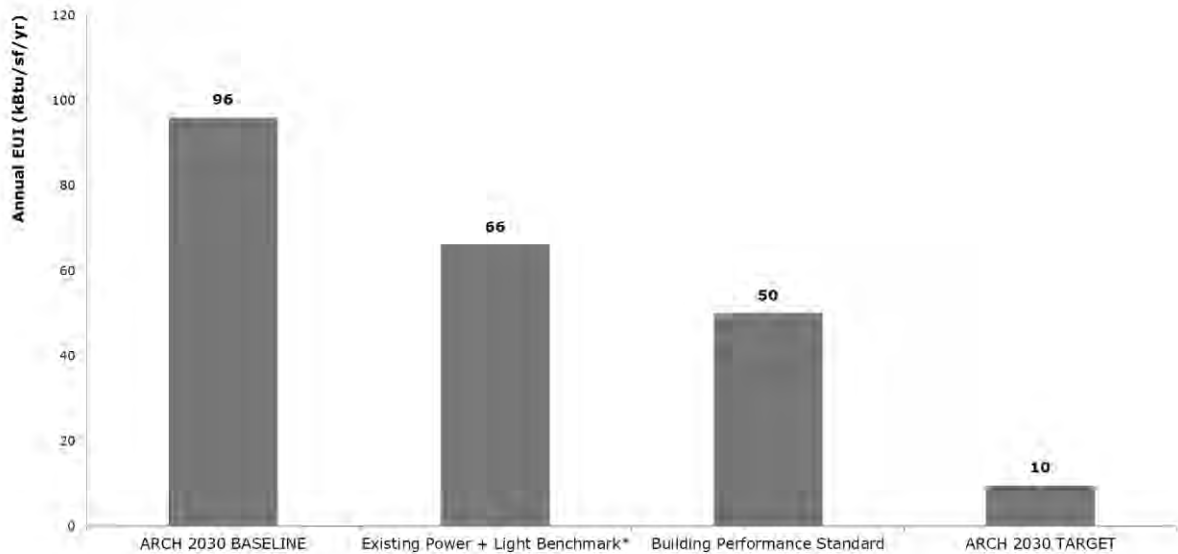
1.3 Sustainable Design

OREGON BUILDING PERFORMANCE STANDARD

The Oregon Department of Energy (ODOE) plans to finalize and adopt the Oregon Building Performance Standard by the end of 2024, as directed by House Bill 3409. The Power and Light building will be classified as Tier 1 (a building in which the sum of gross floor area for hotel, motel and nonresidential use equals or exceeds 35,000 square feet, excluding any parking garage) and will be subject to compliance on June 1, 2030 (assuming the total gross building area is less than 200,000-sf). The Building Performance Standard sets energy use intensity (EUI) requirements for various building types. For an “Office - Admin/Professional” building, the EUI target will be 50 kBtu/sf/year. If the performance targets are not met, building owners are required to conduct an energy audit and develop efficiency plans to meet the target.

ARCHITECTURE 2030

The Architecture 2030 target is a 90 percent reduction from the energy use of similar existing buildings in the same climate zone – which is also the basis for the Energy Trust of Oregon Path to Net Zero (PTNZ) Program. The table below summarizes the Average Building EUI, the Power and Lighting Building actual EUI (from 2019), the Oregon Building Performance Standard requirement, and the Arch 2030/ETO PTNZ Target.



*Benchmark Based on 2019 Commercial Building Energy Performance Reporting



GRID INTERACTIVE EFFICIENT BUILDINGS (GEBs)

The Energy Trust is interested in evaluating strategies for their new office which support their new Grid-Interactive Efficient Buildings program (GEBs). The intent of the program is to encourage building operators to manage the timing of electricity consumption and associated peak demand on the utility grid. Strategies can include: setpoint adjustment (space temperature, lighting controls), electrical battery energy storage systems (BESS), and thermal storage that reduces peak electricity use (e.g. hot/chilled water storage).

RECOMMENDATIONS

Base Project Requirements:

The BMS is set up to receive a demand response signal from the utility. The BMS automatically adjusts the following setpoints in the ETO tenant space:

- Lighting setpoints (via BACnet integration with lighting controller)
- Space cooling setpoint (adjusts upward by adjustable offset).

Additional strategies requiring further study:

Based on initial evaluation of the electrical and water systems on Levels 9 and 10, there is likely little benefit or ability for local battery or thermal storage within the ETO space, however, the base building is likely to require central upgrades to comply with the forthcoming Oregon Building Performance Standard. A separate study would be required to evaluate and make recommendations for strategies at the building level that can reduce total energy consumption and/or peak electrical demand. Including:

- Heat recovery chiller (to reduce total energy consumption)
- Central air to water heat pumps (to reduce total energy consumption)
- Thermal storage (to reduce peak demand)
- Battery storage (to reduce peak demand)

1.4 Codes and Standards

The following codes, guidelines, regulations and other references that will be put into practice in the design of the building.

- 2021 Oregon Energy Efficiency Specialty Code
- 2023 Oregon Electrical Specialty Code
- 2022 Oregon Mechanical Specialty Code
- 2023 Oregon Plumbing Specialty Code
- 2022 Oregon Structural Specialty Code
- 2022 Oregon Fire Code
- ASHRAE Standard 62.1-2022 – Ventilation for Acceptable Indoor Air Quality
- ASHRAE Standard 55-2023 – Thermal Environmental Conditions for Human Occupancy
- ADA or Uniform Federal Accessibility Standards
- National Fire Protection Association (NFPA) Standards



2.0 Mechanical

2.1 Design Criteria

The following tables illustrate the design criteria that will be utilized to design the facility systems.

Table 1: Outdoor Conditions

Operation	Reference	Temperature
Cooling	ASHRAE 0.4% (Dry Bulb/Mean Coincident Wet Bulb)	92°F/68°F
Heating	ASHRAE 99.6% (Dry Bulb)	25°F

Table 2: Indoor Climate Conditions

Occupancy	Relative Humidity	Cooling	Heating
Offices	n/a	75°F ±2°F	70°F ±2°F
Conference Rooms	n/a	75°F ±2°F	70°F ±2°F
Corridors	n/a	78°F ±2°F	68°F ±2°F
Restrooms	n/a	78°F ±2°F	68°F ±2°F
Vestibules	n/a	n/a	50°F ±2°F
Storage	n/a	80°F ±2°F	60°F ±2°F
IDF Spaces	n/a	80°F ±2°F	60°F ±2°F

Table 3: Minimum Airflow Rates

Occupancy	¹ Outdoor Air	Supply Air	Exhaust Air
Offices	(5CFM/person + 0.06CFM/sf) + 30%	varies	n/a
Conference Rooms	(5CFM/person + 0.06CFM/sf) + 30%	varies	n/a
Corridors	0.06 CFM/SF + 30%	varies	n/a
Restrooms	n/a	n/a	2 CFM/SF
Vestibules	n/a	n/a	n/a
Storage	0.06 CFM/SF + 30%	varies	n/a
IDF Spaces	0.06 CFM/SF + 30%	varies	n/a

Outdoor air based on 2022 Oregon Mechanical Specialty Code plus an additional 30%.



Table 4: Acoustical Design Guidelines

Occupancy	Room Criterion
Offices	40
Conference Rooms	30
Corridors	40
Restrooms	40
Vestibules	n/a
Storage	50
IDF Spaces	50

Table 5: Internal Loads

Occupancy	Occupant Density	Plug Load	Lighting Load
Offices	200 SF/person	Base on installed equipment	Base on installed lighting.
Conference Rooms	20 SF/person	Base on installed equipment	Base on installed lighting.
Corridors	n/a	0 W/sf	Base on installed lighting.
Restrooms	n/a	0 W/sf	Base on installed lighting.
Vestibules	n/a	0 W/sf	Base on installed lighting.
Storage	n/a	0 W/sf	Base on installed lighting.
IDF Spaces	n/a	Base on installed equipment	Base on installed lighting.



Table 6: Duct and Pipe Sizing Criteria

Low-Pressure Ductwork	
Static Pressure Loss	Maximum 0.10 inches water column per 100 feet
Concealed Velocity	Maximum 1,500 feet per minute
Exposed Velocity	Maximum 1,000 feet per minute
Flexible Ducts	Maximum length 8 feet, minimize total 90-degree bends
Medium-Pressure Ductwork	
Static Pressure Loss	Maximum 0.20 inches water column per 100 feet
Concealed Velocity	Maximum 1,800 feet per minute
Exposed Velocity	Maximum 1,400 feet per minute
Hydronic Piping	
Static Pressure Loss	Maximum 4 feet water column per 100 feet
Velocity	Maximum 7 feet per second

2.2 HVAC Systems

EXISTING CENTRAL AIR SYSTEM

Two existing central fan systems (SF-2 and SF-3) supply tempered mixed air to each floor. Central air shafts provide return/relief from each floor, without the use of return fans.

Each fan system has modulating outside air and return air dampers with an apparent minimum outside air damper position of 20%.

EXISTING CENTRAL HYDRONIC SYSTEMS

Heating water for the building is generated by three natural gas fired boilers with dedicated primary loop pumps. Two secondary loop pumps serve the building heating water loop. During PAE's site walk, the heating water temperature setpoint was 135°F, though the control screen appeared to indicate a reset schedule is applied based on outdoor air temperature.

Chilled water for the building is generated by two water cooled chillers and cooling towers. A heat exchanger between the building chilled water loop and condenser water loop provides water side economizer. During PAE's site walk, water wide economizer was active and the chilled water supply temperature to the building was 57.6°F.

The building operators reported ample capacity in both the heating water and chilled water central equipment.



SCOPE OF WORK: PRE-BALANCING AND CONTROLS INVESTIGATION

As part of the design phase during this project, perform a pre-balance and controls investigation of the central equipment to determine the following:

- SF-2 and SF-3 Outside air percentage at minimum damper position.
- SF-2 and SF-3 Total supply flow at full speed with terminal equipment open.
- Supply air “budget” for Levels 9 and 10.
- Primary air temperature minimum and maximum setpoint and associated outside air minimum and maximum.
- Heating water temperature minimum and maximum setpoint and associated outside air minimum and maximum.
- Chilled water temperature minimum and maximum setpoint and associated outside air minimum and maximum.

2.3 Terminal Heating/Cooling Equipment

EXISTING EQUIPMENT

The 9th and 10th floors are currently served by single duct variable air volume terminal units which modulate the primary air to each zone. Primary air is ducted to mixing box inlets on 4-pipe fan coils which provide zone heating and cooling. Ventilation air is relieved via openings directly into the return air shafts.

Existing hot water convectors exist on each floor around the perimeter but have been abandoned in place.

SCOPE OF WORK:

The overall intent is to repurpose as much of the existing equipment, ductwork, and piping as practical to meet the new program requirements. The attached proposed zoning diagrams are intended to support this intent.

Note that primary airflow to each zone must be sized for the minimum ventilation rate of the zone accounting for the outside air percentage of the primary air (i.e. the primary air is not 100% outdoor air). Include an assumption for overall occupant diversity in the building in this calculation. This is anticipated to be a driving factor for equipment sizing in some locations due to the relatively low amount of outside air in the primary air supply.

Level 9 areas will continue to use terminal units and fan coils with new equipment provided where required to meet the new programming. As indicated in the attached zone diagrams some ductwork will need to be modified. Terminal units and fan coils will need to be evaluated for capacity and reuse.

Because the TI space on Level 10 is limited to three new high occupancy zones. The amount of primary air required to ventilate the spaces is expected to provide the required cooling capacity, without fan coils. Accordingly, these new perimeter zones are served by new fan powered terminal units with reheat coils. The interior catering kitchen is served by the existing fan coil serving that area. The following terminal equipment is estimated to serve the TI space:



- (22x) Variable air volume terminal without reheat units serving fan coils (sizes vary)
- (22x) 4-Pipe fan coil units with heating and cooling coils (sizes vary)
- (4x) Fan powered terminal units with reheat coil (sizes vary)
- For initial pricing assume (5x) new 4-pipe fan coils and (5x) new VAV boxes and the remainder are to be reused or relocated. Include unit pricing if final quantities vary.
- Assume all new (4x) fan powered terminal units with reheat. Include unit pricing if final quantities vary.

2.4 Exhaust Systems

Existing central exhaust systems serve core restrooms and single user restrooms and will remain. The existing branch serving the single user restroom will be extended to serve the new restroom, duct size will be increased as needed to meet new airflow needs.

2.5 Controls

An existing Honeywell direct digital control (DDC) system installed by Macdonald Miller controls and monitors HVAC equipment and systems. PAE understands there may be another legacy control system in the building serving some equipment. All new or modified equipment will be integrated into the existing DDC system including graphics. Assume connection to the Honeywell system but confirm with building owner. The control system will perform all required control functions, including optimization of equipment and system performance, reliability, equipment life, and energy consumption.

METERING AND VERIFICATION

Integrate data from new electrical sub-meters provided by division 26 into the BMS. Assume 8 electrical sub-meters on levels 9 and 10 each with a BACNet connection provided by division 23. The BMS stores and displays data including graphics for hourly, daily, monthly and annual energy consumption for each meter and totalized by end use (mechanical, lighting, plug loads). The BMS also responds to and displays peak demand response signals received from the utility – refer to the Sustainability section of this narrative for additional requirements.



3.0 Plumbing

3.1 Design Criteria

Table 7: Plumbing Piping Sizing Criteria

Domestic Water Piping	
Minimum Pressure	35 PSI at most remote outlet
Maximum Pressure	70 PSI
Friction Loss	Maximum 3 PSI per 100 feet
Velocity	Maximum 6 feet per second (Cold & Non-potable Water) Maximum 5 feet per second (Hot Water) Maximum 3 feet per second (Hot Water Return)
Sizing	Per Code (OPSC 2023)
Distribution Piping	Type L, Hard drawn copper tubing, Soldered\brazed fittings
Domestic Water Insulation	Domestic Cold Water: 1-1/4-inch and smaller, 1-inch thick fiberglass, all-purpose jacket or elastomeric. 1-1/2-inch and larger, 1-1/2-inch thick fiberglass, all-purpose jacket or elastomeric. Domestic Hot Water (supply/return): 3/4 inch and smaller, 1-inch-thick fiberglass, all-purpose jacket or elastomeric 1 inch and larger, 1-1/2 inch thick fiberglass or all-purpose jacket
Waste and Vent Piping	
Piping Slope	Minimum 1/4 inch per foot for piping less than 4 inches, 1/8 inch per foot for 4 inches and larger
Sizing	Per Code (CPC 2016)
Material	Service weight cast iron with no-hub couplings



3.2 Plumbing Fixtures

Commercial grade low flow fixtures will be provided where indicated on the architectural drawings. Refer to table below for representative flow rates for each type of fixture.

Table 8: Plumbing Fixture Types and Locations

Fixture	Location	Type	Control	Flow*	Basis of Design	Notes
WC-1 Water Closet	Restrooms (ADA)	Wall hung, vitreous china	Sensor Operated flush valve	1.28 GPF	Kohler water closets with Sloan flush valve	Seat at 18 inches above floor, centerline at 17 inches from wall
L-1 Lavatory	Restrooms	Counter mounted, vitreous china	Sensor Operated	0.5 GPM	Kohler sink basin with Delta faucet	All locations are ADA accessible
S-1 Sink	Kitchenettes	Self rimming, counter mounted, Stainless steel	Single lever faucet, swing spout	1 GPM	Elkay sink basin with Delta faucet	ADA faucet
S-2 Sink	Lactation room	Self rimming, counter mounted, Stainless steel	Dual handle faucet, goose neck spout	1 GPM	Elkay sink basin with Delta faucet	ADA faucet
S-3 Sink	Prep room	Self rimming, counter mounted, double compartment, Stainless steel	Dual handle faucet, goose neck spout	1.5 GPM	Elkay sink basin with Delta faucet	ADA faucet

*Code minimum flush/flow rates.

3.3 Plumbing Systems

Existing cold water, hot water supply, hot water return, waste and vent piping serves existing fixtures. Domestic hot water heaters are located at the floor level – PAE understands some water heaters may serve more than one floor. The scope of work includes the following:

- Domestic hot water heating: Verify level 9 and 10 water heater capacities and which floors they serve.
- Core Restrooms: No change. Existing fixtures to remain.
- Break room relocation: The existing break room sinks will be demolished. New breakroom sinks will be located on the other side of the wall. It is expected that piping can be reconfigured in the area with new connections for ice machine, coffee maker, and refrigerator. Include undercounter hydromechanical grease interceptor in initial pricing and confirm with authority having jurisdiction if required based on final fixture selections.
- New single user restroom located at existing mother's room, and new mothers room located at existing adjacent conference room. There is an additional water closet and lavatory installed in this area. Assume cold water, hot water, waste and vent piping needs



- to be demolished and replaced with larger piping back to mains and field verify existing pipe size. Coordinate new waste routing with building owner and 8th floor tenants.
- New catering prep room on Level 10: New sink. New cold water, hot water supply, hot water return, waste and vent piping will be extended from either the 9th or 10th floor hot water systems in coordination with the building owner and 10th floor tenants. Include undercounter hydromechanical grease interceptor in initial pricing and confirm with authority having jurisdiction if required based on final fixture selections and room usage.



4.0 Fire Protection

4.1 Design Criteria

The project fire protection system will be designed in accordance with the following standards, State Fire Code, and local Fire Marshall requirements.

- NFPA 13: Standard for the Installation of Sprinkler Systems
- NFPA 25: Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems
- NFPA 70: National Electrical Code
- NFPA 72: National Fire Alarm Code

4.2 General

CORE AND SHELL FINISH

Reuse the existing wet pipe sprinkler system to the extent possible with coverage per NFPA 13 spacing guidelines using upturned sprinklers for future tenant renovations. Minor pipe modifications and head redistribution are anticipated to coordinate with new finish walls. Please refer to the provided area classification floor plans.

HYDRAULIC CALCULATIONS

Water supply data provided by either Authority Having Jurisdiction Hydraulic Model or by test using a minimum of two hydrants as close to the point of connection as possible. Hydraulic calculations will commence at the gauge hydrant used in the waterflow test and include the backflow prevention device as well as all fire protection system valves and include fittings with a 10 psi safety factor. Water data will be confirmed at the project location.

EXTENT OF SPRINKLER COVERAGE

The TI area will be fully sprinklered in accordance with the building codes and current local codes. Ordinary electrical equipment rooms, telephones closets, housekeeping closets and similar areas will be provided with sprinklers. Sprinkler protection is permitted to be omitted in main electrical switchgear and generator rooms provided with direct access to the outside and enclosed by two-hour fire rated construction. Additional areas where sprinkler protection is permitted to be omitted per NFPA 13 will be presented to the Authority Having Jurisdiction for final acceptance.

SYSTEM ZONING REQUIREMENTS

Coordination of the building sprinkler zone boundaries with the provided smoke and/or fire partitions.



4.3 Materials and Components

All fire protection system materials and associated components must be listed and/or approved and installed in strict conformance to the conditions of their manufacturer listing.

SPRINKLER PIPING

Only steel pipe with a Corrosion Resistance Ratio (CRR) of one or greater will be used.

Schedule 5 pipe will not be accepted in any size.

Schedule 10 steel pipe are permitted to be used only with listed roll groove end fittings.

Schedule 40 steel pipe are permitted to be used only with threaded end fittings.

FITTINGS AND JOINTS

All fittings must be listed or approved for the specific pipe and type of system they are used on. Gasketed fittings will be installed only with the lubricant used by the manufacturer to obtain its listing.

The following joining methods are approved for steel pipe, except that threading or cut groove fittings are accepted for use only on fully compliant Schedule 40 and heavier pipe:

- Threading
- Shop Welding
- Cut Groove with Gasket Fitting
- Roll Groove with Gasket Fitting

Plain end, hooker, press-on, or slip type metal fittings are not permitted. As mixing different brands may cause problems due to variations in design dimensions and tolerances, all grooved metal products on a job must be provided by the same manufacturer.

SPRINKLER HEADS

Finished areas with ceilings will be provided with concealed pendant type heads. Coordinate color with architect.

Areas without will be provided with upright type heads.

Light hazard occupancies will be provided with Quick-Response heads.



5.0 Electrical

5.1 Service and Distribution

BUILDING MAIN POWER SERVICE

The Power & Light Building has multiple electrical services provided by Pacific Power at both 480Y/277V and 208Y/120V. The tenant improvement areas on the 9th and 10th floors are fed via the Public Service Building Distribution and Electrical Service #2. Public Service Building Distribution board is sized at 4000-amp, 208Y/120V, 3-phase, 4-wire and feeds multiple floors of the building used for tenant occupancy. There is also a 400-amp, 480Y/277V busduct riser off Electrical Service #2 with a 100-amp bus plugs at floors 9 and 10 serving a 100A, 480Y/277V, 3-phase, 4-wire panelboard at each floor.

FLOOR 9 & 10 DISTRIBUTION

The 9th and 10th floors are served from (4) individual 208Y/120V, 3-phase 4-wire panels located throughout the floor area. These 208-volt panels feed receptacle, lighting and small equipment loads. These panels have individual conduit and conductor feeders routed through the building down to the sub-basement to the Public Service Building Distribution.

On the 9th floor, panels "9L" and "9R" are located on either side of the elevator core. Panel "9N" is located on the north side of the building while panel "9S" is located on the south side of the building. Both "9N" and "9S" are in existing storage rooms.

On the 10th floor, panels "10L" and "10R" are located on either side of the elevator core. Panel "10N" is located on the north side of the building while panel "10S" is located on the south side of the building. Both "10N" and "10S" are in existing storage rooms.

