

INVITATION TO BID

Project: **Condon City Memorial Hall**

Owner: **City of Condon, 120 S. Main Street, Condon, OR 97823**

Architect/Engineer: **LRS Architects, Inc.
720 NW Davis St., Suite 300
Portland, Oregon 97209**

Date: **July 24, 2018**

City of Condon will receive Bids on a General Contract for Memorial Hall Acoustic Project. This will include demolition of current materials on wall and rebuild according to specifications provided.

Your firm is invited to submit a Bid to the City of Condon for remodel of Memorial Hall Acoustic Project located at 120 S. Main Street, Condon, Oregon.

The Owner requires the Project to be completed in 180 calendar days from date of award of Contract.

The Owner will receive bids until Wednesday, September 19, 2018, 3 p.m. at Condon City Hall, 128 S. Main Street, Condon, Oregon 97823.

Bids received after the above stated time will not be accepted. Bids will be opened privately.

Bids must include cost of project, three (3) references of company's work on similar projects, experience of similar projects, contractor license, statement that they will adhere to the City of Condon's public contracting laws and the laws of the State of Oregon and any negotiable terms or conditions which the bidder may offer in response to the RFP/Invitation to bid. These items will be used for evaluation of the bids received.

Site Visits: Made by appointment only by calling Kathryn Greiner, City Administrator 541-384-2711 or email administration@cityofcondon.com

Bidding Documents may be obtained from City of Condon's website – www.cityofcondon.com

Submit your Bid in written form and submit by fax 541-384-2700, mail – City of Condon, PO Box 445, Condon, OR 97823, email administration@cityofcondon.com or hand delivery at City Hall, 128 S. Main Street, Condon, Oregon.

Bid will be required to be submitted under a condition of irrevocability for a period of 30 days after submission.

The Owner reserves the right to accept or reject any or all Bids.

City of Condon

Kathryn Greiner
City Administrator

Request for Proposals

Acoustic Project – Memorial Hall

The City of Condon is requesting proposals for an acoustic construction project of the Veterans Memorial Hall located at 120 S. Main Street, Condon, OR 97823.

The project is to increase the function of the Memorial Hall with improvement of installing insulation and acoustic tiles to exterior walls and an acoustic drop ceiling. This will include demolition of existing materials. Electrical work is **not** included in this project.

This project must adhere to BOLI rules if project exceeds \$50,000, and all applicable public contracting laws. Must be licensed and bonded in the State of Oregon and must complete the job within 180 days of approved RFP.

A packet with specifications may be picked up at City Hall, 128 S. Main Street, Condon, OR 97823 or by emailing Kathryn Greiner, City Administrator at administration@cityofcondon.com or on the City's website – www.cityofcondon.com

Proposals must be returned no later than Wednesday, September 19, 2018, 3 p.m. to City of Condon, PO Box 445, Condon, OR 97823-445, fax – 541-384-2700, email-administration@cityofcondon.com, or hand delivered to City Hall, 128 S. Main Street, Condon, OR 97823.

August 16, 2018

Condon’s Memorial Hall, used for a variety of community events, has a several problems that will need to be addressed over the coming years to improve its usefulness to the community.

1. Acoustical quality of the space is poor, making speech difficult to hear.
2. Lighting upgrades are needed, particularly when used for art shows.
3. The non-insulated building is difficult to heat.
4. Heating system upgrades, including ductwork are needed.

This report is limited specifically to acoustical issues. The remaining issues are outside of the scope of work being considered at this time, except as coordination with future improvements may be beneficial to consider in conjunction with acoustics.

Sound intelligibility in the space is difficult, primarily due to reflectivity of the floor, ceiling and wall surfaces. This reflectivity results in a long **reverberation time**, defined simply as the length of time a sound bounces around in a space before it drops 60 decibels in intensity. When listening to someone speak, you first hear the sound directly from the speaker, and then you hear multiple slightly delayed reflections as the sound bounces off of reflective surfaces in the space. The resulting sound becomes more garbled the longer it bounces around, which can make speech nearly incomprehensible. The negative effects of a long reverberation time are more noticeable in larger spaces due to the longer distances these delayed sounds will travel.

Optimal/recommended sound reverberation times in a 30,000 cubic ft space:

Conference Room / Speech	0.6 to 0.8 seconds
Chamber Music	1.0 seconds
Organ Music	1.4 seconds

Reverberation time of a space may be calculated mathematically as follows:

Reverberation Time = $\frac{0.05 \times \text{Volume of space}}{(S_1 \times a_1) + (S_2 \times a_2) + (S_3 \times a_3) + \dots}$

Where S = area of a particular surface material
 a = sound absorption coefficient of that particular material
 (also known as NRC – noise reduction coefficient)

For the Existing Room: Volume = 38.5 ft x 54.25 ft x 14.33 ft = 29,930 cubic ft

	S	a	S x a
Wood floor	2090 sf	0.10	209
Gypsum/plaster ceiling	2090 sf	0.06	125
Painted Conc Masonry (columns & upper walls)	549 sf	0.07	38
Plywood walls w/ light wt carpet cover	1640 sf	~0.14	230
Gypsum board walls	385 sf	0.06	23
TOTAL			625

