# 540 WEST MADISON OWNER, LLC SUITE 2450 INTERIOR ALTERATION

# **ISSUED FOR BID/PERMIT**

12.20.2023

INTERIOR ALTERATION OF EXISTING OFFICE SUITE ON 24TH FLOOR.

# Perkins&Will

The Wrigley Building
410 North Michigan Ave.
Suite 1600
Chicago, IL 60611
t 312.755.0770
f 312.755.0775



	CODE MATRIX			CONTACT INFO	0	BLDG CODE STATEMENT OF COMPLIANCE	SHEET INDEX		
ITEM SUBJECT CHICAGO ZONING REQUIREMENTS  ZONING DISTRICT / PLANNED DEVELOPMENT NO.  Z.01  Z.02 EXISTING ZONING USE(S)  Z.03 PROPOSED ZONING USE(S)  Z.04 CHICAGO LANDMARK DESIGNATION  Z.06 ZONING OVERLAY DISTRICT	ZONING MAP  17-17-0100 17-17-0100 RECORDED DEED RESTRICTION ZONING MAP, CH. 17-7	ORDINANCE REQUIREMENT ACTUAL N/A LOCATION / SHEET NO.  PD 70 SUBAREA "B"  OFFICE OFFICE - N/A N/A EXISING NO CHANGE N/A EXISING NO CHANGE	PROPERTY MANAGEMENT  JONES LANG LASALLE (312) 815-5064 CONTACT: MIGUEL LULLI MIGUEL.LULLI@AM.JLL.COM	OWNER  601 W SOUTH WACKER & 601 SUNSET WACKER, LLC (312) 815-5064 CONTACT: MIGUEL LULLI MIGUEL.LULLI@AM.JLL.COM	ARCHITECT / DESIGNER  PERKINS AND WILL (312) 755.0770  CONTACT: ERIC EVANGELISTA ERIC.EVANGELISTA@PERKINSWILL.COM	I CERTIFY THAT THESE ARCHITECTURAL DOCUMENTS DESCRIBED WITHIN WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE, CONFORM TO ALL APPLICABLE CODES AND REGULATIONS OF THE CITY OF CHICAGO AND THE STATE OF ILLINOIS; AND THAT I AM A DULY REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF ILLINOIS.  NAME: JEREMY D HELFERT SIGNED DATE: 12.20.2023  ARCHITECT'S ILLINOIS LICENSE NUMBER: 001.022080	SHEET NUMBER SHEET NAME	ISSUED FOR ENGINEERING 11.29.2023 ISSUED FOR BID/PERMIT 12.20.2023	
Z.08 LOT AREA Z.09 FLOOR AREA RATIO (FAR) Z.10 TOTAL FLOOR AREA Z.11 BUILDING HEIGHT 2019 CHICAGO BUILDING CODE REQUIREMENTS B.03.01 PROPOSED OCCUPANCY CLASSIFICATION(S) B.03.02 EXISTING OCCUPANCY CLASSIFICATION(S) B.05.02 BUILDING HEIGHT IN FEET ABOVE GRADE PLANE B.05.03 NUMBER OF STORIES ABOVE GRADE PLANE B.05.05 BUILDING AREA B.05.06 NUMBER OF BASEMENTS EXCLUDED FROM AREA	17-17-0302  VARIES BY DISTRICT  17-17-0305, VARIES BY DISTRICT  17-17-0311, VARIES BY DISTRICT  14B-3-302.1  14R-3-302.6, CH. 14B-3  14B-2-203.3, 14B-5-504.3  14B-2-202, 14B-5-504.4  14B-2-203.4, 14B-5-506  14B-5-506.1.3	B-BUSINESS B-BUSINESS N/A EXISING NO CHANGE  B-BUSINESS N/A EXISING NO CHANGE  B-BUSINESS N/A EXISING NO CHANGE		VICINITY MAP		BR II. SO. LOCK	GENERAL G00-00 COVER SHEET G01-24 LEVEL 24 CODE COMPLIANCE PLAN - CHICAGO ARCHITECTURAL A00-01 REFERENCE SHEET A00-30 SPECIFICATIONS A00-31 SPECIFICATIONS		
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PERKINS+WILL INC #184000338-0001

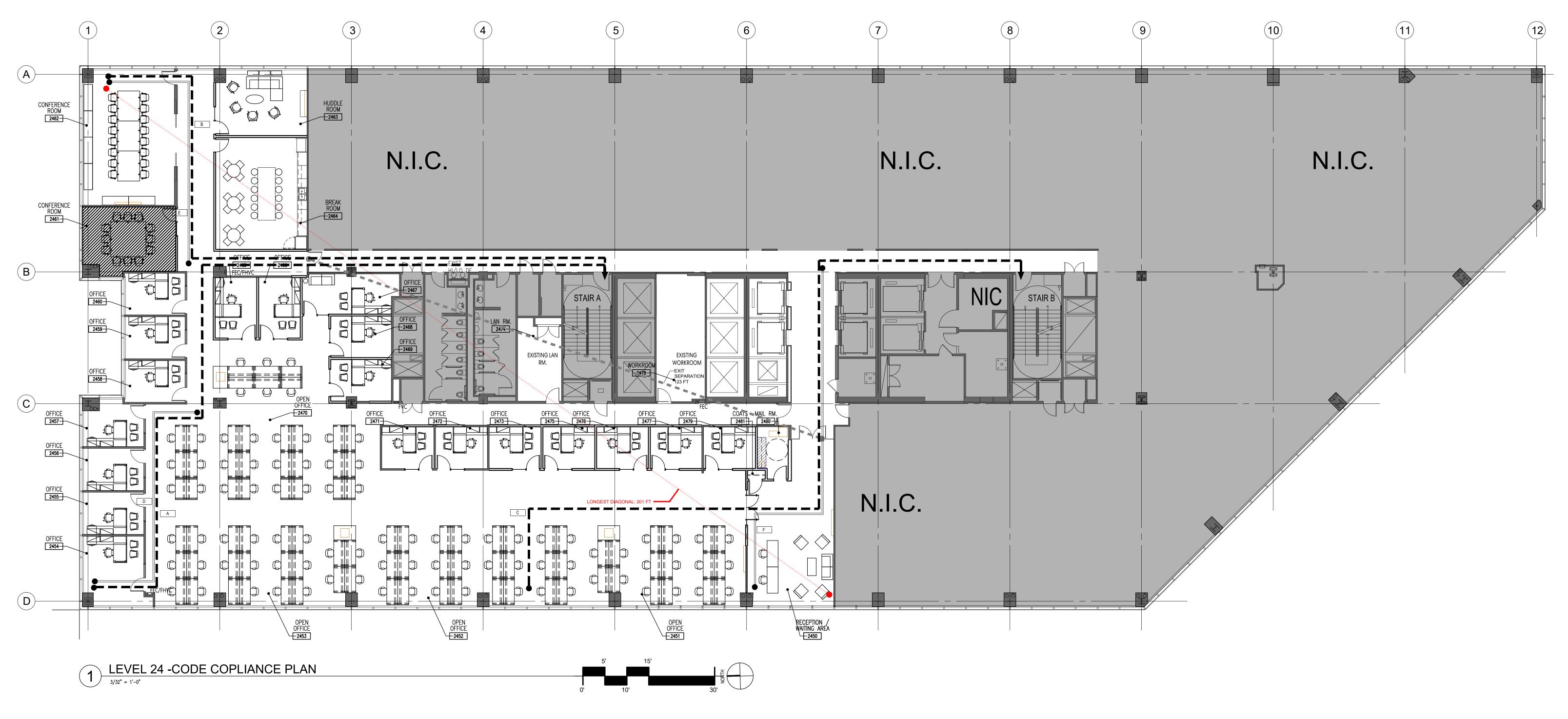
540 W. MADISON SUITE 2450 INTERIOR ALTERATION CHICAGO, IL 60661

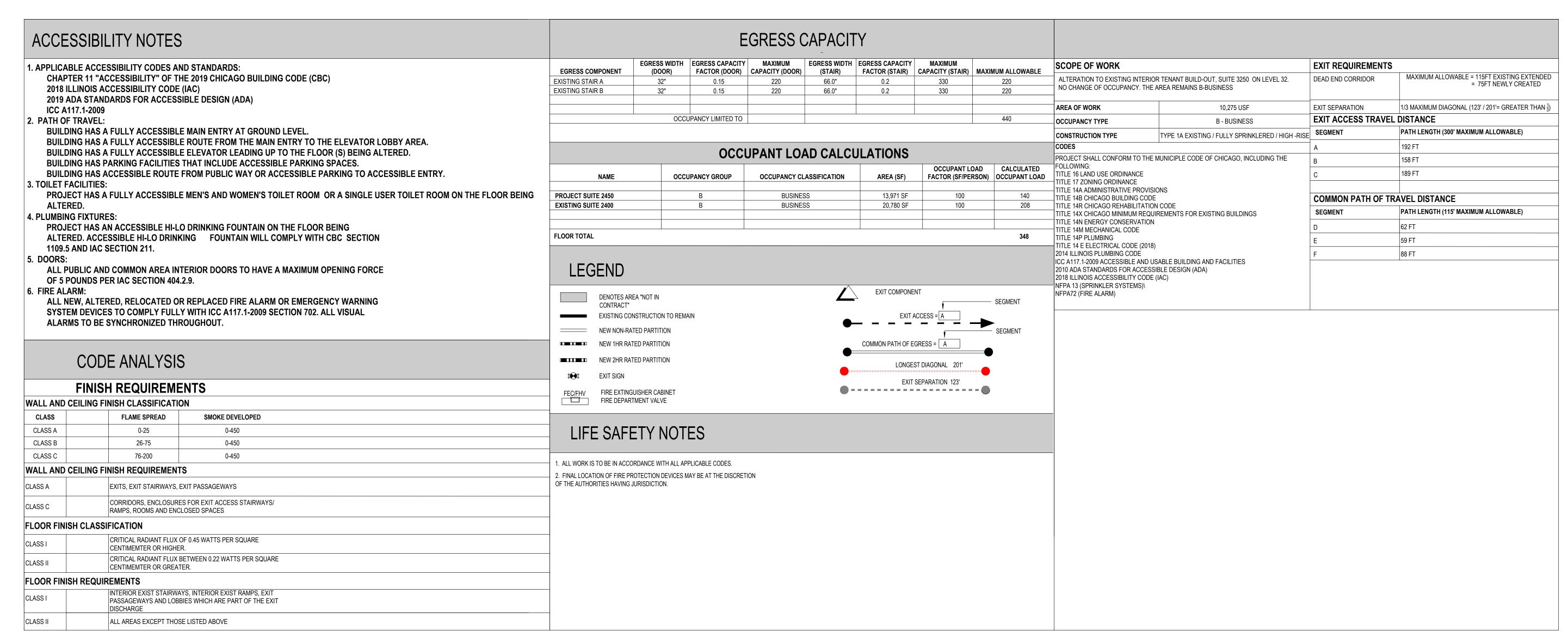
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PERKINS+WILL INC #184000338-0001

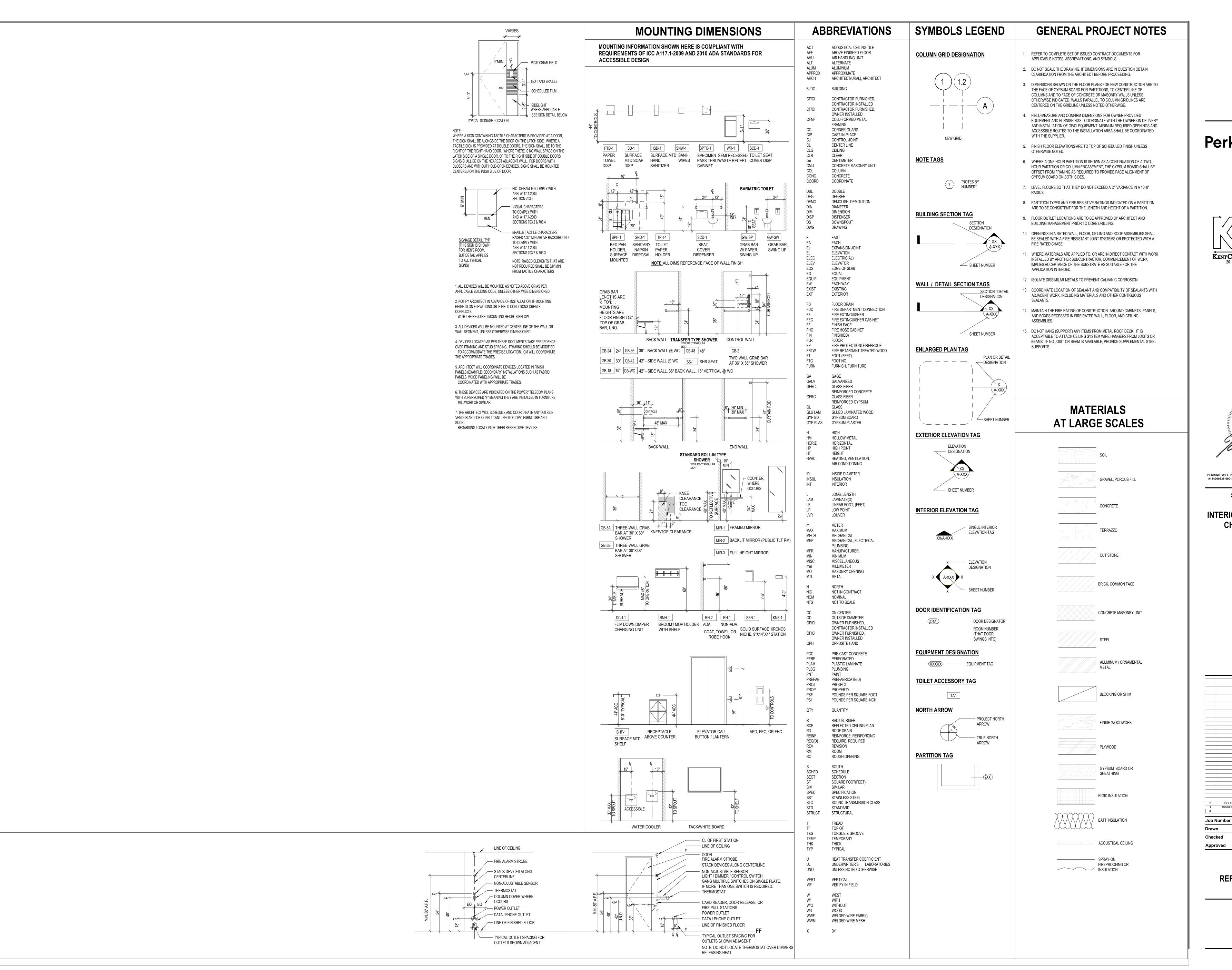
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LEVEL 24 CODE COMPLIANCE PLAN

SHEET NUMBER

G01-24



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PERKINS+WILL INC #184000338-0001

**PROJECT** 540 W. MADISON **SUITE 2450 INTERIOR ALTERATION** CHICAGO, IL 60661

**ISSUE CHART** 2 ISSUED FOR BID/PERMIT 12.20.2023 1 ISSUED FOR ENGINEERING 11.29.2023 # ISSUE DATE 026332.030 TITLE

REFERENCE SHEET

SHEET NUMBER

A00-01

01 10 00 - PROJECT REQUIREMENTS

1.1 SUMMARY A. Intent: Drawings and specifications are intended to provide basis for proper completion of Project suitable for intended use of Owner. Items not expressly set forth but which are reasonably implied or necessary for proper performance of this work shall be included

1.2 PERMITS A. Apply for, obtain, and pay for building permits, other permits, and utility company backcharges required to perform work. Submit copies to Architect 1.3 WORK UNDER OTHER CONTRACTS

A. Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate Work of this Contract with work performed under separate contracts B. Other work may be undertaken during course of this work. Owner may award separate contracts for other projects

to be conducted simultaneously with work under this Contract. 1.4 USE OF PREMISES A. Contractor shall have limited use of premises including site for construction operations during construction period.

Contractor's use of premises is limited by Owner's right to perform work, to retain other contractors on other projects and the limitation to areas affected by work. B. Limit use of premises to area of work except as allowed or acceptable by Building Regulations. Do not disturb portions of Project site beyond areas in which Work is indicated.

Allow for Owner occupancy of Project site and use by Owner, Architect and consultants. Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. C. Coordinate utilization of site with Owner including phasing, closures, temporary fencing / facilities, and storage.

D. Perform work per Building Regulations including requirements for trash removal, elevator usage, work hours, noise, utility shutdowns, power and water usage and conservation, toilet facilities, storage, and deliveries. Coordinate work with Building Manager for timely completion of project. E. No parking is available in the building and limited parking is available in the area.

F. Coordinate use of loading dock with Building Management.

Substantial Completion.

period covered by application.

G. Removal of demolished materials and construction debris shall be done in a legal manner. A. Perform Work at Contractor's discretion meeting local jurisdiction and permit limitations, requirements of other sections, project schedule and Owner's acceptance. Perform Work during normal business working hours Monday through Friday, except otherwise indicated. Perform Work on weekends and during early morning hours at Contractor's discretion meeting requirements of

local, permit and other regulations for restrictions on noisy work. B. Coordinate work with Building Manager related to utility shut-downs or interruptions. Do not interrupt utilities serving facilities occupied by Owner or others unless permitted per the following: Notify Owner not less than two days in advance of proposed utility interruptions.

Do not proceed with utility interruptions without Owner's written permission.

1.6 EXECUTION REQUIREMENTS A. On discovery of need for clarification of Contract Documents, submit request for information to Architect. Include detailed description of problem encountered and recommendations. B. Before laying out Work, verify layout information in relation to property survey and existing benchmarks. If

discrepancies are discovered, notify Architect promptly. C. Maintain log of layout control work. Record deviations from required lines and levels. Make log available for reference by Architect D. Locate Work and components of Work accurately, in correct alignment and elevation, as indicated.

E. Comply with manufacturer's written instructions and recommendations for installing products. F. Install products at time and under conditions that will ensure best possible results. Maintain conditions required for product performance until Substantial Completion. G. Provide final protection and maintain conditions to ensure installed Work is without damage or deterioration at

1.7 APPLICATIONS FOR PAYMENT A. Applications for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.

B. Payment Application Times as indicated in Agreement between Owner and Contractor. C. Payment Application Forms: AIA Documents G702 and G703 Continuation Sheets. D. Complete every entry on application form. Notarize and execute by person authorized to sign legal documents on

behalf of Contractor. Architect will return incomplete applications without action. Match data on Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions Include amounts of Change Orders and Construction Change Directives issued before last day of construction

E. Transmit 3 signed and notarized original copies of each Application for Payment to Architect by method ensuring receipt within 24 hours including waivers of lien and similar attachments. List attachments and recording appropriate information about application F. With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors,

and suppliers for construction period covered by previous application. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.

When application shows completion of item, submit final or full waivers. Owner reserves right to designate which entities involved in the Work must submit waivers. Submit final Application for Payment with or prior to final waivers from every entity involved with performance of Work covered by application that is lawfully entitled to a lien.

Submit waivers of lien on forms, executed in a manner acceptable to Owner. G. Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment Contractor's Construction Schedule (preliminary if not final).

Copies of permits. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work. Initial progress report. Certificates of insurance and insurance policies.

Bonds, where applicable. Data needed to acquire Owner's insurance. H. Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to:

Evidence of completion of Project closeout requirements. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid. Updated final statement, accounting for final changes to Contract Sum.

AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims." AIA Document G706A, "Contractor's Affidavit of Release of Liens." AIA Document G707, "Consent of Surety to Final Payment."

Evidence that claims have been settled. 1.8 PROJECT MANAGEMENT AND COORDINATION

A. Coordinate construction operations to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.

Schedule construction operations in sequence required to obtain best results where installation of one part of the Work depends on installation of other components, before or after its own installation. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair Make adequate provisions to accommodate items scheduled for later installation.

Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of components, including mechanical and electrical. B. Prepare coordination drawings for areas above ceilings where close tolerances are required between building

elements and mechanical and electrical work. Verify location of utilities and existing conditions. Notify Architect of conditions differing from those indicated. D. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings. E. Coordinate scheduling and timing of required administrative procedures with other construction activities and

activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following: Preparation of Contractor's Construction Schedule.

Installation and removal of temporary facilities and controls. Delivery and processing of submittals. Progress meetings.

Project closeout activities Schedule and conduct project meetings at Project site. G. Conduct progress meetings at intervals acceptable to Owner. Coordinate dates of meetings with preparation of

Attendees: Representatives of Owner, Architect, each contractor, major subcontractors. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project. Review progress since last meeting. Discuss whether schedule revisions are required to ensure that current and

subsequent activities will be completed within Contract Time. Review schedule for next period. Review present and future needs of each entity present, including the following: Interface requirements.

2) Status of correction of deficient items. 3) Field observations.

Status of proposal requests. Pending changes.

7) Status of Change Orders. 8) Pending claims and disputes. 9) Documentation of information for payment requests.

Record meeting minutes. Distribute minutes of meeting to each party present and to parties who should have been present. Revise Contractor's Construction Schedule after progress meeting where revisions to schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting. H. Requests for Interpretation (RFIs)

Project meeting, prepare and submit RFI in form specified. RFIs shall originate with Contractor. RFIs submitted by other entities will be returned with no response. Coordinate and submit RFIs in prompt manner to avoid delays in Work.

1. On discovery of need for interpretation of Contract Documents and if not possible to request interpretation at

Content of RFI: detailed, legible description of item needing interpretation, Project name, Date and RFI number, Architect will review each RFI, determine action required, and return it. Allow 5 business days for Architect's

response for each RFI. Allow 10 business days for responses which require Consultant input. Prepare, maintain, and submit tabular log of RFIs organized by RFI number. 1.9 CONTRACTOR'S CONSTRUCTION SCHEDULE A. Submit comprehensive, fully developed, horizontal bar-chart-type, Contractor's Construction Schedule within 15 days of date established for commencement of Work.

B. Indicate each significant construction activity separately. Identify first workday of each week with continuous vertical line. C. Monthly, update schedule to reflect actual construction progress and activities. Issue schedule one week before

each regularly scheduled progress meeting. Revise schedule after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with report of each such meeting. Include report with updated schedule that indicates every change, including, but not limited to, changes in logic,

durations, actual starts and finishes, and activity durations. As Work progresses, indicate Actual Completion percentage for each activity.

D. Distribute copies of approved schedule to Architect, Owner, separate contractors, and other parties identified by Contractor with need-to-know schedule responsibility.

1.10 SUBMITTALS A. Coordinate preparation and processing of submittals with performance of construction activities.

B. Allow enough time for submittal review, including time for resubmittals as follows. Time for review shall commence on Architect's receipt of submittal. No extension of Contract Time will be authorized because of failure to transmit submittals enough in advance of Work to permit processing, including resubmittals. 1. Allow 10 business days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when submittal must be delayed for coordination.

2. If intermediate submittal is necessary, process it in same manner as initial submittal. 3. Allow 7 business days for review of each resubmittal. 4. Fabricate materials from approved shop drawings only.

C. Place a permanent label or title block on each submittal for identification. 1. Indicate name of firm or entity that prepared each submittal on label or title block. 2. Provide space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.

D. Highlight, encircle, or otherwise specifically identify deviations from Contract Documents on submittals. E. Submit for approval 3 copies of each submittal listed in individual sections. Submit range samples where applicable for sample. F. Unless additional copies are required for final submittal, and unless Architect observes noncompliance with

provisions in Contract Documents, initial submittal may serve as final submittal. G. Package submittals individually and appropriately for transmittal and handling. Transmit using transmittal form. Architect will return submittals, without review, received from sources other than Contractor. H. Make resubmittals in same form and number of copies as initial submittal. 1. Note date and content of previous submittal. 2. Note date and content of revision in label or title block and clearly indicate extent of revision.

I. Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms. J. Contractor's Review 1. Review submittal and check for coordination with Work and for compliance with Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

2. Stamp submittal with Contractor's uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with Contract Documents. K. Architect's Action

1. Architect will not review submittals that do not bear Contractor's approval stamp and will return them 2. Architect will review each action submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with action stamp and will mark stamp appropriately to indicate action taken.

A. Comply with applicable codes, regulations, ordinances and requirements of authorities having jurisdiction, including accessibility guidelines where applicable. Submit copies of inspection reports, notices and similar documents to Architect. B. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for 3

vears, unless otherwise indicated. C. Use experienced installers. Furnish evidence of experience if requested. D. Deliver, handle, and store materials in strict accordance with manufacturer's instructions.

E. Use of any supplier or subcontractor is subject to Owner's approval. F. Engage and pay for testing agencies as required. Refer to individual sections for additional requirements. 1.12 TEMPORARY FACILITIES A. Include cost or use charges for temporary facilities in Contract Sum. Allow other entities to use temporary

services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, testing agencies, and authorities having jurisdiction. B. Use of existing power, water, and toilet facilities is acceptable. Endeavor to conserve power and water

C. Limited facilities are available for storage on site. Coordinate with Building Manager. Deliver materials to site in timely manner for installation. D. Provide superintendent with cellular telephone for use when away from field office.

E. Provide temporary facilities and connections as required for proper completion of project. F. Provide temporary protection for adjacent areas to prevent contamination by construction dust and debris. G. Provide temporary barricades as necessary to ensure protection of the public. H. Provide suitable waste disposal units and empty regularly. Do not permit accumulation of trash and waste

J. Maintain egress within and around construction areas. K. Maintain fire alarm systems in operation during construction L. Provide fire extinguishers in work areas during construction. M. Provide temporary protection for adjacent construction. Promptly repair any damage at no additional cost to

I. Use of designated existing sanitary facilities in building is acceptable.

1.13 PRODUCT REQUIREMENTS A. Provide products and materials specified. Request Architect's selection of colors and accessories in sufficient time to avoid delaying progress of work. B. Submit requests for substitutions in writing, including reasons. Submit sufficient information for Architect to

evaluate proposed substitution. C. Remove and replace work which does not conform to contract documents at no additional expense to Owner. D. Delivery and Handling: 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.

2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses. 3. Deliver products to Project site in undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.

4. Inspect products on delivery to ensure compliance with Contract Documents and to ensure that products are undamaged and properly protected. E. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units. 2. Store products that are subject to damage by the elements, under cover in weathertight enclosure above ground, with ventilation adequate to prevent condensation. 3. Store cementitious products and materials on elevated platforms.

4. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage. 5. Protect stored products from damage and liquids from freezing.

6. Provide secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner. F. Installation: 1. Inspect substrates and report unsatisfactory conditions in writing.

2. Do not proceed until unsatisfactory conditions have been corrected. 3. Take field measurements prior to fabrication where practical. Form to required shapes and sizes with true edges, lines and angles. Provide inserts and templates as needed for work of other trades.

4. Install materials in exact accordance with manufacturer's instructions and approved submittals. 5. Install materials in proper relation with adjacent construction and with proper appearance. 6. Restore units damaged during installation. Replace units which cannot be restored at no additional expense to the Owner. 7. Refer to additional installation requirements and tolerances specified under individual specification

1.14 CUTTING AND PATCHING A. Provide cutting and patching work to properly complete the Project. B. Do not remove or alter structural components without written approval.

C. Cut with tools appropriate for materials to be cut. D. Patch with materials and methods to produce patch which is not visible from a distance of five feet. E. Do not cut and patch in manner that would result in failure of work to perform as intended, decrease fire performance, decrease acoustical performance, decrease energy performance, decrease operational life,

or decrease safety factors. 1.15 FIELD ENGINEERING A. Verify and locate utilities, existing facilities, and equipment.

B. Survey and layout improvements, utilities, structures, and components. 1.16 CLOSEOUT PROCEDURES

A. Punchlist: 1. Prepare punchlist for remaining work for review by Architect. 2. Complete punchlist items promptly at no additional expense to Owner. B. Before requesting final inspection for determining date of Final Completion, complete the following: 1. Submit final Application for Payment per "Payment Procedures."

2. Submit punchlist stating that each item has been completed or otherwise resolved for acceptance. 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements. 4. Submit pest-control final inspection report and warranty.

5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and D. Submit written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected

before certificate will be issued. 1. Request reinspection when Work identified in previous inspections as incomplete is completed or corrected 1.17 RECORD DRAWINGS

A. Maintain one set of black-line prints of Construction Documents. 1. Mark Record Prints to show actual installation where installation varies from that shown originally, including: Dimensional changes.

 b. Revisions to details. c. Locations and depths of underground utilities. d. Field records for variable and concealed conditions.

B. Store Record Drawings in field office apart from Construction Documents used for construction. Do not use Project Record Documents for construction purposes. 1.18 MAINTENANCE AND OPERATIONS MANUALS

File items into binders for Owner's future use.

2. Transmit items to Owner at completion of work.

A. Maintain one set of submittals and operation and maintenance manuals.

02 41 19 - SELECTIVE STRUCTURE DEMOLITION

Submittals

1.1 GENERAL A. Demolition and removal of selected portions of building or structure, including salvaging of existing items. 1. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled

2. Remove and Salvage: Detach items from existing construction and deliver them to Owner ready for reuse. 3. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where 4. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1. Schedule of Selective Demolition Activities indicating: a. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure building manager's and building tenants' on-site operations are uninterrupted. b. Interruption of utility services. Indicate how long utility services will be interrupted.

c. Coordination for shutoff, capping, and continuation of utility services. d.Use of elevator and stairs. e.Locations of proposed dust- and noise-control temporary partitions and means of egress. f. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of

g. Means of protection for items to remain and items in path of waste removal from building. 2. Landfill Records: Indicate receipt and acceptance of hazardous wastes by landfill facility licensed to accept hazardous wastes. D. Quality Assurance 1. Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and

disposal regulations of authorities having jurisdiction. 2. Standards: ANSI A10.6 and NFPA 241. Project Conditions 1. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

2. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical. 3. Notify Architect of discrepancies between existing conditions and Drawings before proceeding. 4. Hazardous Materials: It is unknown whether hazardous materials will be encountered in Work. a. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Owner will remove hazardous materials under separate contract. 5. Storage or sale of removed items or materials on-site is not permitted.

6. Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations. Maintain fire-protection facilities in service during selective demolition operations. PRODUCTS (Not Used) EXECUTION A. Examination

1. Verify that utilities have been disconnected and capped. 2. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition 3. Inventory and record condition of items to be removed and reinstalled or salvaged. 4. When unanticipated elements that conflict with intended function or design are encountered, investigate and

measure nature and extent of conflict. Promptly submit written report to Architect. 5. Perform surveys as Work progresses to detect hazards resulting from selective demolition activities. B. Utility Services and Mechanical/Electrical Systems 1. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.

a. Comply with requirements for existing services/systems interruptions. 2. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished. a. Building manager will arrange to shut off indicated services/systems when requested by Contractor. b. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain

continuity of services/systems to other parts of building. c. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing. Where entire wall is to be removed, existing services/systems may be removed with removal of wall. Preparation

1. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain. a. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied b. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.

c. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective d. Cover and protect furniture, furnishings, and equipment that have not been removed. e. Comply with requirements for temporary enclosures, dust control, heating, and cooling. E. Selective Demolition, General

1. Demolish and remove existing construction only to extent required by new construction and as indicated. Use methods required to complete Work within limitations of governing regulations and as follows: a. Where applicable, proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on next lower level. b. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.

c. Cut or drill from exposed or finished side into concealed surfaces to avoid marring existing finished surfaces. d.Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations. e. Maintain adequate ventilation when using cutting torches.

f. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of g.Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent

ground impact or dust generation. h. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing. i. Dispose of demolished items and materials promptly.

2. Removed and Salvaged Items: a. Clean salvaged items. b. Pack or crate items after cleaning. Identify contents of containers. c. Store items in secure area until delivery to Owner.

d. Transport items to Owner's storage area on-site designated by Owner. e.Protect items from damage during transport and storage. 3. Removed and Reinstalled Items:

a. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new b. Pack or crate items after cleaning and repairing. Identify contents of containers. c. Protect items from damage during transport and storage.

d.Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated. 4. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.

Disposal of Demolished Materials 1. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in EPA-approved

a. Do not allow demolished materials to accumulate on-site. b. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas. c. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

Do not burn demolished materials 3. Transport demolished materials off Owner's property and legally dispose of them. G. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

03 54 16 - HYDRAULIC CEMENT UNDERLAYMENT 1.1 GENERAL A. Provide hydraulic-cement-based underlayment in areas where existing slab does not meet flatness criteria

1. Wood, tile, or stone floor finish with at least one edge longer than 15 inches: maximum deviation from planar of 1/8 inch within 10 feet measured in any direction, with no more than 1/16 inch variation within 24 inches when measured from the high points in the surface. 2. Wood, tile, or stone floor finish with all edges shorter than or equal to 15 inches: maximum deviation from planar of 1/4 inch within 10 feet measured in any direction, with no more than 1/16 inch variation within 12

inches when measured from the high points in any surface. 3. Resilient flooring and carpet: maximum allowable deviation from planar is 1/2 inch with 10 feet, with no more than 1/8 inch variation within 12 inches when measured from the high points in the surface. Submittals: Product data.

Quality Assurance 1. Installer Qualifications: Experienced installer acceptable to manufacturer, who has completed underlayment applications similar in material and extent to that required for this Project, whose work has resulted in construction with record of successful in-service performance. 1.2 PRODUCTS

A. Hydraulic-cement-based, polymer-modified, self-leveling product that can be applied in minimum uniform

thicknesses of 1/8 inch and that can be feathered at edges to match adjacent floor elevations, compatible with sealers, finish flooring products, and adhesives. 1. Cement Binder: ASTM C150, portland cement, or hydraulic or blended hydraulic cement - ASTM C219. 2. Compressive Strength: Not less than 4100 psi at 28 days when tested according to ASTM C109. B. Products: Subject to compliance with requirements, provide one of the following: 1. Ardex, Inc.; K-15 Self-Leveling Underlayment Concrete.

Mapei Corporation; Ultra/Plan MB. C. Accessory Materials: Primers, aggregates, additives and reinforcements recommended by manufacturer for substrate, thickness, and conditions indicated. 1.3 EXECUTION

A. Provide clean, dry, neutral-pH substrate for underlayment application.

Treat substrate cracks to prevent telegraphing. 2. Mechanically remove laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants that might impair underlayment bond. B. Apply in uniform thicknesses per manufacturer's recommendations. 1. Apply final layer without aggregate to produce smooth surface.

2. Feather edges to match adjacent floor elevations. C. Remove and replace underlayment that lacks bond with substrate, including areas that emit a "hollow" sound when D. Do not install finish flooring over underlayment until after time period recommended by underlayment manufacturer.

05 50 00 - METAL FABRICATIONS

A. Provide metal fabrications including steel framing and supports for countertops, operable partition support, partial-height partition lateral support, decorative metals, large opening headers that exceed capacity of light gage framing, and for applications where framing and supports are not specified in other sections. B. Submittals: Shop drawings, Product data.

 Performance Requirements 1. Structural performance:

a. Provide tube framing for partial height walls capable of withstanding deflection not to exceed 1/360 of wall height when subjected to positive and negative pressure of 5 psf.

Provide countertop framing capable of withstanding all deadloads and 500 pound live load placed on

countertop or vanity without exceeding allowable design working stress of materials involved, including anchors and connections, or of exhibiting excessive deflections in any of components making up countertop and vanity. Deflection at midspan: L/1000 times span or 1/8" whichever is less. Provide framing at headers for operable partitions and door systems which meet deflection limitations per manufacturers of operable partitions and door systems.

C. Quality Assurance 1. Professional Engineer Qualifications: Professional engineer legally qualified to practice in project jurisdiction experienced in providing engineering services for installations of metal fabrications that are similar to those indicated for this Project in material, design, and extent. D. Project Conditions

1. Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication and indicate measurements on shop drawings. Where field measurements cannot be made without delaying work, establish dimensions and proceed with fabricating metal fabrications without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond to established dimensions. Provide for trimming and fitting at site.

A. Provide materials with smooth, flat surfaces, unless otherwise indicated. For metal fabrications exposed to view in completed work, provide materials without seam marks, roller marks, rolled trade names, or blemishes. B. Steel plates, shapes, and bars: ASTM A36.

Steel tubing: ASTM A500, cold-formed steel tubing, or ASTM A501, hot-formed steel tubing. D. Steel pipe: ASTM A53, type S - seamless, grade A suitable for close coiling or cold bending, standard weight (schedule 40) minimum, unless otherwise required to satisfy performance requirements, black finish.

Shop primer: fast-curing, lead- and chromate-free, universal modified-alkyd primer. Fasteners: zinc-plated fasteners of type, grade, and class required by application indicated. . Non-shrink, non-metallic grout: ASTM C1107, non-staining, non-corrosive, non-gaseous grout. Welding rods and bare electrodes: select according to AWS specifications for metal alloy welded. I. Fabricate steel framing and supports indicated and as necessary to complete Work and which are not part of

projection screens, ceiling hung televisions and cameras, tube framing for partial height walls, countertops, and mechanical and electrical equipment. 1. Fabricate steel framing and supports from structural-steel shapes, plates, bars, and tubes of welded construction. Weld per AWS D1.1. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction retained by framing and supports. Cut, drill, and tap units to receive hardware, hangers, and

structural framework, including but not limited to framing and supports for overhead door frames, sliding doors,

similar items. Tolerances: Fabrication tolerance 1/8 inch in 10 feet; erection tolerance, 1/16 inch 3. Shop priming: Prime metal fabrications after assembly. Remove oil, grease, and similar contaminants per SSPC -SP 1 "Solvent Cleaning," followed with SSPC-SP 3, "Power Tool Cleaning." Apply one coat of shop primer in compliance with SSPC-PA 1, "Paint Application Specification No. 1."

A. Provide anchorage devices and fasteners for securing metal fabrications to in-place construction. Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, with edges and surfaces level, plumb, and true.

B. Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on shop drawings. 06 10 00 - ROUGH CARPENTRY 1.1 GENERAL

components, artwork, and other elements requiring wall anchoring. B. All blocking must be meet requirements of local AHJ for fire resistance. C. Wood blocking, backing panels, nailers, furring and grounds with fire-retardant treatment unless otherwise noted. Provide preservative treatment at wood items where indicated.

A. Provide wood or metal blocking at wall-mounted furniture, millwork, grab bars and other toilet accessories, AV

D. Submittals: Product Data. 1.2 PRODUCTS A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by American Lumber Standards Committee Board of Review, S4S, 15 percent maximum moisture content at time of dressing for 2-inch

B. Plywood: DOC PS 1 or DOC PS 2. C. Oriented Strand Board: DOC PS 2. D. Preservative Treatment by Pressure Process: AWPA C2 (lumber) and AWPA C9 (plywood), except lumber not in contact with ground and continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX). Kiln-dry material after treatment to maximum moisture content of 19 percent for

Preservative Application: Treat items indicated on Drawings, and the following: a. Wood blocking, stripping, and similar members in connection with vapor barriers, and waterproofing. b. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete. Wood framing members less than 18 inches above grade.

lumber and 15 percent for plywood.

treated not less than 1/2 inch thick.

06 40 23 - INTERIOR ARCHITECTURAL WOODWORK

Softwood Plywood: DOC PS 1, Medium Density Overlay.

2. Catches: Roller catches, BHMA A156.9, B03071.

Wood floor plates that are installed over concrete slabs directly in contact with earth. E. Fire-Retardant-Treated Materials: Interior Type A High Temperature (HT), AWPA C20 (lumber) and AWPA C27 (plywood). Identify fire-retardant-treated wood with appropriate classification marking. F. Dimension Lumber: Construction or No. 2 with 15 percent maximum moisture content of any species.

G. Miscellaneous Concealed Plywood: Exposure 1 sheathing, span rating to suit framing spacing and not less than 1/2 inch thick. H. Plywood Underlayment: Exposure 1 Underlayment, fully sanded face and not less than 1/4 inch thick. I. Miscellaneous Exposed Plywood: DOC PS 1, A-D Interior, not less than 1/2 inch thick. J. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant

K. Power-Driven Fasteners: CABO NER-272. 1.3 EXECUTION A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.

items, and trim. Provide metal clips for fastening gypsum board at corners and intersections where framing or blocking does not provide surface for fastening edges of panels. Space clips not more than 16 inches oc. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows: Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches oc with solid wood

B. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty

blocking or noncombustible materials accurately fitted to close furred spaces. Fire block concealed spaces behind combustible cornices at not more than 20 feet oc. Sort and select lumber so natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

Securely attach rough carpentry work as indicated, complying with applicable codes and recognized standards. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Countersink nail heads at exposed carpentry work and fill with wood filler.

Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

A. Interior architectural woodwork including plastic laminate countertops and cabinetry, standing and running trim. B. Submittals: Product Data, Shop Drawings, Samples. C. Quality Assurance

1. Fabricator and Installer Qualifications: Same firm employing skilled workers, who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance. 2. Comply with AWI's "Architectural Woodwork Quality Standards" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements. D. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete including painting and similar operations that could damage woodwork have been completed in installation areas, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels

during remainder of construction period. If woodwork must be stored in other than installation areas, store only

E. Project Conditions 1. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying Work. 2. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before

in areas where environmental conditions comply with AWI requirements.

being enclosed, and indicate measurements on Shop Drawings. 1.2 PRODUCTS A. Comply with AWI's "Architectural Woodwork Quality Standards" for Custom grade of interior architectural woodwork, construction, finishes, and other requirements Lumber Standards: Meet grading and workmanship of AWI Quality Standards, Sections 100-S-1, 100-S-4, 100-S-5, Grade I and requirements shown and specified. Where standards conflict the more stringent shall apply. Lumber surfaced 4 sides (S4S) and fabricated to profiles shown. Lumber kiln dried to moisture content

indicated in AWI Section 100 S 11. 1. Furring, Blocking, Shims: No. 1 Common; Southern Pine. 2. Door Subframes: No. 1 Common Southern Pine, fire retardant treated to reduce combustibility. 3. Solid Hardwood for Opaque Finish: Plain sawn Yellow Poplar, free from checks, splits, sound knots. Wood Veneer: Species and Cut for Transparent Finish: Meet AWI 1500 and as scheduled.