The 9th and 10th floors have a 480Y/277V, 100A, 3-phase, 4-wire panels fed from the 400-amp busduct riser through the north side of the building. Panel L-9 is in a 9th floor storage room and feeds mechanical units on the floor. Similarly, panel L-10 is in a 10th floor storage room and feeds mechanical units on the floor.

FLOOR 9 & 10 MODIFICATIONS

Based on the new program layout of the tenant improvement all existing panelboards on levels 9 and 10 can remain in their current locations and are anticipated to be adequate to support the new program. Any required modifications will be at the branch circuit level. At level 9, existing branch circuits within all (5) panels located on the floor serving existing receptacles, lighting and mechanical units will be maintained or reused wherever practical. New branch circuits will be utilized from the nearest branch panel as needed to meet the new program layout on the floor. At level 10, the existing circuits existing receptacles, lighting and mechanical units will be maintained or reused wherever practical. New branch circuits will be utilized from panels "10R" and "10L" as needed to meet the new program layout on the floor.

Flexibility

The power distribution system will be developed to provide flexibility for reconfiguring spaces as much as possible while still using the existing branch circuit system that is in place. All



areas provided with new branch circuits will also be developed to provide as much flexibility as possible. The presentation and conference rooms on level 10 will be developed in a way that allows for maximum flexibility and usability of the space. strategies such as floor power in the form of fire rated poke throughs along with perimeter receptacles can be utilized to allow for many uses of the space.

Branch Circuit Wiring

Existing conduit and conductors to existing receptacle will be maintained wherever practical and devices match the needs of the new program. For any new branch circuits, copper conductors routed in EMT raceway will be used throughout the building for branch distribution. Flexible metal clad (MC) cabling will be used in office areas, meeting rooms, and other enclosed spaces for local distribution of branch circuits, the homeruns back to the panel will be EMT/copper conductors. MC cable permitted from junction box above accessible ceiling to devices in the same room and between rooms.

New branch circuits will not utilize shared neutrals and instead each new branch circuit will be provided with its own neutral conductor. Ground fault circuit interrupter receptacles will be provided in toilet rooms at sinks, break rooms, roof, outdoors, and other wet locations where required by code.

Load types will be segregated on panels to prevent large mechanical loads from affecting power quality of general-purpose branch circuitry.

All devices to be heavy duty specification grade with thermoplastic cover plates. Provide adhesive label on all receptacle and equipment connection cover plates indicating serving branch panel and circuit number. Provide typewritten, updated panelboard schedules for each affected branch panel.

The presentation and conference rooms on level 10 are anticipated to contain fire rated poke throughs and additional perimeter power to support flexible use of the space.

Automatic Receptacle Control

Wherever possible, automatic control of receptacles will be utilized to in the following space types:

- Private Offices
- Conference Rooms
- Copy/Printing Rooms
- Break Rooms
- Desk/Workstations



New receptacles provided in the spaces noted above will be wired as controlled receptacles. Re-wiring of existing devices may be required for open office furniture at the perimeter of the space. The design for this tenant improvement is to provide a relay connection to the timeclock to turn off the controllable outlets after hours. Plug load control modules will tie into the lighting control system and will utilize the lighting system timeclock for automatic control of each of the designated plug loads that require this functionality. Receptacle devices will be provided in the aforementioned location types that will allow the top receptacle to be controlled while the bottom receptacle is uncontrolled. In some instances, fully controlled receptacles will be utilized in lieu of half controlled devices. The receptacle will clearly identify which outlets are controlled and which is uncontrolled for each duplex receptacle using a distinguishing mark or color.

Equipment Connections

Electrical power connections will be made to all mechanical equipment, to include providing all electrically associated devices such as disconnect switches, contactors, magnetic or manual starters, lock-out switches, etc., not furnished under Division 23. VFDs are furnished under Division 23 and installed under Division 26.

Electrical power connections will be made to support miscellaneous HVAC equipment. Connections include disconnect safety switches and wiring to support interlocks to remote devices. New branch circuits will be provided from the 480Y/277V panel to new fan coil units and fan powered boxes on the 9th and 10th floors.

- (4) fan powered terminal units with reheat
- (5) fan coil units

Grounding System

A grounded power system will be provided in compliance with the NEC. The existing grounding system will be extended thru out all electrical systems in facility. All metallic systems will be grounded to the building grid. An equipment grounding conductor will be provided in all feeder and branch wiring runs.

ENERGY MANAGEMENT

The electrical distribution system will incorporate metering and system performance tracking at all feeders for panels located within the tenant improvement space per the Oregon Energy Efficiency Specialty Code 8.4.2 (OEESC). The metering will provide information on system loading and power quality as well as tracking individual energy usage of the various system types throughout the building. System types tracked separately shall be:

- Total Electrical Energy
- HVAC Loads (Cooling, Fans, etc.)
- Plug Loads (General Outlets, Plug Equipment and Small Appliances)
- Interior Lighting Loads

The electrical monitoring system shall record at 15-minute intervals and be equipped with hourly, daily, monthly and annual tracking. The energy data will be transmitted to a digital control system for informational purposes.



Meters to monitor and record the applicable loads on the 9th floor will be added to all 208Y/120V, and 480Y/277V panels. This will allow for load data on this floor to be accounted for and tracked. On the 10th floor, branch level circuit metering will be required. The tenant improvement area on this floor does not have a dedicated panel serving the area so branch circuits serving the area will be individually monitored to meet the requirements of OEESC 8.4.2.

5.2 On-Site Power Systems

EMERGENCY GENERATOR

Emergency power is provided to the building by a 480Y/277V, 3-phase, 4-wire generator. The generator serves two automatic transfer switches (ATS) located in the basement. These ATS's feed 480-volt emergency lighting panels up through the building. Each panel feeds 2-3 floors each and is shared between tenants on those floors. The tenant improvement on the 9th and partial 10th floor space will utilize existing 480-volt emergency panel E11 located on the 11th floor. Panel E11 is located in a storage room closet on the south end floor and has a feeder to a dry-type 208Y/120V, 3-phase, 4-wire transformer which feeds a 208Y/120V panel named E11-A. E11-A has feeds to the 9th, 10th and 11th floors.

Emergency loads will be limited to emergency lighting located in the tenant improvement areas meeting the criteria of NEC 700. Existing branch circuits from panels E11 and E11-A will be maintained to emergency lighting designated to remain. The extension of existing branch circuits or new branch circuits will be provided from panels E11 and E11-A to new emergency lighting as needed due to program and layout modifications.

5.3 Fire Alarm

SYSTEM DESCRIPTION

The tenant improvement space on the 9th and 10th floor has an existing horn/strobe fire alarm system that will be maintained, provide a design/build modification of this system where needed to accommodate the new program. The 9th floor has an existing Notification Amplification Circuit (NAC) Panel located in a closet on the north side of the building elevator core.

The main system components will remain as existing. End use devices such as horns, combination horn/strobes, strobes and addressable relays will be modified as needed to match the new program layout.

5.4 Low Voltage Systems

Provide backbox and pathway rough-in for low voltage devices including telecommunications, audio-visual, and access control systems. Coordinate requirements with system design or installing vendor, anticipate 2-gang backbox with 1" C to accessible ceiling for a typical outlet.



5.5 Lighting and Lighting Controls

LIGHTING

Lighting design will be provided by the lighting subconsultant. Provide branch circuit power connections from existing lighting circuits saved from demolition.

LIGHTING CONTROLS

The lighting control system will be a distributed network control system using category cable to interconnect the lighting control devices, luminaires, bridges, and the user interface station. Basis of design Acuity nLight or similar system.

Daylighting harvesting will be pursued wherever practical along the building perimeter. When adequate daylight is available in a space, luminaires will be dimmed or turned off.

Control of lighting will be provided by the following methods for the respective tasks/areas:

Table 9: Lighting Control Methods by Area

Task/Area	Control Method
Corridor	Corridor Occupancy Sensor
Maintenance Spaces	Manual on/off
Restrooms	Occupancy Sensor (with manual override)
Building Interior – Perimeter	Photocell – Daylight Dimming
Conference Rooms	Vacancy Sensor (with manual on/off, raise/lower)
Enclosed Offices/Phone Rooms/Huddle Rooms	Vacancy Sensor (with manual on/off, raise/lower)
Open Offices	Vacancy Sensor (with manual on/off, raise/lower)
Presentation Spaces	Vacancy Sensor (with manual on/off, raise/lower), integration with AV as required for presentations.
Storage Spaces	Combination on/off control with occupancy sensor
Catering Kitchen/Breakroom	Vacancy Sensor (with manual on/off, raise/lower)



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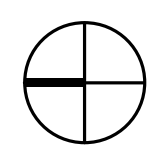
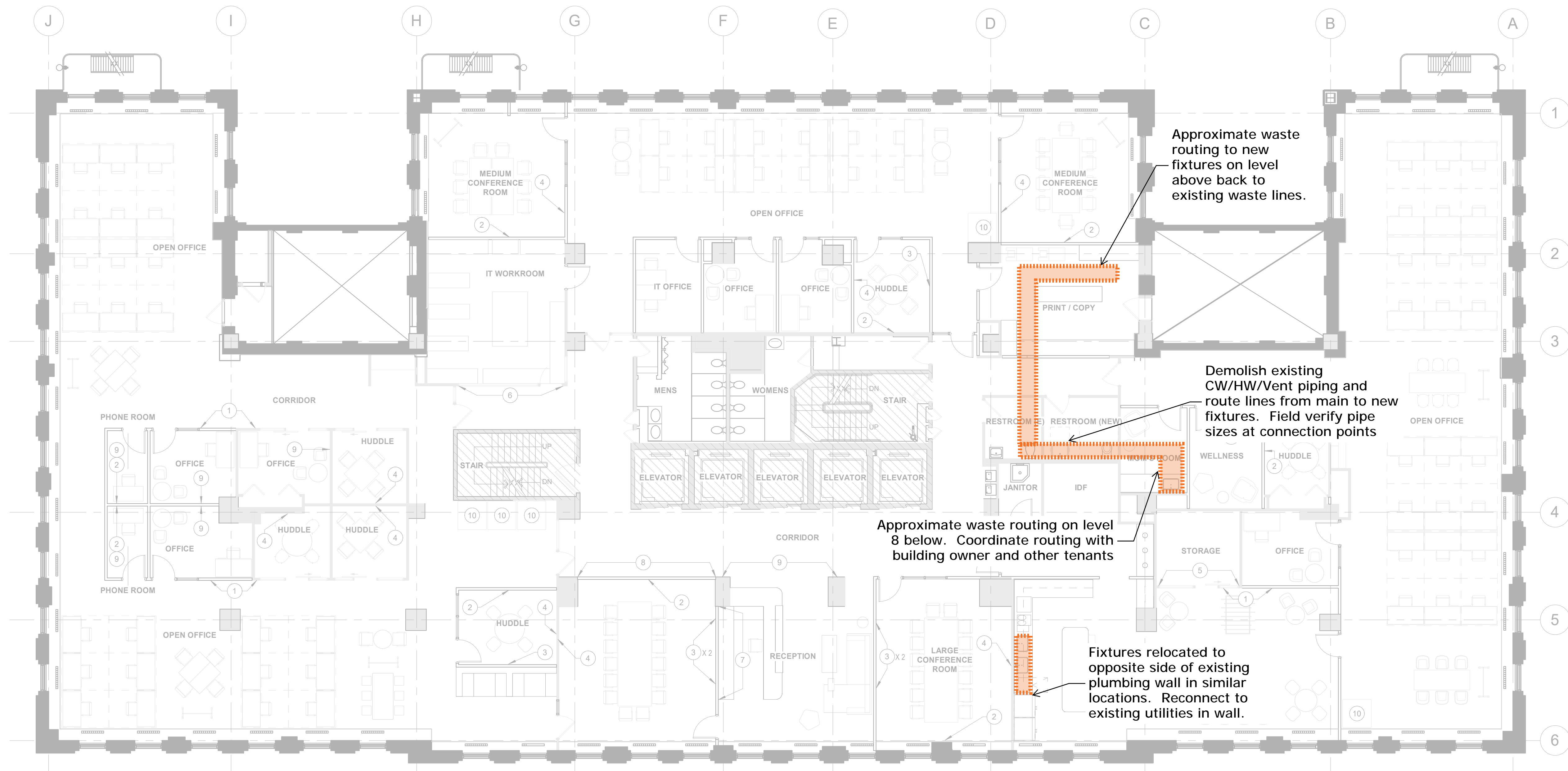
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PROJECT NO: 2403023

FLOOR PLAN -
LEVEL 09

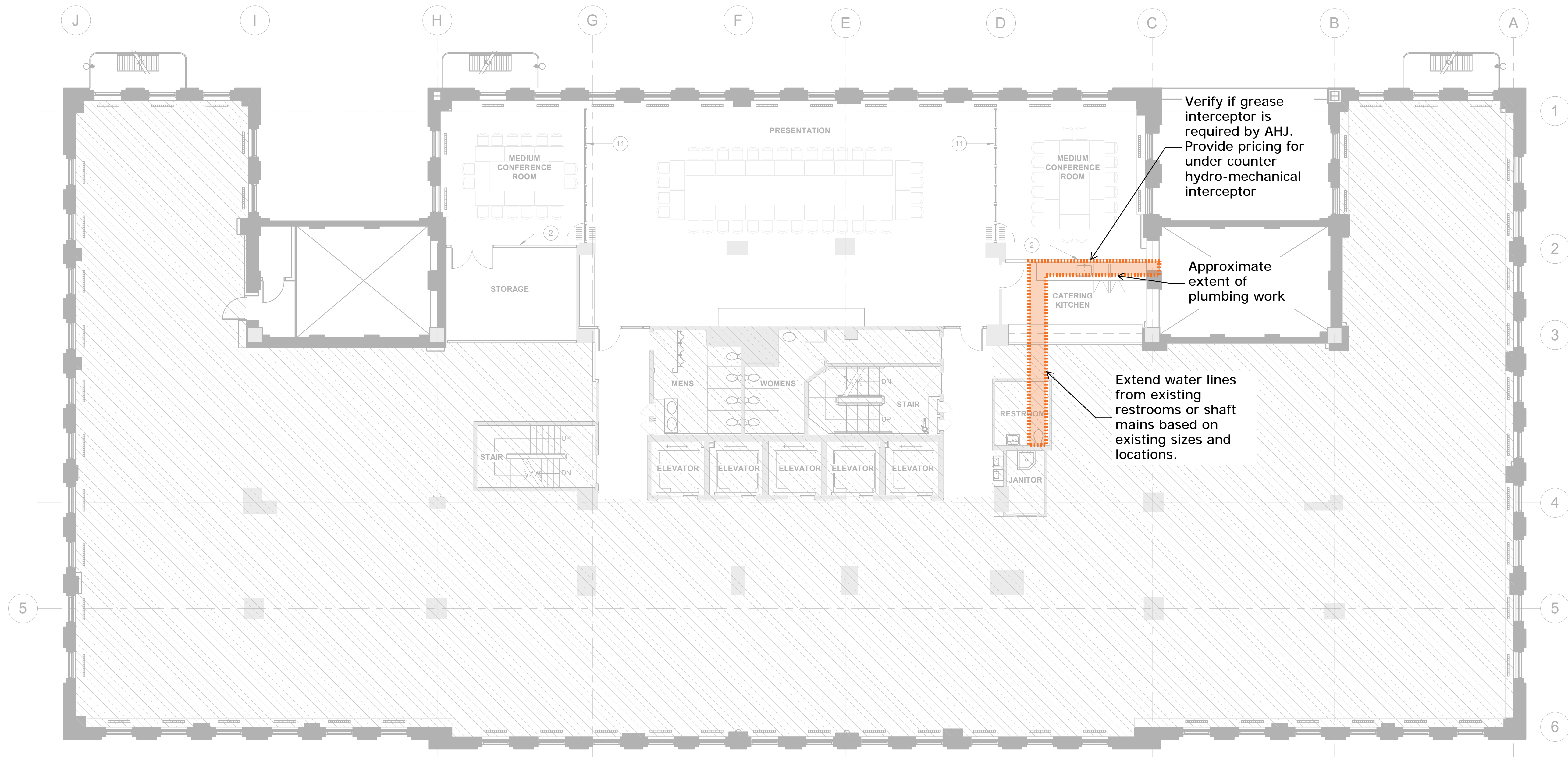
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1 FLOOR PLAN - LEVEL 09

1/8" = 1'-0"



1 FLOOR PLAN - LEVEL 10
1/8" = 1'-0"



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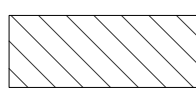


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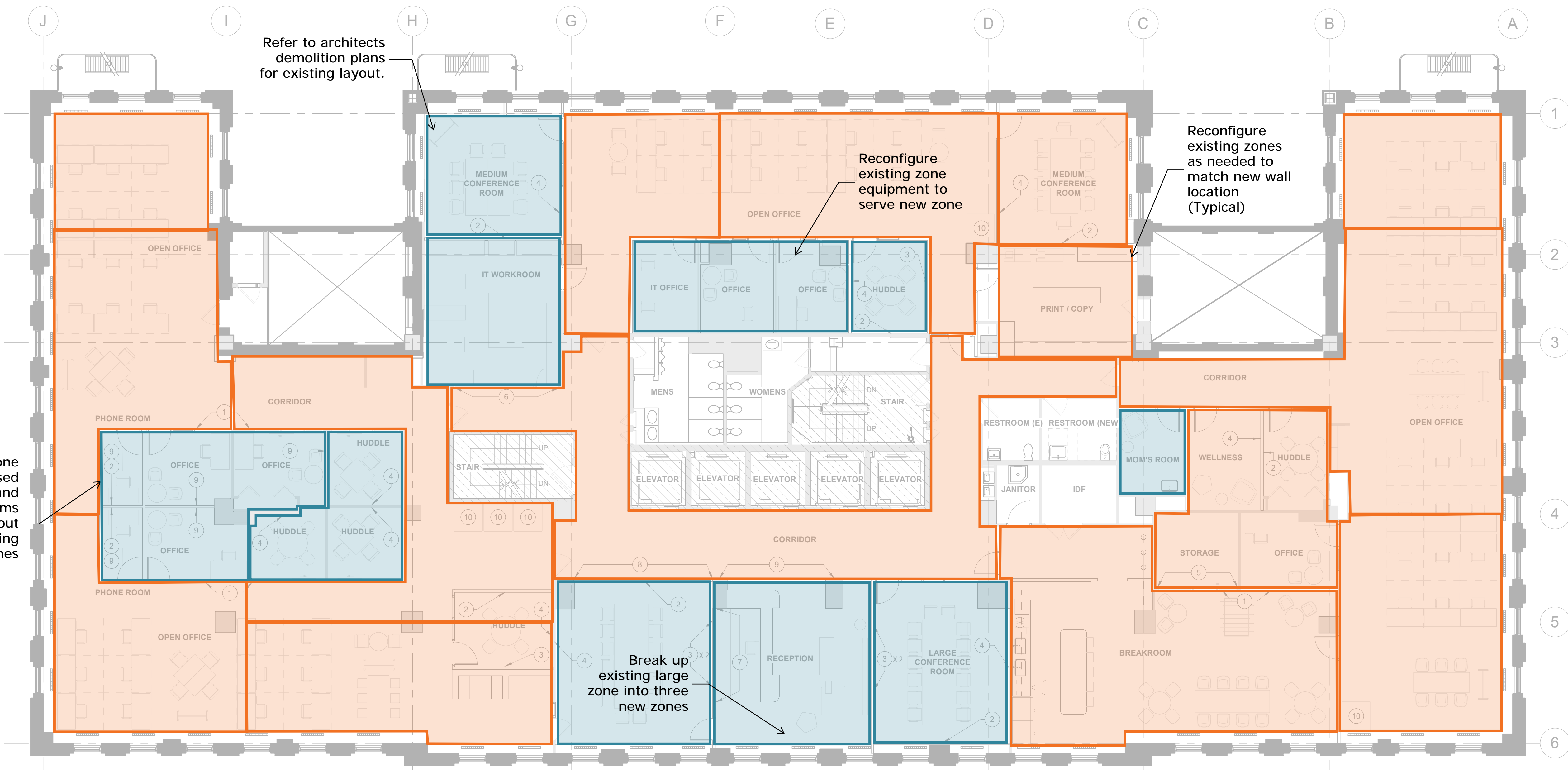
FLOOR PLAN -
LEVEL 10