Reverberation Time = $0.05 \times 29,930 / 625 = 2.4 \text{ seconds}$ >> **Way too long**

Acoustical Improvements

Option 3 - Acoustical Ceiling + 5ft high acoustical panels on 2 walls (North and South)

Wood floor	2090 sf	0.10	209
Acoustical tile ceiling	2090 sf	0.85	1776
Painted Conc Masonry	114 sf	0.07	8
Gypsum board walls	2005 sf	0.06	120
Acoustical wall panels	455 sf	1.00	<u>455</u>
	Total S x a		2568

Rev Time = $0.05 \times 29,930 / 2568 = \mathbf{0.58 \text{ seconds}}$ >> **Close to Optimal for speech**

** Caution should be exercised to avoid additional sound absorbent surfaces which could further deaden the space.

Comparative Costs

The estimated costs shown below are based on preliminary studies complete in March of 2017. Actual costs will vary, depending on the specific products selected and potential additional work items that may be desired or required. For instance, installing an acoustical ceiling provides the best acoustical improvement for the money spent, but will require installation of new lighting at an additional \$10 per square foot, or more.

Also, some of the improvements are dual purpose. Furring and insulating the exterior walls will not only improve acoustical quality in the space, but also improve thermal comfort and reduce the load on the aging HVAC equipment.

Carpet is also very effective for the investment, but may not be a good fit with serving food in the space and additional maintenance required.

	Quantity	Unit Cost	Total Cost
<u>Option 3</u>			
Acoustical ceiling system	2090 sf	~ \$ 9/sf	~ \$20,000
Demo plywd infill	1640 sf		
Fur & insulate ext. walls	1625 sf	~ \$ 6/sf	~ \$10,000
Acoust wall panels	455 sf	~ \$ 10/sf	~ \$ 5,000
			\$35,000

Attachments:

Drawings provided on the following pages include: First Floor Plan, Reflected Ceiling Plan, Existing Wall Section with demo items noted, Acoustical Wall Section, showing new wall treatment, and the optional Proposed Lighting Improvements.

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Suspended metal grid ceiling system.
- B. Acoustical units.

1.2. SUBMITTALS

- A. Shop Drawings: Indicate grid layout and related dimensioning.
- B. Product Data: Provide data on suspension system components.
- C. Samples: Submit two full size samples illustrating material and finish of acoustical units.
- D. Samples: Submit two samples each, 12 inches long, of suspension system main runner, cross runner and perimeter molding.
- E. Certifications: Manufacturer's certifications that systems comply with the following requirement:
 - 1. Seismic Performance: International Code Council Evaluation Report, ESR-1308.
- F. Manufacturer's Installation Instructions: Indicate special procedures.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

1.4. QUALITY ASSURANCE

- A. Suspension System and Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- B. Acoustical Performance: Each carton of material delivered to Project must carry an approved independent laboratory classification of NRC and CAC.
- C. Seismic Performance: Provide acoustical ceiling systems designed and installed to withstand the effects of earthquake motions according to the following, or as otherwise acceptable to governing jurisdiction according to prescriptive design indicated in Drawings.
 - 1. State Building Code, Seismic Category D, E and F, as applicable.
 - 2. Tested per International Code Council -Evaluation Services- AC 156 Acceptance Criteria for Seismic Qualification Testing of Non-structural Components as evidenced by International Code Council Evaluation Report ESR-1308.

1.5. FIELD CONDITIONS

- A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

1.6. EXTRA MATERIAL

- A. Deliver to Owner an extra stock of approximately 2 percent of each type of acoustical material installed, separately packaged, marked, and protected against deterioration.

PART 2 PRODUCTS

2.1. MANUFACTURERS

- A. Acoustical Panels: Provide manufacturer's standard panels of products that comply with ASTM E 1264 classification, Type and Form as indicated, for each designation in the Interior Finish Legend in the Drawings.
- B. Suspension Systems:
 - 1. Same manufacturer as for acoustical units.

2.2. ACOUSTICAL UNITS

- A. Acoustical Units - General: ASTM E1264, Class A.
- B. Acoustical Tile Type [ACP-1]: Painted fiberglass, ASTM E1264 Type XII, Form 2, with the following characteristics specified:
 - 1. Size 24 by 48 inches, unless otherwise indicated in Drawings.
 - 2. Thickness: 1 inch.
 - 3. Light Reflectance: 90 percent, determined in accordance with ASTM E1264.
 - 4. NRC Range: .95, determined in accordance with ASTM E1264.
 - 5. Edge: Square tegular; 9 /16 inch.
 - 6. Surface Color: White.
 - 7. Products:
 - a. Basis of Design: Armstrong; Optima Series..
 - b. Substitutions: Submit according to Section 01 2500.

