

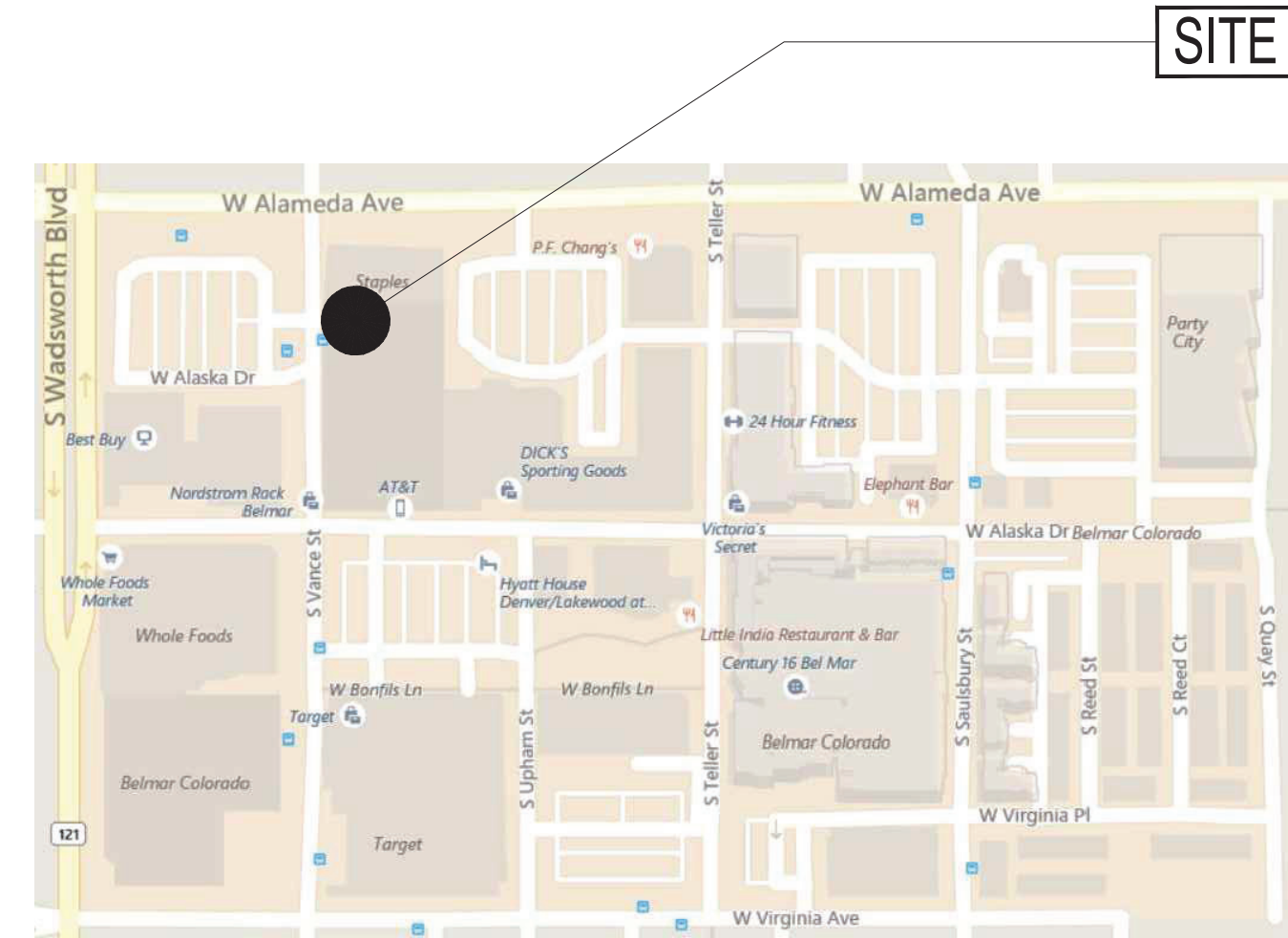
BELMAR MALL

TENANT IMPROVEMENTS

330 South Vance Street
Lakewood, CO 80226

FOR PERMIT
PLAN CHECK REV 1
March 13, 2023

VICINITY MAP



SITE

2 VICINITY MAP
NOT TO SCALE

LEGEND

- BUILDING SECTION
- WALL SECTION
- BUILDING ELEVATION
- INTERIOR ELEVATION
- DETAIL SECTION
- WALL TYPE
- DETAIL TAG
- ROOM NAME AND NUMBER
- DOOR NUMBER (KEY TO ROOM NO.)
- REVISION NOTE
- ELEVATION TAG

CODE SUMMARY - GENERAL

Project Address: Belmar Mall
330 South Vance Street
Lakewood, CO 80226

Occupancy Type: S-2 - Open Parking Garage
S-1 - Storage
M - Mercantile
B - Business

Construction Type: Table 601: Type I-B - Sprinklered, Refer to NFPA 13 and IBC, Section 903.3.1.1.

Building Height: 27'-0" Above Average Grade, Four Levels
(Total Allowable Height to comply with Table 503. Sprinkler Increase, Section 504.2.)

Building Area: 463,490 SF

Required Fire Resistance Ratings (in hours):
Type I-B, Table 601
2-Hour: Structural Frame: Including columns, girders and trusses
Bearing Walls (Exterior)
Per Table 602: Nonbearing Walls and Partitions (Exterior)
2-Hour: Bearing Walls (Interior)
Non-rated: Nonbearing Walls and Partitions (Interior)
2-Hour: Floor Construction and Secondary Members (supporting beams and joists)
1-Hour: Roof Construction and Secondary Members (supporting beams and joists)

Fire District: West Metro Fire Protection District

ADA General Site Note: Along accessible means of travel, all cross slopes shall be less than 2% perpendicular to the direction of travel, slopes parallel to the direction of travel shall be less than 5% and there shall be no more than 1/4" vertical or 1/2" beveled transition at all finished surfaces.

CODE SUMMARY - TENANT

Project Area: 2,599 SF
Occupancy Type: B - Business
Occupant Load: 37 Occupants: 1,288 SF/50 SF per Occupant = 26 Occupants, 676 SF/100 SF per Occupant = 7 Occupants,
(2) Treatment Rooms/2 Occupants Each = 4 Occupants, (2) 64 SF Restrooms

Project Scope: The scope of work includes the construction of a new business on the ground floor. Included in the scope are new storefront doors, rear egress doors and hardware, interior partitions, finishes, lighting, mechanical, electrical and plumbing work.

Exiting: One (1) exit is required from the space. Minimum exit door width: 36".
All door hardware shall conform to requirements of IBC 1008.1.9, ADAAG and ANSI 117.1.
Exit doors shall not require more than one (1) operation and will be operable from within with minimal effort and without keys.
Existing under Core and Shell, modified as required by scope of work via deferred submittal.
To be submitted directly by Contractor of Record.

Fire Sprinkler System: Contractor to provide Wall-Mounted Portable Fire Extinguishers: Class 2A Rating, Light Hazard Occupancy.

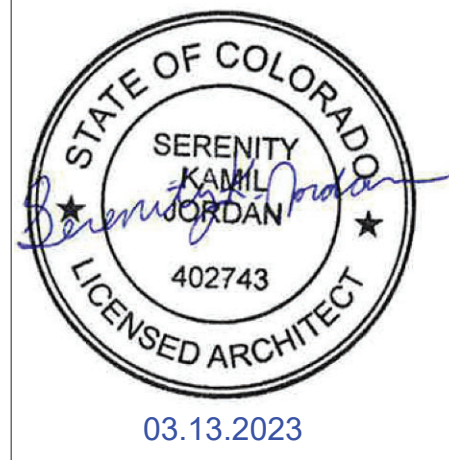
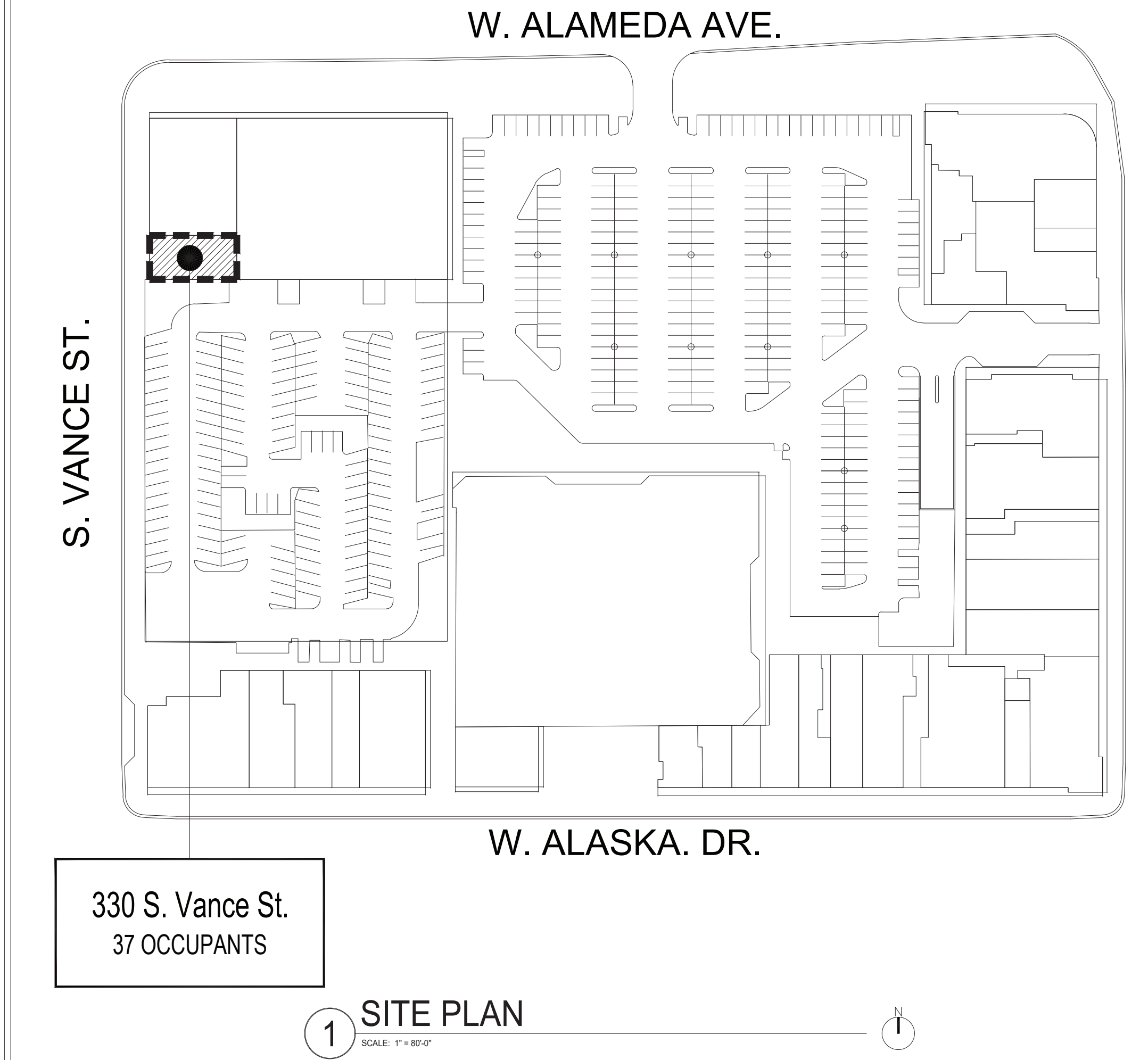
Plumbing Calculations: Two (2) Accessible Unisex Restrooms to be provided. Per Table 2902.1: Required drinking fountains may be substituted with a water dispenser for an occupant load of 50 or fewer.

GENERAL NOTES

- All Construction shall comply with the codes referenced herein, and all applicable local, state and federal regulations having jurisdiction.
Primary Codes: 2015 International Building Code
Secondary Codes: 2015 Existing Building Code
2018 International Plumbing Code
2015 International Mechanical Code
2018 International Fuel Gas Code
2015 International Energy Conservation Code
2015 International Fire Code
2020 National Electric Code
Lakewood Amendments to the Building Codes
ICC/ANSI A117.1-2009 Accessible and Usable Buildings and Facilities.
Americans with Disabilities Act of 1990
- The Contractor shall provide all necessary temporary barriers, lighting, covering and fire prevention necessary for the safety of all personnel and the property throughout the duration of the construction contract.
- Refer to technical specifications for additional requirements.
- The Contractor shall investigate, verify and be responsible for all conditions of the project and shall notify the Architect or Owner's Representative of conditions requiring modifications or any discrepancies between the drawings and existing conditions prior to proceeding with work.
- Contractor to protect all in place construction, landscaping, paving, utilities, etc. from damage during construction. All existing construction that is damaged is to be restored to original condition by the Contractor damaging the same.
- Contractor shall coordinate all Mechanical and Electrical floor and wall sleeves and all Mechanical shafts with Mechanical, Plumbing, Fire Protection, Electrical and Architectural Drawings.
- Should any conflict occur, between MEP and Architectural drawings, the Architectural drawings shall supercede all others. Contractor shall notify Architect or Owner's Representative immediately for interpretation.
- Coordinate placement of all ceiling elements with Mechanical, Electrical and Fire Protection installer. Where discrepancies exist between drawings and installation, consult the Architect prior to proceeding.
- Contractor to verify exact location of all utility lines and intercept as required to keep all piping as close to walls and as high to underside of structure as possible.
- Any conduit or utility not used shall be capped below slab or run above and terminated as directed by Owner's Representative and shown on As-Built Drawings.
- All penetrations of ductwork, conduit, piping and similar work through fire rated assemblies shall be sealed to maintain the fire rating of the assembly with a UL approved material.
- All equipment installed in return air plenum shall be approved by the appropriate governing agency for compliance with code.
- All equipment, fixtures and materials shall be listed by Underwriters Laboratories (U.L.).
- A Finish or Fire rating indication on a wall shall mean that the entire length of wall is to be finished or fire rated as indicated.
- Notes appear on various sheets for different systems and construction materials. All sheets are to be reviewed and notes on any one sheet are to be applied to all related drawings and systems.
- Details not shown are similar in character to those detailed.
- Do not scale drawings.
- Partitions are dimensioned to face of stud unless noted otherwise.
- Door openings that are not dimensionally located are to be centered between walls or positioned with one jamb 4" from an adjacent wall or column as shown on the plans and/or determined from the details.
- All dissimilar metals shall be effectively isolated from each other to avoid molecular breakdown.
- Provide illuminated signage, directional signs and emergency lighting (interior and exterior) at all exits as required by law. Exit illumination, exit signage and separate power sources shall conform to the requirements per Section 1008 'Means of Egress Illumination', per the IBC 2015 Edition. Refer to Electrical drawings for locations, circuit information and Fixture Schedule for Secondary (Battery Pack) Fixtures' power sources.
- Manufacturer's nameplates, trademarks, logos or their identification shall not be visible in public areas.
- Provide blocking as required for wall mounted items.
- All interior glass shall be tempered or laminated.
- All welding shall be performed by certified welders.
- All switches and controls for lights, heat, ventilation, fire alarms and all other similar controls of frequent or essential use shall be placed within reach for individuals in wheelchairs as required by accessibility guidelines.

DRAWING INDEX

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A0.3	ANSI 117.1 DETAILS ARCHITECTURAL	03.13.2023
A1.0	FLOOR PLAN, SCHEDULES & NOTES	03.13.2023
A1.1	RCP, NOTES & LEGEND	03.13.2023
A1.2	FINISH PLAN, SCHEDULE, NOTES & INTERIOR FINISH SPECIFICATIONS	03.13.2023
A1.3	FF&E PLAN	03.13.2023
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P0.0	PLUMBING COVER SHEET	03.13.2023
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E2.1	ELECTRICAL LIGHTING PLAN	03.13.2023
E3.0	ELECTRICAL COMPLIANCE REPORT	03.13.2023



BELMAR MALL
TENANT IMPROVEMENTS
330 South Vance Street,
Lakewood, CO 80226

OWNER/TENANT
PHYSICAL REHABILITATION NETWORK
CARLSBAD, CA
ARCHITECT | TENANT IMPROVEMENTS
ROTHSCHILD DOWNES
ENGLEWOOD, CO
MECHANICAL, ELECTRICAL, PLUMBING
DMCE ENGINEERING
LAKEWOOD, CO

NO	DATE	ISSUE
01	07/22/22	PRELIMINARY FOR REVIEW
02	08/23/22	PRELIMINARY FOR REVIEW
03	09/14/22	FOR REVIEW
04	12/14/22	FOR PERMIT
05	03/13/23	PLAN CHECK REV 1

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DRAWING INDEX, CODE SUMMARY, GENERAL NOTES AND SITE PLAN

A0.0

ARCHITECTURAL SPECIFICATIONS

DIVISION 0 - CONTRACT REQUIREMENTS

SECTION 0100 GENERAL CONDITION OF THE CONTRACT

A. The scope of the work shall include all work described in the Contract Documents as drawings.

B. Substitutions: Contractor's request for substitution will be received and considered when extensive revisions to Contract Documents are not required and changes are in keeping with general intent of Contract Documents; when timely, fully documented and properly submitted; and when one or more of the following conditions are satisfied, all as judged by Owner's Representative. Otherwise, requests will be returned without action except to record non-compliance with these requirements.

- Where request is directly related to an "or equal" clause in the Contract Documents.
- Where required product, material or method cannot be provided within contract time, or Owner's published schedule, but not as a result of Contractor's failure to pursue the work promptly or coordinate various activities properly.

C. Warranty: Equipment, workmanship and materials shall be warranted for a period of one (1) year from and after the date of Substantial Completion. During this period, the Contractor shall repair or replace, as required, any part or parts found to be defective in their operation, installation, or construction.

D. Contractor Note: Some sections in the specifications may not pertain to every project. Only those the sections related to the Construction Documents and scope of work described.

E. Before request for first partial payment, Contractor shall prepare and submit to Owner's Representative a construction schedule. The schedule shall be in graphic form, bar graph or such similar form as is acceptable to Owner's Representative showing the proposed dates of commencement and completion of the various subdivisions or units of work required under the Contract.

F. Issuance of Certificate of Substantial Completion is dependent on Contractor's receipt of Temporary Certificate of Occupancy.

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 10100 ALTERNATES

PART 1 - GENERAL

1.01 Summary

A. Provide list price for each alternate in Bid Form. Include cost of other work to accommodate alternate. Include related costs such as overhead and profit.

B. Owner's Representative will determine which alternates are selected for inclusion in the Contract.

C. Alternates are described briefly in this section. The Contract Documents define the requirements for alternates.

D. Coordinate alternates with related work to ensure that work affected by each selected alternate is properly accomplished.

SECTION 10100 COORDINATION

PART 1 - GENERAL

1.01 Organization of Documents

A. The organization of specifications into divisions, sections, etc., and the distribution of information on drawings does not in any way control or limit the Contractor in dividing the extent of work to be performed by any trade, contractor or subcontractor. All systems described herein shall be complete and operational, regardless of description content.

1.02 Coordination of Work

A. It is not possible to show on a single drawing or specify in a single section, all information pertaining to construction of any one area of the building. Compare all of the drawings and specifications and be responsible for coordination of work of various subcontractors and trades, and avoiding interferences between inter-related portions of the work.

B. Contractor shall retain a current copy of all Construction Documents on-site.

C. Report to the Architect any inconsistency, interference, error or omission discovered in the Contract Documents. Do not proceed with the work without first obtaining instructions or revised drawings or specifications clarifying the discrepancy from the Architect or Owner's Representative.

SECTION 10105 CUTTING AND PATCHING

PART 1 - GENERAL

1.01 Summary

A. Provide cutting and patching work to properly complete the work of the project, complying with requirements for:

- Structural Work
- Mechanical/Electrical Systems
- Visual requirements, including detailing and tolerances.
- Operational and safety limitations.
- Fire resistance ratings.
- Inspection, preparation, and performance.
- Cleaning.

B. Do not cut and patch in a manner that would result in a failure of the work to perform as intended, decreased energy performance, increased maintenance, decreased operational life, or decreased safety.

PART 2 - PRODUCTS

A. Verify field measurements prior to preparation of shop drawings and fabrication. Do not delay the job; allow for cutting and fitting if field measurement is not practical.

B. Form work true to line with sharp angles and edges. Grind edges flush and smooth on exposed surfaces.

C. Install work plumb and level with hairline joints and ground flush welds around ground flush welds.

D. Touch-up damaged coatings with shop primer.

E. Paint items scheduled in accordance with painting section.

A. Inspection of existing conditions prior to work to identify scope is required. Protect adjacent work. Notify Owner of work requiring interruption to building services.

B. Perform work with workmen skilled in the trades involved.

C. Cutting: Use cutting tools, not chopping tools. Make neat holes. Minimize damage to adjacent work. Check for concealed utilities and structure before cutting.

D. Patching: Make patches, seams, and joints durable and inconspicuous. Comply with tolerances for new work.

E. Clean work area and areas affected by cutting and patching operations.

DIVISION 1 - GENERAL REQUIREMENTS, CONTINUED

SECTION 01100 PROJECT PROCEDURES

PART 1 - GENERAL

1.01 Summary

A. Provide Coordination of Work

- Supervisory personnel.
- Preconstruction conference.
- Monthly meetings; distribute minutes.
- Other meetings.

B. Submit progress schedule, bar-chart type, updated monthly.

C. Prepare submittal schedule; coordinate with progress schedule.

D. Submit schedule of values.

E. Submit schedule of required tests including payment and responsibility.

F. Submit and post a list of emergency telephone numbers and address for individuals to be contacted in case of emergency.

G. Submit record drawings and specifications; to be maintained and annotated by Contractor as work progresses.

H. Submit payment request procedures; using AIA Document G702.

I. Perform quality control during installation.

J. Clean and protect work.

SECTION 01300 SUBMITTALS

PART 1 - GENERAL

1.01 Shop Drawings and Samples

A. Submit shop drawings, samples, catalog data and schedules of such materials as are required by Specification Division 2 through 16 and schedule herein. Such submission shall be in accordance with the General Conditions.

B. Owner's Representative's examination of resubmissions will be limited to:

- Revisions made in compliance with comments or corrections which were noted on previous submittals.
- Other revisions which the Contractor has specifically called to their attention in writing.

C. No work requiring submission of shop drawings, material list, catalog data, schedules or samples shall be commenced until submission has been approved by Owner's Representative.

1.02 Submittals

A. Submit the number of opaque reproductions which the Contractor requires, plus the number of copies stated below which will be retained. Contractor shall be responsible for providing copies of reviewed Shop Drawings to appropriate subcontractors.

- Shop Drawings - 2 Copies
- Product Data - 2 Copies
- Samples - As Specified

B. Reproduction of Shop Drawings as submittals is an expense of the Contractor.

C. Contractor shall retain a copy of all reviewed Shop Drawings on site.

1.03 Operation and Maintenance Manual

A. Submit three (3) copies of each Manual in a three-ring binder, with each section tabbed by trade. Provide maintenance information, cut-sheets, cleaning instructions, and any pertinent data needed by the Owner to properly operate and maintain installed work and equipment.

DIVISION 5 - METALS

SECTION 05500 - METAL FABRICATION

PART 1 - GENERAL

1.01 Provide the following:

- Miscellaneous framing and support for suspended operable partitions.
- Miscellaneous structural framing and support at storefront.

1.02 Submit shop drawings for approval.

1.03 Comply with governing codes and regulations. Use experienced installers. Deliver, handle and store materials in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

2.01 Materials

A. Ferrous Materials:

- Steel shapes and bars, ASTM A36.
- Steel Tubing, ASTM A500 or A501.
- Brackets, flanges and anchors: Cast or formed metal.
- Fire resistance ratings.
- Inspection, preparation, and performance.
- Cleaning.

2.02 Steel Frames

A. Exterior Frames: Welded type. 18-gauge galvanized sheet steel, mitered or coped corners.

B. Finish: Factory primed and field painted.

C. Interior Frames: Welded type. 18-gauge galvanized sheet steel, mitered or coped corners.

D. Touch-up damaged coatings with shop primer.

E. Paint items scheduled in accordance with painting section.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

SECTION 07900 - JOINT SEALERS

PART 1 - GENERAL

1.01 Summary

A. Provide joint sealers at interior and exterior vertical and horizontal joints.

PART 2 - MATERIALS

2.01 Manufacturers

A. DAP, DOW Coming Corporation, USG.

B. Substitutions: Under Provisions of Section 01300.

2.02 Sealants

A. Type A

- ASTM C920, Type M, Grade P, Class 25; multi component polyurethane, self-leveling.
- Movement capability: Plus or minus 25%.
- Color: Standard color as selected by Owner's Representative.

B. Type B

- ASTM C920, Type M, Grade NS, Class 25; multi component polyurethane, non-sag.
- Movement capability: Plus or minus 25%.
- Color: Standard color as selected by Owner's Representative.

C. Adjust, clean and protect.

SECTION 08410 - ALUMINUM ENTRIES, STOREFRONTS

PART 1 - GENERAL

1.01 Provide aluminum entrances and storefront:

- Exterior Entrance Doors.
- Frames for Entrances.
- Storefront-type framing system.
- Transom metal panels.
- Perimeter trims, accessories, shims, anchors and perimeter sealing of storefronts where applicable.

1.02 Performance Requirements: Provide Framing System and anchorage capable of withstanding wind load design pressures of a minimum of 100 miles per hour.

1.03 Submit for Approval: Shop Drawings, product data and warranty in accordance with Section 01300 - Submittals.

1.04 Comply with governing codes and regulations. Provide products from acceptable manufacturers which have been in satisfactory use in similar service for three (3) years. Use experienced installers. Deliver, handle and store materials in accordance with manufacturer's instructions.

PART 3 - EXECUTION

3.01 Installation

A. Examine substrate; report unsatisfactory conditions in writing. Beginning work means acceptance of substrates.

B. Provide sealants in colors as selected from manufacturer's standard.

C. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections. Clean and prime joints; install bond breakers, backer rods and sealants as recommended by manufacturers.

D. Depth shall equal width up to 1/2" wide; depth shall equal 1/2 width for joints over 1/2" wide.

E. Cure and protect sealants as directed by manufacturers. Replace or restore damaged sealants. Clean adjacent surfaces to remove spillage.

3.02 Schedule

A. Exterior Joints:

- Horizontal joints subject to pedestrian or vehicular traffic, Type A.
- Other joints, Type B.

B. Interior Joints:

- Joints subject to thermal movement, Type B.
- Joints in toilet rooms, Type D.
- Other joints, Type C.

1.03 Comply with governing codes and regulations. Use experienced installers. Deliver, handle and store materials in accordance with manufacturer's instructions.

1.04 Standards: ANSISDI-100, Recommended Specifications for Standard Steel Doors and Frames.

1.05 Fire-Rated Assemblies: NFPA 80, and acceptable testing agency listing.

PART 2 - PRODUCTS

2.01 Steel Doors:

A. Door Type: Standard steel doors with hollow or composite construction.

B. Exterior Doors: ANSISDI 100, Grade III, extra-heavy duty, minimum 16-gauge galvanized steel sheet, 1-3/4" thick.

C. Finish: Factory primed and field painted.

D. Interior Frames: Welded type. 18-gauge galvanized sheet steel, mitered or coped corners.

E. Coordinate with Glass and Glazing work, install hardware and adjust for smooth, proper operation.

F. Protect and clean completed system, repair damage.

G. Anchor securely in place; install framing and trim units level, plumb and true to line with uniform joints.

D. Install glass to avoid direct metal-to-glass contact, provide weather-tight installations.

E. Coordinate with Glass and Glazing work, install hardware and adjust for smooth, proper operation.

F. Protect and clean completed system, repair damage.

G. Anchor securely in place; install framing and trim units level, plumb and true to line with uniform joints.

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F. Protect and clean completed system, repair damage.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

SECTION 07900 - JOINT SEALERS

PART 1 - GENERAL

1.01 Summary

A. Provide joint sealers at interior and exterior vertical and horizontal joints.

PART 2 - MATERIALS

2.01 Manufacturers

A. DAP, DOW Coming Corporation, USG.

B. Substitutions: Under Provisions of Section 01300.

2.02 Sealants

A. Type A

- ASTM C920, Type M, Grade P, Class 25; multi component polyurethane, self-leveling.
- Movement capability: Plus or minus 25%.
- Color: Standard color as selected by Owner's Representative.

B. Type B

- ASTM C920, Type M, Grade NS, Class 25; multi component polyurethane, non-sag.
- Movement capability: Plus or minus 25%.
- Color: Standard color as selected by Owner's Representative.

C. Adjust, clean and protect.

SECTION 08410 - ALUMINUM ENTRIES, STOREFRONTS

PART 1 - GENERAL

1.01 Provide aluminum entrances and storefront:

- Exterior Entrance Doors.
- Frames for Entrances.
- Storefront-type framing system.
- Transom metal panels.
- Perimeter trims, accessories, shims, anchors and perimeter sealing of storefronts where applicable.

1.02 Performance Requirements: Provide Framing System and anchorage capable of withstanding wind load design pressures of a minimum of 100 miles per hour.

1.03 Submit for Approval: Shop Drawings, product data and warranty in accordance with Section 01300 - Submittals.

1.04 Comply with governing codes and regulations. Provide products from acceptable manufacturers which have been in satisfactory use in similar service for three (3) years. Use experienced installers. Deliver, handle and store materials in accordance with manufacturer's instructions.

PART 3 - EXECUTION

3.01 Installation

A. Examine substrate; report unsatisfactory conditions in writing. Beginning work means acceptance of substrates.

B. Provide sealants in colors as selected from manufacturer's standard.

C. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections. Clean and prime joints; install bond breakers, backer rods and sealants as recommended by manufacturers.

D. Depth shall equal width up to 1/2" wide; depth shall equal 1/2 width for joints over 1/2" wide.

E. Cure and protect sealants as directed by manufacturers. Replace or restore damaged sealants. Clean adjacent surfaces to remove spillage.

3.02 Schedule

A. Exterior Joints:

- Horizontal joints subject to pedestrian or vehicular traffic, Type A.
- Other joints, Type B.

B. Interior Joints:

- Joints subject to thermal movement, Type B.
- Joints in toilet rooms, Type D.
- Other joints, Type C.

1.03 Comply with governing codes and regulations. Use experienced installers. Deliver, handle and store materials in accordance with manufacturer's instructions.

1.04 Standards: ANSISDI-100, Recommended Specifications for Standard Steel Doors and Frames.

1.05 Fire-Rated Assemblies: NFPA 80, and acceptable testing agency listing.

PART 2 - PRODUCTS

2.01 Materials

A. Manufacturer's: Kawneer Company, Oldcastle Building Envelope, Vistawall Architectural Products, Tubelite Architectural Products, Binswanger Glass, CRL Aluminum or approved equal.

B. Aluminum Entrances and Storefront: Match Existing where possible. If not, Kawneer EnCORE Thermal Framing System or approved equal.

C. Door Style: Narrow Slit with 10" Bottom Sile.

D. Framed System: 1 3/4" x 6" profile, thermal front glazing with applied glazing stops. Provide sill receptors with integral drainage, compensation head receptors, thermal back flatter at jambs and corner mullions where required.

E. Aluminum Members: ASTM B221, B209 and B211.

F. Steel Reinforcement: ASTM A36, A611 and A570.

G. Glass and Glazing: Refer to Glazing Section 08800

H. Primary Glazing Color: Clear.

I. Closers: LCN 4040 with drop plate.

J. Finish:

- Anodic Finish: AA6A 611, Class 1, 0.018 mm or thicker.
- Baked-Enamel or Powder-Coat Finish: AA6A 2603 except with a minimum dry film thickness of 1.5 mils.

C. Auxiliary Materials:

- Aluminum infill panels to match adjacent finish.
- Door stops, overhead holders and deadlocks.
- Weather-stripping and thresholds.
- Exit Devices.

PART 3 - EXECUTION

3.01 Installation

A. Take field measurements before fabrication where possible, do not delay job process.

B. Comply with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work in related sections.

C. Anchor securely in place; install framing and trim units level, plumb and true to line with uniform joints.

D. Install glass to avoid direct metal-to-glass contact, provide weather-tight installations.

E. Coordinate with Glass and Glazing work, install hardware and adjust for smooth, proper operation.

F. Protect and clean completed system, repair damage.

G. Anchor securely in place; install framing and trim units level, plumb and true to line with uniform joints.

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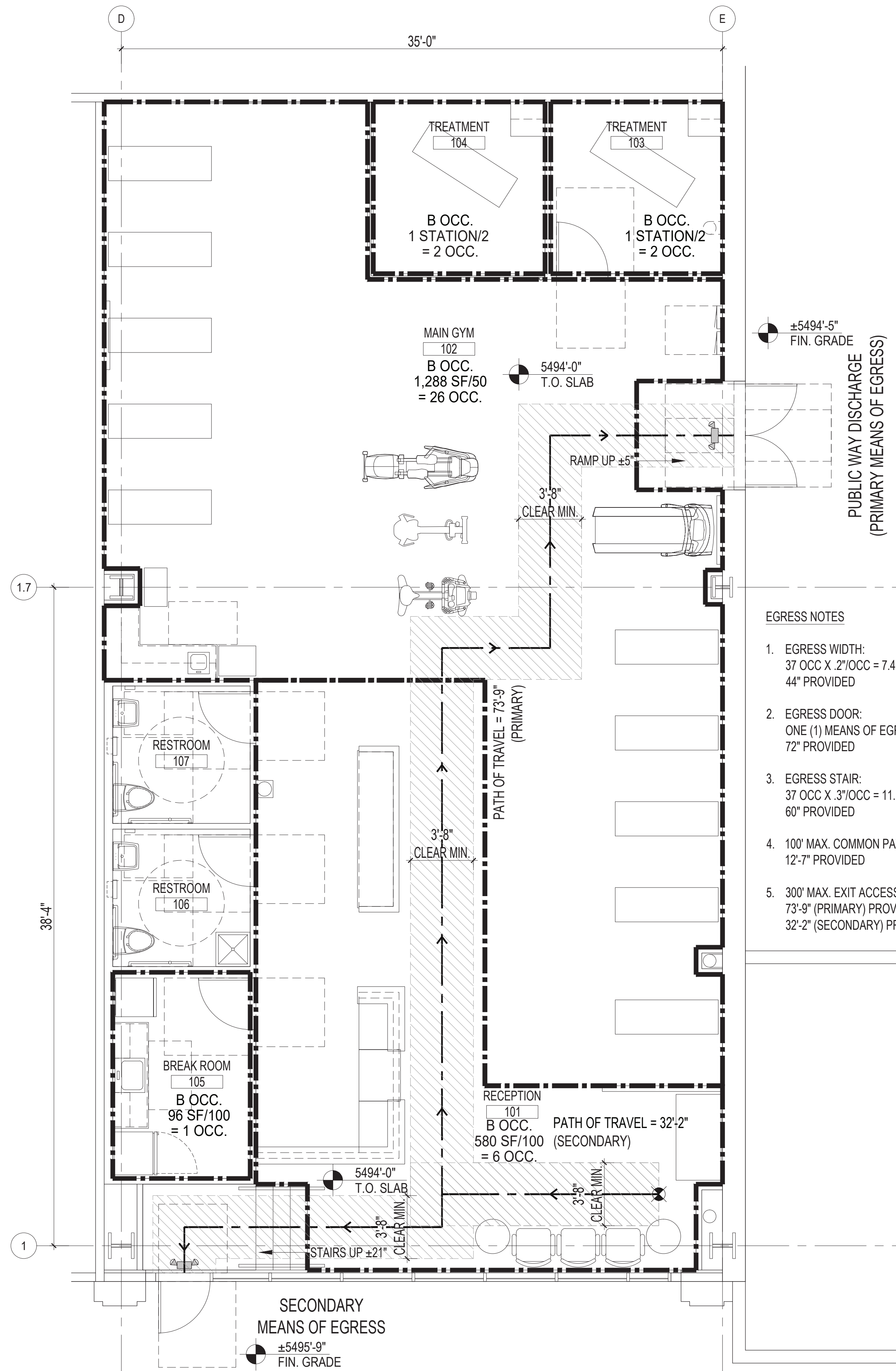
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D. Install glass to avoid direct metal-to-glass contact, provide weather-tight installations.

OCCUPANT LOAD

S.F. BREAKDOWNS:	TOTAL S.F.	OCCUPANT LOAD FACTOR	OCCUPANT LOAD
PROJECT AREA:	2,599	---	---
EXERCISE ROOM:	1,288	50	26
BUSINESS:	580	100	6
BUSINESS:	96	100	1
TREATMENT ROOM:	200	2/ROOM	4
RESTROOMS:	128	---	---
CIRCULATION:	80	---	---
TOTAL AREA:	2,371	---	37



- EGRESS NOTES**
- EGRESS WIDTH:
37 OCC X .2"/OCC = 7.4" MIN. EGRESS WIDTH REQUIRED
44" PROVIDED
 - EGRESS DOOR:
ONE (1) MEANS OF EGRESS REQUIRED, 36" MIN. WIDTH
72" PROVIDED
 - EGRESS STAIR:
37 OCC X .3"/OCC = 11.1" MIN. EGRESS WIDTH REQUIRED
60" PROVIDED
 - 100' MAX. COMMON PATH OF EGRESS TRAVEL
12'-7" PROVIDED
 - 300' MAX. EXIT ACCESS TRAVEL DISTANCE
73'-9" (PRIMARY) PROVIDED
32'-2" (SECONDARY) PROVIDED

1 OCCUPANCY/EGRESS PLAN
SCALE: 1/4" = 1'-0"



03.13.2023

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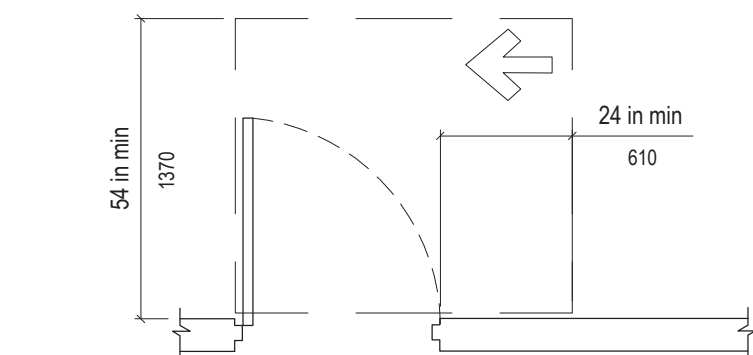
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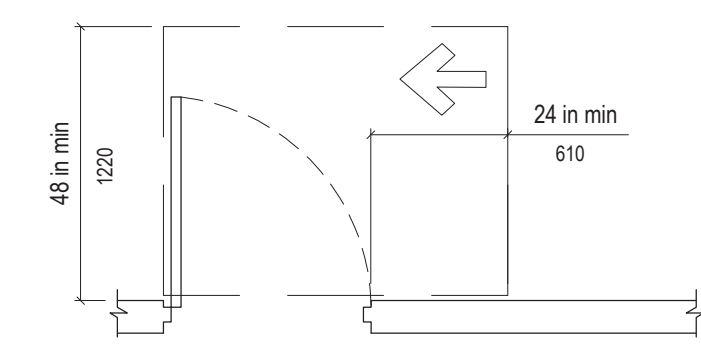
OCCUPANCY / EGRESS PLAN

A0.2

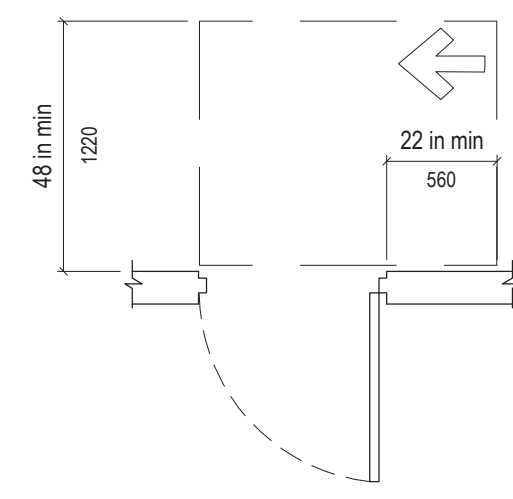
ANSI 117.1 DETAILS



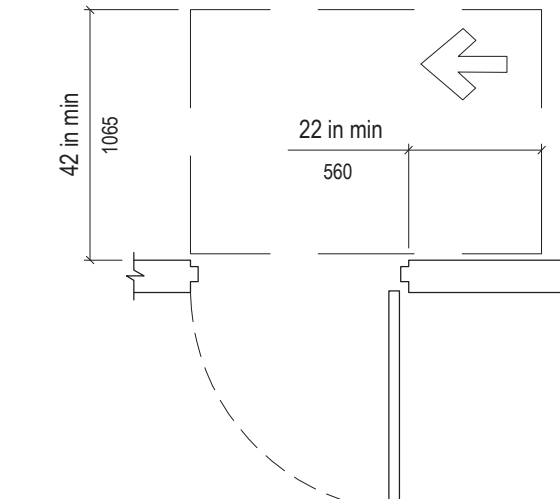
24 LATCH APPROACH, PULL SIDE, DOOR PROVIDED WITH CLOSER NOT TO SCALE



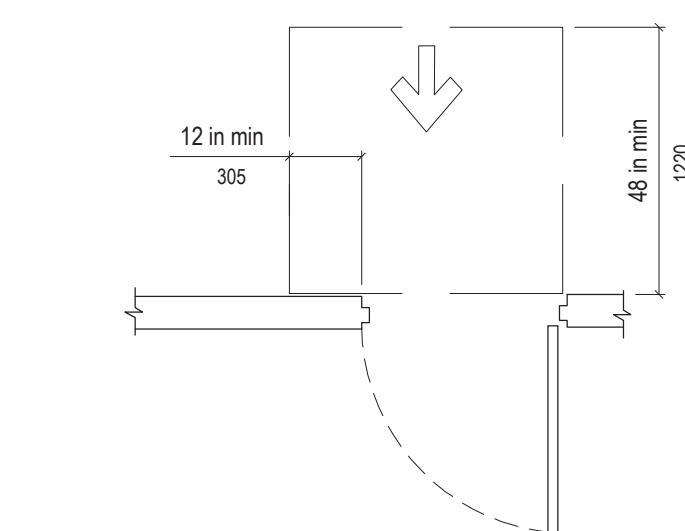
23 LATCH APPROACH, PULL SIDE NOT TO SCALE



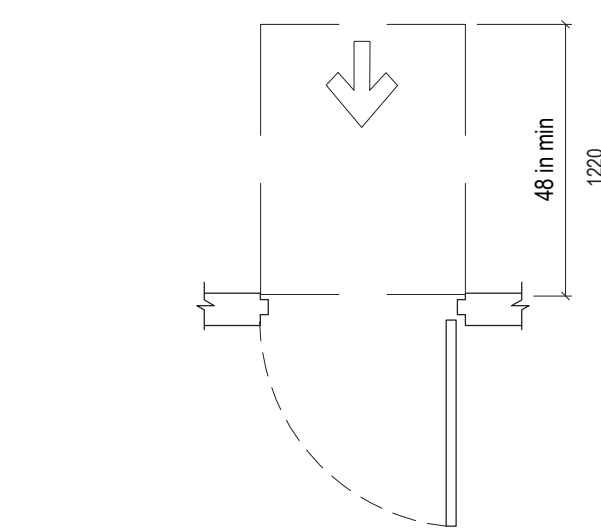
22 HINGE APPROACH, PUSH SIDE, DOOR PROVIDED WITH BOTH CLOSER AND LATCH NOT TO SCALE