Medium Density Fiberboard: ANSI A208.2, MD Exterior Glue; minimum 3/4" thick. Particleboard: ANSI A208.1, Grade M-2 Exterior Glue; minimum 3/4" thick. Thermoset Decorative Overlay (Melamine): Particleboard or medium-density fiberboard with thermally fused, melamine-impregnated decorative paper face, LMA SAT-1. High-Pressure Decorative Laminate: NEMA LD 3, as scheduled. Backing sheets: Non-decorative, high pressure

Solid-Surfacing Material: ANSI Z124.3, for Type 5 or Type 6; ISSFA -2-01, as scheduled. Fire-Retardant-Treated Lumber and Plywood: AWPA C20 (lumber) and AWPA C27 (plywood), Interior Type A. Kiln-dry material after treatment. 1. Discard treated lumber that does not comply with requirements of referenced woodworking standard. Do not use twisted, warped, bowed, discolored, or otherwise damaged or defective lumber.

laminate, NEMA LD3, Grade, types and thickness to match face sheets and equalize pull.

K. Provide cabinet hardware and accessory materials associated with architectural cabinets, except for items specified in Division 08 "Door Hardware," ANSI/BHMA A156.9. 1. Frameless Concealed Hinges (European Type): 170 degree minimum opening capabilities. For end doors perpendicular to walls, provide 90 degree type. For doors 32-inches high or less, provide 2 pair of hinges, add 1/2 pair for every additional 20 -inches.

Knape and Vogt. Brackets: Model No. 180 Series LL ANO by Knape and Vogt. 5. Drawer Slides: positive stop, self-closing, side-mounted, full-extension, zinc-plated steel drawer slides with steel ball bearings. a. Pencil Drawer: Partial extension type, Accuride No. 2006.

4. Adjustable Shelf Standards and Brackets: Standards: Model No. 87ANO Extra Heavy Duty 87-187 Series; by

Adjustable Shelf Supports: EDP type, set in 2/10-inch holes spaced at 1-1/4 inches oc.

b. Box Drawer: 100 pound capacity minimum, up to 24 inches wide, Accuride No. 3832SC, color zinc. c. Lateral File Drawer: 150 pound capacity minimum, up to 30 inches wide, Accuride No. 4034 over-travel. d. Lateral File Drawer: 200 pound capacity minimum, more than 30 inches wide, Accuride No. 3640. e. Keyboard: Accuride No. 2009, color zinc.

6. Mutes: Rubber, approximately 1/4-inch diameter, color compatible with adjacent finish. 7. Wire Management Grommets: 2-1/4" diameter; MG Series; Doug Mockett. US26D satin chrome. 8. Door and Drawer Locks: BHMA A156.11, E07121 at door locks and E07041 at drawer locks. Pin and tumbler

slide bolt lock, two keys each. Key locks inside one room alike and provide masterkey for all locks in

project. Finish to match adjacent pull. 9. Closet Rods and Flanges: For spans up to 48 inches: No. KV 770-1 rod with 735 flanges by Knape and Vogt. For spans from 48 inches up to 84 inches: No. KV 770-5 rod with 766 flanges by Knape and Vogt. 10. Exposed Hardware Finishes: Satin Stainless Steel: BHMA 630.

Stainless Steel Trim 1. Custom fabricated trim to sizes, shapes and profiles shown, in standard commercial tempers and hardness, as required for fabrication, strength and durability from Type 304 alloy. Form exposed work true to line and level, with flush surfaces and accurate angles. Ease exposed edges to radius of approximately 1/32"

radius, unless otherwise shown. Miter exposed corner joints and machine fit to hairline joint. Sheet goods

Sheet and Plate: ASTM A167. Bar Stock: ASTM A276.

4. Stainless Steel Trim Finishes:

 No. 4 (bright directional polish). b. No. 8 (bright mirror non-directional polish.) N. For concealed hardware, manufacturer's standard finish complying with product class requirements in BHMA D. Furring, Blocking, Shims, and Hanging Strips: Fire-retardant-treated softwood lumber, kiln dried to less than 15

Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Toothed-steel or lead expansion sleeves for drilled-in-place anchors.

Wood Moisture Content: Per referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas. Fabricate woodwork to dimensions, profiles, and details indicated. a. Reinforcing shown is minimum. Provide additional steel and lumber reinforcing as required to sustain imposed

loads and to ensure rigid assembly. b. Exposed surfaces: free from dents, tool marks, warpage, buckle, glue and open joints, or other defects affecting serviceability or appearance. Accurately fit joints, corners and miters. Conceal fasteners. Make threaded connections up tight so that threads are entirely concealed.

c. Ease edges to radius indicated for the following: 1) Corners of Cabinets and Edges of Solid-Wood (Lumber) Members 3/4 Inch Thick or Less: 1/16 inch. 2) Edges of Rails and Similar Members More Than 3/4 Inch Thick: 1/8 inch. 3) Corners of Cabinets and Edges of Solid-Wood (Lumber) Members and Rails: 1/16 inch. 3. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before

shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting. 4. Shop-cut openings to maximum extent possible to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

2) In single piece lengths of solid stock hardwood lumber. Form frames with dadoes or rabbeted joints,

5. Wood Door Frames for Opaque Finish a. Frames constructed per AWI Custom Grade requirements for interior Grade I standards, sizes as shown, complying with the followina: 1) AWI Sections 100, 300, 700 and 900.

plant assembled for paint finish. 3) Subframing fabricated from solid lumber stock; fire retardant treated. 6. Interior Standing and Running Trim for Opaque Finish: Complying with AWI 300, fabricated from solid hardwood with scarfed joints, profiles and finishes as indicated. AWI Custom Grade. Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in

Plastic-Laminate Cabinets a. Comply with AWI Section 400 requirements for laminate cabinets. AWI Custom Grade, Flush overlay, frameless construction, unless otherwise indicated b. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate. Horizontal Surfaces Other Than

c. Materials for Semi-exposed Surfaces: High-pressure decorative laminate, Grade VGS.

d. Concealed Backs of Panels with Exposed Plastic Laminate Surfaces: High-pressure decorative laminate, Colors, Patterns, and Finishes: Indicated by manufacturer's designations, Match Architect's sample. f. Provide dust panels of 1/4-inch plywood or tempered hardboard above compartments and drawers, unless located directly under tops.

Tops: Grade HGS. Vertical Surfaces: Grade VGS. Edges: Matching surfaces adjacent to edges.

a. Comply with AWI Section 400 requirements for high-pressure decorative laminate countertops. AWI Custom b. High-Pressure Decorative Laminate Grade: HGS.

d. Edge Treatment: Same as laminate cladding on horizontal surfaces.

a. Comply with AWI Section 600 requirements. AWI Custom Grade.

extent that it was not completed in the shop.

smooth, and finish same as wood base, if finished.

filler where exposed.

c. Colors, Patterns, and Finishes: As scheduled.

a. Seal edges of openings in countertops with coat of varnish.

finished work.

Plastic-Laminate Countertops

Closet & Utility Shelving

e. Core Material: Particleboard or medium-density fiberboard. f. Core Material at Sinks: Particleboard made with exterior glue, medium-density fiberboard made with exterior glue, or exterior-grade plywood.

b.Medium density fiberboard where indicated to be painted; medium density particle board where indicated for plastic laminate or melamine veneer. c. Finishes: As scheduled. S. Shop Finishing 1. Comply with AWI Section 1500, unless otherwise indicated. Finish Grade: same grade as items to be

2. Finish architectural woodwork at fabrication shop as specified in this Section. Defer only final touchup, cleaning, and polishing until after installation. Priming of interior architectural woodwork with field applied opaque finish required to be performed at fabrication shop are specified in this Section. Refer to Division 9 "Painting" for finishing opaque finished architectural woodwork. 3. Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed

surfaces, and similar preparations for finishing paneling, as applicable to each unit of work. 4. Factory Finishing for Interior Architectural Woodwork: Transparent Finish: AWI Premium Grade finish as indicated on drawings 5. b. Opaque Finish: AWI Premium Grade finish as indicated on drawings

6. Field Applied Opaque Finish: AWI Custom Grade. Color: Match Architect's paint samples. 7. Plastic Laminate Finish: Gluing of plastic laminate surfacing materials by hot plate method, with glued surfaces in close contact throughout. Glue stains not permitted. 8. Solid Surfacing Finish: As scheduled. 9. Unexposed Wood Finish: Alkyd type primer sealer. 1.3 EXECUTION

A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas and examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming. B. Install woodwork to comply with requirements for same grade specified for fabrication of each woodwork Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication to

D. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches. E. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts. F. Handle, store, and install fire-retardant-treated wood to comply with chemical treatment manufacturer's written instructions.

Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated. H. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 96 inches long, except where shorter single-length pieces are necessary. Scarf running joints and stagger in

adjacent and related members. Fill gaps between top of base and wall with plastic wood filler, sand

10 wafer-head sheet metal screws through metal backing or metal framing behind wall finish.

Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line. 2. Maintain veneer sequence matching of cabinets with transparent finish. 3. Fasten wall cabinets through back, near top and bottom, at ends and not more than 16 inches o.c. with No.

J. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop. 1. Align adjacent solid-surfacing-material countertops and form seams per manufacturer's written recommendations using adhesive in color to match countertop. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

Install countertops with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line. 3. Caulk space between backsplash and wall with silicone sanitary sealant specified in Division 7 "Joint K. Complete finishing work specified in this Section to extent not completed at shop or before installation of paneling. Fill nail holes with matching filler where exposed. Apply specified finish coats, including stains and paste fillers if any, to exposed surfaces where only sealer/prime coats are applied in shop.

not possible to repair, replace woodwork. Adjust joinery for uniform appearance. N. Clean, lubricate, and adjust hardware. Clean woodwork on exposed and semi-exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching

M. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where

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**ISSUE CHART** 

**SPECIFICATIONS** 

1.3 PERFORMANCE REQUIREMENTS

A. General: Installed glazing systems shall withstand normal thermal movement and wind and impact loads (where applicable) without failure including loss or glass breakage attributable to the following: defective manufacture, fabrication, or installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.

1.4 COORDINATION A. Coordinate glazing channel dimensions to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product. B. Sustainable Design Submittals:

1. Product Data: For sealants, indicating VOC content.

C. Glass Samples: For each type of glass product other than clear monolithic vision glass; 12 inches (300 mm) square.

D. Glazing Accessory Samples: For sealants and colored spacers, in 12-inch (300-mm) lengths. Install sealant Samples between two strips of material representative in color of the adjoining framing system. E. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For installers and manufacturers of insulating-glass units with sputter-coated, low-e coatings.

B. Product Certificates: For glass and glazing products, from manufacturer. C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for tinted glass, coated glass, insulating glass, glazing sealants and glazing gaskets.

1. For glazing sealants, provide test reports based on testing current sealant formulations within previous 24-month period. D. Preconstruction adhesion and compatibility test report.

E. Sample Warranties: For special warranties.

1.7 QUALITY ASSURANCE A. Manufacturer Qualifications for Insulating-Glass Units with Sputter-Coated, Low-E Coatings: A qualified insulating-glass manufacturer who is approved and certified by coated-glass manufacturer. B. Installer Qualifications: A qualified installer who employs glass installers for this Project who are certified under the National Glass

Association's Certified Glass Installer Program. C. Glass Testing Agency Qualifications: A qualified independent testing agency accredited according to the NFRC CAP 1 Certification

D. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing

E. Source Limitations for Glass: Obtain tinted float glass, coated float glass, laminated glass and insulating glass from single source from single manufacturer for each glass type. F. Source Limitations for Glazing Accessories: Obtain from single source from single manufacturer for each product and installation method. G. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced PART 3 -

1. GANA Publications: GANA's "Laminated Glazing Reference Manual" and GANA's "Glazing Manual." 2. IGMA Publication for Insulating Glass: SIGMA TM-3000, "North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use

H. Safety Glazing Labeling: Where safety glazing labeling is indicated, permanently mark glazing with certification label of the SGCC or another certification agency acceptable to authorities having jurisdiction or the manufacturer. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.

I. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of IGCC.

1.8 PRECONSTRUCTION TESTING A. Preconstruction Adhesion and Compatibility Testing: Test each glass product, tape sealant, gasket, glazing accessory, and glass-framing member for adhesion to and compatibility with elastomeric glazing sealants. 1. Testing is not required if data are submitted based on previous testing of current sealant products and glazing materials matching

those submitted. 2. Use ASTM C 1087 to determine whether priming and other specific joint-preparation techniques are required to obtain rapid, optimum adhesion of glazing sealants to glass, tape sealants, gaskets, and glazing channel substrates.

3. Test no fewer than eight Samples of each type of material, including joint substrates, shims, sealant backings, secondary seals, and miscellaneous materials 4. Schedule enough time for testing and analyzing results to prevent delaying the Work.

5. For materials failing tests, submit sealant manufacturer's written instructions for corrective measures including the use of specially formulated primers.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Protect glazing materials according to manufacturer's written instructions. Prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes. B. Comply with insulating-glass manufacturer's written instructions for venting and sealing units to avoid hermetic seal ruptures due to altitude

1.10 FIELD CONDITIONS

A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes. 1. Do not install glazing sealants when ambient and substrate temperature conditions are outside limits permitted by sealant manufacturer or are below 40 deg F (4.4 deg C).

1.11 WARRANTY A. Manufacturer's Special Warranty for Coated-Glass Products; Manufacturer agrees to replace coated-glass units that deteriorate within

specified warranty period. Deterioration of coated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in coating.

1. Warranty Period: 10 years from date of Substantial Completion. B. Manufacturer's Special Warranty for Laminated Glass: Manufacturer agrees to replace laminated-glass units that deteriorate within specified warranty period. Deterioration of laminated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning laminated glass contrary to manufacturer's written instructions. Defects include edge separation. delamination materially obstructing vision through glass, and blemishes exceeding those allowed by referenced laminated-glass standard. 1. Warranty Period: 10 years from date of Substantial Completion.

C. Manufacturer's Special Warranty for Insulating Glass: Manufacturer agrees to replace insulating-glass units that deteriorate within specified warranty period. Deterioration of insulating glass is defined as failure of hermetic seal under normal use that is not attributed to glass breakage or to maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass. 1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS A. Source Limitations for Glass: Obtain from single source from single manufacturer for each glass type.

1. Obtain tinted glass from single source from single manufacturer. 2. Obtain reflective-coated glass from single source from single manufacturer.

3. Obtain each type of decorative glass from a single source or single manufacturer.

B. Source Limitations for Glazing Accessories: Obtain from single source from single manufacturer for each product and installation method.

2.2 PERFORMANCE REQUIREMENTS A. General: Installed glazing systems shall withstand normal thermal movement and wind and impact loads (where applicable) without failure Structural Performance: Glazing shall withstand the following design loads within limits and under conditions indicated determined

according to the applicable codes and ASTM E 1300. Thickness of Patterned Glass: Base design of patterned glass on thickness at thinnest part of the glass. 2. Probability of Breakage for Sloped Glazing: For glass surfaces sloped more than 15 degrees from vertical, design glass for

probability of breakage not greater than 0.001 3. Maximum Lateral Deflection: For glass supported on all four edges, limit center-of-glass deflection at design wind pressure to not more than 1/50 times the short-side length or 1 inch (25 mm), whichever is less.

4. Differential Shading: Design glass to resist thermal stresses induced by differential shading within individual glass lites. C. Safety Glazing: Where safety glazing is indicated, provide glazing that complies with 16 CFR 1201, Category II. 2.3 GLASS PRODUCTS, GENERAL

A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below unless more stringent requirements are indicated. See these publications for glazing terms not otherwise defined in this Section or in referenced

1. GANA Publications: "Laminated Glazing Reference Manual" and "Glazing Manual." 2. AAMA Publications: AAMA GDSG-1, "Glass Design for Sloped Glazing," and AAMA TIR A7, "Sloped Glazing Guidelines." 3. IGMA Publication for Sloped Glazing: IGMA TB-3001, "Guidelines for Sloped Glazing."

Commercial and Residential Use. B. Safety Glazing: Where safety glazing is indicated, permanently mark glazing with certification label of the SGCC or another certification agency acceptable to authorities having jurisdiction or manufacturer. Label shall indicate manufacturer's name, type of glass, thickness, and

4. IGMA Publication for Insulating Glass: SIGMA TM-3000, "North American Glazing Guidelines for Sealed Insulating Glass Units fo

safety glazing standard with which glass complies. Safety glazing shall meet test requirements of ANSI Z97, 1 C. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of IGCC.

D. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass that complies with performance requirements and is not less than the thickness indicated. 1. Minimum Glass Thickness: 6 mm

E. Strength: Where annealed float glass is indicated, provide annealed float glass, heat-strengthened float glass, or fully tempered float glass as needed to comply with "Performance Requirements" Article. Where heat-strengthened float glass is indicated, provide heat-strengthened float glass or fully tempered float glass as needed to comply with "Performance Requirements" Article. Where fully tempered float glass is indicated, provide fully tempered float glass.

2.4 GLASS PRODUCTS

A. Primary Float Glass 1. Clear Annealed Float Glass: ASTM C 1036, Type I, Class 1 (clear), Quality-Q3.

2. Minimum Thickness: 6 mm, larger where required by lite size. a. Products: Subject to compliance with requirements, provide one of the following: AFGD, clear float glass.

Guardian, clear glass. 3) Pilkington Libbey-Owens-Ford (LOF), clear glass

4) PPG Industries, clear glass. B. Heat-Treated Clear Float Glass, required at safety glazing locations as indicated on drawings or where required by code

1. Heat Treated Float Glass: ASTM C 1048, Condition A (uncoated); Quality-Q3 and as follows: a. Class: 1 (clear).

b. Minimum Thickness: 6 mm, larger where required by lite size.

c. Kind: FT (fully tempered). 2. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless

otherwise indicated. 3. For clear or low-iron glass 1/4" to 3/8" thick without ceramic frit or ink, maximum + or - 100 mD (millidiopter) over 95% of the glass

4. Maximum peak to valley rollerwave 0.003" (0.08mm) in the central area and 0.008" (0.20mm) within 10.5" (267mm) of the leading and trailing edge 1) Substitutions: Under provisions of Section 01 25 00. 5. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed, unless

6. Maximum peak to valley rollerwave 0.003" (0.08mm) in the central area and 0.008" (0.20mm) within 10.5" (267mm) of the leading and trailing edge

2.5 GLAZING SEALANTS

C. General: 1. Compatibility: Compatible with one another and with other materials they contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

1. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation. Sealant shall have a VOC content of 250 g/L or less.

3. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range. B. Glazing Sealant: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following: a. Dow Corning Corporation.

b. GE Construction Sealants; Momentive Performance Materials Inc. c. May National Associates, Inc.; a subsidiary of Sika Corporation. d. Pecora Corporation.

e. Sika Corporation. f. Tremco Incorporated. 2. Applications: Window perimeters or panel to panel joints. To coat over end dams or other internal seals in curtain wall systems.

A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based, 100 percent solids elastomeric tape; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; and complying with ASTM C 1281 and AAMA 800 for products indicated below: 1. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.

AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure. B. Expanded Cellular Glazing Tapes: Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; and complying with AAMA 800 for the following types:

1. AAMA 810.1, Type 1, for glazing applications in which tape acts as the primary sealant. 2. AAMA 810.1, Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant. 2.7 MISCELLANEOUS GLAZING MATERIALS

A. General: Provide products of material, size, and shape complying with referenced glazing standard, with requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation. B. Cleaners, Primers, and Sealers; Types recommended by sealant or gasket manufacturer.

C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.

D. Spacers: Elastomeric blocks or continuous extrusions of hardness required by glass manufacturer to maintain glass lites in place for installation indicated.

E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking). 2.8 FABRICATION OF GLAZING UNITS

A. Fabricate glazing units in sizes required to fit openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements. . Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing

EXECUTION

2.6 GLAZING TAPES

1 EXAMINATION A. Examine framing, glazing channels, and stops, with Installer present, for compliance with the following:

1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners. Presence and functioning of weep systems. 3. Minimum required face and edge clearances.

a. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

4. Effective sealing between joints of glass-framing members. B. Proceed with installation only after unsatisfactory conditions have been corrected.

A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to B. Examine glazing units to locate exterior and interior surfaces. Label or mark units as needed so that exterior and interior surfaces are

readily identifiable. Do not use materials that leave visible marks in the completed Work. 3.3 GLAZING, GENERAL A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.

B. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of of Project site. Damaged glass includes glass with edge damage or other imperfections that, when installed, could weaken glass, impair performance, or impair appearance. . Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.

D. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead. E. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

F. Provide spacers for glass lites where length plus width is larger than 50 inches (1270 mm). 1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements. Provide 1/8-inch (3-mm) minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness

slightly less than final compressed thickness of tape. G. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications. H. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

Set glass lites with proper orientation so that coatings face exterior or interior as specified. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.

K. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer. 3.5 GASKET GLAZING (DRY)

A. Cut compression gaskets to lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together a

Installation with Drive-in Wedge Gaskets: Center glass lites in openings on setting blocks, and press firmly against soft compression gaske

by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer. Installation with Pressure-Glazing Stops: Center glass lites in openings on setting blocks, and press firmly against soft compression gasket. Install dense compression gaskets and pressure-glazing stops, applying pressure uniformly to compression gaskets. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket

E. Install gaskets so they protrude past face of glazing stops.

3.6 CLEANING AND PROTECTION

0.0475-inch- diameter wire.

A. Immediately after installation remove nonpermanent labels and clean surfaces. B. Protect glass from contact with contaminating substances resulting from construction operations. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup o

dirt, scum, alkaline deposits, or stains. 1. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer. Remove and replace glass that cannot be cleaned without damage to coatings.

Remove and replace glass that is damaged during construction period. D. Wash glass on both exposed surfaces not more than four days before date scheduled for inspections that establish date of Substantia Completion. Wash glass as recommended in writing by glass manufacturer.

09 22 16 - NON-STRUCTURAL METAL FRAMING 1.1 GENERAL A. Provide non-load-bearing steel framing members for the following applications: Interior framing systems including supports for partition walls, framed soffits, furring.

2. Interior suspension systems including supports for ceilings, suspended soffits. Submittals: Product Data. Quality Assurance **Gypsum Board Assembly Deflections:** a. Typical Walls: Deflection not to exceed 1/240 of wall height when subjected to positive and negative pressure of 5 psf

b. Walls with Ceramic Tile Finish: Deflection not to exceed 1/360 of wall height when subjected to positive and negative pressure of 5 psf. c. Ceilings, bulkheads, soffits, ceiling transitions, ledges, and coves: Deflection not to exceed 1/360 of distance between supports

d. Elevator Shafts: Minimum pressure depending on elevator velocity and number of elevators per shaft; according to United States Gypsum's System Folder SA-926. 2. For fire-resistance-rated assemblies that incorporate non-load-bearing steel framing, materials and construction identical to those tested in assembly indicated by design designations from UL's "Fire Resistance Directory" in compliance with ASTM E119.

3. For STC-rated assemblies, materials and construction identical to those tested in assembly indicated according to ASTM E90 and classified per ASTM E413 by independent testing agency. 1.2 PRODUCTS A. For fire rated assemblies, materials, including accessories and fasteners produced by one manufacturer, or, when products of more than one manufacturer are used in rated system, they shall be acceptable to authorities having jurisdiction.

Non-Load-Bearing Steel Framing, General: ASTM C754. Steel Sheet Components: ASTM C645, unless otherwise indicated. Protective Coating: ASTM A653, G40, hot-dip galvanized, unless otherwise indicated. Steel Suspended Ceiling Framing 1. Steel framing members sized and spaced as indicated but not less than that required per ASTM C754 under maximum deflection conditions specified under Article 'Assembly Performance Requirements'. 2. Tie Wire: ASTM A641, Class 1 zinc coating, soft temper, 0.0625-inch- diameter wire, or double strand of

3. Hanger Attachments to Concrete: a. Fabricated from corrosion-resistant materials with holes or loops for attaching wire hangers and capable of sustaining, without failure, load equal to 5 times that imposed by construction as determined by testing per ASTM E488 by independent testing agency. Type: Postinstalled, chemical anchor or Postinstalled, expansion anchor b. Powder-Actuated Fasteners: Suitable for application indicated, fabricated from corrosion-resistant materials with clips or other devices for attaching hangers of type indicated, and capable of

sustaining, without failure, load equal to 10 times that imposed by construction as determined by

testing per ASTM E1190 by independent testing agency. 4. Hangers: As follows: Wire Hangers: ASTM A641, Class 1 zinc coating, soft temper, 0.162-inch diameter. b. Rod Hangers: ASTM A510, mild carbon steel. Diameter: ¼-inch. Protective Coating: ASTM A153, hot dip c. Flat Hangers: Commercial-sheet steel, ASTM A653, G60, hot dip galvanized. Steel sheet, 1 by 3/16 inch

by length indicated. 5. Carrying Channels: Cold-rolled, commercial-steel sheet with base metal thickness of 0.0538 inch, minimum 1/2-inch- wide flange, with manufacturers standard corrosion resistant zinc coating. Depth: 1-1/2 6. Furring Channels (Furring Members): Commercial-steel sheet with ASTM A653, G40, hot-dip galvanized

a. Cold-Rolled Channels: 0.0538-inch bare-steel thickness, with minimum 1/2-inch- wide flanges, 3/4 inch b. Steel Studs: Match steel studs used for walls. Hat-Shaped, Rigid Furring Channels: ASTM C645, 7/8 inch deep, minimum base metal thickness of 0.0312 inch.

7. Grid Suspension System for Ceilings: ASTM C645, direct-hung system composed of main beams and cross-furring members that interlock. a. Products: Subject to compliance with requirements, provide one of the following: Armstrong World Industries, Inc.; Drywall Grid Systems, Chicago Metallic Corporation; 640-C Drywall Furring System, or USG Corporation; Drywall Suspension System.

D. Steel Framing for Framed Assemblies 1. Steel framing members sized and spaced as indicated but not less than that required per ASTM C754 under maximum deflection conditions specified.

installation per deflection limitation. 3. Steel Studs and Runners: ASTM C645, gage as required to meet deflection criteria. Stud size as indicated on drawings or as required to meet deflection criteria, whichever is greater. 4. Deep Leg Deflection Track: ASTM C645 top runner with 2 inch deep flanges.

2. In areas where top of partitions are dependent on ceiling system for lateral support, coordinate design and

5. Proprietary Firestop Track: Top runner manufactured to allow partition heads to expand and contract with movement of structure while maintaining continuity of fire resistance rated assembly indicated; in thickness not less than indicated for studs and in width to accommodate depth of studs; one of the following: FireTrak Corp.; FireTrak or Metal-Lite, Inc.; The System.

6. Flat Strap and Backing Plate: 36 inch wide x 18 ga., galvanized per ASTM A653, G60 or heavier, length as required, fastened to study for attachment of surface mounted items and accessories. 7. Cold-Rolled Channel Bridging: For channel bridging for fixture attachment or lateral bracing provide

0.0538-inch bare steel thickness, with minimum 1/2-inch- wide flange. a. Depth: 1-1/2 inches, unless otherwise indicated. b. Clip Angle: 1-1/2 by 1-1/2 inch, 0.068-inch-thick, galvanized steel.

8. Hat-Shaped, Rigid Furring Channels: ASTM C645.

strand of 0.0475-inch- diameter wire.

a. Minimum Base Metal Thickness: 0.0179 inch. b. Depth: 7/8 inch. 9. Resilient Furring Channels: ½ inch deep, steel sheet members designed to reduce sound transmission. 10. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members securely to substrates involved; complying with recommendations of gypsum board manufacturer for applications indicated.

11. Cold-Rolled Furring Channels: 0.0538-inch bare-steel thickness, with minimum 1/2-inch- wide flanges. a. Depth: 3/4 inch b. Furring Brackets: Adjustable, corrugated-edge type of steel sheet with minimum bare-steel thickness of c. Tie Wire: ASTM A641/A 641M, Class 1 zinc coating, soft temper, 0.0625-inch- diameter wire, or double

E. Auxiliary Materials: Complying with referenced installation standards. 1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates. 2. Isolation Strip at Exterior Walls: Provide one of the following:

a. Asphalt-Saturated Organic Felt: ASTM D226, Type I (No. 15 asphalt felt), nonperforated. b. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch thick, in width to suit steel stud size. 1.3 EXECUTION A. Preparation

1. Coordination with Sprayed Fire-Resistive Materials: a. Before sprayed fire-resistive materials are applied, attach offset anchor plates or ceiling runners (tracks) to surfaces indicated to receive sprayed fire-resistive materials. Where offset anchor plates are required, provide continuous plates fastened to building structure not more than 24 inches o.c. b. After sprayed fire-resistive materials are applied, remove them only to extent necessary for installation of non-load-bearing steel framing. Do not reduce thickness of fire-resistive materials below that required for fire-resistance ratings indicated. Protect adjacent fire-resistive materials from damage. B. Install steel framing per ASTM C754, ASTM C840 and gypsum board manufacturer's recommendations, where standards conflict, the more stringent shall apply. 1. Install supplementary framing, blocking, backerplates, and bracing at locations in gypsum board assemblies

similar construction. Comply with details indicated and gypsum board manufacturer's written recommendations or, if none available, with United States Gypsum's "Gypsum Construction Handbook." 2. Install bracing at terminations in assemblies 3. Isolate steel framing from building structure to prevent transfer of loading imposed by structural movement. a. Where building structure abuts ceiling perimeter or penetrates ceiling. b. Where partition framing and wall furring abuts structure, install slip-type joints at head of partition

indicated to support fixtures, equipment, heavy trim, grab bars, toilet accessories, furnishings, or

assemblies that avoid axial loading of assembly while laterally supporting assembly. 4. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently. Installing Suspension Systems 1. Install suspension system components in sizes and spacings as indicated, but not less than those required by referenced installation standards for assembly types and other assembly components indicated. 2. Isolate suspension systems from building structure where they abut or are penetrated by building structure to

3. Suspend hangers from building structure as follows: a. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or suspension system. 1) Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means. b. At ducts and other construction within ceiling plenum which interfere with locations of hangers required to

hangers in the form of trapezes or equivalent devices. 1) Size supplemental suspension members and hangers to support ceiling loads within performance limits c. Wire Hangers: Secure by looping and wire tying, either directly to structures or to inserts, eye screws, or other devices and fasteners that are secure and appropriate for substrate, and in manner that will

support standard suspension system members, install supplemental suspension members and

not cause hangers to deteriorate or otherwise fail. d. Flat Hangers: Secure to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices and fasteners that are secure and appropriate for structure and hanger, and in manner that will not cause hangers to deteriorate or otherwise fail. e. Do not attach hangers to steel roof deck, permanent metal forms, or rolled-in hanger tabs of composite

f. Do not connect or suspend steel framing from ducts, pipes, or conduit. 4. Seismic Bracing: Sway-brace suspension systems with hangers used for support. 5. Grid Suspension Systems: Attach perimeter wall track or angle where grid suspension systems meet vertical surfaces. Mechanically join main beam and cross-furring members to each other and butt-cut to fit into 6. Installation Tolerances: Suspension systems level to within 1/8 inch in 12 feet measured lengthwise on each member that will receive finishes and transversely between parallel members that will receive finishes. 7. Wire-tie furring channels to supports as required per requirements for assemblies indicated.

8. Install suspended steel framing components in sizes and spacings indicated, but not less than that required by referenced steel framing and installation standards unless more stringent spacings are recommended by gypsum board manufacturer. Installing Framed Assemblies 1. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install

2. Install studs so flanges within framing system point in same direction. Space studs as follows Single-Layer Application: 16 inches o.c., unless otherwise indicated. 2) Multilayer Application: 16 inches o.c., unless otherwise indicated. 3) Tile backing panels: 16 inches o.c., unless otherwise indicated.

isolation strip between studs and exterior wall.

prevent transfer of loading imposed by structural movement.

3. Install continuous runner tracks sized to match studs at floors, ceilings, and structural walls and columns where gypsum board stud assemblies abut other construction. Secure runners to substrates with fasteners spaced maximum of 24" o.c. unless closer spacing is recommended by framing manufacturer for floor and ceiling construction involved. Provide fasteners at corners and ends of runner tracks. 4. Install runner tracks at floors and overhead supports. Extend framing full height to structural supports or

substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling. 5. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce ioints at tops of framing systems that prevent axial loading of finished assemblies. 6. Frame door openings per GA-600 and with gypsum board manufacturer's applicable written recommendations, unless otherwise indicated. Screw vertical studs at jambs to jamb anchor clips on

door frames; install runner track section (for cripple studs) at head and secure to jamb studs.

a. Install two studs at each jamb, unless otherwise indicated. Install one additional stud no more than 6" from jamb studs at single doors greater than 4'-0" and at all pairs of doors. c. Install cripple studs at head adjacent to each jamb stud, with minimum 1/2-inch clearance from jamb stud to allow for installation of control joint in finished assembly. Provide runner track and typical studs above door openings with studs spaced not more than 24" o.c.

d. At all welded frames with fixed anchor clips secure stud reinforcing to jamb anchor clips with not less than two self tapping screws per clip. e. Extend jamb studs through suspended ceilings and attach to underside of overhead structure. 1. Frame openings other than door openings same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads. 2. Install framing per fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.

9. Install framing per sound-rated assembly indicated. 10.Curved Partitions: a. Cut top and bottom track (runners) through leg and web at 2-inch intervals for arc length. In cutting lengths of track, allow for uncut straight lengths of not less than 12 inches at ends of arcs. b. Bend track to uniform curve and locate straight lengths so they are tangent to arcs.

a. Firestop Track: Where indicated, install to maintain continuity of fire-resistance-rated assembly.

c. Support outside (cut) leg of track by clinching steel sheet strip, 1-inch- high-by-thickness of track metal, to inside of cut leas using metal lock fasteners. d. Begin and end each arc with stud, and space intermediate studs equally along arcs at stud spacing recommended in writing by gypsum board manufacturer for radii indicated. On straight lengths of not less than 2 studs at ends of arcs, place studs 6 inches oc. 11.Direct Furring: Attach to concrete or masonry with stub nails, screws designed for masonry

attachment, or powder-driven fasteners spaced 24 inches oc. 12. Extend partition framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings and at partial height partitions. Continue framing over frames for doors and openings and frame around ducts penetrating partitions above ceiling to provide support for gypsum board. a. Cut studs 1/2 inch short of full height. Do not fasten studs to top track to allow independent movement of

studs and track. b. For fire-resistance-rated and STC-rated partitions that extend to underside of floor/roof slabs and decks or other continuous solid-structure surfaces to obtain ratings, install framing around structural and other members extending below floor/roof slabs and decks, as needed to support gypsum board closures and to make partitions continuous from floor to underside of solid structure. Terminate partition framing at suspended ceilings as indicated. d. Terminate partial height partition framing as indicated.

13.Install steel studs and furring in sizes and at spacings indicated but not less than required by referenced steel framing installation standard per maximum deflection and minimum loading requirements specified, unless more stringent requirements are recommended by gypsum board manufacturer: 14.Install steel studs so flanges point in same direction and so that leading edges or ends of each panel can be attached to open (unsupported) edges of stud flanges first. 15.Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch

from plane formed by faces of adjacent framing. 16.Install backerplates for support of wall mounted items. 17. Where partitions abut exterior wall window mullions, adhesively attach isolation strips to window mullions. Center isolation strips on mullion to form a continuous, sound resistant and lightproof, recessed joint seal for entire length of interface between partition studs and trim members and vertical

window mullions. 09 29 00 - GYPSUM BOARD

A. Provide Gypsum Board Assemblies: 1. Interior walls, partitions, and ceilings for tape and joint compound finish. Remodeling gypsum drywall systems at areas of new construction. Submittals: Product Data, Samples.

Quality Assurance 1. For fire-resistance-rated assemblies, materials and construction identical to those tested in assembly indicated per ASTM E119 by independent testing agency. 2. For STC-rated assemblies, materials and construction identical to those tested in assembly indicated per ASTM E90 and classified per ASTM E413 by independent testing agency. 3. Single Source for Panel Products: Gypsum board and other panel products from single manufacturer. 4. Single Source for Finishing Materials: Finishing materials from either same manufacturer that supplies

gypsum board and other panel products or from manufacturer acceptable to gypsum board

5. Mockups: Before beginning gypsum board installation, install mockups of at least 100 sq. ft. in surface area to demonstrate aesthetic effects and set quality standards for materials and execution. a. Install mockups for each level of gypsum board finish indicated for use in exposed locations

a. Apply or install final decoration indicated, including painting and wall coverings, on exposed surfaces for

Simulate finished lighting conditions for review of mockups. c. Approved mockups may become part of completed Work if undisturbed at Substantial Completion. PRODUCTS A. Panel Size, General: Provide in maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

For fire rated assemblies, materials, including accessories and fasteners produced by one manufacturer, or, when products of more than one manufacturer are used in rated system, they shall be acceptable to authorities having jurisdiction. Interior Gypsum Board: Complying with ASTM C36 or ASTM C1396, as applicable to type of gypsum board indicated and whichever is more stringent. . Regular Type: 5/8 inch thick, unless otherwise indicated with long edges tapered. Location: Vertical surfaces,

unless otherwise indicated 2. Type X: 5/8 inch thick with long edges tapered. Location: Where required for fire-resistance-rated assembly. 3. Flexible Gypsum Wallboard: ASTM C36, manufactured to bend to fit tight radii and to be more flexible than standard regular-type panels of same thickness. Thickness: 1/4 inch. Long Edges: Tapered. Location: Apply in double layer at curved assemblies. 4. Sag-Resistant Gypsum Wallboard: ASTM C36, manufactured to have more sag resistance than regular-type

D. Tile Backing Panels . Water-Resistant Gypsum Backing Board: ASTM C630 or ASTM C1396. 2. Core: 5/8 inch, regular type. 5/8 inch thick Type X core where required for fire resistive rated assemblies. Interior Steel Trim Accessories: ASTM C1047; formed metal sheet steel zinc coated by hot dipped process. Shapes indicated below by reference to Fig. 1 designations in ASTM C1047:

gypsum board. Thickness: 1/2 inch. Long Edges: Tapered. Location: Ceiling surfaces.

 Cornerbead: Use at outside corners. LC-Bead with both face and back flanges to receive joint compound: Use at exposed panel edges. 3. U-Bead with face and back flanges; face flange formed to be left without application of joint compound: Use where indicated. 4. Expansion (Control) Joint: One piece control joint formed with V shaped slot, with removable strip covering

5. Curved Edge Corner Bead: With notched or flexible flanges; use at curved openings. Aluminum Trim: Extruded aluminum trim with 1/4" diameter holes in fins for attachment to wallboard or studs; longest lengths available in profiles indicated; primed for finish painting; sized for scheduled wallboard 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following: a. Fry Reglet Corp.

b. Gordon, Inc. c. Pittcon Industries. 2. Aluminum: Alloy and temper with not less than strength and durability properties of ASTM B221, Alloy 3. Finish: Corrosion-resistant primer compatible with joint compound and finish materials specified.

slot opening. Use where indicated.

compounds applied on previous or for successive coats.

products and joint treatment materials for each application indicated. 1. Interior Gypsum Wallboard: Paper. 2. Tile Backing Panels: As recommended by panel manufacturer. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other

Joint Treatment Materials, General: ASTM C475 and recommendations of both manufacturers of wallboard

1. Prefilling: At open joints, and damaged surface areas, use setting-type taping compound. 2. Embedding and First Coat: For embedding tape and first coat on joints, flanges of trim accessories, and fasteners, use setting-type taping compound. B. Second coat: For filling over tape, beads and fasteners. Use setting-type, sandable topping compound. 4. Third coat: For finishing over tape, beads and fasteners. Use drying-type, all-purpose compound.

5. Skim Coat: For final coat of Level 5 finish, use drying-type, all-purpose compound. Joint Compound for Tile Backing Panels: 1. Water-Resistant Gypsum Backing Board: Use setting-type taping compound and setting-type, sandable topping compound.

Acoustical Sealant for Exposed and Concealed Joints: Nonsag, paintable, nonstaining, latex sealant per ASTM C834 that effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies per ASTM E90. Auxiliary Materials: Complying with referenced installation standards and manufacturer's written recommendations.

2. Laminating Adhesive or joint compound recommended for directly adhering gypsum panels to continuous 3. Steel Drill Screws: ASTM C1002, unless otherwise indicated. ASTM C954 for fastening panels to steel members from 0.033 to 0.112 inch thick. 4. Sound Attenuation Blankets: ASTM C665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.

a. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly 5. Wood Blocking and Trim Not Concealed in Partition Construction: Refer to Division 6, INTERIOR ARCHITECTURAL WOODWORK. 6. Wood Blocking Concealed in Partition Construction: Fire retardant treated, refer to Division 6, MISCELLANEOUS CARPENTRY. 7. Metal Post for Tube Framing at Partial Height Walls: Refer to Division 5, METAL FABRICATIONS.

8. Spot Grout: ASTM C475, setting type joint compound recommended for spot grouting hollow metal door

frame anchors 9. Isolation Strip at Exterior Walls: Adhesive-backed, closed-cell, compressible, non-extruding, sound transmission reducing, vinyl foam tape strips with approximately 13 Shore 00 hardness that allow fastener penetration without foam displacement, 1 inch thick, in width 1/2" less than window mullion width. V730 Norton Sealant Tape; gray color. 10. Window Mullion Fillers: Gordon Mullion-Mate I or II as applicable. .3 EXECUTION

A. Install and finish gypsum panels per ASTM C840, GA-216, and gypsum panel manufacturer's

recommendations. Where standards conflict, the more stringent shall apply. Install joints only over framing members. Do not allow butt-to-butt joints. Install assemblies true, plumb, level and in proper relation to adjacent surfaces. Where new meet existing construction, remove existing cornerbeads to provide smooth transition. Install sound attenuation blankets before installing gypsum panels, unless blankets are readily installed after panels have been installed on one side. Provide blocking for items such as railings, grab bars, casework, toilet accessories, and similar items. Single-Laver Application:

1. On ceilings, apply gypsum panels before wallboard application to greatest extent possible and at right angles to framing, unless otherwise indicated. Install ceiling board panels across framing to minimize number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member. 2. On partitions, apply gypsum panels vertically (parallel to framing), unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints or avoid them entirely. a. Stagger abutting end joints not less than one framing member in alternate courses of board.

b. At high walls, install panels horizontally, unless otherwise indicated or required by fire-resistance-rated

3. Fastening Methods: Apply gypsum panels to supports with steel drill screws. Multilayer Application: 1. On Partitions: Apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.