2.3. SUSPENSION SYSTEM(S)

- A. Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.

- B. Attachment Devices: Size for five times the design load indicated in ASTM C 635, Table 1, "Direct Hung", unless otherwise indicated, and in accordance with the International Building Code, Section 1613 Category D, E and F as described in EASR-1308.
 - 1. Power Actuated fasteners in concrete may be used for support of acoustical tile or lay-in panel suspended ceiling applications and distributed systems where the service load on any individual fastener does not exceed 90 lb.
 - 2. Power Actuated fasteners in concrete shall not be used for sustained tension loads or for brace applications in Seismic Design Categories D, E, or F unless approved for seismic loading.

- C. Exposed Steel Suspension System: Formed steel, commercial quality cold rolled; heavy-duty.
 - 1. Profile: Tee; 15/16 inch wide face.
 - 2. Construction: Double web.
 - 3. Finish: White painted.
 - 4. Products:
 - a. Basis of Design: Armstrong; Prelude Suspension System..
 - b. Substitutions: Submit according to Section 01 2500.

2.4. ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.

- B. Perimeter Moldings: Same material and finish as grid.
 - 1. At Exposed Grid: Provide L-shaped molding for mounting at same elevation as face of grid.
 - 2. In accordance with the State Building Code, Section 1621 for Category D, E and F as described in ESR-1308.
 - a. Perimeter Support Closure Angles: Hemmed, pre-finished angle molding, minimum 2 inch horizontal leg width.

- C. Seismic Clips:
 - 1. Seismic Joint Clip, 5 inches by 1-1/2 inch, hot-dipped galvanized cold-rolled steel per ASTM A 568, designed to accommodate a seismic separation joint.
 - 2. 2 inch Beam End Retaining Clip, 0.034 inch thick, hot-dipped galvanized cold-rolled steel per ASTM A 568, used to join main beam or cross tee to wall molding.

- D. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 EXECUTION

3.1. EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

3.2. INSTALLATION - SUSPENSION SYSTEM

- A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.
- B. Install suspension system and panels in accordance with International Building Code, Section 1613, except as noted in Section 4.4.3.1 of ESR-1308, and with authorities having jurisdiction.
 - 1. ESR-1308, Section 4.4.3.1, Alternate Seismic Design Category D, E and F installation allows use of 2 inch Beam End Retaining Clip with nominal 7/8 inch 15/16 inch wall molding.
 - 2. Install Seismic Separation Joint Clip per manufacturer's instructions.
- C. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- D. Lay out system to a balanced grid design with edge units no less than 50 percent of acoustical unit size.
- E. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
- F. Provide hanger clips during steel deck erection. Provide additional hangers and inserts as required.
- G. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- H. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- I. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- J. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- K. Do not eccentrically load system or induce rotation of runners.

- L. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions where necessary to conceal edges of acoustical panels.
 - 1. Install with continuous gasket, where indicated in Drawings.
 - 2. Use longest practical lengths.
 - 3. Overlap corners.

3.3. INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Lay directional patterned units as indicated in Drawings. .
- D. Fit border trim neatly against abutting surfaces.
- E. Install units after above-ceiling work is complete.
- F. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- G. Cutting Acoustical Units:
 - 1. Make field cut edges of same profile as factory edges.
- H. Where round obstructions occur, provide preformed closures to match perimeter molding.

3.4. TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

End of Section

PART 1 GENERAL

1.1. SECTION INCLUDES

- A. Sound-absorbing wall panels.
- B. Mounting accessories.

1.2. RELATED REQUIREMENTS

- A. Section 06 4000 - Architectural Woodwork: Custom wood trim.

1.3. SUBMITTALS

- A. Product Data: Manufacturer's printed data sheets for products specified.
- B. Shop Drawings: Fabrication and installation details, panel layout, and fabric orientation.
- C. Selection Samples: Manufacturer's color charts for fabric covering, indicating full range of fabrics, colors, and patterns available.
- D. Verification Samples: Fabricated samples of each type of panel specified; 12 by 12 inch, showing construction, edge details, and fabric covering.
- E. Test Reports: Certified test data from an independent test agency verifying that panels meet specified requirements for acoustical and fire performance.

1.4. QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company with not less than five years of experience in manufacturing acoustical products similar to those specified.

1.5. DELIVERY, STORAGE, AND HANDLING

- A. Protect acoustical units from moisture during shipment, storage, and handling. Deliver in factory-wrapped bundles; do not open bundles until units are needed for installation.
- B. Store units flat, in dry, well-ventilated space; do not stand on end.
- C. Protect edges from damage.

1.6. MOCK-UP

- A. See Section 01 4000 - Quality Requirements, for additional mock-up requirements.
- B. Construct mock-up of acoustical units at location as indicated by Architect.
 - 1. Minimum mock-up dimensions; 96 by 96 inches.