P102

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LEGEND - FLOOR PLAN

-  NOT IN CONTRACT / WORK LIMIT LINE
-  Existing zones to remain
-  New zones



 **1** FLOOR PLAN - LEVEL 09
1/8" = 1'-0"



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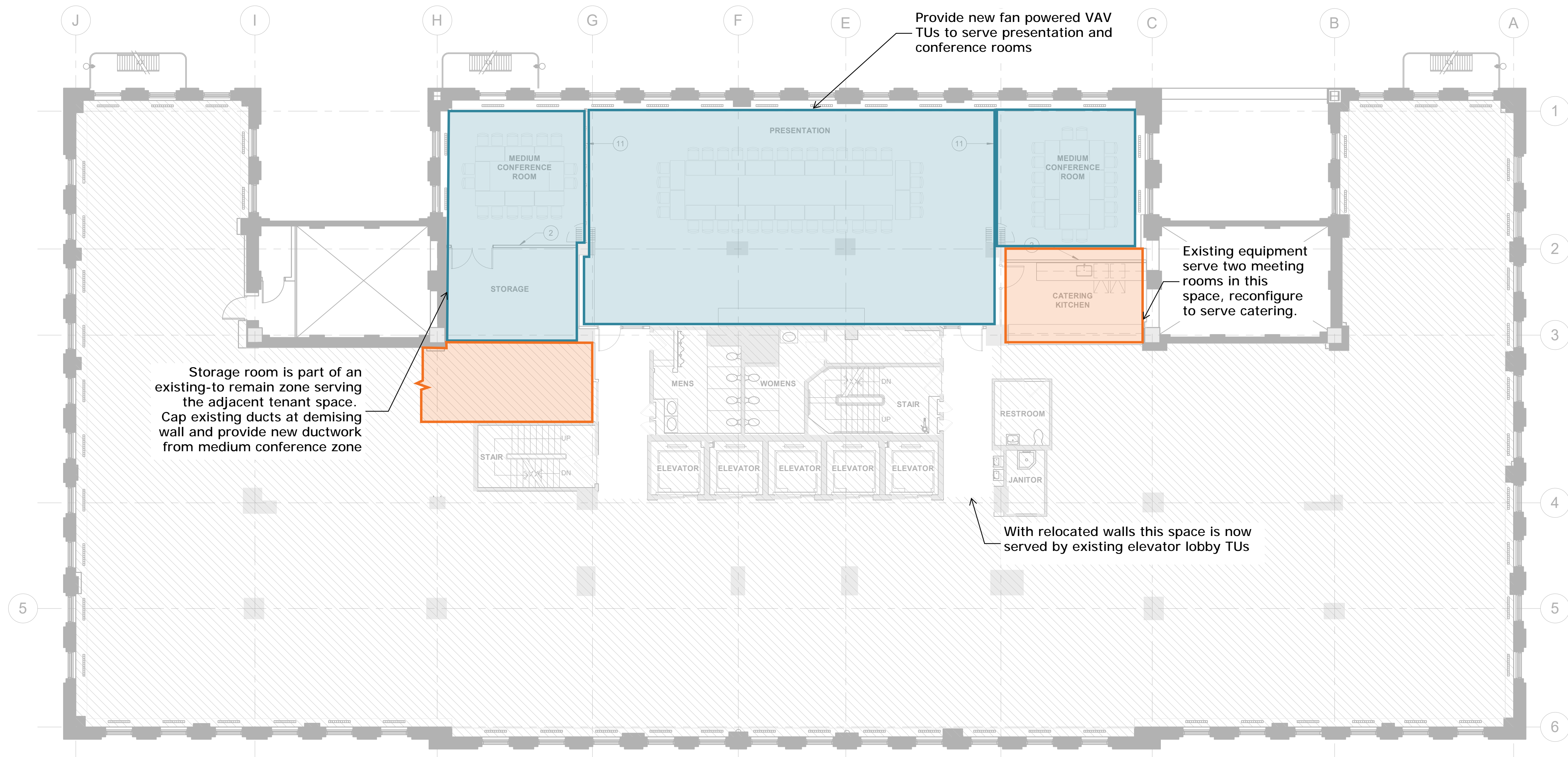
FLOOR PLAN -
LEVEL 09

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LEGEND - FLOOR PLAN

-  NOT IN CONTRACT / WORK LIMIT LINE
-  Existing zones to remain
-  New zones



 **1** FLOOR PLAN - LEVEL 10
1/8" = 1'-0"



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FLOOR PLAN -
LEVEL 10

M102

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December 4, 2024

Energy Trust of Oregon Power + Light Building Tenant Improvement Schematic Design Finish Narrative

DEMO NOTES

1. Demo all areas per AD100 & AD200 series sheets.
2. Protect all existing floor and wall base finishes in place, UNO.
3. Salvage all existing light fixtures from demo for reuse per new suite layout.
4. Salvage all existing TVs, monitors, and whiteboards from demo for reuse per new suite layout.
5. Salvage existing hardwood floor from demo for reuse per new suite layout.
6. Store excess hardwood for future tenant improvements.

CONSTRUCTION NOTES

Building Core

1. Elevator lobby and suite floor finishes to remain. Protect in place during construction.
2. All core doors to be painted.
3. Provide card reader at all doors between tenant suites and public corridors suite entrances.

Electrical

1. See MEP Narrative.
2. Clean grills and vents for like new appearance, paint if needed.
3. Replace all existing "ivory" outlets with new building standard white outlets, UNO. New outlets to be installed at 18" AFF.
4. Provide cat-6, or tenant standard cabling as required.
5. Existing electrical to remain in rooms that are not being demolished.

Plumbing

1. See MEP Narrative.
2. Existing building core restrooms to remain.
3. New Single User Restroom:
 - a. Provide all equipment necessary for ADA compliance.
 - b. Provide a wall mounted baby changing station.
 - c. Finishes to match existing single user restroom.
4. Provide plumbing in Breakroom, Mom's Room, and Catering Kitchen as required.
5. ADD ALT: Replace fixtures in core restrooms to meet current code flow requirements.

Floors

1. Replace damaged flooring as required with salvaged materials from demolished spaces.
2. Wood flooring to remain throughout, UNO. Patch flooring as required with salvaged material from demolished spaces.
3. Carpet flooring to remain in existing rooms, UNO. Provide new, similar carpet tile as required. Basis of Design Finishes:
 - a. Sisal Carpet Tile in Driftwood (to match existing)
 - b. ADD ALT: Shaw In Common Carpet Tile in Link Color 50375
4. Provide wall base to match existing at all new locations.

Ceiling & Lighting

1. Provide new ACT ceilings at all new enclosed rooms.
2. Provide new switching and controls as needed for new suite layout.
3. Provide new pendant light fixtures at main corridors as indicated on A201 Ceiling Plan.
4. ADD ALT: Spray applied k-13 in standard white in open office areas.

Doors & Relites

1. New black aluminum swing doors with full lites in black aluminum frames with a maximum 4" integral ¼" tempered glass sidelight at all new private offices, meeting rooms and phone rooms to match existing, UNO.
2. Provide 2 new folding wall systems with integrated doors at locations indicated.
 - a. Basis of Design Option 1: DIRTT Leaf Folding Wall - Ceiling Mounted
 - i. Provide new steel W12x26 beam above suspended door and associated connections to existing structure
 - b. Basis of Design Option 2: NanaWall Generation 4 - Floor Mounted
 - i. Provide new steel W12x26 beam below floor supported door and associated connections to existing structure
 - ii. The beam will be supported from the existing structure and be installed with grout between the existing floor and the top of the beam to ensure bearing on beam.

Banquette Seating

1. Salvage and reinstall existing banquette seating as required.

Gypsum Wall Board

1. Gypsum wallboard to be painted, with a Level 4 finish. Gypsum wallboard ceilings and soffits to be painted with a Level 5 finish. Walls which receive graphic wall covering to have a Level 5 finish.

Paint

1. New paint throughout, UNO.
2. All interior field-applied paints and coatings to contain zero VOC content.

Window Coverings

1. All existing window coverings to remain. Protect in place.

Signage

1. Signage update throughout to align with brand standards.

2. Provide any new FEC, AED and other FLS equipment to include ceiling mounted edge lit LED exit signage.

LEVEL 9 SPACES

Reception

1. Provide a built-in reception desk: 20 linear feet of wood millwork with solid surface countertop and transaction counter, return, cutouts for 2 height adjustable desks, and decorative wood tambour panel front. Provide an area for ADA access
2. Provide 12.5 linear feet of new AWI standard millwork lowers with doors and drawers, and a solid surface countertop for storage behind desk
3. Basis of Design Finishes:
 - a. Solid Surface: Silestone Loft in Nolita
 - b. Plastic Laminate: Wilsonart Atlantis D25
 - c. Tambour: Surfacing Solution Solid Wood Maple Tambor, Profile 505
4. Provide custom colored wood wall panels with backlit logo cutout.
 - a. Wood Panel: Pioneer Millworks Larch Cobalt
5. Wrap column at reception desk with wall covering.
 - a. Newwall Linear Field in Saffron
 - b. ADD ALT: Wrap 1 additional column in reception area
6. Provide high quality wall graphic in elevator lobby.
7. Provide 3 new pendant light fixtures above the reception desk.

Breakroom

1. **Kitchen Casework:** Provide 30 linear feet of new AWI standard millwork lowers & upper cabinets with doors and drawers, solid surface countertop and ceramic tile backsplash. Provide 16 linear feet of floating shelves above sink. Basis of Design Finishes:
 - a. Solid Surface: Silestone Loft in Nolita
 - b. Plastic Laminate: Wilsonart Atlantis D25
 - c. Plastic Laminate: Wilsonart Limber Maple
 - d. Tile Backsplash: Daltile Stagecraft in Galaxy
 - e. Tile Backsplash: TileBar Chance in Ice
2. **Island Casework:** Provide 12 linear feet of custom island casework with plastic laminate and decorative wood tambour panel finish and solid surface countertop. Basis of Design Finishes:
 - a. Solid Surface: Silestone Loft in Nolita
 - b. Plastic Laminate: Wilsonart Limber Maple
 - c. Tambor: Surfacing Solution Solid Wood Maple Tambor, Profile 505
3. **Trash & Recycling Casework:** Provide 7 linear feet of new AWI standard millwork lowers for trash and recycling, with finished edge grommets in solid surface countertop and ceramic tile backsplash. Basis of Design Finishes:
 - a. Solid Surface: Silestone Loft in Nolita
 - b. Plastic Laminate: Wilsonart Limber Maple
 - c. Tile Backsplash: Daltile Stagecraft in Galaxy
 - d. ADD ALT: Provide wall mounted decorative logo in LED strip lights above trash and recycling counter
4. **Equipment Requirements** (Provide plumbing and electrical as required):

- a. 2 x Sinks
 - b. 1 x Dishwasher (Basis of Design: Bosch 800 Series Dishwasher 24" Stainless Steel SGE78C55UC)
 - c. 2 x Refrigerators (Basis of Design: True Residential Side-By-Side 42" Stainless Glass Refrigerator TR-48SBS-SG-C)
 - d. 2 x Microwaves (owner provided)
 - e. 1 x Toaster Oven (owner provided)
 - f. 1 x Coffee Brewer (Coffee service provider)
 - g. 1 x Espresso Machine (owner provided)
5. Provide 3 new pendant light fixtures above the island.
 6. ADD ALT: Provide hot water dispenser at sink

Open Office

1. Provide floor or wall mounted power and data in open collaboration areas. GC to coordinate location with tenant and tenants furniture vendor.
2. Provide floor or wall mounted power and data feeds for system furniture. GC to coordinate location with tenant and tenants furniture vendor.
3. ADD ALT: Provide 60 linear feet of full height wall covering or high quality wall graphics.

Enclosed Offices X 6 & IT Office X 1

1. Salvage existing hardwood floor from demo for reinstall in locations per new suite layout.
2. Reinstall existing pendant light fixtures as indicated on A201 Ceiling Plan.
3. Provide new carpet tile and wall base to match existing. Basis of Design Finishes:
 - a. Sisal Carpet Tile in Driftwood (to match existing)
 - b. ADD ALT: Shaw In Common Carpet Tile in Link Color 50375
4. Two (2) duplex outlets and 1 data port.
5. One wall of accent paint and one wall of acoustic wall panel.
6. ADD ALT: One wall of wallcovering.

Typical Phone Room X 2

1. Salvage existing hardwood floor from demo for reinstall in locations per new suite layout.
2. Provide new carpet tile and wall base to match existing. Basis of Design Finishes:
 - a. Sisal Carpet Tile in Driftwood (to match existing)
 - b. ADD ALT: Shaw In Common Carpet Tile in Link Color 50375
3. One (1) duplex outlet and 1 data port in new phone rooms.
4. Reinstall 1 existing, salvaged pendant light.
5. Reinstall 1 existing TV/monitor, provide steel or wood backing as required.
6. One wall of accent paint and one wall of acoustic wall panel.
7. ADD ALT: One wall of wallcovering.

Typical Huddle Room X 6

1. Salvage existing hardwood floor from demo for reinstall in locations per new suite layout.
2. Provide new carpet tile and wall base to match existing. Basis of Design Finishes:
 - a. Sisal Carpet Tile in Driftwood (to match existing)
 - b. ADD ALT: Shaw In Common Carpet Tile in Link Color 50375
3. Three (3) duplex outlets and 2 data ports.
4. Additional lighting TBD. Assume 1 linear fixture per room (6 total).

5. For new rooms, reinstall 1 existing TV/monitor, provide steel or wood backing as required.
6. For new rooms, reinstall 1 existing white board, provide steel or wood backing as required.
7. One wall of accent paint and one wall of acoustic wall panel.

Typical Medium Conference Room X 2

1. Salvage existing hardwood floor from demo for reinstall in locations per new suite layout.
2. Provide new carpet tile and wall base to match existing. Basis of Design Finishes:
 - a. Sisal Carpet Tile in Driftwood (to match existing)
 - b. ADD ALT: Shaw In Common Carpet Tile in Link Color 50375
3. Three (3) duplex outlets and 2 data ports.
4. Provide a floor core with power and data and a 2" conduit routed under floor and up through adjacent head wall cavity.
5. Reinstall existing, salvaged pendant lights, as indicated on A201 Ceiling Plans.
6. Additional lighting TBD. Assume 4 linear fixtures per room (8 total).
7. Reinstall 1 existing TV/monitor, provide steel or wood backing as required.
8. One wall of accent paint and one wall of acoustic wall panel.
9. ADD ALT: Two adjacent walls of acoustic wall panel.

Typical Large Conference Room X 2

1. Salvage existing hardwood floor from demo for reinstall in locations per new suite layout.
2. Provide new carpet tile and wall base to match existing. Basis of Design Finishes:
 - a. Sisal Carpet Tile in Driftwood (to match existing)
 - b. ADD ALT: Shaw In Common Carpet Tile in Link Color 50375
3. Three (3) duplex outlets and 2 data ports.
4. Provide a floor core with power and data and a 2" conduit routed under floor and up through adjacent head wall cavity.
5. Additional lighting TBD. Assume 6 linear fixtures per room (12 total).
6. Reinstall 1 existing TV/monitor, provide steel or wood backing as required.
7. Reinstall 2 existing white boards, provide steel or wood backing as required.
8. One wall of accent paint and one wall of acoustic wall panel.
9. ADD ALT: Two adjacent walls of acoustic wall panel.

Mom's Room

1. Provide 9 linear feet of AWI standard millwork lowers with built in sink and undercounter refrigerator, with solid surface counter and 4" backsplash. Basis of Design Finishes:
 - a. Solid Surface: Silestone Loft in Nolita
 - b. Plastic Laminate: Wilsonart Limber Maple
2. Provide 2 new wall sconces at casework wall
3. Provide locking hardware with occupancy indicator
4. Reinstall wood flooring and provide new wall base to match existing.
5. Reinstall existing mirror, provide steel or wood backing as required.
6. Equipment Requirements (Provide plumbing and electrical as required):
 - a. 1 x Sink
 - b. 1 x Microwave (owner provided)
 - c. 1 x Undercounter Refrigerator (salvaged from existing space)
 - d. 1 x Wall Mounted Paper Towel Dispenser
7. ADD ALT: Full wall tile backsplash above casework. Basis of Design Finishes:

- a. Tile Backsplash: Daltile Stagecraft in Galaxy

Wellness

1. Provide new carpet tile and wall base to match existing. Basis of Design Finishes:
 - a. Sisal Carpet Tile in Driftwood (to match existing)
 - b. ADD ALT: Shaw In Common Carpet Tile in Link Color 50375
2. Provide locking hardware with occupancy indicator

IT Workroom

1. Reinstall wood flooring and new wall base to match existing.
2. Reinstall existing pendant light fixtures as indicated on A201 Ceiling Plans.
3. Add film to existing storefront. Basis of Design:
 - a. SOLYX: SXJ-0547 Feather Gradient
4. Lock and remove hardware from existing door.
5. Provide card reader for new door.
6. Six (6) quadplex outlets and 4 data ports
7. ADD ALT: ESD flooring. Basis of Design:
 - a. Armstrong ESD Static Control Flooring

Copy/Print:

1. Provide 38 linear feet of upper and lower plastic laminate millwork with an exposed edge laminate countertop for the copy/print area. 4" plastic laminate backsplash
2. Provide power outlets for tenant supplied printers.
3. Reinstall existing, salvaged pendant lights, as indicated on A201 Ceiling Plans.

Storage

1. Provide fully opaque film on glazing of existing storefront. Basis of Design:
 - a. SOLYX: SXWF-WM White Matte
2. Add locking hardware to existing door.

LEVEL 10 SPACES

Presentation Space

1. Reinstall salvaged pendant light fixtures as indicated on A202 Ceiling Plans.
2. Additional lighting TBD. Assume 16 linear fixtures and 6 track lights with 3 adjustable cans each (24 cans total).
3. Provide new carpet tile and wall base to match existing. Basis of Design Finishes:
 - a. Sisal Carpet Tile in Driftwood (to match existing)
 - b. ADD ALT: Shaw In Common Carpet Tile in Link Color 50375
4. Provide 30 linear feet of new AWI standard millwork base with doors and drawers, and solid surface countertop. Basis of Design Finishes:
 - a. Solid Surface: Silestone Loft in Nolita
 - b. Plastic Laminate: Wilsonart Limber Maple
 - c. ADD ALT: Tile Backsplash: Daltile Stagecraft in Galaxy at north counter
5. Audio Visual Equipment Assumptions (provide electrical as required)

- a. Provide A/V Package including 3 x projectors and screens, speakers, microphones, and cameras.

Typical Medium Conference Rooms X 2

1. Salvage existing hardwood floor from demo for reinstall in locations per new suite layout.
2. Provide new carpet tile and wall base to match existing. Basis of Design Finishes:
 - a. Sisal Carpet Tile in Driftwood (to match existing)
 - b. ADD ALT: Shaw In Common Carpet Tile in Link Color 50375
3. Three (3) duplex outlets and 2 data ports
4. Provide a floor core with power and data and a 2" conduit routed under floor and up through adjacent head wall cavity.
5. Additional lighting TBD. Assume 4 linear fixtures per room (8 total).
6. Reinstall 1 existing TV/monitor, provide steel or wood backing as required
7. One wall of accent paint and one wall of acoustic wall panel

Storage Room

1. Salvage existing hardwood floor from demo for reinstall in locations per new suite layout.
2. Provide new carpet tile and wall base to match existing. Basis of Design Finishes:
 - a. Sisal Carpet Tile in Driftwood (to match existing)
 - b. ADD ALT: Shaw In Common Carpet Tile in Link Color 50375

Catering Kitchen

1. Provide new linoleum flooring and wall base. Basis of Design:
 - a. Forbo Marmoleum in Warm Grey 3601
2. Provide 34 linear feet of new AWI casework lowers & upper cabinets with plastic laminate finish and stainless steel countertop and 4" stainless steel backsplash.
3. Equipment Requirements - provide plumbing or electrical as required:
 - a. 1 x Sink
 - b. 2 x Dishwashers (Basis of Design: Bosch 800 Series Dishwasher 24" Stainless Steel SGE78C55UC)
 - c. 1 x Commercial Refrigerators (Basis of Design: True Reach in Refrigerator TS-49G-HC~FGD01)
 - d. 2 x Microwaves (owner provided)
 - e. 1 x Coffee Brewer (Coffee service provider)



Exhibit 3 – General Contractor Scope of Services

The Scope of Services include, but are not limited to the following:

A. General Provisions

1. Contractor shall be responsible for advising Manager and/or Client and his consultants, throughout the project, of all laws, ordinances, rules, regulations, orders, state and local building codes or requirements of authorities having jurisdiction over the project. If Contractor performs work under the contract knowing it to be contrary to the requirements of Manager and/or authorities having jurisdiction over the work and without advising Client or their consultants of such requirements, the Contractor shall assume full responsibility of such work and all associated cost for appropriate modifications, which may be required by authorities having jurisdiction over the work.
2. Contractor shall be responsible for protecting the structural integrity of the building and the roofing material integrity during its construction operations.
3. Contractor is responsible for maintaining a secured job site, per client standards, at all times. In addition, contractor and its subcontractors and representatives shall comply with all security regulations of the building.
4. Safety policies are to be strictly enforced. All contractors performing any work on a project will be expected to follow established OSHA guidelines as well as their own established safety programs. The contractor will provide a copy of their established safety programs and procedures to JLL's Project Manager prior to the start of any work. Any safety issues will be addressed either from or to JLL.
5. The Contractor shall maintain a detailed and accurate accounting system and such controls shall be in place as may be necessary for proper financial management. Contractor's records and receipts shall allow for ready identification of all charges included in subcontracts, purchase orders, change orders, invoices and Application for Payments and the Manager/Client shall have the right to audit, at any time, all the Contractors records related to this project and the work.

B. Pre-Construction and Bid Phase

1. Schedule Development

Prepare a detailed Construction Schedule beginning with Construction Mobilization and continuing through the Construction Phase and Post-Construction Phase. Pro-actively manage key milestones for construction and close-out phases of work.

2. Project Costs / Value Engineering

Solicit trade bids, qualify, analyze and report in bid tabulation form the results of the bidding process. A minimum of (3) bids should be obtained for work estimated to exceed \$10,000. Upon receipt of Manager's approval, award such work. The Manager and/or Client may review in open book format the bid packages including comparison sheets and trade contractor bid proposals with detailed cost breakdowns.



Based on the contractor's knowledge and experience, the Contractor shall provide pricing options for alternate means of construction and/or alternate construction materials with the intent to lower the overall cost of construction. This input shall be requested during pre-construction and shall remain a service of the contractor throughout the project.