2. On Ceilings: Apply gypsum board indicated for base layers before applying base layers on partitions; apply base layers in same sequence. Apply base layers at right angles to framing members and offset face layer joints 1 framing member, 16 inches minimum, from parallel base joints, unless otherwise indicated or required by fire-resistance-rated assembly. 3. Fastening Methods: Fasten base layers and face layers separately to supports with screws. 4. Laminating to Substrate: Where gypsum panels are indicated as directly adhered to substrate (other than studs, furring members, or base layer of gypsum board), comply with gypsum board manufacturer's written recommendations and temporarily brace or fasten gypsum panels until fastening adhesive has

Curved Partitions: 1. Install panels horizontally and unbroken, to the extent possible, across curved surface plus 12-inch- long straight sections at ends of curves and tangent to them. Wet gypsum panels on surfaces that will become compressed where curve radius prevents using dry panels. Comply with gypsum board manufacturer's written recommendations for curve radii, wetting methods, stacking panels after wetting, and other preparations that precede installing wetted gypsum panels. 3. On convex sides of partitions, begin installation at one end of curved surface and fasten gypsum panels to studs as they are wrapped around curve. On concave side, start fastening panels to stud at center of curve and work outward to panel ends. Fasten panels to framing with screws spaced 12 inches o.c.

4. For double-layer construction, fasten base layer to studs with screws 16 inches o.c. Center gypsum board face layer over joints in base layer, and fasten to studs with screws spaced 12 inches o.c. 5. Allow wetted gypsum panels to dry before applying joint treatment. Tile Backing Panels: 1. Water-Resistant Gypsum Backing Board: For substrates indicated to receive thin set ceramic tile, install water-resistant gypsum backing board panels, unless otherwise indicated. 2. Install at showers, tubs, and where indicated. Install with 1/4-inch gap where panels abut other construction

3. Where tile backing panels abut other types of panels in same plane, shim surfaces to produce uniform plane across panel surfaces. H. Install ceiling panels across framing to minimize number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one Install gypsum panels with face side out. Do not install imperfect, damaged, or damp panels. Butt panels

Do not force into place.

chases braced internally.

together for light contact at edges and ends with not more than 1/16 inch of open space between panels.

Locate both edge or end joints over supports, except in ceiling applications where intermediate supports or gypsum board back blocking is provided behind end joints. Position adjoining panels so that tapered edges abut tapered edges, and field cut edges abut field cut edges and ends. Do not place tapered edges against cut edges or ends. Stagger vertical joints over different studs on opposite sides of partitions. Avoid joints at corners of framed openings where possible. Attach gypsum panels to framing provided at openings and cutouts. Form control and expansion joints with space between edges of adjoining gypsum panels. Spot grout hollow metal door frames for all doors. Apply spot grout at each jamb anchor clip and immediately insert gypsum panels into frames.

Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in

1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area. 2 Fit gypsum panels around ducts pines and conduits. 3. Where partitions intersect open coffers, joists, exterior and interior wall kickers, and other structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by coffers, joists, and other structural members; allow 1/4- to 3/8-inch- wide joints to install sealant. 4. Where chase walls are shown, provide bracing between parallel rows of studs. Provide gypsum wallboard braces no less than 1/2" thick x 12" wide and cut to width of chase. Locate at quarter points in wall

height between each pair of parallel studs. Fasten with not less than 3 screws at each stud.

floors. Provide 1/4- to 1/2-inch- wide spaces at these locations, and trim edges with edge trim where

Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except

edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical Attach panels so leading edge or end of each panel is attached to open edges of stud flanges first. Provide acoustical sealant at runner tracks, wall perimeters, openings, expansion, and control joints. STC-Rated Assemblies: Seal construction at perimeters, behind control and expansion joints, and at openings and penetrations with continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C919 and manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through gypsum board assemblies, including sealing partitions above acoustical ceilings. Cut openings in wallboard for electrical outlets, piping and other penetrations. Maintain close tolerances so that edges will be covered by plates and escutcheons. Cut both face and back paper. Do not install

manufacturer's written recommendations. Space screws maximum of 12 inches o.c. for vertical applications. Space fasteners in panels that are tile substrates maximum of 8 inches o.c. 3. Install fasteners not less than 3/8" from ends or edges of wallboard sheets, spacing fasteners opposite each other on adjacent ends or edges. 4. Begin fastening from center of wallboard and proceed toward edges and corners. 5. Apply pressure on surface of wallboard adjacent to fasteners being driven to ensure that wallboard will be

Space fasteners in gypsum panels per referenced gypsum board application and finishing standard and

electrical outlets back to back on opposing sides of partitions.

secured tightly to supporting members.

Drive fastener with shank perpendicular to face of board. b. Drive screws with power screwdriver as recommended by wallboard manufacturer. Set heads of screws slightly below surface of paper without cutting paper.

Installing Trim Accessories 1. For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels.

Otherwise, attach trim per manufacturer's written instructions. 2. Control Joints: Install control joints at locations indicated on Drawings and per ASTM C840 and in specific locations approved by Architect for visual effect.

3. Install interior trim accessories where edge of gypsum panels would otherwise be exposed or semiexposed. Provide interior trim accessories with face flange formed to receive joint compound. 4. Install aluminum trim accessories where indicated.

5. Where new partitions meet existing construction, remove existing cornerbeads to provide smooth transition. Finishing Gypsum Board I. Apply joint treatment at gypsum board joints, flanges of interior trim and aluminum trim accessories, interior angles, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration and levels of gypsum board finish indicated. Provide 3-coat joint treatment such that, after finishing, joints are not visible. Produce surfaces free of tool marks and ridges ready for decoration of type indicated. Promptly remove residual joint compound from

adiacent surfaces. 2. Prefill open joints and damaged surface areas. 3. Apply joint tape over gypsum board joints, except at trim having flanges not intended for tape. 4. Provide 3 coat joint treatment such that, after finishing, joints are not visible. 5. Sand and leave ready for finish painting and wall treatment.

1. Level 1: Embed tape at joints in ceiling plenum areas and concealed areas unless higher level of finish is required for fire-resistance-rated assemblies and sound-rated assemblies as recommended by gypsum board manufacturer. 2. Level 2: Embed tape and apply separate first coat of joint compound to tape, fasteners, and trim flanges where panels are substrate for tile and where indicated, unless higher level of finish is required for

fire-resistance-rated assemblies and sound-rated assemblies as recommended by gypsum board

W. Gypsum Board Finish Levels: Finish panels to levels indicated below, per ASTM C840 and GA-214, for

3. Level 4: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges at panel surfaces exposed to view, unless otherwise indicated. 4. Level 5: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges, and apply skim coat of joint compound over entire surface where wallboard is indicated to receive wall coverings, visual display surfacing, and semi-gloss and high gloss paints. 5. Glass-Mat. Water-Resistant Backing Panels: Finish per manufacturer's written instructions.

X. Clean floors of wallboard debris and leave broom clean. Excess material, scaffolding, tools and other

Provide final protection and maintain conditions that ensures gypsum board assemblies remain without damage or deterioration at time of Substantial Completion Remove and replace panels that are wet, moisture damaged, and mold damaged.

equipment are to be removed upon completion of work.

09 30 13 - TILING

PART 1 - GENERAL

SUMMARY Section Includes:

locations indicated:

 Porcelain tile. Ceramic tile. 3. Waterproof/Crack isolation membrane.

B. Related Requirements: 1. Section 07 92 00 "Joint Sealants" for sealing of expansion, contraction, control, and isolation joints in tile surfaces. 2. Section 09 29 00 "Gypsum Board" for glass-mat, water-resistant backer board.

A. General: Definitions in the ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless ANSI A108 Series: ANSI A108.01, ANSI A108.02, ANSI A108.1A, ANSI A108.1B, ANSI A108.1C, ANSI A108.4, ANSI A108.5, ANSI A108.6, ANSI A108.8, ANSI A108.9, ANSI A108.10, ANSI A108.11, ANSI A108.12, ANSI A108.13, ANSI A108.14, ANSI A108.15, ANSI A108.16, and ANSI A108.17, which are contained in its "Specifications for Installation of Ceramic Tile."

ISO 13007 Standards for Ceramic Tile Grouts and Adhesives. Module Size: Actual tile size plus joint width indicated. E. Face Size: Actual tile size, excluding spacer lugs.

PREINSTALL ATION MEETINGS

A. Product Data: For each type of product.

A. Preinstallation Conference: Conduct conference at Project site. 1. Review requirements in ANSI A108.01 for substrates and for preparation by other trades. 1.4 ACTION SUBMITTALS

control, and isolation joints in tile substrates and finished tile surfaces. Show locations and types (including finish) of all metal Samples for Verification: . Full-size units of each type of trim and accessory for each color and finish required.

Metal edge strips in 6-inch (150-mm) lengths.

Product Certificates: For each type of product.

standards for materials and execution.

PART 2 - PRODUCTS

1.5 INFORMATIONAL SUBMITTALS A. Qualification Data: For Installer. B. Master Grade Certificates: For each shipment, type, and composition of tile, signed by tile manufacturer and Installer.

B. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction,

D. Product Test Reports: For tile-setting and -grouting products and certified porcelain tile. 6 MAINTENANCE MATERIAL SUBMITTALS A. Furnish extra materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing contents. 1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed for each type, composition, color,

pattern, and size indicated. 2. Grout: Furnish quantity of grout equal to 3 percent of amount installed for each type, composition, and color indicated. QUALITY ASSURANCE Installer Qualifications:

Contractors' Association of America. 2. Installer's supervisor for Project holds the International Masonry Institute's Foreman Certification. 3. Installer employs Ceramic Tile Education Foundation Certified Installers or installers recognized by the U.S. Department of Labor as Journeyman Tile Layers Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality

1. Installer is a five-star member of the National Tile Contractors Association or a Trowel of Excellence member of the Tile

1. Build mockup of each type of floor tile installation. 2. Build mockup of each type of wall tile installation. 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location. Store aggregates where grading and other required characteristics can be maintained and contamination can be avoided.

Store liquid materials in unopened containers and protected from freezing. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

2.1 MANUFACTURERS Source Limitations for Tile: Obtain tile of each type and color or finish from single source or producer. 1. Obtain tile of each type and color or finish from same production run and of consistent quality in appearance and physical properties for each contiguous area. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout

1. Obtain setting and grouting materials, except for unmodified Portland cement and aggregate, from single manufacturer.

2. Obtain waterproofing / crack isolation membrane, except for sheet products, from manufacturer of setting and grouting materials.

Source Limitations for Other Products: Obtain each of the following products specified in this Section from a single manufacturer:

 Waterproofing / crack isolation membrane. Metal edge strips. PRODUCTS, GENERAL ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.

1. Provide tile complying with Standard grade requirements unless otherwise indicated.

component from single manufacturer and each aggregate from single source or producer.

Part 2 articles, ANSI standards referenced by TCNA installation methods specified in tile installation schedules, and other Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer unless otherwise

Colors, Textures, and Patterns: Where manufacturer's standard products are indicated for tile, grout, and other products requiring

ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other

1. Where tile is indicated for installation in wet areas, do not use back- or edge-mounted tile assemblies unless tile manufacturer specifies in writing that this type of mounting is suitable for installation indicated and has a record of successful in-service performance TILE PRODUCTS

selection of colors, surface textures, patterns, and other appearance characteristics, provide specific products or materials complying with the following requirements: Provide as indicated in Interior Finish Legend, unless otherwise indicated. C. Trim Units: Provide tile trim units to match characteristics of adjoining flat tile and to comply with the following requirements:

2. Shapes: As follows, selected from manufacturer's standard shapes: a. Base for Thin-Set Mortar Installations: Straight. b. Wainscot Cap for Thin-Set Mortar Installations: Surface bullnose. c. External Corners for Thin-Set Mortar Installations: Surface bullnose. d. Internal Corners: Field-butted square corners, except with coved base and cap angle pieces designed to member with

1. Size: As indicated, coordinated with sizes and coursing of adjoining flat tile where applicable.

WATERPROOFING / CRACK ISOLATION MEMBRANE

Basis of Design Products: Refer to Interior Finish Legend on Drawings.

General: Manufacturer's standard product that complies with ANSI A118.10 and ANSI A118.12 and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer. Fabric-Reinforced, Fluid-Applied Membrane: System consisting of liquid-latex rubber or elastomeric polymer and continuous fabric 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Ardex Engineered Cements; 8+9 waterproofing/crack isolation compound. Custom Building Products; 9240 Waterproofing and Anti-Fracture Membrane. Laticrete International, Inc.; Laticrete 9235 Waterproof Membrane with Waterproofing/Anti Fracture Fabric. MAPEI Corporation; Mapelastic 315 with MAPEI Fiberglass Mesh. TEC; H.B. Fuller Construction Products Inc.; Triple Flex with Waterproofing Mesh

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#184000338-0001

540 W. MADISON CHICAGO, IL 6066

ISSUED FOR BID/PERMIT ISSUED FOR ENGINEERING
ISSUE **Job Number** 026332.030 Drawn Checked Approved

**ISSUE CHART** 

**SPECIFICATIONS** 

**SHEET NUMBER** 

TITLE

### 2.5 SETTING MATERIALS

A. Modified Dry-Set Cement Mortar (Thinset): ANSI A118.4 and ISO 13007; C2.

- 1. Provide prepackaged, dry-mortar mix combined with acrylic resin or styrene-butadiene-rubber liquid-latex additive at Project site. a. Latex Liquid Additive:
- 1) Laticrete No. 4237 for mortar and No. 1776 for grout, Laticrete ) Keralastic for mortar, Mapei
- 425 Multi-Purpose Acrylic Latex Admixture, Bostik Hydroment 2. Mortars: Subject to compliance with requirements, provide products by one of the following:
- a. Wall Applications, non-large format tile: Ardex Engineered Cements, "X5".
- 2) Custom Building Products, "MegaLite Rapid Set Crack Prevention Mortar."
- 3) Laticrete International, Inc., "253 Gold.
- MAPEI Corporation, "Ultraflex 2."
- b. Floor Applications, non-large format tile: 1) Laticrete No. 211, Laticrete
- Kerabond, Mapei
- 3) Tile-Mate Floor & Wall, Bostik Hydroment c. Large format floor and wall applications:
- 1) Laticrete Sure Set, Laticrete Ultraflex LFT, Mapei 3) StoneWall, Bostik Hydroment

# 2.6 GROUT MATERIALS (Reference "Tile Installation Schedule" at end of Section

- Water-Cleanable Epoxy Grout: ANSI A118.3 and ISO 13007; RG, with a VOC content of 65 g/L or less. 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- a. Ardex Engineered Cements, "WA 100% solids epoxy grout".
- b. Custom Building Products, "100% Solids Epoxy Grout" or "Fusion". c. Laticrete International, Inc., "SpectraLOCK Pro Premium Grout."
- d. MAPEI Corporation, "Kerapoxy CQ" or "Flexcolor CQ". 2. Provide product capable of withstanding continuous and intermittent exposure to temperatures of up to 140 and 212 deg F (60 and 100 deg C), respectively, and certified by manufacturer for intended use.

### 2.7 MISCELLANEOUS MATERIALS

- A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.
- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- Ardex Engineered Cements, Feather Finish or K15. b. Laticrete, "L&M Duracrete" or "L&M Durapatch Industrial"
- c. MAPEI, "Mapecem Quickpatch." B. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for
- materials and installations indicated by tile and grout manufacturers. 1. Basis of Design Products, Laticrete, "Stonetech Professional Stone & Tile Cleaner".

### 2.8 ELASTOMERIC SEALANTS

- A. General: Provide sealants, primers, backer rods, and other sealant accessories that comply with the following requirements and with the applicable requirements in Section 07 92 00 "Joint Sealants."
- 1. Use primers, backer rods, and sealant accessories recommended by sealant manufacturer. 2. Colors: Provide colors of exposed sealants to match colors of grout in tile.

- 2.9 MIXING MORTARS AND GROUT A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.
- B. Add materials, water, and additives in accurate proportions.
- C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

### PART 3 - EXECUTION

- 3.1 EXAMINATION A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work. 1. Verify that substrates for setting tile are firm; dry; clean; free of coatings that are incompatible with tile-setting materials, including
  - ANSI A108 01 for installations indicated 2. Verify that concrete substrates for tile floors installed with bonded mortar bed or thinset mortar comply with surface finish

curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by

- requirements in ANSI A108.01 for installations indicated. a. Verify that surfaces that received a steel trowel finish have been mechanically scarified.
- b. Verify that protrusions, bumps, and ridges have been removed by sanding or grinding. 3. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in
- or behind tile has been completed 4. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.

# B. Proceed with installation only after unsatisfactory conditions have been corrected.

- 3.2 PREPARATION A. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot (1:50) toward drains.
- B. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended,

### either return to manufacturer or blend tiles at Project site before installing. 3.3 CERAMIC TILE INSTALLATION

- A. Comply with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation" for TCNA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 series "Specifications for Installation of Ceramic Tile" that are referenced in TCNA installation methods, specified in tile installation schedules, and apply to types of setting and grouting
- 1. Follow procedures in the ANSI A108 Series of tile installation standards for tile layout including but not limited to:
- a. Center and balance areas. Excess amount of cuts.

### c. Smooth edge cuts. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unles

- otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments. C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other
- penetrations so plates, collars, or covers overlap tile. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.
- Where accent tile differs in thickness from field tile, vary setting-bed thickness so that tiles are flush. F. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each
- space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated
- 1. Where adjoining tiles, base, walls, or trim are specified or indicated to be same size, align joints. 2. Where tiles are specified or indicated to be whole integer multiples of adjoining tiles on base, walls, or trim, align joints unless
- otherwise indicated. G. Joint Widths: Unless otherwise indicated, install tile with the following joint widths: 1. Wall tile joint maximum 1/8 inch, adjust to smaller if the floor calibration allows.
- 2. Floor tile joint maximum 1/8 inch, adjust to smaller if the floor calibration allows. Align joints center to center.
- 4. Confirm grout joint widths in submittal phase prior to any tile installation.
- H. Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles. 1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them. Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.

# 3.4 WATERPROOFING / CRACK ISOLATION MEMBRANE INSTALLATION

- A. Install waterproofing / crack isolation membrane to comply with ANSI A108.17 and manufacturer's written instructions to produce membrane of uniform thickness that is bonded securely to substrate.
- Allow waterproofing / crack isolation membrane to cure before installing tile or setting materials over it. C. Waterproofing / crack isolation membrane required at all floor tile locations.

# 3.5 ADJUSTING AND CLEANING

- A. Remove and replace tile that is damaged or that does not match adjoining tile. Provide new matching units, installed as specified and
- in a manner to eliminate evidence of replacement B. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.

- 1. Remove grout residue from tile as soon as possible. 2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions but no sooner than 10 days
- after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.

# A. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If

- recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors. B. Prohibit foot and wheel traffic from tiled floors for at least seven days after grouting is completed.
- C. Before final inspection, remove protective coverings and rinse neutral protective cleaner from tile surfaces.

# 3.7 INTERIOR TILE INSTALLATION SCHEDULE

A. Interior Wall Installations, Metal Studs or Furring: 1. Tile Installation W243: TCNA W243; thinset mortar on moisture-resistant gypsum board.

c. Grout: Water-cleanable epoxy grout

- Tile Type: Refer to Interior Finish Legend on Drawings. b. Thinset Mortar: Modified dry-set mortar.
- B. Interior Floor Installations: 1. Tile Installation F125: TCNA F125-Full; thinset mortar on waterproof / crack isolation membrane.

### Tile Type: Refer to Interior Finish Legend on Drawings. b. Thinset Mortar: Medium-bed, modified dry-set mortar. Grout: Water-cleanable epoxy grout 09 51 13 - ACOUSTICAL PANEL CEILINGS

- 1.1 GENERAL A. Provide acoustical panel ceilings, trim, and concealed metal suspension system and remodel existing acoustical lay
- Submittals: Product Data, Samples, Maintenance Data.
- C. Each type of acoustical ceiling panel and supporting suspension system through one source from single D. Acoustical panel ceilings designed and installed to withstand the effects of earthquake motions according to local
- code requirements E. Coordinate layout and installation of acoustical panel ceiling systems with other construction that penetrates
- ceilings or is supported by them. F. Furnish extra materials that match products installed, packaged with protective covering for storage and identified with labels describing contents. Full-size panels, suspension system and hold down clips equal to 2.0 percent of quantity installed.
- 1.2 PRODUCTS A. Acoustical Panels: ASTM E1264; surface-burning Class A. Subject to compliance with requirements, provide products as scheduled, LR not less than 0.75, unless otherwise indicated with NRC and CAC meeting or

seismic design. Subject to compliance with requirements, provide products as scheduled.

exceeding performance of scheduled product B. Metal Suspension System: ASTM C635, Prepainted, electrolytically zinc coated, or hot-dip galvanized per ASTM A653, not less than G30 coating designation; intermediate-duty, unless heavy-duty is indicated or required for

Attachment Devices: Size for five times design load indicated in ASTM C635, Table 1, "Direct Hung," unless

otherwise indicated. Comply with seismic design requirements. Attachment Types: a. Expansion, and Adhesive anchors in concrete fabricated from corrosion-resistant materials capable of supporting a load equal to five times that imposed by ceiling construction; testing per ASTM E488 or ASTM E1512.

- a. Powder-actuated fasteners in concrete fabricated from corrosion-resistant materials capable of supporting a load equal to 10 times that imposed by ceiling construction; testing per ASTM E1190. 1. Corrosion Protection: Carbon-steel components zinc plated per ASTM B633, Class Fe/Zn 5 for Class SC 1 service condition, unless otherwise indicated. At areas subject to high humidity, provide corrosion protection using
- stainless-steel components complying with ASTM F593 and ASTM F594, Group 1 Alloy 304 or 316 for bolts; Alloy 304 or 316 for anchor. D. Wire Hangers, Braces, and Ties: ASTM A641, Class 1, soft temper; diameter so stress at three times hanger design load (ASTM C635, Table 1, "Direct Hung") is less than yield stress of wire, but not less than 0.106-inch.
- Rod Hangers: ASTM A510, mild carbon steel, 1/4-inch diameter, ASTM A153, hot-dip galvanized. Seismic Supports: Manufacturer's standard perimeter stabilizers, standard compression struts and seismic clips designed and spaced to secure acoustical panels in-place.
- G. Where indicated, provide manufacturer's standard hold-down clips spaced 24 inches o.c. on all cross tees. H. Roll-Formed, Sheet-Metal Edge Moldings and Trim: 1. Manufacturer's standard edge moldings that fit acoustical panel edge details and suspension systems indicated and that match width and configuration of exposed runners, unless otherwise indicated. 2. For lay-in panels with reveal edge details, stepped edge molding that forms reveal of same depth and width as that

formed between edge of panel and flange at exposed suspension member where indicated.

- 3. For circular penetrations of ceiling, edge moldings fabricated to diameter required to fit penetration exactly. Extruded-Aluminum Edge Moldings and Trim: Armstrong Industries Axiom in sizes and types indicated. 1. Aluminum Alloy: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with not less than the strength and durability properties of aluminum extrusions complying with ASTM B221 for Alloy and Temper 6063-T5.
- 2. Finish: As scheduled. 3. Provide corners and transitions that are factory fabricated with tight fitting mitered corners. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer's standard nonsag, paintable, nonstaining latex sealant, ASTM C834. Products: Pecora Corporation; AC-20 FTR Acoustical and Insulation Sealant or
- USG Corporation; SHEETROCK Acoustical Sealant. K. Acoustical Sealant for Concealed Joints: Manufacturer's standard nondrying, nonhardening, nonskinning, nonstaining, gunnable, synthetic-rubber sealant recommended for sealing interior concealed joints to reduce airborne sound transmission. Products: OSI Sealants, Inc.; Pro-Series SC-175 Rubber Base Sound Sealant, Pecora Corporation; BA-98 or Tremco, Inc.; Tremco Acoustical Sealant.
- 1.3 EXECUTION A. Examine substrates, areas, and conditions, including structural framing to which ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of acoustical panel ceilings. Proceed with installation only after unsatisfactory conditions have
- been corrected. B. Measure ceiling areas and establish layout to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders. Comply with layout shown on reflected ceiling plans. C. Install acoustical panel ceilings per ASTM C636 and seismic design requirements, per manufacturer's written

1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of

- instructions and CISCA's "Ceiling Systems Handbook." D. Suspend ceiling hangers from building's structural members and as follows:
- supporting structure or of ceiling suspension system. 2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means. 3. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with
- supplemental suspension members and hangers in form of trapezes or equivalent devices. 4. Secure wire hangers to ceiling suspension members and to supports above with minimum of 3 tight turns. Connect hangers directly to structures or to inserts or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures. 5. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to

location of hangers at spacings required to support standard suspension system members, install

- inserts, eye screws, or other devices that are secure and appropriate for both structure to which hangers are attached and type of hanger involved. Install hangers in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.
- 6. Do not support ceilings directly from permanent metal forms or floor deck. Fasten hangers to cast-in-place hanger inserts, postinstalled mechanical or adhesive anchors, or power-actuated fasteners that extend through forms 7. When steel framing does not permit installation of hanger wires at spacing required, install carrying channels or
- other supplemental support for attachment of hanger wires. 8. Do not attach hangers to steel deck tabs or to steel roof deck. Attach hangers to structural members. 9. Space hangers not more than 48 inches o.c. along each member supported directly from hangers, unless otherwise indicated; provide hangers not more than 8 inches from ends of each member.
- 10. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards and publications. E. Secure bracing wires to ceiling suspension members and to supports with minimum of 4 tight turns. Suspend bracing from structural members as required for hangers, without attaching to permanent metal forms, steel deck, or steel deck tabs. Fasten bracing wires into concrete with cast-in-place or postinstalled anchors. F. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to
- conceal edges of acoustical panels. Apply acoustical sealant in continuous ribbon concealed on back of vertical legs of moldings before they are 2. Screw attach moldings to substrate at intervals not more than 16 inches o.c. and not more than 3 inches from ends.
- leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet. Miter corners accurately and connect securely 3. Do not use exposed fasteners, including pop rivets, on moldings and trim. G. Install suspension system runners so they are square and securely interlocked with one another. Remove and
- replace dented, bent, or kinked members. H. Install acoustical panels with undamaged edges and fit accurately into suspension system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide a neat, precise fit. 1. Arrange directionally patterned acoustical panels pattern running in one direction parallel to short axis of space,
- unless otherwise indicated. [Install panels in a basket-weave pattern.] 2. For square-edged panels, install panels with edges fully hidden from view by flanges of suspension system runners and moldings.
- 3. For reveal-edged panels on suspension system runners, install panels with bottom of reveal in firm contact with top surface of runner flanges. 4. For reveal-edged panels on suspension system members with box-shaped flanges, install panels with reveal surfaces in firm contact with suspension system surfaces and panel faces flush with bottom face of runners.
- 5. Paint cut edges of panel remaining exposed after installation; match color of exposed panel surfaces using coating recommended in writing for this purpose by acoustical panel manufacturer. 6. Install hold-down clips in areas indicated, in areas required by authorities having jurisdiction, and for fire-resistance ratings; space as recommended by panel manufacturer's written instructions, unless otherwise indicated. I. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension system
- members per manufacturer's written instructions. Touch up minor finish damage. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.
- 09 65 13 RESILIENT BASE AND ACCESSORIES Provide resilient base and accessories, including remodeling of existing resilient wall base and accessories.
- Furnish extra materials that match products installed, packaged with protective covering for storage and identified with labels describing contents. Furnish not less than 10 linear feet for every 500 linear feet or fraction thereof, of each type, color, pattern, and size of resilient product installed. 2. Remove coatings, including curing compounds, and other substances incompatible with adhesives and that contain PRODUCTS
- A. Resilient Base: ASTM F1861, Cove (base with toe) at resilient flooring and concrete and straight (flat or toeless) at carpet, Minimum Thickness: 0.125 inch, Height: As indicated. 1. Subject to compliance with requirements, provide products as scheduled. Match Architect's samples. Finish, Colors and Patterns: As indicated by manufacturer's designations.
- 2. Lengths: Coils in manufacturer's standard length. Outside and Inside Corners: Job formed. B. Resilient Molding Accessory: Rubber, Transition strips at flooring changes in profile and dimensions indicated. Colors and Patterns: As indicated by manufacturer's designations match Architect's samples. C. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by manufacturer for applications indicated.
- indicated. 1.3 EXECUTION A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products. 1. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound and remove

D. Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions

- bumps and ridges to produce a uniform and smooth substrate. 2. Do not install resilient products until they are same temperature as the space where they are to be installed. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation 3. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation.
- Comply with manufacturer's written instructions for installing resilient base and accessories Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required. D. Install resilient base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces
- E. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates. F. Do not stretch resilient base during installation G. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.
- H. Job-Formed Corners: Use straight pieces of maximum lengths possible. Form without producing discoloration (whitening) at bends. Shave back of base at points where bends occur and remove strips perpendicular to ength of base that are only deep enough to produce a snug fit without removing more than half the wall base Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each
- piece. Install reducer strips at edges of carpet and resilient floor covering that would otherwise be exposed. J. Cleaning and Protection: Comply with manufacturer's written instructions for cleaning and protection of resilient 1. Perform the following immediately after completing resilient product installation:
- a. Remove adhesive and other blemishes from exposed surfaces. b. Sweep and vacuum surfaces thoroughly. c. Damp-mop surfaces to remove marks and soil. 2. Protect resilient products from mars, marks, indentations, and other damage from construction operations and

# placement of equipment and fixtures during remainder of construction period.

Quality Assurance

Submittals: Product Data, Samples.

- 09 65 19 RESILIENT TILE FLOORING Provide resilient floor tile, including new resilient flooring and remodeling of existing resilient flooring. Submittals: Product Data, Samples, Maintenance Data.
- . Installer Qualifications: Qualified installer who employs workers for this Project who are competent in techniques 2. Mockups: Build mockups for floor tile including resilient base and accessories. Minimum 100 sq. ft. for each type, color, and pattern in locations directed by Architect. Furnish extra materials that match products installed, packaged with protective covering for storage and identified with labels describing contents. Furnish 1 box for every 50 boxes or fraction thereof, of each type, color, and
- pattern of floor tile installed. PRODUCTS Floor Tile: Subject to compliance with requirements, provide floor tile as scheduled matching Architect's sample. B. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by manufacturer for applications indicated. Adhesives: Water-resistant type recommended by manufacturer to suit floor tile and substrate conditions. Floor Polish: Protective liquid floor polish products as recommended by flooring manufacturer.
- FXFCUTION Maintain temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive floor tile during 48 hours before, during and 48 hours after installation: B. After postinstallation period, maintain temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F. Close spaces to traffic during floor covering installation and for 48 hours after floor covering installation.
- Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work. 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.
- Proceed with installation only after unsatisfactory conditions have been corrected. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products. 1. Concrete Substrates: Prepare according to ASTM F 710.

Install resilient products after other finishing operations, including painting, have been completed.

- a. Verify that substrates are dry and free of curing compounds, sealers, and hardeners. b. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents. c. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing. d. Moisture Testing: Perform tests recommended by manufacturer and as follows. Proceed with installation only after substrates pass testing. 1) Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with installation only after substrates have
- maximum moisture-vapor-emission rate as recommended by the tile manufacturer but not more than 3 lb of water/1000 sq. ft. in 24 hours or. 2) Perform relative humidity test using in situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 75% relative humidity level measurement. 2. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate. Level to 1/8 inch in 10 feet tolerance.
- a. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation. 4. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation. H. Comply with manufacturer's written instructions for installing floor tile.

3. Do not install floor tiles until they are same temperature as space where they are to be installed.

packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.

- I. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths less than one-half tile at 1. Lay tiles square with room axis, unless otherwise indicated. Lay tiles in patterns where indicated. J. Match floor tiles for color and pattern by selecting tiles from cartons in same sequence as manufactured and
- 1. Lay tiles with grain running in one direction, unless otherwise indicated. Install with grain direction alternating in adjacent tiles (basket-weave pattern) where required. K. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames. L. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door
- M. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent, non-staining marking device. N. Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in finished floor areas. Maintain overall continuity of color and pattern between pieces of tile installed on covers
- and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover perimeters. Adhere floor tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections. P. Comply with manufacturer's written instructions for cleaning and protection of floor tile. Perform the following

1. Remove adhesive and other blemishes from exposed surfaces. Sweep and vacuum surfaces thoroughly.

Damp-mop surfaces to remove marks and soil. 2. Protect floor tile products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period. Q. Remove soil, visible adhesive, and surface blemishes from floor tile surfaces before applying liquid floor polish.

### 09 68 13 - TILE CARPETING

Apply two coat(s).

before installing these items.

immediately after completing floor tile installation

- Provide Modular carpet tile, including floor preparation and remodeling of existing carpet tile. Submittals: Product Data, Shop Drawings (Layout Diagram), Samples, Maintenance Data, Warranty.
- Quality Assurance 1. Experienced installer certified by Floor Covering Installation Board or who can demonstrate compliance with its certification program requirements. 2. Carpet Critical Radiant Flux Classification: Class I, not less than 0.45 w/sq. cm per ASTM E 648.
- D. Comply with CRI 104, Section 5, "Storage and Handling." . Comply with CRI 104, Section 7.2, "Site Conditions; Temperature and Humidity" and Section 7.12, "Ventilation."
- 2. Environmental Limitations: Do not install carpet tiles until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at levels indicated for Project when occupied for its intended use. 3. Do not install carpet tiles over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive and concrete slabs have pH range recommended by carpet tile manufacturer. 4. Where demountable partitions or other items are indicated for installation on top of carpet tiles, install carpet tiles
- Special Warranty for Carpet Tiles: Manufacturer's standard form in which manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period. 1. Warranty does not include deterioration or failure of carpet tile due to unusual traffic, failure of substrate, vandalism, 2. Failures include, but are not limited to, more than 10 percent loss of face fiber, edge raveling, snags, runs, loss of
- 3. Warranty Period: 10 years from date of Substantial Completion. protective covering for storage and identified with labels describing contents. Full-size units equal to 5 percent of amount installed for each type indicated, but not less than 10 sq. yd. Carpet Tile: Subject to compliance with requirements, provide products as scheduled matching Architect's samples,

with backing(s) as recommended by carpet tile manufacturer for intended use. Size as indicated.

tuft bind strength, dimensional stability, excess static discharge, and delamination.

- Manufacturer's standard applied soil-resistance treatment. Manufacturer's standard antimicrobial treament at Installation Accessories . Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet tile manufacturer 2. Adhesives: Water-resistant, mildew-resistant, non-staining, pressure-sensitive type to suit products and subfloor
- conditions indicated, that complies with flammability requirements for installed carpet tile and is recommended by carpet tile manufacturer for releasable installation. EXECUTION Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet tile performance. Examine carpet tile for type, color, pattern, and potential defects 1. Concrete Subfloors: Verify that concrete slabs comply with ASTM F710 and the following:
- with adhesive bond. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by carpet tile manufacturer. b. Subfloor finishes comply with requirements for slabs receiving carpet tile. c. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits. 2. For painted subfloors, perform bond test recommended in writing by adhesive manufacturer. 3. Proceed with installation only after unsatisfactory conditions have been corrected. Comply with CRI 104, Section 6.2, "Site Conditions; Floor Preparation," and with carpet tile manufacturer's written

a. Slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere

- installation instructions for preparing substrates to receive carpet tile. 1. Use trowelable leveling and patching compounds, per manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch wide or wider and protrusions more than 1/32 inch, unless more stringent requirements are required by manufacturer's written instructions.
- soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by carpet tile manufacturer. 3. Broom and vacuum clean substrates to be covered immediately before installing carpet tile. Comply with CRI 104, Section 14, "Carpet Modules," and carpet tile manufacturer's written instructions. Maintain dve lot integrity. Do not mix dve lots in same area.
- Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet tile manufacturer. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves,
- Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, nonstaining marking device. . Install pattern parallel to walls and borders. Cleaning: Immediately after installing carpet tile: Remove excess adhesive, seam sealer, and other surface
- blemishes using cleaner recommended by carpet tile manufacturer. Remove yarns that protrude from carpet tile surface. Vacuum carpet tile using commercial machine with face-beater element. Protect installed carpet tile to comply with CRI 104, Section 16, "Protection of Indoor Installations." . Protect carpet tile against damage from construction operations and placement of equipment and fixtures during

### remainder of construction period. Use protection methods recommended in writing by carpet tile manufacturer. 09 68 16 - SHEET CARPETING

and similar openings.

- Provide Carpet including floor preparation and remodeling of existing carpet affected by work. Submittals: Product Data, Shop Drawings (Seaming Diagram), Samples, Maintenance Data, Warranty.
- Installer Qualifications: Experienced installer certified by Floor Covering Installation Board or who can demonstrate compliance with its certification program requirements. Carpet Critical Radiant Flux Classification: Class I, not less than 0.45 w/sq. cm per ASTM E 648. Comply with CRI 104, Section 5, "Storage and Handling." Project Condition: Comply with CRI 104, Section 7.2, "Site Conditions; Temperature and Humidity" and Section 7.12, "Ventilation."
- Environmental Limitations: Do not install carpet[ and carpet cushion] until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at levels indicated for Project when occupied for its intended use. onot install carpet over concrete slabs until slabs have cured, are sufficiently dry to bond with adhesive, and have pH range recommended by carpet manufacturer. stall carpet before installing items are indicated for installation on top of carpet including demountable partitions Special Warranty-Carpet: Manufacturer's standard form in which manufacturer agrees to repair or replace
- components of carpet installation that fail in materials or workmanship within specified warranty period. Warranty does not include deterioration or failure of carpet due to unusual traffic, failure of substrate, vandalism, or Failures include, but are not limited to, more than 10 percent loss of face fiber, edge raveling, snags, runs, loss of tuft bind strength, excess static discharge, Insert failure characteristic and delamination.
- Special Warranty-Carpet Cushion: Manufacturer's standard form in which manufacturer agrees to repair or replace components of carpet cushion installation that fail in materials or workmanship within specified warranty period. Warranty includes consequent removal and replacement of carpet and accessories. Warranty does not include deterioration or failure of carpet cushion due to unusual traffic, failure of substrate, vandalism, or abuse. Failure includes, but is not limited to, permanent indentation or compression.

Warranty Period: 10 years from date of Substantial Completion.

manufacturer] [carpet and carpet cushion manufacturers].

EXECUTION

Warranty Period: 10 years from date of Substantial Completion. protective covering for storage and identified with labels describing contents. Extra Material of Carpet: Full-width rolls equal to 5 percent of amount installed for each type indicated, but not less than 10 sq. yd Subject to compliance with requirements, provide products as scheduled, match Architect's samples. At existing

carpet work, match existing carpet to remain. Backings and back coating as recommended by carpet

- manufacturer for intended use. with manufacturer standard soil-resistance treatment. Carpet Cushion: [Cushion: Rubber or polyurethane carpet cushion: Thickness not exceeding 3/8 inch.] Service: [Moderate] [Heavy] [Extra heavy] traffic. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet[ cushion] manufacturer. Adhesives: Water-resistant, mildew-resistant, nonstaining type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet and is recommended or provided by [carpet
- Direct Glue-Down: Releasable type; CRI 104, Section 8. Double Glue-Down: Carpet to cushion, permanent type; cushion to substrate, releasable type; CRI 104, Section 9. Attached Cushion: Carpet to cushion, manufacturers standard, shop applied; Cushion to substrate, releasable type: CRI 104, Section 10. Tackless Carpet Stripping: Water-resistant plywood, in strips as required to match cushion thickness and that comply with CRI 104, Section 12.2. Seam Adhesive: Hot-melt adhesive tape or similar product recommended by carpet manufacturer for sealing and

taping seams and butting cut edges at backing to form secure seams and to prevent pile loss at seams.

Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet performance. Examine carpet for type, color, pattern, and potential defects. Concrete Subfloors: Verify that concrete slabs comply with ASTM F710 and the following:

- Slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere with adhesive bond. Determine adhesion and dryness characteristics by performing bond and moisture tests
- recommended by carpet manufacturer. Subfloor finishes comply with requirements for slabs receiving carpet. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.
- Proceed with installation only after unsatisfactory conditions have been corrected. Comply with CRI 104, Section 7.3, "Site Conditions; Floor Preparation," and with carpet manufacturer's written installation instructions for preparing substrates.
- Use trowelable leveling and patching compounds per manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch wide or wider, and protrusions more than 1/32 inch, unless more stringent requirements are required by manufacturer's written instructions
- Remove coatings, including curing compounds, and other substances incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by carpet[ cushion] manufacturer.
- Broom and vacuum clean substrates to be covered immediately before installing carpet. Comply with CRI 104 and [carpet manufacturer's] [carpet and carpet cushion manufacturers'] written installation instructions for the following installation types
- Direct-Glue-Down: CRI 104, Section 9. Double-Glue-Down: CRI 104, Section 10.
- Carpet with Attached-Cushion: CRI 104, Section 11. Stretch-in: CRI 104, Section 12. Comply with carpet manufacturer's written recommendations and Shop Drawings for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile. At doorways, center seams under door in closed position. [Bevel adjoining border edges at seams with hand shears] [Level adjoining border edges].
- Do not bridge building expansion joints with carpet. Cut and fit carpet to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, and thresholds. Bind or seal cut edges as recommended by carpet manufacturer. Extend carpet into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and
- Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, non-staining marking device. Install pattern parallel to walls and borders to comply with CRI 104, Section 15, "Patterned Carpet Installations" and with carpet manufacturer's written recommendations Comply with carpet cushion manufacturer's written recommendations. Install carpet cushion seams at 90-degree
- manufacturer. Remove yarns that protrude from carpet surface. Vacuum carpet using commercial machine with face-beater element Protect installed carpet to comply with CRI 104, Section 16, "Protection of Indoor Installations." Protect carpet against damage from construction operations and placement of equipment and fixtures during

Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet

remainder of construction period using protection methods recommended in writing by manufacturers of carpet,

### cushion and adhesive

# 09 91 23 - INTERIOR PAINTING

- GENERAL Provide: 1. Painting and surface preparation for interior unfinished surfaces.
- 2. Painting and surface preparation of exposed mechanical and electrical work. 3. Repainting and surface preparation at areas of remodeling
- Painting of entire surface where patch painting is required. Submittals: Product Data, Samples 8" x 8". Quality Assurance 1. Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems
- 2. Comply with VOC and environmental regulations. 3. First line commercial quality products for all coating systems. 4. Mockups: Apply benchmark samples of each paint system and each color and finish selected. a. Architect will select one surface to represent surfaces and conditions for application of each paint system. Wall and
- Ceiling Surfaces: At least 100 sq. ft. Other items or surfaces: Architect will designate items/areas b. Apply benchmark samples after permanent lighting and other environmental services have been activated. c. Final approval of color selections will be based on benchmark samples.
- Attic Stock: 1 unopened gallon of each type of paint used. PRODUCTS Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- Benjamin Moore & Co. 2. ICI Paint Stores, Inc. 3. Duron Paints/Duron, Inc. PPG Industries, Inc.
- 5. Sherwin-Williams Co. Material Compatibility:

nomenclature plates.