2. Approved mock-up may remain as part of the Work.

PART 2 PRODUCTS

2.1. FABRIC-COVERED SOUND-ABSORBING UNITS

- A. Manufacturers: As specified in Finish Material Legend in the Drawings.
 1. **Essi Acoustical Products Company; ESSI Silentspace Acoustical Wall Panels:** www.essiacoustical.com/#sle.
 2. **LAMVIN; Sonic Standard Panel:** www.lamvin.com/#sle.
 3. **Owens Corning Conwed Designscape:** www.conweddesignscape.com/#sle.
 4. **TECHLITE; Accent Fabric Wrapped Panels:** www.techlite.com/#sle.
 5. **NetWell Noise Control: Fabric Panels:** www.controlnoise.com.

- B. Sound Absorbing Units: Prefinished, factory assembled fabric-covered panels.
 1. Surface Burning Characteristics: Flame spread index of 25 or less and smoke developed index of 450 or less, when tested in accordance with ASTM E84.

- C. Fabric-Covered Acoustical Panels for Walls:
 1. Panel Core: Manufacturer's standard rigid or semi-rigid fiberglass core.
 - a. Facing: 1/16 inch impact-resistant surface laminated to core.
 2. Noise Reduction Coefficient (NRC): 1.00 when tested in accordance with ASTM C423.
 3. Panel Size: 60 inch high by width required to fill wall space in equal divisions.
 4. Panel Thickness: As required to meet required acoustical performance.
 5. Corners: Square.
 6. Fabric: As selected by Architect, or Owner.
 7. Color and Pattern: As selected by Architect, or Owner, from manufacturer's full range.
 8. Patterns: Where fabric with directional or repeating patterns or fabric with directional weave is used, mark for installation in same direction.
 9. Mounting Method: Back-mounted with mechanical fasteners.

2.2. FABRICATION

- A. Fabric Wrapped, General: Fabricate panels to sizes and configurations as indicated, with fabric facing installed without sagging, wrinkles, blisters, or visible seams.
 1. Where radiused or mitered corners are indicated, install fabric to avoid seams or gathering of material.

- B. Tolerances: Fabricate to finished tolerance of plus or minus 1/16 inch for thickness, overall length and width, and squareness from corner to corner.

2.3. ACCESSORIES

- A. Back-Mounting Accessories: Manufacturer's standard accessories for concealed support, designed to allow panel removal, and as follows:
 - 1. Two-part clip and base-support bracket system; brackets designed to support full weight of panels and clips designed for lateral support, with one part mechanically attached to back of panel and the other attached to substrate.
- B. Trim Moldings: Manufacturer's standard wood trim moldings for concealing panel joints; color as selected from manufacturer's standards.
- C. Fixing Clips: Manufacturer's standard for application as indicated.
- D. Panel Adhesive: Acceptable to acoustical panel manufacturer for application as indicated.

PART 3 EXECUTION

3.1. EXAMINATION

- A. Examine substrates for conditions detrimental to installation of acoustical units. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2. INSTALLATION

- A. Install acoustical units in locations as indicated, following manufacturer's installation instructions.
- B. Align panels accurately, with edges plumb and top edges level. Scribe to fit accurately at adjoining work and penetrations.
- C. Install acoustical units to construction tolerances of plus or minus 1/16 inch for the following:
 - 1. Plumb and level.
 - 2. Flatness.