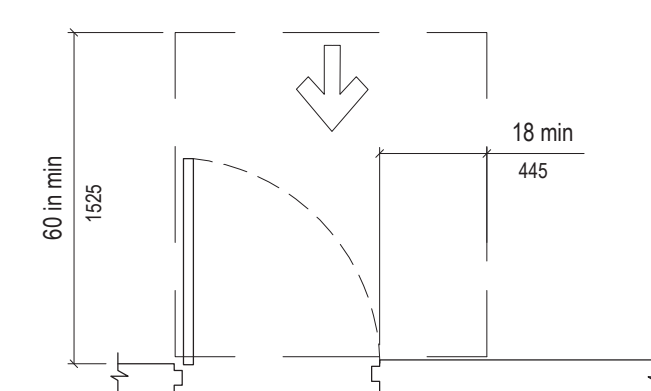
21 HINGE APPROACH, PUSH SIDE NOT TO SCALE



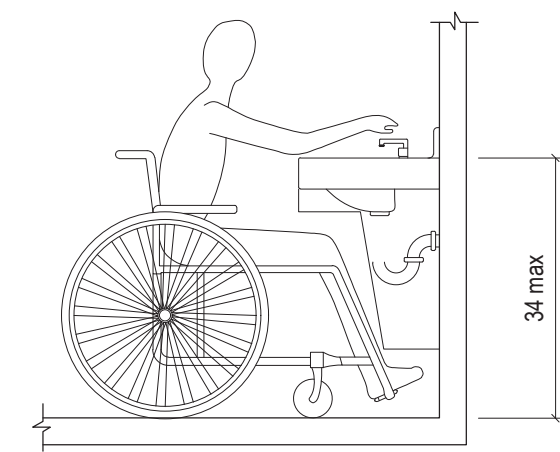
18 FRONT APPROACH, PUSH SIDE, DOOR PROVIDED WITH BOTH CLOSER AND LATCH NOT TO SCALE



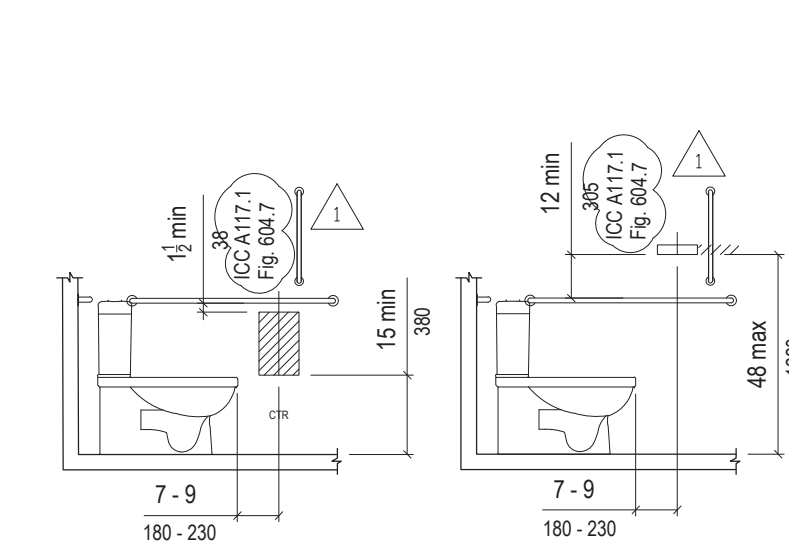
17 FRONT APPROACH, PUSH SIDE NOT TO SCALE



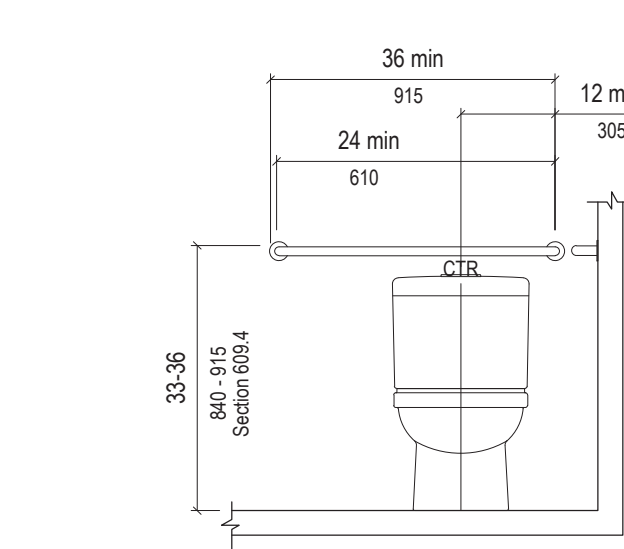
16 FRONT APPROACH, PULL SIDE NOT TO SCALE



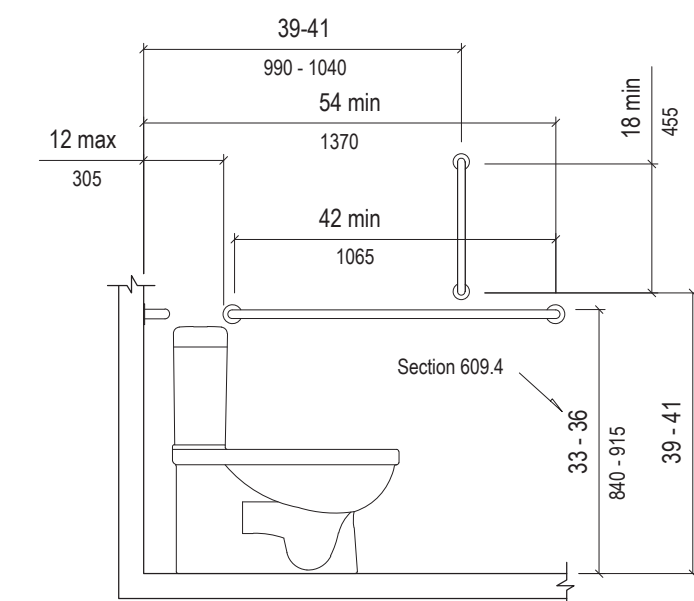
15 HEIGHT OF LAVATORIES AND SINKS NOT TO SCALE



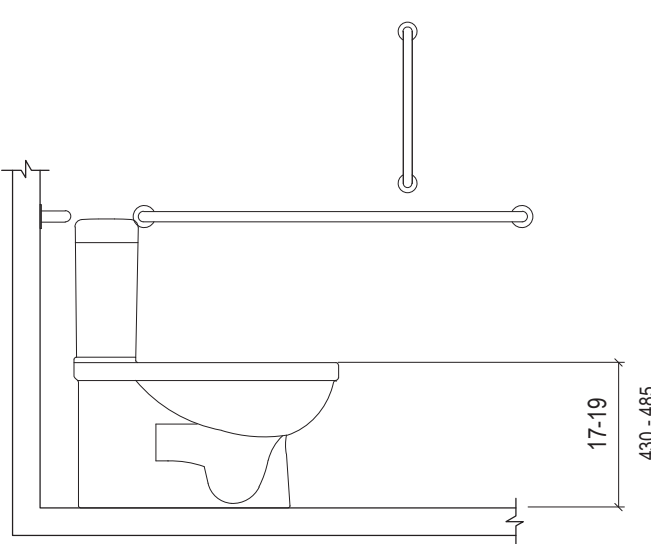
12 DISPENSER LOCATION NOT TO SCALE



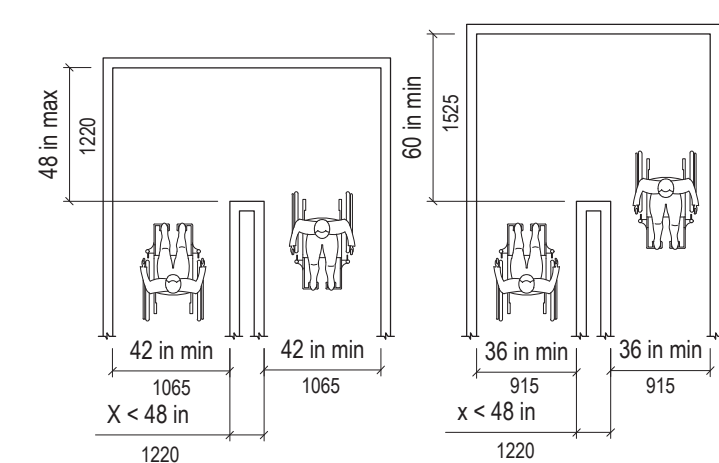
11 REAR WALL GRAB BAR FOR WATER CLOSET NOT TO SCALE



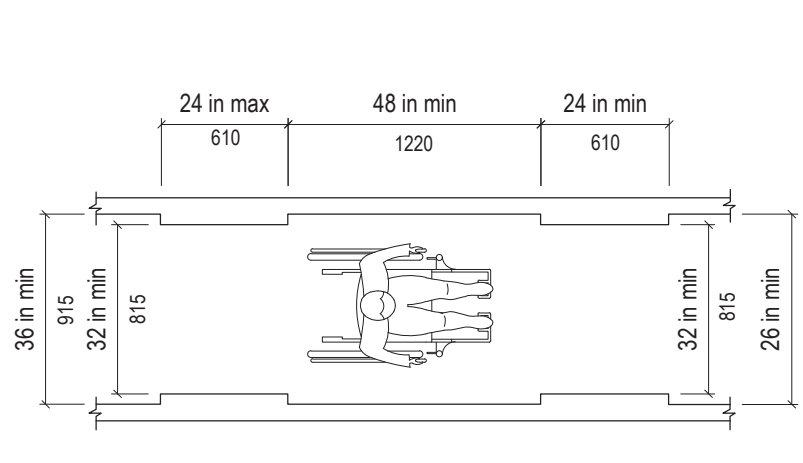
10 SIDE WALL GRAB BAR FOR WATER CLOSET NOT TO SCALE



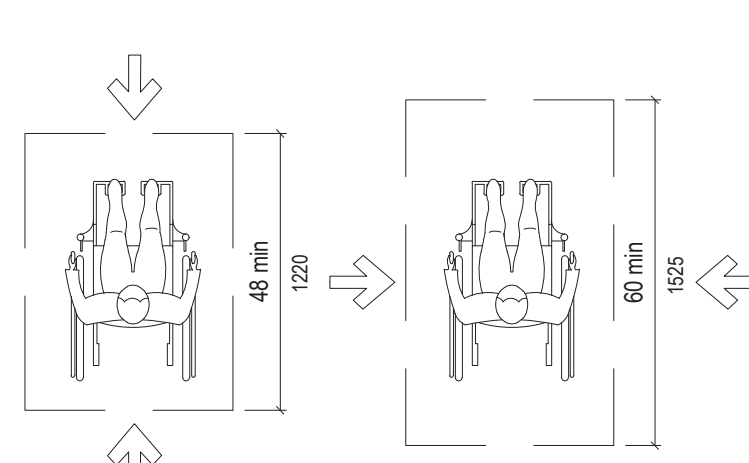
09 WATER CLOSET HEIGHT NOT TO SCALE



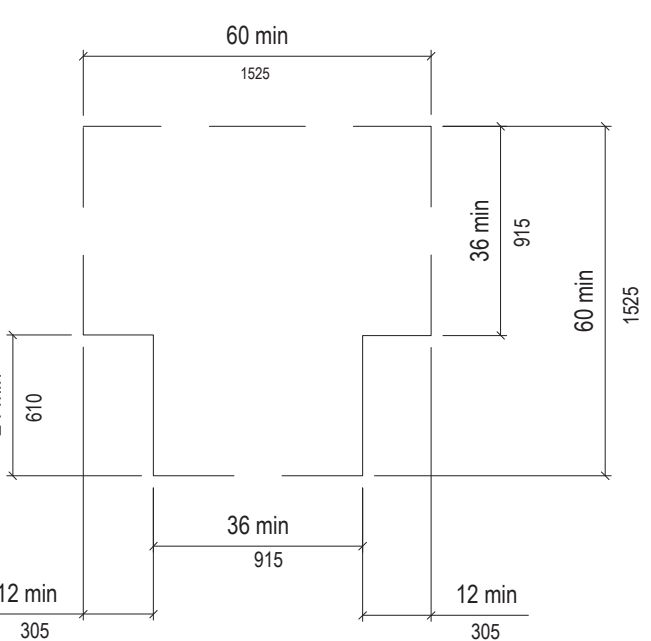
06 CLEAR WIDTH AT TURN NOT TO SCALE



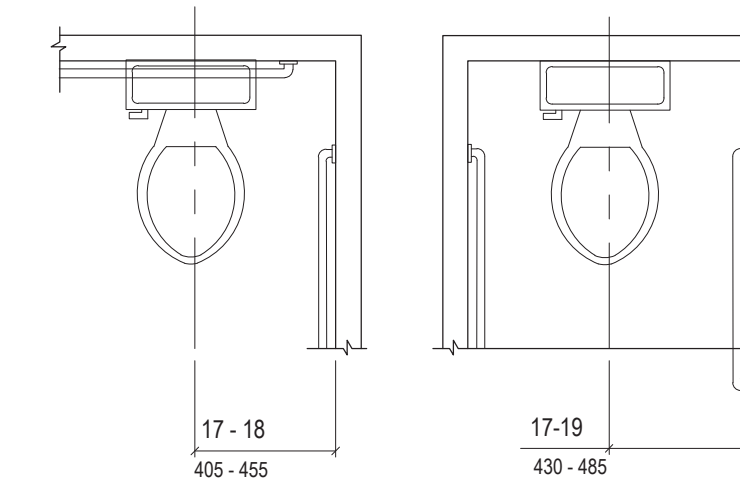
05 CLEAR WIDTH OF AN ACCESSIBLE ROUTE NOT TO SCALE



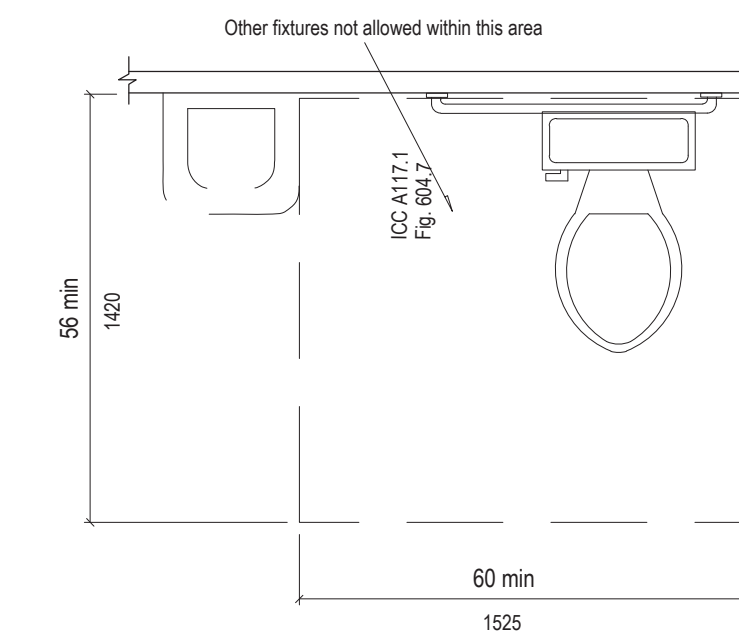
04 DEPTH OF WHEELCHAIR IN ASSEMBLY AREAS NOT TO SCALE



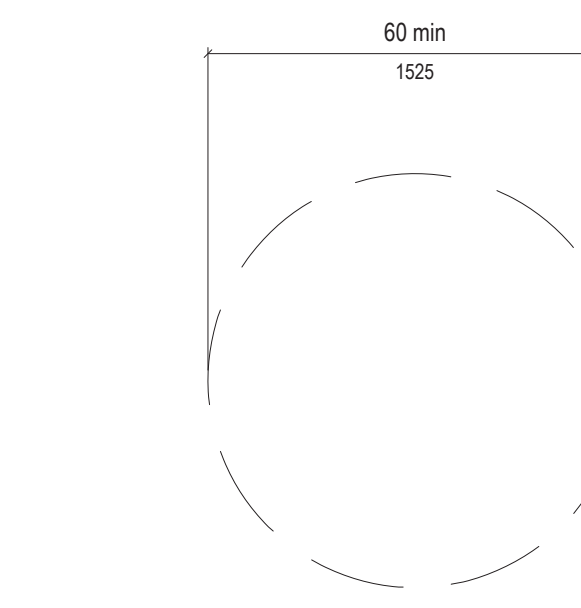
03 SIZE OF TURNING SPACE NOT TO SCALE



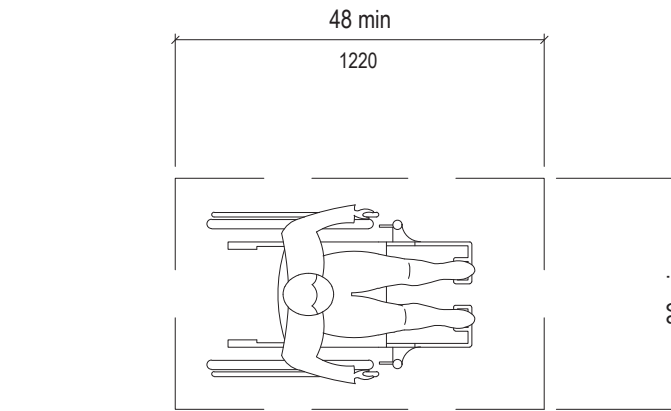
08 WATER CLOSET LOCATION NOT TO SCALE



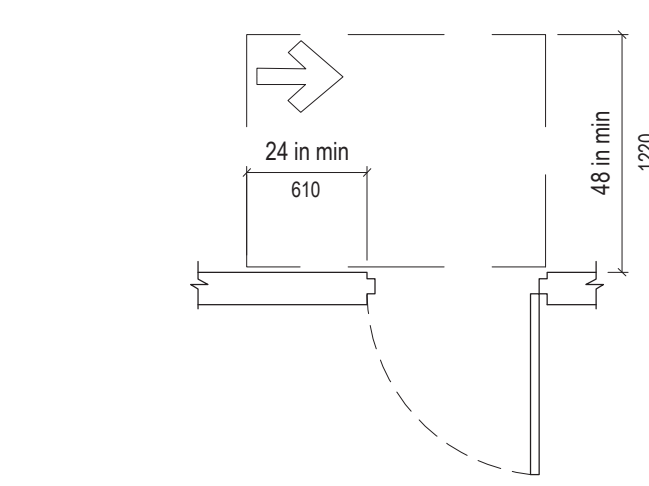
07 SIZE OF CLEARANCE FOR WATER CLOSET NOT TO SCALE



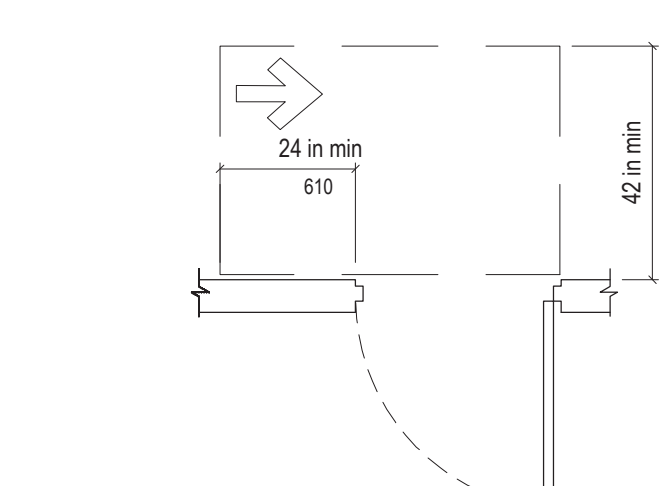
02 SIZE OF TURNING SPACE NOT TO SCALE



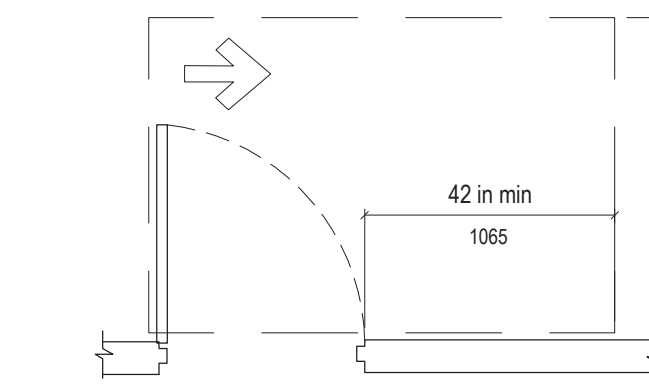
01 SIZE OF CLEAR FLOOR SPACE NOT TO SCALE



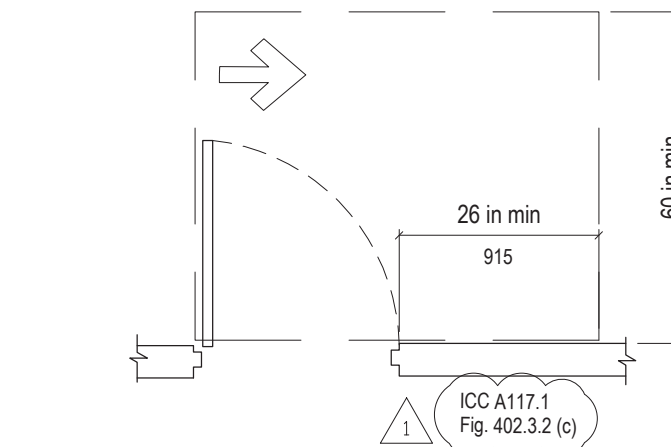
26 LATCH APPROACH, PUSH SIDE, DOOR PROVIDED WITH CLOSER NOT TO SCALE



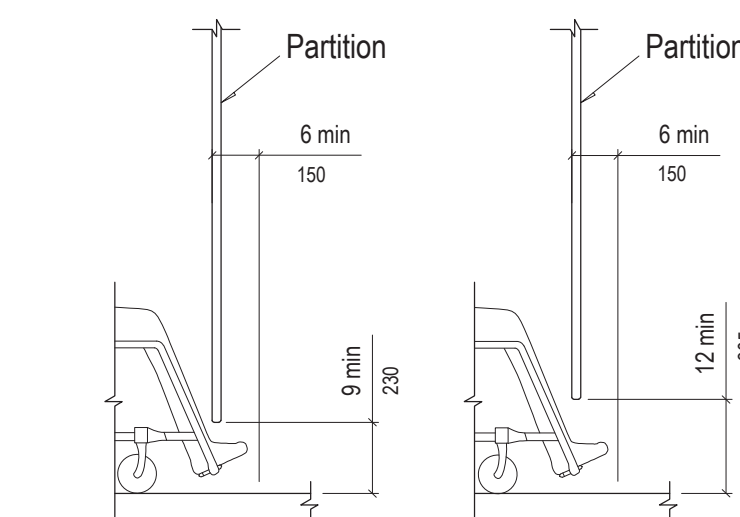
25 LATCH APPROACH, PUSH SIDE NOT TO SCALE



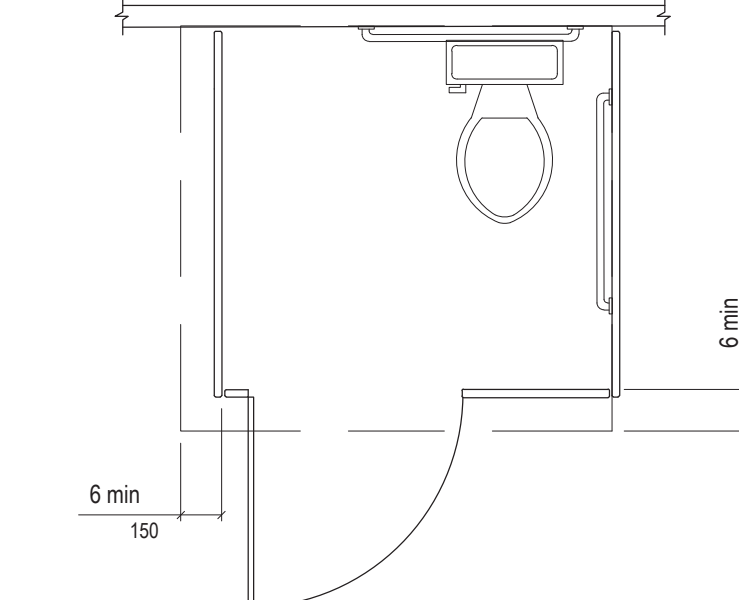
20 HINGE APPROACH, PULL SIDE NOT TO SCALE



19 HINGE APPROACH, PULL SIDE NOT TO SCALE



14 WHEELCHAIR ACCESSIBLE COMPARTMENT TOE CLEARANCE NOT TO SCALE



13 WHEELCHAIR ACCESSIBLE COMPARTMENT TOE CLEARANCE NOT TO SCALE



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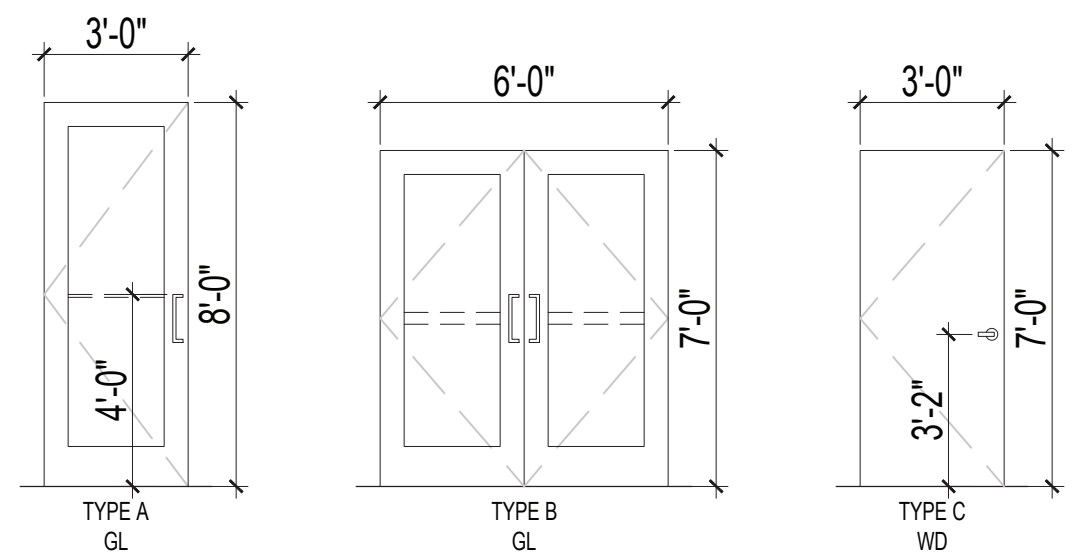
A0.3

DOOR AND HARDWARE SCHEDULE

DOOR NO.	SIZE			DOOR					FRAME			LABEL (MIN.)	HARDWARE SET	REMARKS		
	WIDTH	HEIGHT	THICK	TYPE	MATL.	MATL.	HEAD	JAMB	SILL	MATL.	MATL.				HEAD	JAMB
101A	3'-0"	8'-0"	1 3/4"	A	GL	ALUM	8/A2.0	7/A2.0	8/A2.0	-	-	-	-	-	HW SET 01	REFER TO NOTE #3.
101B	6'-0"	7'-0"	1 3/4"	B	GL	ALUM	5/A3.0	5/A3.0	-	-	-	-	-	-	HW SET 04	REFER TO NOTE #3.
103	3'-0"	7'-0"	1 3/4"	C	WD	HM	5/A3.0	5/A3.0	6/A3.0	-	-	-	-	-	HW SET 02	3/4" UNDERCUT
105	3'-0"	7'-0"	1 3/4"	C	WD	HM	5/A3.0	5/A3.0	6/A3.0	-	-	-	-	-	HW SET 03	3/4" UNDERCUT
106	3'-0"	7'-0"	1 3/4"	C	WD	HM	5/A3.0	5/A3.0	6/A3.0	-	-	-	-	-	HW SET 02	3/4" UNDERCUT
107	3'-0"	7'-0"	1 3/4"	C	WD	HM	5/A3.0	5/A3.0	6/A3.0	-	-	-	-	-	HW SET 02	3/4" UNDERCUT

- HARDWARE NOTES:**
- REFER TO HARDWARE SPECIFICATIONS SECTION 08700 ON SHEET A0.1.
 - WOOD DOORS TO BE PRIMED AND PAINTED. RE-SPECIFICATIONS.
 - IF THE MAIN EXTERIOR DOOR IS TO BE EQUIPPED WITH KEY LOCKING HARDWARE, PROVIDE THE PROPER LOCKING DEVICE TO READILY INDICATE WHEN THE DOOR IS LOCKED AND SIGNAGE THAT STATES "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" PER SECTION 1010.1.9.3 OF THE 2015 INTERNATIONAL BUILDING CODE.

DOOR TYPES



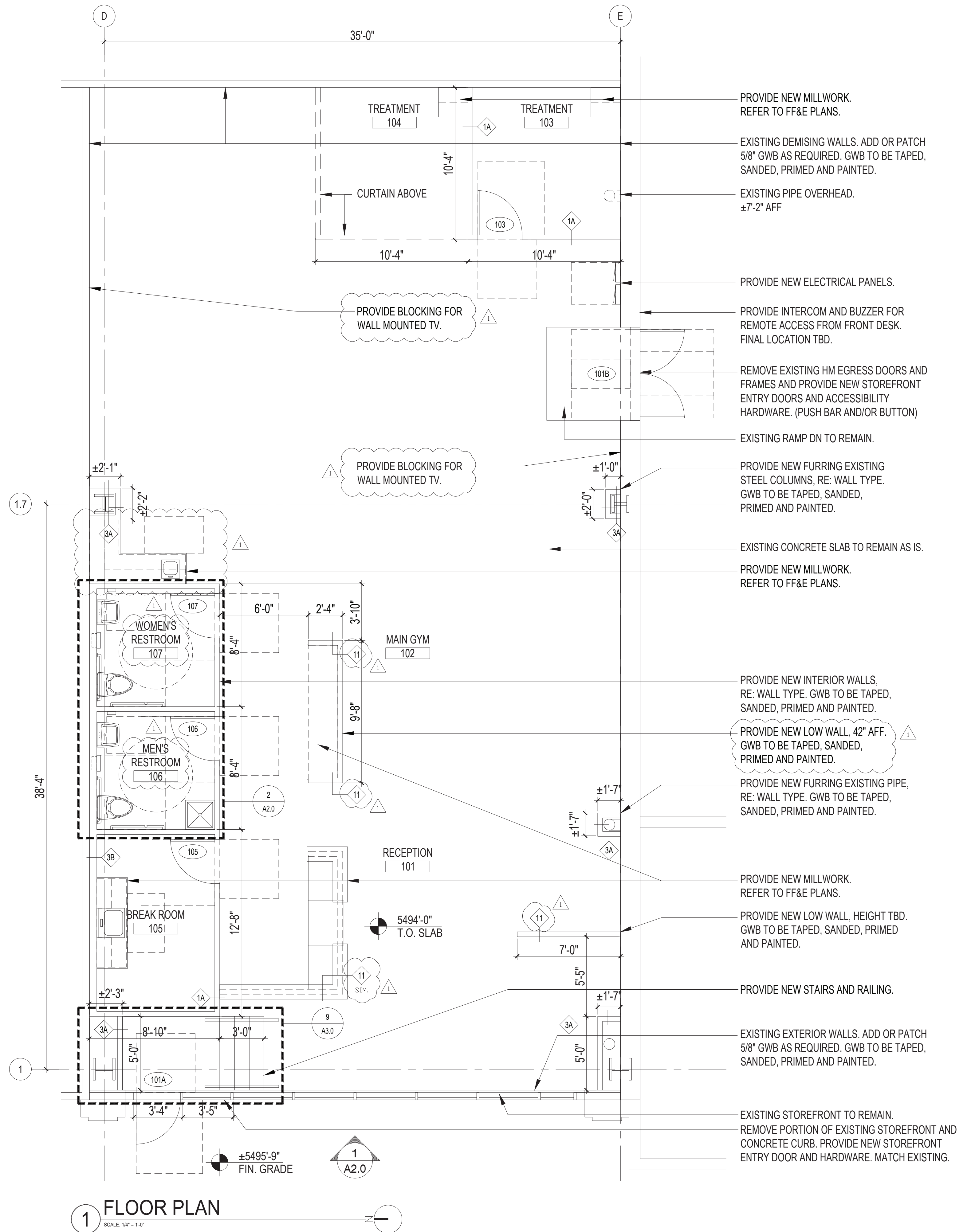
- CONSTRUCTION NOTES:**
- SEE ELEVATIONS FOR PLUMBING FIXTURE LOCATIONS.
 - ALL HINGE SIDE DOOR JAMBS ARE LOCATED 4" FROM ADJACENT WALL UNLESS DIMENSIONED OTHERWISE, RE: 5/A3.0.

FLOOR PENETRATION NOTES

- GC TO SCAN/RAY ALL SLAB AREAS PRIOR TO CORE DRILLING TO ASSURE THAT NO STRUCTURAL DAMAGE WILL OCCUR IN STRUCTURAL AND POST-TENSIONED SLABS. GC SHALL NOT DAMAGE ANY POST-TENSIONED REINFORCING WITH FLOOR PENETRATIONS.
- GC SHALL BE PERMITTED TO CREATE AT MOST ONE (1) SIX INCH (6") DIAMETER FLOOR PENETRATION WITHIN SIX FEET (6') OF ANY GIVEN COLUMN. NO ADDITIONAL PENETRATIONS ARE PERMITTED WITHOUT WRITTEN APPROVAL BY THE STRUCTURAL ENGINEER.
- ALL PENETRATIONS THROUGH SUSPENDED SLABS FOR ELECTRICAL AND PLUMBING WORK SHALL BE CORE DRILLED ONLY. PENETRATIONS SHALL BE PROPERLY SLEEVED, FIRE-STOPPED AND SEALED IN ACCORDANCE WITH CODE.

DEMOLITION AND PATCHING

- CONTRACTOR TO FIELD VERIFY ALL EXISTING WALL CONDITIONS.
- CONTRACTOR TO PATCH AND REPAIR WALLS AS NECESSARY TO PROVIDE A CLEAN, CONSISTENT SURFACE, TAPED, SANDED AND READY TO RECEIVE FINAL FINISH.
- THE USE OF PROPER MATERIALS AND EQUIPMENT IS THE RESPONSIBILITY OF THE G.C.
- ALL DOORS AND FRAMES ARE TO BE SAVED AND REUSED WHERE PERMISSIBLE.
- TAKE ALL MEANS NECESSARY TO PROTECT OBJECTS DESIGNATED TO BE PRESERVED. IN THE EVENT OF DAMAGE, IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
- PERFORM THE REMOVAL, CUTTING, DRILLING, ETC. OF EXISTING WORK WITH EXTREME CARE, AND USING SMALL TOOLS IN ORDER NOT TO JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE BUILDING.
- THE G.C. SHALL REMOVE, PROTECT AND RE-INSTALL EXISTING ITEMS AS INDICATED ON THE DRAWINGS. ANY MATERIALS SCHEDULED FOR REUSE WHICH ARE DAMAGED BY THE G.C. TO THE EXTENT THAT THEY CANNOT BE REUSED SHALL BE REPLACED BY THE G.C. WITH EQUIVALENT QUALITY MATERIAL.
- EXISTING FINISHES TO REMAIN SHALL BE REPAIRED TO ORIGINAL CONDITION.
- EXISTING WORK AND ITEMS WHICH ARE REQUIRED TO BE REMOVED SHALL BE REMOVED IN SUCH A MANNER THAT MINIMUM DAMAGE AND DISTURBANCE IS CAUSED TO ADJACENT AND CONNECTING WORK SCHEDULED FOR REPAIR. THE G.C. SHALL BE RESPONSIBLE FOR REPAIRING AND/OR REPLACING ALL EXISTING WORK SCHEDULED TO REMAIN WHICH IS DAMAGED BY THESE OPERATIONS.
- EXISTING PERMANENT WALLS WHICH REMAIN SHALL HAVE CONTINUOUS SURFACES WITH NO VISIBLE MARKS FROM PREVIOUS ABUTTING CONSTRUCTION.
- REBUILD ANY EXISTING WORK WHICH HAS TO BE REMOVED TO ALLOW FOR THE INSTALLATION OF NEW WORK AS REQUIRED.
- DEMOLITION SHALL INCLUDE PREPARATION OF EXISTING AREAS TO RECEIVE NEW MATERIALS AND REMOVAL OF MATERIALS AND EQUIPMENT TO ALTER OR REPAIR THE EXISTING BUILDING AS INDICATED ON THE DRAWINGS AND AS SPECIFIED.
- DEMOLITION WORK SHALL BE PERFORMED BY EXPERIENCED PERSONNEL EXERCISING PROPER CARE TO PREVENT INJURY TO THE PUBLIC, WORKMEN AND ADJOINING PROPERTY. APPROPRIATE SAFETY EQUIPMENT SHOULD BE UTILIZED.
- ALL DEMOLITION WORK SHALL COMPLY WITH ALL PERTINENT CODES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, ALL FEDERAL AND STATE SAFETY CODES.
- ALL AREAS REQUIRING PATCHING DUE TO THE WORK OF THIS PROJECT, INCLUDING MARKS FROM RELOCATED WALLS, DAMAGE CAUSED BY REMOVING, RELOCATING AND/OR ADDING FIXTURES AND EQUIPMENT, DAMAGE CAUSED BY DEMOLITION AND AT ADJACENT MATERIALS ETC. SHALL BE EXPERTLY PATCHED BY JOURNEYMEN EXPERIENCED IN THE TRADE INVOLVED IN THE PATCH WORK.
- REMOVE FROM THE SITE ALL RUBBISH, DEBRIS, AND ALL MATERIALS RESULTING FROM THE DEMOLITION, UNLESS SPECIFICALLY DIRECTED OTHERWISE. TAKE EXTRA PRECAUTIONS TO CLEAN-UP DEBRIS IN A TIMELY FASHION IN ORDER TO MAINTAIN A SAFE CONDITION AT ALL TIMES.
- LEAVE THE WORK IN A COMPLETELY SAFE AND CLEAN CONDITION, FREE FROM ALL DEMOLITION MATERIALS, TOOLS AND EQUIPMENT.



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



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FLOOR PLAN,
SCHEDULES & NOTES

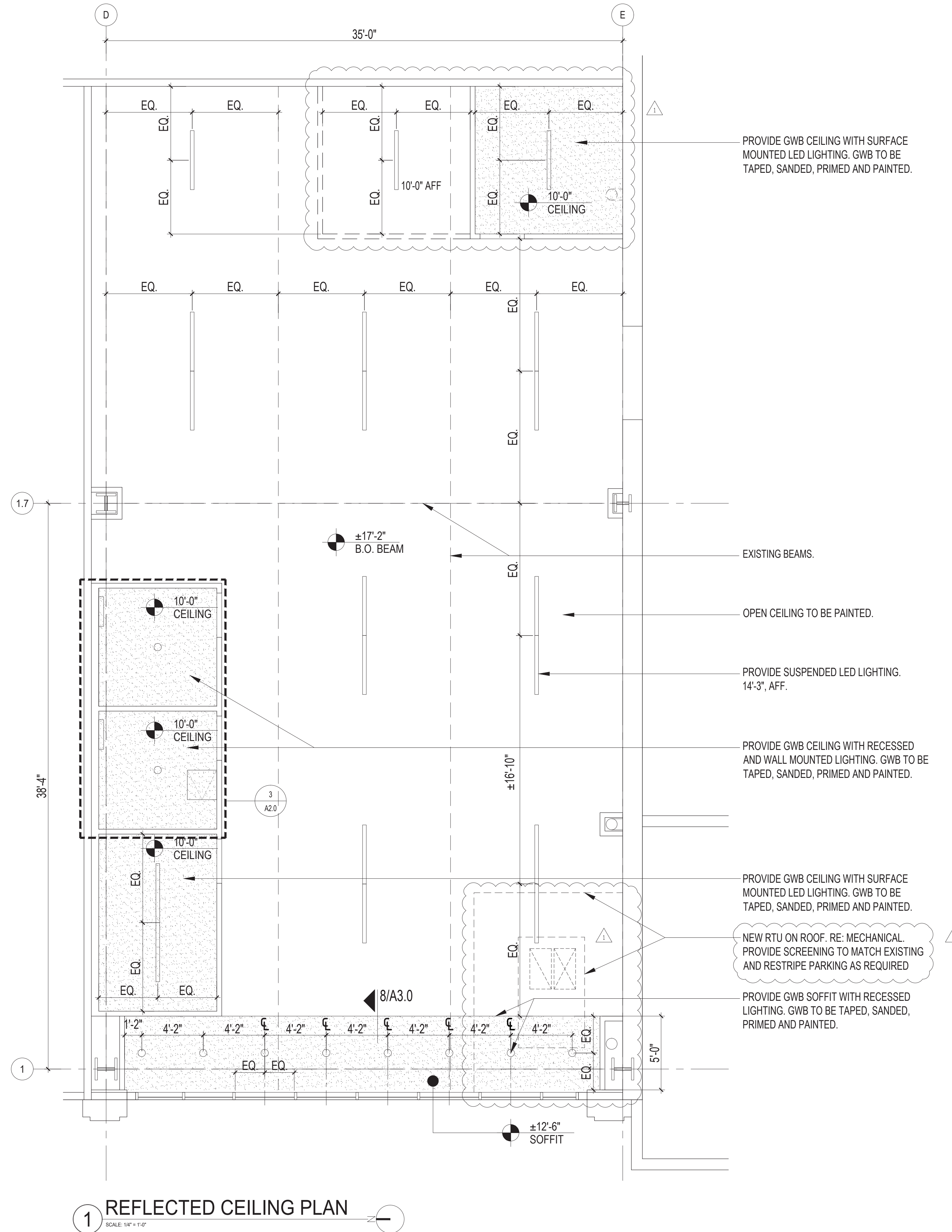
A1.0

LIGHTING NOTES

- FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO STARTING NEW WORK.
- ALL ELECTRICAL, MECHANICAL AND PLUMBING PER ENGINEER PLANS. COORDINATE DISCREPANCIES WITH ARCHITECT.
- ALL CEILING CONDITIONS PER REFLECTED CEILING PLAN.
- CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITIES.
- ELECTRICAL INSTALLATION SHALL MEET REQUIREMENTS OF ALL APPLICABLE CODES AND REGULATIONS.
- VERIFY THE POWER REQUIREMENTS OF ALL INSTALLED MECHANICAL EQUIPMENT.
- SMOKE DETECTORS (IF REQ.) TO COMPLY WITH ALL APPLICABLE CODES, AND COORDINATE WITH ALARM SYSTEM.
- ENSURE EGRESS ILLUMINATION REQUIREMENTS COMPLY WITH ALL APPLICABLE CODES.
- CONTRACTOR TO VERIFY FIXTURE COUNT AND COORDINATE DISCREPANCIES WITH ARCHITECT.