- 1. Materials for use within each paint system that are compatible with one another and substrates, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience. 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated. C. Colors: As indicated. Match Architect's samples. EXECUTION
- Examination 1. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work. 2. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows: a. Concrete or Masonry (Clay and CMU): 12 percent. b. Wood: 15 percent.

1. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is

- c. Gypsum Board or Plaster: 12 percent. 3. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers. 4. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry. Beginning coating application constitutes Contractor's acceptance of substrates and conditions. Preparation: Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting. a. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any. b. Do not paint prefinished items, concealed surfaces, finished metal surfaces, and operating parts. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or
- 2. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants. a. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems
- b. Test sample area for adhesion for each type of paint. c. Sand before painting until smooth and flat and sand between coats. 3. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written 4. Clay Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content of surfaces
- or alkalinity of mortar joints to be painted exceed that permitted in manufacturer's written instructions. 5. Concrete Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions. 6. Steel Substrates: Remove rust and loose mill scale. Clean using methods recommended in writing by paint 7. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil
- subsequently applied paints. 8. Aluminum Substrates: Remove surface oxidation. Wood Substrates: a. Scrape and clean knots, and apply coat of knot sealer before applying primer. b. Sand surfaces that will be exposed to view, and dust off.

c. Prime edges, ends, faces, undersides, and backsides of wood.

bleed through or defects.

INTERIOR PAINTING SCHEDULE

Paint entire surface where patch painting is required

d. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when 10. Gypsum Board Substrates: Do not begin paint application until finishing compound is dry and sanded smooth. 11. Plaster Substrates: Do not begin paint application until plaster is fully cured and dry. 12. Spray-Textured Ceiling Substrates: Do not begin paint application until surfaces are dry. 13. Cotton or Canvas Insulation Covering Substrates: Remove dust, dirt, and other foreign material that might impair bond of paints to substrates

stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of

- Apply paints per manufacturer's written instructions to achieve manufacturer's recommended dry film thicknesses. Use applicators and techniques suited for paint and substrate indicated. 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only. 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces
- be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs.

sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks. Recoat areas which show

D. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to

H. Painting Mechanical and Electrical Work: Paint items exposed in equipment rooms and occupied spaces including, but not limited to the following: . Mechanical Work: Uninsulated metal and plastic piping, Pipe hangers and supports, Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets, Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material, and Mechanical equipment

Protect work of other trades against damage from paint application. Correct damage to work of other trades by

cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

that is indicated to have a factory-primed finish for field painting. 2. Electrical Work:Panelboards exposed to view, and electrical equipment that is indicated to have a factory-primed finish for field painting. Clean spattered surfaces by washing, scraping, or other methods. Do not scratch or damage adjacent finished

Touch up and restore damaged or defaced painted surfaces at completion of construction.

Concrete Substrates, Nontraffic Surfaces: 1. Walls: LSG, Semi Gloss -- 1 coat latex primer, 2 coats latex finish. 2. Walls: OSG, Semi Gloss -- 1 coat interior alkyd enamel undercoat, 2 coats alkyd enamel. Concrete Substrates. Traffic Surfaces: Floors: LG, Low Gloss -- 3 coats interior/exterior latex floor and porch paint (low gloss).

4. Floors: Clear Sealer -- 2 coats interior/exterior clear concrete floor sealer (solvent based).

. Walls: LSG, Semi Gloss -- Latex block filler, 1 coat latex primer, 2 coats latex finish.

primer/sealer matching topcoat, 2 coats interior latex. matching topcoat.

2. Floors: G, Gloss --- 3 coats exterior/interior alkyd floor enamel (gloss).

3. Floors: Concrete Stain -- 2 coats interior concrete floor stain.

- 5. Floors: Clear Sealer -- 2 coats interior/exterior clear concrete floor sealer (water based). Clav-Masonry Substrates: Walls: LSG, Semi Gloss -- 1 coat latex primer, 2 coats latex finish. 2. Walls: OSG, Semi Gloss -- 1 coat interior alkyd enamel undercoat, 2 coats alkyd enamel. CMU Substrates
- Ferrous Metals: OSG, Semi Gloss -- 1 coat rust inhibiting primer, 2 coats alkyd enamel. Gynsum Wallboard Substrates: 1. Walls: LES, Eggshell -- 1 coat latex primer, 2 coats latex finish. 2. Ceilings: FL, Flat -- 1 coat latex primer, 2 coats latex finish. 3. Walls and Ceilings in Bathrooms, Kitchens and Wet Areas: SG, Semi Gloss -- 1 coat latex primer, 2 coats latex

. Walls: OSG, Semi Gloss -- Latex block filler, 1 coat interior alkyd enamel undercoat, 2 coats alkyd enamel.

4. Walls to Receive Wall covering: 1 coat latex primer. Plaster Substrates: Walls: LES, Eggshell -- 1 coat latex primer, 2 coats latex finish. . Walls: LSG, Semi Gloss -- 1 coat latex primer, 2 coats latex finish. Wood for Painted Finish: OSG, Semi Gloss -- 1 coat interior alkyd enamel undercoat, 2 coats alkyd enamel.

Cotton or Canvas Insulation-Covering Substrates: Including pipe and duct coverings, FL, Flat: 1 coat interior latex

# 10 28 00 - TOILET ACCESSORIES

Related sections include the following:

### PART 1 - GENERAL

- 1.1 SUMMARY
- A. This Section includes the following: Toilet accessories.
- . Product Data: Include construction details, material descriptions and thicknesses, dimensions, profiles, fastening and mounting

1. Division 06 Section "Miscellaneous Carpentry" for in-wall blocking for wall mounted equipment and accessories.

- methods, specified options, and finishes for each type of accessory specified. Setting Drawings: For cutouts required in other work; include templates, substrate preparation instructions, and directions for preparing cutouts and installing anchoring devices. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required. Use designations
- indicated in the Toilet and Bath Accessory Schedule and room designations indicated on Drawings in product schedule.
- . Maintenance Data: For accessories to include in maintenance manuals specified in Division 01. Provide lists of replacement parts and service recommendations.
- QUALITY ASSURANCE A. Source Limitations: Provide products of same manufacturer for each type of accessory unit and for units exposed to view in same areas, unless otherwise approved by Architect.
- COORDINATION Coordinate accessory locations with other work to prevent interference with clearances required for access by disabled persons,
- proper installation, adjustment, operation, cleaning, and servicing of accessories. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.
- . General Warranty: Special warranty specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under

Manufacturer's Mirror Warranty: Written warranty, executed by mirror manufacturer agreeing to replace mirrors that develop visible

Products: Subject to compliance with requirements, provide one of the products indicated for each designation in the Toilet and Bath

### silver spoilage defects within minimum warranty period indicated. 1. Minimum Warranty Period: 15 years from date of Substantial Completion.

- PART 2 PRODUCTS 2.1 MANUFACTURERS
- A. Manufacturers: Subject to compliance with requirements, provide accessories by one of the following: Toilet Accessories: a. American Specialties, Inc.

Accessory Schedule at the end of Part 3.

finished edges; ASTM B 30, castings.

requirements of the Contract Documents.

- b. Bobrick. c. Bradley. d. GAMCO
- A. Stainless Steel: ASTM A 666, Type 304, with No. 4 finish (satin), in 0.0312-inch (0.8-mm) minimum nominal thickness, unless Brass: ASTM B 19, leaded and unleaded flat products; ASTM B 16(ASTM B 16M), rods, shapes, forgings, and flat products with
- Sheet Steel: ASTM A 366/A 366M, cold rolled, commercial quality, 0.0359-inch (0.9-mm) minimum nominal thickness; surface preparation and metal pretreatment as required for applied finish. D. Galvanized Steel Sheet: ASTM A 653/A 653M, G60 (Z180). E. Chromium Plating: ASTM B 456, Service Condition Number SC 2 (moderate service), nickel plus chromium electrodeposited on base

H. Galvanized Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.

waterproof label or stamped nameplate indicating manufacturer's name and product model number.

- Baked-Enamel Finish: Factory-applied, gloss-white, baked-acrylic-enamel coating. Mirror Glass: ASTM C 1036, Type I, Class 1, Quality q2, nominal 6.0 mm thick, with silvering, electroplated copper coating, and protective organic coating complying with FS DD-M-411.
- Fasteners: Screws, bolts, and other devices of same material as accessory unit, tamper and theft resistant when exposed, and of galvanized steel when concealed. 2.3 FABRICATION A. General: One, maximum 1-1/2-inch-(38-mm-) diameter, unobtrusive stamped manufacturer logo, as approved by Architect, is permitted on exposed face of accessories. On interior surface not exposed to view or back surface of each accessory, provide printed,
- Recessed Toilet Accessories: Unless otherwise indicated, fabricate units of all-welded construction, without mitered corners. Hang doors and access panels with full-length, stainless-steel hinge. Provide anchorage that is fully concealed when unit is closed. Framed Glass-Mirror Units: Fabricate frames for glass-mirror units to accommodate glass edge protection material. Provide mirror backing and support system that permits rigid, tamper-resistant glass installation and prevents moisture accumulation. 1. Provide galvanized steel backing sheet, not less than 0.034 inch (0.85 mm) and full mirror size, with non-absorptive filler material.

8. Surface-Mounted Toilet Accessories: Unless otherwise indicated, fabricate units with tight seams and joints, and exposed edges

rolled. Hang doors and access panels with continuous stainless-steel hinge. Provide concealed anchorage where possible.

Mirror-Unit Hangers: Provide mirror-unit mounting system that permits rigid, tamper- and theft-resistant installation, as follows:

- 1. One-piece, galvanized steel, wall-hanger device with spring-action locking mechanism to hold mirror unit in position with no exposed screws or bolts. 2. Heavy-duty wall brackets of galvanized steel, equipped with concealed locking devices requiring a special tool to remove. Keys: Provide universal keys for internal access to accessories for servicing and re-supplying. Provide minimum of six keys to
- . Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
- Secure mirrors to walls in concealed, tamper-resistant manner with special hangers, toggle bolts, or screws. Set units level, plumb, and square at locations indicated, according to manufacturer's written instructions for substrate indicated. Install grab bars to withstand a downward load of at least 250 lbf (1112 N), when tested according to method in ASTM F 446.
  - A. Adjust accessories for unencumbered, smooth operation and verify that mechanisms function properly. Replace damaged or defective

C. Clean and polish exposed surfaces according to manufacturer's written recommendations.

Remove temporary labels and protective coatings.

3.3 TOILET AND BATH ACCESSORY SCHEDULE

Corrugated cardboard is not an acceptable filler material.

Owner's representative

3.2 ADJUSTING AND CLEANING

A. As indicated on Drawings.

PART 3 - EXECUTION

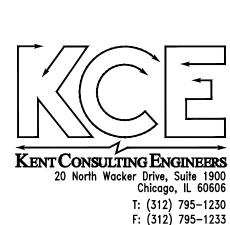
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www.perkinswill.com

540 WEST MADISON

CHICAGO, IL 60661

CONTACT: COURTNEY HAMM





540 W. MADISON

#184000338-0001

ISSUED FOR BID/PERMIT ISSUED FOR ENGINEERING
ISSUE **Job Number** 026332.030 Checked

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Approved



1 LEVEL 24- DEMOLITION PLAN

1/8" = 1'-0"

# DEMOLITION PLAN KEYNOTES

- REMOVE ALL INDICATED DOORS/FRAMES AND SIDELIGHTS; SALVAGE FOR RELOCATION
- REMOVE ALL EXISTING WALL AND FLOOR FINISHES THROUGH; PREPARE WALLS AND FLOOR FOR NEW FINISHES; REFER TO SHEET A13-024
- REMOVE EXISTING LVT IN THIS LOCATION
- 4 EXISTING MILLWORK AND FLOOR FINISHES, ELECTRICAL, DATA, PLUMBING TO REMAIN
- 5 REMOVE EXISTING CHIEF BOX; CLOSE WALL
- 6 REMOVE EXISTING GLASS FILM FROM ALL GLASS FRONTS

DENOTES AREA "NOT IN CONTRACT"

EXISTING CONSTRUCTION TO REMAIN

EXISTING CONSTRUCTION TO BE DEMOLISHED

EXISTING DOOR AND FRAME TO REMAIN

EXISTING FIXTURE TO REMAIN

KEYNOTE

EXISTING FIXTURE TO BE DEMOLISHED

EXISTING FIXTURE TO BE RELOCATED

EXISTING DOOR AND FRAME TO BE DEMOLISHED

# Perkins&Will

The Wrigley Building 410 North Michigan Ave. Suite 1600 Chicago, IL 60611 t 312.755.0770 f 312.755.0775





PERKINS+WILL INC #184000338-0001

540 W. MADISON **SUITE 2450 INTERIOR ALTERATION** CHICAGO, IL 60661

I. THE CONTRACTOR SHALL FIELD SURVEY THE SITE OF PROPOSED WORK TO DETERMINE THE EXTENT AND NATURE OF THE DEMOLITION WORK. REFER TO ALL CONTRACT DOCUMENTS FOR ADDITIONAL REQUIREMENTS AND SCOPE OF DEMOLITION WORK.

6. THE CONTRACTOR SHALL PREPARE AN INVENTORY OF EXISTING ITEMS TO BE REUSED, RELOCATED, AND/OR RETURNED TO THE LANDLORD OR OWNER. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND/OR LANDLORD TO DETERMINE ITEMS TO BE INVENTORIED, AND THE FORMAT OF THE INVENTORY PRIOR TO THE COMMENCEMENT OF WORK. CAREFULLY REMOVE AND NEATLY STORE AND PROTECT FROM DAMAGE ALL ITEMS IN THE CONTRACT DOCUMENTS TO BE REUSED AND OR RELOCATED AND LOCATION OF ON-SITE AND/OR OFF-SITE STORAGE.

7. ALL MATERIALS WHICH ARE NOT REQUIRED TO BE REUSED AND RELOCATED SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR IS TO BE RESPONSIBLE FOR ALL HAULING AND DISPOSAL OF DEBRIS IN ACCORDANCE WITH STATE LAWS AND

LOCAL ORDINANCES. 8. REMOVE ALL CONSTRUCTION INDICATED IN THE DOCUMENTS AS EXISTING TO BE REMOVED, INCLUDING, BUT NOT LIMITED TO, FLOOR AND CEILING, HANGERS, STRAPS AND MISCELLANEOUS APPURTENANCES RELATED TO THE ITEMS BEING REMOVED.

9. WHERE PARTITIONS ARE BEING REMOVED, ALL ELECTRICAL OUTLETS AND SWITCHES SHALL BE DISCONNECTED AT SUPPLY

JUNCTION BOXES, UNO.

11. WHERE PLUMBING, WATER LINES, WASTES, AND VENTS ARE REMOVED, THEY SHALL BE DISCONNECTED AND CAPPED AT THE TAP CONNECTION; ADEQUATELY RECESS TO ACCOMMODATE PATCHING AND FINISH OF THE FINISH SURFACE.

12. WHERE EXISTING PARTITIONS ARE TO REMAIN, REMOVE EXISTING FINISH MATERIALS AND SURFACE MOUNTED ELEMENTS WHERE

B. WHERE TACKLESS CARPET AND/OR PAD ARE BEING REMOVED, REMOVE MECHANICAL ATTACHMENTS TO THE FLOOR.

ADHESIVE TO LEAVE THE FLOOR WITH A SMOOTH, FINISH.

VOLTAGE SYSTEM.

17. REPAIR DEMOLITION PERFORMED IN EXCESS OF THAT REQUIRED AT NO COST TO OWNER OR ARCHITECT. IMMEDIATELY REPAIR ANY DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION OPERATIONS.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL, STORAGE, PROTECTION, AND REINSTALLATION OF EXISTING WINDOW TREATMENTS AT ALL WINDOWS SO AS TO RETURN THE WINDOW TREATMENTS TO THEIR ORIGINAL CONDITION AT THE COMMENCEMENT TREATMENTS AT THE COMMENCEMENT OF THE PROJECT. ANY DAMAGED WINDOW TREATMENTS THAT ARE NOT DOCUMENTED AS SUCH BY THE CONTRACTOR AT THE COMMENCEMENT OF THE PROJECT SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE TENANT OR LANDLORD.

19. REMOVE ALL FLOOR AND WALL FINISHES (INCLUDING WALL BASE) THROUGHOUT SUITE, PREPARE FOR NEW.

20. REMOVE ALL CEILING AND LIGHT FIXTURES THROUGHOUT SPACE 21. ALL MARBLE AND WOOD BASE TO REMAIN. ALL BUILDING CORE WOOD TRIM AT DOORS TO REMAIN, UNO.

22. REMOVE ANY EXISTING FLOOR BOXES, PATCH AND FILL FLOOR WITH CONCRETE TO ACHIEVE REQUIRED FLOOR SEPARATION. 23. PROVIDE DEMOLITION AS REQUIRED FOR MECHANICAL, ELECTRICAL AND PLUMBING WORK, SEE MEP DRAWINGS.

24. REMOVE ANY UNUSED WALL/COLUMN OUTLETS AND INFILL. 25. DAS SYSTEMS NEEDS TO STAY AND BE RE-HUNG.

26. PROTECT ALL EXISTING WINDOW BLINDS.

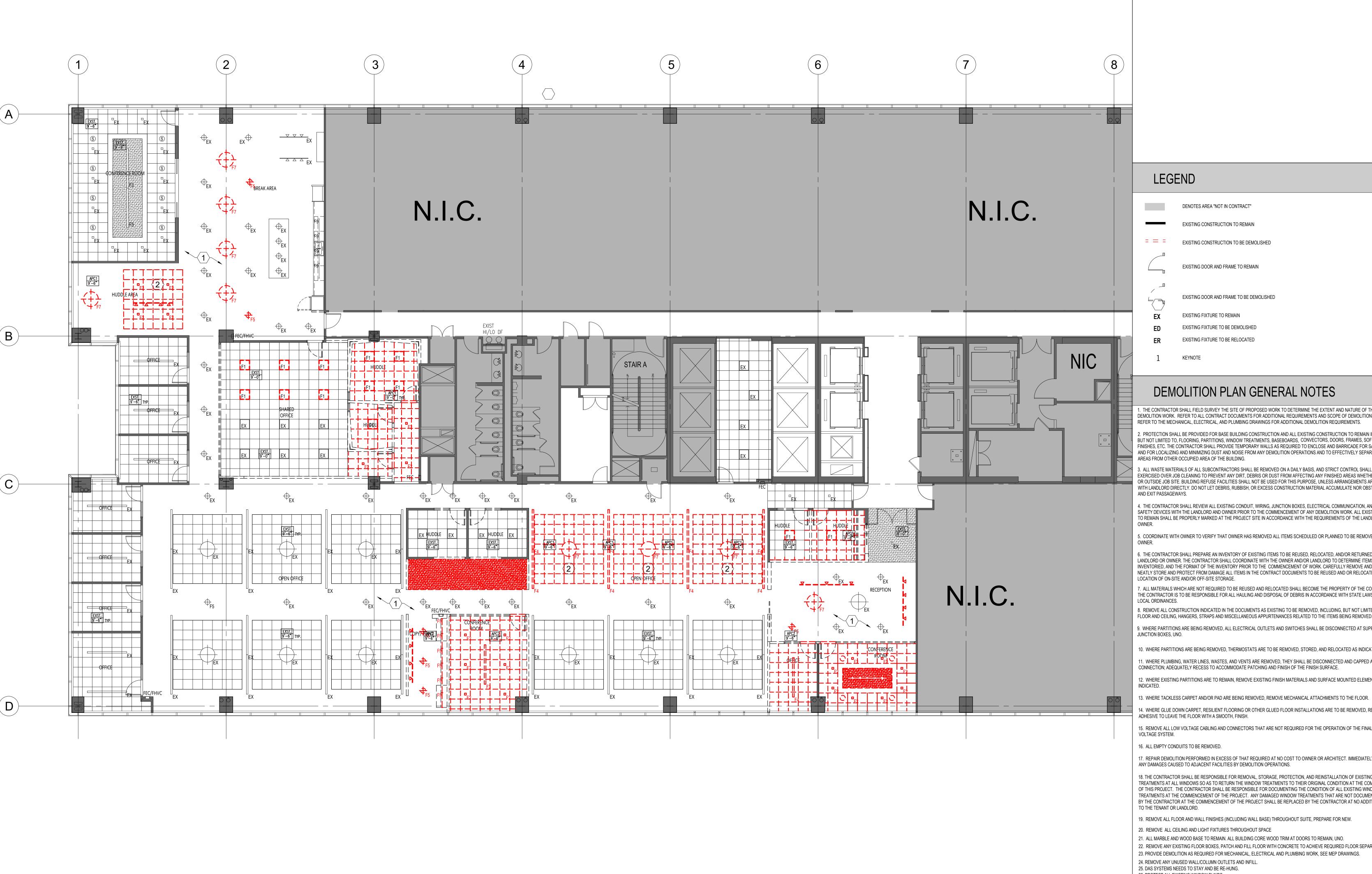
2 ISSUED FOR BID/PERMIT
1 ISSUED FOR ENGINEERING
# ISSUE Job Number 026332.030 Drawn Checked Approved TITLE

**ISSUE CHART** 

**DEMOLITION PLAN** 

SHEET NUMBER

A04-24



LEVEL 24- DEMOLITION REFLECTIVE CEILING PLAN

1/8" = 1'-0"

# DEMOLITION PLAN KEYNOTES

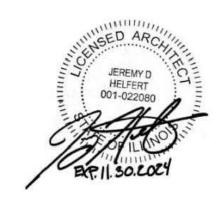
- 1 REMOVE ALL DESIGNATED LIGHT FIXTURES AND SALVAGED FOR REINSTALLATION
- 2 REMOVE DESIGNATED ACOUSTICAL CEILING CLOUDS; SALVAGED FOR POSSIBLE REINSTALLATION

# Perkins&Will

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CHICAGO, IL 60661 (312) 374.2801 CONTACT: COURTNEY HAMM



PERKINS+WILL INC #184000338-0001

**PROJECT** 540 W. MADISON **SUITE 2450 INTERIOR ALTERATION** CHICAGO, IL 60661

DEMOLITION PLAN GENERAL NOTES

DENOTES AREA "NOT IN CONTRACT"

EXISTING CONSTRUCTION TO REMAIN

EXISTING CONSTRUCTION TO BE DEMOLISHED

EXISTING DOOR AND FRAME TO REMAIN

EXISTING FIXTURE TO REMAIN

KEYNOTE

EXISTING FIXTURE TO BE DEMOLISHED

EXISTING FIXTURE TO BE RELOCATED

EXISTING DOOR AND FRAME TO BE DEMOLISHED

I. THE CONTRACTOR SHALL FIELD SURVEY THE SITE OF PROPOSED WORK TO DETERMINE THE EXTENT AND NATURE OF THE DEMOLITION WORK. REFER TO ALL CONTRACT DOCUMENTS FOR ADDITIONAL REQUIREMENTS AND SCOPE OF DEMOLITION WORK. REFER TO THE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS.

. PROTECTION SHALL BE PROVIDED FOR BASE BUILDING CONSTRUCTION AND ALL EXISTING CONSTRUCTION TO REMAIN INCLUDING, BUT NOT LIMITED TO, FLOORING, PARTITIONS, WINDOW TREATMENTS, BASEBOARDS, CONVECTORS, DOORS, FRAMES, SOFFITS, FINISHES, ETC. THE CONTRACTOR SHALL PROVIDE TEMPORARY WALLS AS REQUIRED TO ENCLOSE AND BARRICADE FOR SAFETY, AND FOR LOCALIZING AND MINIMIZING DUST AND NOISE FROM ANY DEMOLITION OPERATIONS AND TO EFFECTIVELY SEPARATE WORK AREAS FROM OTHER OCCUPIED AREA OF THE BUILDING.

3. ALL WASTE MATERIALS OF ALL SUBCONTRACTORS SHALL BE REMOVED ON A DAILY BASIS, AND STRICT CONTROL SHALL BE EXERCISED OVER JOB CLEANING TO PREVENT ANY DIRT, DEBRIS OR DUST FROM AFFECTING ANY FINISHED AREAS WHETHER WITHIN OR OUTSIDE JOB SITE. BUILDING REFUSE FACILITIES SHALL NOT BE USED FOR THIS PURPOSE, UNLESS ARRANGEMENTS ARE MADE WITH LANDLORD DIRECTLY. DO NOT LET DEBRIS, RUBBISH, OR EXCESS CONSTRUCTION MATERIAL ACCUMULATE NOR OBSTRUCT EXITS AND EXIT PASSAGEWAYS.

4. THE CONTRACTOR SHALL REVIEW ALL EXISTING CONDUIT, WIRING, JUNCTION BOXES, ELECTRICAL COMMUNICATION, AND LIFE SAFETY DEVICES WITH THE LANDLORD AND OWNER PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION WORK. ALL EXISTING ITEMS TO REMAIN SHALL BE PROPERLY MARKED AT THE PROJECT SITE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LANDLORD AND

5. COORDINATE WITH OWNER TO VERIFY THAT OWNER HAS REMOVED ALL ITEMS SCHEDULED OR PLANNED TO BE REMOVED BY

6. THE CONTRACTOR SHALL PREPARE AN INVENTORY OF EXISTING ITEMS TO BE REUSED, RELOCATED, AND/OR RETURNED TO THE LANDLORD OR OWNER. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND/OR LANDLORD TO DETERMINE ITEMS TO BE INVENTORIED, AND THE FORMAT OF THE INVENTORY PRIOR TO THE COMMENCEMENT OF WORK. CAREFULLY REMOVE AND NEATLY STORE AND PROTECT FROM DAMAGE ALL ITEMS IN THE CONTRACT DOCUMENTS TO BE REUSED AND OR RELOCATED AND LOCATION OF ON-SITE AND/OR OFF-SITE STORAGE.

7. ALL MATERIALS WHICH ARE NOT REQUIRED TO BE REUSED AND RELOCATED SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR IS TO BE RESPONSIBLE FOR ALL HAULING AND DISPOSAL OF DEBRIS IN ACCORDANCE WITH STATE LAWS AND LOCAL ORDINANCES.

8. REMOVE ALL CONSTRUCTION INDICATED IN THE DOCUMENTS AS EXISTING TO BE REMOVED, INCLUDING, BUT NOT LIMITED TO, FLOOR AND CEILING, HANGERS, STRAPS AND MISCELLANEOUS APPURTENANCES RELATED TO THE ITEMS BEING REMOVED. 9. WHERE PARTITIONS ARE BEING REMOVED, ALL ELECTRICAL OUTLETS AND SWITCHES SHALL BE DISCONNECTED AT SUPPLY

10. WHERE PARTITIONS ARE BEING REMOVED, THERMOSTATS ARE TO BE REMOVED, STORED, AND RELOCATED AS INDICATED. 11. WHERE PLUMBING, WATER LINES, WASTES, AND VENTS ARE REMOVED, THEY SHALL BE DISCONNECTED AND CAPPED AT THE TAP CONNECTION; ADEQUATELY RECESS TO ACCOMMODATE PATCHING AND FINISH OF THE FINISH SURFACE.

12. WHERE EXISTING PARTITIONS ARE TO REMAIN, REMOVE EXISTING FINISH MATERIALS AND SURFACE MOUNTED ELEMENTS WHERE

4. WHERE GLUE DOWN CARPET, RESILIENT FLOORING OR OTHER GLUED FLOOR INSTALLATIONS ARE TO BE REMOVED, REMOVE ALL ADHESIVE TO LEAVE THE FLOOR WITH A SMOOTH, FINISH. 15. REMOVE ALL LOW VOLTAGE CABLING AND CONNECTORS THAT ARE NOT REQUIRED FOR THE OPERATION OF THE FINAL LOW

16. ALL EMPTY CONDUITS TO BE REMOVED.

17. REPAIR DEMOLITION PERFORMED IN EXCESS OF THAT REQUIRED AT NO COST TO OWNER OR ARCHITECT. IMMEDIATELY REPAIR ANY DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION OPERATIONS.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL, STORAGE, PROTECTION, AND REINSTALLATION OF EXISTING WINDOW TREATMENTS AT ALL WINDOWS SO AS TO RETURN THE WINDOW TREATMENTS TO THEIR ORIGINAL CONDITION AT THE COMMENCEMENT OF THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING THE CONDITION OF ALL EXISTING WINDOW TREATMENTS AT THE COMMENCEMENT OF THE PROJECT. ANY DAMAGED WINDOW TREATMENTS THAT ARE NOT DOCUMENTED AS SUCH BY THE CONTRACTOR AT THE COMMENCEMENT OF THE PROJECT SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE TENANT OR LANDLORD.

19. REMOVE ALL FLOOR AND WALL FINISHES (INCLUDING WALL BASE) THROUGHOUT SUITE, PREPARE FOR NEW.

20. REMOVE ALL CEILING AND LIGHT FIXTURES THROUGHOUT SPACE

21. ALL MARBLE AND WOOD BASE TO REMAIN. ALL BUILDING CORE WOOD TRIM AT DOORS TO REMAIN, UNO. 22. REMOVE ANY EXISTING FLOOR BOXES, PATCH AND FILL FLOOR WITH CONCRETE TO ACHIEVE REQUIRED FLOOR SEPARATION. 23. PROVIDE DEMOLITION AS REQUIRED FOR MECHANICAL, ELECTRICAL AND PLUMBING WORK, SEE MEP DRAWINGS. 24. REMOVE ANY UNUSED WALL/COLUMN OUTLETS AND INFILL.

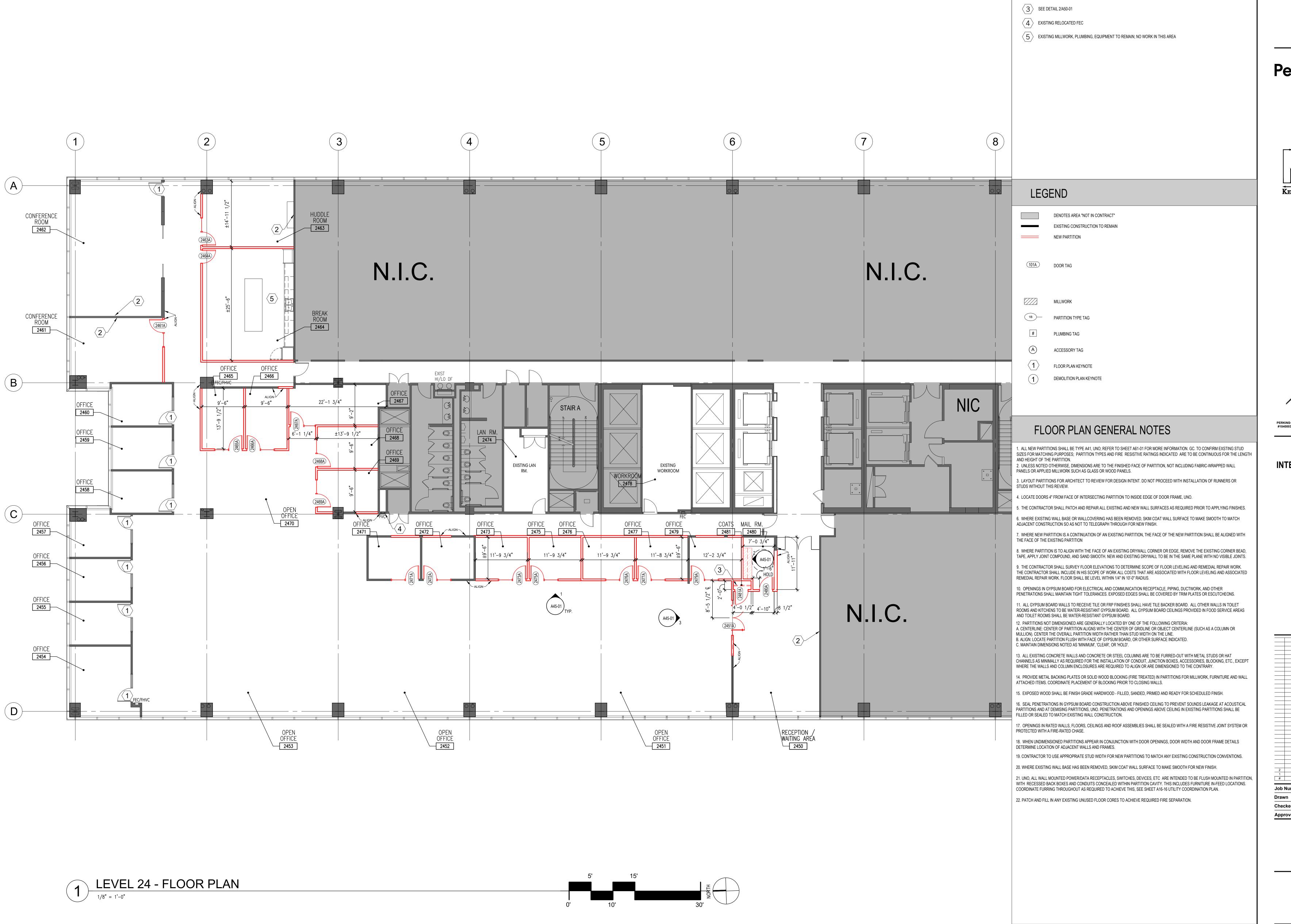
25. DAS SYSTEMS NEEDS TO STAY AND BE RE-HUNG. 26. PROTECT ALL EXISTING WINDOW BLINDS.

**ISSUE CHART** 2 ISSUED FOR BID/PERMIT 12.20.2023 1 ISSUED FOR ENGINEERING 11.29.2023 # ISSUE DATE Job Number 026332.030 Drawn Checked Approved TITLE

**DEMOLITION REFLECTIVE CEILING PLAN** 

SHEET NUMBER

A04.1-24



FLOOR PLAN KEYNOTES

2 PROVIDE AND INSTALL NON COMBUSTIBLE BLOCKING FOR TV MONITORS AS REQUIRED

 $\langle 1 \rangle$  disable all existing locks at these locations

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CBRE CHICAGO, IL 60661 (312) 374.2801 CONTACT: COURTNEY HAMM

PERKINS+WILL INC #184000338-0001

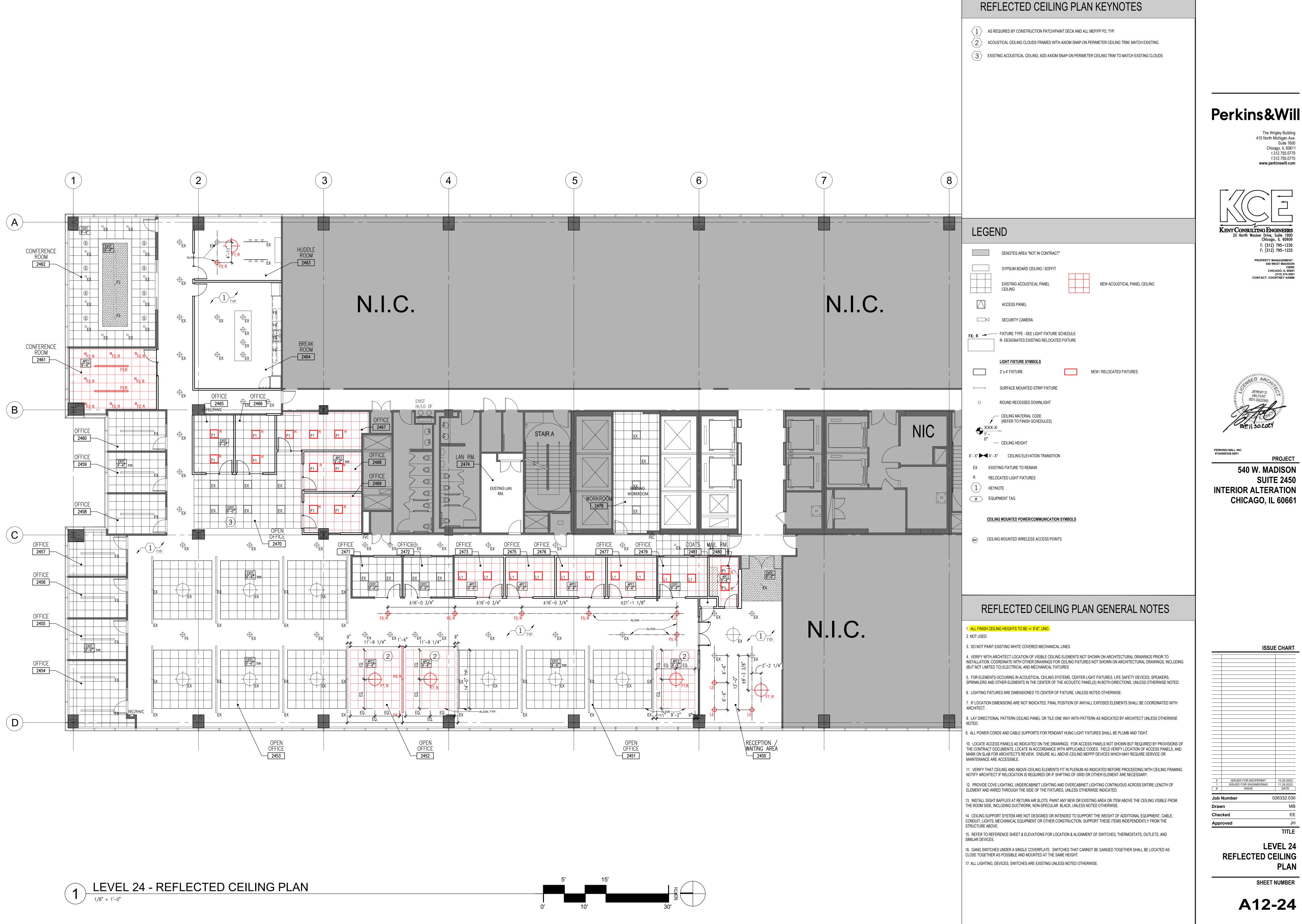
540 W. MADISON **SUITE 2450 INTERIOR ALTERATION** CHICAGO, IL 60661

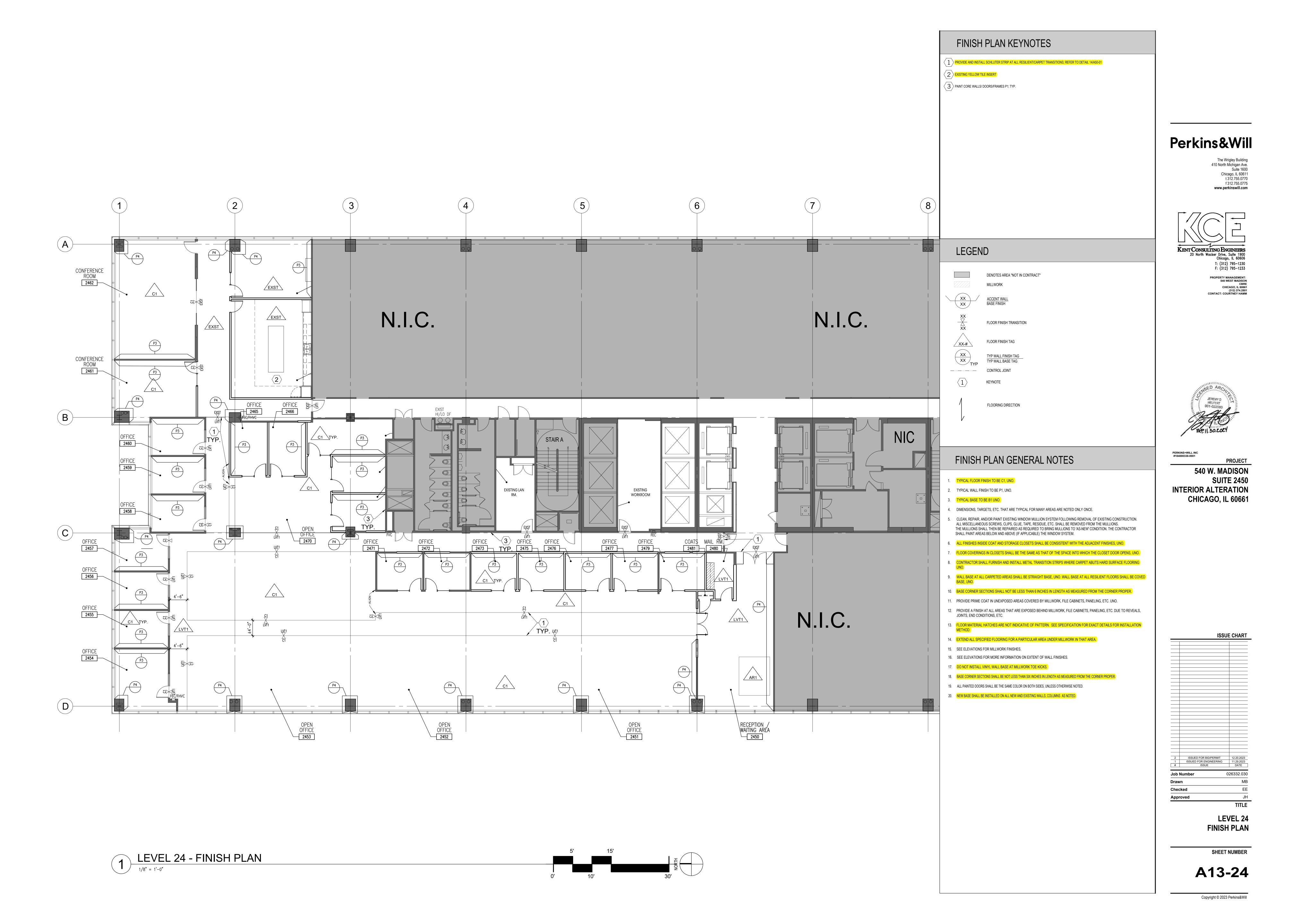
**ISSUE CHART** 2 ISSUED FOR BID/PERMIT
1 ISSUED FOR ENGINEERING
# ISSUE Job Number 026332.030 Checked Approved