3.3. CLEANING

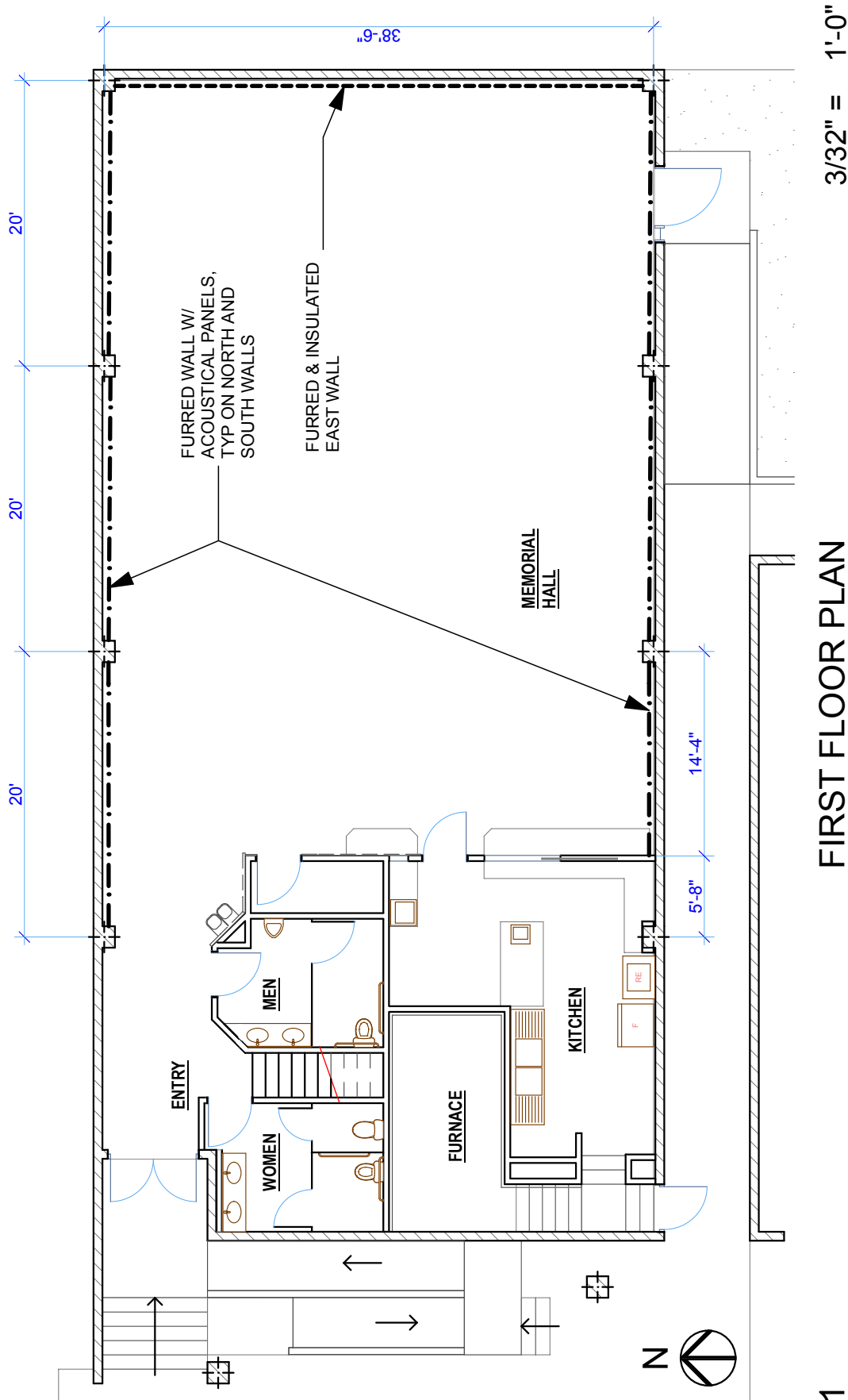
- A. Clean fabric facing upon completion of installation from dust and other foreign materials, following manufacturer's instructions.

3.4. PROTECTION

- A. Provide protection of installed acoustical panels until Date of Substantial Completion.

- B. Replace panels that cannot be cleaned and repaired to satisfaction of the Architect.

End of Section



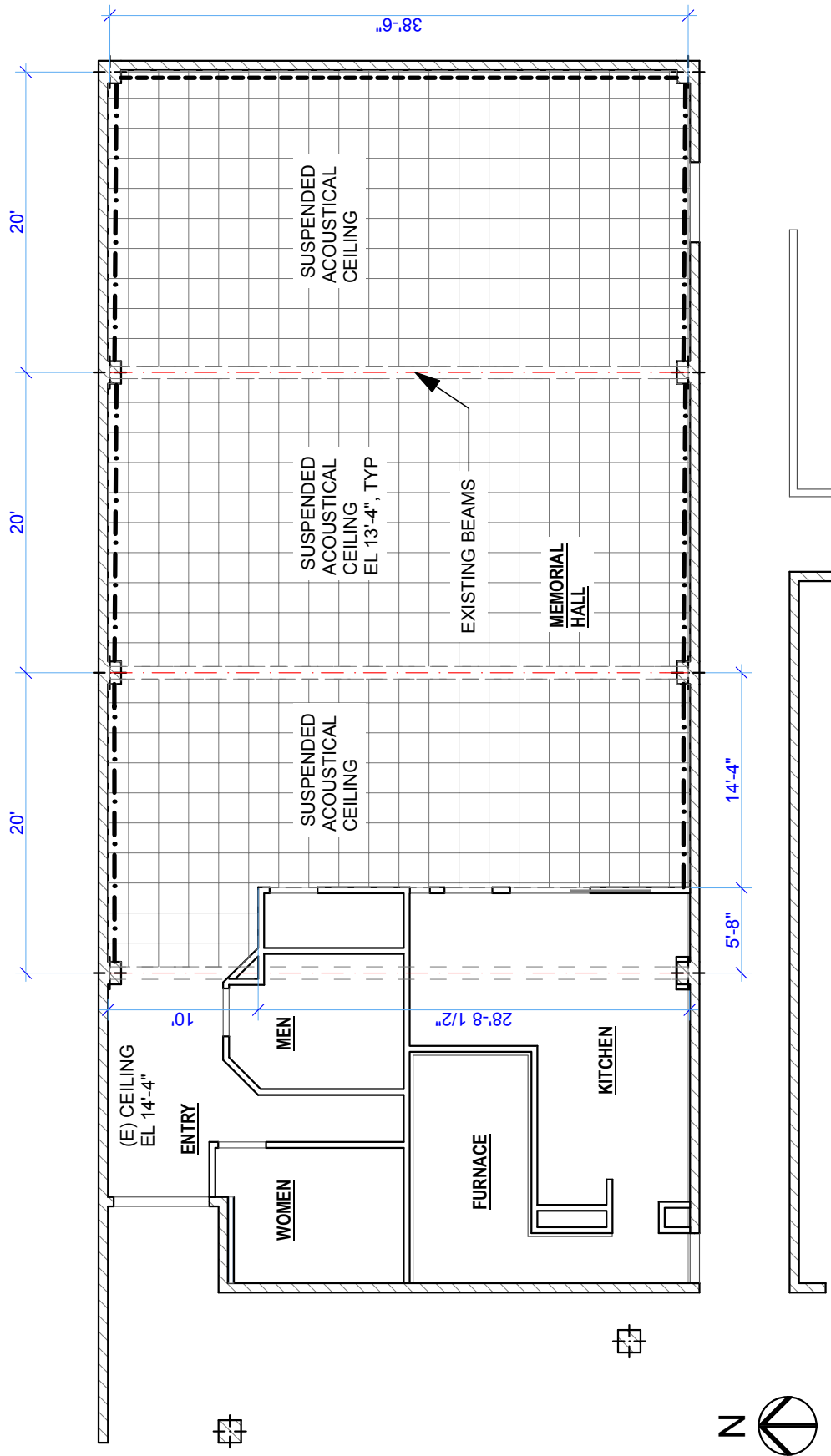
3/32" = 1'-0"