LIGHTING LEGEND

-  RECESSED LED LIGHT
-  4' LED STRIP LIGHTS (SUSPENDED AND SURFACE MOUNTED)
-  2' WALL MOUNTED LED LIGHT



1 REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"



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RCP, NOTES & LEGEND

A1.1

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR		BASE		NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING		REMARKS
		MATL.	FINISH	MATL.	FINISH	MATL.	FINISH	MATL.	FINISH	MATL.	FINISH	MATL.	FINISH	MATL.	FINISH	
101	RECEPTION	LVT	-	RB	-	GWB	PT	GWB	PT	GWB	PT	GL/GWB	SF1/PT	GWB-	PT/PT	
102	MAIN GYM	RSF	-	RB	-	GWB	PT	GWB	PT	GWB	PT	GWB	PT	-	PT	
103	TREATMENT	CT	-	RB	-	GWB	PT	GWB	PT	GWB	PT	GWB	PT	GWB	PT	
104	TREATMENT	RSF	-	RB	-	-	-	GWB	PT	GWB	PT	-	-	-	PT	
105	BREAK ROOM	LVT	-	RB	-	GWB	PT	GWB	PT	GWB	PT	GWB	PT	GWB	PT	
106	MENS RESTROOM	LVT	-	RB	-	GWB/FRP	PT/-	GWB/FRP	PT/-	GWB/FRP	PT/-	GWB/FRP	PT/-	GWB	PT	
107	WOMENS RESTROOM	LVT	-	RB	-	GWB/FRP	PT/-	GWB/FRP	PT/-	GWB/FRP	PT/-	GWB/FRP	PT/-	GWB	PT	

MATERIAL LEGEND

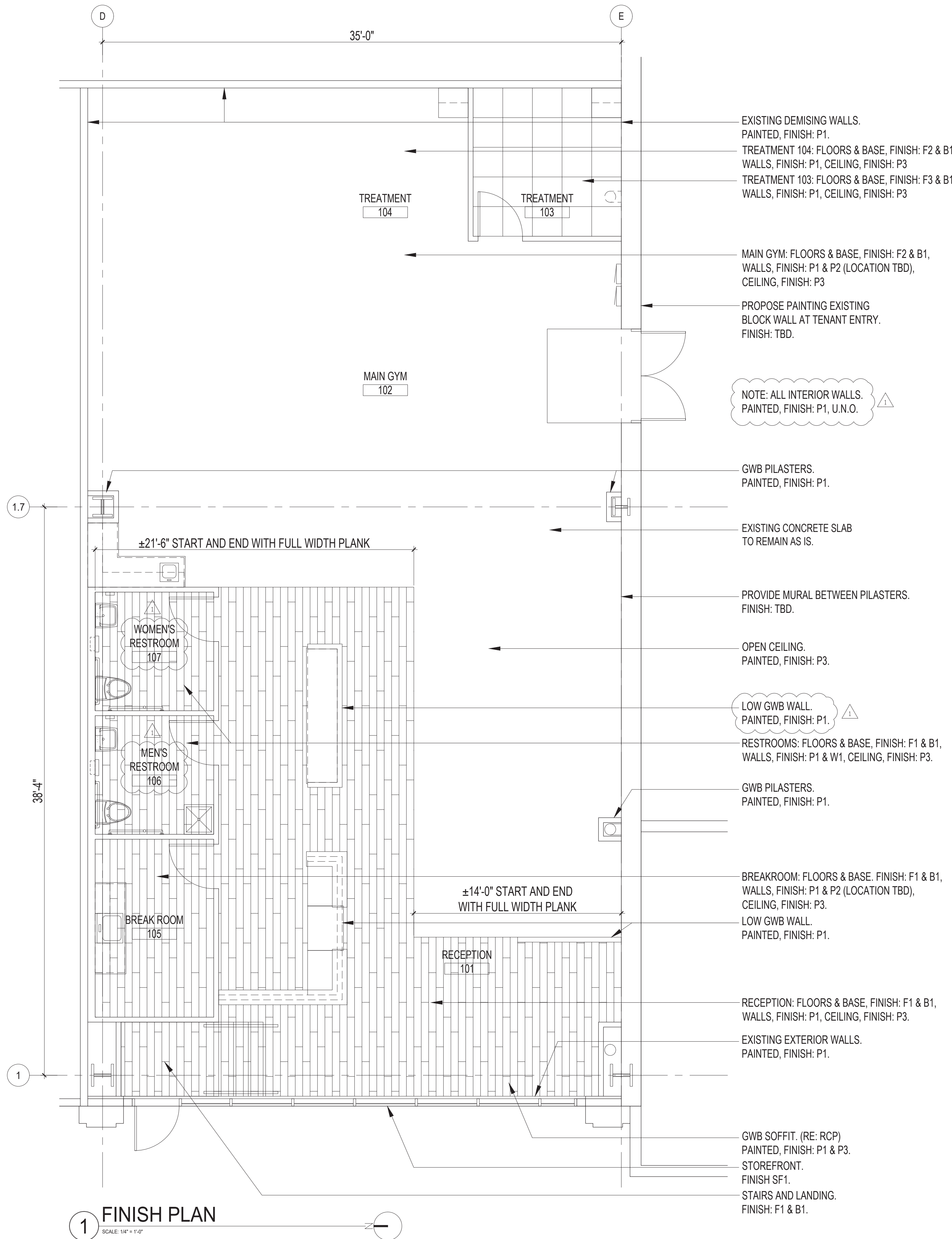
FLOOR	BASE	WALL	CEILING
C CONCRETE	RB RUBBER BASE	GWB GYPSUM WALL BOARD	GWB GYPSUM WALL BOARD
LVT LUXURY VINYL TILE		GL STOREFRONT, GLAZING	PT PRIMED AND PAINTED
RSF RUBBER SPORTS FLOORING		PT PRIMED AND PAINTED	
CT CARPET TILE		FRP FIBER REINFORCED PLASTIC	

FINISH NOTES

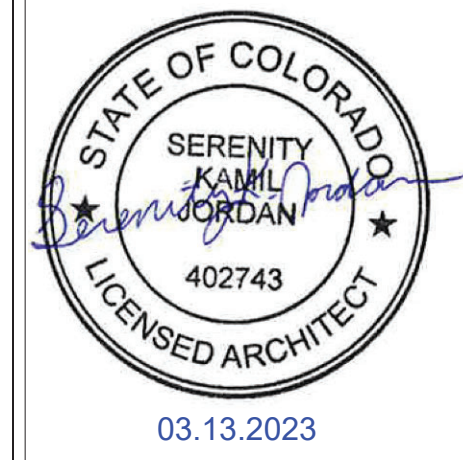
- CONTRACTOR TO PROVIDE SCHLUTER TRANSITION STRIPS (OR APPROVED EQUAL) OR THRESHOLDS AT ALL CHANGES OF MATERIALS.
- CONTRACTOR NEEDS TO TEST FOR MOISTURE IN CONCRETE & INSTALL MATERIALS PER MANUFACTURERS RECOMMENDATIONS.
- CHANGES IN FLOORING ELEVATION BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
- ALL MATERIAL SELECTIONS PER ARCHITECTURAL SPECIFICATIONS AND INTERIOR FINISH SPECIFICATIONS.
- FINAL FINISHED FLOOR ELEVATION AT STAIRS TO BE LEVEL WITH EXISTING EXTERIOR GRADE.
- CONTRACTOR TO CALCULATE AREA AND YARDAGE NEEDED FOR MATERIALS.

INTERIOR FINISH SPECIFICATIONS

<p>F1 RECEPTION, BREAK ROOM, RESTROOM AND STAIR FLOORING</p> <p>TYPE: LVT MANUFACTURER: MANNINGTON COMMERCIAL NAME: SPACIA FIRST COLOR: SMOCKED GREY OAK, #SF3W3023 SIZE: 6x6, PLANK INSTALLATION: STAGGERED</p>	<p>W1 RESTROOMS</p> <p>TYPE: FRP MANUFACTURER: MARLITE NAME: SYMMETRIX SMART SEAM STYLE: SUBWAY TILE, HORIZONTAL (VERIFY WITH OWNER) COLOR: WHITE WITH WHITE GROUT LINES, #SYM-SS100-663-R1 SIZE: 6" x 3" (VERIFY WITH OWNER)</p>
<p>F2 MAIN GYM AND TREATMENT 104 FLOORING</p> <p>TYPE: RUBBER SPORTS FLOORING MANUFACTURER: ROPPE NAME: RECOIL COLOR: COBALT LIGHT GRAY, #378 SIZE: FULL ROLL, 4' x 49'-6" THICKNESS: 3/8"</p>	<p>P1 FIELD PAINT</p> <p>MANUFACTURER: SHERWIN-WILLIAMS COLOR: ORAGAMI WHITE, SW 7636 FINISH: EGGSHELL</p>
<p>F3 TREATMENT 103 FLOORING</p> <p>TYPE: CARPET TILE MANUFACTURER: PHILADELPHIA COMMERCIAL NAME: MAINSTREET STYLE: INTELLECT COLOR: BRILLIANT, #45100 INSTALLATION: MONOLITHIC SIZE: 24x24</p>	<p>P2 ACCENT PAINT</p> <p>MANUFACTURER: SHERWIN-WILLIAMS COLOR: WATERLOO, SW 9141 FINISH: EGGSHELL</p>
<p>B1 LVT, RUBBER SPORTS FLOORING AND CARPET TILE BASE</p> <p>TYPE: RUBBER BASE MANUFACTURER: ROPPE NAME: PINNACLE PLUS PROFILE: SIMPLICITY, #00 COLOR: BLACK, #100 SIZE: ROLL, 4' HIGH</p>	<p>P3 CEILING PAINT</p> <p>MANUFACTURER: SHERWIN-WILLIAMS COLOR: ORAGAMI WHITE, SW 7636 FINISH: FLAT</p>
	<p>P4 DOORS AND FRAMES PAINT</p> <p>MANUFACTURER: DUNN EDWARDS COLOR: CASTLEROCK, DE6375 FINISH: SEMI-GLOSS</p>
	<p>SF1 STOREFRONT</p> <p>COLOR: MATCH EXISTING</p>



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



BELMAR MALL
 TENANT IMPROVEMENTS
 330 South Vance Street,
 Lakewood, CO 80226

OWNER/TENANT
 PHYSICAL REHABILITATION NETWORK
 CARLSBAD, CA
 ARCHITECT | TENANT IMPROVEMENTS
 ROTHSCHILD DOWNES
 ENGLEWOOD, CO
 MECHANICAL, ELECTRICAL, PLUMBING
 DMCE ENGINEERING
 LAKEWOOD, CO

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05	03/13/23	PLAN CHECK REV 1

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FINISH PLAN,
 SCHEDULE, NOTES
 & INTERIOR FINISH
 SPECIFICATIONS
A1.2



03.13.2023

BELMAR MALL

TENANT IMPROVEMENTS

330 South Vance Street,
Lakewood, CO 80226

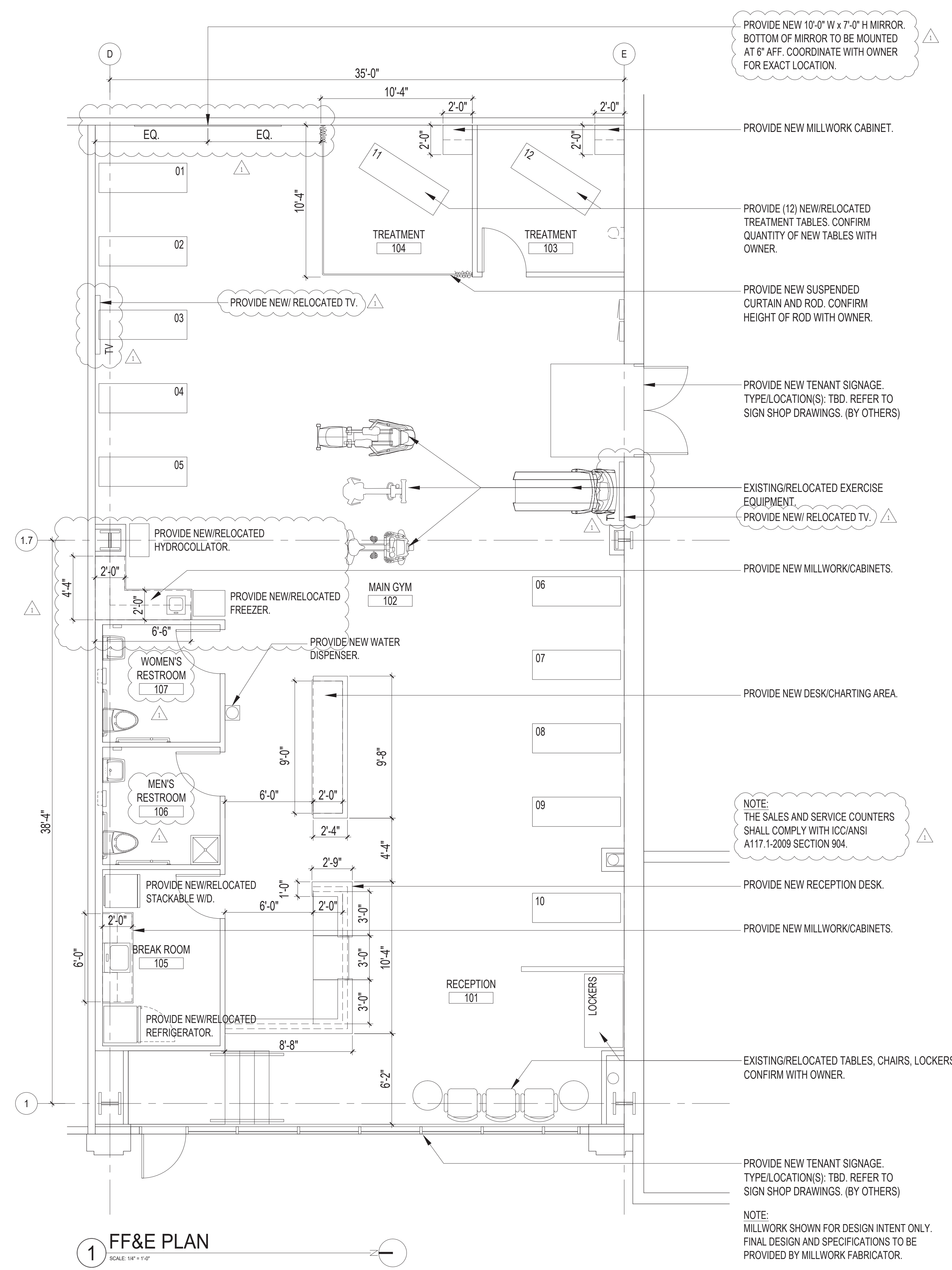
OWNER/TENANT
PHYSICAL REHABILITATION NETWORK
CARLSBAD, CA
ARCHITECT | TENANT IMPROVEMENTS
ROTHSCHILD DOWNES
ENGLEWOOD, CO
MECHANICAL, ELECTRICAL, PLUMBING
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FF&E PLAN

A1.3



PROVIDE NEW 10'-0" W x 7'-0" H MIRROR. BOTTOM OF MIRROR TO BE MOUNTED AT 6" AFF. COORDINATE WITH OWNER FOR EXACT LOCATION.

PROVIDE NEW MILLWORK CABINET.

PROVIDE (12) NEW/RELOCATED TREATMENT TABLES. CONFIRM QUANTITY OF NEW TABLES WITH OWNER.

PROVIDE NEW SUSPENDED CURTAIN AND ROD. CONFIRM HEIGHT OF ROD WITH OWNER.

PROVIDE NEW TENANT SIGNAGE. TYPE/LOCATION(S): TBD. REFER TO SIGN SHOP DRAWINGS. (BY OTHERS)

EXISTING/RELOCATED EXERCISE EQUIPMENT.
PROVIDE NEW/RELOCATED TV.

PROVIDE NEW MILLWORK/CABINETS.

PROVIDE NEW DESK/CHARTING AREA.

NOTE:
THE SALES AND SERVICE COUNTERS SHALL COMPLY WITH ICC/ANSI A117.1-2009 SECTION 904.

PROVIDE NEW RECEPTION DESK.

PROVIDE NEW MILLWORK/CABINETS.

EXISTING/RELOCATED TABLES, CHAIRS, LOCKERS. CONFIRM WITH OWNER.

PROVIDE NEW TENANT SIGNAGE. TYPE/LOCATION(S): TBD. REFER TO SIGN SHOP DRAWINGS. (BY OTHERS)

NOTE:
MILLWORK SHOWN FOR DESIGN INTENT ONLY. FINAL DESIGN AND SPECIFICATIONS TO BE PROVIDED BY MILLWORK FABRICATOR.

1 FF&E PLAN
SCALE: 1/4" = 1'-0"



03.13.2023

BELMAR MALL

TENANT IMPROVEMENTS

330 South Vance Street,
Lakewood, CO 80226

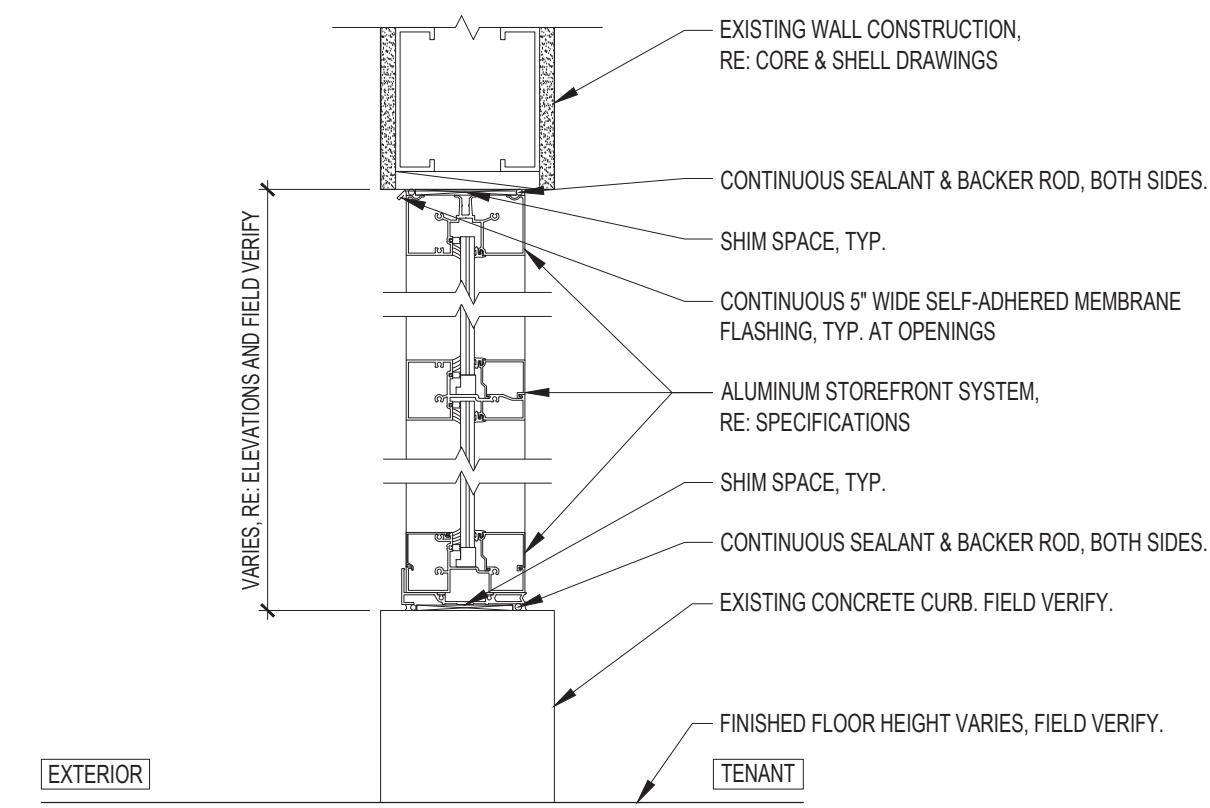
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PHYSICAL REHABILITATION NETWORK
CARLSBAD, CA
ARCHITECT | TENANT IMPROVEMENTS
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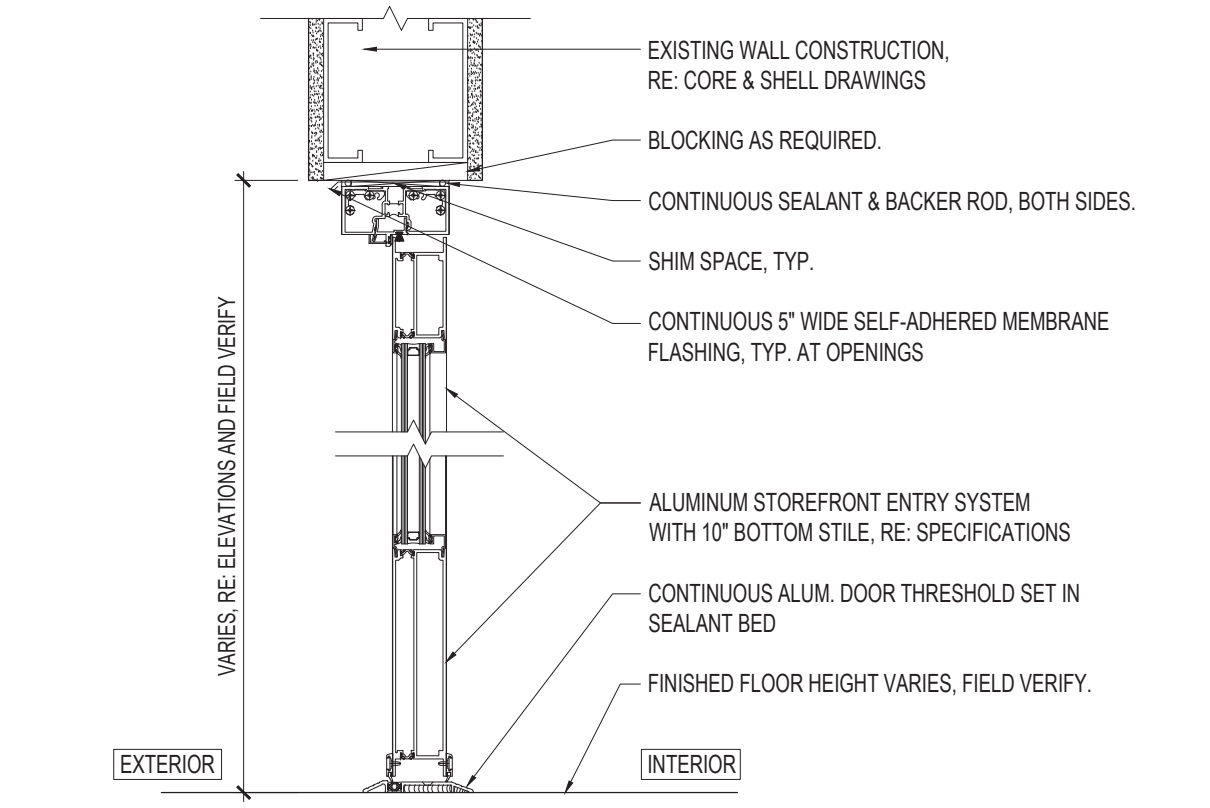
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STOREFRONT ELEVATION AND DETAILS, RESTROOM PLAN, RCP AND ELEVS

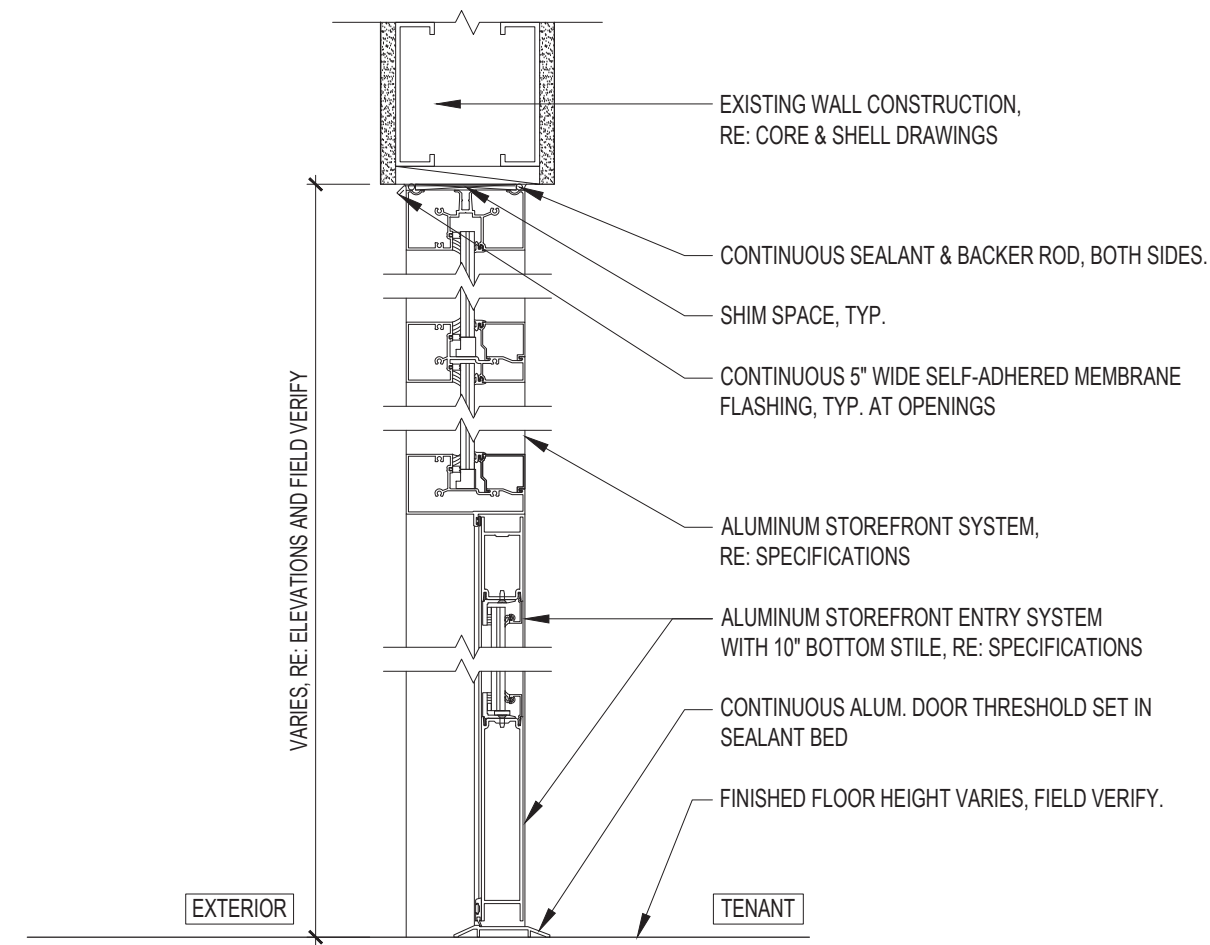
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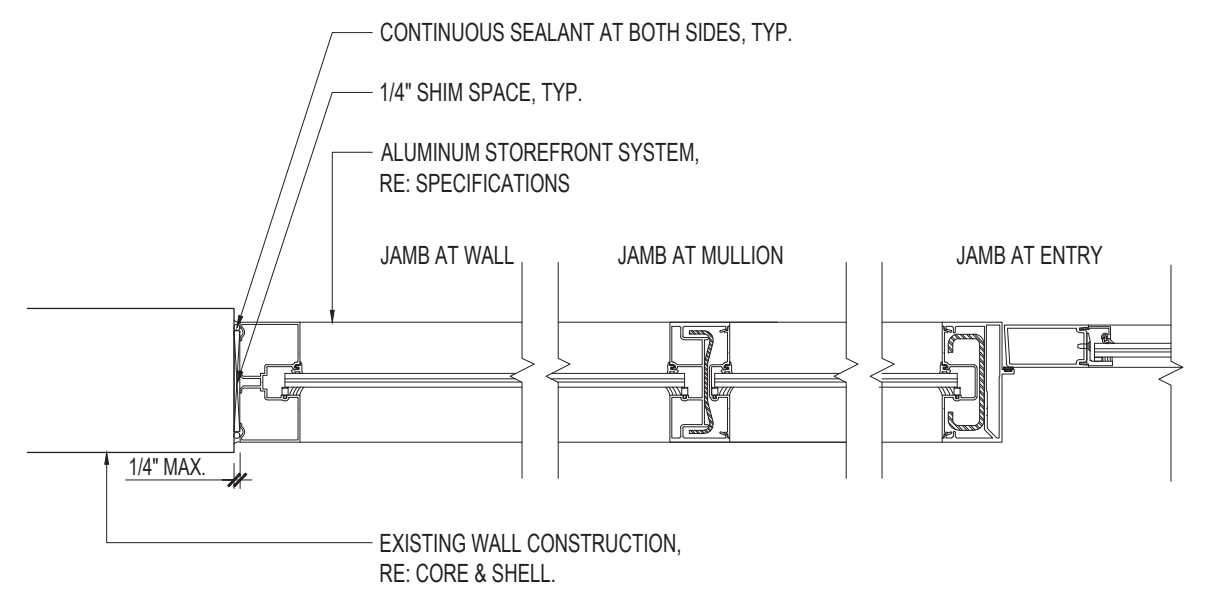
9 HEAD/SILL DETAIL - PANEL
SCALE: 1/12" = 1'-0"



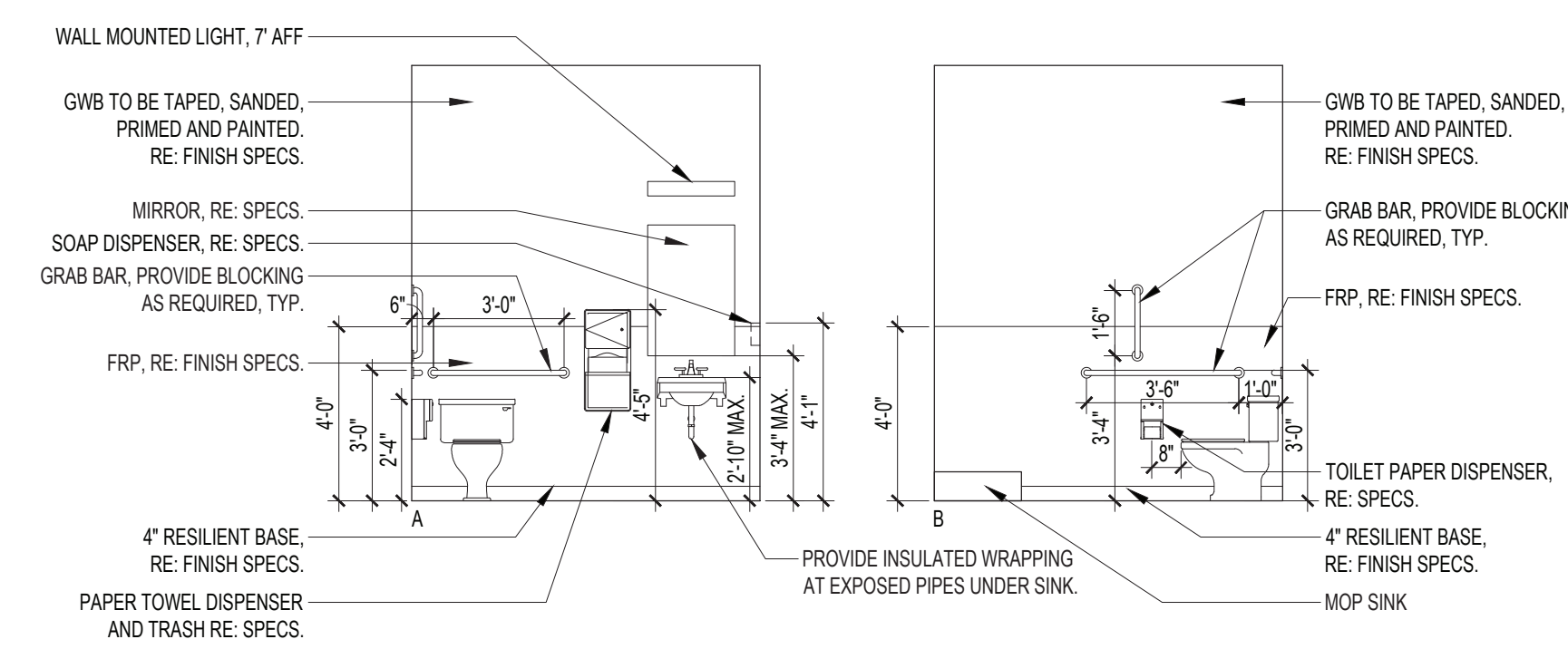
8 HEAD/SILL DETAIL - DOOR
SCALE: 1/12" = 1'-0"



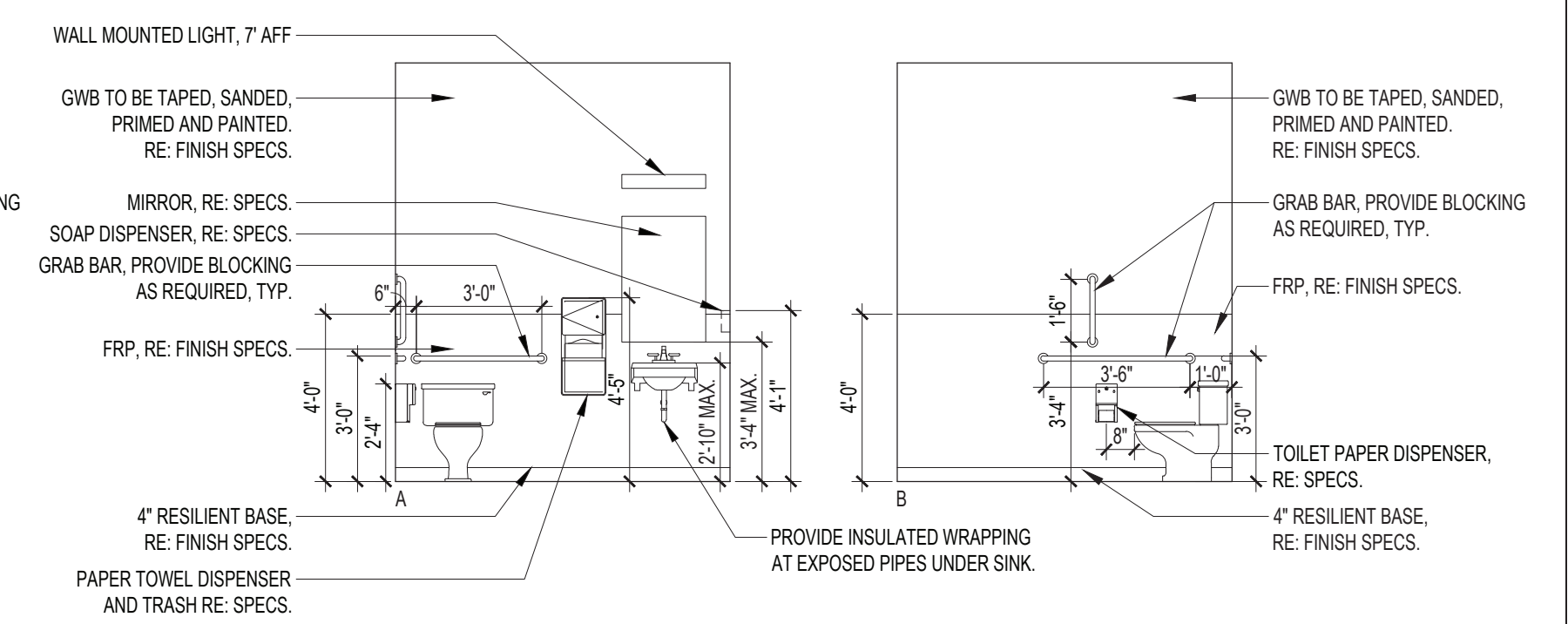
7 HEAD/SILL DETAIL - DOOR
SCALE: 1/12" = 1'-0"



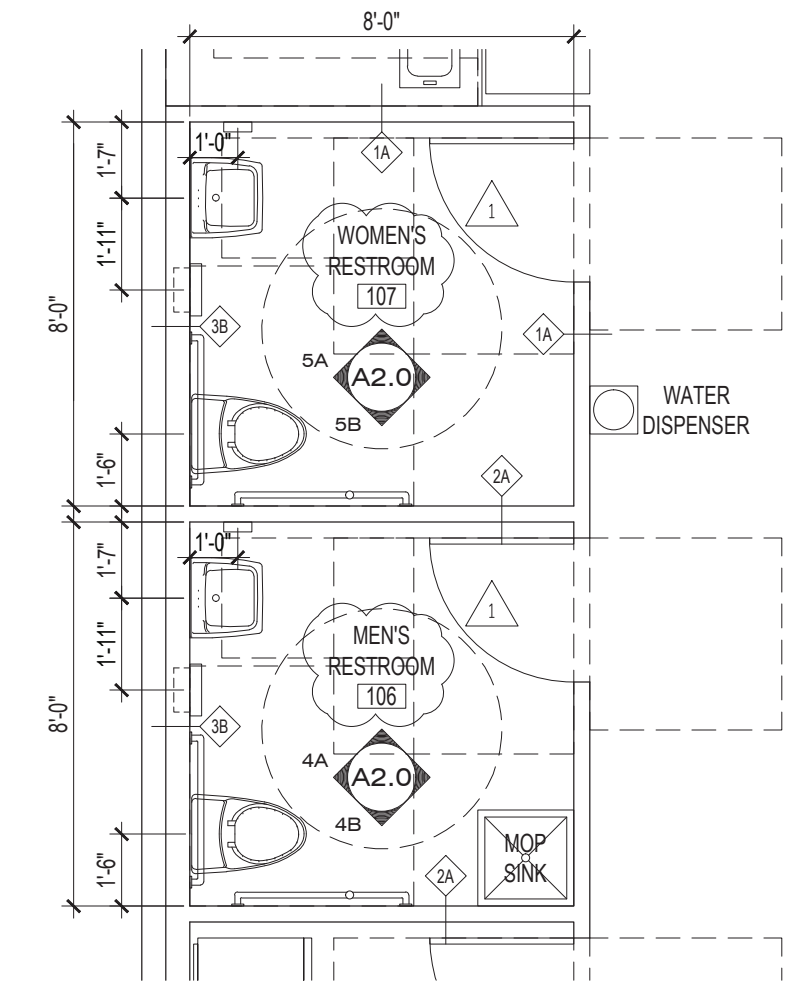
6 STOREFRONT JAMB
SCALE: 1/12" = 1'-0"



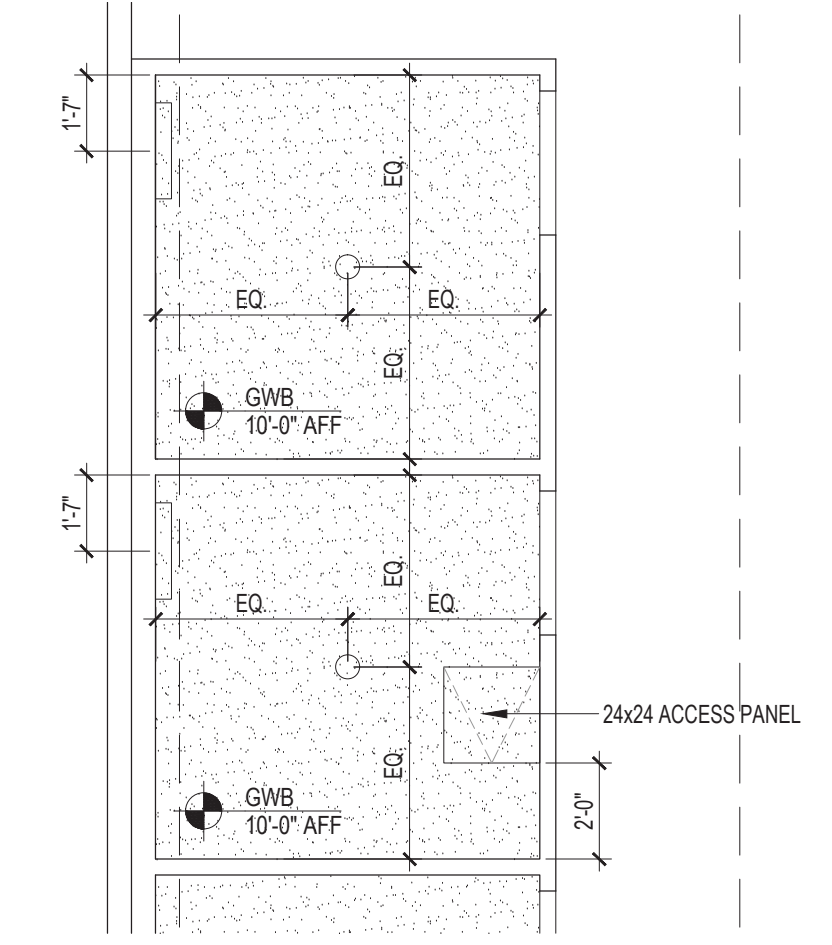
4 MEN'S RESTROOM ELEVATIONS - 106
SCALE: 1/4" = 1'-0"