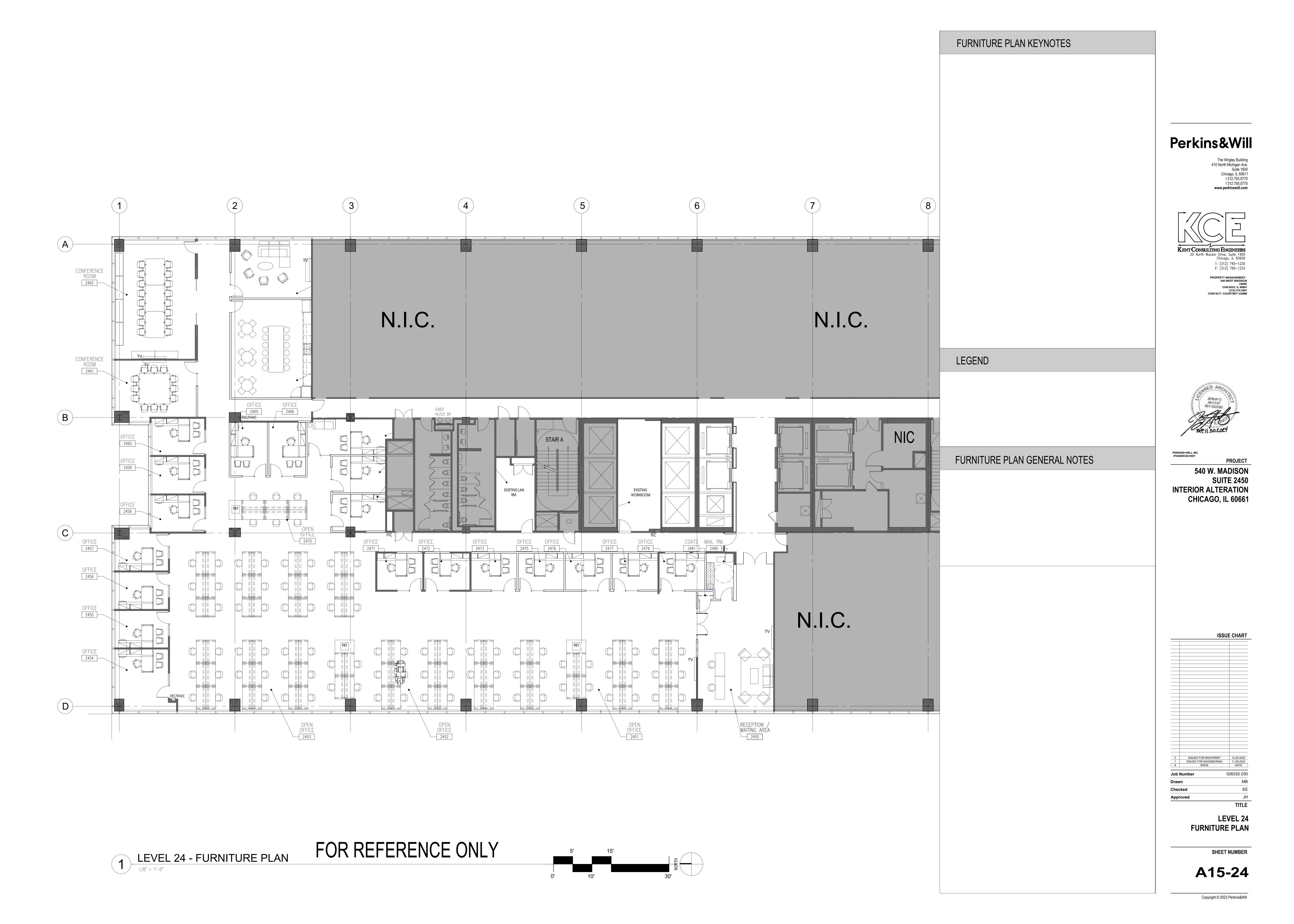
> LEVEL 24 **FLOOR PLAN**

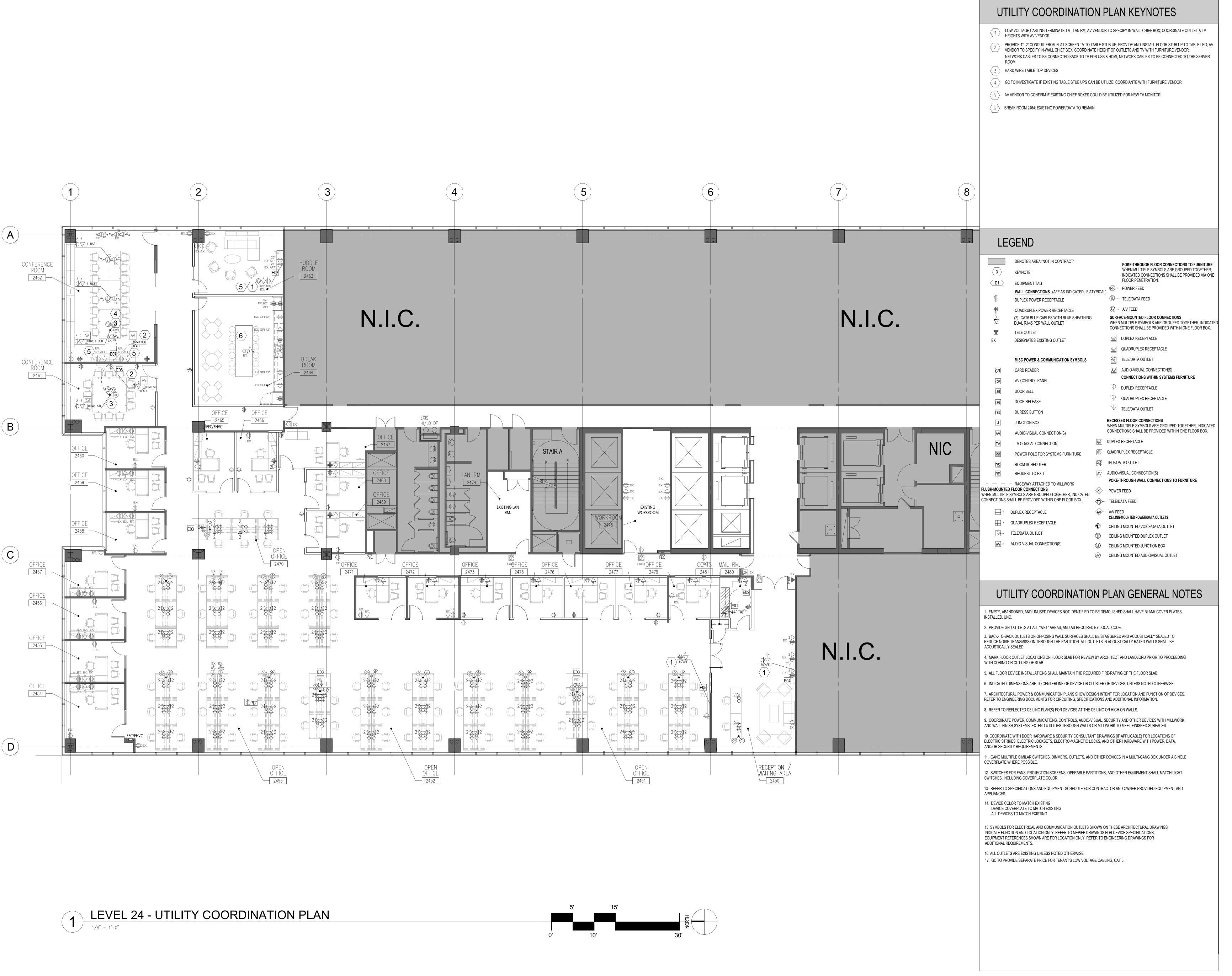
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A11-24





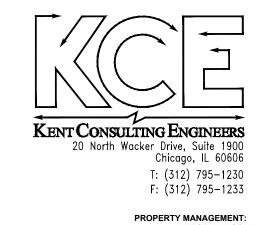




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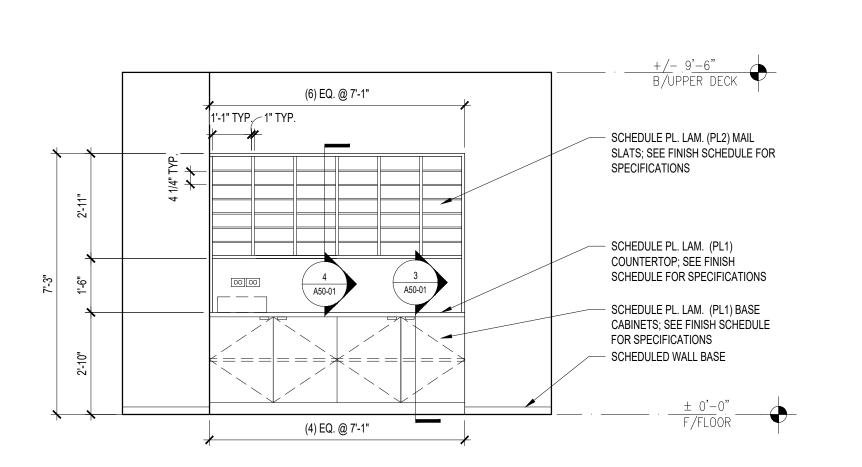
PERKINS+WILL INC #184000338-0001

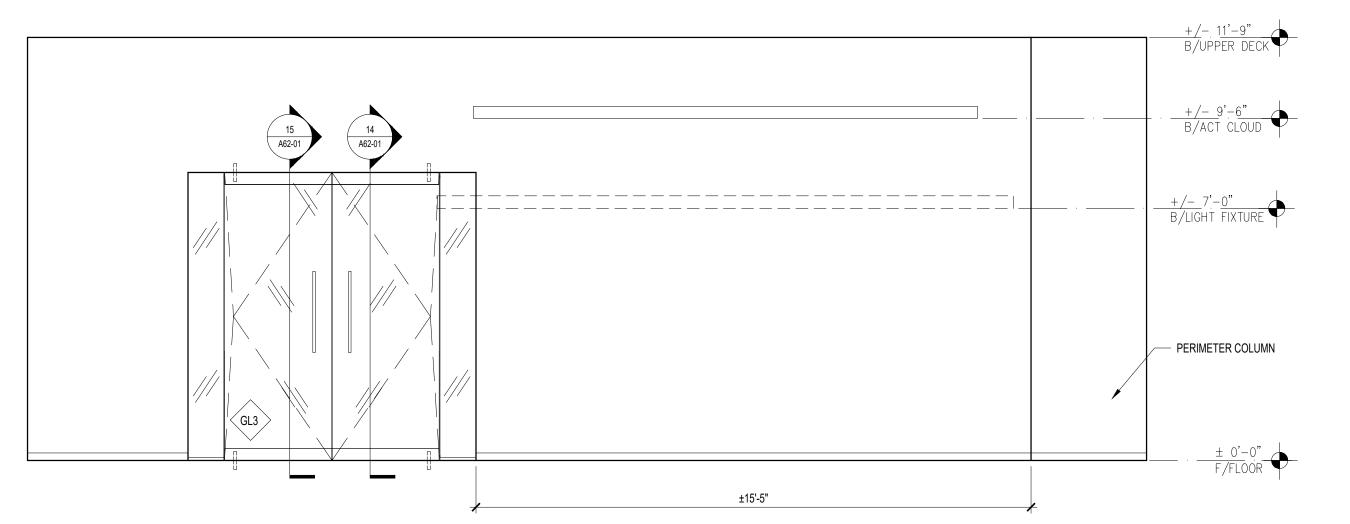
540 W. MADISON
SUITE 2450
INTERIOR ALTERATION
CHICAGO, IL 60661

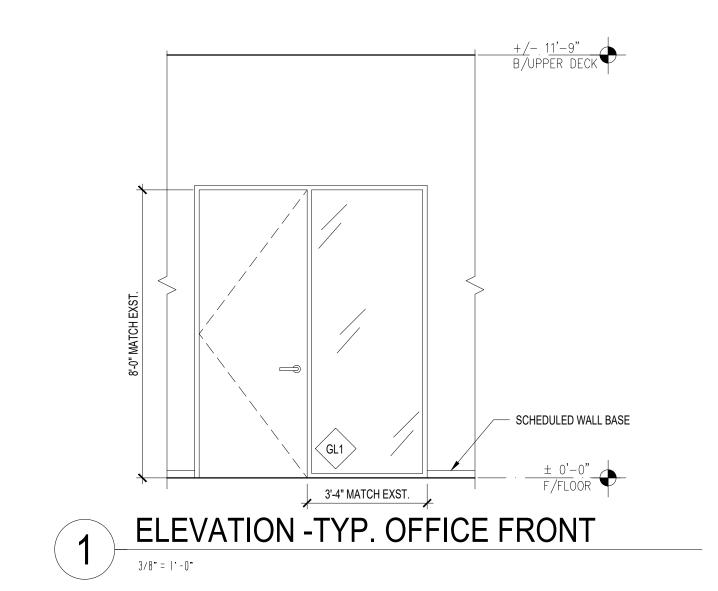
LEVEL 24
UTILITY COORDINATION

SHEET NUMBER

A16-24







4 ELEVATION - MAIL ROOM

3/8" = 1'-0"

3 ELEVATION - WALL FOR TV MONITOR SIZING



Perkins&Will

KENT CONSULTING ENGINEERS

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Chicago, IL 60606

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F: (312) 795-1233

PROPERTY MANAGEMENT:
540 WEST MADISON
CBRE
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(312) 374.2801
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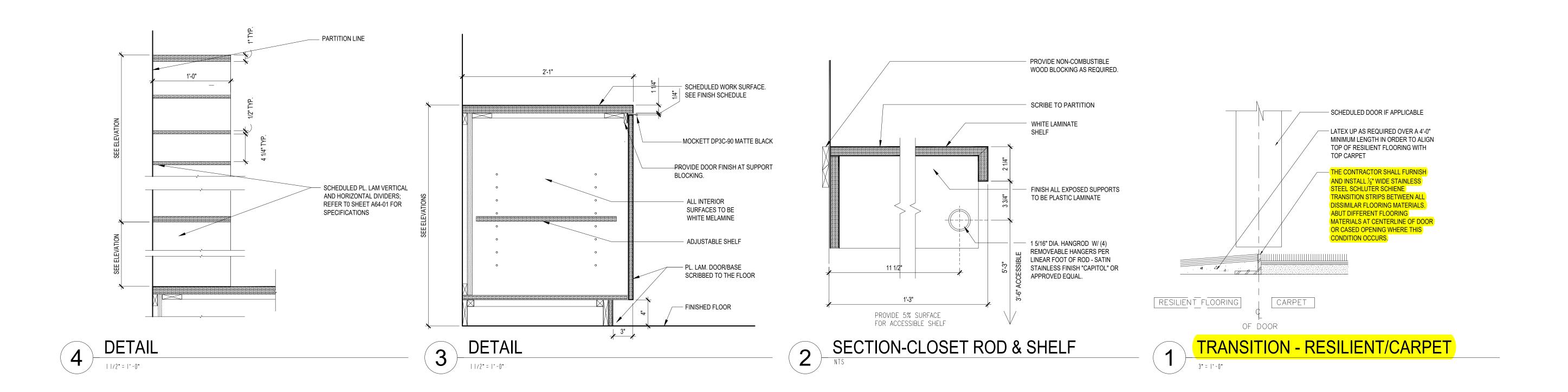
540 W. MADISON
SUITE 2450
INTERIOR ALTERATION
CHICAGO, IL 60661

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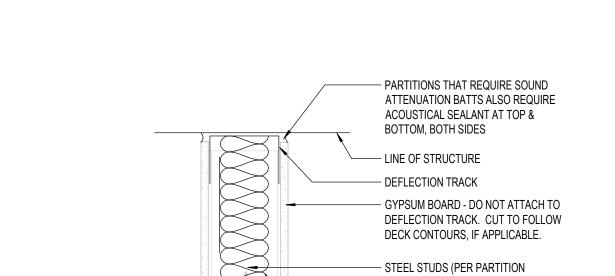
540 W. MADISON
SUITE 2450
INTERIOR ALTERATION
CHICAGO, IL 60661

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1	ISSUED FOR ENGINEERING	11.29.2023
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**DETAILS** 

SHEET NUMBER

A50-01

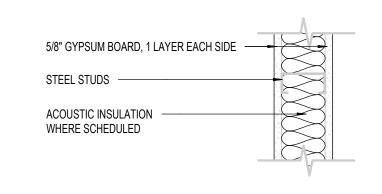


— SOUND ATTENUATION BATTS IF REQUIRED BY PARTITION TYPE. EXTEND FROM FLOOR TO

STRUCTURE ABOVE.

NOTE:
APPLIES TO ALL PARTITION HEAD CONDITIONS IDENTIFIED
AS NON-RATED TO STR ABOVE IN PARTITION CHARTS.

TYP. HEAD DETAIL



A

	A1_	STC	A2_	STC	A3_	STC	A4_	STC	A5_	STC	A6_	STC	A7_	STC	A8_	STC
1-HR RATED WITH GYP BD TO STR ABOVE			A20 —	46	A30 —	39	A40—	47	A50 —	39	A60—	47	A70—	40	(A80)	<b>—</b> 48
NON-RATED W/ GYP BD TO STR ABOVE	<u>A11</u> —	39	(A21)—	46	(A31)—	39	A41)—	47	A51 —	39	A61 —	47	(A71)—	40	(A81)—	<b>—</b> 48
NON-RATED TO 6" ABOVE CEILING	<u>A12</u> —		A22 —		(A32)—		A42 —		A52 —		A62 —		(A72)—		(A82)—	_
NON-RATED TO FINISHED CEILING	<u>A13</u> —		A23 —		(A33)—		A43 —		A53 —		A63 —		A73—		(A83)—	
PARTIAL HEIGHT	<u>A14</u> —		A24 —		(A34)—		A44 —		A54 —		A64 —		A74 —		A84 —	
STUD SIZE	2 1/2"		2 1/2"		3 5/8"		3 5/8"		4"		4"		6"		6"	
BASIC PARTITION THICKNESS (EXCLUDING ADDITIONAL FINISHES OR PER NOTE 4)	3 3/4"		3 3/4"		4 7/8"		4 7/8"		5 1/4"		5 1/4"		7 1/4"		7 1/4	"
ACOUSTICAL INSULATION	NO		YES		NO		YES		NO		YES		NO		YES	;
FIRE TEST NUMBER (WHERE APPLICABLE)	-		UL #U419	)	UL #U465	5	UL #U465	5	UL #U465	;	UL #U465	5	UL #U465	5	UL #U4	165

# ACOUSTICAL PARTITION NOTES THE FOLLOWING NOTES APPLY TO ALL PARTITIONS DESIGNATED TO HAVE A SOUND TRANSMISSION CLASS (STC) RATING ON THE PARTITION CHARTS. 1. ALL ACOUSTICAL PARTITIONS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE REFERENCED TEST, WHERE APPLICABLE. 2. STAGGER AND SEAL ALL JOINTS ON ALL PARTITIONS WITH MULTIPLE LAYERS OF GYPSUM BOARD. 3. SEAL PARTITIONS AIR-TIGHT AT FLOORS, SIDES, AND CEILINGS ON BOTH SIDES WITH NON-HARDENING ACOUSTICAL SEALANT. 4. ALL BATTS AND BLANKETS IN RATED PARTITIONS MUST BEAR THE REQUIRED (IF APPLICABLE) UL CLASSIFICATION MARKING AS TO FIRE-RESISTANCE. 5. AVOID COMPRESSING ACOUSTICAL BATT INSULATION AT BLOCKING AND RECESSED ITEMS IN ACOUSTIC RATED WALLS 6. ACOUSTICALLY SEAL ALL WALL INTERSECTIONS, CONTROL JOINTS, ELECTRICAL BOXES, CONDUIT, STRUCTURAL, DUCT AND PIPE PENETRATIONS. IF THE PARTITION IS ALSO FIRE-RATED, FIRE-RATED DETAIL REQUIREMENTS TAKE PRECEDENCE FOR PENETRATION SEALING. PROVIDE PUTTY PADS AT ALL ELECTRICAL BOXES. SEAL PRIOR TO CLOSING-IN PARTITIONS AND PRIOR TO INSTALLING DEVICES AND COVER PLATES. 7. ELECTRICAL BOXES ON OPPOSITE SIDES OF ACOUSTICAL PARTITIONS SHALL BE SEPARATED BY A MINIMUM OF ONE STUD. 8. VERIFY ACOUSTICAL SEAL COMPLIANCE WITH STC REFERENCE TEST, WHERE APPLICABLE. 9. FOR NON-RATED PARTITIONS TYPE "A" TO FINISH CEILING-PROVIDE SOUND ATTENUATION BATTS ON CEILING TO 4" EACH SIDE OF PARTITION

GENERAL PARTITION NOTES

DELETE GRAY

FILL FOR ANY TYPES USED IN THE PROJECT

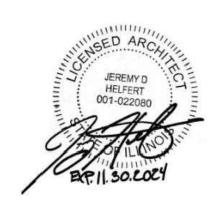
REFER TO A13 SERIES PLAN(S) FOR FINAL FINISHES ON PARTITIONS.

2. ISOLATE NON-LOAD BEARING FRAMING FROM STRUCTURAL ELEMENTS TO PREVENT THE TRANSFER OF LOAD TO PARTITION FRAMING. STOP STUDS 3/4" BELOW CEILING RUNNER (TOP TRACK) TO ALLOW FOR VERTICAL EXPANSION. SET TOP TRACK 1" BELOW DEFLECTION CHANNEL. DO NOT ATTACH STUDS TO TOP TRACK. DO NOT ATTACH GYPSUM BOARD TO THE DEFLECTION TRACK. THIS MAY ALSO BE ACHIEVED, AT THE CONTRACTOR'S OPTION, BY UTILIZING THE PROPRIETARY SYSTEM DESCRIBED IN THE SPECIFICATIONS.

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> 540 W. MADISON SUITE 2450 INTERIOR ALTERATION CHICAGO, IL 60661

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INTERIOR PARTITION TYPES & DETAILS

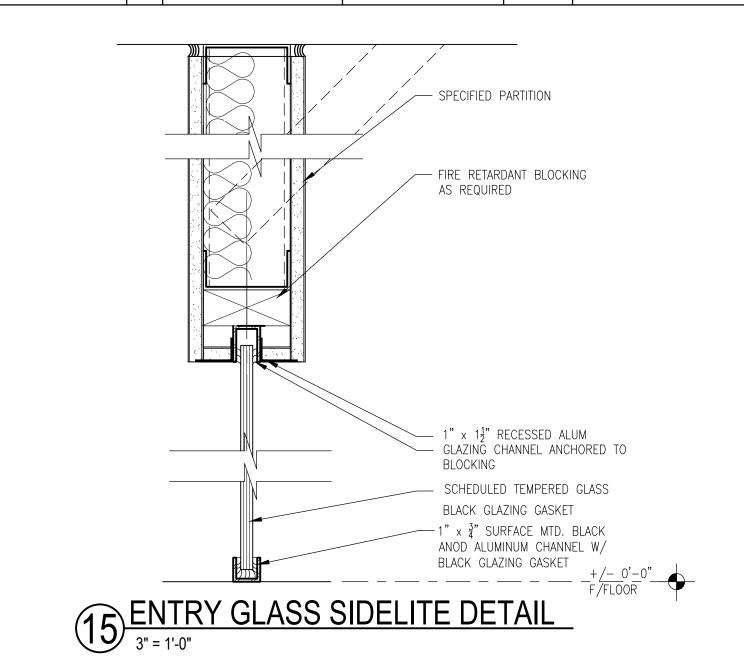
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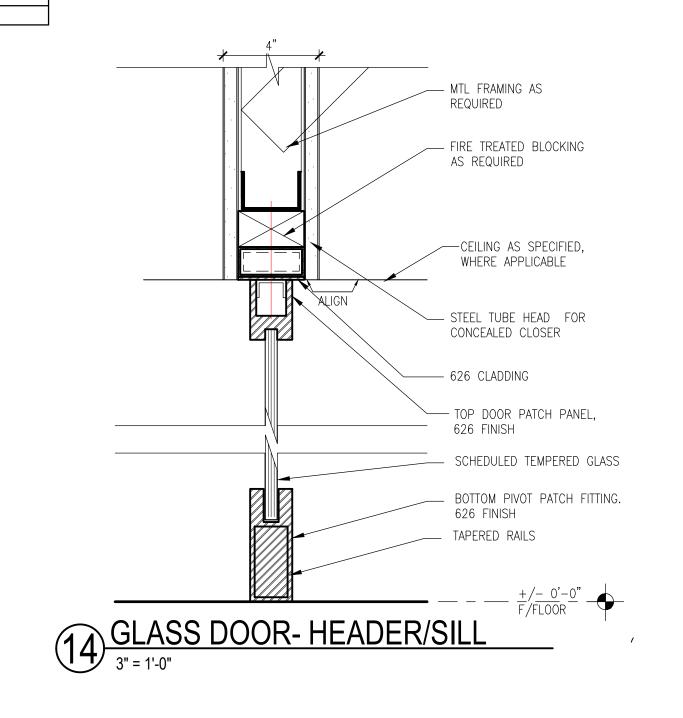
A61-0

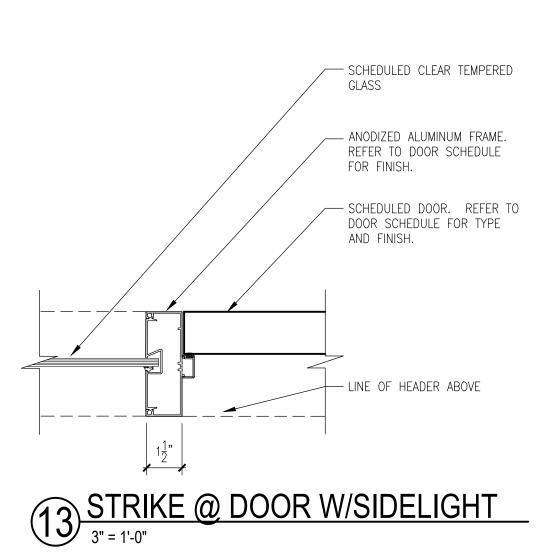
DESCRIPTION	MANUFACTURER	MODEL / STYLE	FINISH	REMARKS
BUTT HINGES	HAGER	BB1279 4-1/2" X 4-1/2"	626	MATCH EXISTING
FLOOR STOP	IVES	FS436	626	MATCH EXISTING
DH SURFACE CLOSER	LCN	4100 SERIES	626	MATCH EXISTING
EVER LOCKSET	SCHALGE	L0170 HALF DUMMY	626	MATCH EXISTING
EVER LOCKSET	SCHALGE	L9010 PASSAGE	626	MATCH EXISTING
EVER LOCKSET	SCHLAGE	L9080 STOREROOM	626	MATCH EXISTING
COAT HOOK	ROCKWOOD	RM801	626	MATCH EXISTING
/ERTICAL PULLS	ASSA ABLOY	RM 3302 OFFSET 6" 27" LONG	STAINLESS STEEL	

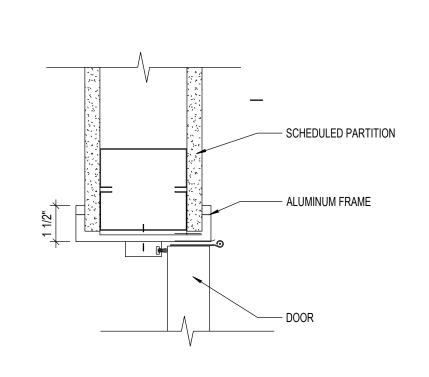
DOOR HARDWARE SETS											
TAG	EXAMPLE USE	QTY	ITEM	DETAIL	FINISH	REMARKS					
SET 1	OPEN OFFICE	2	SET OF VERTICAL PULLS								
		2	TOP AND BOTTOM PIVOTS								
		2	FLOOR STOP								
		2	OH CONCEALED CLOSER								
SET 2	CONFERENCE/ HUDDLE	4	BUTT HINGE								
		1	LEVER LATCHSET	PASSAGE FUNCTION							
		1	FLOOR STOP								
SET 3	OFFICE	4	BUTT HINGE								
		1	LEVER LATCHSET OR LOCKSET	PASSAGE FUNCTION							
		1	FLOOR STOP								
		1	COAT HOOK								
SET4	COPY ROOM	1	BUTT HINGE								
SE 14	COPT ROOM	4	LEVER LOCKSET	STOREROOM FUNCTION							
		1	FLOOR STOP	STOREROOM FUNCTION							
		1	OH SURFACE MOUNTED CLOSER	PULL SIDE							
		- '	OTTOOK AGE MOONTED GEGGEN	1 OLL SIDL							
ET 5	COATS	4	BUTT HINGE								
	<del>-</del>	1	HALF DUMMY LEVER								
		<u> </u>	CLOSER	OVERHEAD SURFACE MOUNT		PUSH SIDE					
$\neg \uparrow$											

	DOOR SCHEDULE																					
	MARK				DOOR	<u> </u>				FRAME					FRAME							
			SIZE										DETAILS		7	HARDWARE						
DOOR NO	<b>ROOM NAME</b>	W	HT	THK	TYPE	MATL	FINISH	GLZ	TYPE	MATL	FINISH	HEAD	JAMB	SILL	FIRE RATING	SET NO	REMARKS					
2451A	OPEN OFFICE	PR 3'-0"	8'-0"	1-3/4"	GD2	GL	-	GL3	-	-	-	14				1	MATCH EXST. ENTRY DOOR STYLE					
2461A	CONFERENCE RM.	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			2	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2463A	HUDLE RM.	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			2	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2464A	BREAK RM.	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	1	ALUM	CL. ANODIZED	11	11			2	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2465A	OFFICE	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			3	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2466A	OFFICE	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			3	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2467A	OFFICE	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			3	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2468A	OFFICE	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			3	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2469A	OFFICE	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			3	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2471A	OFFICE	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			3	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2472A	OFFICE	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			3	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2473A	OFFICE	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			3	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2475A	OFFICE	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			3	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2476A	OFFICE	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			3	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2477A	OFFICE	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			3	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2479A	OFFICE	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	2	ALUM	CL. ANODIZED	11	13			3	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2480A	MAIL RM.	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	1	ALUM	CL. ANODIZED	11	11			4	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
2481A	COATS	3'-0"	8'-0"	1-3/4"	F	SC WOOD	WD1	-	1	ALUM	CL. ANODIZED	11	11			5	MATCH EXST. DOOR, FRAME, HARDWARE STYLE					
EXISTING O	FFICES																					
2454	OFFICE	EXST.	EXST.	EXST.	EXST.	EXST.	EXST.		EXST.	EXST.	EXST.					EXST.	SEE DOOR SCHEDULE REMARK #1					
2455	OFFICE	EXST.	EXST.	EXST.	EXST.		EXST.		EXST.	EXST.	EXST.					EXST.	SEE DOOR SCHEDULE REMARK #1					
2456	OFFICE	EXST.	EXST.	EXST.	EXST.		EXST.		EXST.	EXST.	EXST.					EXST.	SEE DOOR SCHEDULE REMARK #1					
2457	OFFICE	EXST.	EXST.	EXST.	EXST.		EXST.		EXST.	EXST.	EXST.					EXST.	SEE DOOR SCHEDULE REMARK #1					
2458	OFFICE	EXST.	EXST.	EXST.	EXST.		EXST.		EXST.	EXST.	EXST.					EXST.	SEE DOOR SCHEDULE REMARK #1					
2459	OFFICE	EXST.	EXST.	EXST.	EXST.		EXST.		EXST.	EXST.	EXST.					EXST.	SEE DOOR SCHEDULE REMARK #1					
2460	OFFICE	EXST.	EXST.	EXST.	EXST.		EXST.		EXST.	EXST.	EXST.					EXST.	SEE DOOR SCHEDULE REMARK #1					









DETAIL - AL DOOR JAMB/HEAD

3" = 1'-0"

14. ALL DOORS SHALL REMAIN UNLOCKED IN THE DIRECTION OF EGRESS U.N.O.

FRAME TYPES LEGEND	DOOR TYPES LEGEND							
DOOR SCHEDULE REMARKS	SINGLE FLUSH GLASS DOOR F GD2  GENERAL DOOR NOTES							
DOOK SCHEDULE KEIWAKKS								
1. EXISTING DOORS / HARDWARE / FRAMES TO REMAIN EXCEPT: DISABLE EXISTING LOCKS; REPLACE WITH LATCHESETS.	<ol> <li>ALL WOOD DOORS SHALL BE 1-3/4" SOLID CORE</li> <li>CONTRACTOR TO VERIFY DOOR DIMENSIONS AND OPENINGS IN THE FIELD, NOTIFY ARCHITECT OF ANY DISCREPANCIES.</li> <li>PROVIDE STRUCTURAL COMPOSITE LUMBER CORE DOORS FOR ALL DOORS WITH GLASS LITES IN ORDER TO MAINTAIN LIFETIME WARRANTY.</li> <li>USE BUILDING STANDARD HARDWARE: LATCHSETS AND LOCKSETS TO BE SCHLAGE L MORTISE, SMALL FORMAT INTERCHANGEABLE CORE. BUILDING STANDARD KEYWAY IS SFICT. COORDINATE ALL KEYING WITH LANDLORD AND TENANT.</li> <li>PROVIDE METAL BACKING PLATES AT ALL DOOR FRAMES FOR HINGES, CLOSERS, ELECTRIC STRIKES, AND ALL OTHER HARDWARE AS REQUIRED.</li> <li>THE CONTRACTOR SHALL COORDINATE ALL SECURITY REQUIREMENTS WITH THE TENANT AND THE SECURITY CONSULTANT PRIOR TO THE FABRICATION AND INSTALLATION OF DOORS AND FRAMES.</li> <li>ALL DOORS WITH ELECTRO-MAGNETIC LOCKS SHALL COMPLY WITH THE FOLLOWING CRITERIA:         <ul> <li>(A) THE DOOR SHALL UNLOCK WITH THE ACTIVATION OF THE BUILDING FIRE DETECTION OR SPRINKLER SYSTEM.</li> <li>(B) THE DOOR SHALL UNLOCK UPON OR ABNORMAL CONDITION IN THE SUPERVISORY SYSTEMS OF</li> </ul> </li> </ol>	(C) THE DOOR SHALL BE "FAIL SAFE" - UNLOCK WITH THE LOSS OF POWER TO THE LOCK OR LOSS OF POWER TO THE BUILDING. (D) THE ELECTRO-MAGNETIC LOCK SHALL NOT HAVE BACK-UP POWER. (E) A MOTION SENSOR AND PNEUMATIC BYPASS PUSH BUTTON SWITCH MARKED "PUSH TO EXIT" THAT UNLOCKS THE DOOR SHALL INTERRUPT POWER TO THE LOCK FOR A MINUMUM OF 30 SECONDS. THE BUTTON SHALL BE LOCATED WITHIN 5 FEET OF THE DOOR AND 42" AFF.  8. PROVIDE A STRIKE BOX AT ALL DOOR STRIKES.  9. ALL CLOSERS SHALL BE ADJUSTED SO THAT THE MAXIMUM OPENING FORCE AND THE SWEEP PERIOD SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND LOCAL CODES.  10. ALL HARDWARE AND FITTINGS FOR GLASS DOORS BY GLASS DOOR SUPPLIER.  11. ALL SECURITY ITEMS 24V DC, TO BE PRICED OUT SEPARATELY AS GC WORK.  12. ALL DOOR LOUVERS SHALL BE ALUMINUM.  13. NO ELECTRO MAGNETIC LOCKING DEVICES SHALL BE INSTALLED WITHOUT PRIOR APPROVAL OF THE FIRE PREVENTION BUREAU.						

THE BUILDING FIRE DETECTION OR SPRINKLER SYSTEMS.