FIRST FLOOR PLAN

1

FIRST FLOOR PLAN

Project MEMORIAL HALL ACOUSTICAL UPGRADES	Date 07.24.2018
Location 120 S. Main Street, Condon, OR 97823	Project No. 216323
Title MEMORIAL HALL PLANS	Scale: 3/32" = 1'-0"
1	

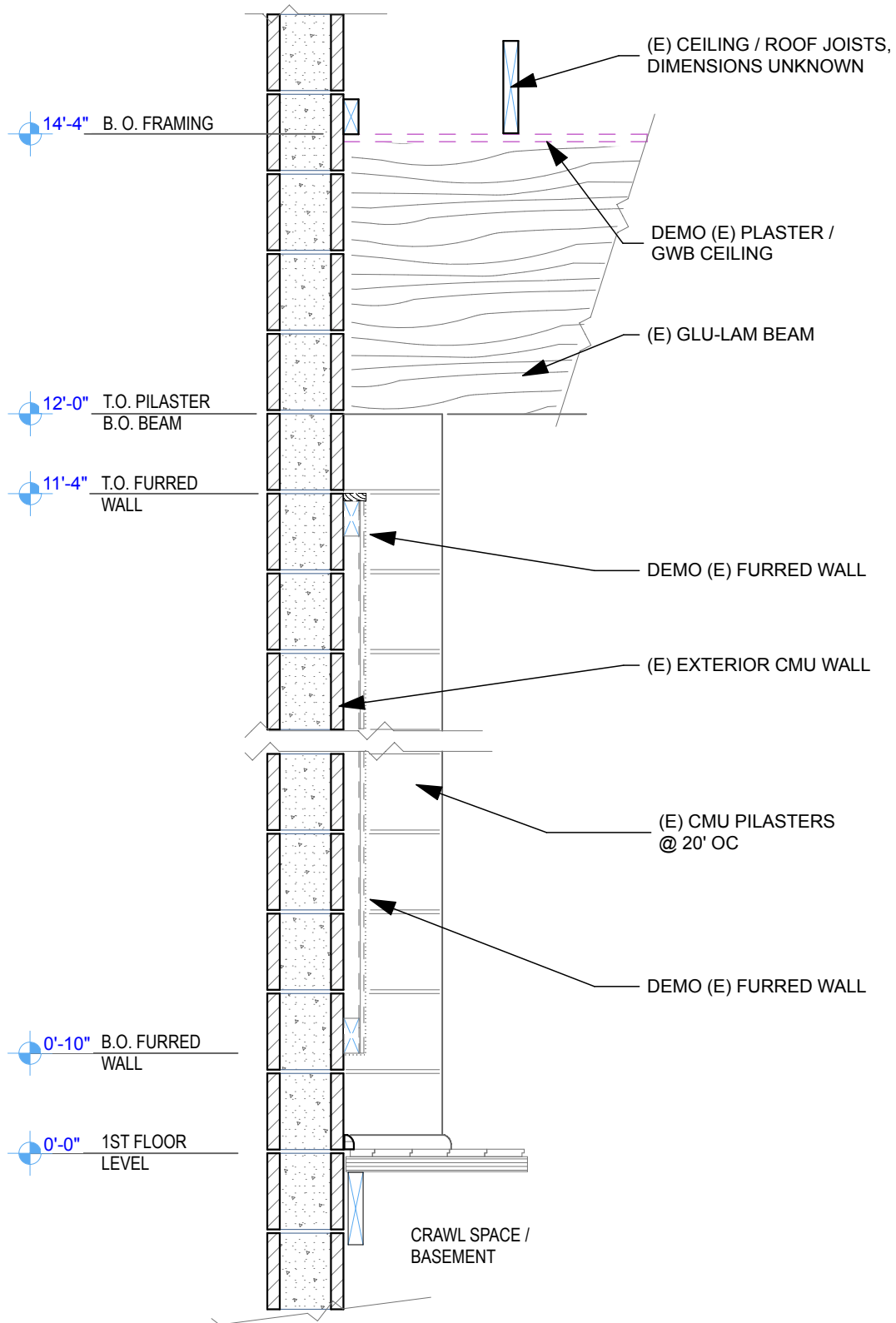


REFLECTED CEILING PLAN