3. Pre-Planning of Site Logistics

Contractor shall meet with JLL's Project Manager and the Building Engineer to ascertain safety issues, building standards, approval processes, locate acceptable staging, parking and break areas, and all procedures for coordinating the construction work with the building staff.

Contractor is required to conduct an existing conditions survey of the work area and paths to the work area from the loading dock to the work area, including elevators that will be used to deliver material and personnel and toilet facilities that will be used by construction personnel. Contractor shall provide a report to JLL's Project Manager, prior to the start of construction, detailing existing conditions with photos if necessary. The intent of the existing conditions survey is to document the base building conditions of the site prior to the start of construction.

4. Mechanical, Electrical, Plumbing, and Fire Protection Design and Permit

Contractor shall work with their subcontractors to provide MEPF drawings for review and approval by Client and Architect. Contractor will be responsible for obtaining necessary permits for mechanical, electrical, plumbing, and fire protection scopes of work.

5. Long Lead Items

Advise Manager and/or Client and Architect of material availability and construction process feasibility. Make recommendations consistent with Manager and/or Owner, document requirements and sound construction practices. Identify long lead items and equipment to be pre-purchased.

Assist in the procurement, scheduling, storage, and installation of pre-purchased and long lead times.

C. Construction Phase

1. Coordinate the activities of trade contractors and vendors that may be hired directly by the Owner.
2. Project Team meetings will be held weekly through the duration of the project, including project close out. Construction meetings will be held on-site or off-site as required. Construction meetings shall be documented by the General Contractor, and minutes distributed to the Project Team within (2) business days.
3. Participate in regularly scheduled and unscheduled job meetings through the construction process. All affected parties should attend these meetings to discuss procedures, progress, problems, scheduling and open items. Minutes to be prepared and issued for each meeting by the Contractor's Project Manager. Contractor shall provide weekly construction updates and a 3 week look-ahead schedule.
4. Maintain a superintendent at the job site with support staff(s) required for the coordination and inspection of work. Basic services shall include estimating, scheduling, construction administration, QA/QC and on-site supervision as required for the successful construction of the project.



5. Coordinate and supervise the work being performed by trade contractors, outside suppliers and vendors for the project's duration. Assure that all work and furnished materials comply with the contract documents.
6. Coordinate the efforts of all trade contractors to ensure that the project is on schedule and is well constructed in accordance with the documents.
7. Establish organization and lines of authority to carry out the overall plans of the Client and Architect in all phases of the project.
8. Establish and implement procedures for, opening and maintaining a clear line of communication with the Project Manager for all the phases of the project.
9. Prepare and develop an on-site record-keeping system, which will be of sufficient detail to satisfy an audit by Client. Such records shall include, but shall not be limited to, daily logs, progress schedules, manpower breakdowns (daily by trade), financial reports, quantities, material lists, shop drawing logs, etc.
10. Coordinate the aspects of the work with local municipal authorities, governmental agencies, utility companies, etc., who may be involved in the project.
11. Coordinate the work of all trade contractors through final completion and the Client's acceptance. A comprehensive final inspection to ensure that the quality of labor and materials are in accordance with the contract documents will be performed, recorded and all deficient items are to be satisfied in a timely fashion.
12. Constantly review the adequacy of the trade contractor's supervision, personnel and equipment and the availability of necessary materials and supplies. Where inadequate, direct that the trade contractors involved take the necessary action.
13. Coordinate with the Client's vendors for furniture, fixtures & equipment, OS&E, AV, signage, custom lighting, cabling and internal IT Team.
14. If applicable, coordinate the furniture removal/liquidation not scheduled for re-use; furniture scheduled to be re-used; new FF&E and OS&E receiving and warehousing.
15. Contractor shall clean up all waste materials, rubbish and debris resulting from its operations at such frequencies as required to maintain a clean and safe working job-site. Contractor shall coordinate the preferred route and procedures for removal of construction debris with Owner's representative and Building Management and shall coordinate all necessary additional cleanup as part of construction operations, such that the building corridors, elevators, stairwells, common areas and area surrounding the work area are maintained free from accumulations of waste material, rubbish and debris.

D. Code of Conduct

1. Contractor personnel must be dressed in a professional trade like manner, including shirts, long pants and appropriate safety gear.
2. Contractor shall consult building engineer as to whether there is a designated smoking area. If smoking is not allowed near the building then no smoking shall be permitted.
3. No alcoholic beverages, illegal drugs, narcotics or weapons are permitted on property.



4. All contractor personnel shall conduct themselves in a professional manner. Building Management reserves the right to remove uncooperative contractors from the property without penalty to the Building Management or Client.
5. Contractor personnel shall only utilize designated restroom areas, maintained by GC, within work area only. Do not use Public Restrooms or restrooms located outside designated work area.
6. Contractor personnel may not initiate contact with any guests or employees of the building.
7. Contractor shall be responsible for taking all necessary precautions to protect all building property and furnishings.
8. Storage of onsite equipment and tools is at discretion of Contractor. Client/Building Management will not assume any liability for missing equipment. Storage is subject to availability and location must be approved by Building Management.
9. Contractor is responsible for meeting all OSHA and local codes, including lockout and hot weld procedures.
10. Contractors will conduct daily safety checks of their employees and equipment.
11. Contractor personnel will abide by the Client's sexual harassment policies.

E. Coordinate Test and Control Inspections

1. Develop a checking and testing procedure, which will ensure that all systems are adequately tested and balanced prior to their acceptance.
2. Coordinate all testing provided by others as required by the technical sections of the specifications, building ownership, and as required by the building code. Keep an accurate record of all tests, inspections conducted, findings and test reports. Submit final test reports to Manager and/or Client and Architect.
3. All test reports, records, and results shall be turned over to building management when requested.

F. Coordinate Shop Drawing Submissions

1. Develop a detailed submittal schedule at the start of the project for approval and use by the Architect.
2. Contractor shall maintain a detailed and accurate shop drawing and product submittal controls system for the project. The system shall be updated on a daily basis and reported to the consultants and JLL for coordination at all weekly project meetings.
3. Receive and review all shop drawings, cuts, samples, delivery schedules, materials lists, etc. for compliance with the contract documents. Provide comments before submitting information to the Architect for concurring review and approval.
4. Oversee the submission of all shop drawings, composite shop and coordination drawings, brochures and material samples. Monitor and implement the follow up of all documents and materials to ensure the proper sequence of approvals by the Architect so as not to delay the progress of the work.



5. Establish and maintain on-site, a complete library of all current contract documents, approved shop drawings and approved material samples.

G. Review All Payment Requests

1. Before the first partial payment becomes due, the General Contractor will provide a detailed breakdown for each trade and a schedule of values for the component of the total contract amount. A “Pencil Draw” shall be submitted for signature to the JLL Project Manager 5 days before the deadline for each Pay Application.
2. Prior to the start of construction, develop a project Progress Invoicing Schedule, review with JLL and Client to establish Cash Flow requirements.
3. All applications for payment will be submitted through the Contractor to the Project Manager in accordance with Owner’s established procedures. Architect approval will be necessary on all payment applications. Trade contract applications for payment along with partial waiver of lien and an affidavit of payment made by each trade contractor must accompany each application.

H. Review and Coordinate All Change Order Requests

1. Cost and/or schedule changes to the contract consisting of additions, deletions or modifications shall be authorized by a written Scope Change. Contractor shall provide detailed back up and pricing so that the cost claim can be properly evaluated. An approved change order from JLL is required prior to commencement of any work related to a change.
2. Any work carried out prior to written authorization to proceed by Project Manager or Owner is at Contractor’s risk and is not guaranteed to be reimbursed. Contractor to provide Owner with timely estimated or bid costs for all Change Order work, such that Owner can make informed decisions.
3. Receive and review all change order requests from the subcontractors. Review unit prices, time and material charges and similar items. Consult with Manager and Architect.
4. Review all changes proposed by Client and/or Architect and make recommendations regarding the impact with respect to cost and or schedule.
5. Ensure that all approved change orders are satisfactorily carried out in the construction process.
6. Implement the specification and Manager's procedures for the processing of change orders, including applications for extensions of time.
7. With respect to portions of the work performed by change orders, or otherwise, on a time-and- material, unit-cost, or similar basis, which requires the keeping of records and computations, maintain adequate cost accounting records to satisfy the specifications and Manager/Client's procedures.

I. Schedule Administration

1. Contractor shall provide a detailed construction schedule prior to the start of construction that includes milestone dates of contractors and others that are not controlled directly by the general contractor as established by JLL’s Project Manager.

2. During the course of construction, the General Contractor will make an analysis of the materials and equipment that will be required on the job. Contractor will determine and issue dates for shop drawing submission and approval, off site fabrication and manufacturing, and delivery dates required to meet with job progress. Contractor will maintain a scheduling system to expedite material and equipment deliveries through the course of construction.

J. Post Construction

1. At the proper time, coordinate the completion of punch-lists, together with the Architect, indicating the items or work remaining to be accomplished, and ensure that these items are completed in an expeditious manner. Prepare Certificates of Substantial and Final Completion, if required.
2. Assemble all guarantees, warranties, etc..., as required by the contract documents and forward electronic copies to the Project Manager and Architect, certifying that they are complete and cover all work as required.
3. Coordinate and expedite the submission of operating manuals and similar instruction; obtain Architect's approval to ensure that they are complete and cover all items as required by the contract documents. This includes any equipment training & necessary maintenance schedules.
4. Receive, check and forward to Project Manager all releases of claims required prior to issuance of final certificate of completion and final payments to subcontractors. Make recommendations on the withholding of payments to subcontractors where deemed necessary to protect client. Determine value of uncorrected work.
5. Expedite the subcontractor's preparation of "as built" drawings of the entire project in accordance with the terms of the project documents. The complete "as-built" drawings shall be subject to the approval of the Architect and submitted to the Manager and Client for its records upon Final Completion of the project.
6. A final cleaning will be required by the Contractor prior to Substantial Completion. Contractor shall include in his proposal the cost to complete a final cleaning. The final cleaning shall include vacuuming carpets, wiping down millwork, cleaning window interiors, cleaning window blinds, bathrooms, etc

Building Alterations at
Power + Light Building

Rules, Regulations, Standards, Specifications and
Guidelines

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Appendix A: Waste Tracking Worksheet (WTW)

Appendix B: Sample Certificate of Insurance

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Introduction

Introduction

This document highlights some of the important components of the pre-construction design and review process that should be addressed early in the process to avoid unnecessary delays. Many of these responsibilities are normally delegated by the Tenant to their Architect or Engineer (s). They in turn work with an expeditor to obtain the necessary city permits, sign-offs, etc.

Many potential problems that can occur during both the design and construction portion of a project can be avoided when the Tenant and their design/construction team review these standards together, and schedule an initial project kick-off meeting with the Landlord's representatives.

We look forward to working with you.

Section 1

Building Information

The Management Team at Power + Light Building

Site Contact Information

JLL
Power + Light Building
920 SW 6th Avenue, Suite 111
Portland, OR 97204
503-515-7333

Name	Title	E-Mail
Thuy Doan	General Manager	Thuy.Doan@jll.com
Christina Bamford	Assistant General Manager	Christina.Bamford@jll.com
Daniel Vattiat	Senior Chief Engineer	Daniel.Vattiat@jll.com

Service Request Information

All requests for services (such as freight, loading dock access, and engineer standby) must be received by 2 p.m. the day prior or by noon on Friday for weekend work.

All requests will be accommodated in the order they are received.

Loading Dock

Loading Dock Entrance: On Taylor St.
Hours of Operation: Monday-Friday, 6pm-8am, all day Saturday & Sunday
Roll Up Door Height: 12'0"
Roll Up Door Wide: 15'0"
Height of Bay: N/A

Elevator Information

Freight Elevator Dimensions and Times for Exclusive Use

	CAR 1
Service Floors	B-15
Rated Capacity	2500 lbs.
Dimensions	
Ext. Door Height	83"
Ext. Door Width	44"
Interior Height:	88"
Interior Width	64"
Interior Depth	60"

Open elevator hours are from 8am-6pm, Monday through Friday. Service outside of these hours is to be arranged with the Property Management Office 24 hours prior to day and time requested. The freight car is booked on a first come-first serve basis.

Passenger elevators will not be used to carry freight. Only general pickups and deliveries are permitted during normal business hours. All major deliveries or removals are to be scheduled for times outside the normal operating hours. Building Management reserves the right to limit and restrict access and use of the freight elevator and loading dock at all times. A list of those individuals who are authorized to reserve the freight car for tenant use and projects must be submitted to the Property Management Office prior to commencement of any work.

In terms of weight distribution for freight elevator cabs, the weight of any single piece of freight or of any single hand truck and its load is not to exceed more than 25% of the rated load of the elevator. All loads are to be handled on and off the car platform manually or by means of hand trucks.

All oversized items requiring opening of the hatch must be arranged at least 24 hours in advance with the Property Management Office. Elevator hatch access will not be permitted for any reason unless an elevator mechanic is present.

Section 2

Drawing Approval/Work Commencement Process

Project Review Process

All Tenant improvements are to be reviewed by the Landlord and receive approval prior to any alterations performed. Submitted documents are to include all appropriate catalog cuts and equipment specification sheets of proposed equipment.

The Tenant is to submit to the Property Management Office a letter describing the scope of the proposed work intended for the demised space as well as any areas outside the demised premises that may be affected prior to beginning any alterations. The letter is to include the Tenant's architectural and engineering firms contact names and phone numbers retained to develop drawings, specifications and oversee the entire project.

The Tenant is responsible for hiring a licensed architect and/or licensed engineer(s) to provide the appropriate design and construction documents. It is imperative that these professionals actually visit the project site to perform a field survey and understand the various components of the building and the demised space. These site visits are often critical to the success of the project and it is recommended that the Tenant include such as a part of the consultant's scope of work.

The Landlord will not make final Tenant Improvement payments until the work is completed and all sign-offs are obtained.

The following information is required in order to complete the review process and approve/disapprove the commencement of any construction work:

A letter requesting the alteration. If you are a sub-tenant, the letter must be accompanied with a letter from the primary tenant allowing your firm to proceed with any alterations.

Three sets of complete, comprehensive and coordinated architectural and engineering drawings (30" x 42") and specifications signed and sealed by the architect & or engineer and a copy of the same on electronic file. Please see Section IV: Building Standards/Drawing Standards, Copy of all applications to various local agencies that must review and approve the drawings. Tenant is to use the Building's expediting firm, who are referenced in the building specific section.

A copy of the architect and engineering firm's Certificate of Insurance matching the building requirements is to be provided at onset of project.

Samples of any proposed non-standard materials (e.g., wall covering, signage, carpet, etc.) and catalog cut sheets for each item.

Retail and Restaurant Tenants are to provide a sample of material boards, schematic design drawings, signage and display window information.

Restaurant Tenants should also include estimates of water and steam usage.

Any changes made to previously approved drawings must be re-submitted for review and approval.

Review by the Landlord is only to ascertain compatibility with the building's design, structure and systems. The review process and Landlord's consent is not to be construed as representation as to propriety or legality of design for intended function. All design work and contracted documents prepared by the Tenant or its consultants shall be subject to compliance with all applicable laws, regulations and the City of New York Buildings Department and Fire Department codes. The compliance is the responsibility of the Tenant's licensed professional architect and/or engineer.

Tenants are responsible for compliance with all applicable laws affecting their premises. All alterations within their premises must comply with City of Portland Codes and Regulations of all the agencies that have jurisdiction and with the Americans with Disabilities Act.

These requirements do not in any way alter the terms and provisions of any lease, and the Landlord reserves the right to withhold its consent or approval notwithstanding compliance to these guidelines.

Landlord reserves the right to add to or modify any standards, specifications and guidelines.

If the project is to be completed in multiple phases, the Tenant shall not permit work to begin within the next phase until the Landlord has reviewed all the appropriate drawings and other documentation and granted approval to begin the following phase.

Pre-Construction Requirements

Before any alteration work may begin, a kickoff meeting is to be scheduled and a copy of all the following documents must be submitted to the Landlord (accompanied with a transmittal letter detailing all documents that are being submitted)

Original drawings that have been reviewed and approved by Landlord, stamped by a licensed architectural/engineering firm.

Copy of all permits and approvals from the agencies that have jurisdiction including but not limited to:

- Copy of the electrical permit filed by the electrical contractor and approved by the Fire Department for fire alarm alterations.
- Copy of the City of Portland Department of Buildings approved drawings.
- Copy of the construction permit.
- Copy of the plumbing permit, if applicable.
- Copy of the sprinkler hydraulic calculation and permits, if applicable.
- Copy of the air conditioning permit, if applicable.
- An authorization letter of the individuals who may order additional services on behalf of the Tenant (i.e. freight elevator reservations, additional cleaning).
- Certificate of Insurance for all firms that represent the Tenant and will be performing work in the building.

- A contact list of all firms who are working on behalf of the Tenant. List is to include company name, trade, contact person(s), phone numbers and emergency phone numbers.

NOTE: Landlord must approve all General and Subcontractors who are intended to work in the building and reserves the right to disallow any contractor, subcontract or vendor proposed. A detailed project schedule indicating phases if necessary and trades along with the proposed time frame for the various work stages.

The day, time and location where construction meetings will be held so that the Landlord's representative may attend the meetings and monitor the progress of the job. Weekly progress meetings are to be held with the owner.

Post Construction Requirements

- Upon completion of tenant's work the following documentation must be submitted to the Property Management Office/ Landlord (along with transmittals for each).
- Two (2) sets of all architectural, mechanical and structural As-Builds in hard copy stamped by Architect and Engineer and one (1) copy of the files on disk in AutoCAD for all trade work in layered format.
- Copy of the air/water balancing report, if applicable.
- Copy of all the required sign-off letter(s) for all work filed and Letter of Completion.
- Copies of any and all "Equipment Use" Permits.
- Final lien waivers for all contracted vendors and tradesmen on the project.
- MSDS sheets for applicable materials i.e. adhesives, paint, etc. that may affect indoor air quality.
- OEMs for all installed equipment.
- Certificate from Architect and Engineer that all work is of substantially complete.

Section 3:

Rules and Regulations for Construction and Service Contracts

GENERAL PROVISIONS

NOTE! Smoking is prohibited at all times and all areas of Power + Light Building. Violators will be subject to removal from the premises.

1. Contractor's employees shall enter and exit the building through the Loading Dock unless otherwise directed.
2. All Employees must provide Photo Identification to Security to retain while in the building. ID's will be returned upon checkout.
3. Contractor's employees must carry building identification at all times and be properly and visually identified at all times.
4. Contractor employees must leave building at end of shift or agreed times unless otherwise arranged. Any employee found after approved times will be escorted from building and reported for further action.
5. Contractor employees shall comply with all security directions given including but not limited to emergencies.
6. All access to tenanted areas must be arranged through the Property Management Office.
7. Construction personnel are not to eat in the building lobby or in front of building.
Use of radios on project sights is prohibited
8. All trades are restricted to defined work areas. Access to toilet areas will be limited to those specifically approved by Property Management Office. Any violators will be subject to removal from the premises.
9. No storage of hazardous or flammable substances will be allowed in the building unless approved by Property Management Office and is in accordance with all applicable building codes and regulations. Contractor must provide a list of all hazardous or flammable substances that are scheduled to be brought on-site. This list must be approved in advanced and quantities of these substances shall be limited to five (5) gallons, unless the Contractor presents a valid City of Portland permit for storage and use of such substances. List will be provided to Property Management Office for approval. Contractor must provide storage lockers for approved construction. Area to locate locker will be provided by JLL.
10. There will be absolutely no use of building property such as, but not limited to, telephones, hand carts, vending machines, pantries, copiers, etc., unless specifically approved in writing

by the Property Management Office in advance of their use. Any violators will be removed from the premises.

11. All deliveries will be scheduled on a 'first come first served' basis. Requests are to be made via the building's service request system. All requests are to be made at least 24 hours in advance and by noon on Friday for weekend deliveries. Scheduling for freight elevator service for deliveries and trash removal will be the responsibility of the Contractor.

12. All trash must be removed daily from all work areas. All areas outside of the work area affected by any Alterations must be continuously cleaned to prevent the accumulation of dust and other construction debris.

13. Immediately upon being awarded a project, the successful Contractor may be required to set up a field office as determined by the Property Management Office.

14. Work producing excessive noise or odor is prohibited during normal building hours (7:00 A.M. – 6:00 P.M. Monday through Friday). The Property Management Office reserves the right to stop any work at any time in its sole discretion.

15. Contractor is to use rubber-wheeled carts in removing debris and trash from all floors. Under no circumstances will metal-wheeled carts be allowed. All doors are to be protected with Kraft paper and Masonite or double layer of cardboard.

16. Delivery of materials and hauling of debris is to be routed via the loading dock/service entrance on Taylor Street. No deliveries or hauling may be made through the building lobby. All deliveries and out loading are to be made via reservation before 8:00 A.M. and after 6:00 P.M. Monday through Friday, or all day Saturday & Sunday. All times need to be scheduled with the Property Management Office.

17. No signage, tape or paint may be affixed to windows.

18. All work areas are to be secure at the conclusion of the workday.

19. All after-hour work must be scheduled with the Property Management Office, at least 24 hours prior to the start of such work via the building's service request system. All weekend work must be scheduled by noon of the preceding Friday.

20. Temporary on-site offices for large construction projects are to have land line telephone services.

21. All stairway doors must be kept closed at all times. Chocking or tying these doors open is strictly prohibited. Locksets may not be taped open and must not be tampered with.

22. At all times during the performance of any Alterations, unrestricted and unhampered access to all stairwells, mechanical/electrical equipment, elevators, fire hoses, valves, fire dampers, and other critical equipment must be available.