5 WOMEN'S RESTROOM ELEVATIONS - 107
SCALE: 1/4" = 1'-0"

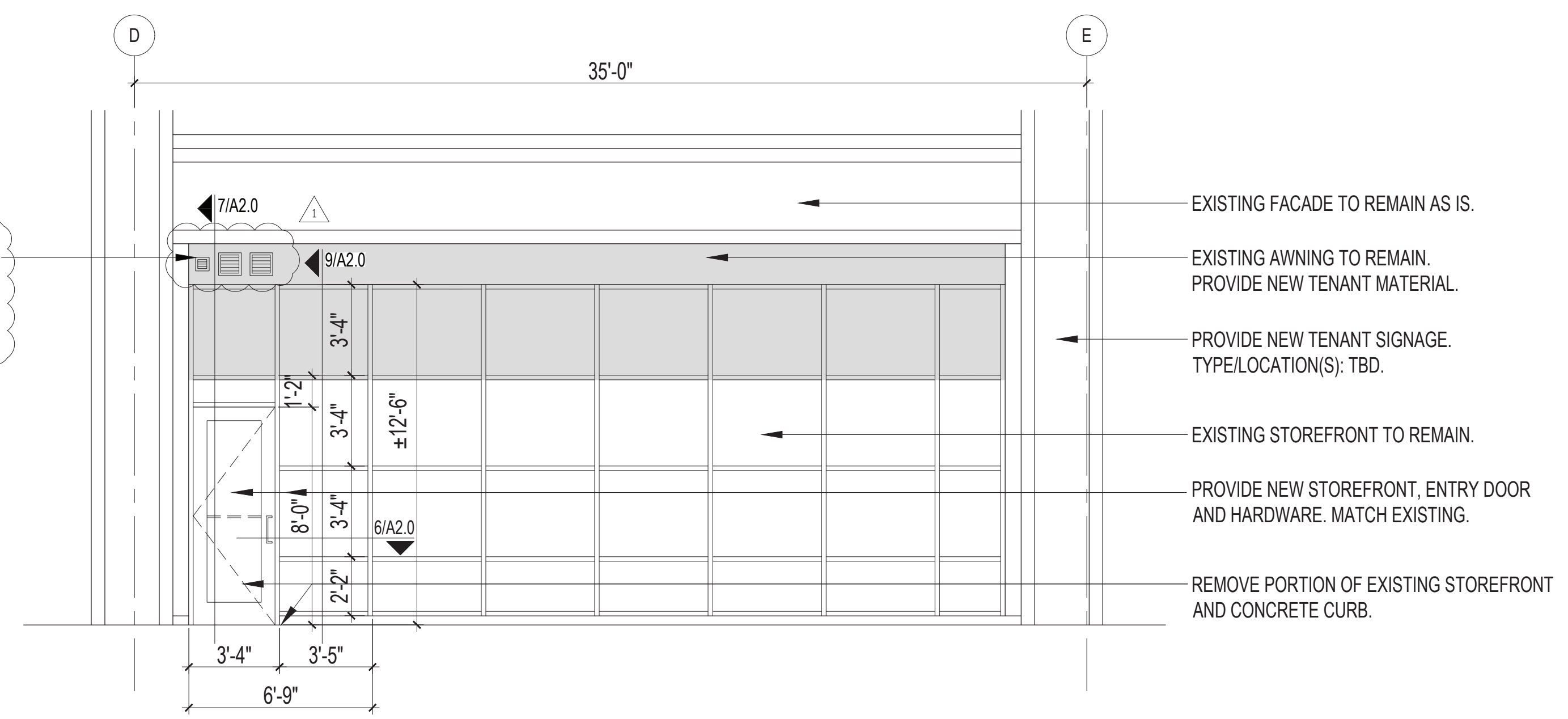


2 RESTROOM FLOOR PLAN
SCALE: 1/4" = 1'-0"



3 RESTROOM RCP
SCALE: 1/4" = 1'-0"

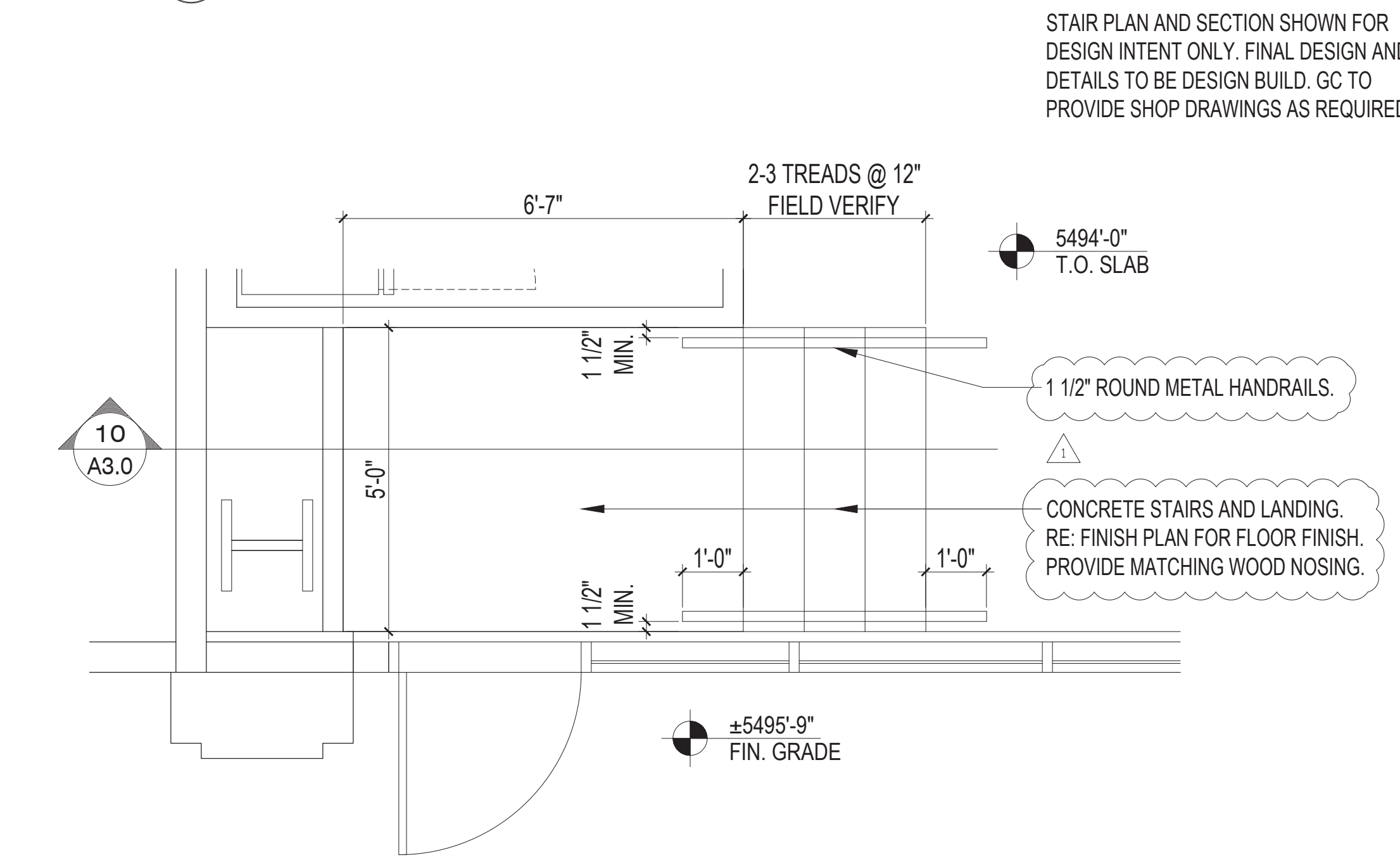
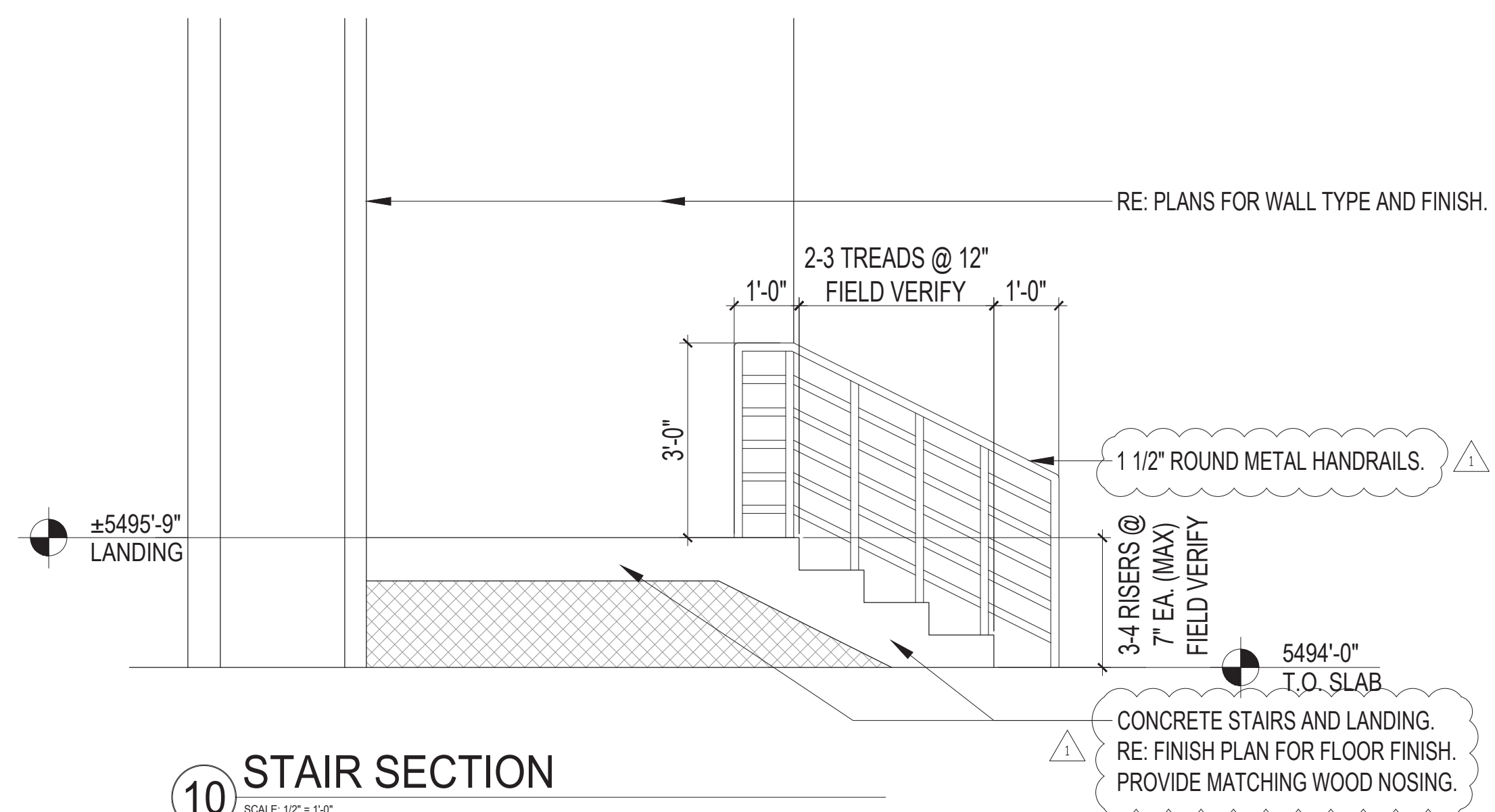
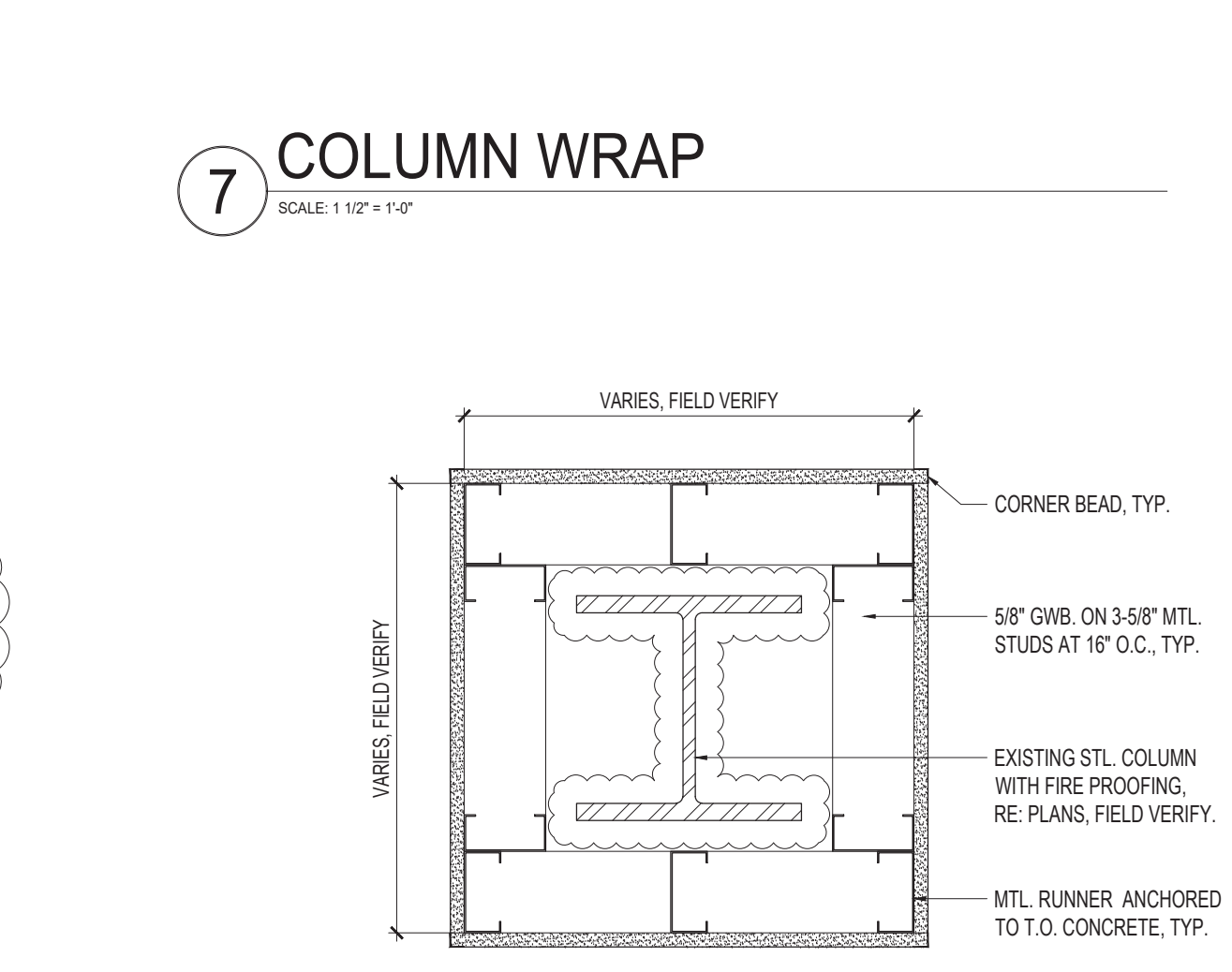
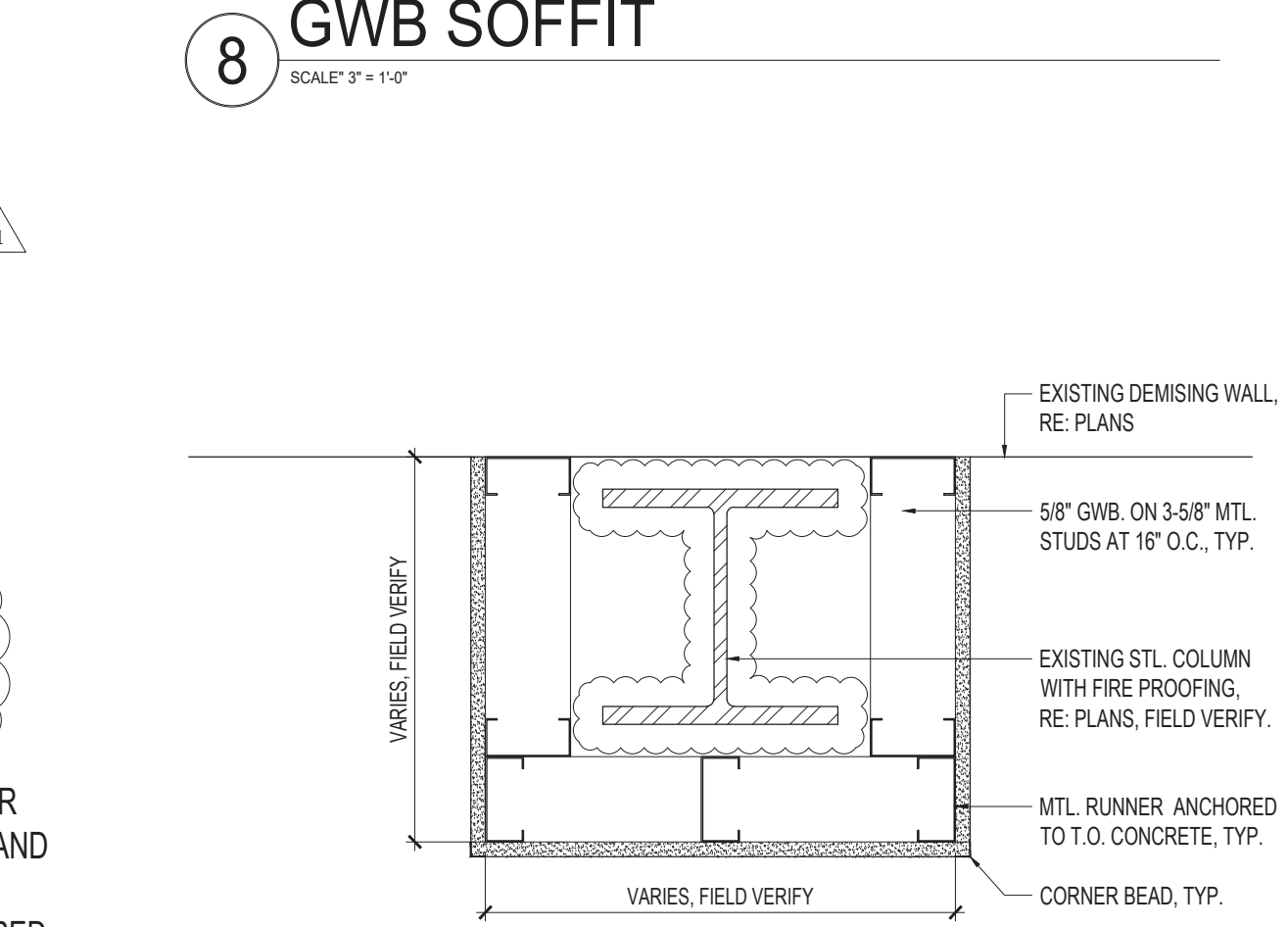
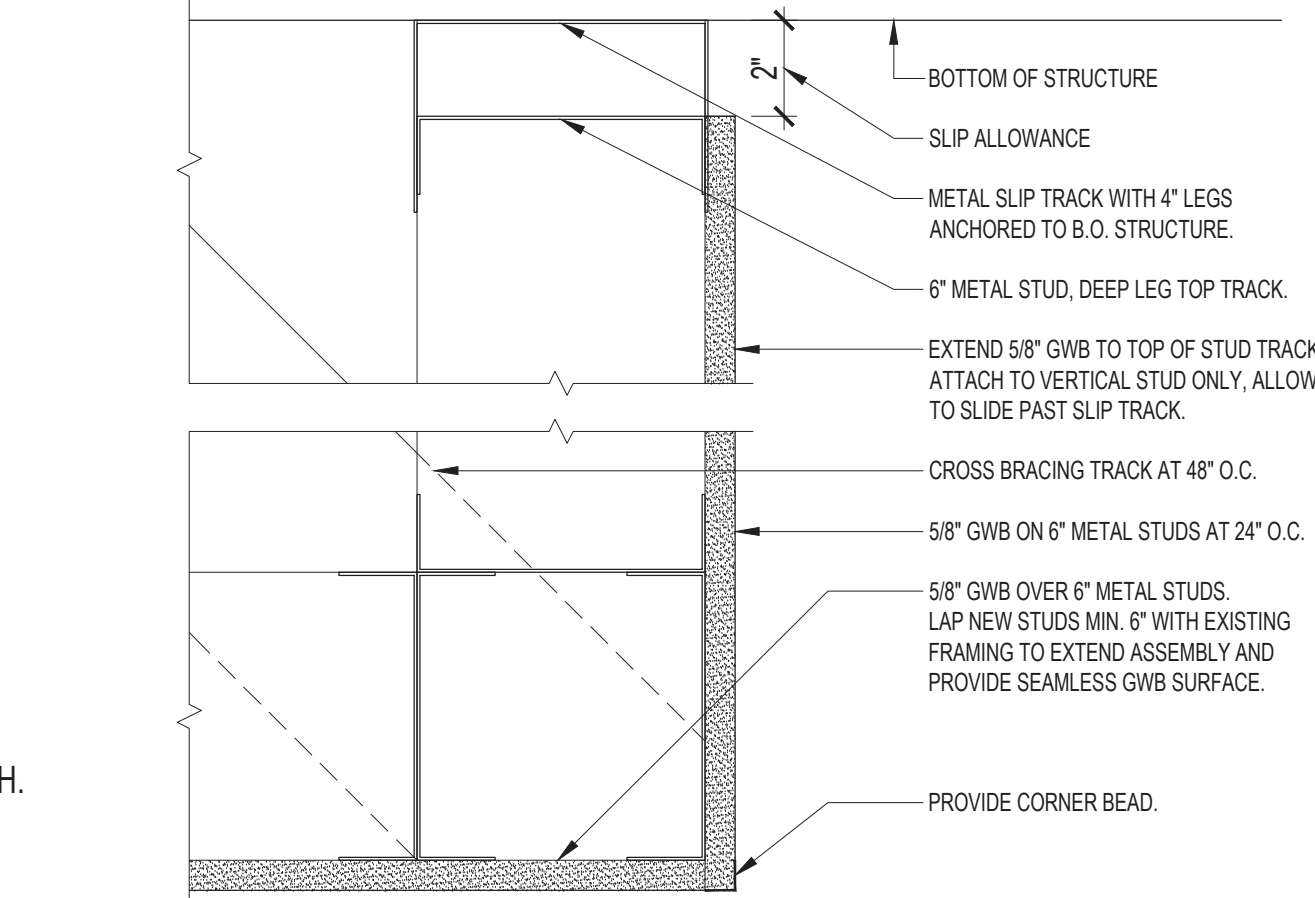
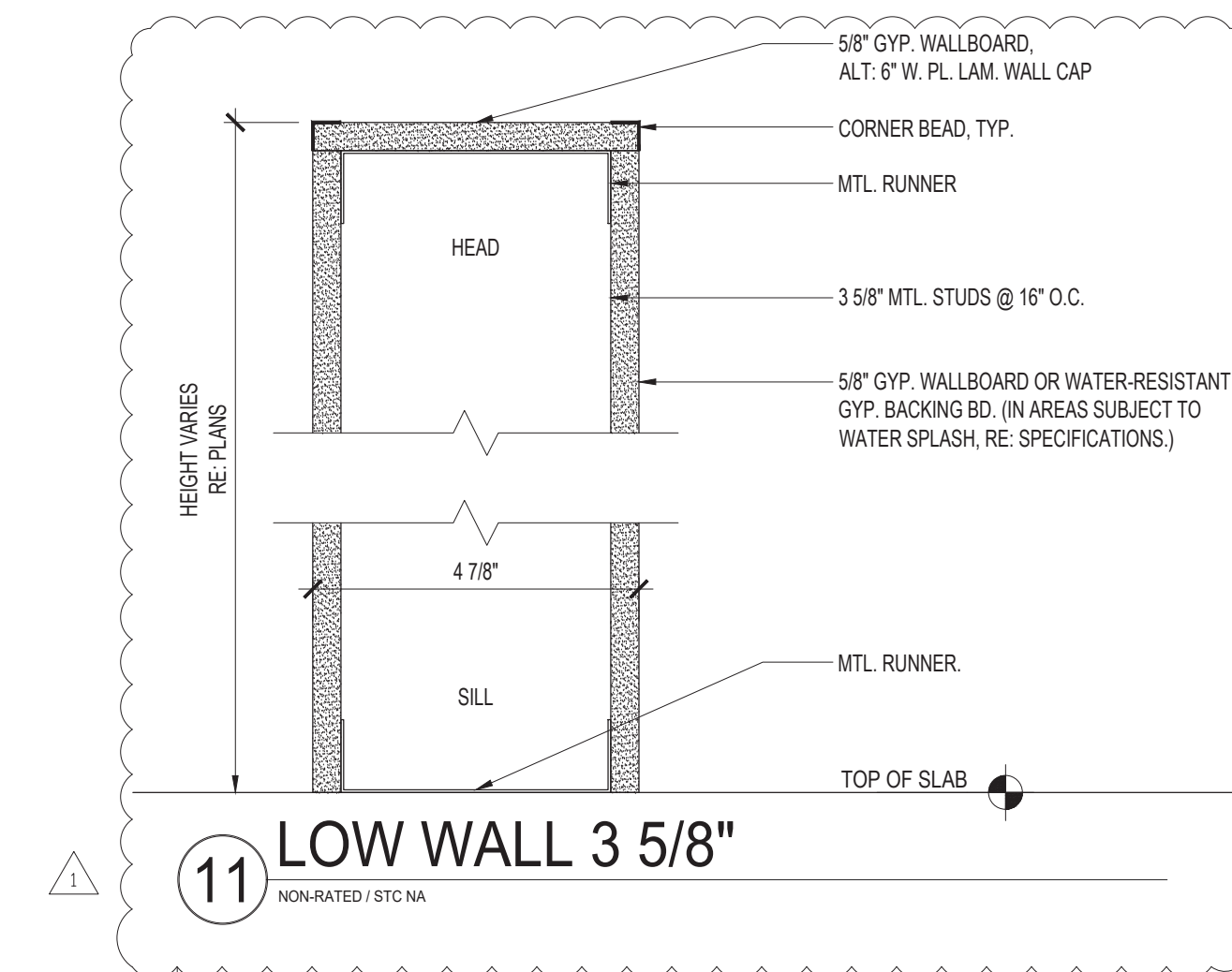
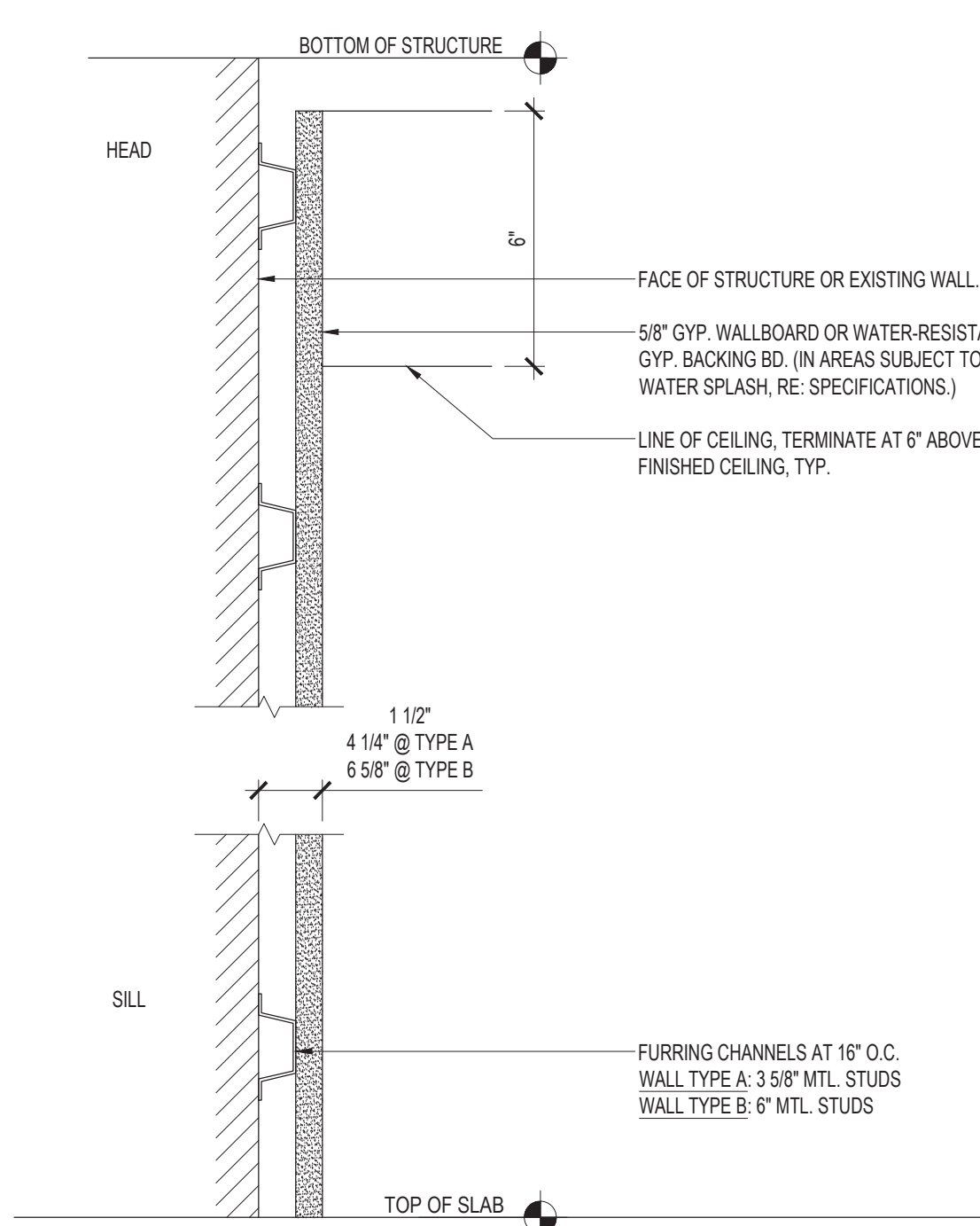
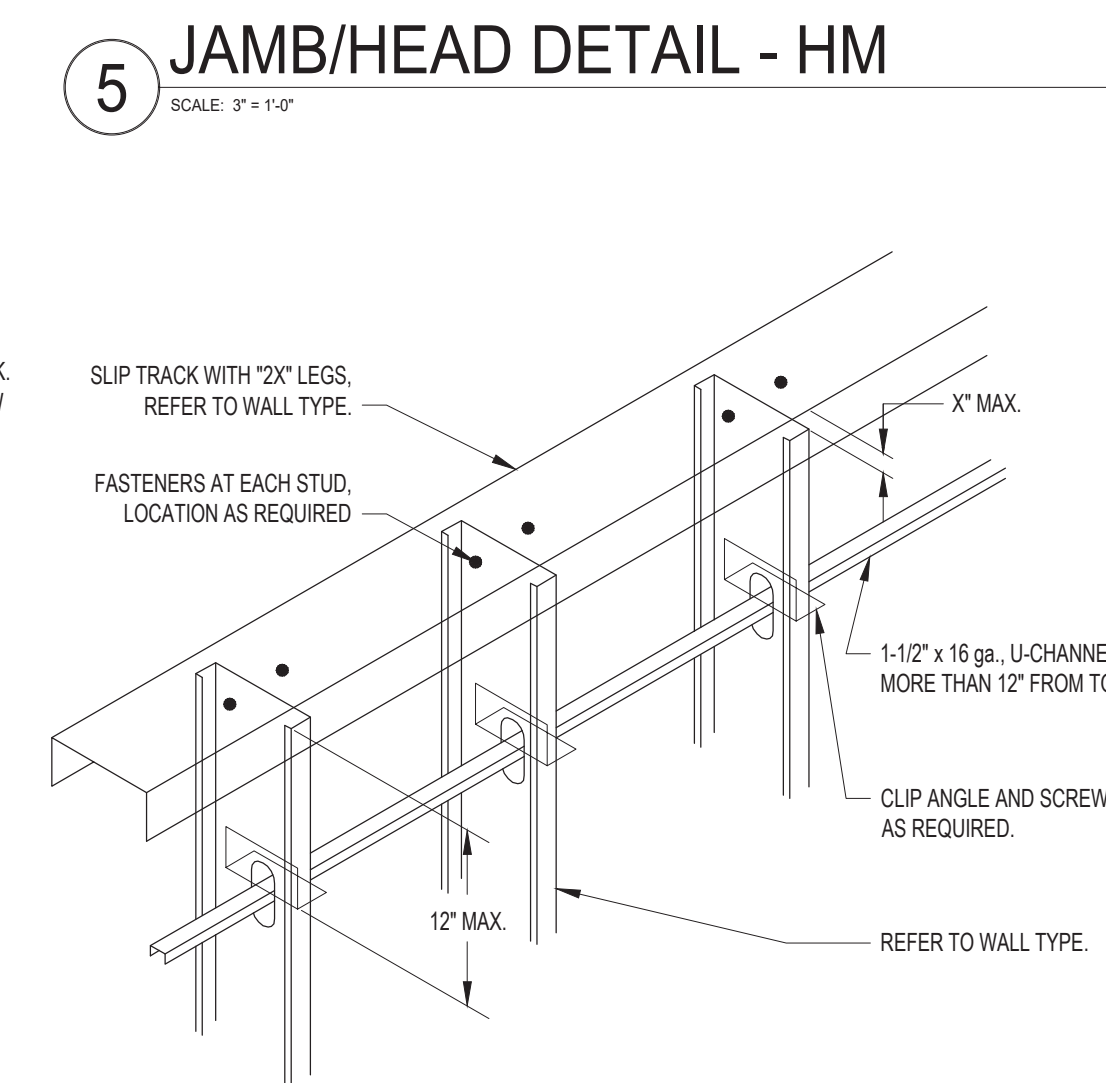
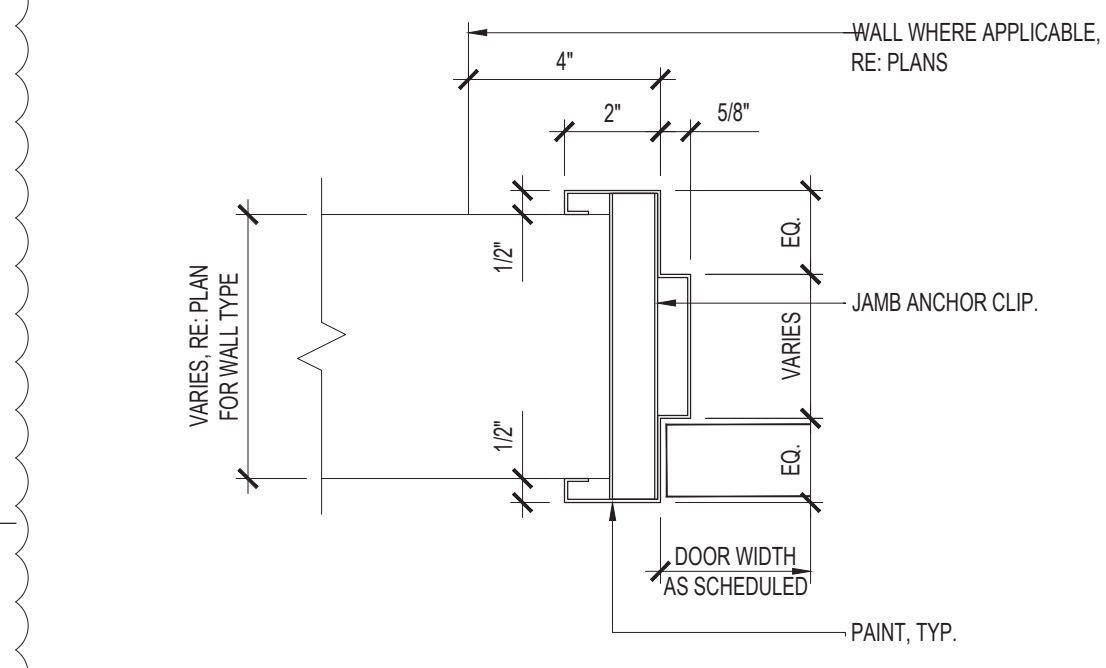
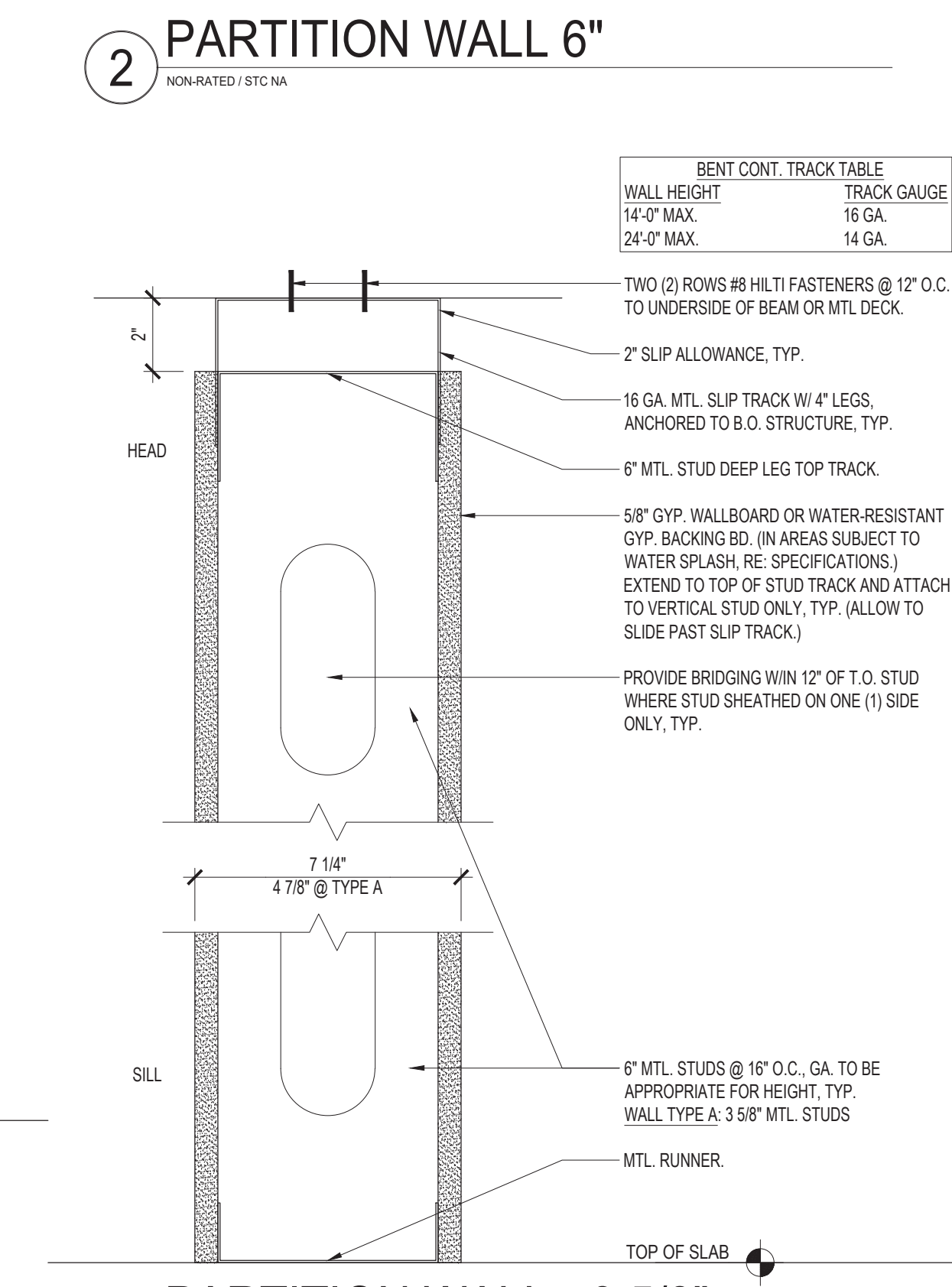
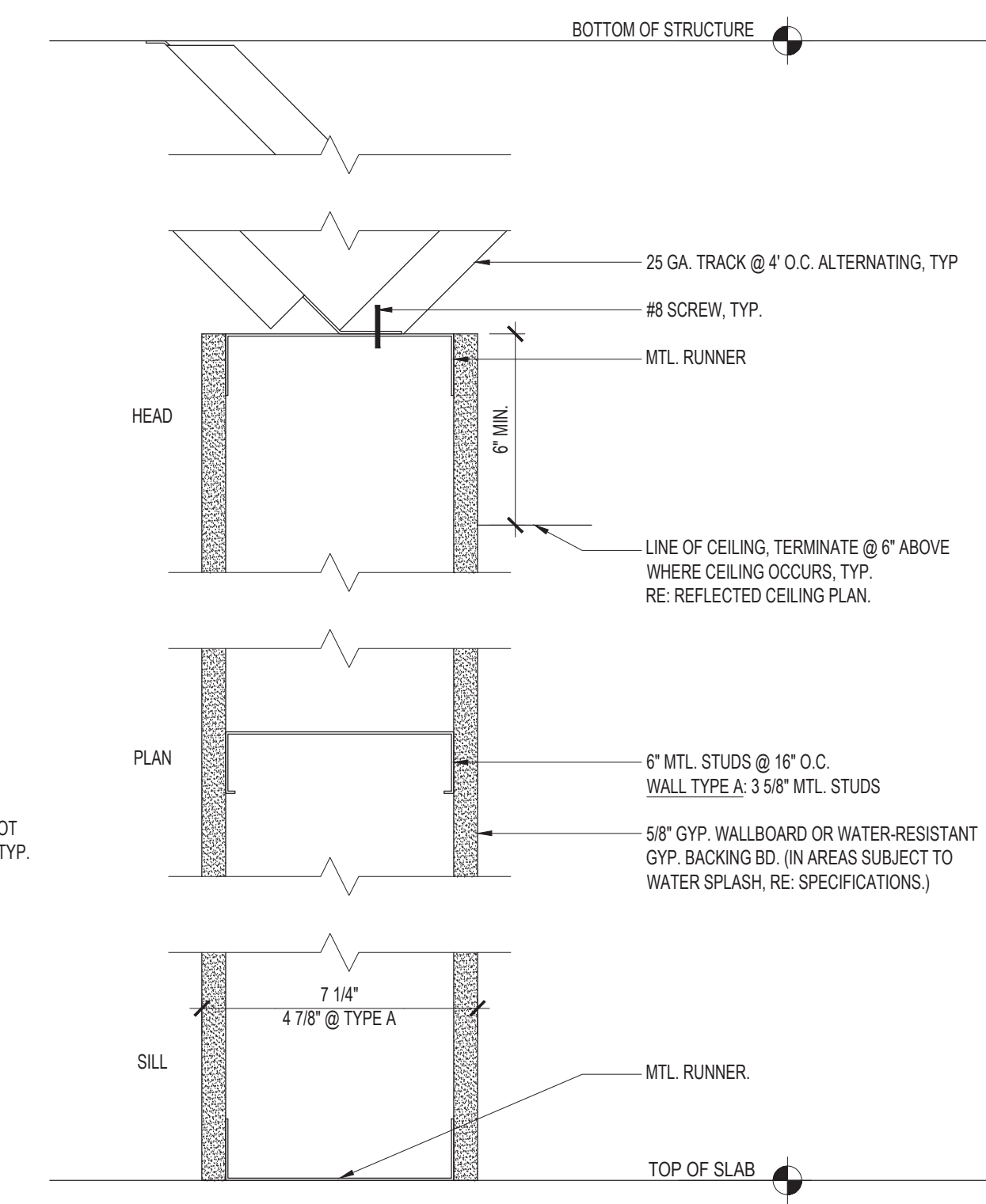
PROVIDE NEW EXHAUST LOUVERS AND DRYER VENT. FINAL LOCATION TO BE COORDINATED IN THE FIELD. RE: MECHANICAL FOR SIZES.