3/32" = 1'-0"

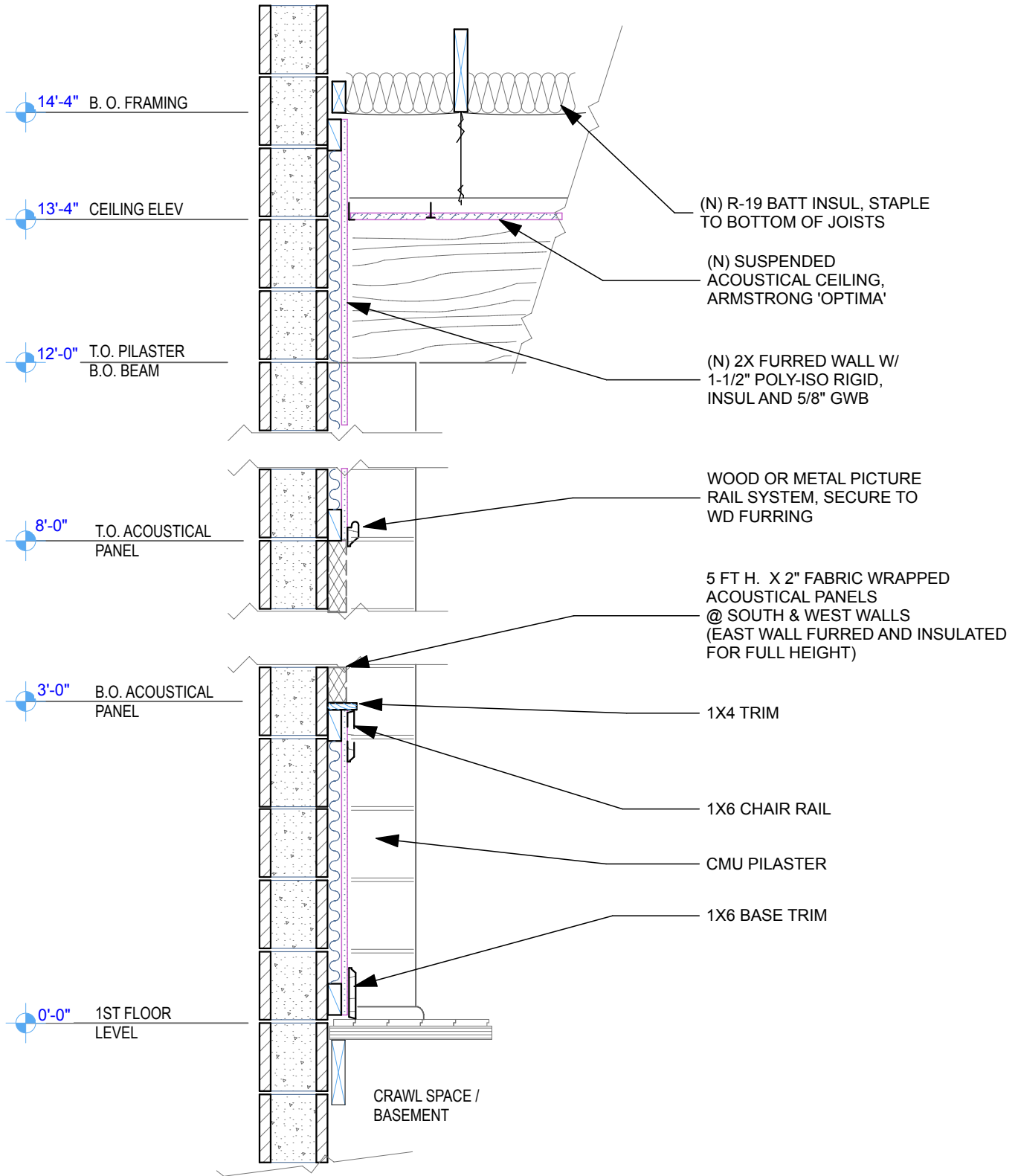
REFLECTED CEILING PLAN

Project MEMORIAL HALL ACOUSTICAL UPGRADES		Date 07.24.2018
Location 120 S. Main Street, Condon, OR 97823	Project No. 216323	Reference / Sheet
Title MEMORIAL HALL PLANS	Scale: 3/32" = 1'-0"	2