23. Access to the Base Building electrical, telephone, and mechanical rooms and closets is restricted to approved contractors and vendors. If access is required, the Building Management Office will require at least 24 hours written notice.

24. Base Building mechanical equipment rooms are off limits to all construction personnel unless otherwise approved by Property Management. Storage of construction equipment in mechanical areas is prohibited. Access can be arranged 24 hours in advance through the Property Management Office as approved by the Chief Engineer.

25. Connections to power receptacles supported by UPS and/or critical systems is prohibited.

26. All project related building inspections (i.e., life safety, electrical, construction, etc.) that are performed by a third party (expeditor, Department of Buildings, etc.) must be scheduled with the Property Management Office at least 24 hours prior to the date of inspection. All inspectors must check-in at the Main Lobby security desk and **must be** accompanied by a Building Engineer (or other authorized Building personnel) for the duration of the said inspection. Any and all associated costs will be charged to the respective construction project.

27. Copies of all construction related violations must be delivered to the JLL management office the date of receipt of such violation. The contractor within the allotted timeframe shall cure all violations and provide JLL with all associated documentation. Any associated costs will be the sole responsibility of the contractor and/or associated project department.

CONSTRUCTION STANDARDS and SPECIFICATIONS

- a) Power + Light Building is a Class A building and has agreements with various unions and trade organizations. Therefore, in an effort to maintain harmony within the facility, all of the Tenant's contractors shall be members in good standing with local unions from each of the various trade organizations.
- b) The Tenant shall be responsible for all damages caused by the Tenant's contractors to the Landlord's property and the property of adjoining tenants. Landlord's property must be restored to the Landlord's satisfaction or the Landlord will be reimbursed for all costs related to restoring property to its original condition.
- c) If additional or special cleaning services are needed in any public area due to the Tenant's construction work, the Tenant will be notified of this need and will be charged for it accordingly.
- d) Both General Contractor and all Subcontractors shall comply with all of the requirements that are listed within this manual. Noncompliance with any of these rules will prevent the noncomplying firm access into the building.
- e) For any construction inside the building or on site (including retrofits, renovations or modifications), the design and contracting documents will include a requirement that all construction waste including demolition waste and land clearing waste (if applicable) be qualified by the type of material and by weight (i.e. Wood, Metal, Gypsum, Concrete, Residual). A minimum of 75% (by weight) of construction waste will be recycled and/or salvaged. The recyclables may be either separated on site in separate bins or offsite at a receiving station,

documentation must be submitted to confirm which approach is being taken where applicable, contact information.

f) Indoor Air Quality (IAQ) Compliant Building Products / Sustainability

To maintain a positive IAQ and reduce the impacts of emissions from materials, employ the following sustainable criteria when choosing these products:

- Paint and coatings with VOC emissions that do not exceed VOC limits of Green Seal's Standard GS-11 requirements
 - Carpet and Carpet Cushion that meets the requirements of the CRI Green Label Testing Program
 - Composite panels (MDF, OSB, plywood) and agrifiber products that contain no added urea-formaldehyde
 - Adhesives and sealants that comply with the VOC content limits of South Coast Air Quality Management District (SCAQMD) Rule #1168
 - Lighting that use reduced mercury content of less than 80 picograms per lumen hour of light output
- g) General Contractor is required to submit documentation of exact amounts of waste removed from the job site and the amount of recyclables contained and removed from the load, including waste generated by all Subcontractors. All documentation must be submitted to the Agent for review on an ongoing basis throughout construction. See Exhibit A: Waste Tracking Worksheet (WTW) to be completed and submitted
- h) Each floor on which construction is undertaken must remain in a safe condition with regard to fire safety for personnel working on the floor. All fire stairs, alarms; manual pull stations are to remain accessible and operable at all times.
- i) All public areas such as elevator lobbies, corridors and hallways shall be protected with Masonite and craft paper to the satisfaction of the Property Management Office. Shoe-wipe-off mats must be placed at all openings into, out of and within the construction area. Public areas must be policed and kept clean at all times. All areas that are found unacceptable are to be cleaned and resolved immediately.
- j) Equipment and other property belonging to the building is to be protected. If any equipment or property is damaged during the course of construction the contractor will be responsible to either repair or replace to the satisfaction of the Property Management . .
- k) All demolition/construction work that produces excessive noise, or generates particulates or odor is permitted only after 6:00 PM and will cease by 7:00 AM Monday through Friday. These activities include partition demolition, fastening studs, chopping, core drilling, etc. The Landlord reserves the right to direct the contractor and/or subcontractor to cease this activity if such activity is disturbing other tenants.
- l) All plumbing fixtures, drinking fountains, sinks, lavatories, water closets, showers, floor drains, etc., that are scheduled to be removed, must have water supply shut off to prevent flooding. Fixtures are to be first offered to the Property Management Office for inventory before the fixtures are discarded. All abandoned plumbing lines are to be disconnected and removed back to the main plumbing risers and properly capped. .

- m) All construction materials are to be brought to the job in proper containers and must be stored in the Tenant's work area. No materials are to be stored in the public areas (i.e. freight lobby, core closets, public corridors, etc.).
- n) The Landlord reserves the right to deny the Tenant's contractor(s) and/or the contractor's employee(s) access into the building if they/he/she has been found in spaces outside the construction area (i.e. adjacent tenant spaces without prior knowledge and approval) or has been found to have removed items from the building that do not belong to their firm. The Landlord's decision will be final.
- o) All fire exits shall be kept clear and accessible at all times.
- p) **No flammable materials of any kind are to be kept on site. Such materials when necessary must be removed from the site except when in actual use. Absolutely no flammable materials are to remain on site overnight.**
- q) Contractors must supply maintain and station Fire extinguishers on the job during construction.
- r) Where demolition is to take place in an area of the building where fire safety equipment such as alarms, speakers, smoke detectors, floor warden stations, etc. are located, the Property Management Office is to be notified at least 48 Hours in advance prior to the start of demolition. It is the contractor's responsibility to provide protection to all devices as approved by the Property Management Office and Life Safety vendor.
- s) All fire safety equipment and associated conduit and wiring shall be protected from any physical damage during demolition and/or construction. At Ownership's discretion, an ample amount of fire alarm coverage shall be maintained at all times (i.e. smokes and speaker strobes) during the entire demolition process. Building Fire Alarm service provider shall be retained at Tenant's cost in order to avoid false alarms and trouble signals.
- t) When burning operations are required, the contractor must ensure that the operator of the burning equipment shall have a Certificate of Fitness to operate such equipment. During the burning operation, an additional person holding a Certificate of Fitness for fire watch must be in attendance. A copy of each certificate must be supplied to the Property Management Office before such work is performed. The building must be advised prior to this work so the fire alarm system may be taken off-line.
- u) Workers may be assigned to one toilet, which the general contractor will be responsible to clean and maintain. Appropriate accommodations should be made to afford both sexes privacy while using the facility.
- v) All containers must be emptied and returned to the construction area promptly. All construction debris and excess material should be removed from the job site and carted away from the building before 7:00 AM and after 6:00 PM. Containers may not be stored or left unattended on the sidewalk or loading dock at any time. Any and all fine(s) resulting from violations received from CITY OF PORTLAND will be paid by the Landlord and billed back to the Tenant.
- w) All fireproofing removed or disturbed must be replaced to match the existing rating and color, at the Tenant's expense, if damaged by the Tenant's contractor.

- x) 48-hour notification must be given to the Building Office before the hung ceiling tiles are to be installed to afford the Landlord the opportunity to view and ensure access doors for VAV's, etc. are not blocked and can be serviced properly.
- y) The General Contractor shall maintain competent and adequate supervision on the premises when any and all work is in progress.
- z) Construction personnel must carry proper identification at all times.
 - aa) All persons in a supervisory position must be able to speak and understand English fluently.
 - bb) The General Contractor (GC) shall be responsible for maintaining the cleanliness of the all work area and areas involved in the delivery and storage of materials. At all times, the GC is responsible to maintain a safe work environment for those within and outside the construction area.
 - cc) Walk-off mats are to be provided within and outside the construction area at each exit and shall be kept wet to prevent the tracking of dust and debris into areas outside the construction area.
 - dd) All public areas such as elevator lobbies, corridors, toilets and service halls shall be protected with Masonite and craft paper to the satisfaction of the Property Management Office.
 - ee) Throughout course of the job, the GC shall protect the HVAC perimeter units, fire alarm equipment, base building systems etc.
 - ff) Main return air and supply air duct trunks are to be properly capped off prior to commencement of all construction activities to protect central fan system from dust and debris. Note: Buildings Chief Engineer to review and approve.
 - gg) Contractor is to maintain a positive Indoor Air Quality (IAQ) work site. The following specific actions may be applicable to controlling contaminants at the work site: wetting agents or sweeping compounds to suppress dust, removing spills or accumulated water, use low odor cleaners, protection of porous materials from moisture, elevate materials off of floor surfaces and increasing the frequency cleaning work areas of dust.
 - hh) Woodwork, cabinetwork, and furniture/partitions along the perimeter wall of the Building at the convector cover locations and all enclosures associated with the perimeter heating system shall be easily removable, or provided with access openings, to allow servicing and maintenance of the perimeter heating and associated piping, as well as maintained at a proper distance to ensure adequate air circulation.

Section 4

Insurance Requirements

The Vendor or General Contractor shall provide the following minimum insurance coverage. See **Exhibit B: Sample Certificate of Insurance** for reference:

I. The Service Contractor shall provide the following minimum insurance coverage:

A. Commercial General Liability

Combined Single Limit - \$1,000,000 per occurrence and annual aggregate per location. Such insurance shall be broad form and include, but not be limited to, contractual liability, independent contractor's liability, products and completed operations liability, and personal injury liability. A combination of primary and excess policies may be utilized. Policies shall be primary and noncontributory.

B. Excess or Umbrella Liability

Service Contractor shall provide Excess or Umbrella Liability insurance on a follow-form basis with respect to the Commercial General Liability, Employers' Liability, and Commercial Automobile Liability insurance with minimum limits equal to \$2,000,000 each occurrence and \$2,000,000 annual aggregate.

C. Worker's Compensation - Statutory Limits

D. Employer's Liability

With minimum liability limits of \$1,000,000 bodily injury by accident each accident, \$1,000,000 bodily injury by disease policy limit; \$1,000,000 bodily injury each employee.

E. Commercial Automobile Liability

Combined Single Limit - \$1,000,000 per accident. Such insurance shall cover injury (or death) and property damage arising out of the ownership, maintenance or use of any private passenger or commercial vehicles and of any other equipment required to be licensed for road use.

F. Property Insurance

All-risk, replacement cost property insurance to protect against loss of owned or rented equipment and tools brought onto and/or used on any Property by the Service Contractor.

G. Crime Insurance / Fidelity Bond Service

Contractor is responsible for loss to Owner and third party property/assets and shall maintain Fidelity Bond or comprehensive crime insurance coverage for the dishonest acts of its employees in a minimum amount of \$1,000,000. Service Contractor shall name Owner as Loss Payee with respect to the comprehensive crime insurance coverage.

H. Errors and Omissions Liability (applicable for Uninterrupted Power Source (UPS) services and/or work only)

Service Contractor shall provide Liability limits of at least \$5,000,000 per claim and \$5,000,000 in the aggregate. The retroactive insurance date of such insurance shall be no later than the commencement date of the contract. Such insurance shall be provided for two years beyond the completion of the work.

II. Policies described in Sections I.A. and I.D. above shall include the following as additional insured, including their officers, directors and employees. Additional Insured endorsements CG 20 10 10 01 and CG 20 37 10 01A or their equivalent shall be utilized for the policy(ies) described in Section I.A. above. Please note that the spelling of these parties must be exactly correct or the Contract Duties will not be allowed to commence.

- 1) Power & Light Building, LLC
- 2) Jones Lang LaSalle Americas, Inc

III. Service Contractor waives any and all rights of subrogation with respect to its commercial property and workers' compensation liability insurance policies against the parties identified above in Paragraph II.

IV. All policies will be written by companies licensed to do business in the State of Oregon and which have a rating by Best's Key Rating Guide not less than "A-/VIII".

V. Service Contractor shall furnish Certificate(s) of Insurance evidencing the above coverage, except property insurance under I.E. Original Certificate(s) of Insurance must be provided before Service Contractor commences Contract Duties or Contract Duties will not be allowed to commence.

VI. Certificate(s) of Insurance relating to policies required under this Agreement shall contain one of the following two sets of words:

"Should any of the above described policies be cancelled before the expiration date thereof, the issuing insurer will endeavor to mail thirty (30) days' written notice to the Certificate Holder."

OR

"Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions."

VII. The following should be named as the Certificate Holder:

Power & Light Building LLC
c/o Jones Lang LaSalle Americas, Inc.
920 SW 6th Avenue, Suite 111
Portland, OR 97204

Section 5

Building Standards

Drawing Standards

General

The required sets of signed and sealed drawings are to be accompanied by a transmittal letter listing drawing and revision date.

Standard drawing sizes are as follows:

30 inch x 42 inch

half-size format

1 electronic format, PDF is acceptable for review stage; AutoCAD's required for final submission.

Each drawing should contain:

Column numbers to facilitate reference and coordination.

Plot Plan and key plan referenced to the appropriate floor and the area(s) of the floor to be worked on are to be shaded in.

Title block with:

Tenant's name, address, floor number

Project description

Drawing number

Scale, date

Revision column with date, revision number and description of change. All revisions that pertain to the Landlord review process should be identified by encircling the revision and labeling it with a revision triangle and number. The number should correspond to the revision column information.

NOTE, the items listed under each drawing type are required as a minimum amount of information necessary for Property Management to have in order to review and make comment in order to either approve or disapprove plans submitted.

Architectural

Architectural set of drawings are to include the following:

Demolition Plan. Based on a field survey, drawings shall indicate all construction components or materials, i.e. partitions, doors, ceiling tiles, etc. to be removed and or re-used.

Note: all convector covers are to remain in place and covered to protect fin-tube piping within. Advance permission from the Property Management Office is required if any covers are to be removed. At completion of construction, contractor will be responsible to vacuum clean fin tube under supervision or Building's Chief Engineer.

Construction Plan. Indicate all new work including the demising partitions.

Room designations

Window treatment

Convactor cover details

Floor chopping and core drilling details

Note all changes to the service core components, i.e. service elevator lobby doors; alterations to any shafts, pipe chases or risers; telephone closets and/or mechanical/electrical rooms.

Hardware schedule (see the Building Specific section for details)

Reflected Ceiling Plan

Specify ceiling construction either new or to remain.

All lights should be shown as either new, existing to be reused or relocated, or existing to remain. Description should contain all light fixture-type, wattage and sizes.

All switches and fixture controls and electrical branch circuit drawings

Power and Telephone Plan

Furniture Plan. Spacing requirements for furniture that is to be placed in front of the perimeter induction units shall be a minimum of 18”.

Structural

Indicate all structural elements and surrounding components that may be affected

Provide drawings for any heavy equipment such as vaults, rolling files, batteries, transformers, storage racks, AC units, pumps, etc. supported on floors or hung from building structure. All such equipment installations and structural modifications are subject to approval of the base building structural engineer.

Electrical

Are to include the following:

Demolition Plan. Indicate all elements to be removed and clearly identify all items that are to remain, i.e. fire safety equipment, etc. A field survey with the building’s Chief Engineer should be performed so that the demolition plan will clearly delineate these elements.

Construction Plan. Indicate all new elements to be installed.

Communication Plan

Lighting & Power Plan

Panel Schedules and Riser Diagrams

Fire Safety Systems Plan. Indicate all existing base building devices and components to remain and/or be relocated to comply with ADA.

Load Calculations for all existing and new work.

Mechanical /HVAC

Are to include the following:

Demolition Plan. Indicate all elements to be removed and clearly identify all items that are to remain, i.e. fire dampers, etc. A field survey should be performed with the building’s Chief Engineer so that the demolition plan will clearly delineate these elements.

HVAC Systems Design Plan and Specifications

HVAC Layout and Zoning Plan
HVAC Piping Design Plan
Equipment Schedules with all usage information

Plumbing

Are to include the following:

Demolition Plan. Indicate all fixtures to be removed and all fixtures to remain. A field survey should be performed with the building's Chief Engineer so that the demolition plan will clearly delineate these elements.

Plumbing Systems Design Plan and Revised Diagrams
Plumbing Specifications and Cuts

Sprinkler / Fire Life Safety

Are to include the following:

Demolition Plan. Indicate all elements to be removed and all elements to remain. A field survey should be performed with the building's Chief Engineer so that the demolition plan will clearly delineate these elements.

Sprinkler Systems Design Plan Specification and Riser Diagram
Hydraulic Calculations

Architectural Standards and Specifications

Doors and Related Components

Single Tenant Floors

A Tenant may propose at their discretion, doors, frames, appropriate signage, etc. This information should be included in the customary architectural package for the Landlord's reference and review process.

Multi-Tenant Floors

A Tenant leasing space on a multi-tenant floor shall install the corridor doors, frames, signage etc. according to the building standard.

Security Systems

Access Card Systems are acceptable on both single tenant and multi-tenant floors but must be installed on the adjacent wall near the entrance door. These devices may require an additional connection to the fire/life safety system to allow egress from the Tenant's space. If Tenant elects not to provide the Building's Engineering department with card keys, a key override keyed to the Building's key system must be installed next to the card key reader. Drawings and catalogue cuts must be submitted for review.

Hardware/Locking System

To facilitate the Tenant's construction schedule, the building standard hardware is available through the Building's approved locksmith hardware provider. Contact the Property Management Office for coordination.

If another hardware provider is to be used, Tenant should review the key requirements and bitting sequence to be used with the Building's in-house locksmith. All keys will be keyed to permit access via the floor master and the building's Grand Master.

All proposed door handles, hinge tension, etc. shall comply with the Americans with Disabilities Act (ADA). No double cylinder deadlocks are permitted; single cylinder deadlocks only. If unicam locks are to be installed, they must be equipped with a Primus cylinder to permit a key override.

Windows, Venetian Blinds & Window Treatment

Perimeter Window Blinds

Mechoshades

Evro Twill

6006Silver Birch 3% Open, Manual

Additional window treatments may be installed inside of building window blinds as approved by Landlord but shall not interfere with the operation of the peripheral air conditioning system or window cleaning operations. .

Window treatment specifications must be submitted for approval by Building Management Office.

Corridors and Elevator Lobbies

Wall covering will only be permitted on single tenant floors and must first be submitted to the Property Management Office for approval prior to installation.

All proposed construction and/or installation of security devices and signage that will affect, damage or alter existing stone, metal or glass finishes in or on the exterior or interior of the building require approval from the Building Management Office. Any damage that occurs will be repaired by the Landlord at the Tenant's expense.

Ceilings

Ceilings in spaces adjacent to exterior windows shall not be dropped lower than the top of the window head, unless held back two feet from the inside face of the window for every one-foot in drop below the window head.

Partitions

Interior drywall partitions that are adjoined to the perimeter shall be fastened to a perimeter column.

A minimum of 18 inches shall be provided so that perimeter induction units may be easily accessible to maintenance personnel.

All existing masonry construction at columns, piers and core penetrations, that have been disturbed by adjacent demolition is to be replaced and / or repaired with material to match existing construction. Restoration of fire rated assemblies must be completed to restore original rating. Masonry openings must be filled with same material before drywall is applied.

Partitions shall not be fastened or braced to ductwork, conduit or piping.

Lighting Systems

To meet current energy code.

Window Solar Film

As approved by Property Management Office

Signage

As approved by Property Management Office

Retail Store and Signage

A Tenant leasing retail space shall submit to the Landlord all plans, elevations, storefront design, signage and samples of finished materials for review.

Security gates may not be used.

All storefront alterations must comply with building standards in terms of configuration, materials, finish, profiles, etc.

Structural Standards

General Notes

Structural drawings must be coordinated and submitted with other disciplines that are affected by structural modifications.

All required fire ratings of existing and new components shall be maintained.

A 'Fire watch' service including appropriate fire extinguishers shall be provided by Tenant's contractor during welding and burning operations. Copies of 'Certificates of Fitness' for all fire watch personnel are to be submitted to the Property Management Office before such fire watch is required. The building shall be notified at least 24 hours in advance to prepare disconnect of the fire alarm system.

New structural in-fill shall be compatible with existing building construction and ensure floor duct continuity and other systems as required by the building's structural engineer.

No attachments, chopping or chasing of core walls and masonry demising partition walls will be permitted without prior Property Management Office approval.

Partitions shall not be fastened or braced to ductwork, conduit or piping.

Where hangers cannot be supported from building structural steel, install two double expansion shields connected by a 2 inch x 2 inch angle from which the angle rod will be suspended. For duct work and pipe sizes 2 inches and under, use a single double expansion shield subject to the approval of the Structural Engineer. Hanger rods shall be of adequate size to support the loads that they carry. Shield may be used in stone concrete slabs only. No powder actuated inserts will be permitted. The intention is to provide supports that shall be amply strong and rigid for the load, but which shall not weaken or unduly stress the building construction.

Electrical Standards

General Conditions

Provide a connected and demand load summary for all new and existing equipment and indicate the watts-per-square-foot usage based on the Tenant's rentable square footage.

OSHA approved temporary lighting and power must be installed and maintained in all work areas. All temporary lighting and wiring will be removed at completion of the project and not left abandoned within the hung ceiling.

An appropriately labeled fused safety switch shall be installed in the electric closet when a sub-panel is installed in a Tenant's space.

Provide emergency lighting fixtures, where applicable by code. Refer to the Building Specification section for emergency power requirements.