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

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PLUMBING NOTES

- ALL DRAWINGS AND NOTES MUST BE READ, REVIEWED & UNDERSTOOD BY THE CONTRACTOR PRIOR TO ORDERING AND/OR INSTALLATION OF ANY AND ALL PLUMBING SYSTEMS.
- THE PLUMBING SYSTEM WITH FIXTURES, WATER HEATER, DRAINS, VENTS, WATER PIPING, INSULATION, GAS PIPING, ETC., SHALL BE BY THE PLUMBING CONTRACTOR IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- THIS SET OF PLUMBING DRAWINGS HAS BEEN DESIGNED UNDER THE 2018 INTERNATIONAL PLUMBING CODE (IPC), THE 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC).
- ALL PLUMBING LINES, PLUMBING PENETRATIONS, PLUMBING EQUIPMENT, ETC., ARE APPROXIMATE LOCATIONS. PIPING IS SPACED AND SHOWN A CERTAIN DISTANCE FROM WALLS, EQUIPMENT, ETC., FOR CLARITY AND COORDINATION. FIELD VERIFY ALL PLUMBING LINE ROUTING, PLUMBING PENETRATION LOCATIONS, PLUMBING EQUIPMENT, ETC., WITH ALL OTHER TRADES, AS WELL AS THE OWNER/ARCHITECT, PRIOR TO INSTALLATION AS DESIGN DRAWINGS MAY DIFFER FROM ACTUAL INSTALLATION CONDITIONS. VERIFY ALL PLUMBING WITH STRUCTURAL, MECHANICAL AND ELECTRICAL, INTERIOR DESIGNER CONTRACTORS, LANDSCAPE/IRRIGATION CONTRACTORS, KITCHEN EQUIPMENT CONTRACTORS, ETC., PRIOR TO INSTALLATION OF ANY AND ALL PLUMBING SYSTEMS.
- ALL SANITARY WASTE VENTS, TO BE A MINIMUM OF 10'-0" FROM ANY AND ALL OPERABLE WINDOWS AND AIR INTAKES INTO THE BUILDING AND TO MECHANICAL EQUIPMENT OR HAVE THE TERMINATION LOCATION A MINIMUM OF 3'-0" ABOVE THE HIGHEST POINT OF THE WINDOW OR AIR INTAKE INTO THE BUILDING OR MECHANICAL EQUIPMENT.
- PLUMBING CONTRACTOR TO FIELD VERIFY ALL NEW & EXISTING PLUMBING CONDITIONS INCLUDING, BUT NOT LIMITED TO, EQUIPMENT, LOCATIONS, PIPING, SIZING, FLOW OF DIRECTION, INVERT ELEVATIONS, UTILITIES, VENTS THRU ROOF, ETC., PRIOR TO ORDERING, INSTALLATION AND ANY WORK BEING DONE. NOTIFY ENGINEER IN WRITING FOR ANY DESIGN/DRAWING DISCREPANCIES.
- USE ONLY BALL VALVES. NO GATE VALVES ALLOWED ON PROJECT.
- HOT WATER MAIN LINES TO GO DOWN IN WALL TO WITHIN 2 FEET MAXIMUM OF THE HOT WATER SUPPLY TO ALL PUBLIC LAVATORIES; PER IECC TABLE C404.5.1, AND THEN BACK UP IN WALL TO ABOVE THE CEILING AND THEN ROUTED TOWARDS THE REMAINING HOT WATER PLUMBING FIXTURES WITH A HOT WATER RECIRCULATION LINE FROM THE FURTHEST HOT WATER PLUMBING FIXTURE BACK TO RCP1 & THE HOT WATER HEATER.
- ALL PLUMBING SHALL BE IN ACCORDANCE WITH THE LOCAL PLUMBING CODES AND/OR ORDINANCES, INCLUDING BUT NOT LIMITED TO PIPE SIZES.
- ALL ACCESS PANELS TO BE LOCATED EITHER IN THE CEILING OR CONCEALED WITHIN A CABINET. NO ACCESS PANELS TO BE LOCATED ON WALLS WHERE IT CONFLICTS WITH THE AESTHETIC OF THE ROOM/WALLS. ALL ACCESS PANEL LOCATIONS TO BE VERIFIED WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.
- PROVIDE ISOLATION VALVES ON THE MOP SINK FAUCETS.
- PROVIDE 1/4 TURN SHUTOFFS AT ALL PLUMBING FIXTURES. PROVIDE ISOLATION VALVES AT RISERS, BRANCHES AND ALL EQUIPMENT.
- DOMESTIC WATER PIPING SHALL BE TYPE "L" HARD DRAWN COPPER WITH WROUGHT COPPER SWEAT FITTINGS. USE ONLY CANFIELD 100% WATER SAFE SOLDER 95% TIN, 4% COPPER, 1% SILVER OR APPROVED EQUAL. DO NOT USE LEAD OR ANTIMONY SOLDERS. AT CONTRACTORS OPTION DOMESTIC WATER PIPE 2" AND BELOW AFTER WATER ENTRY ASSEMBLY MAY BE CPVC PIPE IF APPROVED BY THE LOCAL A.H.J. OWNER AND CODE. NOTIFY ENGINEER IN WRITING IF ANY MATERIAL OTHER THAN COPPER IS GOING TO BE USED FOR POSSIBLE RESIZING OF WATER LINES, PUMP HEAD LOSS, EXPANSION LOOPS, INSULATION, ETC. USE ONLY FLOWGUARD GOLD PIPE WITH FLOWGUARD GOLD ONE STEP CEMENT ON PIPES 1/2" THROUGH 2". NO CPVC SUBSTITUTIONS ARE ALLOWED. PROVIDE CSA APPROVED HARDENED STRIKER PLATES LISTED FOR CSST AND CPVC SYSTEMS AT ALL LOCATIONS WHERE TUBING IS CONCEALED AND PUNCTURE FROM NAILS OR SCREWS IS A POSSIBLE THREAT. SUPPORT ALL PIPE PER DETAILS, BUILDING CODE, AND MANUFACTURER REQUIREMENTS.]
- COPPER TUBING INSTALLED WITHIN A BUILDING AND IN OR UNDER A CONCRETE FLOOR SHALL BE TYPE "K" COOPER AND INSTALLED WITHOUT JOINTS. WHERE JOINTS ARE PERMITTED, THEY SHALL BE BRAZED AND FITTINGS SHALL BE WROUGHT COPPER.
- INTERIOR SOIL AND WASTE PIPING ABOVE GRADE SHALL BE SERVICE WEIGHT IRON SOIL PIPE AND NO-HUB FITTINGS. APPROVED PIPE MANUFACTURERS AB&I FOUNDRY, CHARLOTTE PIPE, AND TYLER PIPE BEARING THE TRADEMARK OF CISPI. NO HUB COUPLINGS SHALL BE NSF CERTIFIED, MEET CISPI 310 STANDARD MANUFACTURED BY TYLER, ANACO, IDEAL, AND MISSION. INSTALL PER THE CISPI 301 STANDARD LATEST VERSION. NO ABS PIPE OR PVC FOAMCORE PIPE ALLOWED ON THE PROJECT. (PVC SCHEDULE 40 SOLID CORE PLASTIC PIPE AND FITTINGS MAY BE USED WHERE APPROVED BY OWNER AND ALLOWED BY THE BUILDING DEPARTMENT. INSTALL ALL PVC PIPE PER ASTM D2321 REQUIREMENTS AND RECOMMENDATIONS. NO FOAM CORE ALLOWED. NO PVC PIPING LOCATED IN RETURN AIR PLENUMS. COORDINATE ALL PIPING ROUTING AND MATERIAL WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION AND ORDERING.)
- EXTERIOR SOIL AND WASTE PIPING BELOW GRADE SHALL BE SERVICE WEIGHT CAST IRON HUB AND SPIGOT SOIL PIPE AND FITTINGS WITH NEOPRENE GASKETS APPROVED MANUFACTURERS AB&I FOUNDRY, CHARLOTTE PIPE, AND TYLER PIPE BEARING THE TRADEMARK OF CISPI. INSTALL PER THE CISPI 301 STANDARD LATEST VERSION. NO ABS PIPE OR PVC FOAMCORE PIPE ALLOWED ON THE PROJECT. (PVC SCHEDULE 40 SOLID CORE PLASTIC PIPE AND FITTINGS MAY BE USED WHERE APPROVED BY THE BUILDING DEPARTMENT. INSTALL ALL PVC PIPE PER ASTM D2321 REQUIREMENTS AND RECOMMENDATIONS. NO FOAM CORE ALLOWED. NO PVC PIPING LOCATED IN RETURN AIR PLENUMS. COORDINATE ALL PIPING ROUTING AND MATERIAL WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION AND ORDERING.)
- SANITARY WASTE LINES TO GRAVITY DRAIN AT 1/4" SLOPE/FOOT FOR ALL PIPING 2" AND SMALLER. SANITARY WASTE LINES TO GRAVITY DRAIN AT 1/8" SLOPE/FOOT FOR ALL PIPING 3" AND LARGER, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
- WATER-HEATING EQUIPMENT NOT SUPPLIED WITH INTEGRAL HEAT TRAPS AND SERVING NON-CIRCULATED SYSTEMS SHALL BE PROVIDED WITH HEAT TRAPS ON THE SUPPLY AND DISCHARGE PIPING ASSOCIATED WITH THE EQUIPMENT.
- PROVIDE A VACUUM BREAKER AT THE TOP OF THE COLD WATER SUPPLY LINE, TO THE HOT WATER HEATER, FOR ALL BOTTOM-FED COLD WATER SUPPLY HOT WATER HEATERS. PROVIDE WATTS N360 (OR EQUAL) VACUUM BREAKER/RELIEF VALVE.
- MOUNT LAVATORY AT REQUIRED ELEVATION FOR HANDICAP USAGE WHERE REQUIRED. INSULATE ALL EXPOSED PIPING SUPPLIES AND DRAINS PER ADA REQUIREMENTS AND DRAWING SPECIFICATIONS.
- WEATHERPROOF ALL PLUMBING ROOF PENETRATIONS PER CODES AND ROOFING MANUFACTURER RECOMMENDATIONS. LOCATE ALL PLUMBING VENTS THROUGH PITCHED ROOFS WITHIN 5' OF ROOF RIDGE. PLUMBING VENT PENETRATIONS SHALL BE CAST IRON AND ONE SIZE LARGER THAN REQUIRED VENT SIZE.
- ALL SANITARY WASTE VENT RISERS TO BE LOCATED IN SAME WALL, AND NEXT TO, SANITARY WASTE RISERS, WHERE APPLICABLE AND POSSIBLE.
- WATER HAMMER SHOCK-ARRESTER SHALL BE PROVIDED AND INSTALLED ON ALL QUICK CLOSING VALVES INCLUDING DISH AND CLOTHES WASHER TO PREVENT PIPING SHOCK OR HAMMER. SIZE ARRESTER PER INDUSTRY STANDARDS.
- ALL MATERIALS AND EQUIPMENT PROVIDED AND INSTALLED UNDER THIS SECTION SHALL BE NEW AND IN CLEAN AND BRIGHT CONDITION. THE CONTRACTOR SHALL TAKE ANY MEASURE NECESSARY TO ENSURE AND MAINTAIN THE QUALITY OF THE INSTALLATION. ALL PIPING SHALL BE FLUSHED WITH CLEAN WATER PRIOR TO BEING PLACED INTO SERVICE TO ENSURE THAT ANY RESIDUAL CUTTING OIL, SLAG, THREAD TAPE, FLUX OR DIRT HAS BEEN PURGED. IN ADDITION TO FLUSHING, THE DOMESTIC WATER PIPING SHALL BE STERILIZED TO ELIMINATE ANY CONTAMINATION IN ACCORDANCE WITH CURRENT IPC RECOMMENDATIONS.
- ALL PIPING, EQUIPMENT, ETC. SHALL BE IDENTIFIED. ALL PIPING IS TO BE TESTED IN ACCORDANCE WITH ACCEPTED CODES AND STANDARD OF CARE PRACTICES.
- ALL SAFETY RELIEF VALVES SHALL BE VENTED TO ATMOSPHERE OR PIPED FULL SIZE TO NEAREST FLOOR DRAIN. BACKFLOW PREVENTERS OF APPROPRIATE TYPE SHALL BE INSTALLED WHERE REQUIRED BY CODE, PROVIDED WITH A CATCH FUNNEL PIPED TO THE NEAREST FLOOR DRAIN OR SINK, AND LOCATED BETWEEN 18" AND 60" AFF WITH MINIMUM OF 30" CLEAR IN FRONT OF VALVE FOR SERVICING. PROVIDE BACKFLOW DEVICE TEST FOR FIRE SERVICE AND DOMESTIC SERVICE PRIOR TO FINAL BUILDING INSPECTION.
- CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION GREATER THAN 45 DEGREES IN THE BUILDING SEWER, BUILDING DRAIN AND HORIZONTAL WASTE, SOIL OR STORM LINES. WHERE MORE THAN ONE CHANGE OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE REQUIRED FOR EACH 40 FEET OF DEVELOPED LENGTH OF THE DRAINAGE PIPING. (IPC 708.3.3 & 1101.8)
- PROVIDE TV1 AT ALL PUBLIC SINKS AND LAVS PER CODE.
- PROVIDE SURESEAL IN-LINE FLOOR DRAIN TRAP SEALER FOR ALL FLOOR DRAINS, TRENCH DRAINS AND FLOOR SINKS THAT ARE 4" PIPE SIZE AND SMALLER. SURESEAL PROVIDES A MAXIMUM OF 4" PIPE IN-LINE FLOOR DRAIN TRAP SEALER. PROVIDE TP1 FOR LARGER THAN 4" DIAMETER DRAINS.
- LABEL ALL PIPING IN ACCESSIBLE AREAS.
- ALL PIPING TO BE HUNG ON ADJUSTABLE SPLIT RING HANGERS OR UNISTRUT SUPPORTS WITH CLAMPS OF SIMILAR MATERIAL AS THE PIPE UNLESS OTHERWISE NOTED. PIPE HANGER SPACING IN FEET TO BE AS FOLLOWS.

PLUMBING SHEET INDEX	
SHEET NUMBER	SHEET NAME
P0.0	PLUMBING COVER SHEET
P0.1	PLUMBING SCHEDULES AND DETAILS
P1.0	PLUMBING PLAN

PLUMBING NARRATIVE:
 NEW TENANT SPACE WITH (1) ONE NEW MOP SINK, (2) TWO NEW ADA COMPLIANT RESTROOMS, (1) ONE NEW KITCHEN SINK IN BREAKROOM, (1) ONE NEW WALL BOX, AND (1) ONE NEW HAND SINK.

- DESIGN CODES:
- 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
 - 2015 INTERNATIONAL MECHANICAL CODE (IMC)
 - 2018 INTERNATIONAL PLUMBING CODE (IPC)
 - 2020 NATIONAL ELECTRICAL CODE (NEC)
 - 2015 INTERNATIONAL FIRE CODE (IFC)
 - 2018 INTERNATIONAL FUEL GAS CODE (IFGC)

PLUMBING & MECHANICAL LEGEND

SYMBOL	ABBREV	DESCRIPTION	SYMBOL	ABBREV	DESCRIPTION	SYMBOL	ABBREV	DESCRIPTION
	CWS	CONDENSER WATER SUPPLY			MOTORIZED GATE VALVE			ACCESS DOOR IN CEILING
	CWR	CONDENSER WATER RETURN			WATER BALANCE VALVE			DUCT TEE W/ TURNING VANES
	CWS	CHILLED WATER SUPPLY			VENTURI			MANUAL DAMPER LOCKING QUADRANT
	CHR	CHILLED WATER RETURN		RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR			MOTORIZED DAMPER
	RS	REFRIGERANT SUCTION			GAS COOK			FLEXIBLE DUCT CONNECTOR
	RH	REFRIGERANT HOT GAS			UNION			SPRN IN FITTING W/ DAMPER
	HWS	HEATING WATER SUPPLY			PIPE REDUCER			45° DUCT TAKE-OFF
	HR	HEATING WATER RETURN			STRAINER			DOOR UNDERCUT
	HPS	HIGH PRESSURE STEAM			STRAINER W/ BLOWOFF VALVE			FIRE DAMPER
	LPS	LOW PRESSURE STEAM		F.D.	FLOOR DRAIN			FIRE & SMOKE DAMPER
	LPSR	LOW PRESSURE STEAM RETURN			EQUIPMENT ROOM DRAIN			SMOKE DAMPER
	VAC	VACUUM		F.S.	FLOOR SINK - HALF GRATE			EXISTING FIRE DAMPER
	A	AIR			FLOOR SINK - 14 GRATE			RETURN GRILLE
	N	NITROGEN			DRAIN ABOVE			CONNECTION NEW TO EXISTING
	F	FIRE		R.D.	ROOF DRAIN			FLEXIBLE PIPE CONNECTION
	CDW	COLD WATER		O.R.D.	ROOF DRAIN - OVERFLOW			THERMOSTAT
	DHW	HOT WATER			DOWNSPOUT NOZZLE			REMOTE SENSOR
	DHC	HOT WATER RECIRCULATE			CLEANOUT - VERTICAL			CARBON DIOXIDE SENSOR
	W	WASTE PIPE			CLEANOUT - HORIZONTAL			CARBON MONOXIDE SENSOR
	V	VENT PIPE			PIPE CAP			HUMIDISTAT
	ST	STORM PIPE		BRK	BREAK - MISC.			GAS METER
	OD	OVERFLOW PIPE		VTR	VENT THRU ROOF			SMOKE DETECTOR
	GW	GREASE WASTE		W.H.	WALL HYDRANT			BOILER DRAIN VALVE
	SO	SAND/OIL WASTE		H.B.	PIPE TEE DOWN			BALANCING VALVE
	G	GAS PIPE			PIPE TEE UP			TEMP CONTROL - 3-WAY
		PIPE UP			GATE VALVE			TEMP CONTROL - 3-WAY
		PIPE DOWN			GLOBE VALVE			PRESSURE REDUCING VALVE
		PIPE TEE DOWN			CHECK VALVE			SOLENOID VALVE
		PIPE TEE UP			BALL VALVE			PRESSURE GAUGE
		BUTTERFLY VALVE			PLUG VALVE			FLOW SENSOR
		PLUG VALVE			GAS PRESSURE REGULATOR			THERMOSTAT
		GAS PRESSURE REGULATOR			GAS COOK (SHUT-OFF) AND UNION			DIFFUSER
		STOP & DRAIN VALVE			STOP & DRAIN VALVE			NECK SIZE
		AUTO FLOW CONTROL VALVE			BALANCING VALVE			FLEX SIZE
		BALANCING VALVE			TEMP CONTROL - 3-WAY			DEMO ITEM LINE WEIGHT
		TEMP CONTROL - 3-WAY			TEMP CONTROL - 3-WAY			NEW ITEM LINE WEIGHT
		TEMP CONTROL - 3-WAY		(E)	EXISTING			RIGID DUCT
		PRESSURE REDUCING VALVE		(R)	RELOCATED			FUTURE
		SOLENOID VALVE		(V)	VACUUM BREAKER			NOTE
		PRESSURE GAUGE			THERMOSTAT			NOTE
		FLOW SENSOR			THERMOSTAT			NOTE

LEGEND SPECIFICATION LIST

SYMBOL	DESCRIPTION	SPECIFIED MANUFACTURER / MODEL	EQUALS BY
	GATE VALVE	MILWAUKEE / 100 or 115	NBCO
	GATE VALVE IN GROUND BOX	MILWAUKEE / 100 or 115	NBCO
	GLOBE VALVE	MILWAUKEE / 190T or 190T	NBCO
	CHECK VALVE	MILWAUKEE / 190T, 190T, F29H(M)A, 548, or 1400 SERIES	NBCO
	AUTO FLOW CONTROL VALVE	FLOWSET / V18	CRISWOLD
	PLUG VALVE	KEYSTONE / SERIES 600	MILLEN
	BUTTERFLY VALVE	MILWAUKEE / CL 223 or CL 323	KEYSTONE
	STOP/DRAIN VALVE	WATTS / B-3000 or B-3001 for 1/2" - 3"	-
	BALL VALVE	MILWAUKEE / BA 100 or BA 150	NBCO
	BALANCING VALVE	FLOWSET / ACCUSETTER	GERAND
	TEMP CONTROL - 3-WAY	BY T.C. CONTRACTOR	-
	TEMP CONTROL - 3-WAY	BY T.C. CONTRACTOR	-
	TEMPERING VALVE	LEONARD	LAWLER
	PRESSURE REDUCING VALVE	WATTS / ADV 115	-
	SOLENOID VALVE	ASCO / RED HAT	SKINNER
	WATER BALANCE VALVE	-	BURKET
	VENTURI	FLOWSET / VW	GERAND
	REDUCED PRESSURE BACKFLOW PREVENTOR	WATTS / 909GTS	-
	GAS COOK	MAXTROL / BV27 or BV4	-
	STRAINER	WATTS / SERIES 775 for 1/2" thru 2-1/2"	CONBRACO
	STRAINER W/ BLOWOFF VALVE	WATTS / SERIES 775 with B-601 VALVE	CONBRACO
	PRESSURE/TEMP. RELIEF	WATTS / SERIES 40, 140, 240, or 340	-
	MANUAL AIR VENT	FLOWSET / AV	-
	P-T TAP	FLOWSET / SUPERSEAL	UNIVERSAL / 4PT-N
	BOILER DRAIN VALVE	MILWAUKEE / BA 100 H	NBCO
	THERMOSTAT	TREXCO / BVX403 12	WEKSLER / AAH
	PRESSURE GAUGE	TREXCO / 600C	WEKSLER / EA4
	FIRE DAMPER	POTTRUFF / VFD-10	-
	FIRE & SMOKE DAMPER	POTTRUFF / FSD-142	-
	SMOKE DAMPER	POTTRUFF / FSD-142	-
	FLEXIBLE PIPE CONNECTION	METAFLEX / METASPHERE EPDM	MASON / MENC EPDM
	AUTOMATIC AIR VENT	AMTROL / 705	HOSFMAN
	GAS PRESSURE REGULATOR	SCHLUMBERGER / VARIES	-
	AIR ADMITTANCE VALVE	STUORVENT	-
	BALL DRAIN W/ HOSE END CONNECTION	APOLLO / FE-1031 1/2" N.P.T. BY HOSE	NBCO

PIPE HANGER SPACING (IN FEET)

TYPE	SIZE				
	1/2"	3/4"	1"	1-1/4"	1-1/2"
COPPER	6	6	6	6	10
PLASTIC - WASTE & VENT	4	4	4	4	4
AQUAPEX - DOMESTIC WATER	2.7	2.7	2.7	4	4

FIXTURE CONNECTION SCHEDULE

FIXTURE	HW	CW	WASTE	VENT
WATER CLOSET - TANK	-	1/2"	4"	2"
LAVATORY	1/2"	1/2"	2"	2"
MOP SINK	3/4"	3/4"	3"	2"
WATER BOTTLE DISPENSER	-	1/2"	-	-
KITCHEN SINK (WITH DISPOSER)	1/2"	1/2"	2"	2"
CLOTHES WASHER	1/2"	1/2"	2"	2"
HAND SINK	1/2"	1/2"	2"	2"

SIZES SHOWN ARE MINIMUM PIPE SIZES TO A SINGLE FIXTURE.

RECIRC. PUMP SCHEDULE

TAG	MANUFACTURER MODEL	LOCATION DUTY	SERIES TYPE	FLOW (GPM)	HEAD (FT)	AMPS	RPM	H.P.	ELECT (VOLT/PH)	REMARKS & FEATURES REQ'D
RCP-1	TACO 008-BC6	RESTROOM	INLINE	1	6	0.79	3250	1/25	115V/1PH/60HZ	1,2,3,4,5

FEATURES REQUIRED:
 1. ALL BRONZE CONSTRUCTION, OR STAINLESS STEEL, FOR DOMESTIC WATER USE.
 2. PUMP CONTROLLED BY PIPE MOUNTED AQUASTAT.
 3. SYSTEM TIMER TO MAINTAIN THE RETURN WATER BETWEEN 125 DEG F AND 135 DEG F (ADJUSTABLE).
 4. INTEGRAL FLOW CHECK VALVE INCLUDED.
 5. METRON FIRE PUMP CONTROLLER MODEL FD4-J, 10 AMPS, 115V/1.
 6. METRON M158 JOCKEY PUMP CONTROLLER
 5. PROVIDE TIMELOCK FOR PUMP TO RUN DURING OCCUPIED TIME (ADJUSTABLE).

APPROVED MFG:
 TACO
 BELL & GOSSETT
 GRUNDFOSS
 ARMSTRONG

WB - BELMAR - BUILDING PLUMBING FIXTURE COUNT

FIXTURE	QTY	WASTE	WASTE TOTAL	COLD WTR	HOT WTR	CW & HW TOTAL	CWT	HWT	WSFU TOTAL
KITCHEN SINKS (PUBLIC)	1	2	2	1	1	1.4	1	1	1.4
CLOTHES WASHER (PUBLIC)	1	3	3	2.25	2.25	3	2.25	2.25	3
MOP SINK	1	2	2	2.25	2.25	3	2.25	2.25	3
WATER BOTTLE DISPENSER	1	0	0	0.25		0.25	0.25	0	0.25
LAVATORY/HAND SINK (PUBLIC)	2	1	2	1.5	1.5	2	3	3	4
WATER CLOSET (PUBLIC-F/T)	2	4	8	5		5	10	0	10
FIXTURE UNIT TOTALS			17					8.5	21.65
TOTAL FLOW RATE								12.8 GPM	21.5 GPM
MIN. SANITARY WASTE & DCW DISTRIBUTION PIPE SIZE				4"				3/4"	1"

Notes:
 1. DCW METER SIZED @ 10 FEET/SECOND PER IPC. DCW DISTRIBUTION SIZED @ 5 FEET/SECOND PER IPC.
 2. DHW DISTRIBUTION SIZED @ 5 FEET/SECOND PER IPC.
 3. PROVIDE MIN. 3/4" DCW METER & SERVICE TAP W/ A MIN. 1" DISTRIBUTION & REDUCED PRESSURE BACKFLOW PREVENTER.

ELECTRIC STORAGE WATER HEATER SCHEDULE

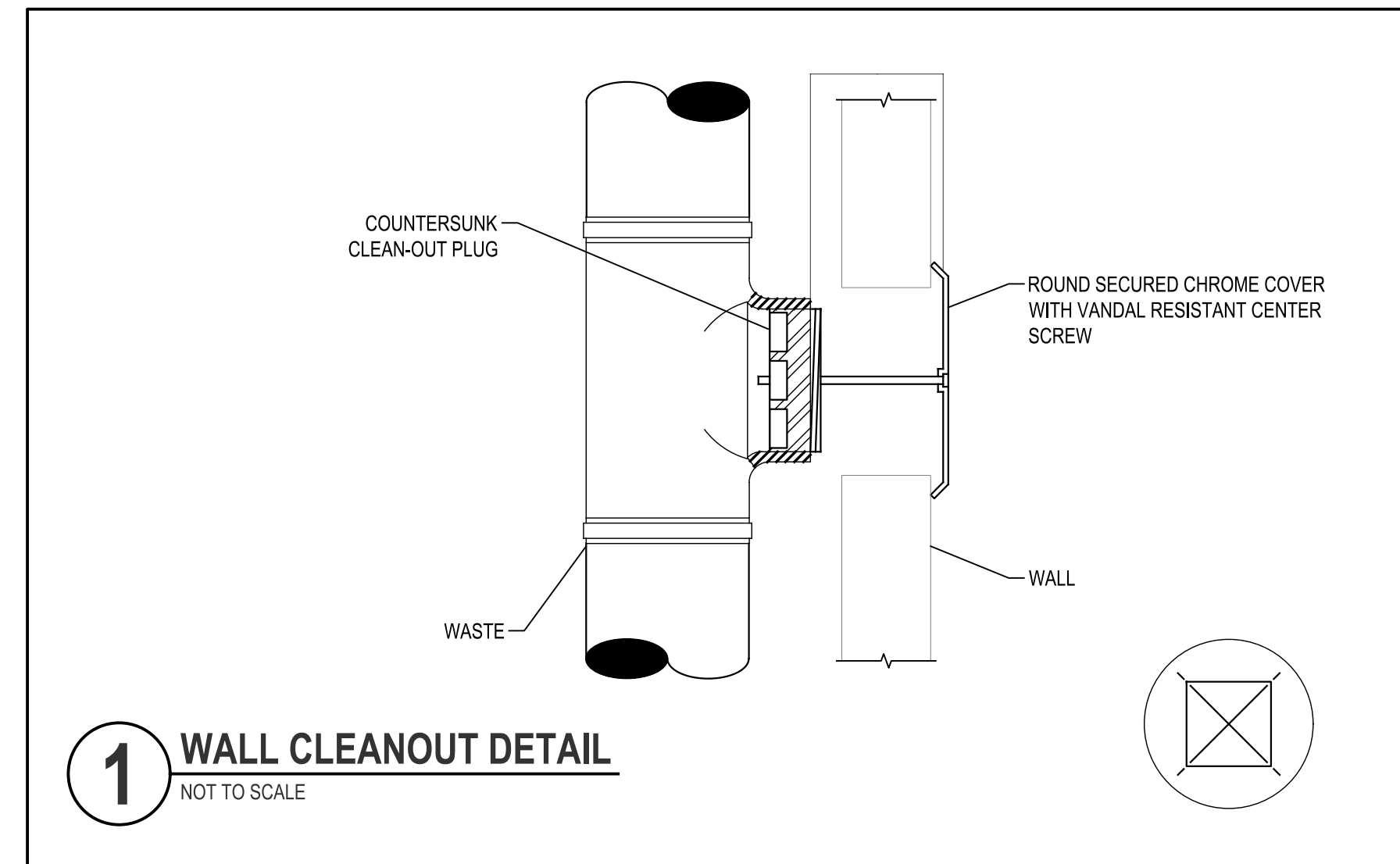
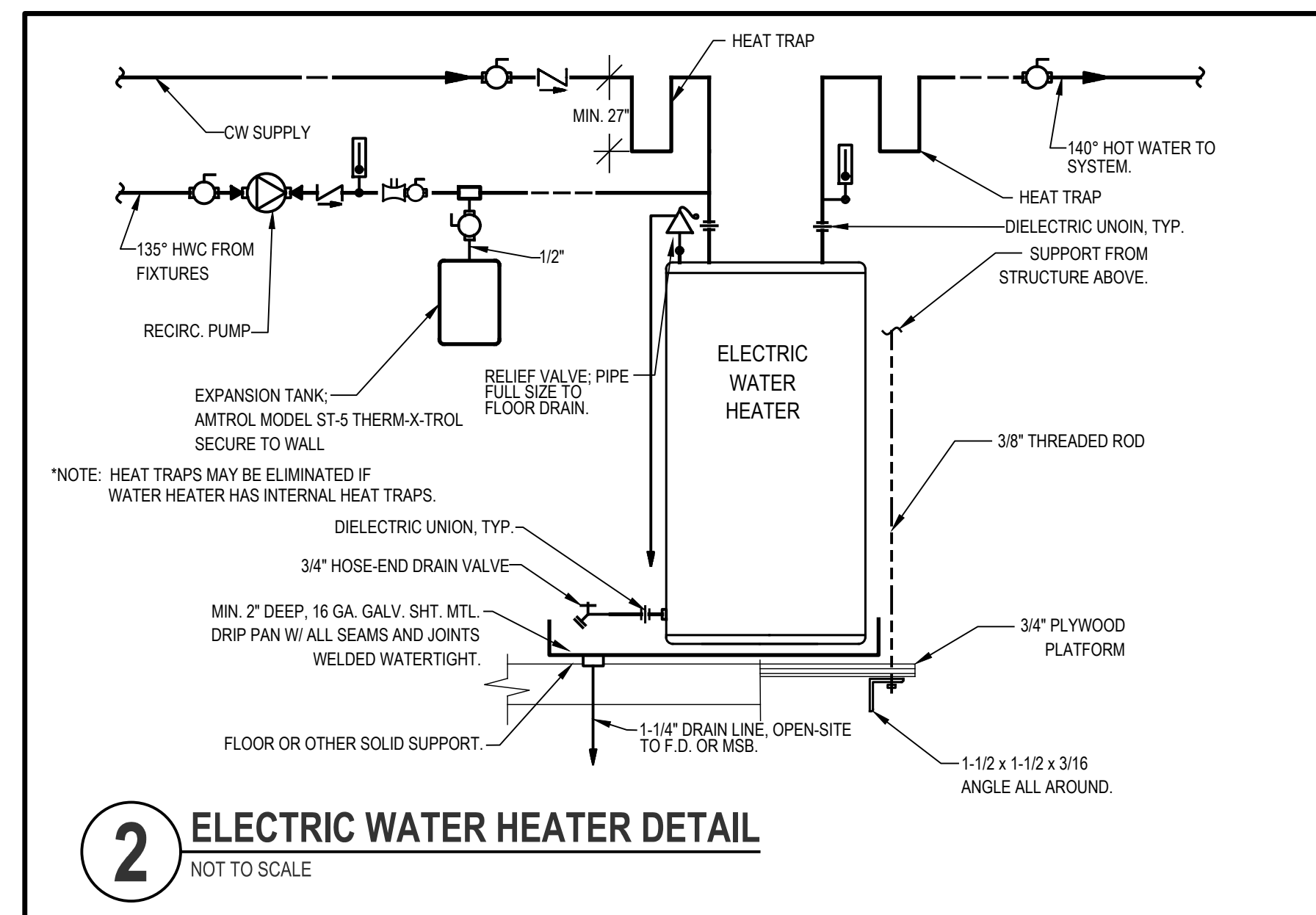
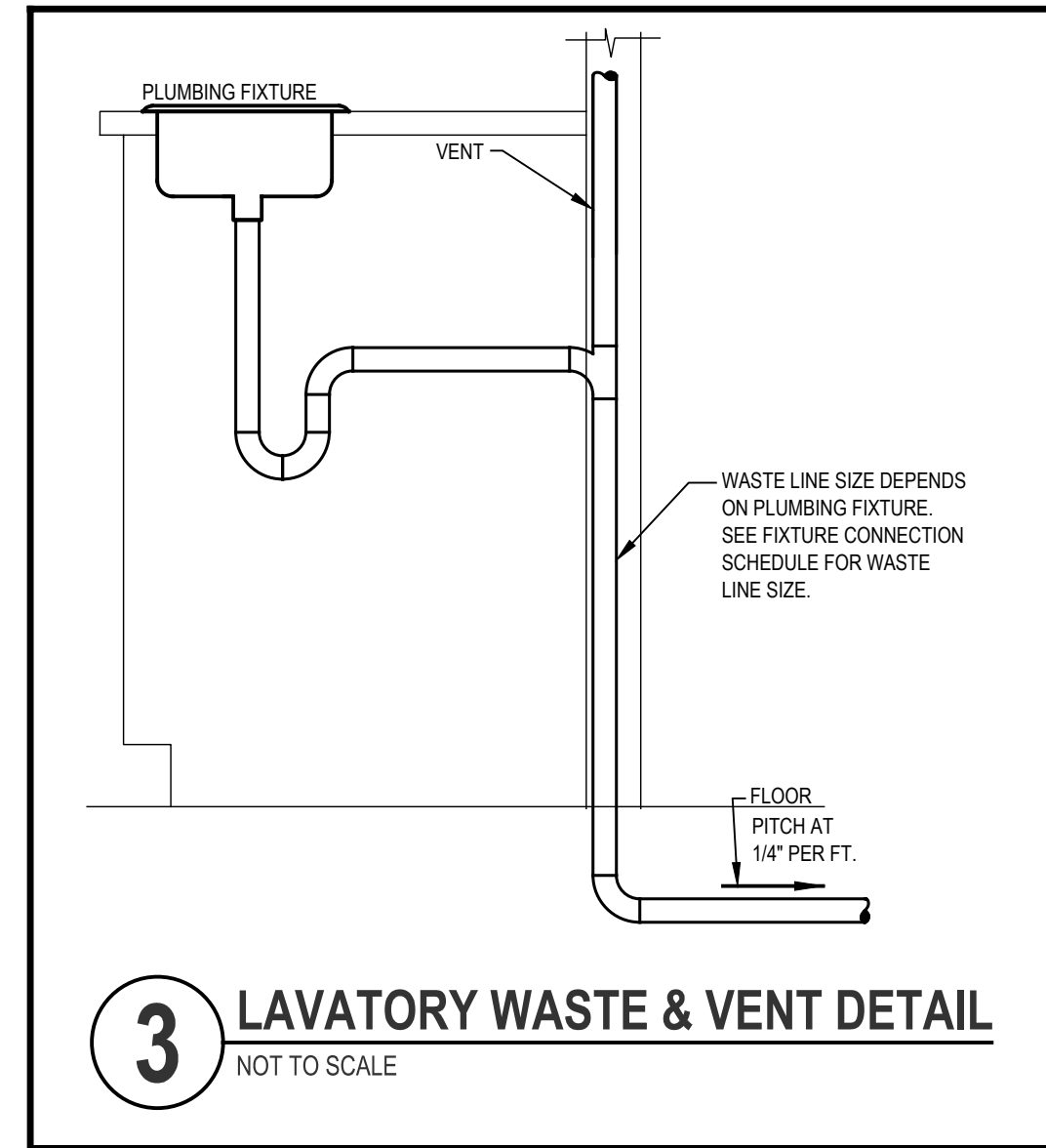
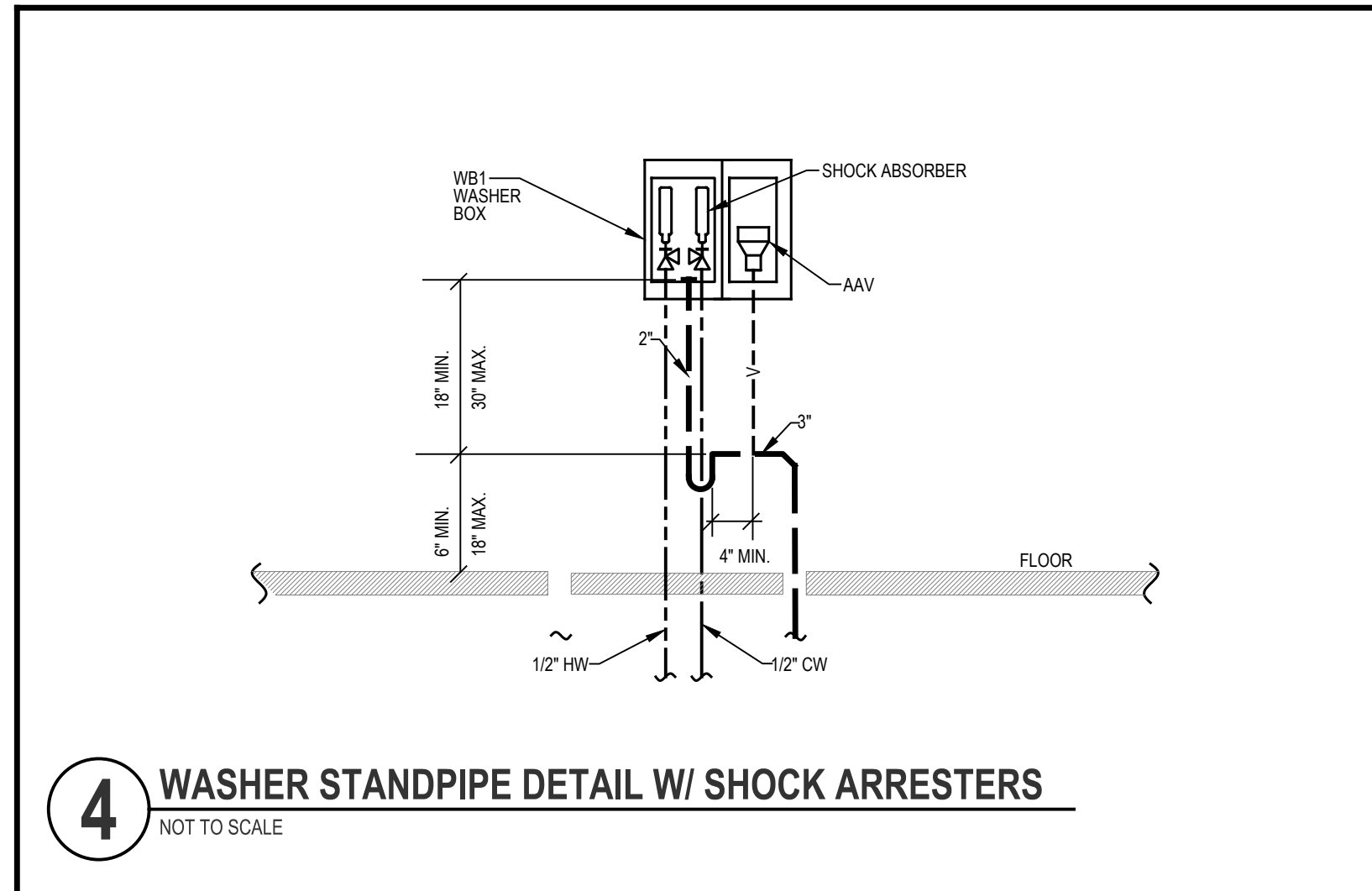
TAG	MANUFACTURER	MODEL NO.	STORAGE CAP.	(KW) INPUT	GPH (100° F)	DIMENSIONS	WEIGHT UNFILLED (LBS)	NOTES
EWH-1	AO SMITH	DR-52	50 GAL	15	61	21-3/4" DIA., 55-3/4" HEIGHT	265	

PLUMBING FIXTURE LIST

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NUMBER	ROUGH-IN CONNECTION				NOTES
				W	V	CW	HW	
CO	CLEAN OUT	PROVIDED BY OWNER	PROVIDED BY OWNER	N/A	N/A	N/A	N/A	
BS-1	BAR SINK	JUST MANUFACTURING COMPANY	JUST - SBL-1515-A-GR	2"	2"	1/2"	1/2"	
MS-1	MOP SINK	AMERICAN STANDARD	7741.000, OR EQUAL W/ FAUCET 8344.212, OR EQUAL	2"	2"	1/2"	1/2"	
WBD-1	WATER BOTTLE DESPENSER	PROVIDED BY OWNER	PROVIDED BY OWNER	N/A	N/A	1/2"	1/2"	
KS-1	KITCHEN SINK	ELKAY	LRAD221955	2"	2"	1/2"	1/2"	
LV-1	LAVATORY	AMERICAN STANDARD	0954.004EC W/FAUCET 5502.175	2"	2"	1/2"	1/2"	
WB-1	WALL BOX	PROVIDED BY OWNER	PROVIDED BY OWNER	N/A	N/A	1/2"	1/2"	
WC-1	WATER CLOSET	AMERICAN STANDARD	2467.100	4"	2"	1/2"	N/A	
WB-2	WASHER WALL BOX	PROVIDED BY OWNER	PROVIDED BY OWNER	2"	N/A	1/2"	1/2"	

1. PLUMBING CONTRACTOR IS RESPONSIBLE FOR VERIFYING SITE CONDITIONS.
 2. FIELD VERIFY BEST LOCATIONS FOR SHUT-OFF VALVES WITH OWNER/ARCHITECT PRIOR TO INSTALLATION. PROVIDE ACCESS DOORS IN WALL OR CEILINGS IF NECESSARY AND AS WHERE REQUIRED FOR ACCESS TO VALVES.

GENERAL REQUIREMENTS:
 1. ALL TOILET ROOM FIXTURES SHALL BE WHITE, VITREOUS CHINA UNLESS DESIGNATED OTHERWISE IN SCHEDULE.
 2. PROVIDE SUITABLE REINFORCEMENTS FOR WALL HANGERS & SUPPORTS.
 3. APPROVED EQUALS:
 DRAINS: ZURN, WADE JOSAM, WATTS, SUN DRAINAGE
 TRAP PRIMERS: MIFAB, PPP, JOSAM, ZURN
 CHINA: WESTERN, ZURN, KOHLER, AMERICAN STANDARD
 MOLDED STONE/TERRAZO: FLORESTONE, STERN WILLIAMS, FIAT
 STAINLESS SINKS: ELKAY, JUST
 FACUETS: SYMMONS, CHICAGO, DELTA
 SEATS: OLSONITE, CHURCH, BEMIS (OR BY WC MFG)
 BRASS: DEARBORN, CS&B, BRASS-CRAFT, MAGUIRE (P-TRAP & TRAP ARM, ESCUTCHEON)
 STOPS ALL MUST BE 1/4 TURN BALL VALVE TYPE. ALL BRASS CONSTRUCTION BY DEARBORN, CS&B, BRASS-CRAFT, OR MAGUIRE
 4. RESTROOM FIXTURES MUST COMPLY WITH ALL BUILDING DEPARTMENT CRITERIA FOR WATER CONSERVATION.
 5. ALL HANDICAP LAVATORIES MUST HAVE OFFSET TRAPS AND "TRUBRO LAV GUARD", OR "ZURN INSUL-GUARD" INSULATION KITS OR MAGUIRE PREINSULATED TRAPS AND SUPPLIES PER ADA "ARTICLE 4.19.4."
 6. VERIFY LEFT/RIGHT HAND LEVER LOCATION ON ALL WATER CLOSETS PER ADA REQUIREMENTS AND INSTALL FLUSH HANDLE ON OPEN SIDE OF ADA STALL. FAILURE TO COMPLY WILL REQUIRE FIELD CORRECTION.
 7. ALL WATER CLOSETS MUST MEET A MINIMUM MAPP RATING OF 800 AS TESTED BY AN INDEPENDENT AND ACCREDITED LABORATORY.
 8. NO PROFLO BRAND NAMED PRODUCTS ARE ALLOWED UNLESS OTHERWISE NOTED AND APPROVED BY OWNERSHIP.