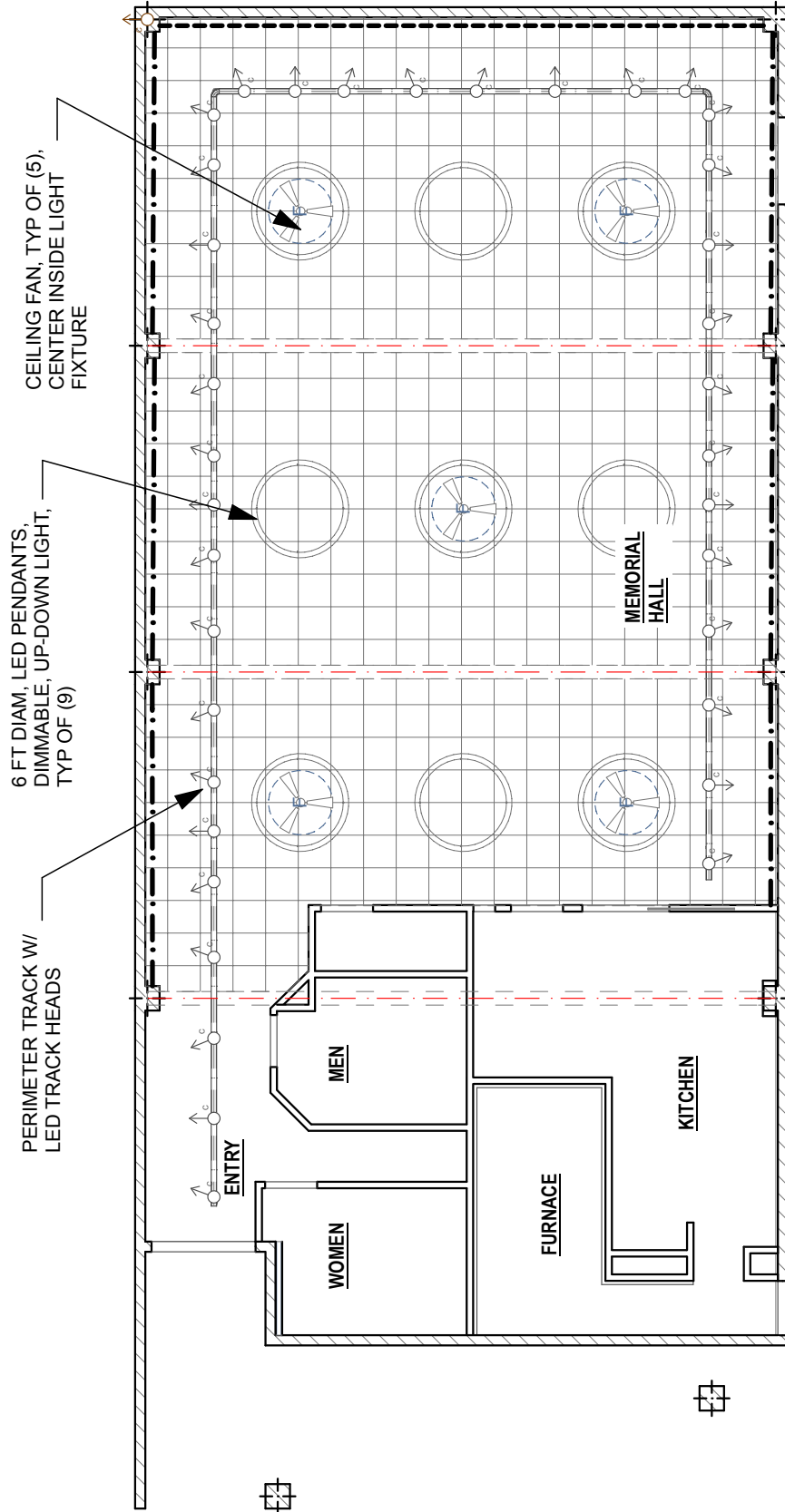
EXISTING WALL SECTION & DEMO

Project	MEMORIAL HALL ACOUSTICAL UPGRADES		Date	07.24.2018
Location	120 S. Main Street, Condon, OR 97823	Project No.	216323	Reference / Sheet
Title	WALL SECTIONS		Scale:	3/4" = 1'-0"
				3



ACOUSTICAL WALL SECTION

Project	MEMORIAL HALL ACOUSTICAL UPGRADES	Date	07.24.2018
Location	120 S. Main Street, Condon, OR 97823	Project No.	216323
Title	WALL SECTIONS	Scale:	3/4" = 1'-0"
			4



PROPOSED LIGHTING PLAN
 3/32" = 1'-0"

PROPOSED LIGHTING PLAN

Project MEMORIAL HALL ACOUSTICAL UPGRADES		Date 07.24.2018
Location 120 S. Main Street, Condon, OR 97823	Project No. 216323	Reference / Sheet
Title MEMORIAL HALL PLANS	Scale: 3/32" = 1'-0"	5