# Perkins&Will

The Wrigley Building 410 North Michigan Ave. Suite 1600 Chicago, IL 60611 t 312.755.0770 f 312.755.0775 www.perkinswill.com



F: (312) 795-1233

PROPERTY MANAGEMENT:
540 WEST MADISON
CBRE
CHICAGO, IL 60661
(312) 374.2801
CONTACT: COURTNEY HAMM



PERKINS+WILL INC #184000338-0001

540 W. MADISON
SUITE 2450
INTERIOR ALTERATION
CHICAGO, IL 60661

	ISS	UE CHART
_	1001150 500 010/055	40.00.000
2 1	ISSUED FOR BID/PERMIT ISSUED FOR ENGINEERING	12.20.2023
#	ISSUED FOR ENGINEERING	11.29.2023 DATE
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b	Number	026332.030
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pı	roved	JH
		TITLE

DOOR SCHEDULE & DETAILS

SHEET NUMBER

A62-01

		FLOOR	COVERING	LEGEND				BASE L	EGEND						LIGHT	FIXTUR	RE LEGE	.ND			
# TYP	MANUF	INSTALLATION SI	ZE(WxDxH) PATTERN/COL	OR CONTACT	REMARKS	NUMBER TYPE			) COLOR	CONTACT REMARKS		DESCRIPTION		SIZE		MODEL		_AMP C	CONTACT	REMARKS	
CARPET C1 TILE -	MILIKEN	ASHLAR 25	CM X 1M HEAVY META ALLOY ALY152-118 ZINC	TAYLOR EAKINS 402.517.2402	GENERAL CARPET; SEE FINISH PLAN	B1 WALL BASE	TARKETT	TRADITIONAL WALL 2.5" H BASE	63 BURNT UMBER	GENERAL WALL BASE	L1 RE	ECESSED IRECT LED	FOCAL POI		FEQL-22-	AL-35K-1C-G-V	VH			CONFIRM THE MODEL WITH EX F2 EXST. LIGHT FIXTURE; MATC REFER TO RCP DEMO & RCP	H E
LUXERY VINYL	TARKETT	STAGGERED 6"	X 36" ID LATITUDE WOOD MOUNTAIN MAPLE	LORI GIBSON 224.724.9112	GENERAL CARPET; SEE FINISH PLAN	BASE NOTES:  1. WALL B	ASE AT ALL CARPETE	ED AREAS SHALL BE STRAIGHT BASE. '	WALL BASE AT ALL	HARD SURFACE FLOORS SHALL BE COVED, U. N. O.	L4 SU	USPENDED IDIRECT PEND	OCL	8FT	-CABLE	-96-MW-PTD BKI	P-35K-72			CONFIRM THE MODEL WITH EXF F4 LIGHT FIXTURE; MATCH EXS	KST. T.
TILE AREA AR1 RUG	T.B.D.	8'	PLWD7534           X 10'         T.B.D.	<u> </u>	AREA RUG TBD. +/- \$1,500 MATERIAL						L5 SU	USPENDED ENDANT	TECH PIPER GF	RANDE	BLACK 700-TD-P BLACK	PRGP-B-B-LED	3			REFER TO RCP DEMO & RCP CONFIRM THE MODEL WITH EXF F5 LIGHT FIXTURE; MATCH EXS	KST.
																				REFER TO RCP DEMO & RCP	PLAN -
								GI AZIN	IG LEGEN	וח											
						NUMBER DESCRIF	DTION	OLAZIIV			1. /		TO BE 3500K,		SPONSIRIF FOR	INSURING COMP	ATIBILITY BETWEEI	N FIXTURE TRIN	MS AND CFL	ING GRID	
						CL1 CLEAR TEN	MPERED SAFETY GLAZING			CONTACT REMARKS	l l					ROVED BY THE A		. FIXTORE TRIM	NO AND CELL	INO GIND.	
						GL2 CLEAR TEN 3/8" THIC	MPERED SAFETY GLAZING														
							MPERED SAFETY GLAZING														
								MILLWO	ORK LEG	END					CE	ILING LI	EGEND				$\exists$
						NUMBER TYPE	MANUFACTURE	R DESCRIPTION	FINISH/COLOR	CONTACT REMARKS	NUMBER	TYPE N	MANUFACTURER	R DESCRIF	PTION S	IZE (WxDxH)	PATTERN/ COLOR	CONTACT		REMARKS	$\exists$
						WD1 WOOD VENEER			-	– DOORS – MATCH EXISTING	APC1 AC	COUSTICAL - EILING TILE -	<del>-</del>	- -	2		HITE	M -	AATCH EXST. AC	OUSTICAL CEILING TILES	
		PAINT AND	WALLCOVE	RING LEGI	END	PL1 PLASTIC LAMINATE	WILSONART		TRACELESS NILE VELVET	BASE CABINETS - VERTICAL SURFACES - COUNTERTOP	GRID GR	EILING - RID -	-	-	-	- WHI' 2'x2' WH		MA	FOR APC1 MATCH EXST. CEI		
NUMBER TYP			·	OLOR CONTACT		PL2 PLASTIC	- WILSONART		15515 ULTRA MATTE 7968K-12	MAIL SLOTS	CRID2 CE	EILING TILE -	- - -	-  -	-	2 XZ WF - WHI	HITE –		- FOR APC2	DUSTICAL CEILING TILE CLOUDS	_
P1 PAINT –	BENJAMIN MOORE - -		S SUPER FFITS/EXPOSED CLG WHITE	- - -	GENERAL PAINT THROUGHOUT GYP. BD. SOFITS, GENERAL CEILING DECK AND MEP	LAMINATE –	<u>-</u>		LOFT OAK SOFTGRAIN FINISH	- - -	GRIDZ GR	RID –	-	-		-  -	-	M	MATCH EXST. CEI	LING GRID	$\dashv$
P2 PAINT –	SHERWIN WILLIAMS	FLAT FINISH-DRYWALL SOF	FFITS/EXPOSED CLG SW7048 URBANE BR	DNZE	MATCH EXST. PAINT COLOR GENERAL DECK AND MEP																
P3 PAINT –	BENJAMIN MOORE	EGGSHELL FINISH— WAALS	1601 HEARTSTONE	- -	ACCENT PAINT SEE FINISH PLAN			PLUMBING	LEGENI	)					EQUIP	MENT I	LEGEND				
P4 PAINT –	SHERWIN WILLIAMS	EGGSHELL FINISH— WAALS	SW7620 SEAWORTHY	-   -   -	ACCENT PAINT SEE FINISH PLAN	MARK INSTAL CODE	DESCRIPTION	MANUFACTURER MODEL	FINISH	SIZE (WxDxH)	MARK C		SCRIPTION MA		MODEL	SIZE (WxDxH	) FINISH PLUM	MBING ELECTRI UIRED REQUIREM	RICAL ENERGY EMEN'S STA	REMARKS	
	_					•	•	•			E01	3 POSTA MACHI MULTIF			SENDPRO C20	0 16.5" X 15.5 X 11.5"					
						<u>INSTALL CODE</u> 1. FURNIS	E: Shed & Installed e	BY CONTRACTOR STALLED BY CONTRACTOR BY TENANT			E02 E03	3 COPIEI	FUNCTION KYC R SOL ER T.B	LUTIONS .D.	TASKALFA 5003i/6003i	16.5" X 15.5 X 11.5"					
						2. FURNIS 3. FURNIS	SHED BY TENANT, INS SHED & INSTALLED E	STALLED BY CONTRACTOR BY TENANT			E04	٥	ONITOR T.B								
											E05	1	ONITOR T.B								_
	WALLCOVERING NOTE										E07	1	ONITOR T.B								
2. GYPS	UM BOARD CEILINGS	HALL HAVE EGGSHELL F SHALL HAVE FLAT FINI DOOR FRAMES TO RECIE		/II—GLOSS FINISH. U.N	I.O.						E08	1 SECUR CAMER	RAS							LOW VOLTAGE	F
0.7.22	, seeke viits .	30011 111 1112012		32333 1 11131, 3111							E09	1 WLAN	T.B	.D.						LOW VOLTAGE	
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											<u>INSTALL</u> 1. F 2. F	FURNISHED &	& INSTALLED B BY TENANT, INS	SY CONTRACTO	OR CONTRACTOR		<u>NERGY STAR RATII</u> R — ENERGY S Q — ENERGY S		)		I
											3. F	FURNISHED &	BY TENANT, INS & INSTALLED B	Y TENANT			N – NOT RATE	)			
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PERKINS+WILL INC #184000338-0001

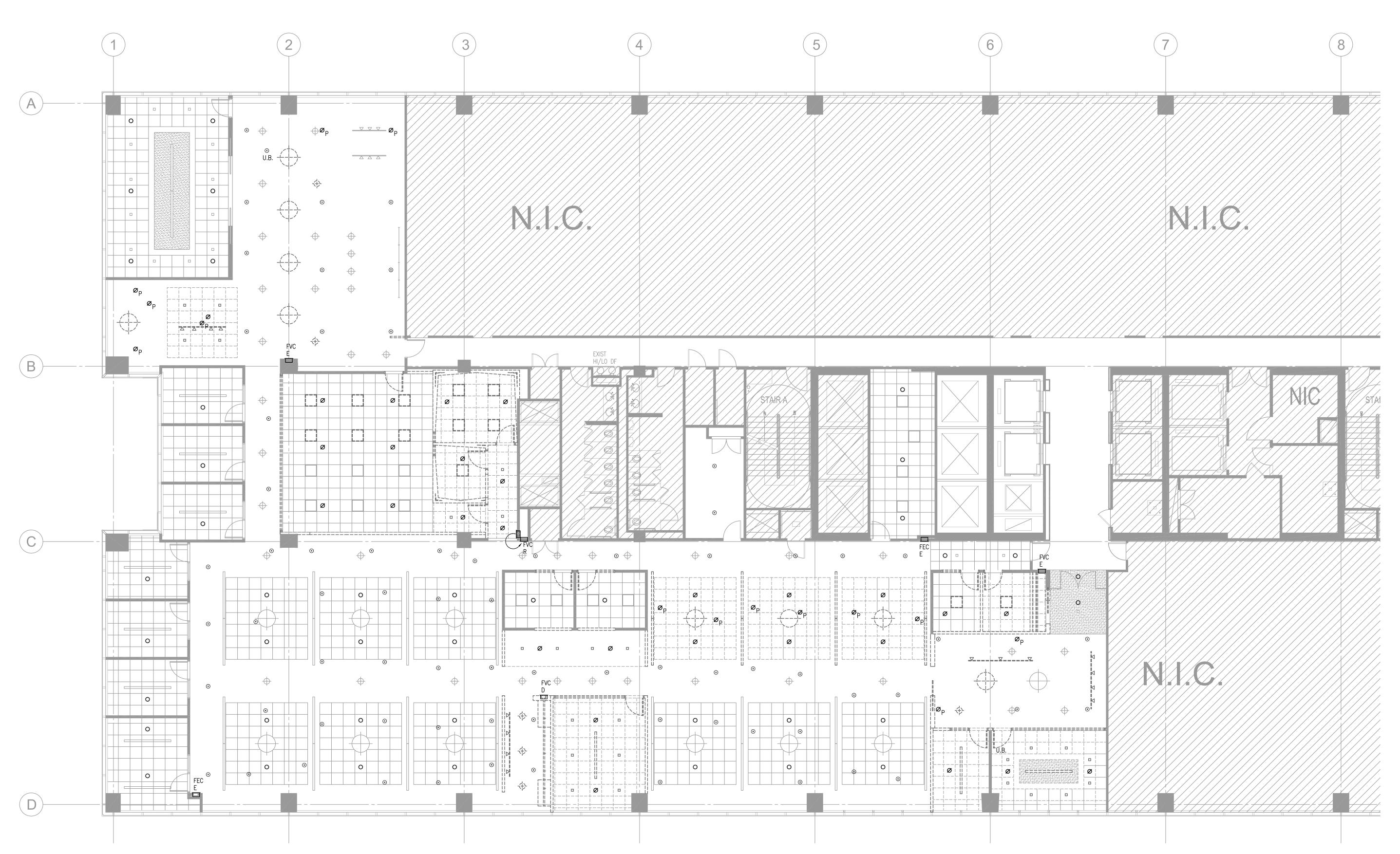
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		TITLE			

INTERIOR SCHEDULES
AND DETAILS

SHEET NUMBER

A64-01



# SCOPE FIRE PROTECTION DEMOLITION PLAN

Perkins&Will

KENT CONSULTING ENGINEERS

REGISTERED PROFESSIONAL ENGINEER OF

PERKINS+WILL INC #184000338-0001

20 North Wacker Drive, Suite 1900 Chicago, IL 60606

T: (312) 795-1230 F: (312) 795-1233

540 WEST MADISON

CHICAGO, IL 60661 (312) 374.2801 CONTACT: COURTNEY HAMM

PROJECT

**SUITE 2450** 

540 W. MADISON

CHICAGO, IL 60661

**INTERIOR ALTERATION** 

The Wrigley Building 410 North Michigan Ave. Suite 1600

Chicago, IL 60611 t 312.755.0770

f 312.755.0775 www.perkinswill.com

1. GENERAL NOTES ON THE DRAWINGS ARE PART OF THIS CONTRACT.

FIRE PROTECTION NOTES

- 2. ALL MATERIAL, EQUIPMENT, METHOD OF INSTALLATION, AND OTHER LIKE ITEMS SHALL BE IN STRICT ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE NFPA AND THE CHICAGO FIRE PROTECTION BUREAU. ALL MATERIAL AND EQUIPMENT SHALL BE UL LABELED AND FACTORY MUTUAL APPROVED. IN THE EVENT OF CONFLICT, THE MOST STRINGENT TO GOVERN.
- 3. SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE FIRE DEPARTMENT AS WELL AS CONCERNED PARTIES OF ANY TEMPORARY DISRUPTION OF SERVICE AS REQUIRED TO COMPLETE THE PROJECT. ANY TEMPORARY PROVISIONS REQUIRED SHALL BE THE SPRINKLER CONTRACTORS RESPONSIBILITY.
- 4. WHERE PIPES PASS THROUGH WALLS, PARTITIONS, OR FLOORS, THE SPRINKLER CONTRACTOR SHALL PROVIDE AND INSTALL GALVANIZED STEEL PIPE SLEEVES 1" LARGER THAN OUTSIDE DIAMETER OF PIPE. COORDINATE PENETRATIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS
- 5. CONTRACTOR SHALL SHOW METHOD OF HANGING SPRINKLER PIPES AND SPACING. THE SPRINKLER PIPES SHALL BE SUPPORTED FROM STRUCTURAL BEAMS OR SLABS.
- 6. ARM-OVERS TO NEW SPRINKLER HEADS AND NEW PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA-13.
- 7. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS IN FIELD PRIOR TO BID AND INSTALLATION.
- 8. CONTRACTOR SHALL COORDINATE WITH MECHANICAL, ELECTRICAL AND OTHER TRADES INVOLVED. ALSO, COORDINATE NEW WORKS WITH EXISTING ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL
- 9. DISRUPTION OF ANY EXISTING SERVICE SHALL BE CLEARED WITH THE OWNER AND SHALL BE PERFORMED AT A TIME AND MANNER SO AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE.
- 10. CONTRACTOR SHALL FILL ALL PENETRATIONS (NEW AND EXISTING)
  THROUGH FIRE RATED WALLS, FLOORS AND CEILINGS WITH APPROVED
  FIRE STOPPING MATERIAL.
- 11. ALL TENANT HOSE CABINET TIE-INS SHALL OCCUR IN THE BASE
  BUILDING STAIRWELLS AND REQUIRE AN ISOLATION VALVE ALONG WITH A

TAMPER SWITCH TIED TO THE BASE BUILDING FIRE LIFE SAFETY PANEL.

12. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL SUBMITTALS, DRAWINGS, CALCULATIONS, SHOP DRAWINGS AND APPROVALS FROM AUTHORITIES HAVING JURISDICTION UNDER THIS CONTRACT. THE BASE DRAWINGS WILL BE MADE AVAILABLE TO THE FIRE PROTECTION CONTRACTOR FOR THEIR USE.

# FIRE PROTECTION EQUIPMENT

SPRINKLERS IN CONCEALED CEILINGS SHALL BE RELIABLE MODEL G5-56 QUICK RESPONSE CONCEALED HEAD WITH FLUSH CHROME PLATE COVER, OR APPROVED EQUAL.

SPRINKLERS IN EXPOSED CEILINGS SHALL BE RELIABLE MODEL F1FR56-300 SERIES UPRIGHT / PENDANT TYPE, OR APPROVED EQUAL.

FIRE EXTINGUISHER (FE) SHALL BE POTTER ROEMER MODEL 3010 10 LB.

MULTI-PURPOSE DRY CHEMICAL TYPE ABC RATED, OR APPROVED EQUAL.

FIRE EXTINGUISHER CABINET (FEC) SHALL BE POTTER ROEMER MODEL
1714 TRIMLESS FRAME TYPE, OR APPROVED EQUAL. FOR USE WITH 10
LB. POTTER ROEMER 3010 EXTINGUISHER.

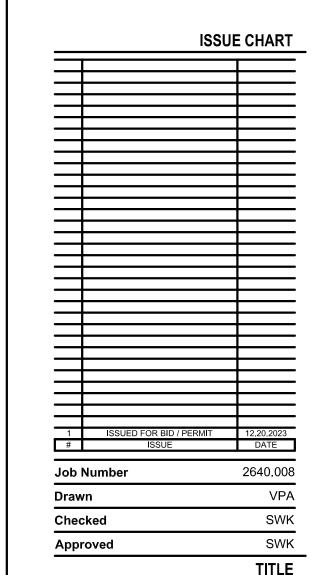
# FIRE PROTECTION LEGEND

- O EXISTING TO REMAIN CONCEALED SPRINKLER HEAD
- NEW OR RELOCATED CONCEALED SPRINKLER HEAD
   Ø EXISTING SPRINKLER HEAD TO
- BE REMOVED/RELOCATED

  ⊙ EXISTING TO REMAIN PENDANT SPRINKLER HEAD
- × NEW OR RELOCATED PENDANT SPRINKLER HEAD
- FEC FIRE EXTINGUISHER CABINET
- 9 FIRE EXTINGUISHER FE
- N NEW R RELOCATED
- D DEMOLISH
- FVC FIRE VALVE CABINET
- P PENDANT

  U.B. UNDER BOX (MECH. EQUIPMENT)

FEC FIRE EXTINGUISHER CABINET



LEVEL 24 SCOPE FIRE PROTECTION DEMOLITION PLAN

SHEET NUMBER

FP01-24



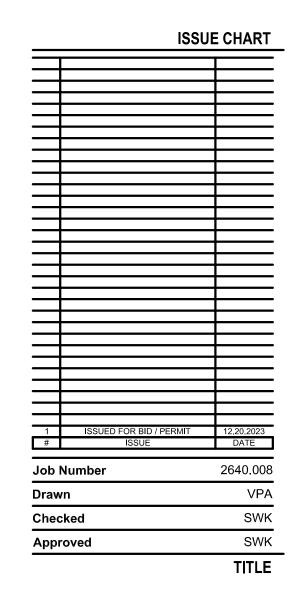








540 W. MADISON **SUITE 2450** INTERIOR ALTERATION CHICAGO, IL 60661



LEVEL 24 **SCOPE FIRE** PROTECTION PLAN

SHEET NUMBER

FP02-24

				VEN <sup>-</sup>	TILATION SCH	DULE					
				CODE RE	QUIREMENTS		AC	TUAL	FAN S	YSTEM	
ROOM NUMBER	ROOM NAME	ROOM PURPOSE	AREA SQ. FT.	SUPPLY CFM	EXHAUST CFM	DIFFUSERS	SUPPLY CFM	EXHAUST CFM	SU-N-7-1, 2, 3, 4	RF-N-7-1, 2, 3, 4	REMARKS
2450	RECEPTION/WAITING AREA	OFFICE	645	387	194	9	810	810	810	810	
2451	OPEN OFFICE	OFFICE	948	569	284	12	1,080	1,080	1,080	1,080	
2452	OPEN OFFICE	OFFICE	1,597	958	479	17	1,530	1,530	1,530	1,530	
2453	OPEN OFFICE	OFFICE	2,431	1,459	729	35	3,150	3,150	3,150	3,150	
2454	OFFICE	OFFICE	214	128	64	4	360	360	360	360	
2455	OFFICE	OFFICE	131	79	50	2	180	180	180	180	
2456	OFFICE	OFFICE	131	79	50	2	180	180	180	180	
2457	OFFICE	OFFICE	133	80	50	2	180	180	180	180	
2458	OFFICE	OFFICE	129	77	50	2	180	180	180	180	
2459	OFFICE	OFFICE	130	78	50	2	180	180	180	180	
2460	OFFICE	OFFICE	129	77	50	2	180	180	180	180	
2461	CONFERENCE ROOM	OFFICE	308	185	92	8	720	720	720	720	
2462	CONFERENCE ROOM	OFFICE	629	377	189	12	1,080	1,080	1,080	1,080	
2463	HUDDLE ROOM	OFFICE	304	182	91	6	540	540	540	540	
2464	BREAK ROOM	LUNCH ROOM, NO COOKING	530	795	795	9	810	810	810	810	
2465	OFFICE	OFFICE	131	79	50	2	180	180	180	180	
2466	OFFICE	OFFICE	130	78	50	2	180	180	180	180	
2467	OFFICE	OFFICE	193	116	58	3	270	270	270	270	
2468	OFFICE	OFFICE	131	79	50	2	180	180	180	180	
2469	OFFICE	OFFICE	128	77	50	2	180	180	180	180	
2470	OPEN OFFICE	OFFICE	590	354	177	9	810	810	810	810	
2471	OFFICE	OFFICE	112	67	50	2	180	180	180	180	
2472	OFFICE	OFFICE	112	67	50	2	180	180	180	180	
2473	OFFICE	OFFICE	112	67	50	2	180	180	180	180	
2474	LAN ROOM	STORAGE, INACTIVE	177	N.R.	N.R.	0	0	0	0	0	
2475	OFFICE	OFFICE	112	67	50	2	180	180	180	180	
2476	OFFICE	OFFICE	112	67	50	2	180	180	180	180	
2477	OFFICE	OFFICE	112	67	50	2	180	180	180	180	
2478	WORKROOM	OFFICE	318	191	95	6	540	540	540	540	
2479	OFFICE	OFFICE	112	67	50	2	180	180	180	180	
2480	MAIL ROOM	OFFICE	79	50	50	2	180	180	180	180	
2481	COATS	CLOSET	8	N.R.	N.R.	0	0	0	0	0	
TOTALS			11,058	7,103	4,248	170	15,300	15,300	15,300	15,300	

					LAISTIN	O VENTILATI	ON EQUIPMENT					
FAN:							HEATING	CONDENSER			CAPAC	ITY CFM
SUPPLY TO	UNIT NO.	CFM	HP	R.P.M.	MANUFACTURER	TYPE	ELEMENT	EQUIPMENT	FAN LOCATION	RATED BTU/H	PLAN	ORDINANO
24TH FLOOR	SU-N-29-1	60000	60		JOY	AXIAL	HOT WATER	CHILLED WATER	29TH FLOOR	3487000		
24TH FLOOR	SU-N-29-2	60000	60		JOY	AXIAL	HOT WATER	CHILLED WATER	29TH FLOOR	3487000	72,000	35,158
24TH FLOOR	SU-N-29-3	60000	60		JOY	AXIAL	HOT WATER	CHILLED WATER	29TH FLOOR	3487000	72,000	30,100
24TH FLOOR	SU-N-29-4	60000	60		JOY	AXIAL	HOT WATER	CHILLED WATER	29TH FLOOR	3487000		
FAN:							1	AREA OF		LOCATION OF	CAPAC	ITY CFM
EXHAUST FROM	UNIT NO.	CFM	HP	R.P.M.	MANUFACTURER	TYPE	DISCH	ARGE DUCT	FAN LOCATION	TERMINATION DUCT	PLAN	ORDINANO
24TH FLOOR	RF-N-29-1	54000	30		JOY	AXIAL	5	4 SQ. FT.	29TH FLOOR	29TH FLOOR LOUVERS		
24TH FLOOR	RF-N-29-2	54000	30		JOY	AXIAL	54 SQ. FT.		29TH FLOOR	29TH FLOOR LOUVERS	72.000	20.040
24TH FLOOR	RF-N-29-3	54000	30		JOY	AXIAL	54 SQ. FT.		29TH FLOOR	29TH FLOOR LOUVERS	72,000	20,612
24TH FLOOR	RF-N-29-4	54000	30		JOY	AXIAL	5	4 SQ. FT.	29TH FLOOR	29TH FLOOR LOUVERS		

				DIFFU	ISER SCHEDULE	
MANUFACTURER	MODEL	FACE SIZE	NECK SIZE	CFM RANGE	TYPE	REMARKS
NAILOR	4310AR	24x24 MODULE	15"Ø	0-1000	RETURN	TYPICAL PERFORATED TYPE FOR LAY-IN CEILING
NAILOR	NFD	9-5/16"	8"Ø	70	FLOOR SUPPLY	
NAILOR	NFD-VAV	9-5/16"	8"Ø	70	FLOOR SUPPLY	VAV CONTROLS
NAILOR	5145H	SEE PLANS	SEE PLANS	-	SINGLE DEFLECTION WALL GRILL	TYPICAL FOR SIDEWALL GRILLES IN WALLS WHEN GRILLE IS EXPOSED

1. COLOR OF ALL NEW FLOOR SWIRL DIFFUSERS SHALL MATCH EXISTING.

2. ALL NAILOR "NFD-VAV" SWIRL-TYPE FLOOR DIFFUSERS SHALL INCLUDE ACTUATORS. SEE PLANS FOR ADDITIONAL DETAILS.

3. ALL PERFORATED RETURN GRILLES SHALL MATCH EXISTING.
4. ALL SIDEWALL GRILLES SHALL MATCH EXISTING. COLOR TO BE DETERMINED BY THE ARCHITECT.

# MECHANICAL NOTES

OTHER TRADES INVOLVED.

FOR DUCTWORK CONSTRUCTION.

- 1. THE DRAWINGS INDICATE DIAGRAMMATICALLY THE EXTENT AND LOCATION OF THE WORK INCLUDED. WORK INDICATED, BUT HAVING MINOR DETAILS OBVIOUSLY OMITTED, SHALL BE PROVIDED, INCLUDING THESE DETAILS WITHOUT EXTRA COST.
- 2. FOR ADDITIONAL DETAILS, THE ARCHITECTURAL AND ACCOMPANYING ENGINEERING DRAWINGS SHALL BE CONSULTED AND ALL THIS WORK SHALL ADHERE TO SAME.
- 3. ALL WORK SHALL FOLLOW ALL CODES AND BUILDING STANDARDS STRICTLY.
  4. ALL PERMITS, LICENSES, APPROVALS AND OTHER ARRANGEMENTS FOR WORK SHALL BE OBTAINED BY THE MECHANICAL CONTRACTOR AT HIS OWN
- EXPENSE, UNLESS DIRECTED OTHERWISE.

  5. MECHANICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL
- 6. DUCT DIMENSIONS SHOWN ON PLANS ARE INSIDE CLEAR DIMENSIONS. FOR OUTSIDE SIZE OF LINED DUCTWORK, ADD TWICE THE THICKNESS OF LINING
- TO THE DIMENSIONS SHOWN ON THE PLANS.

  7. ALL NEW DUCTWORK SHALL BE CONSTRUCTED OF PRIME FIRST QUALITY GALVANIZED STEEL SHEETS. GAUGES OF METAL, SPACING, ETC. SHALL CONFORM TO LATEST EDITION OF THE ASHRAE CONSTRUCTION STANDARDS
- 8. SPRING TYPE VIBRATION ISOLATORS WITH FLEXIBLE CONNECTIONS SHALL BE PROVIDED WITH ALL NEW EQUIPMENT.
- 9. SUBMIT EQUIPMENT SPECIFICATION TO BOTH THE ENGINEER AND ARCHITECT BEFORE PURCHASE.
- 10. ALL NEW TRANSFER DUCTS SHALL HAVE SOUND LINING AND BE CONSTRUCTED WITH ELBOWS AS SHOWN.
- 11. BRANCH TAKE-OFFS SHALL HAVE SPLITTER DAMPERS OR MANUAL VOLUME DAMPERS FOR ALL SUPPLY OR RETURN AIR DUCT BRANCHES.
- 12. PROVIDE FACTORY—FABRICATED TURNING VANES IN ALL SQUARE ELBOWS. VANES SHALL BE BARBER—COLMAN 'AIRTURNS' OR APPROVED EQUAL.
- 13. MAXIMUM LENGTH OF FLEXIBLE DUCT (CITY APPROVED) SHALL BE 5' 0". EXTEND FULL SIZE SHEET METAL DUCT, IF REQUIRED. INSULATE ALL NEW FLEXIBLE DUCTWORK WITH MINIMUM 3.3 R-VALUE INSULATION.
- 14. NEW LOW PRESSURE RECTANGULAR SUPPLY DUCTS SHALL BE LINED WITH 1"
  THICK OR MINIMUM 3.3 R-VALUE NON FIBROUS DUCT LINER FOR A MINIMUM
  OF 10' DOWNSTREAM OF VAV BOX OR FAN POWERED VAV BOX OR THROUGH
  THE FIRST ELBOW OR TEE. DUCT LINER SHALL MEET THE REQUIREMENTS OF
  NFPA BULLETIN 90-A, SHALL BE LABELED BY UL, AND SHALL BE BACTERIA
  AND FUNGI RESISTANT WITH EDGE COATING. ALL OTHER SUPPLY DUCTWORK
  TO BE EXTERNALLY INSULATED. CONTRACTOR OPTION TO PROVIDE
  CONTINUOUS DUCT LINER FOR ALL RECTANGULAR DUCTWORK.
- 15. CONTRACTOR SHALL INSTALL DUCTWORK TO MAINTAIN CEILING HEIGHTS AS ESTABLISHED BY THE ARCHITECT. PROVIDE ALL NECESSARY OFFSETS.
- 16. ALL TERMINAL UNITS SHALL BE INSTALLED IN LOCATIONS WHERE THEY WILL BE EASILY ACCESSIBLE. BOXES ABOVE FULL HEIGHT PARTITIONS OR LIGHT FIXTURES SHALL BE RELOCATED BY THE CONTRACTOR.
- 17. ALL CUTTING AND PATCHING OF HOLES AND ALL RISES AND DROPS IN DUCTWORK FOR THIS WORK IS THE MECHANICAL CONTRACTOR'S RESPONSIBILITY.
- 18. UPON COMPLETION OF THE INSTALLATION OF VENTILATION DUCTS, CLEAN ENTIRE SYSTEM OF RUBBISH, PLASTER, DIRT, ETC., BEFORE INSTALLATION OF GRILLES OR DIFFUSERS.
- 19. MECHANICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIAL FOR ONE (1) YEAR AFTER COMPLETION AGAINST ALL DEFECTS OF MATERIAL, EQUIPMENT AND WORKMANSHIP.
- 20. AFTER COMPLETION OF ALL REQUIRED WORK, THE CONTRACTOR SHALL OPERATE AND MAKE ANY REQUIRED ADJUSTMENT TO EQUIPMENT, DUCTWORK, ETC. AS MAY BE NECESSARY TO PUT THE SYSTEMS IN PROPER OPERATING CONDITION. AFTER ALL ADJUSTMENTS HAVE BEEN COMPLETED THE CONTRACTOR SHALL EMPLOY AN INDEPENDENT CONTRACTOR TO TEST AND BALANCE ALL NEW AND EXISTING AIR TERMINAL UNITS, AND DIFFUSERS TO WITHIN +/-10% OF THE AIR QUANTITY SHOWN ON THE DRAWING. BALANCE SHALL INCLUDE BOTH SUPPLY AND EXHAUST SYSTEMS. FAN POWERED VAV BOXES SHALL HAVE BOTH THE PRIMARY AND FAN AIR VOLUME ADJUSTED AS SCHEDULED. FOUR (4) CERTIFIED TEST AND BALANCE REPORTS SHOULD BE SUBMITTED TO THE ARCHITECT FOR APPROVAL BEFORE TENANT OCCUPANCY.
- 21. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPERATURE CONTROL WIRING.
- 22. MECHANICAL CONTRACTOR SHALL FILL ALL PENETRATIONS (NEW AND EXISTING) THROUGH FIRE RATED WALLS, FLOORS AND CEILINGS WITH APPROVED FIRE STOPPING MATERIAL.

# CITY OF CHICAGO NOTES

- ALL WORK PERFORMED AND EQUIPMENT INSTALLED SHALL CONFORM TO ALL APPLICABLE CITY OF CHICAGO CODES.
- 2. OUTSIDE AIR INTAKES SHALL BE 10' ABOVE GRADE AND A MINIMUM OF 15'-0" FROM ALL EXHAUST AIR AND SOURCES OF CONTAMINATION. MAXIMUM VELOCITY THROUGH OUTSIDE AIR INTAKE LOUVERS AND DUCTWORK SHALL NOT EXCEED 1000 FPM.
- 3. ALL NEW DUCTWORK SHALL BE FABRICATED OF PRIME FIRST QUALITY GALVANIZED SHEET METAL UNLESS NOTED OTHERWISE. GAUGES OF METAL, SPACING, ETC. SHALL CONFORM TO THE LATEST EDITION OF ASHRAE CONSTRUCTION STANDARDS FOR DUCTWORK CONSTRUCTION.
- 4. ALL NEW FLEXIBLE LOW-PRESSURE DUCT WORK SHALL BE INSULATED, CHICAGO APPROVED AND NOT EXCEED 5'-0" IN LENGTH. MANUFACTURER: WIREMOLD TYPE WK UL-181, CLASS 1.
- 5. TRANSFER DUCTS SHALL NOT EXCEED 5'-0" IN LENGTH.
- 6. IF APPLICABLE, PROVIDE WELDED 14 GA. BLACK IRON OR WELDED 18 GA. 303 STAINLESS STEEL DUCTWORK FOR KITCHEN HOOD EXHAUST DUCTWORK.
- 7. WHEN USING RECIRCULATED OR EXHAUST AIR FOR AIR PLENUM CHAMBERS, THE CONTRACTOR SHALL GUARANTEE THAT THE PLENUM CHAMBER USED FOR RECIRCULATION OF AIR WILL BE OF TIGHT CONSTRUCTION AND THAT ALL SOURCES OF AIR CONTAMINATION FROM TRAPS, SOIL STACKS, DOWNSPOUTS, VENTS, EXHAUST DISCHARGES AND OTHER SOURCES WILL BE ENCLOSED SO THAT NO CONTAMINATED AIR WILL BE RECIRCULATED.
- 8. ALL EQUIPMENT SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN UL 1995, THE UL STANDARD FOR SAFETY HEATING AND COOLING EQUIPMENT, AND BE RATED TO OPERATE IN "PLENUM" CEILINGS.
- 9. SUPPLY AIR AND RETURN AIR FAN MOTORS EXPOSED TO DUCTED AIR STREAM SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN UL 1995, THE UL STANDARD FOR SAFETY HEATING AND COOLING EQUIPMENT, AND BE RATED TO OPERATE IN "PLENUM" CEILINGS.
- 10. NO CHANGES IN EXISTING FAN SYSTEMS ARE BEING MADE FOR THE
- 11. HEAT FOR SPACE IS AN EXISTING SYSTEM WITH NO CHANGES BEING MADE FOR THE REMODELLING WORK.
- 12. THE MAXIMUM SOUND PRESSURE LEVEL; "A—SCALE LEVELS," AT THE PROPERTY LINE BORDERING RESIDENTIAL AREAS SHALL NOT EXCEED 55db (A) FOR HVAC EQUIPMENT.
- 13. THE MAXIMUM SOUND PRESSURE LEVEL: "A—SCALE LEVELS," AT THE PROPERTY LINE BORDERING BUSINESS—COMMERCIAL AREAS SHALL NOT EXCEED 62 db (A) FOR HVAC EQUIPMENT.
- 14. ALL NEW REFRIGERANT PIPING SHALL BE TYPE "K" BRAZED RIGID COPPER
- 15. NEW D.X. REFRIGERANT EXPANSION VALVES, DEVICES AND CONNECTIONS SHALL NOT BE LOCATED IN, OR SHALL BE REMOVED FROM, THE AIR STREAM OF AIR CONDITIONING UNITS, IF APPLICABLE.
- 16. THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL A
  REFRIGERANT—RELIEF DISCHARGE PIPE FOR EACH NEW REQUIRED REFRIGERATION
  SYSTEM. THE DISCHARGE PIPE OUTLET SHALL BE INSTALLED A MINIMUM OF
  12'-0" ABOVE THE GROUND, A MINIMUM OF 10'-0" FROM ANY OPENING,
  20'-0" FROM ANY FIRE ESCAPE AND SHALL DISCHARGE THROUGH A TURNED
  DOWN ELBOW.
- 17. IF APPLICABLE, THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL A SAFETY RELIEF VALVE DESIGNED TO RELIEVE AND/OR PREVENT THE BUILD—UP OF EXCESSIVE REFRIGERANT PRESSURE WITHIN EACH DIRECT—EXPANSION SYSTEM. THE PRESSURE RELIEF DEVICE SHALL BE SET AT 400 psi AND SHALL BE INSTALLED ON THE HIGH TEMPERATURE SIDE AT THE DISCHARGE OF THE COMPRESSOR AND UPSTREAM OF THE COMPRESSOR SHUT—OFF (STOP) VALVE.
- 18. SEAL ALL NEW AND EXISTING DUCTWORK JOINTS AND SEAMS IN THE AREA OF WORK.
- 19. ALL NEW RIGID SUPPLY DUCTWORK TO BE INSULATED WITH 1 1/2" FIBERGLASS

ADD NEW FILTERS TO ALL EXISTING FAN COIL UNITS ON 24TH FLOOR.

WITH VAPOR BARRIER OR LINED WITH MINIMUM 3.3 R-VALUE DUCT LINER.

## LEGEND

DUCTWORK

EXISTING
DUCTWORK
TO BE
DEMOLISHED

SOUND LINING

NEW DUCTWORK

BUCTWORK WITH

SUPPLY DIFFUSER

RETURN GRILLE

LIGHT TROFFER

LINEAR DIFFUSER

VAV BOX

FAN POWERED BOX

→ AIRFLOW SYMBOL

FLEXIBLE DUCTWORK

CONICAL T CONNECTION WITH VOLUME DAMPER

──M MOTORIZED DAMPER

DUCT CAP

DUCT CAP

Output

Duct

■ DUCT CAP
① THERMOSTAT

E EXISTING N NEW

R RELOCATED

D.G. DOOR GRILLE
W.G. WALL GRILLE

XX \— TYPE

NEW TO EXISTING CONNECTION

EQUIPMENT TAG:

1 /--- NUMBER DESIGNATION



KENT CONSULTING ENGINEERS

20 North Wacker Drive, Suite 1900

Perkins&Wil

The Wrigley Building

Suite 1600

Chicago, IL 60611

t 312.755.0770

f 312.755.0775

410 North Michigan Ave.

www.perkinswill.com

Chicago, IL 60606



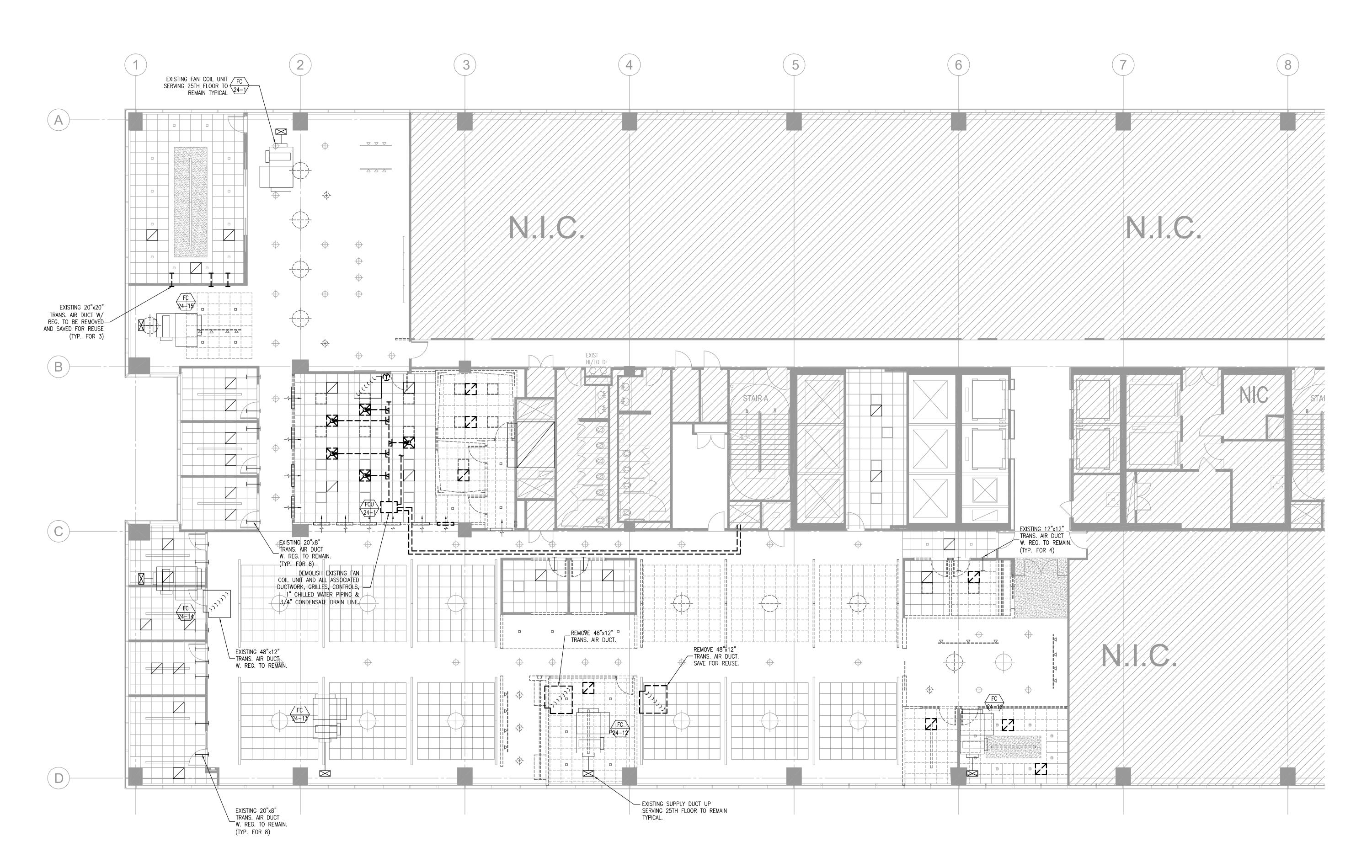
PERKINS+WILL INC #184000338-0001

540 W. MADISON
SUITE 2450
INTERIOR ALTERATION

CHICAGO, IL 60661

1	ISSUED FOR BID / PERMIT	12.20.2023
#	ISSUE	DATE
ob	Number	2640.008
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ppi	roved	SWK

LEVEL 24
MECHANICAL NOTES





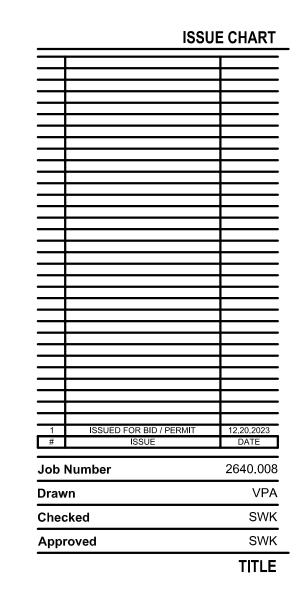






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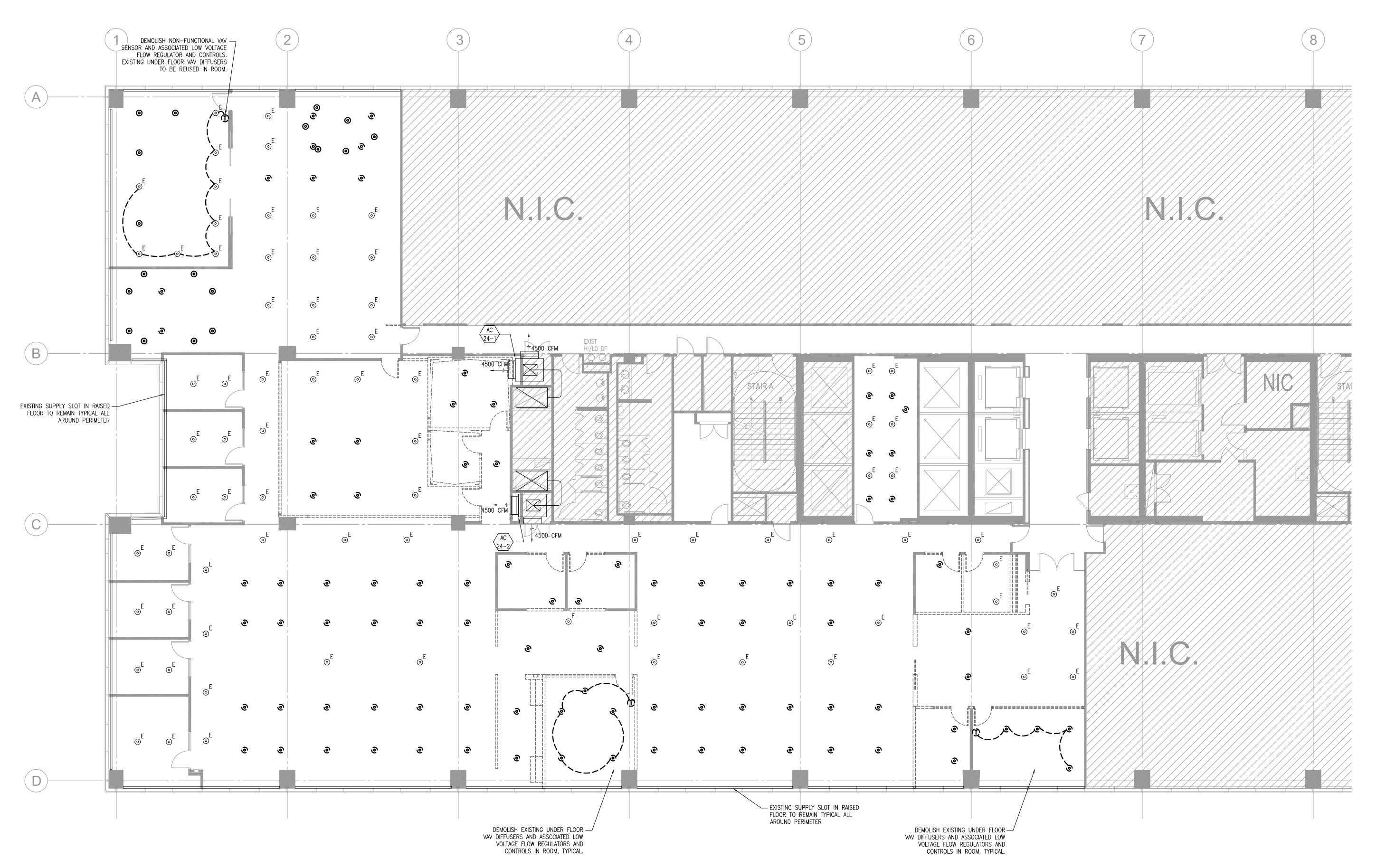
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SUITE 2450
INTERIOR ALTERATION
CHICAGO, IL 60661