It shall be the contractor's responsibility to balance loads and refurbish electric panels where necessary. The condition of the electric panels and closets at the project completion is subject to review by the building's Chief Engineer Landlord.

It is the responsibility of the contractor to maintain all electrical closets in a clean and orderly manner free of all rubbish and materials. It is the contractor's responsibility to patch all openings created by the work to the satisfaction of the building's Chief Engineer. All abandoned or unused conduit, cabling or raceways, must be removed back to the point of origin.

- a) At the completion of the alteration, meter pans, safety switches, panels, panel directories and other distribution devices are to be labeled correctly. Previous labeling or markings are to be removed or painted over.
- b) All panel directories are to be typed and checked for accuracy. **Handwritten directories are unacceptable.** The Directories are to display the circuit number and the devices that are connected to the circuit. All updates to panels are the responsibility of the last electrician of record.
- c) The source of all new risers shall be identified in a manner consistent with existing switchboard designations. All pull boxes required for new riser installations must identify the riser, the Tenant, and equipment served (i.e. circuit breaker panels LP5 A & LP5B).
- d) Core drilling will be allowed only after a complete survey and probe of slab fill is performed to assure that they are clear of any existing conduit or obstructions. A coring plan is to be submitted that clearly indicates size and locations of all proposed cores coordinated with Building raceway for review of buildings' structural engineer.
- e) Permission for such drilling must be obtained from the Property Management Office and the building's Chief Engineer. All work shall be properly fire-stopped and safed-off.
- f) Chasing or chopping of perimeter walls is not allowed.
- g) All electric power is to be disconnected before starting demolition.
- h) A walker duct system exists in this building and should be utilized for floor wiring. Tenant is to remove all abandoned or unused cabling.
- i) When switches or circuit breakers are opened for work on electrical equipment or wiring, signs or tags should be installed at the switch or breaker stating that work is being performed on them. If the device is lockable, it should be padlocked at the end of each workday.
- j) Transformers shall be copper wound, K-13 rated.

- k) Transformers, panel boards, switches, etc. shall be installed as to permit infrared testing of components.
- l) Upon completion of the electrical work, the licensed electrical contractor must submit to Property Management a copy of Certificate or Electrical Inspection for all work performed, including the installation of emergency lighting if applicable.
- m) **Electrical safety, including Arc Flash protection in accordance with NFPA 70E and National Electric Code. No work may be performed on live circuits. Contractor to protect workers with appropriate fire rated clothing, gloves, face shields, tools, etc in accordance with NFPA 70E.**

Applicable Panel boards

- a) Panel boards shall be provided as follows:
 - 120/208 volts and/or 265/460 volts surface mounted in electric closets.
 - All panel boards shall be 3-phase 4 wire and shall not exceed existing available floor amperage.
 - Panels shall be factory assembled and fabricated by an approved Switchboard manufacture, hinged, dead front, bolt-on circuit breaker type, UL listed and City of Portland approved.
 - Cabinets and trim shall be galvanized sheet metal, factory painted with one rust proofing primer coat and one finish coat.
 - Bus Bars shall be full height copper. Neutral bar shall be full size. Bussing shall be braced throughout for a minimum of 10,000 amps. Provide 200 Amp neutral when serving non-linear loads.
 - Doors shall have flush type paracentric cylinder locks and catches. Lock must be compatible with Landlord's standard key system. Back of the door shall have a directory frame and directory card protected with a non-fading transparent cover.
 - Panel board loads shall be balanced to within 10% of each phase. Electrical contractor is to provide 'as-built' drawings with actual load readings as of that date to the Property Management Office indicating any circuit changes to meet load balance.

Specifications for Panels

All panels to be rated for 65,000 AIC. All main circuit breakers are to have ground fault protection. Any existing panels that do not meet this criteria are to be removed and replaced. See below for additional specifications.

PANEL: <u>Typical Panel</u>		480/277 VOLTS, <u>3</u> PHASE <u>4</u> WIRE		MAIN BUS <u>100</u> AMPS	
LOCATION: <u>Refer to riser</u>		MOUNTING: <input checked="" type="checkbox"/> SURFACE <input type="checkbox"/> FLUSH		MAIN BREAKER SIZE SHALL BE AS REQUIRED	
BUILDING: <u>85 BROAD STREET</u>		BUS: <input checked="" type="checkbox"/> COPPER <input type="checkbox"/> ALUMINUM		MAIN BRK: <u>-</u> AMPS 3P Digitrip 310 Trip	
FED FROM: <u>Refer to riser</u>		GROUND BUS: <input checked="" type="checkbox"/> <input type="checkbox"/> THRU-FEED LUGS		LSG-Ground Fault protection	
FEEDER SIZE: <u>Refer to riser</u>		ISOL.GND. BUS: <input type="checkbox"/> * SHUNT TRIP BRKR.		NEUTRAL <u>100%</u> AIC <u>65,000</u>	
				Panel to be Series Rated with branch CB	
				<input type="checkbox"/> LUGS ONLY	
				FEED: <input type="checkbox"/> TOP <input type="checkbox"/> BTM	

CKT NO	TRIP AMPS	DESCRIPTION OF LOAD	WIRE & COND SIZE	LOAD (VA)	PER PHASE (VA)		LOAD (VA)	WIRE & COND SIZE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO
					A	B					
1	20	Branch CB type GHB (typ)	NA	NA			NA	NA		20	2
3	20		NA	NA			NA	NA		20	4
5	20		NA	NA			NA	NA		20	6
7	20		NA	NA			NA	NA		20	8
9	20		NA	NA			NA	NA		20	10
11	20		NA	NA			NA	NA		20	12
13	20		NA	NA			NA	NA		20	14
15	20		NA	NA			NA	NA		20	16
17	20		NA	NA			NA	NA		20	18
19	20		NA	NA			NA	NA		20	20
21	20		NA	NA			NA	NA		20	22
23	20		NA	NA			NA	NA		20	24

Bus bars shall be hard drawn copper, minimum 98 percent conductivity. Provide 25% copper ground bus and 100% copper neutral bus
 Circuit breakers: Main CB- LSG with ground fault- similar to Eaton HFDE. Branch breakers similar to Eaton GHB-Molded case breakers shall be thermal-magnetic, quick-make-quick-break, bolt-on type, manually operated with insulated trip-free handle. Terminals shall be suitable for copper or aluminum cable. Provide new panel interiors in existing enclosures with door-in-door cover panel, dead front, NEMA Type 1.
 Contractor shall replace the existing panel interiors and reconnect the main feeder and include at minimum 24, and up to 42, branch circuits to be reconnected. Extend wiring as required.
 Provide updated Panel directory and add appropriate UL warning that PANEL IS SERIES RATED.

Sub-Metering

- a) The Tenant’s design engineer shall identify and indicate on plans submitted for Landlord review all existing meters serving the space to be renovated.
- b) The Tenant’s design engineer and electrical contractor shall verify that the space under construction has been electrically demised. In addition, the design engineer and contractor shall verify that no other tenants are served by any meter to be removed.
- c) Landlord will install all sub-meters at the Tenant’s expense, once the electrical contractor has completed the required service work, subject to the lease agreement. The Tenant’s electrical contractor should complete the installation of the electrical service as soon as possible to facilitate the installation of the new metering equipment.
- d) Electric meters shall only be installed in base building electric closets or switchboard rooms unless special permission from the Property Management Office is given for an alternate location. Risers terminating at panels located within Tenant spaces that are not metered shall be routed through the nearest electric closet with a disconnect switch and meter installed by the Property Management. Wherever possible, all dedicated risers should be metered at their point of origin.
- e) Temporary feeders to supply new construction are to be metered. No service shall be utilized without a meter in place.

Wiring

- a) Threaded aluminum, rigid steel conduit or EMT shall be used when power distribution is exposed and is run outside of the Tenant space.
- b) EMT shall be used for all concealed work in the walls or above the hung ceiling (3/4" minimum). Armored cable can be used for branch circuitry (BX or MC Cable is not permitted).
- c) Circuit wiring in panel boards shall be trimmed and dressed in a neat and workmanlike manner. All wiring shall be tagged (accurate panel directories are required).
- d) Electrical contractor shall remove all unused wiring back to the source. Unused wiring in under floor duct systems shall also be removed.
- e) All wire, cable and bus must be copper. Wire insulation shall be THHN.
- f) Branch circuit wiring shall be No. 12 AWG minimum. No. 14 AWG wiring may be used for control work only. All branch wiring must be factory color coded for its length. For feeder wiring No. 6 AWG and larger colored strips along the full cable length is acceptable. For short lengths colored tape may be applied to all cable that is visible.
- g) For safety considerations, Phase colors for conductors shall be black-red-blue-white for 208-volt systems and brown-orange-yellow-white for 460-volt systems.
- h) The color of switch legs must match the phase circuit color.
- i) All vertical runs of low voltage Teflon insulated cable below eight feet must be in conduit (EMT). Only cables with Teflon or equivalent plenum type insulation and jacket (UL Type 2P) may be run above the hung ceiling or in convectors without raceway. Proper supports are required.
- j) All temporary lighting and power shall be removed upon completion of project

Equipment

Lighting

- a) All fluorescent light troffers shall be equipped with 2 lamp or 3 lamp electronic ballasts. Fluorescent light troffers shall be equipped with heat extraction slots. Incandescent lamps shall be rated for 125 volts. All fixtures need approval by the Property Management Office prior to installation. Cut sheets of all proposed fixtures are to be submitted for approval (Note: lay in type fixtures must have channel clips securing fixture to ceiling grid).
- b) All relocated lighting fixtures shall be washed and re-lamped. All relocated fixtures not equipped with electronic ballasts shall be re-ballasted prior to re-installation in new location.
- c) Exit signs shall be designed in accordance with Building Standards and all applicable codes.
- d) Tenants are required to utilize motion sensor switching in all areas such as private offices, file rooms, large open areas etc.

- e) All fixtures not controlled by motion sensors shall be provided with both local switches and master automatic control to comply with the requirements of the Oregon State Energy Conservation Code.

Low Voltage Voice/Data Signal Cable

- a) Only Low voltage cable with thermoplastic insulation (UL Type 2X) may be run in floor cell or conduit.
- b) Only cables with Teflon or equivalent plenum type insulation and jacket (UL Type 2P) may be run above the hung ceiling or in convectors without raceway. Proper supports are required.
- c) Wall mounted outlets shall be installed with back boxes and rigid steel or EMT conduit stub-ups into the hung ceiling plenum. Bushings are required at end of all conduit stub-ups.
- d) Teflon cables passing through telephone closet walls must be run through sleeves of rigid galvanized conduit or EMT. What is difference between rigid steel and rigid galvanized? Seal around sleeve and around cables using approved fire-stopping media.
- e) **All abandoned cable must be removed by tenant prior to occupancy. Maintenance of wire, including abandoned cable must be in accordance with NFPA requirements.**

Workstations

- a) All workstations shall be grounded. Ground wire in manufacturer's wiring harness shall be carried back to the panel ground bus.
- b) Workstations shall be hard wired with No. 12 copper wire enclosed in flexible metallic conduit.
- c) No zip-cord, plug mold, plastic or metallic-plug connectors will be allowed.
- d) Maximum distance of flexible metallic conduit from wall or floor outlet to workstation termination point shall be no more than 18 inches.
- e) No receptacles are permitted to be attached or built in to task lighting fixtures.
- f) **NO AUXILLARY EQUIPMENT IS ALLOWED** in offices or at work stations, i.e. heaters, fans etc.
- g) Any fire rated wall penetrations shall be fire stopped with "Flame Safe" or similar compound. Floor and ceiling penetrations shall be seal with cement.

Telecommunications Systems

1. No telecommunications cabling may be installed in base building electrical closets or mechanical spaces.
2. New telecommunications equipment, if required, shall be installed in the Tenant's demised space and not within the core closets.
3. New riser cabling shall be installed at the explicit direction of Property Management Office. Drawings are to be submitted indicating the proposed route, number and type of cables, core drilling details, horizontal takeoffs to floors, anchoring details, weight per linear foot, support

detail, and all other pertinent details to the installation. Tenant telecommunications cabling between contiguous floors shall not be routed through base building risers. Tenant is to provide dedicated telecommunications risers between contiguous floors as approved by the Property Management Office.

Post-Construction Examination and Testing Protocol

This protocol shall govern the post-construction examination and testing performed to confirm that no improper neutral-to-ground bonds have been installed during tenant electrical work.

The City of Portland Electrical Code allows only a single bond between the neutral conductor and ground to be installed at the electrical service equipment, and at separately-derived sources. Improper neutral-ground connections downstream of those code-required/allowed connections allow neutral current to take an unintended path over building steel and other grounding paths back to the electrical source. This current in unintended paths can negatively affect the accuracy and performance of the electrical protective systems, and could potentially be a personnel safety hazard.

Thus, pro-active examination and testing as detailed in this protocol, performed after all tenant electrical work has been completed, will serve to flag improper installations for correction before final acceptance of the work and permanent connection of the tenant-supplied electrical systems to the base-building power system.

Background

Inappropriate neutral-to-ground (N-G) bonds in locations other than permitted/required by the relevant jurisdictional codes result in unintended paths for a portion of the building load neutral current to return to the power source. Current in the unintended paths can negatively affect the accuracy and performance of the electrical protective systems, and could ultimately contribute to nuisance tripping of circuit breakers, interrupting electrical service provided by both the utility and the in-house stand-by generation plant.

Some such inappropriate N-G bonds are readily identified – others are not. Regardless, the best time to identify, and correct, these code-compliance violations is before the final permanent energization of tenant loads, so that any required de-energized tracing and correction can be performed with a minimum of tenant disruption.

Termination errors in 480/277V panels are common, in which a ground conductor is terminated on a neutral bar, or vice-versa. Also, any factory or field bonding of the neutral to the ground bar or housing must be removed if present.

More insidious and difficult to trace are wiring errors that are made in the branch circuit distribution in the tenant space. Examples of these errors are: connection of a neutral to an equipment grounding conductor in a light fixture wiring channel, junction box, receptacle or other equipment/device; pinching with insulation damage of a neutral conductor under a junction box, light fixture wiring channel or other cover.

The following protocol steps specify; 1) a base-line examination/test to be performed when the systems are de-energized, and 2) a follow-up examination/test to be performed when the systems are energized and loaded. Note that a clear result in the energized variant is a necessary but not sufficient condition to deem the system clear of inappropriate N-G bonds since such bonds related to any loads not energized (turned on) would not be detected. Assure that all load breakers are on and all loads are energized if practical.

All such tests must be witnessed by an engineering representative of the building. All test data must be recorded and transmitted to the building. Please contact the PMO office at 212 908 1161 to implement this protocol.

Mechanical Standards

- Condenser water

- a) All Tenant supplemental units are required to use condenser water to remove the heat from their space. Additional charges to tenants may apply.
- b) Dielectric fittings shall be installed at all connections between dissimilar metals.
- c) If Tenant is authorized to tie-into the building's condenser water riser, the Tenant's engineer should contact the Property Management Office to coordinate where and when such connections are to be made.
- d) Tenant shall install their own condenser water pumps for water cooled package units designed and sized appropriately so that they are able to operate the units without the base building units running.
- e) Piping sizes shall be based upon standard engineering principals of flow and pressure losses; however, a minimum velocity in carbon steel pipe of 3 feet per second shall be used in order to prevent blockages caused by deposited particles. Three-way water valves shall be used.
- f) Drain pans shall be provided under circulating pumps with liquid detectors wired to a local alarm.
- g) Each cooling unit shall be provided with a plug valve in addition to the shut-off valves. These plug valves shall be used to regulate the quantity of water flowing through the cooling units as a means of balancing the system.
- h) All primary shut-off valves shall be O S & Y gate, which can be packed while in operation whether open or closed. Ball valves are also permissible. All units are also to have an individual y-type strainer installed on the supply line.
- i) All valves must be readily accessible and be tagged with brass tags stamped with their control number. A valve chart indicating the valve number, the valve's location and what it serves is to be framed and hung at an area designated by the building's Chief Engineer.
- j) All circuit control condenser water valves shall be 2-way type.

- k) All condenser water systems are to be exposed to high levels of chemical corrosion inhibitor for as long as possible before filling the system.
- l) New condenser water lines are to be copper material and brazed (No Victaulic or soft solder). Die-electric fittings are to be used between black iron valves and copper. The lines are to be hydrostatically pressure tested using treated water. A building management representative must be present during testing. Condenser water piping systems shall utilize ASTM B-88, Type K or L hard drawn copper pipe with wrought copper or cast bronze fittings; solder shall be high tensile strength silver solder (lead free). Piping system pressure rating shall meet or exceed a working pressure of 300 psig at 150 degrees F. Systems shall be designed to maintain a velocity of 3 to 5 feet per second and assure that there is continuous flow to all portions of the system, including standby units, or at a minimum of 4 hours per day.
- m) All condenser water piping must be properly insulated.
- n) Piping systems must be pressure tested utilizing treated water. Pressure test (minimum of 100psi and maximum of 240 psi) shall be performed at one and one half times (150%) of the working pressure for a period of four (4) hours. Connection to domestic water system is prohibited. Hydrostatic testing must be held with compressed air or nitrogen. Hydrostatic testing must be scheduled with Chief Engineer, and must be witnessed.
- o) All new systems shall be flushed and chemically cleaned when their installation is completed to remove construction debris prior to connection to building systems. Flushing, cleaning, and chemical treatment shall be supervised by Landlords Chemical Treatment Vendor and Chief Engineer. Prior to opening valve to building system, approval must be obtained by Landlord.
- p) Ensure that “dead head” piping does not exist.

Steam and Condensate

- a) All primary shut-off valves shall be O S & Y gate, which can be packed while in operation whether open or closed. Supply lines are to be metered.
- b) All valves must be readily accessible and be tagged with brass tags stamped with their control number. A valve chart indicating the valve number, the valve’s location and what it serves should be framed and hung at an area designated by the building’s Chief Engineer.
- c) All steam traps shall have a valve and union on each side and shall be of the Float and Temperature type.
- d) All steam lines (Supply and condensate) are to be schedule 80-type pipe.

Miscellaneous

- a) The Base building hot water for heating, compressed air and refrigerant are not available for tenant use.
- b) All valves shall be ¼ turn type, e.g. ball valves, butterfly valves and lubricated-plug chocks. Ball valves shall be full port design and must be domestic brand.

- c) All piping shall be clearly marked with pipe contents, flow direction every 15 feet and properly insulated.
- d) All horizontal piping is to be properly supported with supports and hangers. Main lines and other large or heavy pipes shall be supported by pipe hangers and beam clamps of approved design for pipe size and weight. Hangers for pipe subject to expansion shall be provided with approved rollers.
- e) All hangers shall provide for a minimum of two inches of vertical adjustment.
- f) All rotating equipment and piping within 25 feet of pumps must be supported with vibration isolation devices having a minimum static deflection of 1 inch.
- g) As part of the commissioning process, a vibration analysis is to be performed on all rotating equipment.
- h) All vertical piping shall be anchored wherever necessary to prevent undue strains on offsets and branches and wherever required to support such piping consistent with industry standards. Anchors shall also consist of heavy forged wrought iron clamps securely bolted or welded to pipes; all extension ends shall bear on building construction and wherever they are close to beams shall be bent under top flanges.
- i) Vertical pipes in shafts shall, where ever possible, be supported on structural steel pipe stands. See 3 (b) for labeling requirements.
- j) When more than one vertical pipe is installed in a shaft in close proximity to other vertical piping, roller guides shall be provided for all piping at every other floor level.
- k) Piping shall not be supported by means of wire, rope, wood, ductwork or any other makeshift device.
- l) All existing abandoned piping and equipment shall be removed by the contractor, unless otherwise directed by the Landlord or the Chief Engineer. No materials shall be re-used unless first being approved by the Chief Engineer and then reconditioned.
- m) Waterproof membrane is to be provided in all wet areas, on the floors and 4” above the finished floor (A.F.F.) on walls.

Testing

- a) All testing shall be done in the presence of the Chief Engineer and General Manager.
- b) The contractor shall flow balance every system to the quantities as shown on contract related drawings.
- c) All air and water balancing must be performed by an independent testing and balancing agency approved by Building Management Office. Four (4) copies of the approved final balancing reports are to be transmitted to the Building Management Office and Chief Engineer.

Heating, Ventilation & Air Conditioning Standards

- General

- a) The Tenant shall arrange and pay for all necessary inspections. Copies of all approved inspection reports and certificates are to be transmitted to the Property Management Office.
- b) HVAC system design layout shall not have an adverse effect on the existing base building systems. Supply air quantities for new or re-designed spaces shall not exceed base building design air quantities.
- c) Existing supply, return and exhaust air quantities CFM and static pressures shall be measured at point of connections of new duct to existing ducts and recorded in the presence of Chief Engineer. Written notification must be sent to the Property Management Office 24 hours in advance each time these readings are scheduled to be taken.
- d) All supplemental package units must utilize condenser water for cooling where possible. No air-cooled units or exterior louvers will be permitted.
- e) All equipment including but not limited to supply, return and exhaust fans shall be identified by the system number and their operating data (e.g., Manufacturer's name and model number, CFM, static pressure, rpm and horsepower) on the appropriate drawings.
- f) During the project duration, the Landlord and his/her designated representative will inspect the work in progress. Any work that is judged unsatisfactory for any reason or not in compliance with these standards shall be removed and replaced at the expense of the Tenant.
- g) Any required shut-down of the Building's systems (i.e. BMS, Fire Alarm) shall be coordinated through the Property Management at least 24 hours prior and shall be performed in a manner which does not interfere with other tenants.
- h) Any supplemental 'Spot Coolers proposed must be approved by the Property Management Office.
- i) Piping systems shall be insulated in accordance with automatic shutoff valves on the supply and return lines and a stainless steel drip pan with leak detection to automatically shut off water valves serving the unit and provide a remote alarm to the Building BMS system. Piping used shall be as follows:
 - a. Copper piping, Schedule K type if job call for copper piping
 - b. Domestically produced 'Schedule 80' black iron must be used on all replacement black iron and on new installations.