NO	DATE	ISSUE
01	07/22/22	PRELIMINARY FOR REVIEW
02	08/23/22	PRELIMINARY FOR REVIEW
03	09/14/22	FOR REVIEW
04	12/14/22	FOR PERMIT
03/03/23		PLAN CHECK REV 1

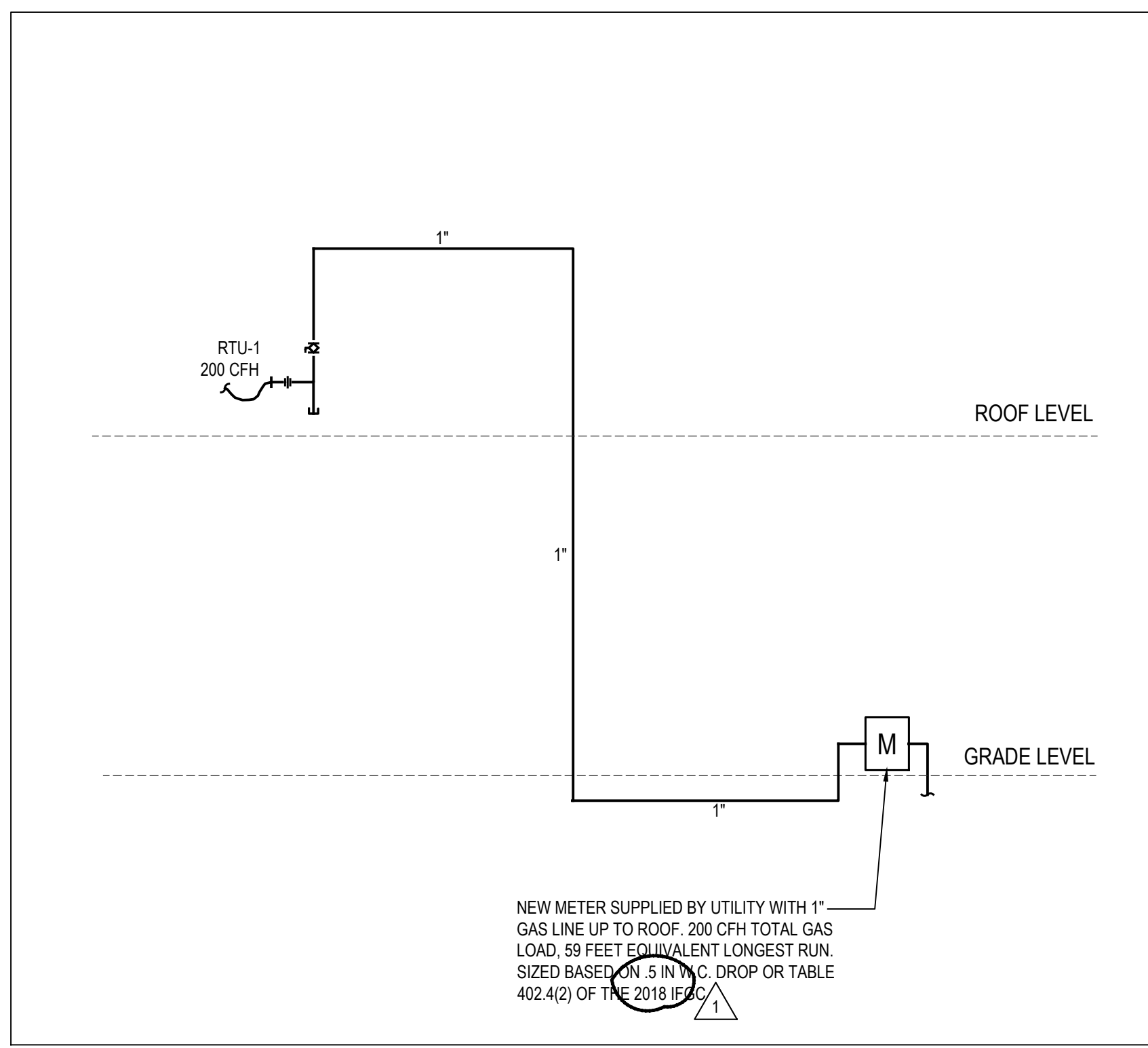
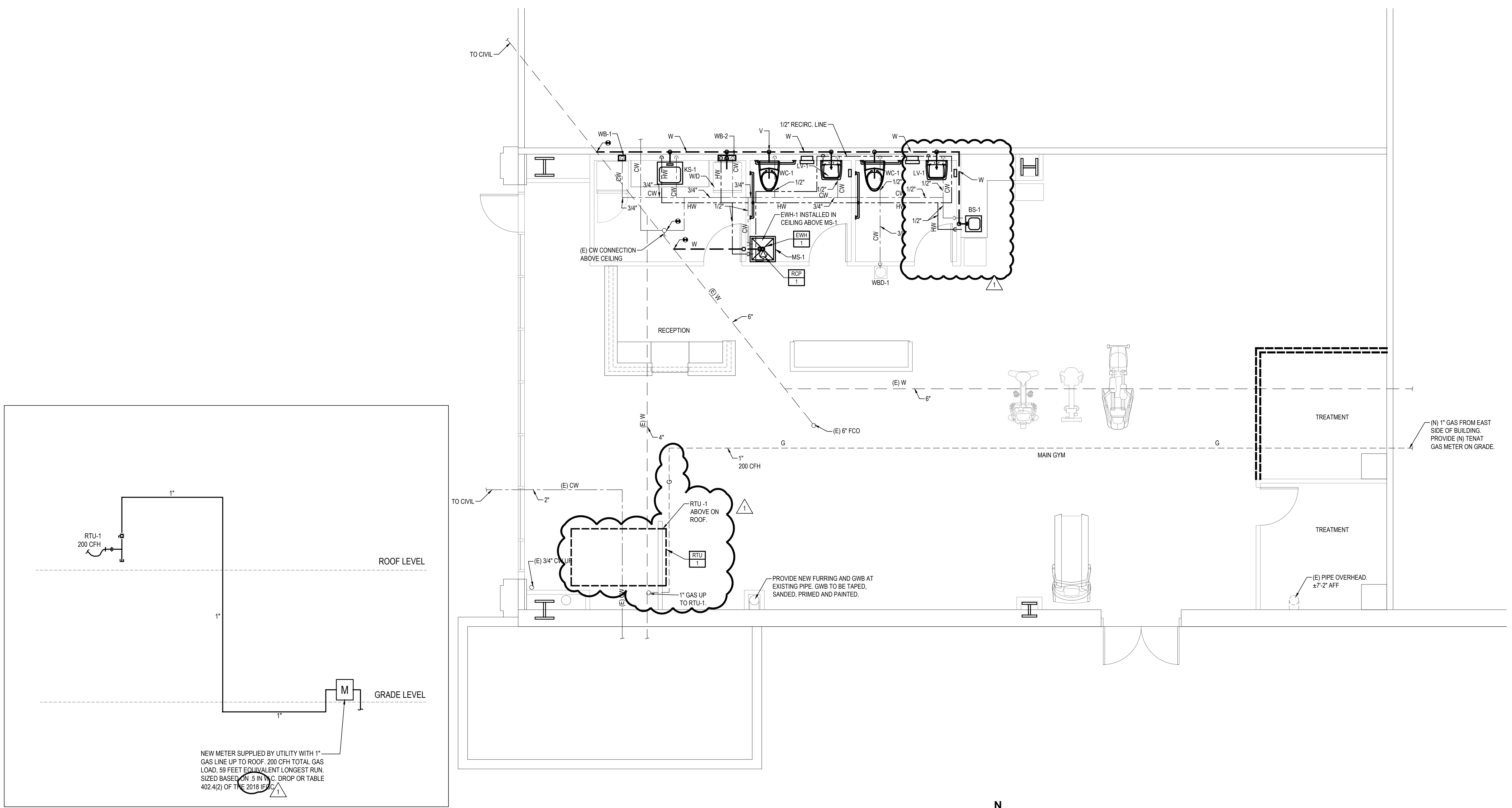
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PLUMBING PLAN

P1.0

GENERAL NOTES:

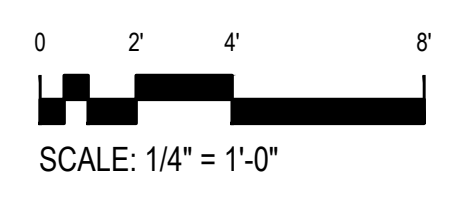
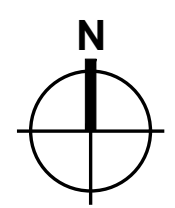
- REFER TO SHEET P0.1.
- CONTRACTOR SHALL FIELD VERIFY SIZE, LOCATION, INVERT & MATERIALS ON ALL CONNECTIONS FROM NEW TO EXISTING PIPING.



NEW METER SUPPLIED BY UTILITY WITH 1" GAS LINE UP TO ROOF. 200 CFH TOTAL GAS LOAD. 59 FEET EQUIVALENT LONGEST RUN. SIZED BASED ON 5 IN IN C. DROP OR TABLE 402.4(2) OF THE 2018 IFGC.

1 GAS PIPING ISOMETRIC
 NOT TO SCALE

2 PLUMBING PLAN
 1/4" = 1'-0"





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05	03/03/23	PLAN CHECK REV 1

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MECHANICAL NOTES & LEGEND

MO.0

MECHANICAL LEGEND			NOTE: ALL DASHED PLUMBING LINES INDICATE BELOW FLOOR ELEVATION UNLESS OTHERWISE NOTED ON DRAWINGS.		
SYMBOL	ABBREV.	DESCRIPTION	SYMBOL	ABBREV.	DESCRIPTION
	CWS	CONDENSER WATER SUPPLY			MOTORIZED GATE VALVE
	CWR	CONDENSER WATER RETURN			WATER BALANCE VALVE
	CWS	CHILLED WATER SUPPLY			VENTURI
	CWR	CHILLED WATER RETURN			REDUCED PRESSURE BACKFLOW PREVENTER
	RS	REFRIGERANT SUCTION			GAS COCK
	RL	REFRIGERANT LIQUID			UNION
	RH	REFRIGERANT HOT GAS			PIPE REDUCER
	HWS	HEATING WATER SUPPLY			STRAINER
	HWR	HEATING WATER RETURN			STRAINER W/ BLOWOFF VALVE
	HPS	HIGH PRESSURE STEAM		F.D.	FLOOR DRAIN
	HPSR	HIGH PRESSURE STEAM RETURN			EQUIPMENT ROOM DRAIN
	LPS	LOW PRESSURE STEAM		F.S.	FLOOR SINK - HALF GRATE
	LPSR	LOW PRESSURE STEAM RETURN		F.S.	FLOOR SINK - 14 GRATE
	VAC	VACUUM			DRAIN ABOVE
	A	AIR		R.D.	ROOF DRAIN
	N	NITROGEN		O.R.D.	ROOF DRAIN - OVERFLOW
	FIRE	FIRE		CO	CLEANOUT - VERTICAL
	CDW	COLD WATER		CO	CLEANOUT - HORIZONTAL
	DHW	HOT WATER		BRK	PIPE CAP BREAK-MISC.
	DHC	HOT WATER RECIRCULATE		VTR	VENT THRU ROOF
	W	WASTE PIPE		WH	WALL HYDRANT
	V	VENT PIPE		H.B.	HOSE BIBB
	ST	STORM PIPE		P#	PUMP
	OS	OVERSIZE PIPE			PRESSURE/TEMP. RELIEF
	GW	GREASE WASTE			AIR VENT
	SO	SAND OIL WASTE			PIPE GUIDE (SLEEVE)
	G	GAS PIPE			PIPE EXPANSION JOINT
	G	GAS PIPE			PIPE ANCHOR
	G	GAS PIPE			SMOKE DETECTOR
		GATE VALVE			BOILER DRAIN VALVE
		GLOBE VALVE			BALL DRAIN W/ HOSE END CONNECTION
		CHECK VALVE			TEMP. CONTROL - 2 WAY
		BALL VALVE			TEMP. CONTROL - 3 WAY
		BUTTERFLY VALVE			3-WAY VALVE
		PLUG VALVE			PRESSURE REDUCING VALVE
		GAS PRESSURE REGULATOR			SOLENOID VALVE
		GAS COOK (SHUT-OFF) AND UNION			PRESSURE GAUGE
		STOP & DRAIN VALVE			FLOW SENSOR
		AUTO FLOW CONTROL VALVE			
		BALANCING VALVE			
		TEMP. CONTROL - 2 WAY			
		TEMP. CONTROL - 3 WAY			
		3-WAY VALVE			
		PRESSURE REDUCING VALVE			
		SOLENOID VALVE			
		PRESSURE GAUGE			
		FLOW SENSOR			

- DESIGN CODES:**
- 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
 - 2015 INTERNATIONAL MECHANICAL CODE (IMC)
 - 2018 INTERNATIONAL PLUMBING CODE (IPC)
 - 2020 NATIONAL ELECTRICAL CODE (NEC)
 - 2015 INTERNATIONAL FIRE CODE (IFC)
 - 2018 INTERNATIONAL FUEL GAS CODE (IFGC)

MECHANICAL NARRATIVE:

WHITEBOX TENANT REFINISH UTILIZING ONE NEW GAS-FIRED ROOFTOP UNIT FOR HEAT WITH OUTSIDE AIR VENTILATION. NEW EXHAUST FANS, NEW DUCT DISTRIBUTION FROM NEW MAIN SUPPLY & RETURN DUCTWORK THRU ROOF WITH NEW DIFFUSERS & GRILLES.

SEQUENCE OF OPERATIONS

- CONSTANT AIR VOLUME, DX COOLING**
- THE AUTOMATIC TEMPERATURE CONTROL SYSTEM SHALL BE ELECTRONIC ANALOG, DIGITAL OR A COMBINATION OF BOTH. PID (PROPORTIONAL, INTEGRAL, DERIVATIVE) CONTROL ALGORITHMS SHALL BE APPLIED ON ALL TEMPERATURE AND PRESSURE APPLICATIONS AS CALLED FOR IN THE CONTROL SEQUENCES. CONTROL DEVICES, SEQUENCES OF OPERATION DEFINED ONCE ON THE TEMPERATURE CONTROL DRAWINGS, SHALL BE PROVIDED AND INCLUDE ALL MATERIAL, EQUIPMENT, AND APPURTENANCES NECESSARY FOR THE INSTALLATION OF A COMPLETE SOLID-STATE ELECTROMAGNETIC SYSTEM OF AUTOMATIC TEMPERATURE CONTROL. THE CONTROL CONTRACTOR SHALL PROVIDE AND INSTALL ALL CONTROL DEVICES, VALVES, ACTUATORS, MECHANICAL DEVICES, AUTOMATIC DAMPERS, WIRE, CONDUIT ELECTRICAL POWER SERVICES, ETC., CONNECTED AS REQUIRED, TO PERFORM ALL CONTROL OPERATIONS AND FUNCTION ACCORDING TO THIS SECTION OF THE CONTRACT DOCUMENTS.

- RUN CONDITIONS - REQUESTED:**
- STARTUP
THE UNIT SHALL OPERATE ON A 7 DAY/NIGHT PROGRAMMABLE THERMOSTAT.

- 2 SUPPLY FAN CONTROL**
 THE SUPPLY FAN SHALL BE CONSTANT AND SET TO THE REQUESTED CFM.

- 3. SPACE TEMPERATURE CONTROL**
 PROVIDE LOCAL WALL MOUNTED ROOM TEMPERATURE THERMOSTAT WITH DIGITAL DISPLAY OF ROOM TEMPERATURE AND SETPOINT (+/- DEG. F. ADJUSTABLE), AND OVERRIDE FEATURE.

- 4. MINIMUM OUTSIDE AIR CONTROL**
 DURING OCCUPIED MODE THE MINIMUM OUTSIDE AIR DAMPER SHALL BE OPEN. PROVIDE MOTORIZED OUTDOOR AIR DAMPER.

- 5. ECONOMIZER CONTROL**
 PROVIDE DUAL ENTHALPHY ECONOMIZER CONTROL. ECONOMIZER CONTROL SHALL BE ENABLED WHENEVER THE OUTSIDE AIR ENTHALPHY IS LOWER THAN THE RETURN AIR ENTHALPHY. ENTHALPHY SHALL BE CALCULATED FROM SENSORS WHICH ARE TIED TO THE SAME CONTROLLER FOR ACCURACY. DURING ECONOMIZER MODE, THE OUTSIDE AIR DAMPER SHALL MODULATE TO 100% OPEN, THE ECONOMIZER DAMPER SHALL MODULATE OPEN ON A CALL FOR COOLING AND MODULATE CLOSED ON A CALL FOR HEATING. THE RETURN DAMPER SHALL MODULATE INVERSELY WITH THE ECONOMIZER DAMPER. ECONOMIZER SHALL HAVE POWERED RELIEF.

- 6. COOLING CONTROL**
 COOLING SHALL BE CONTROLLED TO MAINTAIN SPACE TEMPERATURE SETPOINT. ON A CALL FOR COOLING THE HEATING SHALL BE OFF. ON A FURTHER CALL FOR COOLING, ENABLE THE ECONOMIZER MODE. ON A FURTHER CALL FOR COOLING, DISABLE THE ECONOMIZER MODE AND THE MECHANICAL COOLING SHALL BE STAGED ON.

- 7. HEATING CONTROL**
 HEATING SHALL BE CONTROLLED TO MAINTAIN SPACE TEMPERATURE SETPOINT. ON A CALL FOR HEATING, THE MECHANICAL COOLING SHALL BE OFF. ON A FURTHER CALL FOR HEATING, THE ECONOMIZER MODE SHALL BE DISABLED. ON A FURTHER CALL FOR HEATING THE GAS HEATING SHALL BE STAGED ON.

- 9. UNOCCUPIED MODE**
 DURING THE UNOCCUPIED MODE OF OPERATION, THE RTU SHALL GO INTO NIGHT SETBACK MODE.

- 10. NIGHT SETBACK/SHUTDOWN**
 AT NIGHT SETBACK/SHUTDOWN THE RTU SHALL GO TO FAIL SAFE POSITION. FAIL SAFE POSITION IS DEFINED BY THE FOLLOWING: THE SUPPLY FAN IS OFF, THE OUTDOOR AIR INTAKE DAMPER IS CLOSED, THE HEATING IS OFF AND THE MECHANICAL COOLING IS OFF. THE SUPPLY FAN SHALL CYCLE IN CONJUNCTION WITH EITHER THE HEATING OR COOLING SYSTEM TO MAINTAIN A MINIMUM/MAXIMUM SPACE TEMPERATURE DEPENDING ON THE SEASON.

- MIXED AIR TEMPERATURE:**
- THE CONTROLLER SHALL MONITOR THE MIXED AIR TEMPERATURE AND USE THE MEASURED VALUE AS REQUIRED FOR ECONOMIZER CONTROL.

- RETURN AIR TEMPERATURE:**
- THE CONTROLLER SHALL MONITOR THE RETURN AIR TEMPERATURE AND USE AS REQUIRED FOR SET POINT CONTROL OR ECONOMIZER CONTROL.

- CONTROLS**
- ELECTRICAL CONTRACTOR WILL PROVIDE POWER WIRING. HVAC CONTRACTOR SHALL PROVIDE ALL THE LOW VOLTAGE WIRING OF HVAC UNITS AND CONTROLS, THERMOSTATS AND CONTROLLERS. THERMOSTAT SHALL BE BY THE RTU MANUFACTURER.
 - MANUFACTURER OF THE HVAC UNIT (HEAT/COOL/AUTO/OFF) WITH NIGHT SETBACK, PROVIDE PLASTIC PROTECTIVE COVER FOR ALL THERMOSTATS.

- LOW VOLTAGE THERMOSTATS:**
- LOW VOLTAGE THERMOSTATS SHALL BE FURNISHED, INSTALLED AND WIRED BY THE HVAC CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL PROVIDE 4 SQUARE X 1-1/2 DEEP WALL OUTLET BOXES (WITH SINGLE-GANG RINGS) FOR ALL THERMOSTATS/SENSORS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ONE 3/4 EMPTY CONDUIT FROM EACH THERMOSTAT/SENSOR LOCATION, TURNED OUT ABOVE ACCESSIBLE CEILING (IN JOIST SPACE OR AGAINST OVERHEAD SLAB/DECK). THE HVAC/TEMPERATURE CONTROL CONTRACTOR SHALL PROVIDE ALL OTHER NECESSARY CONDUIT, RACEWAY AND WIRING RELATED WORK. CONDUIT SHALL BE IDENTIFIED IN CEILING CAVITY AND SHALL BE PROVIDED WITH SWEEP BENDS, BUSHINGS AND DRAGLINE.
 - THE HVAC/TEMPERATURE CONTROL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR TO ENSURE THERMAL ENVELOPE IS MAINTAINED AT THESE LOCATIONS.

MECHANICAL NOTES

- IDENTIFY ALL HVAC AND REFRIGERATION EQUIPMENT AS TO THE AREA SERVED BY THE EQUIPMENT. IDENTIFICATION SHALL BE ENGRAVED PLASTIC TAGS PERMANENTLY AFFIXED TO EACH PIECE OF EQUIPMENT.
- PROVIDE UL RATED FIRE OR FIRE/SMOKE DAMPERS WHERE INDICATED ON PLANS OR SCHEDULES. INSTALL PER BUILDING DEPARTMENT, UL, AND SMACNA REQUIREMENTS. INCLUDE LABELED ACCESS FOR DUCT AND CEILING/ROOF STRUCTURES. ACCESS DOORS TO BE UL RATED IN ALL FIRE RATED ARCHITECTURAL ASSEMBLIES. INCLUDE TRANSFORMERS FOR 115V/24V ELECTRICAL CONNECTION.
- PROVIDE ALL CURBS, SUPPORTS, AND ANCHORS FOR MECHANICAL WORK. NO CHAIN, TAPE, OR WIRE MAY BE USED FOR HANGING OR SUPPORTING. PROVIDE AND INSTALL ALL NECESSARY SHIMS AND LEVELING DEVICES TO PROPERLY INSTALL ALL EQUIPMENT IN A LEVEL CONDITION.
- RECEIVE, UNCRATE, ASSEMBLE, INSURE, AND INSTALL IN CONFORMANCE TO MANUFACTURER'S RECOMMENDATIONS ALL EQUIPMENT FURNISHED BY THIS CONTRACT AND FURNISHED BY THE OWNER.
- THE NEW MECHANICAL SYSTEMS CONSISTING OF THE AIR DISTRIBUTION SYSTEM WITH: DUCTWORK, FLEXIBLE DUCT, DIFFUSERS, GRILLES, DAMPERS, CONTROL SYSTEMS, ETC. SHALL BE BY THE MECHANICAL CONTRACTOR.
- CEILING CAVITY IS A RETURN AIR PLENUM.
- DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS. OVERALL OUTSIDE DUCT DIMENSIONS SHALL BE ADJUSTED TO ALLOW FOR ANY LINER THICKNESS.
- ALL SHEET METAL TO BE MADE AND INSTALLED TO SMACNA SEAL CLASS B STANDARDS WITH 45-DEGREE MAXIMUM REDUCING, 30-DEGREE MAXIMUM EXPANDING TRANSITIONS. ALL EXPOSED RECTANGULAR DUCTS TO BE PAINT LOCK GALVANIZED. PROVIDE HOLLOW BLADE TURNING VANES ON 1 1/2 CENTERLINE RADIUS FOR ALL ELBOWS AND TEES. HVAC SUPPLY AND RETURN RECTANGULAR DUCTS TO HAVE A MINIMUM 1/2" THICK, R22 THERMAL PERFORMANCE, 0.5 NRC SOUND ABSORPTION RATED DUCT LINER. ALL OUTSIDE AIR DUCTS TO HAVE 2" THICK R9 INSULATION, 0.9 NRC SOUND ABSORPTION RATED, UL 181 CLASS ONE FIBERGLASS DUCT LINER ATTACHED WITH STC-KLIPS 15' O.C. EACH WAY AND 100% COVERAGE OF FLAME PROOF ADHESIVE. INCREASE DUCT TO ALLOW FOR LINER. SEAL ALL DUCT AIR TIGHT WITH TWO COATS OF DUCT SEALANT.
- CALLK ALL DUCT JOINTS AIR AND WATER TIGHT WITH PERMANENT COMMERCIAL CAULK PER MANUFACTURER'S RECOMMENDATIONS.
- CONCEALED ROUND DUCTS SHALL BE LOW PRESSURE CONSTRUCTION, SEALED AIR TIGHT AND EXTERNALLY INSULATED WITH 1-1/2" 3/4 LB. DENSITY BLANKET INSULATION WITH FOIL SCRIMP/CRAFT FACING. SEAL ALL JOINTS WITH CAULK AIR TIGHT.
- ALL FLEXIBLE DUCTWORK USED SHALL BE INSULATED SEMI-RIGID FLEXIBLE DUCT. FLEXMASTER SM OR FLEXOR FLEX AIR. SHALL CONFORM TO LOCAL CODES. MAKE FLEXIBLE DUCT CONNECTIONS WITH DRAW BANDS AND SHEET METAL SCREWS AT EACH END OF FLEX. ALL FLEXIBLE DUCT TO BE SAME SIZE AS DIFFUSER CONNECTION. LIMIT FLEXIBLE DUCTWORK TO 6-F.T. MAXIMUM LENGTH. NO FLEX DUCT ALLOWED IN EXPOSED AREAS.
- ALL ROUND DUCT TAKEOFFS SHALL BE CONICAL BELL MOUTH SPIN-IN FITTINGS WHERE DUCT DIMENSION ALLOWS.
- THIS CONTRACTOR SHALL COORDINATE ALL DUCTWORK WITH OTHER TRADES PRIOR TO INSTALLATION.
- PROVIDE FIRE OR SMOKE DETECTORS (ON RETURN FOR MECHANICAL SYSTEMS OVER 2000 CFM AS REQUIRED BY CODES OR BUILDING STANDARDS) IF TWO OR MORE MECHANICAL SYSTEMS (I.E. FURANCES) SERVE THE SAME AREA AND WHEN COMBINED EXCEED 2000 CFM, A FIRE OR SMOKE DETECTOR SHALL BE INSTALLED ON THE RETURN OF EACH UNIT WHEN REQUIRED BY LOCAL AUTHORITIES.
- PROVIDE SLEEVES AND COLLARS FOR ALL DUCTWORK AND PIPES THROUGH WALLS, FLOORS, AND CEILINGS. SEAL ALL EXTERNAL PENETRATIONS WEATHER TIGHT WITH EXTERIOR COMMERCIAL GRADE CAULK. FIREPROOF ALL PENETRATIONS OF FIRE RATED WALLS, FLOORS AND CEILINGS.
- CONFIRM VOLTAGE, PHASE, AND AMPACITY WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT. ALL CONTROL AND INTERLOCK WIRING FOR MECHANICAL EQUIPMENT BY MECHANICAL CONTRACTOR. THREE PHASE MOTORS TO HAVE MAGNETIC STARTERS WITH PROTECTION ON ALL THREE LEADS. CONTROLS AND HEATING/COOLING EQUIPMENT TO AUTOMATICALLY RESTART AFTER POWER FAILURE. ALL WIRE TO BE IN CONDUIT WHERE REQUIRED BY CODE.
- ALL RECIRCULATED AIR SHALL PASS THROUGH STANDARD 30% MERV 8, THROW AWAY FILTERS. PROVIDE ONE ADDITIONAL CLEAN SET FOR OWNER AT PROJECT COMPLETION.
- A MINIMUM CLEARANCE OF 36 INCHES SHALL BE PROVIDED AROUND ANY EQUIPMENT OR COMPLY WITH MANUFACTURER'S REQUIREMENTS (I.E., FANS, PUMPS, BOILERS, AIR CONDITIONERS, ETC.) FOR SERVICE AND MAINTENANCE. GAS FIRED APPLIANCES SHALL BE VENTED PER THE MANUFACTURER'S LISTING. PROVIDE COMBUSTION AIR AS REQUIRED PER CODE.
- TEMPERATURE CONTROLS** - THE HVAC SYSTEM CONTROLS ARE TO BE FULLY AUTOMATIC. ALL CONTROLS ARE TO BE ELECTRIC. TEMPERATURE CONTROL SETUP AND SETBACK SHALL BE ACCOMPLISHED BY MEANS OF AN ELECTRIC THERMOSTAT WITH THE FOLLOWING FEATURES BEING STANDARD:
 - ADJUSTABLE HEATING AND COOLING SETPOINTS.
 - NIGHT AND WEEKEND PROGRAMMABLE SETBACK.
 - AUTOMATIC CHANGEOVER BETWEEN HEATING AND COOLING CYCLES.
 - MINIMUM JOB EIGHT (8) HOUR BATTERY BACKUPS DURING POWER FAILURE.
 - OPTIMAL SYSTEM STARTUPS TO ENSURE CORRECT TEMPERATURE AT OCCUPANCY.
 - LOCKABLE COVERS.
 - ALL CONTROL SYSTEMS SHALL BE DESIGNED AND PROVIDED BY A CONTROL MANUFACTURER WHO HAS BEEN IN THE BUSINESS OF MANUFACTURING, DESIGNING AND INSTALLING CONTROL COMPONENTS AND SYSTEMS FOR A MINIMUM OF TEN (10) YEARS.

MECHANICAL SHEET LIST

SHEET NUMBER	SHEET TITLE
MO.0	MECHANICAL COVER SHEET
MO.1	MECHANICAL SCHEDULES & COMCHECK
M1.0	MECHANICAL PLAN
M1.1	MECHANICAL ROOF PLAN

ROOFTOP HEATING & COOLING UNIT SCHEDULE

TAG	TRANE MODEL	COOLING MBH			HEATING MBH			SUPPLY FAN @ ALTITUDE				O.D. DUCT SIZE CONNECTION				UNIT WT (LB) W/O CURB	ADDITIONAL FEATURES REQUIRED		
		5300 FT ALT MBH	MIN SEER/IEER	MIN SEER/IEER (W/STAGED FAN)	SEA LEVEL INPUT	GAS CFH	5300 FT ALT. OUTPUT	TOTAL CFM	MIN OA CFM	ESP	RPM	FAN HP	RETURN	SUPPLY	VOLTS / PHASE			MCA	MOCP
RTU-1	DHC092H3RHA	85.6	15.5	15.5	156.8	200	85.2	3000	600	1.00	1067	2.8	32-1/8" x 17-1/2"	33" x 17-1/2"	208/3	43.0	50	906	2,4,5,6,7,8,10,11,12,13,15,16,17,18

- FEATURES:**
- ECM SUPPLY FAN.
 - PROVIDE ROOF CURB ADAPTER. M.C. TO VERIFY EXISTING ROOF CURB INFORMATION PRIOR TO ORDERING.
 - (MANUAL-2-POS MOTORIZED) FRESH AIR HOOD 0-50% .
 - NON-FUSED DISCONNECT.
 - POWERED 120V/160 CONVENIENCE OUTLET.
 - ECONOMIZER FREE COOLING W/ BAROMETRIC RELIEF DAMPER.
 - FILTER SECTION W/ 2 SETS OF 2" MERV 8 FILTERS.
 - STANDARD INDUCED DRAFT, TUBULAR, ALUMINIZED STEEL HEAT EXCHANGER.
 - REBALANCE EXISTING RTU SUPPLY AIR AND OUTSIDE AIR PER PERFORMANCE REQUIREMENTS IN THIS SCHEDULE GENERAL NOTES (REQUIRED ALL UNITS):
 - ALL EQUIPMENT SHALL COMPLY WITH LOCAL ENERGY CODE REQUIREMENTS AND CURRENT ASHRAE 90.1 STANDARD.
 - HEATING OUTPUT CAPACITY BASED ON 5300 FT ALTITUDE.
 - OPERATING WEIGHT INCLUDES 14" ROOF CURB, ECONOMIZER, AND HALL GUARD.
 - CAPACITY IS BASED ON CFM @ ESP AND ELEVATION SHOWN AND 77 DB / 55 WB EAT AND 100 DEG F AMBIENT CONDENSER AIR
 - CONDENSER COIL HAIL GUARDS.
 - POWERED EXHAUST WITH BUILDING PRESSURIZATION CONTROL.
 - RETURN SMOKE DETECTOR WITH SAMPLING TUBE AND REMOTE TEST STATION WITH (AUDIBLE/VISUAL) ALARM (INTERLOCK WITH FIRE ALARM SYSTEM).
 - GPS-FC48-AC SELF-CLEANING NEEDLE-POINT BIPOLAR IONIZATION, UL2998 COMPLIANT.
 - STAGED COOLING CAPACITY (SEE STAGES ABOVE) WITH MODULATING FAN CONTROL (VFD). FULL FACE ACTIVE EVAPORATOR COIL. CARRIER
 - FACTORY START-UP.

EQUALS BY:
 TRANE
 DAIKIN
 TEMPMASTER
 LENNOX

G.R.D. AND LOUVER SCHEDULE

TAG	MFG / MODEL	FIRE DMPR	OBD	MAX N.C.	ADDITIONAL FEATURES REQUIREMENTS
A	PRICE SDG SUPPLY		NO	-	STEEL CONSTRUCTION
B	PRICE SPD SUPPLY/DIFFUSER		NO	-	STEEL CONSTRUCTION B.C
C	PRICE STG TRANSFER GRILLE		NO	-	STEEL CONSTRUCTION

- FEATURES:**
- USE LAY-IN FRAME STYLE 3P ON ALL T-BAR CEILING.
 - USE FRAME STYLE 1 ON ALL HARD SURFACE CEILING.
 - USE MAX 6FT. OF CODE APPROVED INSULATED FLEX DUCT.
 - MAXIMUM S.P. DROP = 0.15" W.C. UNLESS OTHERWISE NOTED.
 - ALL CEILING DIFFUSERS TO HAVE 4-WAY DEFLECTION UNLESS SHOWN WITH THROW BLOCKING.
 - OBD MAY BE OMITTED IF ONLY ONE RETURN INLET PER SYSTEM IS USED, OR RETURN SYSTEM IS NON-DUCTED.
 - USE SPIN-IN FITTINGS WITH LOCKING BUTTERFLY DAMPER IN ACCESSIBLE LAY-IN CEILING. IN LIEU OF OBD. USE OBD IN ALL NON ACCESSIBLE CEILING AREAS ONLY WHERE SPIN/DAMPER CAN NOT BE SERVICED.
- EQUALS BY: GRD - TITUS, KRUEGER, NAILOR, METALAIR, ANEMOSTAT, TUTTLE AND BAILEY
 LOUVERS - RUSKIN, ARROW, UNITED ENERTECH, POTTOFF, NCA
- NOTE: PROVIDE A ROOM-BY-ROOM AIR DISTRIBUTION SCHEDULE WITH THE DIFFUSER AND GRILLE SUBMITTAL. INCLUDE TAG #, ROOM #, MANUFACTURER, MODEL #, NECK SIZE, BORDER SIZE, COLOR, OBD, QUANTITY, CFM AND N.C. THROW @ 150 FPM

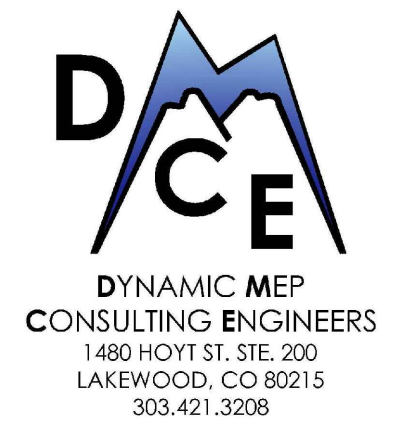
EXHAUST FAN SCHEDULE

TAG	MANUFACTURER MODEL	FAN TYPE	CFM	S.P.	FAN RPM	SONES AT OPER. PT.	ELECTRICAL		ADDITIONAL FEATURES REQ.
EF-1	GREENHECK SP-B110	CEILING DIRECT	100	0.125	950	1.5	HP	VOLTS/PHASE	
							80 WATTS	115/1	1,2,3,6

- FEATURES:**
- CORRECT ALL FAN RPM FOR ALTITUDE.
 - SWITCH ON WITH LIGHT.
 - FLAT ROOF CAP OR WALL CAP BY FAN MANUFACTURER.
 - CONTROL WITH TIME CLOCK.
 - PROVIDE 12" HIGH ROOF CURB.
 - GRAVITY BACKDRAFT DAMPER.
 - INLET GUARD.
- EQUALS BY:
 COOK
 PANASONIC
 S & P

VENTILATION SCHEDULE (2015 IMC) -- (RTU-1)

SYSTEM SERVED BY	ZONE IDENTIFICATION			VENTILATION RATE PROCEDURE - SINGLE ZONE SYSTEMS						REMARKS
	FLOOR PLAN ROOM NAME & NUMBER	OCCUPANCY CLASSIFICATION PER TABLE 403.3 - 2015 IMC	ZONE NET FLOOR AREA Az [SQ. FT.]	OUTDOOR AIRFLOW REQUIRED PER PERSON Rp (#1) [CFM / PERSON]	OUTDOOR AIRFLOW RATE REQ. PER UNIT Ra (#1) [CFM / SQ. FT.]	ZONE OCCUPANT DENSITY (#2) [PEOPLE / 1000 SQ. FT.]	ZONE POPULATION Pz [PEOPLE]	BREATHING OUTDOOR AIR FLOW Vbz (#3) [CFM]	ZONE AIR DISTRIB. EFFECT. Ez (#4)	
RTU-1	RECEPTION	MAIN ENTRY LOBBIES	495	5	0.06	10	5	55	0.8	68
RTU-1	MAIN GYM	HEALTH CLUB/WEIGHT ROOM	1,452	20	0.06	10	15	387	0.8	484
RTU-1	BREAK ROOM	OFFICE SPACES	96	5	0.06	5	1	11	0.8	13
RTU-1	TREATMENT	OFFICE SPACES	100	5	0.06	5	1	11	0.8	14
RTU-1	TREATMENT	OFFICE SPACES	100	5	0.06	5	1	11	0.8	14
SYSTEM SUMMARY:										
REQUIRED OUTDOOR AIR INTAKE Vol (#7) [CFM] =			593							
PROVIDED OUTDOOR AIR INTAKE FLOW [CFM] =			600							
TOTAL SUPPLY RATE Vpz (#6) [CFM] =			3,000							
SYSTEM OUTDOOR AIR PERCENTAGE =			20.0%							
IN COMPLIANCE WITH STANDARD? [Y/N] =			Y							
NOTES:										
1. "PEOPLE AND AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE"; PER TABLE 403.3.1.1.						8. NOTE THESE VALUES ARE ESTIMATED BASED ON ENGINEERING JUDGEMENT.				
2. "DEFAULT OCCUPANT DENSITY"; PER TABLE 403.3.1.1.										
3. BREATHING ZONE OUTDOOR AIRFLOW Vbz = Rp*Pz + Ra*Az; PER EQUATION 4-1.										
4. ZONE AIR DISTRIBUTION EFFECTIVENESS; PER TABLE 403.3.1.1.1.2.										
5. ZONE OUTDOOR AIRFLOW Voz = Vbz/Ez; PER EQUATION 4-2.										
6. PRIMARY AIRFLOW SUPPLIED FROM THE AIR HANDLING UNIT.										
7. OUTDOOR AIR INTAKE FLOW RATE Vol = Voz; PER EQUATION 4-3.										



BELMAR MALL
TENANT IMPROVEMENTS
330 South Vance Street,
Lakewood, CO 80226

OWNER/TENANT
PHYSICAL REHABILITATION NETWORK
CARLSBAD, CA
ARCHITECT / TENANT IMPROVEMENTS
ROTHSCHILD DOWNES
ENGLEWOOD, CO



MECHANICAL, ELECTRICAL, PLUMBING
DMCE ENGINEERING
LAKEWOOD, CO

NO	DATE	ISSUE
01	07/22/22	PRELIMINARY FOR REVIEW
02	08/23/22	PRELIMINARY FOR REVIEW
03	09/14/22	FOR REVIEW
04	12/14/22	FOR PERMIT
05	03/03/23	PLAN CHECK REV 1

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MECHANICAL SCHEDULES & COMCHECK

MO.1

COMcheck Software Version COMcheckWeb Mechanical Compliance Certificate

Project Information
 Energy Code: 2015 IECC
 Project Title: 22050 - WB - BELMAR
 Location: Lakewood, Colorado
 Climate Zone: S0
 Alteration
 Construction Site: 7230 West Alameda, Lakewood, Colorado 80226
 Owner/Agent: [Signature]
 Designer/Contractor: DMCE, 1480 Hoyt Street, St. 200, Lakewood, Colorado 80215

Mechanical Systems List
Quantity System Type & Description
 Heating: 1 each - Central Furnace, Electric, Capacity = 200 MBtu/h
 No minimum efficiency requirement applies.
 Cooling: 1 each - Single Package DX Unit, Capacity = 80 MBtu/h, Air-Cooled Condenser, Air Evaporator
 Proposed Part Load Efficiency = 11.20 EER, Required Part Load Efficiency = 11.20 EER
 Proposed Part Load Efficiency = 13.50 EER, Required Part Load Efficiency = 12.80 EER
 Fan System: FAN SYSTEM 1 - Compliance (Motor nameplate HP and fan efficiency method) - Passes
 Fans: FAN 1 Supply, Constant Volume, 3000 CFM, 2.8 motor nameplate hp, 90.0 fan efficiency grade, 0.0 total fan efficiency, 0.0 design fan efficiency, fan exception: Fan array <= 3 total HP
 1 Water Heater: Electric Storage Water Heater, Capacity: 50 gallons w/ Circulation Pump, Proposed Efficiency: 0.95, NtH (F = 12 Kw), Required Efficiency: 0.84, 54, NtH (F = 12 Kw)

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

Gage Brumley [Signature] 09-30-2022
 Name - Title Signature Date

Project Title: 22050 - WB - BELMAR Report date: 09/30/22
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COMcheck Software Version COMcheckWeb Inspection Checklist
 Energy Code: 2015 IECC
 Requirements: 0.0% were addressed directly in the COMcheck software
 Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is determined in a separate table, a reference to that table is provided.