LEVEL 24 MECHANICAL DEMO CEILING PLAN

SHEET NUMBER

M02-24



# N MECHANICAL DEMOLITION FLOOR PLAN 0 5ft. 10ft. 15ft. 20ft. 1/8"=1'-0" ORIGINAL SIZE PLOT

# Perkins&Will

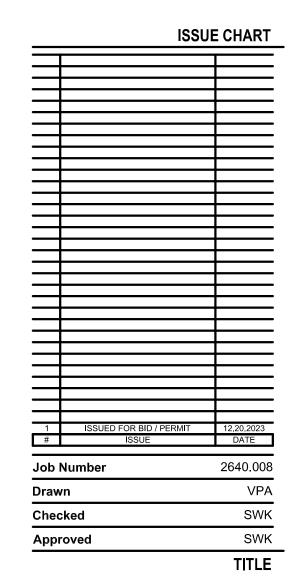
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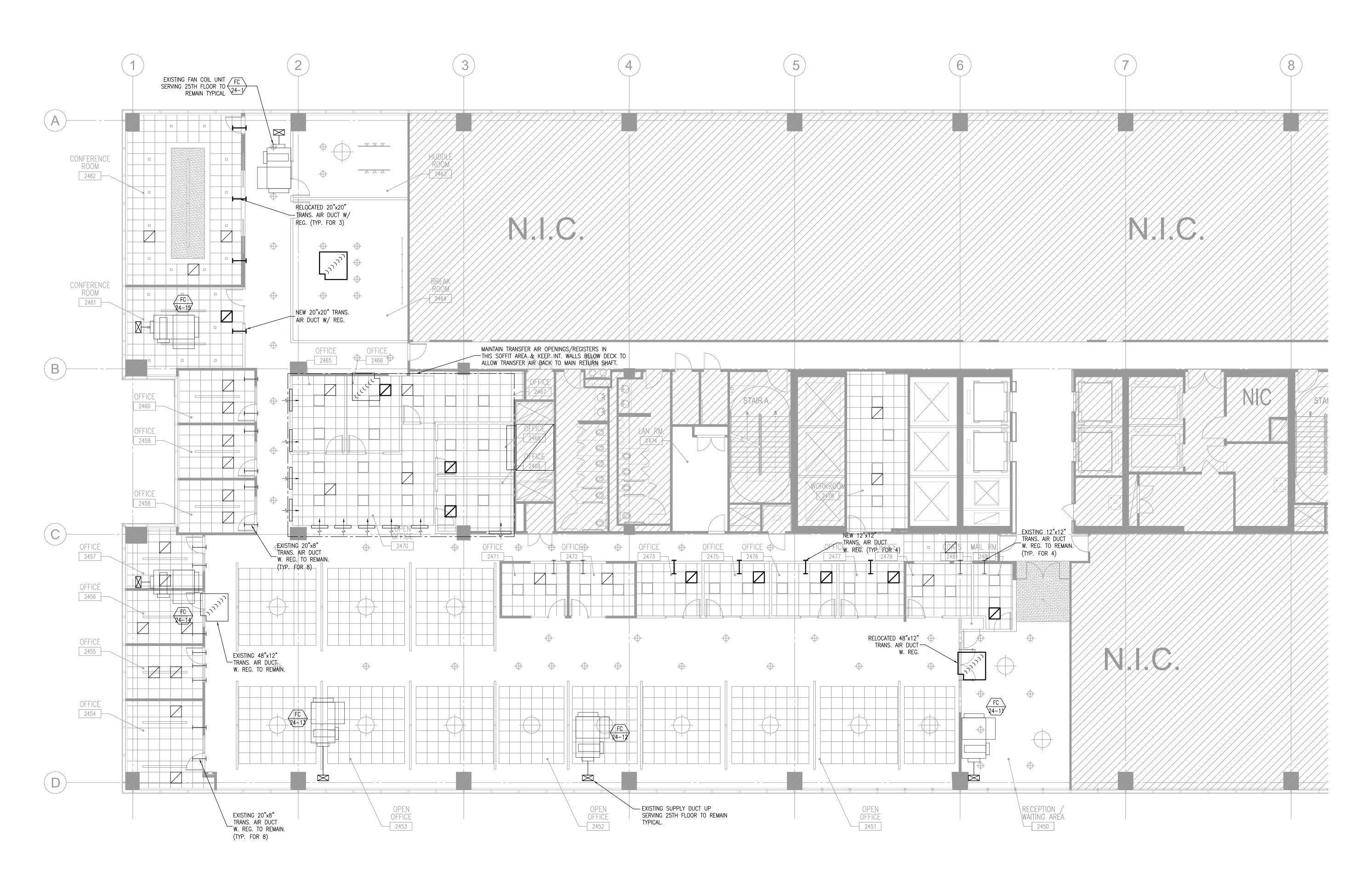
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CHICAGO, IL 60661



LEVEL 24 MECHANICAL DEMO FLOOR PLAN

SHEET NUMBER

M03-24





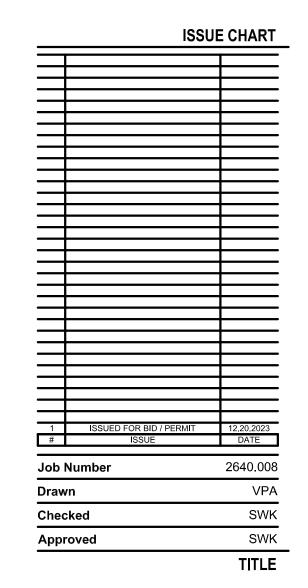
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LEVEL 24 MECHANICAL CEILING PLAN

SHEET NUMBER

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M04-24

# — UNDER FLOOR DIFFUSER— 90 CFM EACH. PROVIDE NEW / RELOCATED NAILOR NFD-VAV ROUND ACCESS DIFFUSER WITH LOW VOLTAGE ACTIVATED FLOW REGULATOR AND CONTROLS TYPICAL FOR ROOMS 2461, 2462 & 2463. CONFERENCE ROOM 2462 N.I.C. NAC. CONFERENCE ROOM 2461 EXIST HI/LO DF EXISTING SUPPLY SLOT IN RAISED — FLOOR TO REMAIN TYPICAL ALL AROUND PERIMETER OFFICE 2456 OFFICE 2455 M.I.C. OFFICE 2454 EXISTING SUPPLY SLOT IN RAISED OPEN FLOOR TO REMAIN TYPICAL ALL OFFICE AROUND PERIMETER 2451 OPEN OFFICE 2453 RECEPTION / WAITING AREA EXISTING TO REMAIN UNDER FLOOR SWIRL DIFFUSER— 90 CFM EACH TYPICAL. NEW / RELOCATED UNDER FLOOR SWIRL DIFFUSER MOUNTED IN 2x2 RAISED FLOOR TILES. 90 CFM EACH TYPICAL.

MECHANICAL FLOOR PLAN

0 5ft. 10ft. 15ft. 20ft. 1/8"=1'-0" ORIGINAL SIZE PLOT

# Perkins&Will

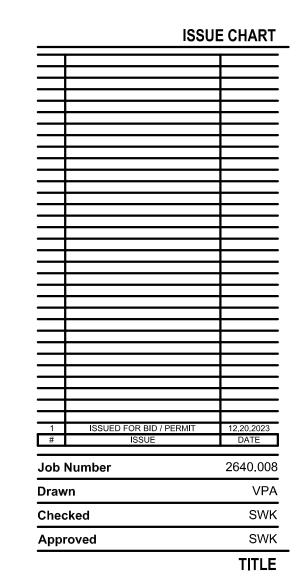
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540 W. MADISON
SUITE 2450
INTERIOR ALTERATION
CHICAGO, IL 60661



LEVEL 24 MECHANICAL FLOOR PLAN

SHEET NUMBER

M05\_2/

### **ELECTRICAL SPECIFICATION NOTES**

OF THIS CONTRACT.

- 1. THE GENERAL CONDITIONS OF THE CONTRACT AS ADOPTED BY THE ENGINEER, ARE HEREBY PART OF THESE SPECIFICATION NOTES.
- 2. ALL WORK AND MATERIAL SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE CITY OF CHICAGO 2018 ELECTRICAL CODE AND ENERGY CODE OR N.E.C. 2017, ALSO ALL AMENDMENTS PER LOCAL JURISDICTION. ALL FIRE ALARM INSTALLATION TO BE DONE PER NFPA 72 AND LOCAL FIRE DEPARTMENT CODES.
- 3. ALL MATERIAL SHALL BE UNDERWRITERS LABORATORY LISTED, AS APPROVED FOR THE PURPOSE INTENDED.
- 4. OBTAIN AND PAY ALL FEES, TAXES, AND PERMITS REQUIRED FOR ELECTRICAL WORK. PREPARE AND SUBMIT TO THE AUTHORITIES, ANY AND ALL DATA, DRAWINGS AND DETAILS WHICH MAY BE REQUIRED FOR APPROVAL PRIOR TO INSTALLATION OF SAME.
- 5. FURNISH, INSTALL AND MAINTAIN ADEQUATE TEMPORARY POWER(GFI) AND LIGHTING REQUIRED FOR CONSTRUCTION. REMOVE SAME UPON COMPLETION OF CONSTRUCTION. PAY ALL ENERGY COSTS AND ALL OWNERS PRESENT SERVICE. CONSULT WITH OWNER PRIOR TO BID.
- 6. FURNISH ALL LABOR, MATERIAL, EQUIPMENT, AND RELATED APPURTENANCES REQUIRED FOR ALL WORK INCLUDED AS PART OF THE ELECTRICAL INSTALLATION
- 7. COORDINATE ELECTRICAL WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS AND DELAYS.
- 8. FURNISH AND INSTALL ALL AUXILIARY SUPPORTS AND MATERIAL NECESSARY TO INSTALL EQUIPMENT, MATERIAL, LIGHTING DEVICES AND CONDUITS.
- 9. ALL SYSTEMS WHICH ARE INCLUDED AS PART OF THE ELECTRICAL INSTALLATION FOR THIS PROJECT, SHALL BE COMPLETE IN ALL DETAILS, INCLUDING ALL COMPONENTS REQUIRED FOR PROPER AND SATISFACTORY OPERATION.
- 10. ALL WIRE SHALL BE INSTALLED IN CONDUIT MINIMUM SIZE CONDUIT SHALL BE 3/4"C. I.D. LARGER SIZES SHALL BE USED WHERE REQUIRED BY CODE SIZED PER WIRING SECTION OF CODE. A MAXIMUM OF (9) WIRES SHALL BE INSTALLED ON ANY CONDUIT.
- 11. ALL DATA/PHONE CABLING, TV CABLING, CARD READER WIRING, SPEAKER SYSTEM WIRING TO BE PROVIDED/INSTALLED BY OTHERS. E.C. TO PROVIDE EMPTY CONDUITS. E.C. TO PROVIDE MIN. 3/4" CONDUIT. VERIFY FINAL ELECTRICAL REQUIREMENTS WITH VENDORS.
- 12. ALL WORK ABOVE CEILING TO BE INSTALLED IN CONDUIT (PLENUM RATED) LIGHTING FIXTURES, J.B., FLEX CONDUIT, FITTINGS, ETC. WHERE CODE APPLIES TO CITY OF CHICAGO.
- 13. EXACT LOCATION OF CONDUIT TERMINATIONS FOR DATA/PHONE HOMERUN CONDUITS SHALL BE COORDINATED WITH THE COMMUNICATIONS CONTRACTOR. E.C. SHALL STUB ALL CONDUITS AS REQUIRED TO THE COMMUNICATIONS CONTRACTOR AND PROVIDE AND INSULATE GROUNDING BUSHING FOR EACH CONDUIT END. NOTE: FOR PLENUM CEILING IN CITY OF CHICAGO, ALL CABLING TO BE INSTALLED IN CONDUIT. ROUTED BACK TO DATA ROOM.
- 14. ELECTRICAL METALLIC TUBING (EMT) MAY BE USED WITHIN CODE LIMITATIONS. (IMC) USED ON FEEDERS, (HWGC) USED ON FEEDERS BELOW GRADE AND SERVICE ENTRANCE LOCATIONS.
- 15. E.C. SHALL REFER TO MECHANICAL, FIRE PROTECTION, PLUMBING SHOP DRAWINGS AND CONSTRUCTION DRAWINGS FOR EXACT LOCATIONS OF ALL EQUIPMENT INCLUDING QUANTITIES, SIZES, TYPES AND VOLTAGE RATINGS PRIOR TO EQUIPMENT ORDERS AND INSTALLATION.
- 16. CONDUITS SHALL BE CONCEALED IN ALL FINISHED AREAS. IN UNFINISHED AREA, CONDUITS MAY BE RUN EXPOSED, PARALLEL WITH OR PERPENDICULAR TO BUILDING LINES.
- 17. ALL WIRE SHALL BE COPPER. MINIMUM SIZE SHALL BE #12 AWG. OVER 75'-0" #10 AWG ALL WIRE SHALL BE TYPE THHN/THWN INSULATION, 600 VOLT RATING. EXCEPT AS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. ALL FEEDERS SHALL BE INSTALLED OVERHEAD.
- 18. E.C. SHALL FURNISH AND INSTALL A COMPLETE OPERATIONAL CODE APPROVED FIRE ALARM SYSTEM AND/OR ADDITIONS INCLUDING ALL NECESSARY MATERIALS, LABOR TESTING, PROGRAMMING, MODIFICATIONS, COORDINATION, ETC. (E.C. SHALL INCLUDE ALL OF THE ASSOCIATED COST AS REQUIRED PER LAYOUT)
- 19. PROVIDE BLANK COVER FOR ALL PRESET ACTIVATIONS THAT WILL NOT BE USED IN NEW CONSTRUCTION AS REQUIRED.
- 20. PROVIDE CONDUIT CONNECTION REQUIRED FOR THE TEL/DATA CABLES FROM THE BASE BUILDING TELEPHONE ROOM TO THE TENANT EQUIPMENT AREA. COORDINATE LOCATION WITH THE ARCHITECT/OWNER. SIZE CONDUIT FOR CAT5 AND CAT6 PER ATTACHED REQUIREMENTS.

# 1 1/4" 1 1/2"

- 21. TYPICAL EXHAUST FAN TO BE CONTROLLED BY PILOT LITE SWITCH, THERMOSTAT OR SPEED CONTROL. FURNISHED/INSTALLED AND WIRED BY E.C. EXCEPT AS NOTED IN MECHANICAL EXHAUST FAN SCHEDULE. PROVIDE ENGRAVED NAMEPLATE. 22. COORDINATE WITH THE ARCHITECT FOR EXACT LOCATION OF IN-PARTITION POWER
- CIRCUIT AND TEL/DATA ACTIVATION. FIELD DRILL EXISTING UNDER FLOOR DUCT SYSTEM AND PROVIDE AFTERSET INSERT FITTINGS, BOXES, CONNECTING CONDUIT,
- 23. ELECTRICAL CONTRACTOR SHALL RECONNECT ANY EQUIPMENT AND RECEPTACLES IN AREA NOT UNDER CONSTRUCTION THAT ARE INTERRUPTED DURING DEMOLITION. 24. ELECTRICAL CONTRACTOR SHALL PROVIDE DIVIDER BETWEEN CIRCUIT BREAKERS SERVING DIFFERENT TENANTS - DROP-LINK PANEL ONLY.
- 25. PANELS SHALL BE SQUARE D, CHICAGO SWITCHBOARD CO. OR WESTINGHOUSE MANF. SQUARE D #NQOD OR EQUAL. (AIR) OF PANELS C.B., RATED PER POWER CO. AVAILABLE FAULT C., ALL C.B. TO BE BOLT-ON. BRANCH C.B. TO BE VISI-TRIP TYPE.

- 26. FURNISH AND INSTALL ALL OUTLET BOXES, PLASTER RINGS RAISED COVERS, COVER PLATES, AND SUPPORTS AS REQUIRED.
- 27. COVER PLATES SHALL BE OF THE TYPE AND FINISH TO MATCH HARDWARE. IN UNFINISHED AREAS, COVER PLATES MAY BE BLANK SHEET METAL.
- 28. WHERE (2) OR MORE DEVICES ARE INDICATED TO BE MOUNTED AT THE SAME HEIGHT. AND ARE SHOWN ON THE PLANS AS BEING CLOSE IN PROXIMITY THEY SHALL BE INSTALLED UNDER A COMMON COVER PLATE.
- 29. WALL SWITCHES SHALL BE LOCATED AS CLOSE TO DOOR JAMBS AS POSSIBLE.
- 30. OUTLETS SHALL NOT BE INSTALLED BACK TO BACK.

SYMMETRICAL AMPS PER POWER COMPANY.

- 31. GUARANTEE ALL WORK, MATERIAL, AND SYSTEMS FOR (1) YEAR FROM DATE OF FINAL
- 32. FURNISH, INSTALL, AND WIRE ALL STARTERS, MINIMUM SIZE NEMA-1 WITH THREE (3) OVERLOADS, HOA. CONTROL TRANSFORMERS AUX. CONTACTS.
- 33. FURNISH AND INSTALL ALL FUSES FOR ALL EQUIPMENT, INCLUDING EQUIPMENT FURNISHED BY OWNER AND OTHER TRADES. ALL FUSES OR CIRCUIT BREAKERS TO BE CORRECT RMS
- 34. PREPARE AND SUBMIT COMPLETE CIRCUITED AS-BUILT PLANS PRIOR TO FINAL PAYMENT. SUCH PLANS SHALL BE REPRODUCIBLE TYPE, CLEAR AND LEGIBLE, AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO FINAL PAYMENT.
- 35. VERIFY EXISTING CONDITIONS AND LOCATIONS IN FIELD PRIOR TO SUBMITTING PROPOSAL. FAILURE TO DO SO SHALL NOT RELIEVE THIS CONTRACTOR FROM PERFORMING THE WORK AS PART OF THIS CONTRACT. INCLUDE IN PROPOSAL ANY RELOCATION OR ALTERATION OF EXISTING ELECTRICAL SYSTEM, EQUIPMENT, OR COMPONENTS WHICH ARE REQUIRED TO CLEAR THE NEW CONSTRUCTION, ADDITIONS OR ALTERATIONS TO BE PERFORMED.
- 36. MAKE NECESSARY MODIFICATIONS AND ADJUSTMENTS TO ALL ELECTRICAL ITEMS AND EQUIPMENT, BOTH NEW AND EXISTING, AS IS REQUIRED BY NEW CONSTRUCTION, ADDITIONS, OR ALTERATIONS.
- ALL CUTTING, PATCHING AND CORE DRILLING REQUIRED FOR THE INSTALLATION OF EQUIPMENT AND MATERIAL INCLUDED AS PART OF THIS CONTRACT SHALL BE PROVIDED BY THIS CONTRACTOR. ALL CORE DRILLING TO BE COORDINATED WITH BUILDING ENGINEER AND OFFICE OF THE BUILDING.
- 38. EXISTING CONDITIONS OF ALL EXISTING BASE BUILDING EQUIPMENT, DEVICES, FIXTURES, AND SYSTEMS THAT REQUIRE REWIRING, REUSE, RELOCATION, OR REFURBISHING AS PER DRAWINGS AND SPECIFICATIONS SHALL BE FIELD VERIFIED BY THE E.C. PRIOR TO COMMENCEMENT OF ANY WORK TO BE COMPLETELY OPERATIONAL. E.C. SHALL SUBMIT A WRITTEN STATEMENT AND ITEMIZED LISTING OF ALL CONDITIONS OF THE FOLLOWING, ALTHOUGH NOT LIMITED TO THOSE LISTED:
  - ELECTRIC PERIMETER BASEBOARD AND/OR CEILING FAN POWER HEATING UNITS.
  - EXIT SIGNS, EMERGENCY LIGHTING FIXTURES. LIFE SAFETY/FIRE ALARM SYSTEM DEVICES
  - CORE LIGHTING AND RECEPTACLE DEVICES
- 39. NOTIFY ARCHITECT/ENGINEER, IN WRITING, OF ANY DISCREPANCIES BETWEEN ELECTRICAL WORK AND THE WORK OF OTHER TRADES PRIOR TO SUBMITTING PROPOSAL. LACK OF SUCH NOTIFICATION SHALL BE CONSTRUED TO INDICATE NO DISCREPANCIES OR CONFLICTIONS OF EXIST. ADDITIONAL COMPENSATION WILL NOT BE GRANTED AFTER AWARD OF CONTRACT FOR ANY WORK REQUIRED TO COMPLY WITH THESE REQUIREMENTS.
- DISCONNECT AT SOURCE, AND REMOVE ALL ELECTRICAL ITEMS AND EQUIPMENT INCLUDING BUT NOT LIMITED TO LIGHTING FIXTURES, WIRING DEVICES, SIGNAL SYSTEM EQUIPMENT, PANELS, CONDUITS, WIRING AND OTHER MATERIAL GENERALLY PART OF ELECTRICAL WORK WHICH ARE RENDERED OBSOLETE BY THESE ALTERATIONS AND ADDITIONS. ALL ITEMS BEING REMOVED SHALL BE STORED BY THE CONTRACTOR ON THE SITE, IN LOCATION AS DIRECTED
- 41. DISCONNECT, REMOVE, AND RELOCATE ALL EXISTING ELECTRICAL ITEMS AND EQUIPMENT INCLUDING, BUT NOT LIMITED TO LIGHTING FIXTURES, WIRING DEVICES, SIGNAL SYSTEM EQUIPMENT, PANELS, CONDUITS, WIRING AND OTHER MATERIAL GENERALLY PART OF ELECTRICAL WORK WHICH INTERFERE OR ARE INTERFERED WITH, OBSTRUCT OR ARE OBSTRUCTED BY, THESE ALTERATIONS AND ADDITIONS. PERMANENTLY INSTALL SUCH ITEMS IN NEW LOCATIONS AS DIRECTED OR AS SHOWN ON THE PLANS. PROVIDE NEW OUTLETS, CONDUITS, WIRING, E.T.C. AS REQUIRED, TO MAINTAIN PROPER OPERATIONS IN NEW
- RECEPTACLE SPEC. ITEMS: MANUFACTURER: LEVITON NORMAL DUPLEX OUTLET: #16352-W (20A-120V., WHITE), DEDICATED DUPLEX OUTLET: #16342-GY (20A-120V., GRAY), GFCI DEDICATED DUPLEX OUTLET: #7899-GY (20A-120V., GRAY) GFCI NORMAL DUPLEX OUTLET: #7899-W (20A-120V., WHITE) USB DUPLEX OUTLET (TAMPER RESISTANT): #T5832-W (20A-120V., WHITE)
- 43. E.C. SHALL FILL ALL PENETRATIONS (NEW AND EXISTING) THROUGH FIRE RATED WALLS, FLOORS AND CEILINGS WITH APPROVED FIRE STOPPING MATERIAL.
- 44. AFTER COMPLETION OF ALL REQUIRED WORK, THE E.C. SHALL OPERATE AND MAKE ANY REQUIRED ADJUSTMENT TO LIGHTING CONTROLS AS MAY BE NECESSARY TO PUT THE SYSTEMS IN A PROPER CODE COMPLIANT OPERATING CONDITION (IECC 2018). AFTER ALL ADJUSTMENTS HAVE BEEN COMPLETED THE CONTRACTOR SHALL PROVIDE A WRITTEN REPORT OF THE BASIC SYSTEM FUNCTIONALITY TO THE ENGINEERING DESIGN PROFESSIONAL ASSOCIATED WITH THIS PROJECT. TESTING SHALL ENSURE THAT ALL CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
  - A. CONFIRM THAT THE PLACEMENT, SENSITIVITY AND TIME-OUT ADJUSTMENTS FOR OCCUPANT SENSORS YIELD ACCEPTABLE PERFORMANCE.
  - B. CONFIRM THAT THE AUTOMATIC TIME SWITCHES AND PROGRAMMABLE SCHEDULE CONTROLS ARE PROGRAMMED TO TURN THE LIGHTS OFF. ANY AFTER HOURS OVERRIDE (ON) TO OPERATE FOR A MAXIMUM OF 2 HOURS.
  - C. CONFIRM THAT THE PLACEMENT AND SENSITIVITY ADJUSTMENTS FOR PHOTO SENSOR CONTROLS REDUCE ELECTRIC LIGHT BASED ON THE AMOUNT OF USABLE DAYLIGHT IN THE SPACE AS SPECIFIED.
- 45. FOR MULTI-WIRE BRANCH CIRCUITS SHARING A COMMON NEUTRAL, PROVIDE MEANS TO DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT OF ORIGIN PER N.E.C.

# **SYMBOLS**

### DEVICES \$ LIGHT SWITCH (TYPE AS NOTED)

- \$t THERMAL SWITCH (120V. 20A.)
- \$P PILOT LIGHT SWITCH
- → SINGLE RECEPTACLE → DUPLEX RECEPTACLE
- ⇒IG ISOLATED GROUND DUPLEX RECEPTACLE
- RECEPTACLE MOUNTED ABOVE COUNTERTOP
- QUADRUPLEX RECEPTACLE

← TELEPHONE/DATA OUTLET

- SPECIAL RECEPTACLE, AS NOTED
- RACEWAYS & WIRING ────── HOMERUN TO PANEL
- GROUND WIRE IN CONDUIT
- —/ NEUTRAL WIRE IN CONDUIT — / PHASE WIRE IN CONDUIT
- CONCEALED CONDUIT

# FLEXIBLE CONDUIT CONNECTION

- SPECIAL SYSTEMS SD SMOKE DETECTOR
- HEAT DETECTOR TYPE AS SCHEDULED

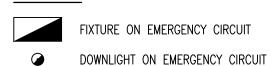
MANUAL PULL STATION

- A FIRE ALARM HORN
- FIRE ALARM VOICE COMMUNICATION SPEAKER
- FIRE ALARM VISUAL DEVICE FIRE ALARM HORN / STROBE COMBINATION
- FIRE ALARM SPEAKER / STROBE COMBINATION SOUND SYSTEM SPEAKER

# **POWER**

- NON-FUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH STARTER/DISCONNECT SWITCH
- JUNCTION BOX
- ( ) MOTOR
- GROUNDING CONNECTION
- LIGHTING OR RECEPTACLE PANELBOARD

# TRANSFORMER



ABBREVIATIONS E.C. ELECTRICAL CONTRACTOR

SINGLE-FACE EXIT SIGN

- W.P. WEATHERPROOF NEMA 3R
- N.F. NON-FUSED
- R EXISTING DEVICE TO BE REMOVED COMPLETELY
- N NEW DEVICE
- RR REMOVE AND RELOCATE

E EXISTING DEVICE

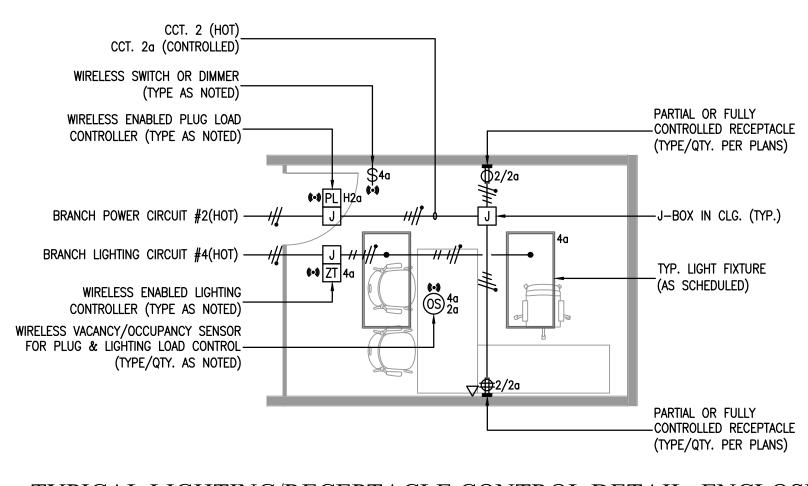
RN RELOCATED DEVICE IN NEW LOCATION

### ——SENSOR FOR PLUG & LIGHTING LOAD CONTROL. (TYPE/QTY. AS NOTED) BRANCH LIGHTING CIRCUIT #5 -- \\\ WIRELESS ENABLED LIGHTING TYP. LIGHT FIXTURE CONTROLLER (TYPE AS NOTED) (AS SCHEDULED) FULL CONTROLLED DUPLEX (TYPE/QTY. PER PLAN\$) MAX 72" (IECC) --NORMAL DUPLEX (TYPE/QTY. PER PLANS) WIRELESS ENABLED PLUG LOAD CONTROLLER (TYPE/QTY. AS NOTED) TYP. SYSTEMS FURNITURE WALL IN-FEED J.B. OR FLOOR CORE. BRANCH POWER CIRCUITS #1/3 <del>→ \\\\</del>

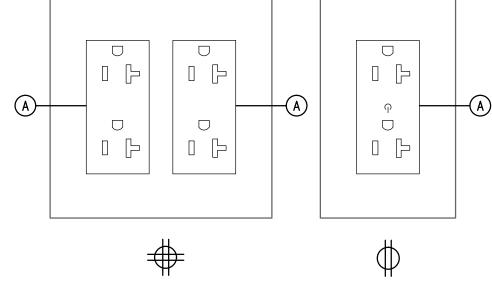
TYPICAL LIGHTING/RECEPTACLE CONTROL DETAIL: OPEN OFFICE NOT TO SCALE

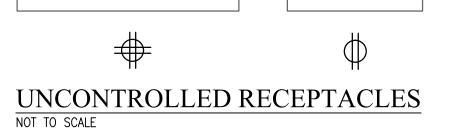
CCT.'S 1&3 (HOT)

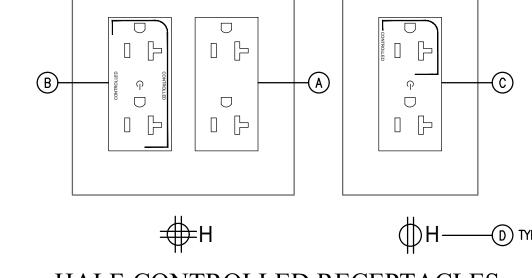
CCT.'S F/1&F/3 (CONTROLLED)



TYPICAL LIGHTING/RECEPTACLE CONTROL DETAIL: ENCLOSED AREA

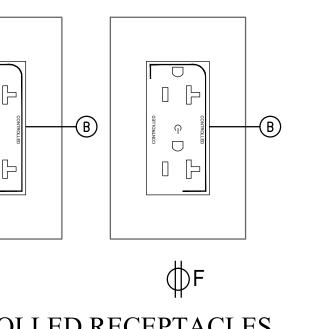




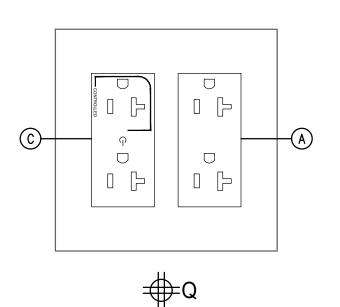


WIRELESS VACANCY/OCCUPANCY

HALF-CONTROLLED RECEPTACLES







**QUARTER-CONTROLLED RECEPTACLES** 

CONTROLLED RECEPTACLE DETAIL NOTES:

- (A) UNCONTROLLED DECORA STYLE RECEPTACLE WITH NO MARKINGS B FULL-CONTROLLED DECORA DUPLEX RECEPTACLE WITH PERMANENT
- MARKINGS PER NEC 406.3(E) C HALF-CONTROLLED DECORA DUPLEX RECEPTACLE WITH PERMANENT MARKINGS PER NEC 406.3(E)
- (D) FLOOR PLAN DESIGNATION SYMBOL AND RECEPTACLE TYPE.



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PROJECT 540 W. MADISON **SUITE 2450** INTERIOR ALTERATION CHICAGO, IL 60661

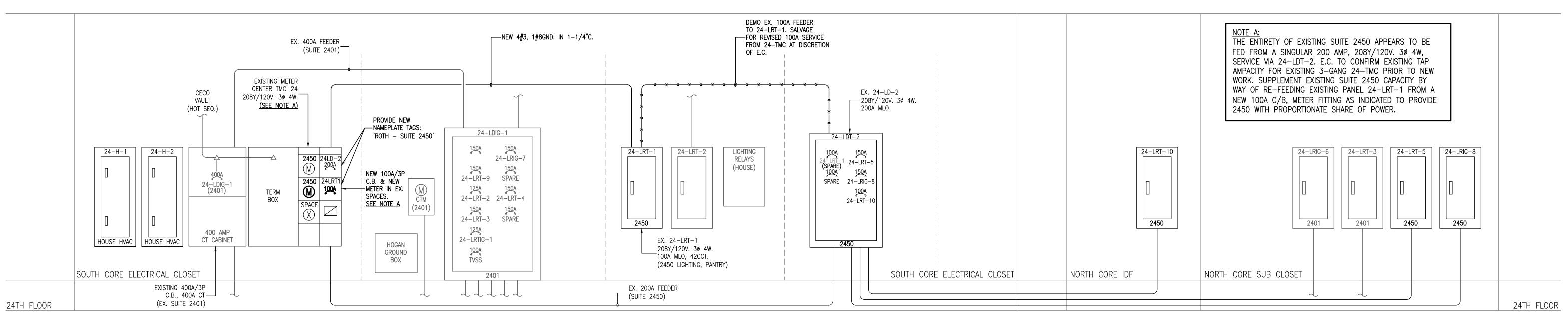
**Job Number** 2640.008 Approved

> LEVEL 24 **ELECTRICAL NOTES**

SHEET NUMBER

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# RW DEVICE IN EXISTING LOCATION, REWORKED



# ELECTRICAL RISER DIAGRAM NOT TO SCALE

EV 24 LDT 2	(. 24-LDT-2			08Y/120V.	3Ø 4W.								
EA. 24-LU1-2		MA	INS: 200A	MLO			MOL	INTING: SU	JRFACE			REMARKS:	GROUND BUS
CIDCUIT LISE	C.B. SIZE		L	DAD WAT	ΓS	CIE	C. #	L	OAD WAT	ΓS		C D CIZE	CIDCUIT LISE
CIRCUIT USE	C.B. SIZE		AØ	BØ	СØ	CIR	.C. #	AØ	BØ	CØ		C.B. SIZE	CIRCUIT USE
			0			1	2	10,620					
SPARE	100A/3P	Ε		0		3	4		12,780		Ε	20A/1P	24-LRT-5
					0	5	6			13,100			
			0			7	8	9,000					
SPARE	100A/3P	Е		0		9	10		7,020		Ε	20A/1P	24-LRIG-8
					0	11	12			6,540			
						13	14	4,360					
SPACE		Е		*************		15	16		4,360		Ε	20A/1P	24-LRT-10
						17	18			2,500			
						19	20						
SPACE		E				21	22				Ε	_	SPACE
			•			23	24						
					' '	25	26						
SPACE		E				27	28				Ε	_	SPACE
517.GL		-				29	30				_		0.7.02
					·	23	30			<u> </u>			
N: NEW C/B			PHA	ASE	AØ	В	Ø	СØ	TOTAL	WATTS			
E: EXISTING C/B				TTS	23,980		160	22,140		280			
					1,110	<u> </u>			<u> </u>				
					TOTA	LAI	/PS:	195.08		]			
						<u>- A</u>	5.	- 100.00		J			

\* EXISTING 24-LRT-1 BREAKER. PANEL 24-LRT-1 TO BE RE-FED. MARK SPARE

LOAD TYPE	LOAD WATTS	DEMAND FACTOR	DEMANI WATTS
FIRST 10KW	10000	1	10000
RECEPTACLES	60,280	0.5	30140
TOTALS	70280		40140

TV 04 LDT 4		VC	LTAGE: 20	08Y/120V.	3Ø 4W.										
EX. 24-LRT-1		MA	INS: 100A	MLO			MOU	NTING: SI	JRFACE			REMARKS: GROUND BUS			
CIRCUIT USE	C.B. SIZE	=		OAD WAT	TS	CIR	C.#	L	OAD WAT	TS		C.B. SIZE	CIRCUIT USE		
	O.B. OIL		AØ	BØ	cø			AØ	BØ	cø	<u> </u>	O.D. OILL	0110011002		
LIGHTING	20A/1P	E	1295			1	2	1086			Ε	20A/1P	LIGHTING		
LIGHTING	20A/1P	E		665		3	4		1237		Ε	20A/1P	LIGHTING		
LIGHTING	20A/1P	Е			689	5	6			1112	Е	20A/1P	LIGHTING		
X. PANTRY RECEPT.	20A/1P	Е	1000			7	8	1000			Ε	20A/1P	EX. PANTRY RECEPT.		
X. PANTRY RECEPT.	20A/1P	E		1000		9	10		1000		Ε	20A/1P	EX. PANTRY RECEPT.		
X. PANTRY RECEPT.	20A/1P	E			1000	11	12			1000	Ε	20A/1P	EX. PANTRY RECEPT.		
EX. PANTRY RECEPT.	20A/1P	E	1000			13	14	3000			_	40 A /OD	EV EWIL		
X. PANTRY RECEPT.	20A/1P	E		1000		15	16		3000		E	40A/2P	EX. EWH		
X AC UNIT IDF	20A/1P	E			500	17	18			0	Е	20A/1P	SPARE		
SPARE	20A/1P	E	0			19	20	0			Ε	20A/1P	SPARE		
SPARE	20A/1P	E		0		21	22		0		Ε	20A/1P	SPARE		
SPARE	20A/1P	Е			0	23	24			0	Ε	20A/1P	SPARE		
SPARE	20A/1P	Е	0			25	26	0			Ε	20A/1P	SPARE		
SPARE	20A/1P	E		0		27	28		0		Ε	20A/1P	SPARE		
SPARE	20A/1P	Е			0	29	30			0	Ε	20A/1P	SPARE		
SPARE	20A/1P	E	0			31	32	0			Ε	20A/1P	SPARE		
SPARE	20A/1P	E		0		33	34		0		Ε	20A/1P	SPARE		
SPARE	20A/1P	E			0	35	36			0	Ε	20A/1P	SPARE		
SPARE	20A/1P	Е	0			37	38	0			Ε	20A/1P	SPARE		
SPARE	20A/1P	E		0		39	40		0		Ε	20A/1P	SPARE		
SPARE	20A/1P	Е			0	41	42			0	Е	20A/1P	SPARE		