Air and Water Balancing

All air and water balancing must be performed by an independent testing and balancing agency approved by Property Management Office Four (4) approved copies of the final balancing report are to be supplied to the Property Management Office and Chief Engineer.

Ductwork

- a) Drawings shall show new and existing supply, return and exhaust air ducts, with all sizes indicated.
- b) All ductwork (except for special exhaust systems) shall be constructed of galvanized sheet metal properly insulated as required for its use. Installation shall follow all SMACNA Standards.
- c) Galvanized metal ductwork shall be constructed in accordance with the latest SMACNA manual and shall have a pressure rating of 2 inches, 4 inches or 6 inches with 2 inch rating minimum for ductwork between VAV units and outlet, or between fan and outlets if VAV units are not used, and 4 inch rating minimum between fans and VAV units.
- d) All ductwork shall be sealed and SMACNA seal classification – A, B or C specified. Leakage testing shall be required for ductwork and leakage Class 6, 12, 24, or 48 specified. Extent of ductwork to be tested for each leakage class shall be specified.
- e) Flexible round duct connections to Air Terminal Units shall be limited to three feet in length or less.
- f) Flexible canvas connections shall be provided at ductwork connections to fans and other rotating equipment.
- g) Volume dampers shall be shown on drawings wherever required for air balancing purposes.
- h) Access doors shall be a minimum of 24”x24” and indicated on the drawings wherever access for servicing equipment such as coils, humidifiers, etc. is necessary. Access doors in insulated or lined ducts shall be double paneled insulated and a minimum 20 gauge. Access doors in non-insulated duct shall be double paneled, minimum 20 gauge.
- i) Duct hangers shall be indicated and specified in accordance with the City of Portland Building Code and SMACNA.
- j) All unused ductwork is to be removed back to point of origin at Tenant’s expense. Unused openings in main ducts shall be blanked-off and sealed airtight.
- k) Furniture and partitions shall not block or restrict access for service and maintenance of perimeter induction units by engineering personnel or proper airflow through the unit. Induction units are to be protected during construction and thoroughly cleaned upon completion of project. Existing perimeter control wire damaged during construction will be restored and paid for by General Contractor.

VAV Boxes

VAV Boxes are to be electronic Direct Digital Control (DDC). Controls are to be tied into the Base Building Automation System. Landlord BAS vendor is to be contracted to make tie-in at Tenants expense. TITUS VAV Boxes are building standard.

Fire and Smoke Dampers

- a) Accessible fire and/or smoke dampers and access doors shall be shown on the drawings wherever required. Fire dampers shall have blades out of the air stream and breakaway connections.
- b) Existing fire dampers and access doors where no longer required due to architectural changes shall be indicated on the drawings to be removed.
- c) Where ducts penetrate rated walls, including shaft walls, the space between the duct and wall shall be packed with fire-stopping material. The material and the method of packing shall be indicated on the drawings or in the specifications.
- d) Fire and smoke dampers shall be configured for remote control via the fire alarm and BMS systems.
- e) Control wiring for smoke dampers and/or combination fire/smoke dampers must be provided as per system and per floor basis.
- f) All new and existing fire dampers are to be inspected and tested prior to occupancy. Replace fusible links must remain accessible and in the open position.

Duct Insulation and Lining

See the insulation section for details.

Supply Air/Return Air Register and Grilles

- a) All supply air ceiling diffusers and return air register and grilles shall be indicated on the drawings, including size, CFM, manufacturer's name and model number, type number and material.
- b) During construction process, the entire system should be shut down. In case that the system is running during construction, all return system openings in (or immediately adjacent to) the construction area should be sealed with plastic. Supply side diffusers and window units should also be sealed in plastic for further protection.
- c) All filters must receive frequent maintenance, and changed every 14 days if systems are in use during construction and replaced prior to occupancy.

Special Exhaust Systems

- a) Drawings for range hood kitchen exhaust systems shall indicate manufacturer and model number of the range hood(s), CFM exhaust and ductwork connection to the duct riser. Ductwork shall be in accordance with the City of Portland Building & Fire Codes properly insulated. Property Management Office retains the right to review on-going maintenance records to ensure safety and compliance.
- b) Dishwasher exhaust ductwork shall be in copper, stainless steel or aluminum and, shall slope downwards in the direction of the dishwasher connection.

Supplemental Air Conditioning

- a) As previously stated under the HVAC general conditions section, all supplemental HVAC shall use condenser water as the method of heat removal if available. Air-cooled units and exhaust louvers will not be permitted.
- b) All supplemental units shall be shown on the drawings, including manufacturer, model number, size (in tonnage) and CFM.
- c) Access doors to access and service equipment and any Building Fire Alarm system points shall be shown on the drawings. Note, Property Management reserves the right to add access doors to allow access to any and all equipment.
- d) Access doors shall not be blocked by electrical conduit, piping, ceiling black iron and shall be a minimum of 24 inches x 24 inches to allow sufficient room to perform such service.
- e) Any and all supplemental units or controls shall be refurbished and reconditioned prior to installation and putting into service.
- f) Tenant shall be responsible for all costs associated with tapping into the designated riser and all piping to and from the unit.
- g) Isolation valves near each unit on the supply and return lines, local pressure and temperature gauges, condenser water pump, strainer and check valves are to be designed and installed accordingly. Condenser water control valves shall be three-way for constant circulation through open piping system and two-way or three-way in closed systems. Bypass strainers should be considered for critical operations. Pipe sizes shall be selected for a nominal 3 fps or higher open condenser water systems.
- h) Condensate lines are to be run to the nearest slop sink or fan room floor drain, with Building Management approval. Gravity drains are preferred over condensate pumps. Pumps are only to be used when gravity drainage is not possible subject to Property Management approval.
- i) Tenant piping shall be chemically cleaned and tested by the base building water treatment vendor prior to final connection to the building system. Submit certificate of clean water analysis and water sample to Property Management Office for review and acceptance. Substantial delays shall result in requirement for retest prior to start-up.
- j) All piping systems must be provided with identification labels installed every 20 ft. on each pipe and at least once within each room. All piping labels must be reviewed and approved by Building's Chief Engineer.
- k) All vibration and/or noise generating equipment that may cause noise or interference to other tenants shall be effectively isolated from building structure.
- l) Rebalance all systems or portions of systems, which are effected by Tenant work. Prior to performing air-balancing procedures, Tenant's balancer must contact the Property Management Office.
- m) Any ceiling tiles broken or removed during Tenant balancing procedures are to be replaced at Tenant's expense.

- n) All units that require Equipment Use Permits from the City of New York shall be obtained and a copy of the permit should be placed within a sturdy transparent frame as close to the wall mounted control for each supplemental unit. A copy of the permit should also be sent to the Property Management Office.

Controls / Building Management System

- a) Base building BMS is a 'Niagra Platform'.

All existing and new diffusers, VAV boxes, Fan Coil Units, etc. are to be balanced to the proper design CFM.

- b) Field verify that all thermostats are properly calibrated.
- c) All controls to be Back-net compatible, and tied into the base building system.
- d) Air conditioning equipment must be connected to the BMS to monitor alarms, temperature, and capacity control functions.

Plumbing Standards

- General Requirements

- All plumbing, including water coolers, refrigerator ice machines and pantry equipment must be indicated on the drawings. Indicate manufacturer and model number for proper engineering and roughing.
- All abandoned or unused piping must be removed back to the point of origin. Active systems shall be capped appropriately.
- All plumbing work, materials, equipment and fixtures shall be new and approved by the Property Management Office and or by those authorities having jurisdiction over the work, including but not limited to, the City of Portland Plumbing Code.
- All workman employed to perform the work shall be skilled in their respective trades and under direct supervision of a City of Portland licensed plumber.
- Furnish and install waterproof membrane in all wet areas, both on the floor and 4” above the finished floor (A.F.F.) on walls.

Design Criteria and Documents

- The complete scope of work shall be indicated on the drawings.
- Demolition plumbing drawings shall indicate existing plumbing piping, fixtures and equipment to be removed.
- Drawings shall indicate all new pipe, fixtures, valves and equipment.
- Plumbing riser diagrams shall be provided for any plumbing work, all waste drainage, vent, water, and gas systems.
- Manufacturer and model numbers shall be specified on drawings for all valves, fixtures and equipment.
- Hot water heating equipment shall be approved by the City of Portland Board of Standards and Appeals. Manufacturer and model numbers shall be specified. M.E.A. numbers for gas-fired equipment shall be indicated.
- Restaurant tenants must supply water and steam usage estimates as part of the Landlord review process.
- Leak detection system is required on all HW heaters and tanks.

Job Conditions

Connections to Existing Systems

- Prior to disconnecting and connecting new work to existing systems, the plumbing contractor shall notify the Property Management Office provide a schedule of work for approval. The

Property Management Office will authorize all connections and coordinate any necessary shut downs and drain downs as required. Shut downs and drain downs require 72 hour notice if such procedures are deemed to effect other tenants who will require sufficient notification to make necessary preparations. Connections may have to be made after hours. Connections to the base building system shall be either screw galvanized or Husky type double band no-hub type clamps.

- b) Connecting new work to existing systems shall be performed in a neat and acceptable manner. All affected work is to be restored to its original condition and operation. The plumbing contractor shall not interfere with the continuous operation of existing systems.
- c) Hot water lines longer than fifty-feet (50) from base building riser shall be heat traced.

Demolition and Removals

- a) Disconnect and remove plumbing fixtures and piping. Cap and/or plug existing services at source of supply. Remove existing abandoned piping from the ceilings, walls and shafts.
- b) “Safe-off” with valves, caps or plugs, all services supplying plumbing fixtures and equipment in areas designated for demolition prior to the start of demolition work.

Clearance from Electrical Equipment

- a) No plumbing riser shall be run in, or through, electrical closets, telephone closets or elevator machine rooms.
- b) Plumbing design drawings shall be coordinated with other disciplines to prevent floor electric cell penetration.

Access Doors

- a) The plumbing contractor shall be responsible for ensuring that access doors are installed for valves concealed by masonry, plaster or drywall construction. Minimum size shall be 18 inches x 18 inches, unless otherwise approved.
- b) Access doors where required shall be equivalent to the fire rated construction in which they are installed.

Record Drawings and Approvals

- a) At the completion of the work, the plumbing contractor shall submit copies of the plumbing final inspection 505 cards and sign-off.
- b) The contractor is also required to provide the previously stated number of As-Built drawings and AutoCAD disks.

Equipment Brochure and Service Manuals

Two copies of service brochures for major equipment that is installed by the contractor shall be turned over to the Property Management Office. These are to be presented in a neatly bound and labeled format and include the following information:

- Descriptive literature on the equipment and components
- Performance data and model numbers

- Installation instructions
- Operating instructions
- Maintenance and repair instructions
- Spare parts
- Lubricating instructions

Plumbing Fixtures

- a) Wall hung water closets and urinals shall be supported by floor mounted carrier fittings.
- b) Carrier fittings base plates or feet shall be chrome plated.
- c) All fixtures shall be equipped with accessible stop valves or angle stops.
- d) Piping from concealed water roughing, passing through walls to the angle stops or fixture waste connection shall be threaded red brass. Type “L” tubing supply risers may be used between angle stops and faucet connections.
- e) Fixture faucets and flush valves shall have renewable internal parts, stems, cartridges and seats.
- f) Water saving flush valves or faucets are required on all fixtures.
- g) Mechanical rooms, kitchens and public toilets shall be provided with a 3-inch floor drain. The floor shall be provided with membrane waterproofing.
- h) Waste piping from food handling equipment and preparation sinks shall be indirect via air gaps to floor drains or floor sinks as required by the Health Department and Plumbing Code requirements.
- i) Vacuum breakers, check valves and/or approved backflow prevention devices are required on all water connections subject to back siphonage.

Gas Systems

Installation

- a) The contractor shall arrange with Gas Company for meter bar and standard installation details and be responsible for all associated charges.
- b) Piping shall be installed free of traps and shall be provided with drain pocket consisting of nipple and cap at all low points.
- c) Union or right and left nipple and coupling with gas cock shall be provided at each piece of equipment.
- d) Piping shall be pressure tested per code requirements.
- e) Explosion proof solenoid shutoff valves shall be provided in the main supply lines to gas fired equipment. The solenoid valve shall close upon activation of the kitchen hood and/or fire detection system.

Insulation Standards

- General
-

This section specifies insulation requirements for heating, ventilation and air conditioning (HVAC) piping, equipment and sheet metal ductwork.

- a) All piping shall be clearly marked with its contents. Piping should also be properly insulated and indicate the pipe contents and directional flow a minimum of every fifteen-feet (15).
- b) All steam supply, return pumped condensate and hot water piping shall be insulated.
- c) Hot water fittings, valves and flanges for steam return, pumped condensate and hot water shall be insulated as for steam.
- d) Cold water fittings, valves and flanges shall be insulated with molded fitting sections or mitered sections of pipe covering. Vapor seals shall be two coats of PVC coating. For concealed locations, wired on compressed fiberglass blanket may be used.

Air Conditioning Fans, Casings and Ducts Exposed-Not Acoustically Lined.

- a) Insulate all fresh air, air conditioning fans, casings, supply and return ducts with four-pound density fibrous glass board faced with one side with aluminum foil reinforced jacket.
- b) Secure insulation over metal pins and lock in place with friction fit washers.
- c) Seal all joints and punctures with matching foil, reinforced pressure sensitive tape, 3 inch wide on butt joint and punctures, 5 inches wide on corners.

Sprinkler Standards

- Drawings and Specifications
-

- a) All tenant sprinkler system drawings and specifications are to be submitted to the Landlord for review before installation or agency approvals.
- b) The sprinkler drawings must show all core and branch piping and a riser diagram showing the proposed connections to the system.
- c) Pre-action sprinkler system piping layout shall be indicated on the drawings including pre-action valve assembly, tamper water flow switch and all associated mechanical and electric components. A separate electrical riser diagram indicating all electric components and tie-ins to existing system shall be provided to facilitate fire department electrical review and installation approval.
- d) Pre-action valve assembly details must be shown on the drawing with all associated components, including drain and test assembly.
- e) Hydraulic calculations must also be submitted for Landlord review that indicate reasonable uniform water distribution, and allow for loss-of-head in water supply piping. Water density,

areas of sprinkler operation and water supply requirements shall be in accordance with NFPA standards.

- f) Water supply information including gpm and pressure required for fire pumps and gravity/pressure tanks is to be provided.
- g) Provide details of any modifications to the existing gravity or pressure tanks where required.

Materials

a) Water flow Switches

Vane-type water flow switches shall be installed on the sprinkler system piping designed for mounting on either vertical or horizontal piping and have a sensitivity setting to signal any flow of water that equals or exceeds the discharge from one sprinkler head.

b) Tamper Switch

Valve supervisory switch shall be provided on all control valves.

c) Pressure Reducing Valves

Provide pressure reducing valves as required. The valve is to be of all bronze construction with bronze and stainless steel trim. The valve shall be UL listed and rated for 400 psi working pressure and able to be tested to its full rating stamped on valve without damage to any part of the valve. The valve shall be spring actuated, balanced piston, single seated type without diaphragm. All parts are to be easily removable or replaced sealed at the factory.

d) Pressure Relief Valves

All sprinkler systems requiring a pressure relief valve shall be provided with a diaphragm operated pressure relief valve. The valve seat and all working parts that are to be exposed to the fluid to be of non-ferrous material.

e) Pressure Gauges

- Gauges are to be of a type approved by authorities having jurisdiction and shall be 4 ½ inch dials, cast brass cases and have a range equal to twice the working pressure.
- Each gauge shall have a shut-off cock or valve together with a plugged outlet for the connection of an inspector's test gauge. Gauges shall be double spring type.
- Provide a gauge on either side of each pressure-reducing valve.

Installation of Sprinkler System

- a) System drain-downs and fills will be conducted after normal building business hours (Before 8AM and after 6PM Mon. – Fri. or on weekends). A tenant representative or General Contractor's project foreman must be present to print and sign their name in the Class "E" fire alarm system "Alarm Book" (located with building engineer) prior to the sprinkler system drain down taking place. A tenant representative or General Contractor's project foreman must also be present to print and sign their name in the Class "E" fire alarm system "Alarm Book," prior

to the sprinkler system refill process taking place. Tenants will be required to have a reputable pipe fitter contractor on hand to witness the refilling of the system.

- b) If sprinkler system is to be removed, a temporary sprinkler system shall be installed around the core area of the building, or a fire watch may be substituted by an City of Portland Fire Guard of Fire Safety Director Certificate of Fitness holder as approved by General Manager.
- c) All sprinkler system pipe penetrations through fire rated floors, slab and walls shall have sleeves and openings shall be filled with fire-stop, fire-rated compound providing the same rating as the construction through which such sleeves pass.
- d) Sprinkler piping exposed to the elements (freezing conditions) shall be adequately covered and heat-traced.
- e) Provisions are to be made for electrical connection of the water flow and tamper switches to the Building's Class E fire alarm system, by the electrical contractor in coordination with the Building's fire alarm vendor. See Building Specific information for the appropriate company name, contact person and phone number.
- f) Closing of any OS&Y control valve is to be coordinated with the Building Management Office.
- g) All control valves, pressure-reducing valves, check valves, water flow valves, tamper switches, etc., shall be installed so as to be easily accessible for maintenance and removal.
- h) Piping shall be installed so that all or part of the system can be completely drained. Drain assemblies are to be provided with a globe or angle type valve and spill to an approved receptacle to avoid flooding drain riser or slop sink.
- i) Inspector's test connection shall be at least 1-inch diameter terminating in an outlet giving a flow equivalent to one operating sprinkler. The test assembly shall include a globe or angle valve, sight glass, ½ orifice, union and all other appurtenances required for a complete assembly.
- j) Prior to filling the sprinkler line with water, air pressure testing is to be done. Test is to be witnessed by the Landlord's representative. Arrangements are to be made at least 24 hours in advance of the test.
- k) The Tenant shall furnish and install signs and seal as required.
- l) Upon completion, system shall be hydrostatically tested. The Building's Chief Engineer will witness the test.

Fire Safety Standards

- General

- a) The building is equipped with a Class E fire alarm system. Existing base building devices (e.g., smoke detectors, manual pull stations, warden phones, etc.) should not be disconnected or removed without prior notification to the Property Management Office.
- b) The Tenant’s engineer must field survey the location of all the existing devices and indicate on the demolition and construction drawings submitted for review. Plans must be filed with, and approved by, the authority having jurisdiction.
- c) In areas where wiring is susceptible to damage due to exposure to potential mechanical damage (e.g., MER, EMR, etc.), the wiring shall be installed in rigid conduit or EMT throughout the space and not just below eight feet.
- d) Subsystem panels shall be installed in the Tenant’s demised space and must be readily accessible to the Building’s Engineering department. Indication of this panel shall be identified on the drawings for review.
- e) Speakers can be installed either on the walls or in the ceilings but must be audible so all occupants can hear the signals and/or announcements. All speakers should be wired using an “A” and “B” loop as per City of Portland code to ensure some level of alarm will be heard throughout the floor in the event of a partial system failure.
- f) The disabling and reactivation of the building’s Class “E” fire alarm system, in conjunction with tying in or removing tenant devices, (i.e. smoke detectors, speakers, warden phones, manual pull stations, etc.) shall take place after hours (Before 8AM and after 6PM Mon. – Fri. or on weekends). A tenant representative or the General Contractor’s project foreman must be present to print and sign their name in the Class “E” fire alarm system “Alarm Book” (located with building engineer), prior to the disabling of the Class “E” System. A tenant representative or the General Contractor’s project foreman must also be present to print and sign their name in the Class “E” fire alarm system “Alarm Book” (located with building engineer), prior to the reactivation of the Class “E” fire alarm system. Charges associated with disabling, re-activating, testing and program alterations shall be paid for by the Tenant. Programming will be performed by the Building’s Class “E” approved vendor. **Any time devices are to be disconnected or added, whether temporary or permanent, Building Fire Alarm service provider is to be retained in order to avoid false alarms and trouble signals.**
- g) Tenant shall provide and install emergency lighting in accordance with Local Law 16 and all applicable laws. These lighting fixtures should have self-contained battery back-up units within the fixture. The engineer must submit a letter to the Landlord at the time of review that states that the emergency lighting does meet all applicable code requirements.

Restaurant Standards

- General

- a) All food facilities shall be constructed in accordance with Oregon State and City of Portland Health codes.
- b) All food facilities shall have a current City of Portland Health permit or receipt of payment for a permit BEFORE operation of the food facility.
- c) All food facilities shall have a current City of Portland Food Protection Certificate.
- d) All food facilities shall employ a licensed exterminating contractor who is certified by City of Portland and carry a minimum of one million dollars (\$1,000,000) in liability coverage.
- e) All refuse shall be contained on food facility premises in a refrigerated refuse room. Refuse and odors from refuse must not become a nuisance to tenants or Building Management.
- f) All food sinks and grease traps must be indirectly connected to waste lines. Grease traps are mandatory and are to be readily accessible from within the tenant space.
- g) All food facilities shall be vermin-resistant by sealing all openings in walls, floors, ceilings, pipelines, etc.
- h) All kitchen exhaust access doors must be clearly identified on the kitchen ceiling and be accessible for periodic inspection by Building Management and your vendor.
- i) All food facilities with a seating capacity of 20 or more shall be required to provide toilet facilities to their patrons. This should be separate and apart from employee toilet facilities.
- j) Water and sewer estimates must be provided to the Building Office at the time that construction plans are submitted for review.
- k) All food facilities shall ensure that any garbage that is brought out to the curb will not leak and cause a greasy, slick surface that may be a danger to pedestrians or become unsightly.
- l) All signage must be approved by the Landlord before it is installed.
- m) Waterproofing plans must be submitted for review by Landlord.