Section # & Req. ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [P07]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and documents where exceptions to the standard are claimed. List calculations per acceptable engineering standards and handbooks.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C103.2 [P07]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and documents where exceptions to the standard are claimed. No water systems serve per manufacturer's sizing guide.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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Section # & Req. ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C403.2.4 [F09]	Reinforced concrete foundation walls shall be constructed with a minimum of 4 #4 bars per vertical section. These protection systems have automatic controls installed.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

Project Title: 22050 - WB - BELMAR Report date: 09/30/22
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Section # & Req. ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5.1 [F07]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details. [F07]	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.5.2 [F07]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details. [F07]	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.1 [F07]	Automatic time switches installed to automatically switch off the recirculating hot water system or heat lines.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.2 [F07]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.3 [F07]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.7 [F07]	Water distribution system that pumps water from a heated-water supply pipe to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 120°F.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.7 [F07]	Water distribution system that pumps water from a heated-water supply pipe to the heated-water source through a cold-water supply pipe is a demand recirculation water system. Pumps within this system have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 120°F.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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Section # & Req. ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME51]	Thermally reflective panel surface of sensible heating panels having insulation >= R-5.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.1.1 [ME51]	Unenclosed spaces that are heated use only radiant heat.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.3 [ME53]	HVAC equipment efficiency verified.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.
C403.2.4 [ME53]	Fault detection and diagnostics installed with air-cooled outdoor DX units having economizers.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.6 [ME59]	Demand control ventilation provided for spaces >200 sq ft and >25 people/2000 sq ft occupant density and served by systems with auto economizer, auto modulating outside air damper control, or design airflow >3000 cfm.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.7 [ME57]	Exhaust air energy recovery systems meeting Table C403.2.7(1) and C403.2.7(2).	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.8 [ME59]	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.9 [ME59]	HVAC ducts and plenums installed in or under a slab, vermin may need to occur during Foundation Inspection.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.9 [ME59]	Ducts and plenums sealed based on static pressure and location.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.9 [ME59]	Ductwork operating >3 in. water column require air leakage testing.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.3 [ME82]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer controls, and provide a means to relieve excess outside air during operation.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

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Section # & Req. ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.3.1 [ME110]	Multiple zone VAV systems with DDC systems within 90 days of system acceptance.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.
C403.2.2 [ME53]	All outdoor and zone terminal devices have means for air balancing.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.3.4 [ME123]	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressor and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.2.3 and refrigeration compressor systems that comply with C403.2.2.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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Section # & Req. ID	Final Inspection	Complies?	Comments/Assumptions
C303.3.1 [F08]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.2 [F07]	HVAC systems and equipment capacity does not exceed calculated loads.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.3.4 [F07]	Heating and cooling to each zone is controlled by a thermostat control. Minimum and humidity control device per installed humidification/dehumidification system.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4 [F08]	Thermostatic controls have a 5°F deadband.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4 [F07]	Temperature controls have setback override restrictions.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4 [F07]	Each zone equipped with setback controls using automatic time clock or programmable control system.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4 [F07]	Automatic Controls: Setback to 5°F (heat) and 8°F (cool) 7-day clock, 2-hour occupant override, 10-hour backup.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4 [F07]	Systems include optimum start controls.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.3 [F07]	Heat traps installed on supply and discharge piping of non-circulating systems.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6 [F07]	All piping insulated in accordance with section details and Table C403.2.15.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.3 [F07]	Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank system from pool a desaturated return pipe or a cold water supply pipe.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.1 [F08]	Commissioning plan developed by registered design professional or approved agency.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Project Title: 22050 - WB - BELMAR Report date: 09/30/22
 Data filename: Page 7 of 8

Section # & Req. ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.3 [F13]	HVAC equipment has been tested to ensure proper operation.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3 [F10]	HVAC control systems have been calibrated and adjustment of controls.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3 [F10]	Economizers have been tested to ensure proper operation.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.4 [F10]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5 [F17]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5 [F14]	An air and/or hydronic system balancing report is provided for HVAC systems.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5 [F10]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	<input checked="" type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

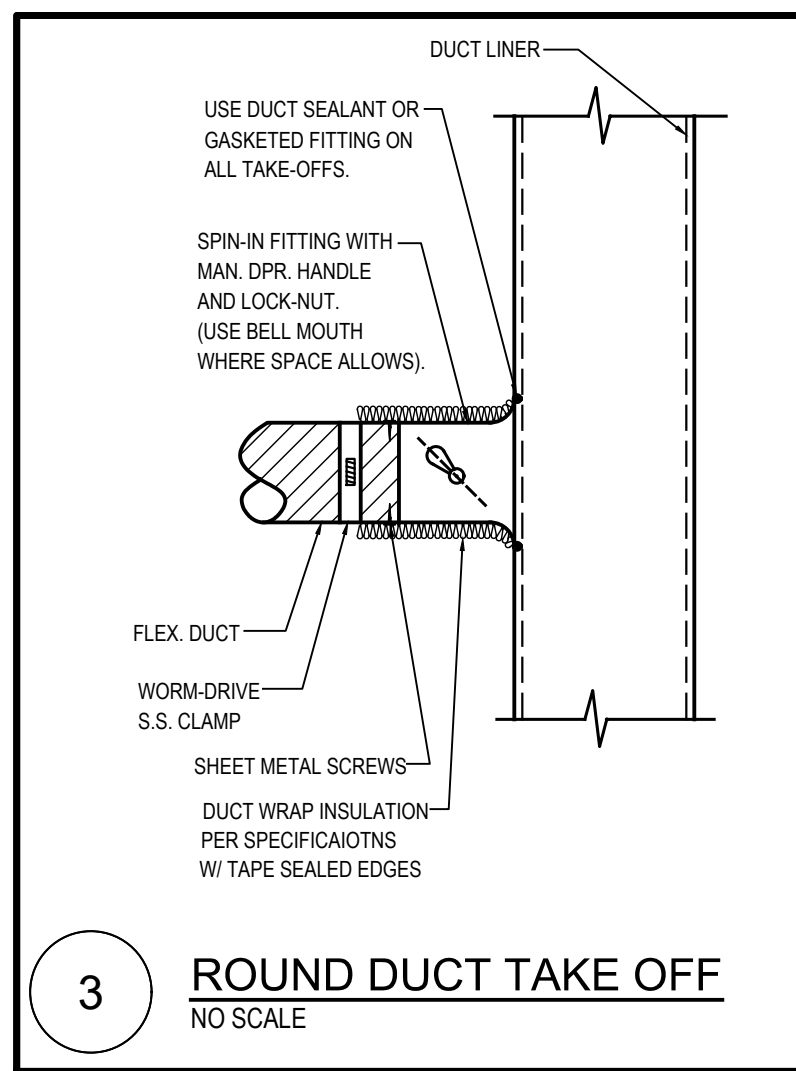
Project Title: 22050 - WB - BELMAR Report date: 09/30/22
 Data filename: Page 8 of 8

GENERAL NOTES:

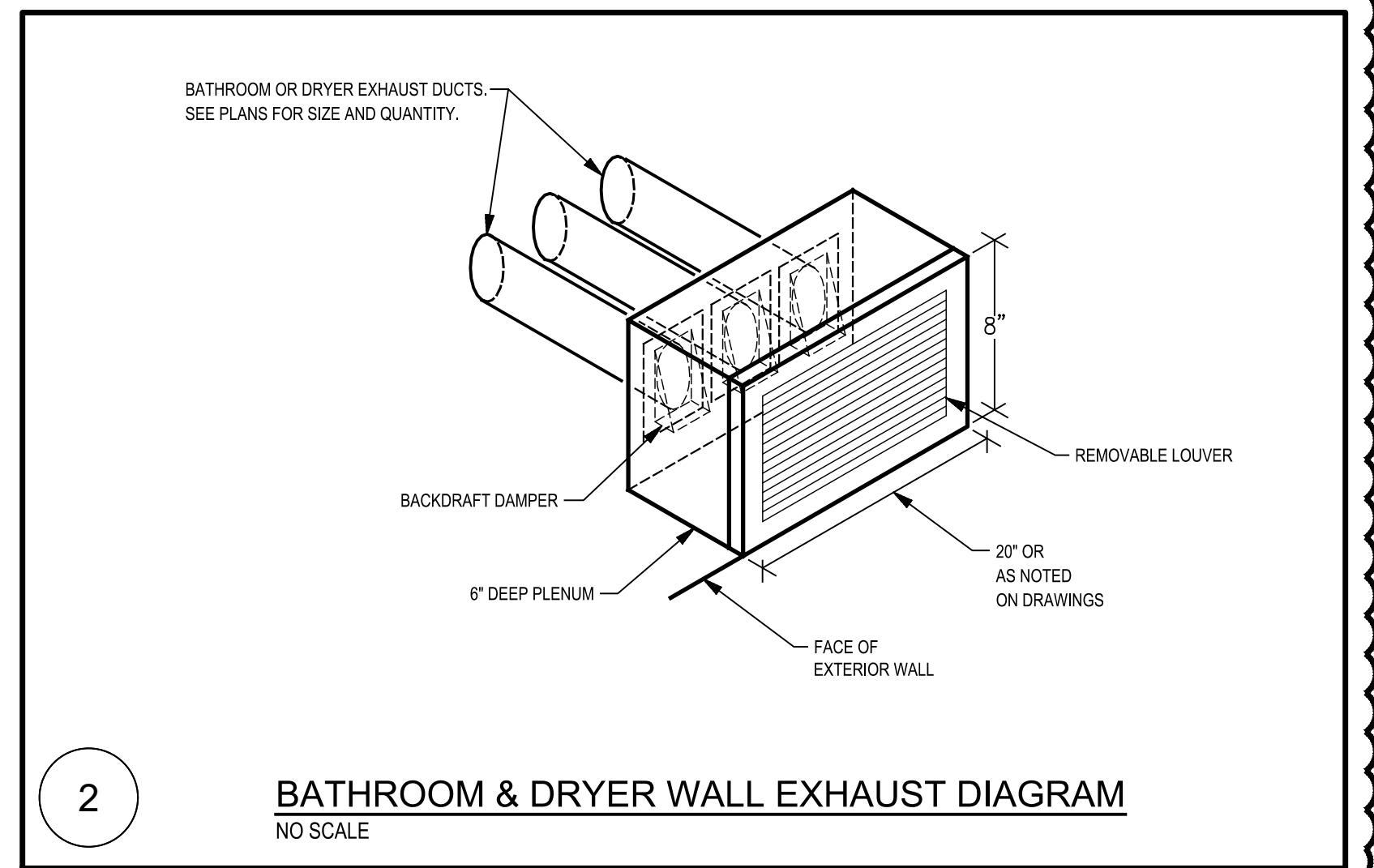
1. REFER TO SHEET M1.0 FOR GENERAL NOTES.

WORK NOTES:

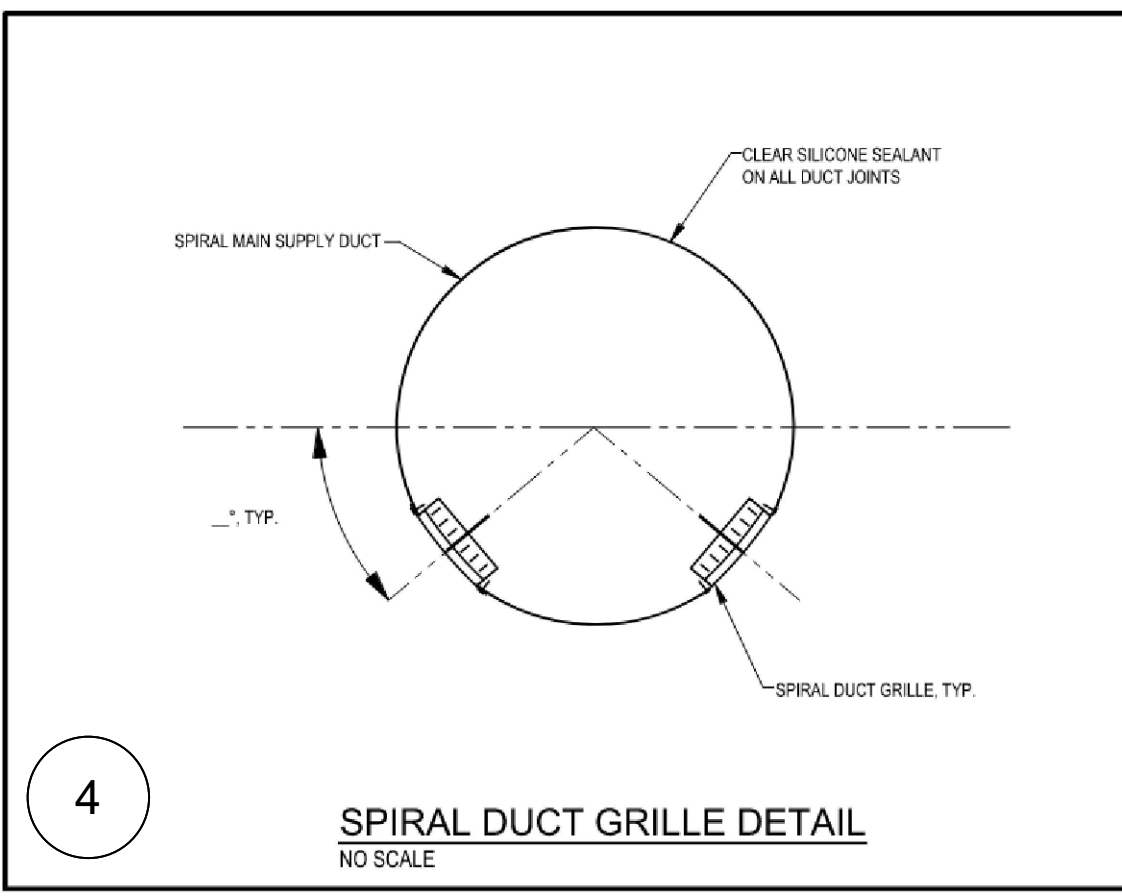
- ① 6"Ø BATHROOM EXHAUST 10" x 10" EXHAUST LOUVER.
- ② 4"Ø DRYER VENT CAP AT EXTERIOR WALL. 10'-0" ABOVE WALKWAY.
- ③ 4"Ø DRYER EXHAUST DN. IN WALL BOX TO FIT BEHIND DRYER.
- ④ MAINTAIN MINIMUM 3'-0" SEPARATION FROM DOOR OPENING, AND 10'-0" ABOVE WALKWAY.



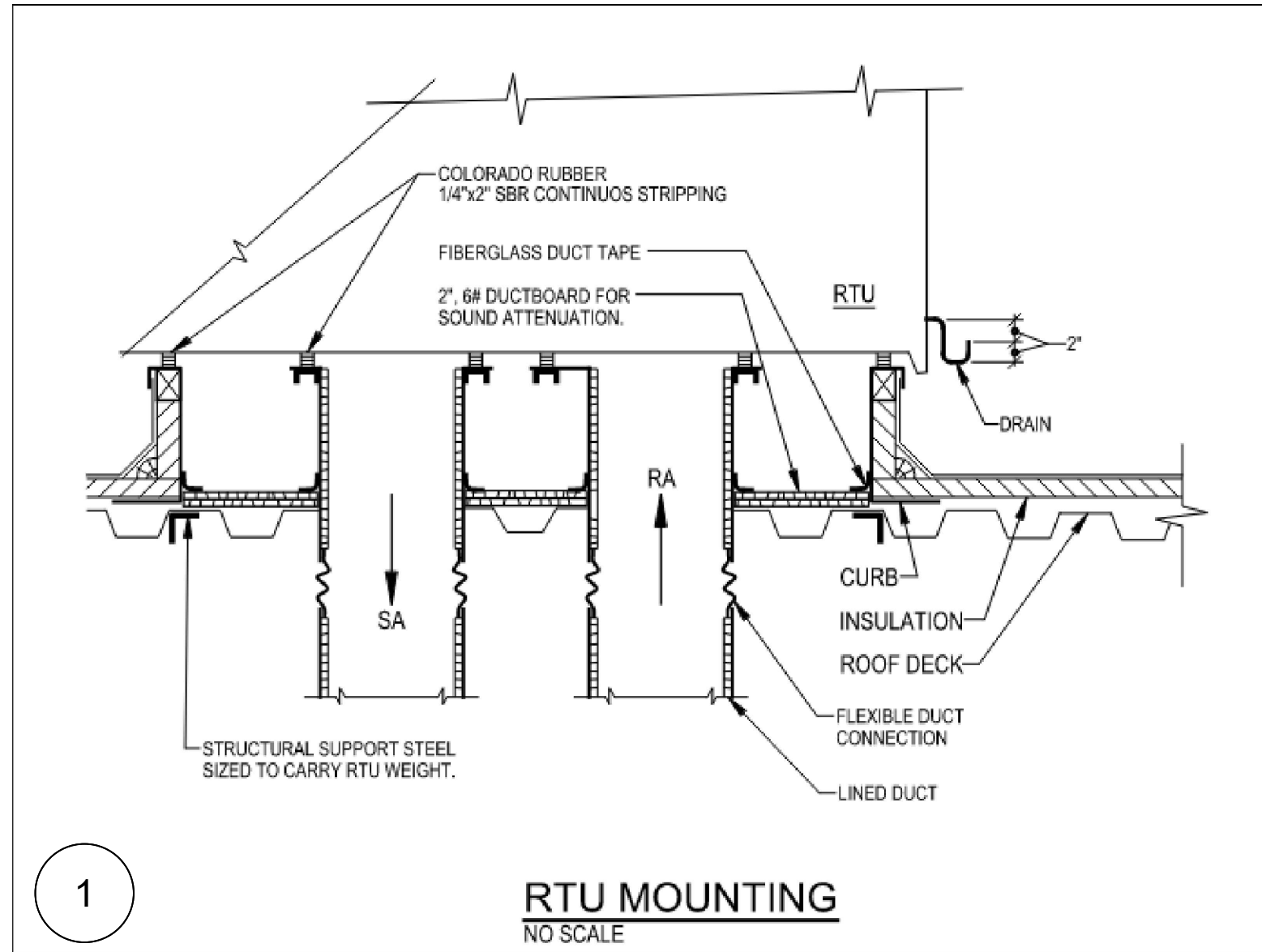
3 **ROUND DUCT TAKE OFF**
NO SCALE



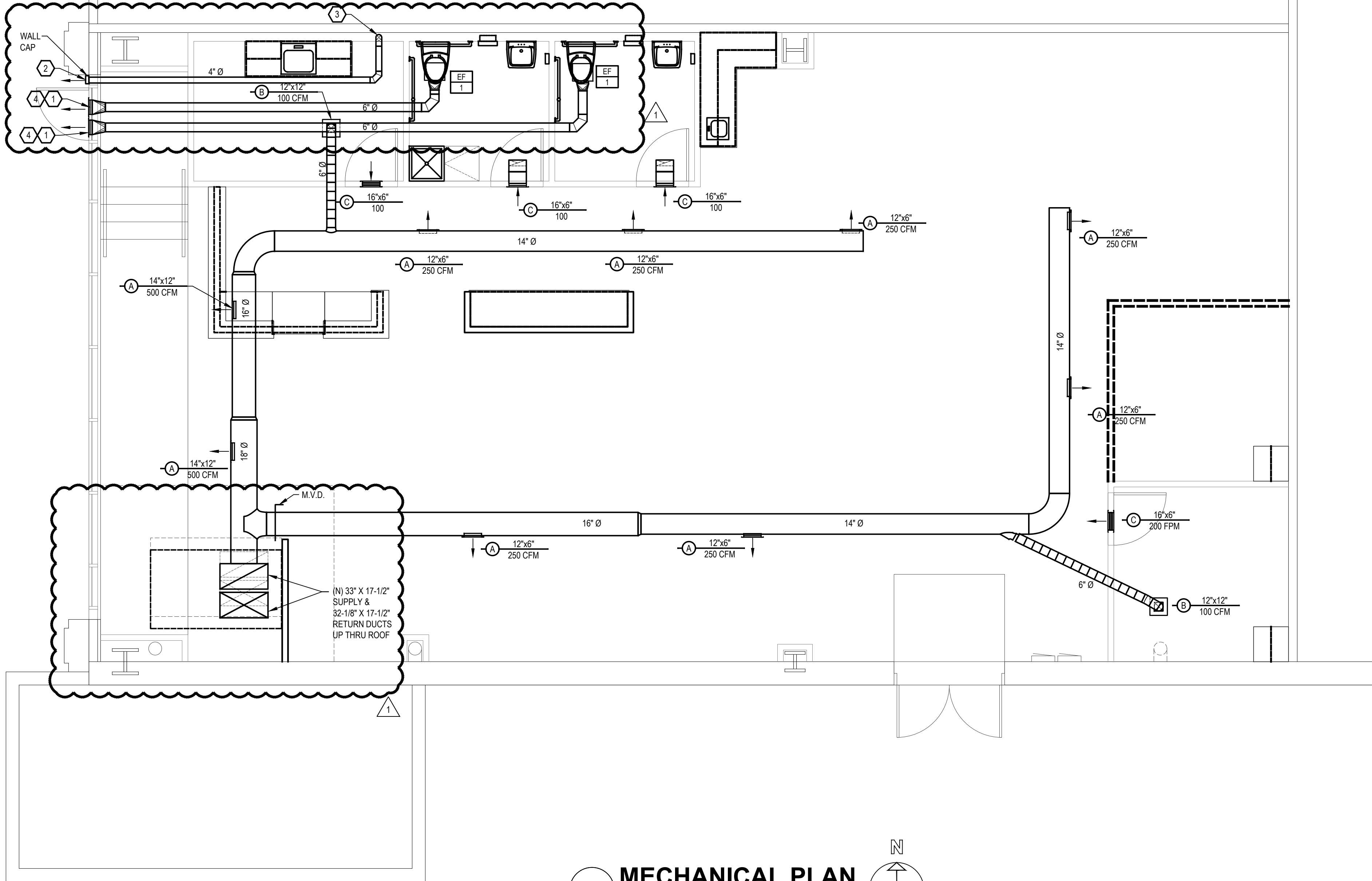
2 **BATHROOM & DRYER WALL EXHAUST DIAGRAM**
NO SCALE



4 **SPIRAL DUCT GRILLE DETAIL**
NO SCALE



1 **RTU MOUNTING**
NO SCALE



1 **MECHANICAL PLAN**
SCALE: 1/4" = 1'-0"
0 2 4 8
SCALE: 1/4" = 1'-0"

DUCTWORK INSULATION SCHEDULE

TABLE NOTES:
1. INSULATION IS NOT REQUIRED (UNLESS OTHERWISE NOTED) ON THE FOLLOWING DUCTS IN COMMERCIAL APPLICATIONS:
A. EXHAUST DUCTS.
B. DUCTS LOCATED IN CONDITIONED SPACE.
C. RETURN DUCTS LOCATED IN RETURN AIR PLENUMS.
D. SUPPLY DUCTS IF TEMPERATURE DIFFERENCE BETWEEN THE INSIDE & OUTSIDE OF DUCT DOES NOT EXCEED 15°F.
E. WHEN LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY AND SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED SPACE BY A MINIMUM OF R-8 INSULATION.
2. IT IS DMCE'S INTERPRETATION THAT A SUPPLY DUCT IS CONSIDERED TO BE WITHIN A CONDITIONED SPACE WHEN LOCATED IN RETURN AIR PLENUM IF THE PLENUM IS INSULATED FROM THE EXTERIOR &/OR UNCONDITIONED SPACE(S) BY A MIN. R-8 INSULATION. (2015 IECC, C403.2.9)
3. IF TABLE AND PLANS CONFLICT, THE MORE STRINGENT SHALL APPLY.

APPLICATIONS	DUCT LOCATION	DUCT SERVICE	INSULATION MIN. R-VALUE	NOM. INSULATION THICKNESS **
COMMERCIAL	EXPOSED TO WEATHER ON THE EXTERIOR OF THE BUILDING.	SUPPLY & RETURN	12	WRAP: 4" WITH PROTECTIVE COVER LINER: 3"
	IN UNCONDITIONED ATTICS, BASEMENTS, CRAWL SPACES, GARAGES, & OTHER UNCONDITIONED SPACES.	SUPPLY & RETURN	6	WRAP: 2" LINER: 1-1/2"

* - INSULATING OF RETURN DUCTWORK IN RESIDENTIAL BASEMENTS NOT REQUIRED.
** - ACTUAL INSULATION THICKNESS MAY VARY BY MANUFACTURER. THICKNESS LISTED IN TABLE & DESIGN BASED ON OWENS CORNING, QUIETR DUCT LINER & OWENS CORNING, SOFTR ALL-SERVICE FIBER GLASS DUCT WRAP.

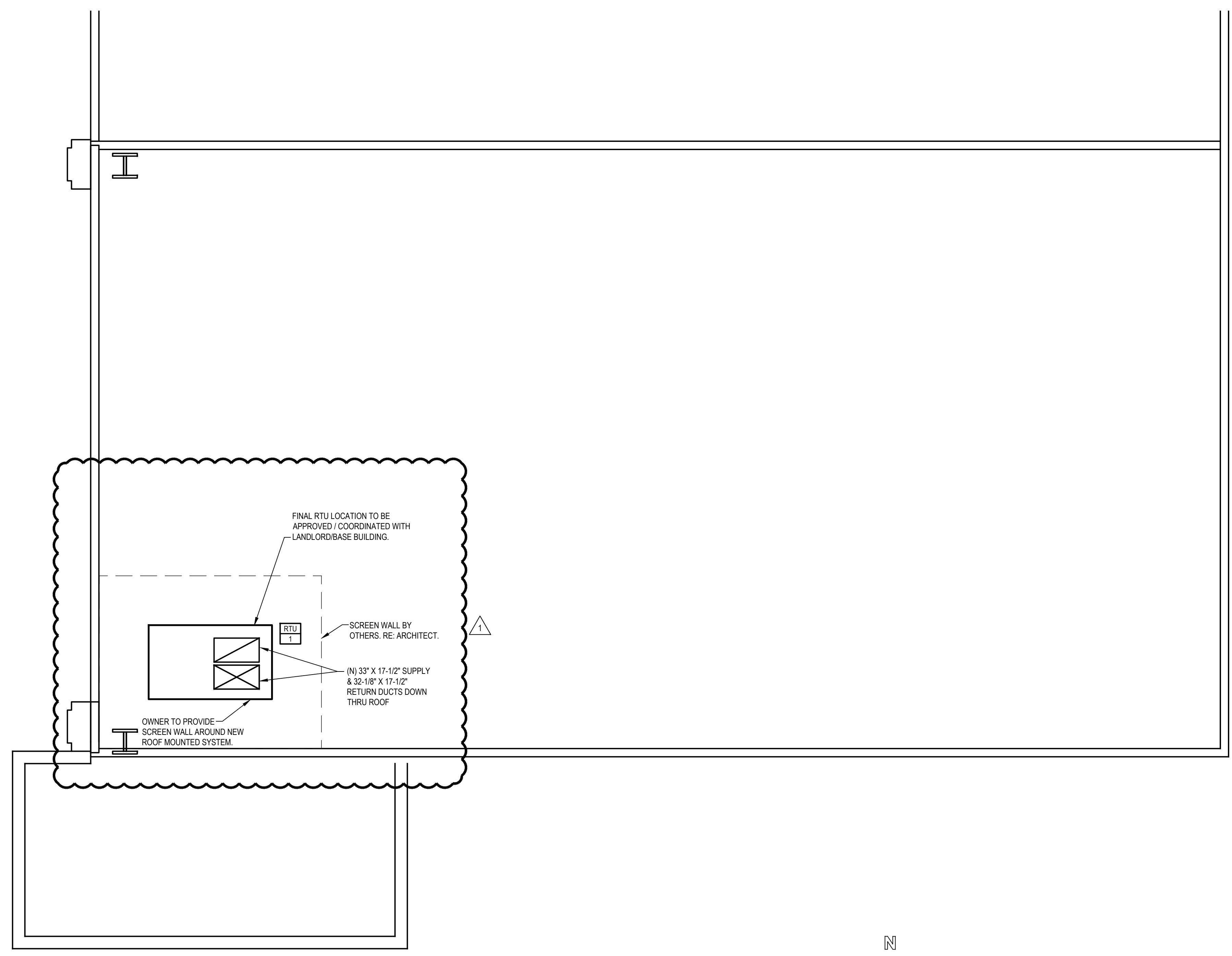


NO	DATE	ISSUE
01	07/22/22	PRELIMINARY FOR REVIEW
02	08/23/22	PRELIMINARY FOR REVIEW
03	09/14/22	FOR REVIEW
04	12/14/22	FOR PERMIT
△	03/03/23	PLAN CHECK REV 1

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MECHANICAL ROOF PLAN

M1.1



1 MECHANICAL ROOF PLAN
 SCALE: 1/4" = 1'-0"
 0 2 4 8
 SCALE: 1/4" = 1'-0"
 N

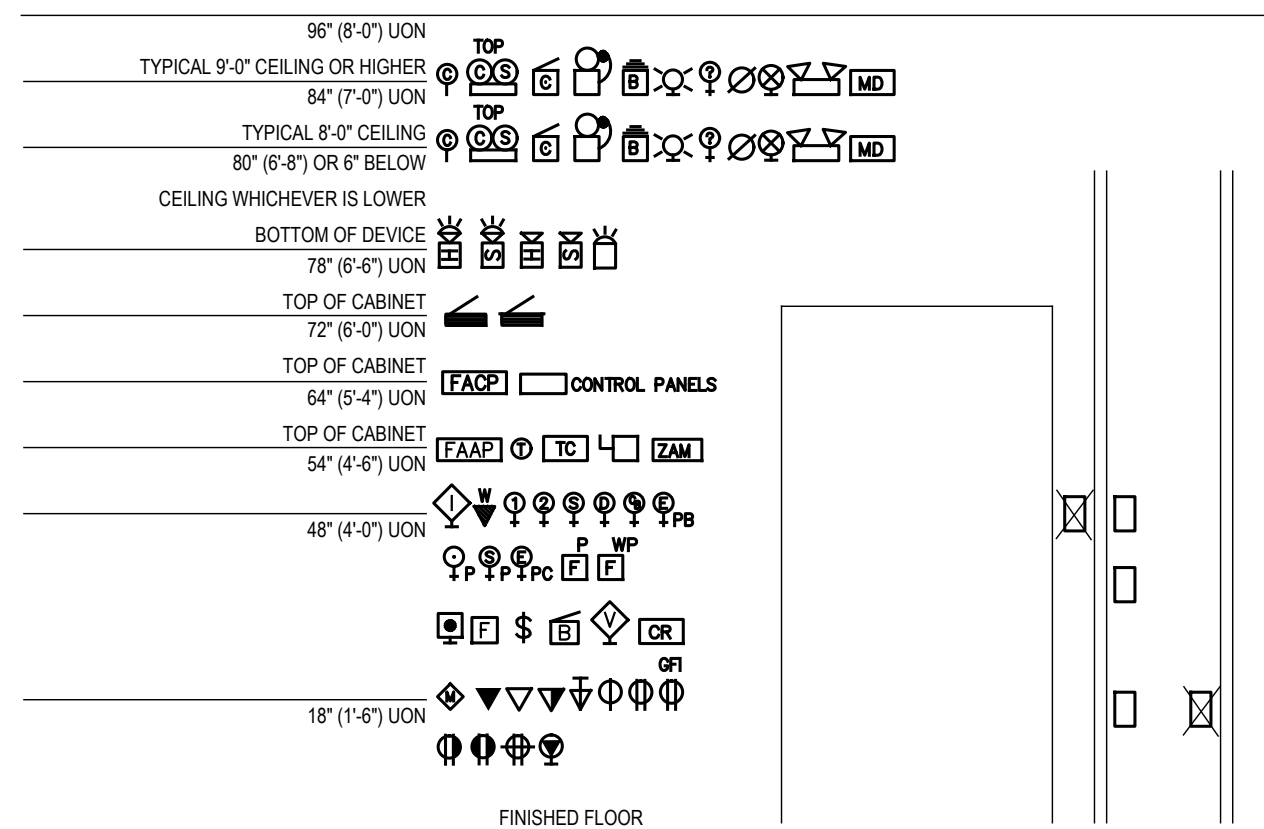
GENERAL PROJECT NOTES

NOTE: SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL CONSTRUCTION REQUIREMENTS

- THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY FOR A COMPLETE, OPERATIONAL AND PROPERLY FUNCTIONING ELECTRICAL SYSTEM
- MATERIALS AND INSTALLATION SHALL COMPLY WITH CODES, LAWS AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION
- MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY U.L., E.T.L., CSA OR ANOTHER RECOGNIZED TESTING LAB. ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW, UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES AND UTILITY COMPANIES SHOP DRAWINGS REQUIRED BY THESE AGENCIES FOR APPROVAL. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE ELECTRICAL WORK. THIS CONTRACTOR SHALL SECURE AND PAY ALL FEES AND PERMITS PERTAINING TO THIS CONTRACT. SHALL BE RESPONSIBLE FOR WORKERS IDENTIFICATION AND BADGING, SAFETY, AND LIABILITY INSURANCE, PROVIDE BARRICADES, WARNING SIGNS, AND TRASH REMOVAL FOR THE SAFETY OF THE WORKERS UNDER THIS CONTRACTOR'S EMPLOY.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER/OWNER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR SHALL PREPARE THE DOCUMENTS, INCLUDING DRAWINGS, REQUIRED TO OBTAIN APPROVAL OF THE EQUIPMENT AND LOCATIONS OF THE DEVICES THAT COMPRISE THE BUILDING FIRE ALARM LIFE SAFETY SYSTEM. THE DRAWINGS AND CUT SHEETS SHALL BE PROVIDED TO A PROFESSIONAL ENGINEER FOR REVIEW AND APPROVAL. THE APPROVED DRAWINGS WILL BE STAMPED, SIGNED AND RETURNED TO E.C. TO SUBMIT TO THE BUILDING DEPARTMENT.
- THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING STANDARDS, LOCAL JURISDICTIONAL CODES AND REQUIREMENTS, AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT. SUBMISSION OF PROPOSAL IN CONNECTION WITH THIS WORK SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE. NO EXTRA CHARGE WILL BE ALLOWED FOR CHANGES AS A RESULT FROM FAILURE TO EXAMINE THE JOB SITE.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY POWER AND WIRING FOR THE PERFORMANCE OF ALL TRADES, FOR THE ENTIRE PERIOD OF CONSTRUCTION AND SHALL REMOVE ALL TEMPORARY WIRING AT THE COMPLETION OF CONSTRUCTION.
- ALL MATERIALS AND EQUIPMENT SHALL BE ERRECTED, INSTALLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
- ALL CUTTINGS, DRILLING AND PATCHING OF MASONRY, STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF THE ARCHITECT-DESIGNER OR THEIR REPRESENTATIVE.
- ALL WORK REQUIRED FOR THE INSTALLATION AS SHOWN ON DRAWINGS INCLUDING LABOR, EQUIPMENT AND MATERIALS SHALL BE IN STRICT COMPLIANCE WITH THE BUILDING STANDARDS.
- ALL FEEDER CONDUCTORS SHALL BE COPPER WITH DEDUCT ALTERNATE PRICING FOR ALUMINUM. BRANCH CIRCUIT CONDUCTORS TO BE COPPER. CABLES WITH TYPE THHN-THWN INSULATION WILL BE USED FOR FEEDERS AND ALL BRANCH CIRCUIT CONDUCTORS.
- PROVIDE COMPLETE METAL RACEWAY SYSTEMS AND ENCLOSURES FOR ALL WIRING THROUGHOUT THE EXTENT OF THE REQUIRED SYSTEM. PROVIDE THE FOLLOWING TYPE OF PRODUCT IN SPECIFIED APPLICATIONS:
 - EXTERIOR LOCATIONS:
 - EXPOSED RACEWAY: IMC OR RMC
 - CONCEALED RACEWAY, ABOVEGROUND: IMC OR RMC
 - UNDERGROUND CONDUIT: RNC
 - CONNECTIONS ON VIBRATING EQUIPMENT: LFMC
 - BOXES, ABOVE GROUND: NEMA TYPE 3R OR TYPE 4. BOXES AND FITTINGS SHALL BE CAST TYPE
 - TRANSITION FROM UNDERGROUND TO ABOVE SLAB: RNC ELBOWS.
 - INTERIOR LOCATIONS:
 - EXPOSED, NOT SUBJECT TO PHYSICAL DAMAGE: EMT
 - EXPOSED, SUBJECT TO PHYSICAL DAMAGE: RMC
 - WOOD-FRAME CONSTRUCTION, AS PERMITTED BY AHJ: NMC
 - DAMP OR WET LOCATIONS: RMC
 - CONCEALED: EMT OR MC (WHERE PERMITTED BY OWNER)
 - CONNECTIONS TO VIBRATING EQUIPMENT, DRY LOCATIONS: FMC
 - CONNECTIONS TO VIBRATING EQUIPMENT, WET LOCATIONS: LFMC
 - BOXES, DRY LOCATION: NEMA 250, TYPE 1
 - BOXES, DAMP AND WET LOCATIONS: NEMA 250, TYPE 4 STAINLESS STEEL.
 - FITTINGS: SET SCREW, GALVANIZED STEEL OR MALLEABLE IRON FOR EMT.
- WIRING DEVICES WILL BE SPECIFICATION GRADE, SIDE AND BACK WIRING TYPE. ANY WIRE CONNECTION SHALL BE SCREW-CLAMP TYPE. RECEPTACLES SHALL HAVE A NEMA 5-20R CONFIGURATION RATED FOR 20 AMPS. STANDARD TOGGLE SWITCHES WILL BE RATED FOR 120/277 VOLTS AND 20 AMPS. WIRING DEVICE AND FACEPLATE FINISHES SHALL BE WHITE IN FINISHED SPACES, STAINLESS STEEL/BLACK IN FITNESS AND UNFINISHED SPACES. OUTDOOR DEVICES SHALL BE RATED WET LOCATION WHILE IN USE.
- ALL BRANCH CIRCUITS TO BE FED WITH #12, #12G, 3/4", UNLESS OTHERWISE NOTED.
- ALL TELE/ DATA BOXES SHALL BE PROVIDED WITH A 1/2" CONDUIT AND DUSHING WITH PULL STRING RUN 6" ABOVE FINISHED CEILING OR CEILING GRID. ELECTRIC METALLIC TUBING (EMT) SHALL BE USED FOR ALL WALL OUTLETS & TELEPHONE WIRING RUNNING BELOW RAISED FLOOR OR ABOVE HARD CEILING.
- ALL RECEPTACLES NOTED AS ISOLATED GROUND (IG) OR DEDICATED OR CIRCUITED AS DEDICATED SHALL BE PROVIDED WITH A DEDICATED GROUND AND NEUTRAL.
- MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS OTHERWISE INDICATED. CONDUITS LARGER THAN 2" DIAMETER OR CONDUITS OF ANY SIZE ROUTED OUTDOORS SHALL BE INTERMEDIATE METAL CONDUIT (IMC).
- FLEXIBLE CONDUIT CONNECTIONS TO RECESSED LIGHTING FIXTURES SHALL BE MADE WITH FLEXIBLE STEEL CONDUIT, 3/8 INCH MINIMUM.
- FINAL CONNECTIONS TO MOTORS SHALL BE MADE WITH LIQUID TIGHT FLEXIBLE STEEL CONDUIT, 1/2 INCH MINIMUM.
- WIRE NO. 8 AND SMALLER INSTALLED IN DRY LOCATIONS SHALL BE TYPE THWN OR THHN THERMOPLASTIC 600V INSULATED COPPER CONDUCTORS. NO WIRE SMALLER THAN NO. 12 SHALL BE USED FOR LIGHTING OR POWER WIRING. WIRE NO. 8 AND LARGER SHALL BE STRANDED. ALL CONDUCTORS INSTALLED IN EXTERIOR OR WET LOCATIONS SHALL BE TYPE THWN 600V INSULATED COPPER CONDUCTORS.
- ALL NEW CIRCUIT BREAKERS FOR NEW PANELBOARDS SHALL MATCH NEW BUILDING STANDARD PANELBOARD MANUFACTURER AND BREAKER TYPE. THE CONTRACTOR SHALL PROVIDE NEW ACCURATE AND DETAILED TYPE WRITTEN PANEL DIRECTORIES PER NEC 408.4 FOR ALL NEW PANELS. NUMBERED CIRCUITS ARE FOR CONVENIENCE OF DESIGN ONLY. E.C. TO FIELD VERIFY ACTUAL CIRCUIT NUMBERS USED AND CORRECTLY INDICATE ON AS-BUILT DRAWINGS. THE E.C. SHALL REMOVE ALL ABANDONED CIRCUITS.
- PROVIDE #10 FOR BRANCH CIRCUITS OVER 75' AT 120V AND OVER 150' AT 277V. E.C. TO FIELD VERIFY BRANCH CIRCUIT LENGTHS AND SIZE CONDUCTORS FOR VOLTAGE DROP PER NEC.
- EACH SWITCH, LIGHT, RECEPTACLE AND ALL OTHER DEVICES SHALL BE PROVIDED AND INSTALLED WITH A GALVANIZED OR SHERARIZED PRESSED STEEL JUNCTION BOX OF NOT LESS THAN NO. 14 U.S. GAUGE STEEL. CONDUITS SHALL BE FASTENED WITH LOCKNUTS AND BUSHINGS AND ALL UNUSED KNOCKOUTS MUST BE LEFT SEALED. THERE MUST BE SUFFICIENT ROOM FOR WIRES AND BUSHINGS AND DEEP BOXES SHALL BE LEFT SEALED. DEEP BOXES SHALL BE SECURELY AND ADEQUATELY SUPPORTED.
- ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SPECIAL OUTLET BOXES THAT MAY BE REQUIRED TO ENCLOSE RECEPTACLES.
- IN SUSPENDED CEILING SUPPORT CONDUIT AND JUNCTION BOXES DIRECT FROM THE STRUCTURAL SLAB, DECK, OR FRAMING PROVIDED FOR THAT PURPOSE. LIGHTING BRANCH CIRCUIT CONDUITS SHALL NOT BE CLIPPED TO THE CEILING SUPPORT WIRES OR SPLINE UNLESS THE CEILING SYSTEM HAS BEEN SPECIFICALLY DESIGNED FOR THAT PURPOSE.
- PROVIDE LOCAL DISCONNECT SWITCHES FOR ALL MOTORS (PLENUM APPROVED WHERE REQUIRED).
- THE E.C. SHALL INCLUDE IN HIS COST THE REMOVAL OF ALL EXISTING ELECTRICAL DEVICES, CONDUITS, FIXTURES AND EQUIPMENT THAT IS NOT TO BE REUSED. DISCARD ALL EQUIPMENT AS REQUIRED. E.C. SHALL BE RESPONSIBLE FOR DISCONNECTING PRIMARY SERVICE AND TEMPORARY POWER.
- PROVIDE WARRANTY GUARANTEED FOR A PERIOD OF ONE YEAR AFTER COMPLETION AND ACCEPTANCE. REPLACE ALL DEFECTIVE WORKMANSHIP, EQUIPMENT AND MATERIALS WITHOUT ADDITIONAL CHARGES.
- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFEKEEPING OF HISHER OWN PROPERTY ON THE JOB SITE. THE OWNER OR TENANT ASSUMES NO RESPONSIBILITY FOR PROTECTION OF THIS CONTRACTOR'S PROPERTY AGAINST FIRE, THEFT, OR ENVIRONMENTAL CONDITIONS.
- WHERE CONDUIT, CABLES, DUCTWORK OR PIPING PASSES THROUGH FIRE RATED FLOORS, WALLS, OR PARTITIONS, THE SLEEVES SHALL BE COMPLETELY LISTED EQUAL A FIRE STOP MATERIAL THAT IS LISTED EQUAL TO LOW CORNING) AND ACCEPTED BY THE BUILDING DEPARTMENT AND FIRE DEPARTMENT AS BEING SUITABLE FOR THE SERVICE. THIS MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS IN ORDER TO MAINTAIN THE FIRE RATING OF THE PENETRATED WALL, FLOOR, OR PARTITION. INSTALLATION SHALL BE A THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM AND UL. THE FIRE RATING SHALL MATCH THE RATING OF THE BARRIER BEING PENETRATED.
- SUBMIT AN ELECTRONIC COPY OF SHOP DRAWINGS, CONTROL DIAGRAMS, AND EQUIPMENT CUTS TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING RELATED WORK. SHOP DRAWINGS SHALL INCLUDE MANUFACTURER'S NAMES, CATALOG NUMBERS, CUTS, DIAGRAMS AND OTHER SUCH DESCRIPTIVE DATA AS MAY BE REQUIRED TO IDENTIFY AND REVIEW THE EQUIPMENT. SUBMITTALS SHALL BE IN LOGICAL GROUPS, PARTIAL SUBMITTALS WILL NOT BE REVIEWED.
- UPON COMPLETION OF CONSTRUCTION, SUPPLY THE OWNER AND ENGINEER WITH ONE COMPLETE SET OF FULL SIZE AS-BUILT DRAWINGS. PROVIDE THE OWNER WITH THREE (3) SETS OF OPERATION AND MAINTENANCE MANUALS FOR EACH TYPE OF EQUIPMENT INSTALLED.
- THIS CONTRACTOR SHALL ASSUME ALL ADDED EXPENSES TO ALL TRADES ASSOCIATED WITH THE INSTALLATION OF SUBMITTED AND APPROVED ALTERNATE EQUIPMENT.
- THE CONTRACTOR SHALL COORDINATE THE LAYOUT OF THE FIRE ROOM WITH ALL OTHER DISCIPLINES, ESPECIALLY THE FIRE ALARM AND FIRE PROTECTION DESIGN-BUILD CONTRACTORS PRIOR TO ANY WORK.
- IF ANY CHANGES ARE MADE TO ACCOMMODATE FIELD CONDITIONS NOTIFY THE ENGINEER IMMEDIATELY OF WHAT THE CHANGES WERE, THE REASON FOR THE CHANGES, AND THE COST IMPACTS.
- LOCATE ALL ELECTRICAL SWITCHBOARDS, PANELBOARDS AND ELECTRICAL DISTRIBUTION EQUIPMENT IN DEDICATED SPACES AND PROTECTED FROM DAMAGE WITH ADEQUATE WORKING CLEARANCE IN ACCORDANCE WITH NEC 110 REQUIREMENTS. PROVIDE PROTECTION FROM ANY FOREIGN SYSTEM INSTALLED ABOVE THE DEDICATED EQUIPMENT SPACE PER NEC 110.26(E).
- LIGHTING AND CONTROLS TO COMPLY WITH IECC 2015. PROVIDE RELAY PANELS WITH ASTRONOMICAL TIME/LOCK AND PHOTOCELL WITH LOW VOLTAGE SWITCHES, DIMMING AND MULTI-ZONE, AS INDICATED. PROVIDE OCCUPANCY SENSOR SWITCHES AS INDICATED. PROVIDE CEILING-MOUNT DUAL-TECHNOLOGY (PIRVUV) WITH LOW-VOLTAGE WALL SWITCHES WHERE INDICATED.

FIRE ALARM SYSTEM NOTES

- FIRE ALARM SYSTEM TO BE DESIGN-BUILD BY ELECTRICAL CONTRACTOR. FIRE ALARM PLANS FOR THIS PROJECT TO BE SUBMITTED UNDER A DEFERRED SUBMITTAL. THE ELECTRICAL CONTRACTOR SHALL OBTAIN THE SERVICES OF A NICET FIRE ALARM LEVEL III CERTIFIED ENGINEER REGISTERED IN COLORADO TO PROVIDE FIRE ALARM PLANS AND DOCUMENTATION SPECIFIC TO THE LOCAL AHJ, INCLUDING, BUT NOT LIMITED TO, EQUIPMENT SELECTION AND SPECIFICATIONS, VOLTAGE DROP CALCULATIONS, CIRCUITING, INTERCONNECTION WITH OTHER BUILDING SYSTEMS AS NECESSARY FOR A COMPLETE AND OPERABLE FIRE ALARM SYSTEM. THE FINAL PLANS SHALL BE SEALED AND SIGNED, AND SHALL BE SUBMITTED TO THE FIRE AUTHORITY HAVING JURISDICTION FOR REVIEW.
- ONCE PLANS HAVE BEEN REVIEWED AND ACCEPTED BY THE FIRE AUTHORITY HAVING JURISDICTION, THE ELECTRICAL CONTRACTOR SHALL THEN OBTAIN THE SERVICES OF A LICENSED AND EXPERIENCED FIRE ALARM CONTRACTOR TO FURNISH AND INSTALL THE FIRE ALARM SYSTEM PER THE COMPLETED AND APPROVED FIRE ALARM PLANS. THE FINAL INSTALLED SYSTEM SHALL BE A COMPLETE AND OPERABLE SYSTEM AND BE INSPECTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.