MAINS: 200A MLO	EX. 24-LRT-5		VC	LTAGE: 2	08Y/120V.	3Ø 4W.							1	
AØ BØ CØ CIRC.# AØ BØ CØ CIRC.# AØ BØ CØ CIRC.# AØ BØ CØ C.B. SIZE C.B. SI			MA	INS: 200A	MLO			MOU	NTING: SI	JRFACE			REMARKS:	GROUND BUS
EX. PANTRY R. GEN 20A/1P E 720 1 1 2 1080 E 20A/1P EX. OFF. R. (B-C) (1-2) EX. PANTRY R. GEN 20A/1P E 720 5 6 1080 E 20A/1P EX. OFF. R. (B-C) (1-2) EX. PANTRY R. GEN 20A/1P E 1080 7 8 1080 E 20A/1P SPARE EXCRECTT. 20A/1P E 3A/1P SPARE EXCRECTT. 20A/1P E 3A/1P SPARE EXCRECTT. 20A/1P E 3A/1P SPARE	CIRCUIT USE	C.B. SIZE	•				CIR	C. #					C.B. SIZE	CIRCUIT USE
EX. PANTRY R. GEN				AØ	ВØ	cø			AØ	BØ	cø	L	0.5. 0.22	
EX. PANTRY R. GEN  20A/1P E  1080  720  5 6  1080  E  20A/1P EX. OFF. R. (B-C) (1-2)  20A/1P E  1080  7 8 1080  E  20A/1P EX. OFF. R. (B-C) (1-2)  20A/1P E  1080  9 10  1080  E  20A/1P NEW WKSTATION R  EX. OFF. R. (C-D) (1-2)  20A/1P E  1080  1180  11 12  1440  E  20A/1P NEW WKSTATION R  NEW WK	EX. PANTRY R. GEN	20A/1P	E	720			1	2	1080			┢	20A/1P	EX. OFF. R. (B-C) (1-2)
EX. OFF. R. (C-D) (1-2)	EX. PANTRY R. GEN	20A/1P	E	•	720		3	4		1080		Ε	20A/1P	EX. OFF. R. (B-C) (1-2)
EX. OFF. R. (C-D) (1-2)	EX. PANTRY R. GEN	20A/1P	E	• • • • • • • • • • • • • • • • • • • •		720	5	6			1080	Ε	20A/1P	EX. OFF. R. (B-C) (1-2)
EX. OFF. R. (C-D) (1-2)	EX. OFF. R. (C-D) (1-2)	20A/1P	E	1080			7	8	1080			E	20A/1P	NEW WKSTATION R
NEW WKSTATION R  20A/1P	EX. OFF. R. (C-D) (1-2)	20A/1P	E		1080		9	10		1080		Ε	20A/1P	NEW WKSTATION R
NEW WKSTATION R  20A/1P	EX. OFF. R. (C-D) (1-2)	20A/1P	E			1080	11	12			1440	Ε	20A/1P	NEW WKSTATION R
NEW WKSTATION R   20A/1P   E   1080   19 20 1080   E   20A/1P   NEW WKSTATION R   NEW RECEPT.   20A/1P   E   1260   21 22   1080   E   20A/1P   NEW WKSTATION R   NEW WKSTATION R   20A/1P   E   1080   23 24   1080   E   20A/1P   NEW WKSTATION R   NEW WKSTATION R   20A/1P   E   1080   25 26 1080   E   20A/1P   NEW WKSTATION R   NEW WKSTATION R   20A/1P   E   1080   27 28   1080   E   20A/1P   NEW WKSTATION R   NEW WKSTATION R   NEW WKSTATION R   NEW WKSTATION R   20A/1P   E   1080   27 28   1080   E   20A/1P   NEW WKSTATION R   NEW WKSTATION R   NEW WKSTATION R   20A/1P   E   1440   29 30   1080   E   20A/1P   NEW WKSTATION R   NEW WKSTATION R   20A/1P   E   540   31 32   0   E   20A/1P   SPARE   NEW RECEPT.   20A/1P   E   540   33 34   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   540   33 34   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   540   33 36   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   180   37 38   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   180   37 38   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   180   37 38   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   180   37 38   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE   NEW WKSTATION R   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE   NEW WKSTATION R   NEW WKST	NEW WKSTATION R	20A/1P	Е	1440			13	14	180			Ε	20A/1P	NEW WKSTATION R
NEW RECEPT. 20A/1P E 1080 19 20 1080 E 20A/1P NEW WKSTATION R NEW RECEPT. 20A/1P E 1260 21 22 1080 E 20A/1P NEW WKSTATION R NEW WKSTATION R 20A/1P E 1080 23 24 1080 E 20A/1P NEW WKSTATION R NEW WKSTATION R 20A/1P E 1080 25 26 1080 E 20A/1P NEW WKSTATION R NEW WKSTATION R 20A/1P E 1080 27 28 1080 E 20A/1P NEW WKSTATION R NEW WKSTATION R 20A/1P E 1440 29 30 1080 E 20A/1P NEW WKSTATION R NEW WKSTATION R 20A/1P E 540 31 32 0 E 20A/1P NEW WKSTATION R NEW KSTATION R 20A/1P E 540 31 32 0 E 20A/1P SPARE NEW RECEPT. 20A/1P E 540 33 34 0 E 20A/1P SPARE NEW RECEPT. 20A/1P E 540 37 38 0 E 20A/1P SPARE NEW WKSTATION R 20A/1P E 180 37 38 0 E 20A/1P SPARE NEW WKSTATION R 20A/1P E 180 37 38 0 E 20A/1P SPARE NEW WKSTATION R 20A/1P E 180 37 38 0 E 20A/1P SPARE	NEW WKSTATION R	20A/1P	Е		1440		15	16		1080		Ε	20A/1P	NEW WKSTATION R
NEW RECEPT. 20A/1P E 1260 21 22 1080 E 20A/1P NEW WKSTATION R NEW WKSTATION R 20A/1P E 1080 23 24 1080 E 20A/1P NEW WKSTATION R NEW WKSTATION R 20A/1P E 1080 25 26 1080 E 20A/1P NEW WKSTATION R NEW WKSTATION R 20A/1P E 1080 27 28 1080 E 20A/1P NEW WKSTATION R NEW WKSTATION R 20A/1P E 1080 27 28 1080 E 20A/1P NEW WKSTATION R NEW WKSTATION R 20A/1P E 1440 29 30 1080 E 20A/1P NEW WKSTATION R NEX. RECEPT. 20A/1P E 540 31 32 0 E 20A/1P SPARE NEX. RECEPT. 20A/1P E 540 33 34 0 E 20A/1P SPARE NEX. SEC DGP 20A/1P E 540 37 38 0 E 20A/1P SPARE NEW WKSTATION R 20A/1P E 180 37 38 0 E 20A/1P SPARE NEW WKSTATION R 20A/1P E 180 37 38 0 E 20A/1P SPARE NEW WKSTATION R 20A/1P E 180 37 38 0 E 20A/1P SPARE	NEW WKSTATION R	20A/1P	E			1440	17	18			1080	Ε	20A/1P	NEW WKSTATION R
NEW WKSTATION R   20A/1P   E   1080   23 24   1080   E   20A/1P   NEW WKSTATION R     NEW WKSTATION R   20A/1P   E   1080   25 26 1080   E   20A/1P   NEW WKSTATION R     NEW WKSTATION R   20A/1P   E   1080   27 28   1080   E   20A/1P   NEW WKSTATION R     NEW WKSTATION R   20A/1P   E   1440 29 30   1080   E   20A/1P   NEW WKSTATION R     NEW WKSTATION R   20A/1P   E   540   31 32 0   E   20A/1P   SPARE     NEW WKSTATION R   20A/1P   E   540   33 34   0   E   20A/1P   SPARE     NEW WKSTATION R   20A/1P   E   540   35 36   0   E   20A/1P   SPARE     NEW WKSTATION R   20A/1P   E   180   37 38 0   E   20A/1P   SPARE     NEW WKSTATION R   20A/1P   E   180   37 38 0   E   20A/1P   SPARE     NEW RECEPT.   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE     NEW RECEPT.   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE     NEW RECEPT.   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE     NEW RECEPT.   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE     NEW RECEPT.   20A/1P   E   1,260   39 40   0   E   20A/1P   SPARE	NEW RECEPT.	20A/1P	E	1080	•		19	20	1080			Ε	20A/1P	NEW WKSTATION R
NEW WKSTATION R  20A/1P	NEW RECEPT.	20A/1P	Е		1260		21	22		1080		Ε	20A/1P	NEW WKSTATION R
NEW WKSTATION R  20A/1P	NEW WKSTATION R	20A/1P	Е			1080	23	24			1080	Ε	20A/1P	NEW WKSTATION R
NEW WKSTATION R  20A/1P	NEW WKSTATION R	20A/1P	Е	1080			25	26	1080			Ε	20A/1P	NEW WKSTATION R
EX. RECEPT. 20A/1P E 540 31 32 0 E 20A/1P SPARE  EX. RECEPT. 20A/1P E 540 33 34 0 E 20A/1P SPARE  EX. SEC DGP 20A/1P E 500 35 36 0 E 20A/1P SPARE  NEW WKSTATION R 20A/1P E 180 37 38 0 E 20A/1P SPARE  NEW RECEPT. 20A/1P E 1,260 39 40 0 E 20A/1P SPARE	NEW WKSTATION R	20A/1P	Е		1080		27	28		1080		Ε	20A/1P	NEW WKSTATION R
EX. RECEPT. 20A/1P E 540 33 34 0 E 20A/1P SPARE  EX. SEC DGP 20A/1P E 500 35 36 0 E 20A/1P SPARE  NEW WKSTATION R 20A/1P E 180 37 38 0 E 20A/1P SPARE  NEW RECEPT. 20A/1P E 1,260 39 40 0 E 20A/1P SPARE	NEW WKSTATION R	20A/1P	Е			1440	29	30			1080	Ε	20A/1P	NEW WKSTATION R
EX. SEC DGP 20A/1P E 500 35 36 0 E 20A/1P SPARE NEW WKSTATION R 20A/1P E 180 37 38 0 E 20A/1P SPARE NEW RECEPT. 20A/1P E 1,260 39 40 0 E 20A/1P SPARE	EX. RECEPT.	20A/1P	Е	540			31	32	0			Ε	20A/1P	SPARE
NEW WKSTATION R 20A/1P E 180 37 38 0 E 20A/1P SPARE NEW RECEPT. 20A/1P E 1,260 39 40 0 E 20A/1P SPARE	EX. RECEPT.	20A/1P	Е		540		33	34		0		Ε	20A/1P	SPARE
NEW RECEPT. 20A/1P E 1,260 39 40 0 E 20A/1P SPARE	EX. SEC DGP	20A/1P	Е			500	35	36			0	Е	20A/1P	SPARE
	NEW WKSTATION R	20A/1P	Е	180			37	38	0			Ε	20A/1P	SPARE
IEW WKSTATION R         20A/1P         E         1,080         41         42         0         E         20A/1P         SPARE	NEW RECEPT.	20A/1P	Е		1,260		39	40		0		Ε	20A/1P	SPARE
	NEW WKSTATION R	20A/1P	Е			1,080	41	42			0	Е	20A/1P	SPARE
	EX. SEC DGP  NEW WKSTATION R  NEW RECEPT.  NEW WKSTATION R	20A/1P 20A/1P	E	180	1,260		37 39	38 40	0	0		E	20A/1P 20A/1P	SPARE SPARE
	N: NEW C/B					AØ			CØ	<u> </u>				
	E: EXISTING C/B			WA	TTS	10,620	12,	,780	13,100	36,	500			
E: EXISTING C/B WATTS 10,620 12,780 13,100 36,500						TOTA	Ι ΔΙ	NDG.	101 31					
						IUIA	L AI	VIPO:	101.31					

EV 24 I DIC 0		VO	LTAGE: 2	08Y/120V.	3Ø 4W.									
EX. 24-LRIG-8		MA	INS: 200A	MLO			MOU	INTING: SU	JRFACE			REMARKS: GROUND BUS		
CIRCUIT USE	C.B. SIZE			OAD WAT		CID	C. #	L	OAD WAT			C.B. SIZE	CIRCUIT USE	
CIRCUIT USE	C.B. SIZE		AØ	BØ	СØ	CIN	··· #	AØ	BØ	СØ		C.B. SIZE	CIRCUIT USE	
NEW RECEPT.	20A/1P	E	1440			1	2	1440			E	20A/1P	NEW WKSTATION R	
EX. RECEPT.	20A/1P	Е		1080		3	4		1440		Ε	20A/1P	NEW WKSTATION R	
NEW RECEPT.	20A/1P	Е			1260	5	6			1440	Ε	20A/1P	NEW WKSTATION R	
NEW RECEPT.	20A/1P	E	1440			7	8	1440	• • • • • • • • • • • • • • • •		E	20A/1P	NEW WKSTATION R	
NEW RECEPT.	20A/1P	П		1080		9	10		1440		Ε	20A/1P	NEW WKSTATION R	
NEW RECEPT.	20A/1P	Е			900	11	12			1440	Е	20A/1P	NEW WKSTATION R	
NEW WKSTATION R	20A/1P	Е	1080			13	14	0			Ε	20A/1P	SPARE C-3	
NEW WKSTATION R	20A/1P	Е		1080		15	16		0		Ε	20A/1P	SPARE D-2	
SPARE B-C	20A/1P	Е			0	17	18			0	Е	20A/1P	SPARE C-4	
NEW RECEPT.	20A/1P	Е	1260			19	20	0			Е	20A/1P	SPARE (C-D) (4-5)	
NEW RECEPT.	20A/1P	Е		900		21	22		0		E	20A/1P	SPARE (C-D) (4-5)	
NEW COPIER DED.	20A/1P	Е			1500	23	24			0	Е	20A/1P	SPARE	
NEW RECEPT.	20A/1P	Е	900			25	26	0			Ε	20A/1P	SPARE	
SPARE C-D 5	20A/1P	Е		0		27	28		0		E	20A/1P	SPARE	
SPARE C-D 5	20A/1P	Е			0	29	30			0	Е	20A/1P	SPARE B-C	
SPARE C-D 5	20A/1P	Е	0			31	32	0			Ε	20A/1P	SPARE B-C	
SPARE C-D 4	20A/1P	Е		0		33	34		0		Ε	20A/1P	SPARE B-C	
SPARE C-D 4	20A/1P	Е			0	35	36			0	Ε	20A/1P	SPARE	
SPARE C-D 3	20A/1P	Е	0			37	38	0			Ε	20A/1P	SPARE	
SPARE C-D 3	20A/1P	Е		0		39	40		0		Ε	20A/1P	SPARE	
SPARE	20A/1P	Е			0	41	42			0	Е	20A/1P	SPARE	

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VOLTAGE: 208Y/120V. 3Ø 4W.

AØ BØ CØ

1000

1000

1000

MOUNTING: SURFACE

1000

1000 5 6

37 38 0

PHASE AØ BØ CØ TOTAL WATTS

WATTS 4,360 4,360 2,500 11,220

TOTAL AMPS: 31.14

 CIRC. #
 LOAD WATTS

 AØ
 BØ
 CØ

1000

REMARKS: GROUND BUS

30A/1P

30A/1P

0 | E | 30A/1P | EX. IT RECEPT.

500 E 30A/1P EX. SECURITY DGP

C.B. SIZE CIRCUIT USE

30A/1P EX. IT RECEPT.

30A/1P EX. IT RECEPT.

20A/1P EX. IT RECEPT.

30A/1P EX. IT RECEPT.

20A/1P EX. IT RECEPT.

20A/1P EX. RECEPTACLES

20A/1P EX. RECEPTACLES

SPACE

EX. L6-30R R2

MAINS: 100A MLO

30A/2P

20A/1P

20A/1P

EX. 24-LRT-10

CIRCUIT USE

EX. L6-30R R3

EX. L6-30R R3

EX. L6-30R R1

EX. L6-30R R1

EX. IT RECEPT.

EX. IT RECEPT.

EX. IT RECEPT.

SPACE

SPACE

SPACE

SPACE

SPACE

N: NEW C/B

E: EXISTING C/B

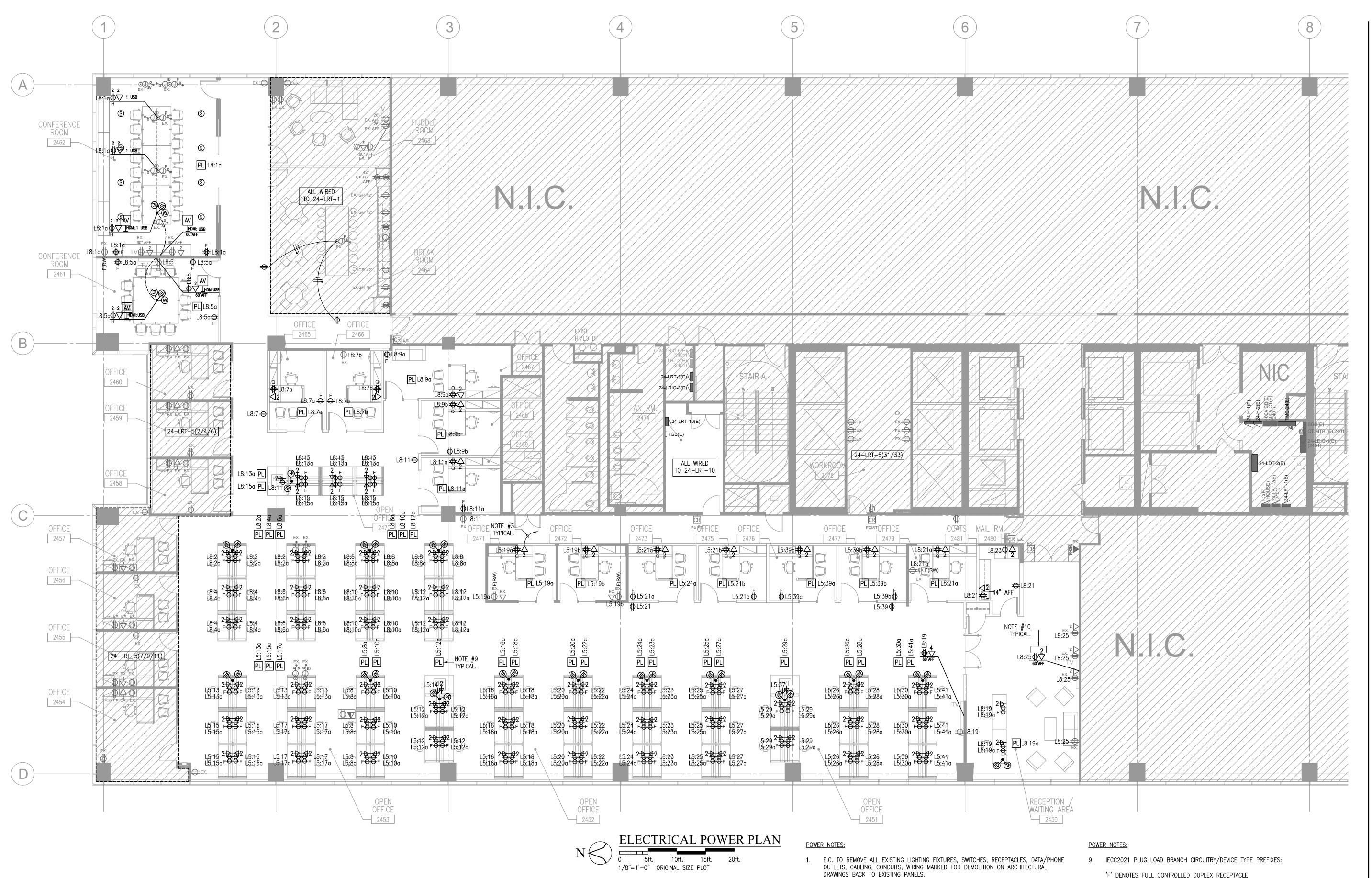
540 W. MADISON
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CHICAGO, IL 60661

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LEVEL 24
ELECTRICAL DETAILS

SHEET NUMBER

E02-24



'F' DENOTES FULL CONTROLLED DUPLEX RECEPTACLE

2. ALL CIRCUIT NUMBERS ARE ASSIGNED ARBITRARILY FOR LOAD GROUPING PURPOSES ONLY.

CIRCUIT NUMBERS SHOWN TO BE RECLAIMED ARE BASED ON EXISTING PANEL SCHEDULE,

AS-BUILT DATA AND MAY NOT REFLECT ACTUAL FIELD CONDITIONS. RECLAIM EXISTING RECEPTACLE BRANCH CIRCUITRY FROM DEMOLITION, PROVIDE NEW CONDUIT/WIRING TO

EXISTING CIRCUIT BREAKERS IN EXISTING PANELS AS REQUIRED FOR NEW WORK (SEE

INSTALLATION CONTRACTOR. E.C. TO PROVIDE EMPTY CONDUITS STUBBED INTO RAISED

FLOOR CAVITY AS REQUIRED. PROVIDE A MINIMUM OF 3/4" CONDUIT FOR NEW ROUTING.

ALL DATA CABLING ROUTED OPEN WITHIN RAISED FLOOR SUPPLY PLENUM CAVITY SHALL

ALL DATA CABLING ROUTED OVERHEAD WITHIN CEILING PLENUM RETURN SHALL BE

3. E.C. TO REFER TO ARCHITECT'S DRAWINGS FOR KEY NOTES FOR HEIGHTS OF ALL

4. ALL WORK WITHIN CONCEALED PLENUM CEILING AREAS SHALL BE PLENUM RATED PER

5. E.C. TO PROVIDE NEW TYPED PANEL DIRECTORY FOR ALL PANELS IMPACTED BY NEW

6. ALL POWER & LOW VOLTAGE SHALL BE ROUTED WITHIN THE RAISED FLOOR CAVITY. ALL

7. E.C. TO ROUTE ALL NEW ELECTRICAL CONDUITS IN CEILING HIGH AND TIGHT TO DECK IN A NEAT, UNOBTRUSIVE, WORKMANLIKE MANNER. PAINT CONDUITS AND CONDUIT SUPPORT

8. E.C. TO UTILIZE EXISTING JUNCTION BOX / TERMINAL BLOCK TECHNOLOGY CENTER FLOOR GRID SYSTEM FOR ALL NEW BRANCH CIRCUITRY WHEREVER POSSIBLE. PROVIDE CLOSE OUT AS-BUILT DRAWINGS WITH UPDATED CIRCUITRY TO LANDLORD, TENANT AND ENGINEER

ASSEMBLIES, JUNCTION BOXES TO MATCH ADJACENT CEILING FINISHES.

THAT REFLECTS POST CONSTRUCTION FIELD CIRCUITRY CONDITIONS.

WORK. REMOVE ALL OLD OR UNUSED TENANT NAMES OR MARKINGS. (PENCIL, MARKER

WORK SHALL BE CITY OF CHICAGO APPROVED, PLENUM RATED, FIRE-RATED. COORDINATE NEW STUB LOCATIONS WITH FURNITURE VENDOR, ARCHITECT PRIOR TO NEW ROUGH-IN

WORK. ALL CONDUIT PENETRATIONS THROUGH RAISED FLOOR TILES SHALL BE SEALED AIR

BE EITHER PLENUM RATED OR ROUTED WITHIN CONDUIT.

VERIFY FINAL ELECTRICAL REQUIREMENTS WITH VENDORS. SIZE FOR CATEGORY-6 CABLING

NOTE #9). PROVIDE AND INSTALL ALL NEW CONDUIT & WIRING AS REQUIRED FOR A COMPLETE POWER SYSTEM WIRED TO EXISTING PANELS AS INDICATED ON PLANS.

3. ALL DATA AND TELEPHONE CABLING TO BE PROVIDED AND INSTALLED BY CABLING

MIN. WIRE #12 OVER 75'-0" #10

MAX. (6) CIRCUITS PER HOME RUN

MIN. 3/4" CONDUIT

TO A MAXIMUM OF:

INSTALLED IN CONDUIT.

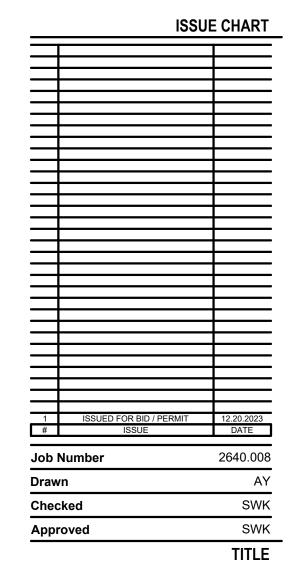
TAGS, ETC.)

TIGHT, FIRE STOPPED.

THE CITY OF CHICAGO ELECTRICAL CODE.

(4) CABLES PER 3/4" CONDUIT (7) CABLES PER 1" CONDUIT (12) CABLES PER 1 1/4" CONDUIT (16) CABLES PER 1 1/2" CONDUIT (27) CABLES PER 2" CONDUIT

- 'H' DENOTES HALF CONTROLLED SPLIT DUPLEX RECEPTACLE 'Q' DENOTES QUARTER CONTROLLED QUAD RECEPTACLE (1 UNCONTROLLED & 1 HALF CONTROLLED DUPLEX)
- PROVIDE PLUG LOAD CONTROLLERS (1 PER SWITCH LEG) REFERENCE LIGHTING DRAWINGS FOR ADDITIONAL INFORMATION. LOCATIONS SHOWN FOR REFERENCE PURPOSES ONLY. E.C. TO DETERMINE FINAL LOCATIONS. LOCATE ADJACENT TO LIGHTING POWER PACKS. LOCATE ALL WIRELESS PLUG LOAD CONTROLLERS WITHIN NEW JUNCTION BOXES IN RAISED FLOOR CAVITY (WITH REMOTE ANTENNAE KNOCKOUTS) WIRED
- 10. PROVIDE LEGRAND/CHIEF #PAC525 SERIES IN-WALL TELEVISION BOX AT ALL NEW TELEVISION LOCATIONS.
- (WHERE NOTED AT QUAD PROVIDE 1 FULL CONTROLLED & 1 NORMAL DUPLEX)
- BETWEEN THE EXISTING JUNCTION BOX GRID SYSTEM AND THE LOAD.



Perkins&Will

PROFESSIONAL ENGINEER OF

**PROJECT** 

**SUITE 2450** 

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CHICAGO, IL 60661

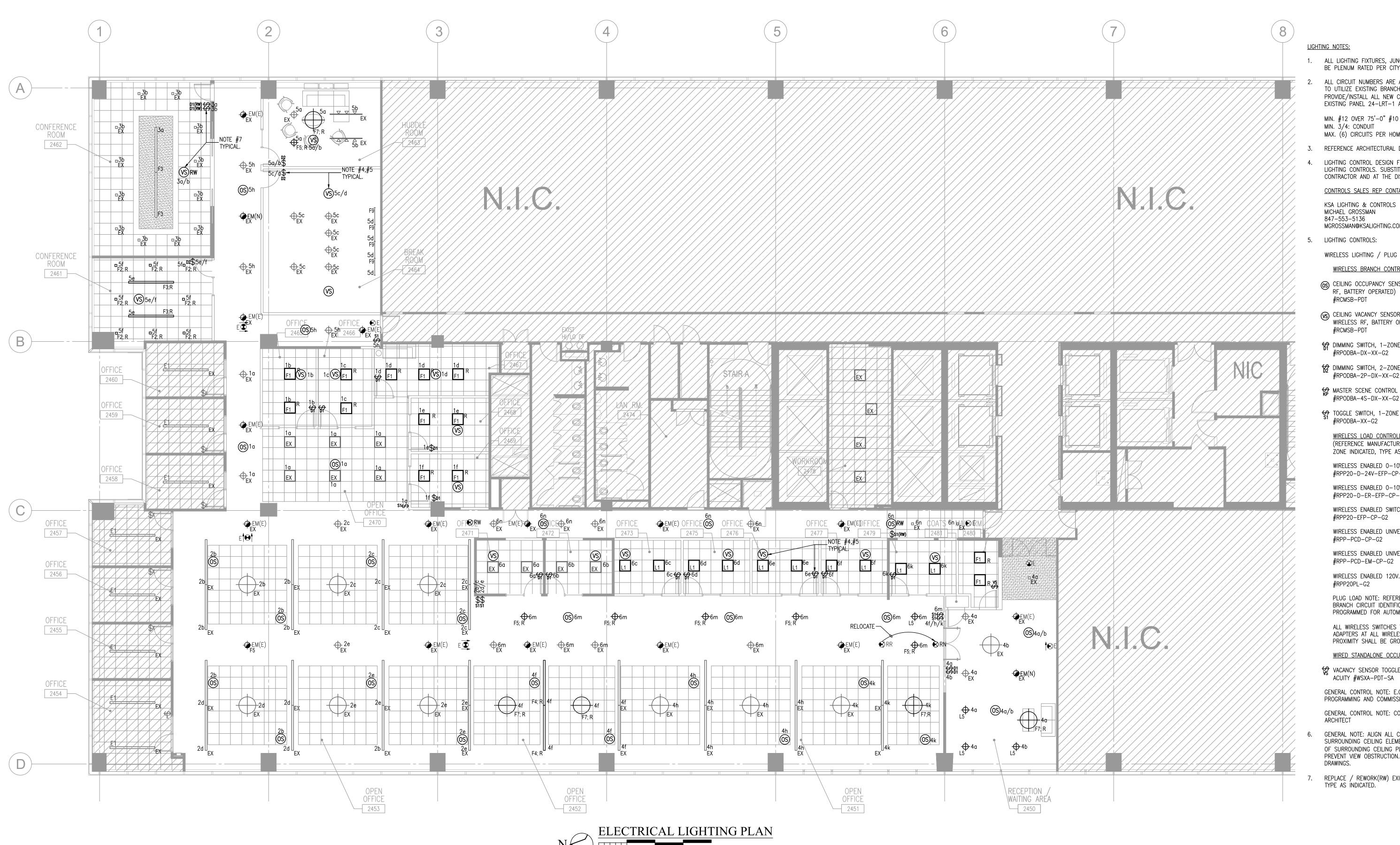
INTERIOR ALTERATION

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LEVEL 24 **ELECTRICAL POWER** 

SHEET NUMBER



1/8"=1'-0" ORIGINAL SIZE PLOT

**LIGHTING NOTES:** 

- 1. ALL LIGHTING FIXTURES, JUNCTION BOXES, ETC. ABOVE CONCEALED PLENUM CEILING AREAS TO BE PLENUM RATED PER CITY OF CHICAGO ELECTRICAL CODE.
- ALL CIRCUIT NUMBERS ARE ASSIGNED ARBITRARILY FOR LOAD GROUPING PURPOSES ONLY. E.C. TO UTILIZE EXISTING BRANCH CIRCUITRY RECLAIMED FROM DEMOLITION FOR ALL NEW WORK. PROVIDE/INSTALL ALL NEW CONDUIT/WIRING FOR A COMPLETE LIGHTING SYSTEM WIRED TO EXISTING PANEL 24-LRT-1 AS INDICATED.
- MIN. #12 OVER 75'-0" #10 WIRE MIN. 3/4: CONDUIT
- MAX. (6) CIRCUITS PER HOMERUN
- REFERENCE ARCHITECTURAL DRAWINGS FOR LIGHT FIXTURE SPECIFICATIONS AND FIXTURE TAGS.
- LIGHTING CONTROL DESIGN FUNCTIONALITY IS BASED ON ACUITY NAIR GENERATION 2 WIRELESS LIGHTING CONTROLS. SUBSTITUTIONS MAY BE ACCEPTED AT THE REQUEST OF THE ELECTRICAL CONTRACTOR AND AT THE DISCRETION OF THE DESIGN ENGINEER.
- CONTROLS SALES REP CONTACT:
- KSA LIGHTING & CONTROLS MICHAEL GROSSMAN
- 847-553-5136 MGROSSMAN@KSALIGHTING.COM
- LIGHTING CONTROLS:
- WIRELESS LIGHTING / PLUG LOAD CONTROLS (IECC 2021 COMPLIANT): WIRELESS BRANCH CONTROL DEVICES:
- ©S CEILING OCCUPANCY SENSOR (AUTO-ON LIGHTING AND PLUGLOAD PROGRAMMING, WIRELESS RF, BATTERY OPERATED) #RCMSB-PDT
- (S) CEILING VACANCY SENSOR (MANUAL-ON LIGHTING, AUTO-ON PLUGLOAD PROGRAMMING, WIRELESS RF, BATTERY OPERATED) #RCMSB-PDT
- DIMMING SWITCH, 1-ZONE WITH RAISE/LOWER (WIRELESS RF, BATTERY) #RPODBA-DX-XX-G2
- DIMMING SWITCH, 2-ZONE WITH RAISE/LOWER (WIRELESS RF, BATTERY) #RPODBA-2P-DX-XX-G2
- MASTER SCENE CONTROL SWITCH (WIRELESS RF, BATTERY OPERATED) #RPODBA-4S-DX-XX-G2
- TOGGLE SWITCH, 1-ZONE ON/OFF ONLY (WIRELESS RF, BATTERY OPERATED) #RPODBA-XX-G2

WIRELESS LOAD CONTROLLERS (PLAN LOCATIONS NOT SHOWN):

(REFERENCE MANUFACTURER SHOP DRAWINGS. PROVIDE ONE PER LIGHTING / PLUG LOAD ZONE INDICATED, TYPE AS REQUIRED):

WIRELESS ENABLED 0-10V. DIMMING LOAD CONTROLLER #RPP20-D-24V-EFP-CP-G2

WIRELESS ENABLED 0-10V. DIMMING LOAD CONTROLLER WITH UL924 EMERGENCY #RPP20-D-ER-EFP-CP-G2

WIRELESS ENABLED SWITCHING ONLY LOAD CONTROLLER #RPP20-EFP-CP-G2

WIRELESS ENABLED UNIVERSAL PHASE DIMMING LOAD CONTROLLER

#RPP-PCD-CP-G2 WIRELESS ENABLED UNIVERSAL PHASE DIMMING LOAD CONTROLLER WITH UL924 EMERGENCY

#RPP-PCD-EM-CP-G2 WIRELESS ENABLED 120V., 20 AMPERE PLUG LOAD CONTROLLER (MOUNT IN PLENUM J.B.)

#RPP20PL-G2 PLUG LOAD NOTE: REFERENCE ELECTRICAL POWER PLAN FOR CONTROLLED RECEPTACLE BRANCH CIRCUIT IDENTIFICATION. ALL OCCUPANCY BASED PLUG LOAD CONTROL SHALL BE

PROGRAMMED FOR AUTOMATIC-ON FUNCTIONALITY. ALL WIRELESS SWITCHES TO BE INSTALLED PERMANENTLY. PROVIDE WALL PLATE / BOX

ADAPTERS AT ALL WIRELESS WALL LOCATIONS. MULTIPLE DEVICES SHOWN IN CLOSE PROXIMITY SHALL BE GROUPED TOGETHER UNDER A COMMON FACEPLATE.

WIRED STANDALONE OCCUPANCY CONTROLS ♥ VACANCY SENSOR TOGGLE SWITCH (WIRED, 120V.. MINIMUM 5 AMP CAPACITY)

GENERAL CONTROL NOTE: E.C. TO INCLUDE COST ALLOWANCE FOR MANUFACTURER ON-SITE PROGRAMMING AND COMMISSIONING OF THE LIGHTING CONTROL SOLUTION.

GENERAL CONTROL NOTE: CONFIRM DESIRED PLATE AND CONTROL DEVICE FINISHES WITH

GENERAL NOTE: ALIGN ALL CEILING LIGHTING CONTROL DEVICES, EXIT SIGNAGE LOCATIONS WITH SURROUNDING CEILING ELEMENTS. TOP OF ALL EXIT SIGN FACEPLATES SHALL BEGIN AT BOTTOM OF SURROUNDING CEILING PLANE ELEMENT (LIGHT FIXTURES, CLOUDS, ETC) SO AS TO PREVENT VIEW OBSTRUCTION. COORDINATE ALL FINAL MOUNTING HEIGHTS WITH ARCHITECTURAL

REPLACE / REWORK(RW) EXISTING CONTROL DEVICE / ROUGH-IN LOCATION WITH NEW DEVICE. TYPE AS ÍNDICATED.

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540 WEST MADISON

CHICAGO, IL 60661 (312) 374.2801 CONTACT: COURTNEY HAMM





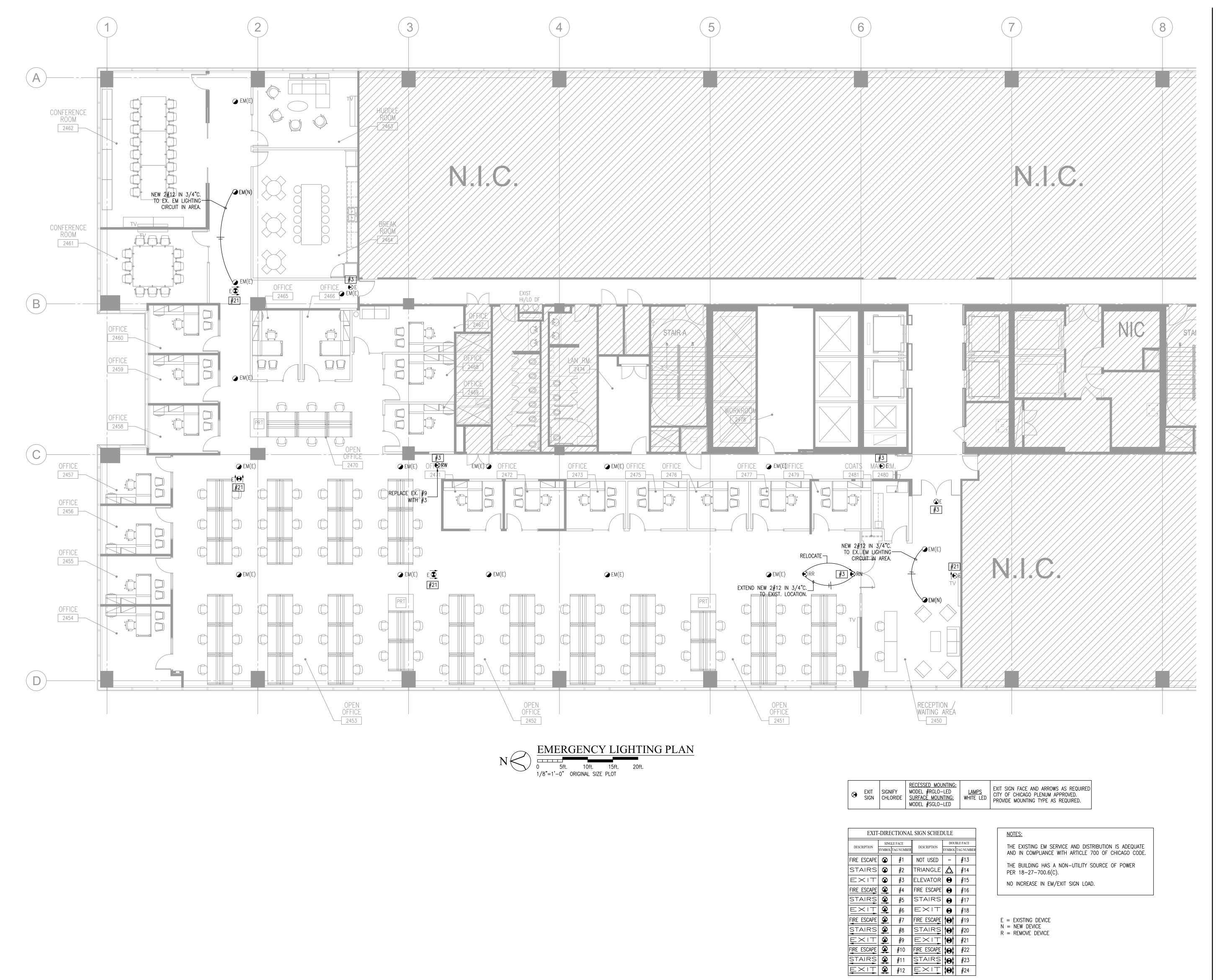
PERKINS+WILL INC #184000338-0001

**PROJECT** 540 W. MADISON **SUITE 2450** INTERIOR ALTERATION CHICAGO, IL 60661

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LEVEL 24 **ELECTRICAL LIGHTING** 

SHEET NUMBER



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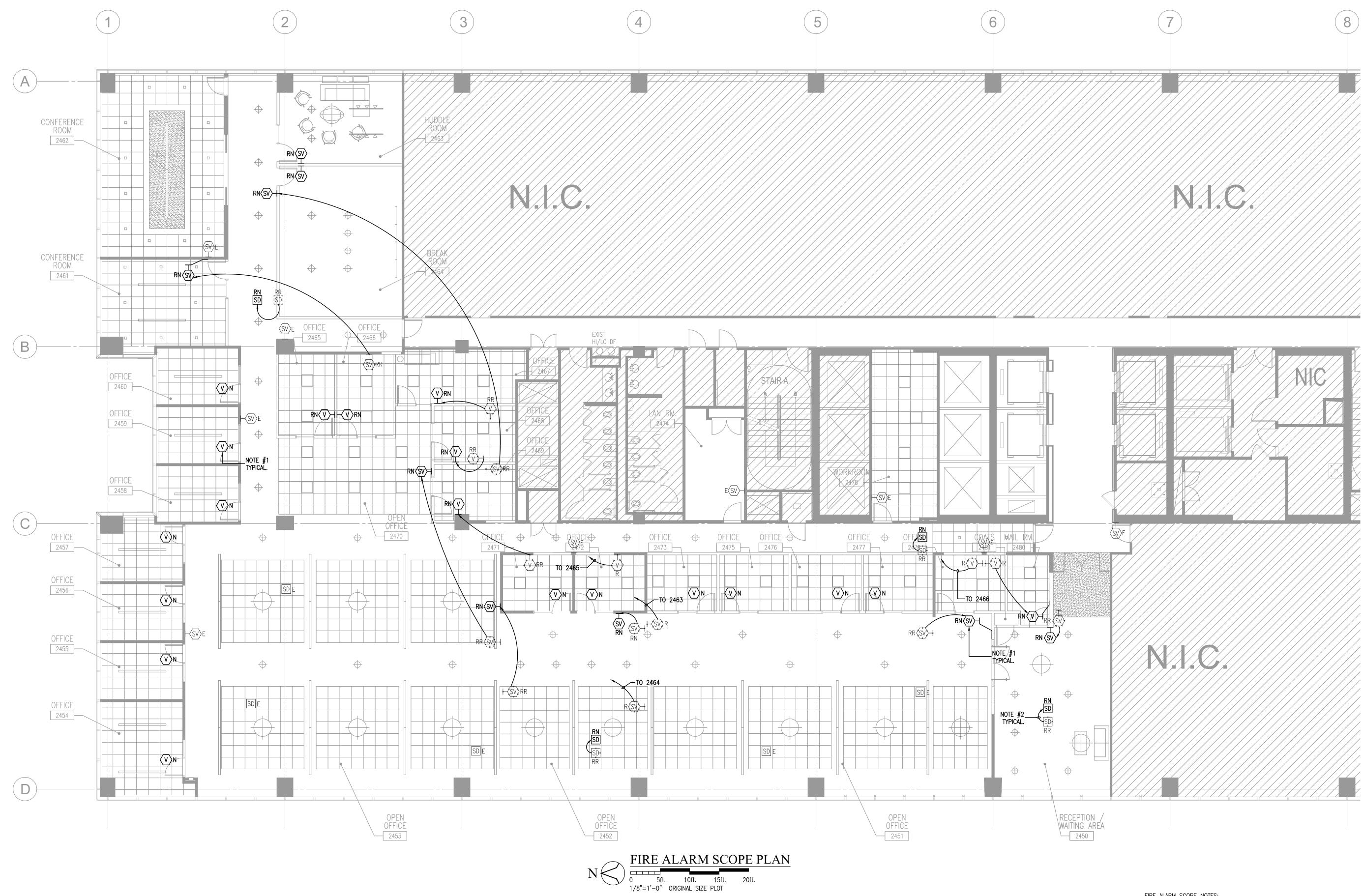
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LEVEL 24 EMERGENCY LIGHTING PLAN

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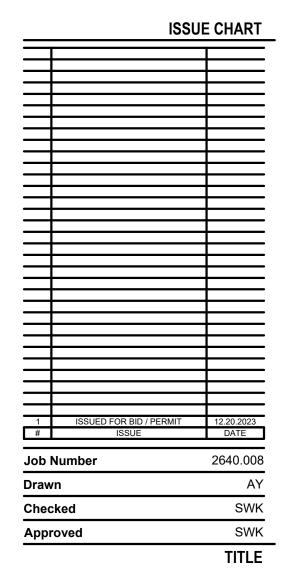


PERKINS+WILL INC #184000338-0001

PROJECT 540 W. MADISON **SUITE 2450 INTERIOR ALTERATION** CHICAGO, IL 60661

# FIRE ALARM SCOPE NOTES:

- 1. EXISTING(E) FIRE ALARM DEVICES TO REMAIN AS SHOWN. PROVIDE NEW CONDUIT AND WIRING AS REQUIRED FOR NEW(N) OR RELOCATED(RN) FIRE ALARM DEVICES. RECONNECT INTO EXISTING FIRE ÀLARM SYSTEM. RELOCATED WALL MOUTNED FIRE ALARM DEVICES SHALL BE MOUNTED 80" A.F.F. TO MATCH BUILDING STANDARD AND LATEST ADA APPROVED. PROVIDE FIRE ENGINE RED FINISH RING AS REQUIRED TO ACCOMMODATE SHALLOW WALL DEPTH. ALL DEVICES, JUNCTION BOX COVERS SHALL BE RED IN COLOR. VERIFY ALL FINAL TERMINATION POINTS AND DETAILS FOR CONNECTION INTO EXISTING FIRE ALARM SYSTEM WITH BUILDING ENGINEER BEFORE BID. UPON COMPLETION OF WORK, SYNCHRONIZE NEW AND EXISTING FIRE ALARM DEVICES IN THE SPACE.
- 2. RELOCATE (RN) EXISTING CEILING MOUNTED SMOKE DETECTOR INTO NEW CEILING CONDITION AS INDICATED. PROVIDE NEW CONDUIT AS NECESSARY. RECONNECT INTO EXISTING ADDRESSABLE DETECTION LOOP ON FLOOR.



LEVEL 24 **ELECTRICAL LIGHTING** 

SHEET NUMBER