Sustainable Building Materials

For all new construction, renovation or maintenance repairs, 10% of the total purchases (on a dollar basis) must meet each one the following sustainability criteria separately (i.e. concrete can meet 10% post-consumer, steel can meet 50% within 500 miles and 10% of wood purchases can be FSC. One product alone cannot combine to meet this requirement):

(Must select and meet 3 requirements)

- Contain at least 10% post-consumer or 20% post-industrial material
- Is Forest Stewardship Council (FSC) certified wood
- Contain at least 50% materials harvested and processed or extracted and processed within 500 miles of the project

OR

Contain at least 70% salvaged material from off site or outside the organization

Contain 50% rapidly renewable materials (i.e. bamboo, cork, linoleum, etc)

Indoor Air Quality (IAQ) Compliant Building Products

To maintain a positive IAQ and reduce the impacts of emissions from materials, employ the following sustainable criteria when choosing these products:

Paint and coatings with VOC emissions that do not exceed VOC limits of Green Seal's Standard GS-11 requirements

Carpet and Carpet Cushion that meets the requirements of the CRI Green Label Testing Program

Composite panels (MDF, OSB, plywood) and agrifiber products that contain no added urea-formaldehyde

Adhesives and sealants that comply with the VOC content limits of South Coast Air Quality Management District (SCAQMD) Rule #1168

Lighting that use reduced mercury content of less than 80 picograms per lumen hour of light output

Appendix A:
Waste Tracking Worksheet (WTW)

Attached after this page

EXHIBIT A WASTE TRACKING WORKSHEET (WTW)

(During Construction)

Project Name:

Project Location:

Completed By:
Company:
Telephone #:

<p><u>Material Type Legend</u></p> <p><u>1. Land Clearing Debris</u></p> <p><u>2. Asphalt</u></p> <p><u>3. Portland Cement/Concrete/Masonry/Stone</u></p> <p><u>4. Steel and Other Metals</u></p> <p><u>5. Wood</u></p> <p><u>6. Gypsum (e.g. drywall)</u></p> <p><u>7. Cardboard</u></p> <p><u>8. Plastic</u></p> <p><u>9. "Blue Box" Waste</u></p> <p><u>10. Mixed Waste</u></p> <p><u>11. Other Types (as Required by Receiving Facility)</u></p>

Log Entry	Shipment Date	Material Type	Amount of Material (Tons)		Receiving Facility Name	Manifest Reference Number
			Recycled/Reused	Landfilled		
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

I hereby certify that the information provided is complete, correct, and complies with the requirements of EPA Best Management Practices:

Signature of Authorized Official:	Title:	Date:
-----------------------------------	--------	-------

Appendix B: Sample Certificate of Insurance

<u>ACORD</u> CERTIFICATE OF LIABILITY INSURANCE		DATE (MM/DD/YY)
PRODUCER Brokers's Name and Address	THIS CERTIFICATE ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
INSURED Name and Address of Contractor/Vendor (including name of entity contracted for)	INSURERS AFFORDING COVERAGE	NAIC #
	INSURER A: Each Insurer must	
	INSURER B: have an A.M. Best	
	INSURER C: Rating of at least	
	INSURER D: A-, VIII	
	INSURER E:	

COVERAGES SAMPLE COPY / SAMPLE COPY / SAMPLE COPY

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INS LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXP DATE (MM/DD/YY)	LIMITS														
INSERT	<input type="checkbox"/> GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY CLAIMS MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Liability <input checked="" type="checkbox"/> Waiver of Subrogation GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC		INSERT DATES:	Expiration Date must be at least 30 Days after date of Certificate of Insurance	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="text-align: center;">EACH OCCURRENCE</td><td style="text-align: right;">\$ 1,000,000</td></tr> <tr><td style="text-align: center;">DAMAGE TO RENTED PREMISES (PER OCCURRENCE)</td><td style="text-align: right;">\$ 150,000</td></tr> <tr><td style="text-align: center;">MED EXP (any 1 person)</td><td style="text-align: right;">\$ 5,000</td></tr> <tr><td style="text-align: center;">PERSONAL & ADV INJURY</td><td style="text-align: right;">\$ 1,000,000</td></tr> <tr><td style="text-align: center;">GENERAL AGGREGATE</td><td style="text-align: right;">\$ 2,000,000</td></tr> <tr><td style="text-align: center;">PRODUCTS – COMP/OP AGG</td><td style="text-align: right;">\$ 1,000,000</td></tr> <tr><td style="text-align: center;">LIQUOR LIABILITY – If Applicable</td><td></td></tr> </table>	EACH OCCURRENCE	\$ 1,000,000	DAMAGE TO RENTED PREMISES (PER OCCURRENCE)	\$ 150,000	MED EXP (any 1 person)	\$ 5,000	PERSONAL & ADV INJURY	\$ 1,000,000	GENERAL AGGREGATE	\$ 2,000,000	PRODUCTS – COMP/OP AGG	\$ 1,000,000	LIQUOR LIABILITY – If Applicable	
EACH OCCURRENCE	\$ 1,000,000																		
DAMAGE TO RENTED PREMISES (PER OCCURRENCE)	\$ 150,000																		
MED EXP (any 1 person)	\$ 5,000																		
PERSONAL & ADV INJURY	\$ 1,000,000																		
GENERAL AGGREGATE	\$ 2,000,000																		
PRODUCTS – COMP/OP AGG	\$ 1,000,000																		
LIQUOR LIABILITY – If Applicable																			
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COMBINED SINGLE LIMIT (Ea Accident)	\$ 1,000,000																		
BODILY INJURY (per person)	\$																		
BODILY INJURY (per accident)	\$																		
PROPERTY DAMAGE (Per accident)	\$																		
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EACH OCCURRENCE	\$ 5,000,000																		
AGGREGATE	\$ 5,000,000																		
	\$																		
	\$																		
INSERT	<input checked="" type="checkbox"/> WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY ANY PROPRIETOR/PARTNER/ EXECUTIVE OFFICER MEMBER EXCLUDED? IF YES, DESCRIBE UNDER SPECIAL PROVISIONS BELOW		INSERT		<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="text-align: center;">E.L. EACH ACCIDENT</td><td style="text-align: right;">\$ 1,000,000</td></tr> <tr><td style="text-align: center;">E.L. DISEASE –EA EMPLOYEE</td><td style="text-align: right;">\$ 1,000,000</td></tr> <tr><td style="text-align: center;">E.L. DISEASE –POLICY LIMIT</td><td style="text-align: right;">\$ 1,000,000</td></tr> </table>	E.L. EACH ACCIDENT	\$ 1,000,000	E.L. DISEASE –EA EMPLOYEE	\$ 1,000,000	E.L. DISEASE –POLICY LIMIT	\$ 1,000,000								
E.L. EACH ACCIDENT	\$ 1,000,000																		
E.L. DISEASE –EA EMPLOYEE	\$ 1,000,000																		
E.L. DISEASE –POLICY LIMIT	\$ 1,000,000																		
INSERT	<input type="checkbox"/> OTHER Commercial Crime (if applicable) Pollution Liability (if applicable)		INSERT		Limit: \$1,000,000 Limit: \$1mm Each Occ/\$2mm Agg														

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS:

Certificate holder and attached list of entities are included as Additional Insureds as required per written Contract on a Primary and Non-Contributory basis. Additional Insureds are included as per Additional Insured Endorsement # _____ (copy attached). Waiver of Subrogation status encompasses General Liability, Automobile and Umbrella Liability.

CERTIFICATE HOLDER

CANCELLATION

Power & Light Building LLC
c/o JLL
920 SW 6th Avenue, Suite 111
Portland, OR 97204

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS

AUTHORIZED REPRESENTATIVE

MUST BE ENTERED

Additional Insureds:

- 1) Power & Light Building LLC
- 2) Jones Lang LaSalle Americas, Inc.

Appendix C: Project Completion Checklist

PROJECT COMPLETION CHECKLIST

Project Name: _____ Date: _____
 Project Manager: _____ Inspected by: _____
 Contractor: _____
 Sub-Contractor: _____
 Job Summary #: _____

- 1. DOCUMENTATION/TECHNICAL DATA DELIVERABLES**
- | | ACCEPTED BY | DATE RECEIVED/
COMPLETED |
|--|--------------------------|--|
| 1.1 RECORD DRAWINGS | | |
| 1.1.1 Contract Arch/EngDrawings and Specifications (latest Revisions) | _____ | _____ |
| 1.1.2 As-Built Drawings: | _____ | _____ |
| <u>PAPER COPY</u> | | <u>DISK COPY</u> |
| <input type="checkbox"/> Plumbing | | <input type="checkbox"/> Plumbing |
| <input type="checkbox"/> Sprinkler | <input type="checkbox"/> | <input type="checkbox"/> Sprinkler |
| <input type="checkbox"/> HVAC | <input type="checkbox"/> | <input type="checkbox"/> HVAC |
| <input type="checkbox"/> Electrical | | <input type="checkbox"/> Electrical |
| <input type="checkbox"/> Fire Alarm | | <input type="checkbox"/> Fire Alarm |
| <input type="checkbox"/> Structural | | <input type="checkbox"/> Structural |
| <input type="checkbox"/> Architectural | | <input type="checkbox"/> Architectural |
| 1.1.3 Electrical Single Line Diagrams | _____ | _____ |
| 1.1.4 Control Wiring Diagrams | _____ | _____ |
| 1.2 PERMIT/CERTIFICATION DOCUMENTS | | |
| 1.2.1 All applicable Permits and Certifications have been Processed and a copy attached. | _____ | _____ |
| 1.2.2 Certificate of Inspection and Sign-off for all appropriate Equipment and systems. | _____ | _____ |
| <input type="checkbox"/> Plumbing <input type="checkbox"/> Sprinkler <input type="checkbox"/> HVAC <input type="checkbox"/> Electrical <input type="checkbox"/> Fire Alarm | | |
| <input type="checkbox"/> Structural <input type="checkbox"/> Architectural | | |
| APPROVED BY | | |
| DATE RECEIVED/
COMPLETED | | |
| 1.3 EQUIPMENT SPECIFICATION DATA | | |
| 1.3.1 Permanent Nameplates identifying Equipment, system accessories and controls. <i>Field Located.</i> | _____ | _____ |
| 1.3.2 Wall Mounted Control Wiring Diagram at equipment location. <i>Field Located.</i> | _____ | _____ |
| 1.4 ELECTRICAL PANEL AND PANELBOARD SCHEDULE DATA | | |
| 1.4.1 Panel and Panel board Schedules | _____ | _____ |
| <input type="checkbox"/> Field Located | | |
| <input type="checkbox"/> Hard Copy in Binder | | |
| 1.5 IDENTIFICATION OF EQUIPMENT | | |
| 1.5.1 Valve identification tagging and | | |

	Wall-mounted location charts. <i>Field Located.</i>	_____	_____
1.5.2	Permanently affixed labels for Major equipment. <i>Field Located.</i>	_____	_____
1.6	SOFTWARE USERS MANUAL/ELECTRONIC BACKUP		
1.6.1	BMS Systems back-up disk <input type="checkbox"/> <i>Field Located</i> <input type="checkbox"/> <i>Disk Copy in Binder</i>	_____	_____
1.7	OPERATION & MAINTENANCE MANUALS		
1.7.1	Manufacturer's O&M Instructions <input type="checkbox"/> <i>HVAC Equipment</i> <input type="checkbox"/> <i>Lighting/Electrical</i> <input type="checkbox"/> <i>BMS (Siemens, Trend, etc.)</i> <input type="checkbox"/> <i>Life Safety Equipment</i> <input type="checkbox"/> <i>Appliances</i> <input type="checkbox"/> <i>Other _____</i>	_____	_____
1.7.2	Manufacturer's Preventative Maintenance Procedures	_____	_____
		APPROVED BY	DATE RECEIVED/ COMPLETED
1.7	OPERATION & MAINTENANCE MANUALS (continued)		
1.7.3	Test and Balance Reports Factory Acceptance Reports: <input type="checkbox"/> <i>Generators</i> <input type="checkbox"/> <i>Other</i> <input type="checkbox"/> <i>HVAC Balancing</i> <input type="checkbox"/> <i>Water Quality</i> <input type="checkbox"/> <i>HVAC Pressure Test</i> <input type="checkbox"/> <i>Hydrostatic Test</i> <input type="checkbox"/> <i>Other</i>	_____	_____
1.8	SPARE PARTS LIST <input type="checkbox"/> <i>Spot Coolers</i> <input type="checkbox"/> <i>FPB's</i> <input type="checkbox"/> <i>VFD's</i> <input type="checkbox"/> <i>Transformers</i> <input type="checkbox"/> <i>BMS/Controls</i> <input type="checkbox"/> <i>Other _____</i>		
1.8.1	All applicable maintenance parts And accessories or materials, As indicated above. <i>Duplicate the pages applicable in O&M Manuals for easy reference.</i>	_____	_____
1.9	WARRANTY INFORMATION <input type="checkbox"/> <i>CRAC Units</i> <input type="checkbox"/> <i>Spot Coolers</i> <input type="checkbox"/> <i>FPB's</i> <input type="checkbox"/> <i>VFD's</i> <input type="checkbox"/> <i>Transformers</i> <input type="checkbox"/> <i>BMS/Controls</i> <input type="checkbox"/> <i>Other _____</i>		
1.9.1	Provide Copies of the Warranty	_____	_____
1.10	VERIFICATION OF FINAL PUNCH LIST COMPLETION (ATTACH COPY)		
1.10.1	Architectural	_____	_____
1.10.2	Engineering	_____	_____
1.10.3	Structural	_____	_____
1.10.4	Operations	_____	_____
1.10.5	Other _____	_____	_____
2.	COMMISSIONING Validate that the building system will comply with all design and operational requirements as well as environmental conditions. Reference Operations and Maintenance Bulletin #24-03 for additional information concerning testing and commissioning requirements.		

A COPY OF THE COMMISSIONING REPORT TO BE INCLUDED IN BINDER SECTION.

DATE RECEIVED/

		APPROVED BY	COMPLETED
2.1	TEST EQUIPMENT INDIVIDUALLY IN ALL MODES, INCLUDING: <input type="checkbox"/> Spot Coolers <input type="checkbox"/> FPB's <input type="checkbox"/> VFD's <input type="checkbox"/> Transformers <input type="checkbox"/> BMS/Controls <input type="checkbox"/> Other _____		
2.1.1	Automatic equipment <i>Field Verified</i>	_____	_____
2.1.2	Manual equipment <i>Field Verified</i>	_____	_____
2.1.3	Emergency equipment <i>Field Verified</i>	_____	_____

2.2	TEST THE SYSTEM IN ALL OPERATIONAL MODES at BMS, INCLUDING: <input type="checkbox"/> CRAC Units <input type="checkbox"/> Spot Coolers <input type="checkbox"/> FPB's <input type="checkbox"/> VFD's <input type="checkbox"/> Transformers <input type="checkbox"/> Generators <input type="checkbox"/> Other _____		
2.2.1	Automatic <i>Field Verified</i>	_____	_____
2.2.2	Manual <i>Field Verified</i>	_____	_____
2.2.3	Emergency <i>Field Verified</i>	_____	_____

Include coordination study and short circuit analysis if applicable.

3. TRAINING OF BUILDING ENGINEERS – SIGN-OFF BASED ON ENGINEER’S CONFIRMATION AND SIGNATURE

		APPROVED BY	DATE RECEIVED/ COMPLETED
3.1	WALK THROUGHS TO UNDERSTAND THE EQUIPMENT LAYOUT		<i>Attendance Records to be Attached</i>

3.2	UNDERSTANDING OF THE MODES OF OPERATION		
3.2.1	Manual	_____	_____
3.2.2	Automatic	_____	_____
3.2.3	Emergency	_____	_____

3.3	EQUIPMENT MAINTENANCE REQUIREMENTS		
3.3.1	Procedures	_____	_____
3.3.2	Frequencies	_____	_____
3.3.3	Special tools and instruments Needed	_____	_____
3.3.4	Delegation of responsibilities to Assigned personnel (specialty Contractors or building engineers)	_____	_____
3.3.5	Testing and non-invasive Maintenance of new or modified Equipment, controls, etc. should be Understood by Building Engineers	_____	_____

3.4	APPLICABLE SAFETY PROCEDURES/OPERATIONS <i>Reviewed with Engineers Onsite</i>	_____	_____
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4. FINAL SIGN-OFF
The signatures below indicate that ALL the items included in this checklist have been completed.

	NAME	SIGNATURE	DATE
Project Manager	_____	_____	_____
General Manager	_____	_____	_____
Assistant G M Engineering	_____	_____	_____



Exhibit 5

CLIENT INSURANCE REQUIREMENTS FOR SELECTED CONTRACTOR

The selected contractor(s) will be required to secure, pay for and maintain during the continuance of construction and fixturing work for the Project, insurance in the following minimum coverages and the following minimum limits of liability:

(i) Worker's Compensation and Employer's Liability Insurance with limits of not less than \$1,000,000.00 or such higher amounts as may be required from time to time by any Employee Benefit Acts or other statutes applicable under Oregon law sufficient to protect selected contractors from liability under the aforementioned acts.

(ii) Commercial General Liability Insurance (including Contractors' Protective Liability) in an amount not less than \$3,000,000.00 per occurrence, whether involving bodily injury liability (or death resulting therefrom) or property damage liability or a combination thereof with a minimum aggregate limit of \$5,000,000.00. Such insurance shall provide for explosion and collapse, completed operations coverage and broad form blanket contractual liability coverage and shall insure selected contractors against any and all claims for bodily injury, including death resulting therefrom, and damage to the property of others and arising from its operations under the contracts whether such operations are performed by selected contractors or by anyone directly or indirectly employed by any of them. Notwithstanding the foregoing, any selected contractors with a scope of work less than \$500,000.00, shall carry Commercial General Liability Insurance (including Contractors' Protective Liability) in an amount not less than \$1,000,000.00 per occurrence, whether involving bodily injury liability (or death resulting therefrom) or property damage liability or a combination thereof with a minimum aggregate limit of \$2,000,000.00.

(iii) Comprehensive Automobile Liability Insurance, including the ownership, maintenance and operation of any automotive equipment owned, hired, or non-owned in an amount not less than \$500,000.00 for each person in one accident, and \$1,000,000.00 for injuries sustained by two or more persons in any one accident and property damage liability in an amount not less than \$1,000,000.00 for each accident. Such insurance shall insure selected contractors against any and all claims for bodily injury, including death resulting therefrom, and damage to the property of others arising from its operations under the contracts, whether such operations are performed by selected contractors, or by anyone directly or indirectly employed by any of them.

All policies (except worker's compensation policy) shall be endorsed to include as additional insured parties the parties listed on, or required by the Lease to be named as additional insureds, Energy Trust, Manager, Landlord and Landlords' managing agent, and their respective members, partners, directors, officers, employees and agents, and such additional persons as Energy Trust may designate to selected contractor in writing. Selected contractor shall, prior to the commencement of its work on the Project and from time to time during the performance thereof (and, in any event, not less than ten (10) days prior to the expiration of any such policy), furnish to Energy Trust and Manager certificates of insurance (with proof of payment) and, if requested by Energy Trust or Manager, copies of all policies, evidencing the foregoing insurance coverage. The insurance policy endorsements shall also provide that all additional insured parties shall be given thirty (30) days prior written notice of any reduction, cancellation or non-renewal of coverage (except that ten (10) days, notice shall be sufficient in the case of cancellation for non-payment of premium) and shall provide that the insurance coverage afforded to the additional insured parties thereunder shall be primary to any insurance carried independently by said additional-insured parties. Additionally, where applicable, each policy shall contain a cross-liability and severability of interest clause.



Exhibit 6

Supplier Diversity Requirements

Client's procurement and competitive solicitation rules require certain supplier diversity obligations on the part of vendors and service providers.

1. Describe Company's approach to diversity, equity, and inclusion, including:
 - Experience in integrating diversity, equity, and inclusion internally, both in staffing and in contracting for services.
 - **Note whether Company is COBID-certified and/or whether Company is otherwise certified as woman- or minority or veteran-owned through the SBA or another certifying entity.**
2. Describe Company's efforts and experience in teaming with minority-, women-, or veteran-owned firms for delivering services like those described in this RFP.
3. If Company itself is not COBID-certified and/or certified minority-, women-, or veteran-owned through the SBA or other certifying entity, the following is also required:
 - Description of work in the scope that will be subcontracted to a COBID-listed and/or otherwise certified woman- or minority or veteran-owned firm(s), including what percentage of the total scope of work the subcontractor(s) will be responsible for. A minimum of 20% of the contract budget is required to be allocated to COBID-certified and/or minority-, woman-, or veteran-owned firm(s) per Energy Trust's [supplier diversity program](#).
 - The name and primary contact information for the subcontractor(s) or, if the subcontractor(s) are not known by the due date of this proposal, a stated commitment to and plan to identify the subcontractor(s) during contracting and no later than April 1, 2025.