NOTES:

- HEIGHTS SHOWN ARE TYPICAL TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE.
- WHERE ANY DEVICES ARE INDICATED TO BE ABOVE DOORS, DEVICE SHALL BE CENTERED BETWEEN TOP OF DOOR TRIM AND CEILING LINE.
- ALL DEVICES INDICATED TO BE INSTALLED AT DIFFERENT MOUNTING HEIGHTS AND LOCATED WITHIN ONE STUD SPACE FROM EACH OTHER SHALL ALIGN VERTICALLY, ON THE SAME SIDE OF THE STUD, WHERE WALL MOUNTED TELEPHONES OCCUR OVER LIGHT SWITCHES, VOLUME CONTROLS, ETC. OFFSET ONE STUD SPACE.
- MOUNTING HEIGHTS SHOWN ON ARCHITECTURAL ELEVATIONS SHALL GOVERN OVER THOSE SHOWN ABOVE.

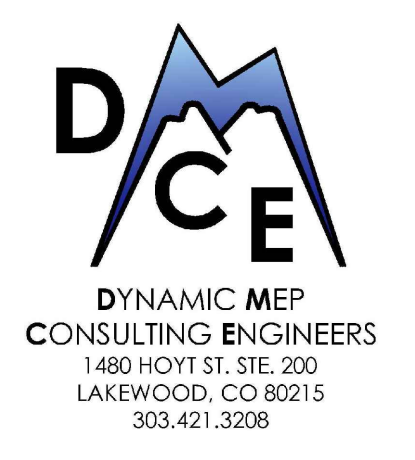
1 TYPICAL DEVICE MOUNTING HEIGHTS
NO SCALE

Sheet List Table	
Sheet Number	Sheet Title
E1.0	ELECTRICAL LEGEND & NOTES
E1.1	ELECTRICAL ONE LINE & SCHEDULES
E2.0	ELECTRICAL POWER PLAN
E2.1	ELECTRICAL LIGHTING PLAN
E3.0	ELECTRICLAL COMPLIANCE REPORT

DESIGN CODES:

- 2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
- 2015 INTERNATIONAL MECHANICAL CODE (IMC)
- 2018 INTERNATIONAL PLUMBING CODE (IPC)
- 2020 NATIONAL ELECTRICAL CODE (NEC)
- 2015 INTERNATIONAL FIRE CODE (IFC)
- 2018 INTERNATIONAL FUEL GAS CODE (IFGC)

ELECTRICAL LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	LIGHTING DOWN LIGHT ADJUSTABLE DOWN LIGHT WALL WASHER WALL MOUNTED FIXTURE TRACK LIGHTING 2x4 SURFACE FIXTURE 2x4 RECESSED FIXTURE 2x2 SURFACE FIXTURE 2x2 RECESSED FIXTURE STRIP LIGHT SHADING INDICATES UNSWITCHED NIGHT LIGHT AND/OR EMERGENCY CIRCUIT		DEVICES CEILING - JUNCTION BOX FLOOR - JUNCTION BOX WALL - JUNCTION BOX MOTOR NON-FUSED DISCONNECT SWITCH FUSED DISCONNECT SWITCH ENCLOSED CIRCUIT BREAKER COMBINATION MAGNETIC MOTOR STARTER MAGNETIC MOTOR STARTER WITH OVERLOADS WALL-DUPLEX RECEPTACLE MTD 18" AFF. UOIN; GFI = GROUND FAULT INTERRUPTING; AFCI = ARC FAULT INTERRUPTING; USB = USB PORT FLOOR-DUPLEX RECEPTACLE; GFI = GROUND FAULT INTERRUPTING; AFCI = ARC FAULT INTERRUPTING CEILING-DUPLEX RECEPTACLE; GFI = GROUND FAULT INTERRUPTING; AFCI = ARC FAULT INTERRUPTING WALL-CONVENIENCE RECEPTACLE, SPLIT WIRED FLOOR-CONVENIENCE RECEPTACLE, SPLIT WIRED WALL-TWO DUPLEX RECEPTACLES IN TWO GANG BOX FLOOR-TWO DUPLEX RECEPTACLES IN TWO GANG BOX CEILING-TWO DUPLEX RECEPTACLES IN TWO GANG BOX WALL-SPECIAL PURPOSE RECEPTACLE, CONFIGURATION NOTED FLOOR-SPECIAL PURPOSE RECEPTACLE, CONFIGURATION NOTED CEILING-SPECIAL PURPOSE RECEPTACLE, CONFIGURATION NOTED FLOOR MOUNTED COMBO POWER / TELE / DATA OUTLET FLOOR - TELEPHONE OUTLET WALL - TELEPHONE OUTLET MTD 18" AFF. UOIN FLOOR - DATA OUTLET WALL - DATA OUTLET MTD 18" AFF. UOIN WALL-COMBINATION TELEPHONE DATA MTD 18" AFF. UOIN WALL-COAXIAL CABLE OUTLET MTD 18" AFF. UOIN WALL-COMBINATION TELEPHONE DATA COAXIAL OUTLET MTD 18" UOIN WALL-COMBINATION TELEPHONE COAXIAL OUTLET MTD 18" AFF. UOIN WALL - OCCUPANCY SENSOR WALL - PHOTOELECTRIC SENSOR CEILING - OCCUPANCY SENSOR WALL - PHOTOELECTRIC SENSOR CEILING - PHOTOELECTRIC SENSOR VARIABLE FREQUENCY DRIVE SINGLE POLE SWITCH, MTD 48" AFF. UOIN SUBSCRIPT INDICATES SWITCHING LEG THREE-WAY SWITCH FOUR-WAY SWITCH
	DIMMER SWITCH PILOT LIGHT SWITCH KEY OPERATED SWITCH LOW VOLTAGE SWITCH MOTOR SWITCH MOMENTARY CONTACT SWITCH OCCUPANCY SENSOR SWITCH THERMAL OVERLOAD SWITCH SWITCHGEAR / SWITCHBOARD BRANCH CIRCUIT PANELBOARD TRANSFORMER COMMUNICATION / DATA BACKBOARD EXPOSED CONDUIT CONDUIT CONCEALED IN WALL OR CEILING CONDUIT CONCEALED IN FLOOR OR UNDERGROUND RACEWAY TURNED TOWARD VIEWER RACEWAY TURNED AWAY FROM VIEWER BRANCH CIRCUIT HOMERUN ONE-LINE DIAGRAM TRANSFORMER (# = KVA) TRANSFORMER WITH GROUND SECONDARY, KVA SIZE & VOLTAGE RATIO AS NOTED DISCONNECT SWITCH FUSED DISCONNECT SWITCH, 3-POLE, 400 AMPERE RATED SWITCH WITH 350 AMPERE RATED FUSE AUTOMATIC TRANSFER SWITCH UTILITY METER GROUND GENERATOR EQUIPMENT ENCLOSURE SERVICE WEATHERHEAD SHORT CIRCUIT CURRENT AVAILABLE AT POINT INDICATED TRANSIENT VOLTAGE SURGE SUPPRESSOR FEEDER SCHEDULE LOAD CENTER		ABBREVIATIONS A AMPERES AC ABOVE COUNTER AFCI ARC-FAULT CIRCUIT INTERRUPTED AF AMPERE FRAME, AMPERE FUSE AFF ABOVE FINISHED FLOOR AFM ABOVE FINISHED GRADE AIC AMPERES INTERRUPTING CAPACITY ANN ANNUNCIATOR AT AMPERE TRIP ATS AUTOMATIC TRANSFER SWITCH AWG AMERICAN WIRE GAUGE C CONDUIT CATV CABLE TELEVISION CB CIRCUIT BREAKER CCTV CLOSED CIRCUIT TELEVISION EC EXISTING EMT EMPTY CONDUIT EMERGENCY ELECTRIC METALLIC TUBING EPO EXPLOSION PROOF EP EMERGENCY POWER OFF EWC ELECTRIC WATER COOLER FA FIRE ALARM FACP FIRE ALARM CONTROL PANEL G GROUND GND GROUND GFI GROUND FAULT INTERRUPTER IG HAND / OFF / AUTOMATIC ISOLATED GROUND IBC INTERMEDIATE METAL CONDUIT ISC SHORT CIRCUIT CURRENT KAIC KILO-AMPERES INTERRUPTING CAPACITY KMIL THOUSAND CIRCULAR MILS MAX MAXIMUM MCC MAIN CIRCUIT BREAKER MCM MOTOR CONTROL CENTER MTD THOUSAND CIRCULAR MILS MDC MAIN DISTRIBUTION CENTER MIN MINIMUM MLO MAIN LIGNS ONLY NEC NATIONAL ELECTRIC CODE NEW NEW NIC NOT IN CONTRACT NL NIGHT LIGHT NO NORMALLY CLOSED NTS NORMALLY OPEN O/C NOT TO SCALE OFCI ON CENTER OGI OWNER FURNISHED, CONTRACTOR INSTALLED OGFI OWNER FURNISHED, OWNER INSTALLED PC PULLCHAIN RGS RIGID STEEL RM RELOCATE RL REMOVE RMS ROOT MEAN SQUARE SB STANDBY SD SPLIT CIRCUIT SDP SUB-DISTRIBUTION PANEL ST SHUNT TRIP SYM SYMMETRICAL TP TAMPER PROOF TVSS TRANSIENT VOLTAGE SURGE SUPPRESSION TYP TYPICAL UOIN UNLESS OTHERWISE NOTED VFD VOLTS W VARIABLE FREQUENCY DRIVE WP WITH W/P WITHOUT XFMR WEATHERPROOF TRANSFORMER 1 WORK NOTE REFERENCE ### MECHANICAL EQUIPMENT REFERENCE
<p>LINE TYPES</p> <p>SOLID LINES INDICATE NEW OR RELOCATED EQUIPMENT. RELOCATED EQUIPMENT MAY INCLUDE "RL"</p> <p>SCREENED LINES INDICATE EXISTING EQUIPMENT TO REMAIN</p> <p>DASHED LINES INDICATE FUTURE</p> <p>SCREENED DASHED LINES INDICATES EQUIPMENT TO BE DEMOLISHED OR REMOVED</p>			
<p>NOTE: 1 NOT ALL SYMBOLS ON THIS LEGEND ARE NECESSARILY USED ON THIS PROJECT 2 ELEVATIONS INDICATED ON LEGEND ARE TO CENTER, UOIN</p>			



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PHYSICAL REHABILITATION NETWORK
CARLSBAD, CA
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ENGLEWOOD, CO
MECHANICAL, ELECTRICAL, PLUMBING
DMCE ENGINEERING
LAKEWOOD, CO



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03	09/14/22	FOR REVIEW
04	12/14/22	FOR PERMIT
	03/03/23	PLAN CHECK REV 1

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ELECTRICAL LEGEND & NOTES

E1.0

POINT	LOCATION DESCRIPTION	LENGTH (L) (ft)	VOLTAGE (E- ⁻)	VOLTAGE (E- ⁺)	PHASE	WIRE SIZE	CONDUCTOR MATERIAL	CONDUCTOR TYPE	CONDUIT MATERIAL	VOLTAGE CLASS	C VALUE	# OF PARALLEL RUNS	Isc AVAILABLE UPSTREAM	Isc AT EQUIP (I _{sc} ⁺) OR (I _{sc} ⁻)	POINT
F0	XFMR													39,100	F0
F1	MSB	50	480	277	3	400	COPPER	THREE SINGLE CONDUCTORS	NONMAGNETIC	600V	24296	6	39,100	37,295	F1
F2	PANEL H1	120	480	277	3	3X	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	12843	1	37,295	15,521	F2
F3	45KVA XFMR	5	480	277	3	4	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	3808	1	15,521	15,321	F3
F4	PANEL L1	5	208	120	3	1X	COPPER	THREE SINGLE CONDUCTORS	STEEL	600V	8924	1	3,293	3,243	F4

NOTES:
 1. ALL CALCULATIONS WERE DONE USING BUSSMAN "POINT-TO-POINT" METHOD.
 2. REFER TO PLANS FOR ASSUMED UTILITY TRANSFORMER SIZE UTILIZED FOR CALCULATIONS.
 3. TRANSFORMER IMPEDANCES USED IN THE CALCULATIONS WERE TAKEN FROM EATON'S PUBLISHED IMPEDANCES FOR DOE 2016 DRY-TYPE TRANSFORMERS.
 4. CONDUCTOR LENGTHS INDICATED IN THIS SCHEDULE ARE FOR THE PURPOSES OF FAULT CURRENT CALCULATIONS ONLY. THESE LENGTHS ASSUME WORST CASE SHORTEST DISTANCE CONDITIONS AND SHOULD NOT BE UTILIZED BY THE ELECTRICAL CONTRACTOR FOR BIDDING PURPOSES. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ESTIMATING AND MEASURING ACTUAL FIELD CONDITION LENGTHS AS PART OF THE BID PROCESS.

MECHANICAL EQUIPMENT SCHEDULE										
KEY	DESCRIPTION	VOLTS	PH	LOAD HP/W/A	MOC/P MFS	BRANCH CIRCUIT (WIRE AND CONDUIT)	DISCONNECT	CIRCUIT NUMBER	NOTES	
RTU 1	ROOFTOP UNIT	208	3	43 MCA	50A	4#6, 1#10G, 1-1/4" C	60A/3P/50AF	L1-8,10,12		
EF 1	EXHAUST FAN	120	1	80 W	20A	2#12, #12G, 3/4" C	\$TO	L1-1		
EW 1	ELECTRIC WATER HEATER	480	3	14.9 KW	30A	4#10, 1#10G, 3/4" C	30A/3P/30AF	H1-1.3.5		
RCP 1	RECRIC PUMP	120	1	1/25 HP	20A	2#12, #12G, 3/4" C	\$TO	L1-1		

GENERAL NOTES:
 A. ALL CONDUCTORS ARE COPPER THHN, UNLESS OTHERWISE NOTED.
 B. REFER TO MECHANICAL PLANS FOR SPECIFIC EQUIPMENT LOCATIONS AND REQUIREMENTS.
 C. PRIOR TO ROUGH-IN, COORDINATE ALL MECHANICAL EQUIPMENT POWER AND CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR'S FINAL SHOP DRAWINGS.
 D. PROVIDE ALL 120V CONTROL WIRING, REFER TO SPECIFICATIONS FOR FURTHER CONTROL WIRING CLARIFICATION.
 E. FOR ANY VAV SYSTEM COORDINATE POWER REQUIREMENTS WITH MECHANICAL CONTRACTOR AND PROVIDE 120V CONNECTIONS AT EACH VAV BOX, OR AT CENTRAL CONTROL PANEL LOCATION(S) AS REQUIRED. IF EXACT QUANTITIES AND LOCATIONS FOR CONTROL PANELS ARE NOT KNOWN AT BID TIME, E.C. IS TO INCLUDE ONE 120V CONNECTION AT EACH VAV DEVICE IN THE BASE BID PRICE AND PROVIDE A CREDIT DURING CONSTRUCTION IF LESS CONNECTIONS ARE REQUIRED.
 F. EXTERIOR DISCONNECT SWITCHES ARE TO BE PROVIDED AS NEMA 3R EQUIPMENT UNLESS OTHERWISE NOTED.
 G. PROVIDE WEATHERPROOF 120 VOLT GFCI RECEPTACLES WITHIN 25' OF ALL ROOFTOP HEATING, VENTILATING, AND AIR CONDITIONING EQUIPMENT. CIRCUIT TO SPARE CIRCUIT ON NEAREST 120V PANELBOARD OR AS INDICATED ON PLANS.
 H. PROVIDE DUCT DETECTION ON ALL RETURN AIR SYSTEMS OF 2,000 CFM OR GREATER, AND FOR ALL SUPPLY AIR SYSTEMS 15,000 CFM OR GREATER, INCLUDING THOSE SYSTEMS SERVING MULTIPLE FLOORS. PROVIDE ADDITIONAL DUCT DETECTORS AND INSTALL REMOTE INDICATOR LIGHTS AS REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.
 I. FOR ANY BOILER MECHANICAL SYSTEM, E.C. IS TO PROVIDE AN EMERGENCY PUSHBUTTON OFF AND ANY CONTROL WIRING REQUIRED. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR AND EQUIPMENT PRIOR TO INSTALLATION.
 J. EC TO PROVIDE HAND/OFF/AUTO STARTERS FOR ALL MOTORS WHEN NOT INDICATED AS TO BE PROVIDED BY THE MECHANICAL CONTRACTOR ON THE MECHANICAL PLANS. SIZE OF STARTER TO BE BASED UPON SIZE OF MOTOR HORSEPOWER INDICATED.

PANEL 'L1'					
VOLTAGE L-L:	208	LOCATION:			
VOLTAGE L-N:	120	BUS RATING:	150	AMPS	COPPER BUS
TYPE:	3PH/4W	MAIN CB:	150	A/3P	100% RATED
MOUNTING:	RECESSED	FED FROM:			
NOTES:	NEW PANEL	AIC RATING:	FULLY RATED AT LEAST EQUAL TO:	10K	AIC

CIR NO	CCT TYPE	LOAD VA	LOAD DESCRIPTION (NOTE #)	CIRCUIT BREAKER			BUS	CIRCUIT BREAKER			LOAD VA	CCT TYPE	CIR NO
				POLE	TRIP	TYPE		TYPE	TRIP	POLE			
1	R	570	BATHROOM RECEPT EF-1 RCP-1	1	20	GFCI	A	20	1	570	R	2	
3	R	180	KITCHEN RECEPTACLE	1	20		B	20	1	180	R	4	
5	R	1500	HYDROCOLLATOR	1	20		C	20	1	1500	R	6	
7	R	2500	DRYER	2	30		A	50	3	2500	R	8	
9	E	2500		//	//		B	//	//	4131	LM	10	
11	E	720	FREEZER	1	20	GFCI	C	//	//	4131	LM	12	
13	R	720	RECEPTION DESK	1	20		A	20	1	720	R	14	
15	R	180	KITCHEN RECEPTACLE	1	20		B	20	1	180	R	16	
17	E	1200	TREADMILL	1	20	GFCI	C	20	1	1200	E	18	
19	KE	1000	REFRIGERATOR	1	20	A	GFCI	20	1	1000	E	20	
21	R	180	BREAK RECEPTACLES	1	20		B	20	1	180	R	22	
23	R	180	BREAK RECEPTACLES	1	20		C	GFCI	20	1	180	KE	24

CCT TYPE: L=LIGHTING, R=RECEPTACLE, M=MOTOR, LM=LARGEST MOTOR, E=EQUIPMENT, KE=KITCHEN EQUIPMENT, S=SUBFEED PANEL
 CB TYPE: GFCI=5mA GROUND FAULT CIRCUIT INTERRUPTER, GFEP=30mA GROUND FAULT PROTECTION FOR EQUIPMENT, AFCI=ARC FAULT CIRCUIT INTERRUPTER
 CAFCI=COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER, ST=SHUNT TRIP, HT#-HANDLE TIE WITH GROUPING #
 HACR = HEATING AIR CONDITIONING REFRIGERATION, ITRIP=INSTANTANEOUS TRIP, ITIME=INVERSE TIME TRIP
 HC=HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION, LOCK=PERMANENTLY LOCKABLE BREAKER

CCT TYPE:	LOAD VA	MULT	DEMAND LOAD	TOTAL CONNECTED LOADS		
				A	B	C
LIGHTING:	974	1.25	1218 VA			
RECEPTACLE:	9790	1.0	9790 VA			
OVER 10K	0	0.5	0 VA			
MOTOR:	0	1.0	0 VA			
LGST MOTOR:	12393	1.25	15491 VA			
EQUIPMENT:	6420	1.0	6420 VA			
KITCH EQUIP:	1912	1	1912 VA			
SUBFEED PNL:	0	1.0	0 VA			

PANEL 'H1'					
VOLTAGE L-L:	480	LOCATION:			
VOLTAGE L-N:	277	BUS RATING:	150	AMPS	COPPER BUS
TYPE:	3PH/4W	MAIN CB:	150	A/3P	
MOUNTING:	RECESSED	FED FROM:			
NOTES:	NEW PANEL	AIC RATING:	FULLY RATED AT LEAST EQUAL TO:	25K	AIC

CIR NO	CCT TYPE	LOAD VA	LOAD DESCRIPTION (NOTE #)	CIRCUIT BREAKER			BUS	CIRCUIT BREAKER			LOAD VA	CCT TYPE	CIR NO
				POLE	TRIP	TYPE		TYPE	TRIP	POLE			
1	E	4988	EW-1	3	30		A	150	3	4988	E	2	
3	E	4988		//	//		B	//	//	11221	S	4	
5	E	4988		//	//		C	//	//	11896	S	6	
7			SPARE	1	20		A	20	1			8	
9			SPARE	1	20		B	20	1			10	
11			SPARE	1	20		C	20	1			12	
13			SPACE				A					14	
15			SPACE				B					16	
17			SPACE				C					18	

CCT TYPE: L=LIGHTING, R=RECEPTACLE, M=MOTOR, LM=LARGEST MOTOR, E=EQUIPMENT, KE=KITCHEN EQUIPMENT, S=SUBFEED PANEL
 CB TYPE: GFCI=5mA GROUND FAULT CIRCUIT INTERRUPTER, GFEP=30mA GROUND FAULT PROTECTION FOR EQUIPMENT, AFCI=ARC FAULT CIRCUIT INTERRUPTER
 CAFCI=COMBINATION ARC FAULT & 5mA GROUND FAULT CIRCUIT INTERRUPTER, ST=SHUNT TRIP, HT#-HANDLE TIE WITH GROUPING #
 HACR = HEATING AIR CONDITIONING REFRIGERATION, ITRIP=INSTANTANEOUS TRIP, ITIME=INVERSE TIME TRIP
 HC=HANDLE CLAMP FOR LOCKING IN ON/OFF POSITION, LOCK=PERMANENTLY LOCKABLE BREAKER

CCT TYPE:	LOAD VA	MULT	DEMAND LOAD	TOTAL CONNECTED LOADS		
				A	B	C
LIGHTING:	0	1.25	0 VA			
RECEPTACLE:	0	1.0	0 VA			
OVER 10K	0	0.5	0 VA			
MOTOR:	0	1.0	0 VA			
LGST MOTOR:	0	1.25	0 VA			
EQUIPMENT:	14964	1.0	14964 VA			
KITCH EQUIP:	0	0	0 VA			
SUBFEED PNL:	34651	1.0	34651 VA			

LUMINAIRE SCHEDULE									
TYPE	DESCRIPTION	MFR	MODEL	VOLTS	LAMPING	LUMENS	WATTS	MOUNTING	NOTES
D1	LED INDIRECT RECESSED CAN	DALS	IND4-DW	120	LED	500	9	CEILING	
S1	4FT LED STRIP LIGHT	LSI	AW-4-FS1-UNV	MVOLT	LED	3750	42	SURFACE/ SUSPENDED	
V1	24" STEEL VANITY LED	DH LIGHTING	STEEL-24-FS1-80-BN	120	LED	2000	25	WALL	
EM	EMERGENCY LIGHTING UNIT, FIXED OPTICS, WHITE FINISH, INTEGRAL EM BACKUP	CARPENTER	CMR16-LED	120	LED	-	3.3	SURFACE	
XEM	COMBINATION EXIT SIGN & EMERGENCY LIGHTING UNIT, WHITE FINISH, GREEN	CARPENTER	CCKXE-U-G-W-W	120	LED	-	4.8	SURFACE	

ABBREVIATIONS: BOF - BOTTOM OF FIXTURE, RFD - RECESSED FIXTURE DEPTH, OFH - OVERALL FIXTURE HEIGHT, AFF (AFG) - ABOVE FINISHED FLOOR (GRADE), WFD - WALL FIXTURE DEPTH
 GENERAL NOTES:
 1. LAMPS SHALL BE 3000K CCT, UON.
 2. PROVIDE LED LAMP WITH WATTAGE NO GREATER THAN LISTED WATTAGE IN LAMPING COLUMN.
 3. ALL LAMPS SHALL BE LED TO COMPLY WITH CURRENT ENERGY CODE.
 4. PROVIDE IC RATED FIXTURE IF REQUIRED AT MOUNTING LOCATION.
 5. REFERENCE ARCHITECTURAL PLANS FOR EXACT MOUNTING HEIGHTS FOR ALL PENDANTS, SUSPENDED FIXTURES, POLE LUMINAIRES AND WALL SCONCES.
 6. REFER TO ARCHITECT OR OWNER FOR FINISH.

TRANSFORMER SCHEDULE - COPPER WINDINGS (2016 DOE EFFICIENCY STANDARDS)													
KVA RATING	PRIMARY FLA	SECONDARY FLA	PRIMARY PROTECTION	PRIMARY FEEDER	SECONDARY PROTECTION	SECONDARY FEEDER	DERIVED GROUND CONDUCTOR	TRANSFORMER IMPEDANCE	APPROX DIMENSIONS HIGH	APPROX DIMENSIONS WIDE	APPROX DIMENSIONS DEEP	APPROX WEIGHT	SPECIFIC NOTES
45	54.2	125.0	70A/3P	3#4, 1#8G, 1-1/4" C	150A/3P	4#10, 1#6G, 2" C	1#6, 3/4" C	3.44%	36.88	24.88	21.13	478LBS	

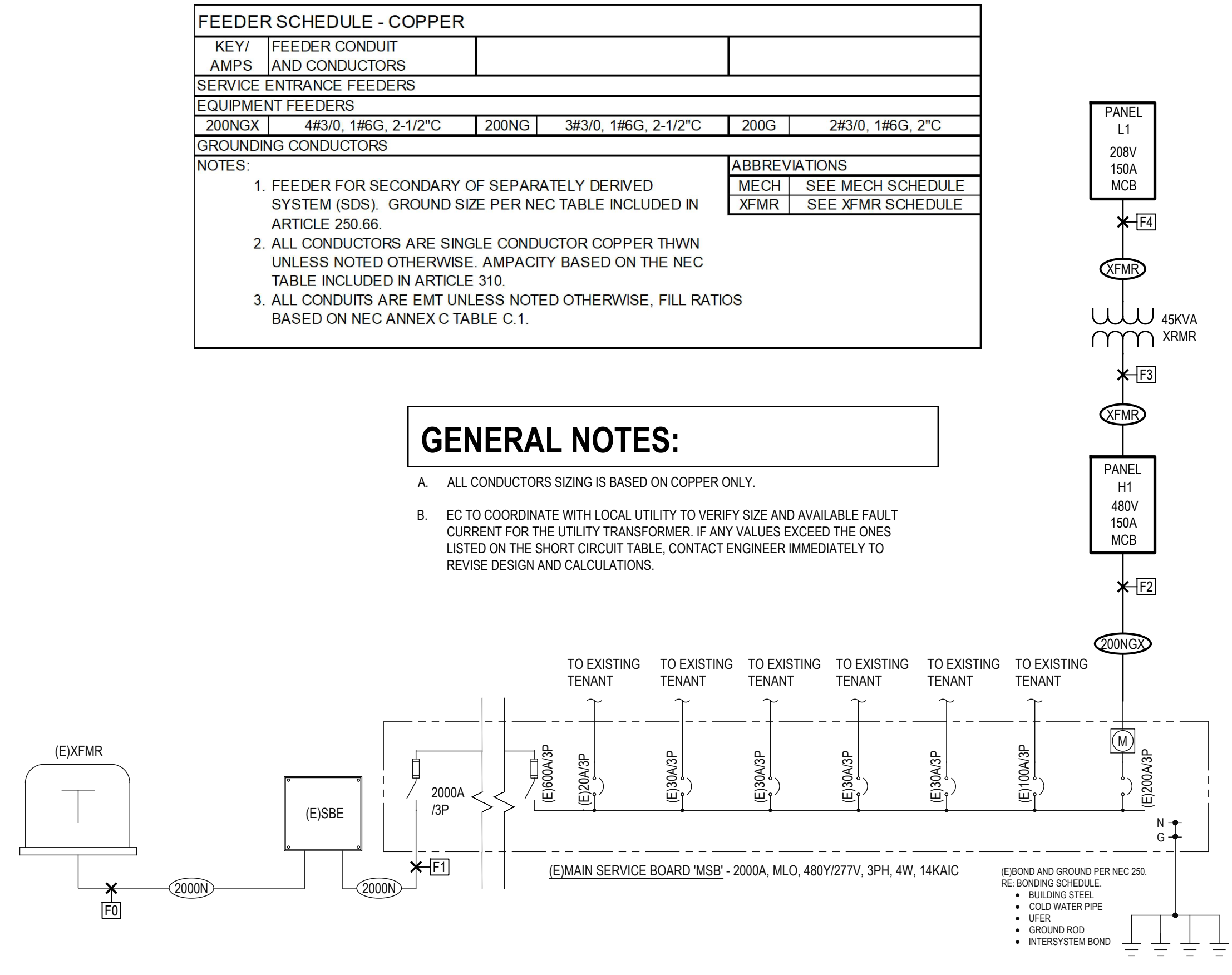
GENERAL NOTES:
 A. ALL TRANSFORMERS ARE 480V, 3PHASE, DELTA PRIMARY AND 208Y/120V, 3PHASE SECONDARY.
 B. ALL CONDUCTORS ARE THWN, COPPER, SEE PLANS FOR INCREASED CONDUCTOR SIZE DUE TO VOLTAGE DROP.
 C. BONDING AND GROUNDING CONDUCTORS ARE TO BE INSTALLED PER NEC 250.30 - GROUNDING SEPARATELY DERIVED ALTERNATING CURRENT SYSTEMS.
 D. WEIGHT SHOWN FOR REFERENCE ONLY, AND MAY VARY BY MANUFACTURER.

SPECIFIC NOTES:
 1. TRANSFORMER IMPEDANCE IS THE ASSUMED VALUE AND IS USED FOR FAULT-CURRENT CALCULATIONS. IF SUBMITTED TRANSFORMER IS OF A DIFFERENT VALUE, REVISED CALCULATIONS MAY BE REQUIRED.
 2. EC TO FIELD VERIFY WEIGHTS OF NON DOE 2016 AS THEY MAY VARY BY MANUFACTURER.

FEEDER SCHEDULE - COPPER			
KEY/ AMPS	FEEDER CONDUIT AND CONDUCTORS		
SERVICE ENTRANCE FEEDERS			
EQUIPMENT FEEDERS			
200NGX	4#3/0, 1#6G, 2-1/2" C	200NG	3#3/0, 1#6G, 2-1/2" C
		200G	2#3/0, 1#6G, 2" C
GROUNDING CONDUCTORS			
NOTES:		ABBREVIATIONS	
1. FEEDER FOR SECONDARY OF SEPARATELY DERIVED SYSTEM (SDS). GROUND SIZE PER NEC TABLE INCLUDED IN ARTICLE 250.66.		MECH SEE MECH SCHEDULE	
2. ALL CONDUCTORS ARE SINGLE CONDUCTOR COPPER THWN UNLESS NOTED OTHERWISE. AMPACITY BASED ON THE NEC TABLE INCLUDED IN ARTICLE 310.		XFMR SEE XFMR SCHEDULE	
3. ALL CONDUITS ARE EMT UNLESS NOTED OTHERWISE, FILL RATIOS BASED ON NEC ANNEX C TABLE C.1.			

GENERAL NOTES:

- A. ALL CONDUCTORS SIZING IS BASED ON COPPER ONLY.
 B. EC TO COORDINATE WITH LOCAL UTILITY TO VERIFY SIZE AND AVAILABLE FAULT CURRENT FOR THE UTILITY TRANSFORMER. IF ANY VALUES EXCEED THE ONES LISTED ON THE SHORT CIRCUIT TABLE, CONTACT ENGINEER IMMEDIATELY TO REVISE DESIGN AND CALCULATIONS.



1 ELECTRICAL ONE LINE DIAGRAM
 NO SCALE

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03/03/23		PLAN CHECK REV 1

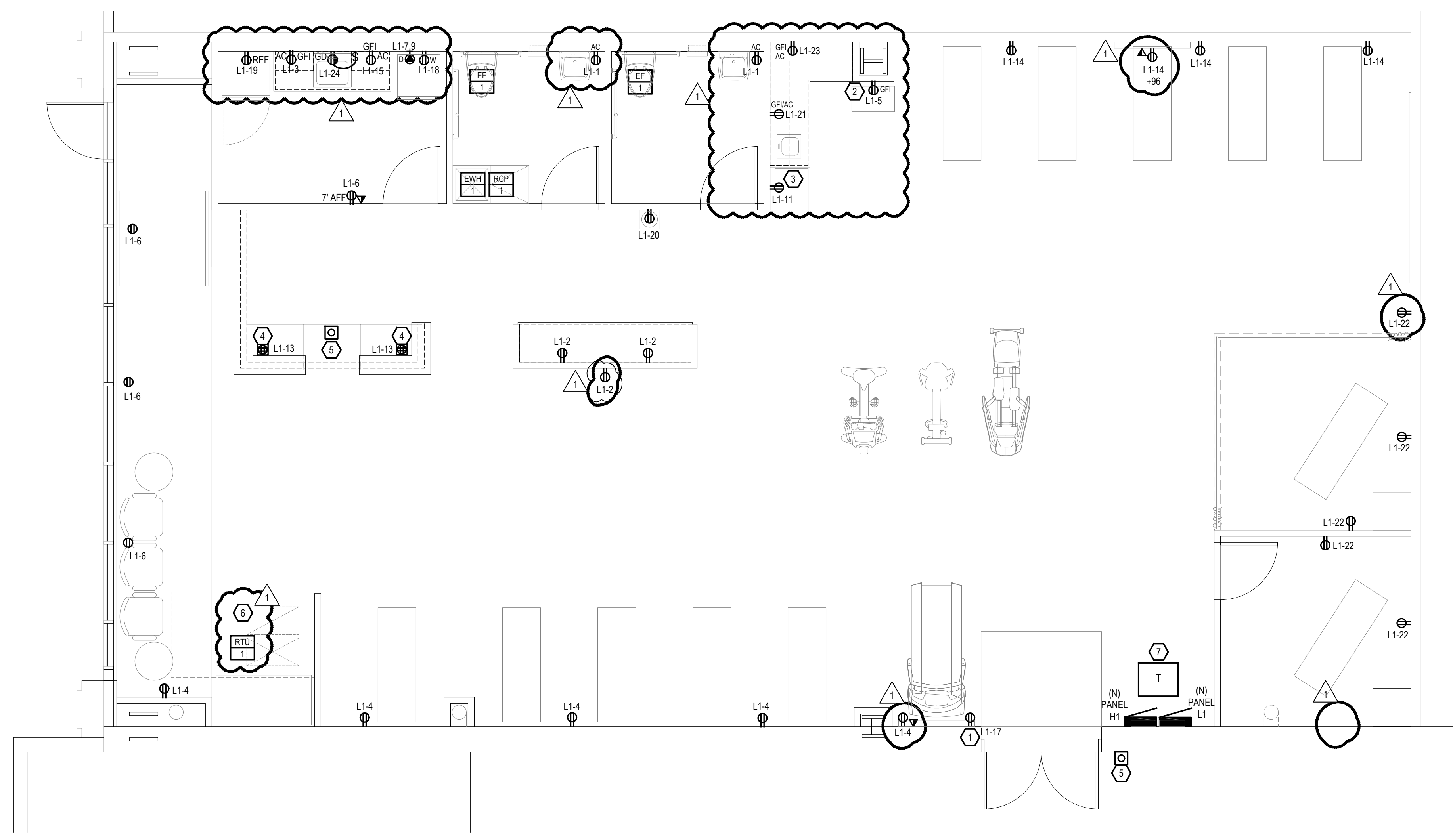
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ELECTRICAL POWER PLAN

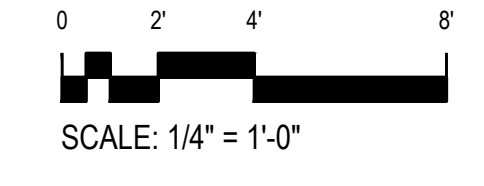
E2.0

WORK NOTES:

- 1 PROVIDED DEDICATED 20A FOR TREADMILL WITH T-NEMA RECEPTACLE S-20R.
- 2 PROVIDE DEDICATED CIRCUIT TO HYDROCOLLATOR OUTLET.
- 3 NOT USED
- 4 PROVIDE QUAD RECEPTACLE FOR THE DESK CONNECTION AND COMPUTER.
- 5 PROVIDE INTERCOM AND ACCESS CONTROL BUZZER FOR REMOTE UNLOCKING OF REAR DOOR FROM RECEPTION DESK. COORDINATE EXACT INSTALLATION LOCATION AND REQUIREMENTS WITH OWNER AND EQUIPMENT VENDOR PRIOR TO ROUGH-IN.
- 6 APPROXIMATE LOCATION OF RTU ON ROOF. FINAL RTU LOCATION TO BE APPROVED / COORDINATED WITH LANDLORD/BASE BUILDING.
- 7 MOUNT 45KVA XFMR FROM STRUCTURE ABOVE.



1 ELECTRICAL POWER PLAN
SCALE: 1/4" = 1'-0"



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ELECTRICAL POWER PLAN

E2.0



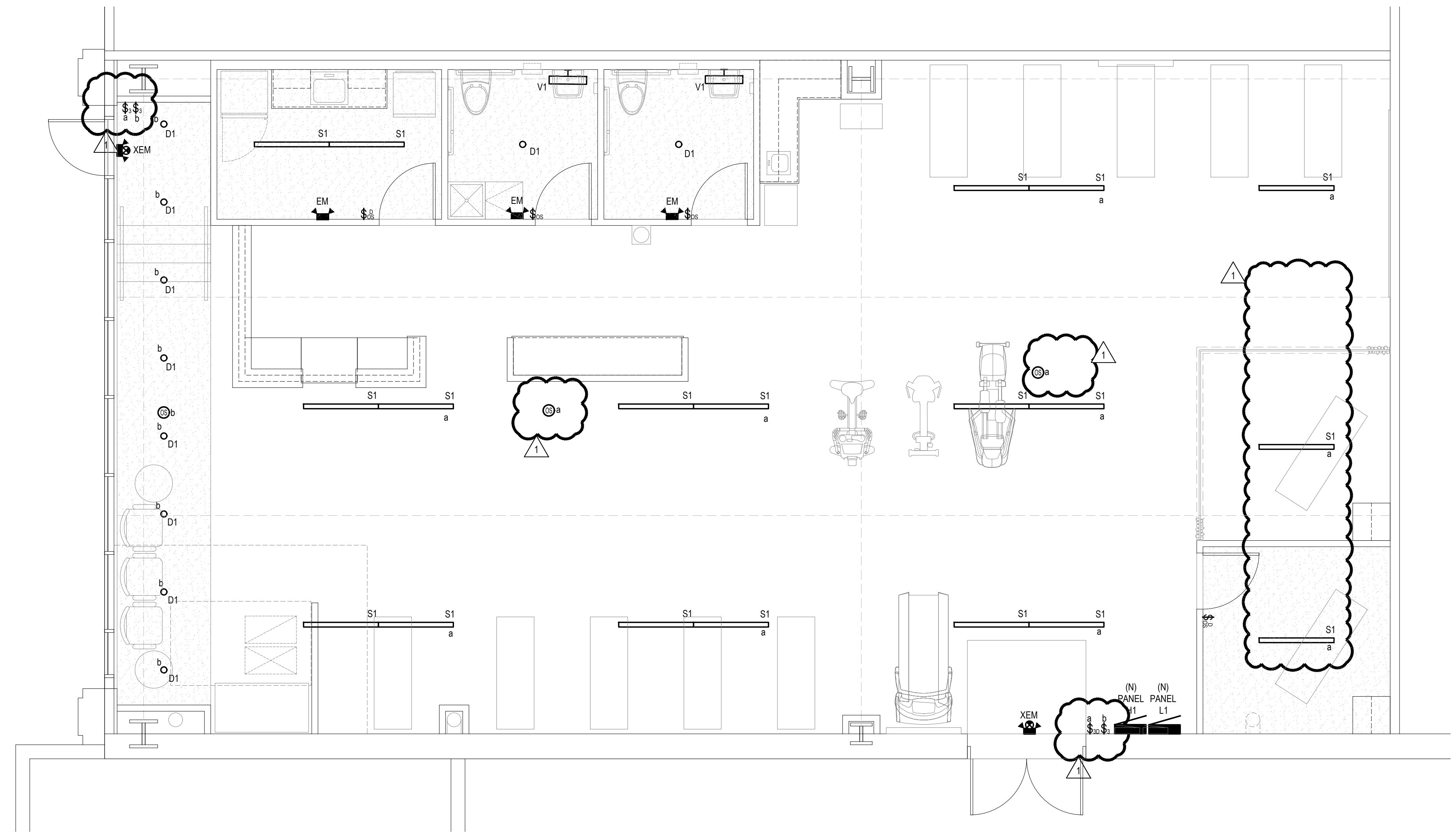
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△	03/03/23	PLAN CHECK REV 1

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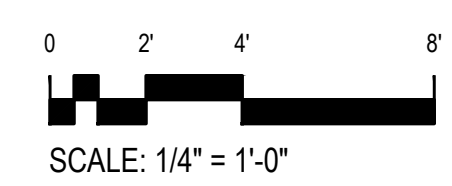
ELECTRICAL LIGHTING PLAN

E2.1

- GENERAL NOTES:**
- CONNECT ALL LIGHTING TO CIRCUIT L1-16. SEE PANEL SCHEDULES SHEET ON E1.1.
 - CIRCUIT ALL EXIT SIGNS AND EMERGENCY EGRESS LUMINAIRES TO CLOSEST ADJACENT UNSWITCHED LEG OF LIGHTING CIRCUIT



1 ELECTRICAL LIGHTING PLAN
 SCALE: 1/4" = 1'-0"





COMcheck Software Version COMcheckWeb
Interior Lighting Compliance Certificate

Project Information

Energy Code: 2015 IECC
Project Title: 22050 - BELMAR TI
Project Type: Alteration

Construction Site: 315 S VANCE ST, LAKEWOOD, Colorado 80226
Owner/Agent: PHYSICAL REHABILITATION NETWORK
Designer/Contractor: DMCE

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts
1-Healthcare Facility:Physical Therapy	2502	0.91	2277
Total Allowed Watts =			2277

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Watt. (C X D)	E
Healthcare Facility: Physical Therapy (2502 sq.ft.)				
LED: D1: Other:	1	10	9	90
LED: S1: Other:	1	20	42	840
LED: V1: Other:	1	2	25	50
Total Proposed Watts =			980	

Interior Lighting PASSES

Interior Lighting Compliance Statement

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

Name - Title: Wesley Bell Signature: [Signature] Date: 9/26/22

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Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.1 [EL15]	Lighting controls installed to uniformly reduce the lighting load by at least 50%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.1 [EL18]	Occupancy sensors installed in required spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.1, C405.2.2 [EL23]	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.2 [EL22]	Automatic controls to shut off all building lighting installed in all buildings.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.3 [EL16]	Daylight zones provided with individual controls that control the lights independent of general area lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.3, C405.2.3.1, C405.2.3.2 [EL20]	Primary sidelighted areas are equipped with required lighting controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.2.3, C405.2.3.1, C405.2.3.3 [EL21]	Enclosed spaces with daylight area under skylights and rooftop monitors are equipped with required lighting controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C405.2.4 [EL4]	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.4 [EL8]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.3 [EL6]	Exit signs do not exceed 5 watts per face.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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

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COMcheck Software Version COMcheckWeb
Inspection Checklist

Energy Code: 2015 IECC

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

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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

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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [F117]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.4.1 [F118]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Interior Lighting fixture schedule for values.
C408.2.5.1 [F116]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.3 [F133]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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

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BELMAR MALL
TENANT IMPROVEMENTS
330 South Vance Street,
Lakewood, CO 80226

OWNER/TENANT
PHYSICAL REHABILITATION NETWORK
CARLSBAD, CA
ARCHITECT | TENANT IMPROVEMENTS
ROTHSCHILD DOWNES
ENGLEWOOD, CO
MECHANICAL, ELECTRICAL, PLUMBING
DMCE ENGINEERING
LAKEWOOD, CO



NO	DATE	ISSUE
01	07/22/22	PRELIMINARY FOR REVIEW
02	08/23/22	PRELIMINARY FOR REVIEW
03	09/14/22	FOR REVIEW
04	12/14/22	FOR PERMIT
05	03/03/23	PLAN CHECK REV 1

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ELECTRICAL COMPLIANCE REPORT

E3.0