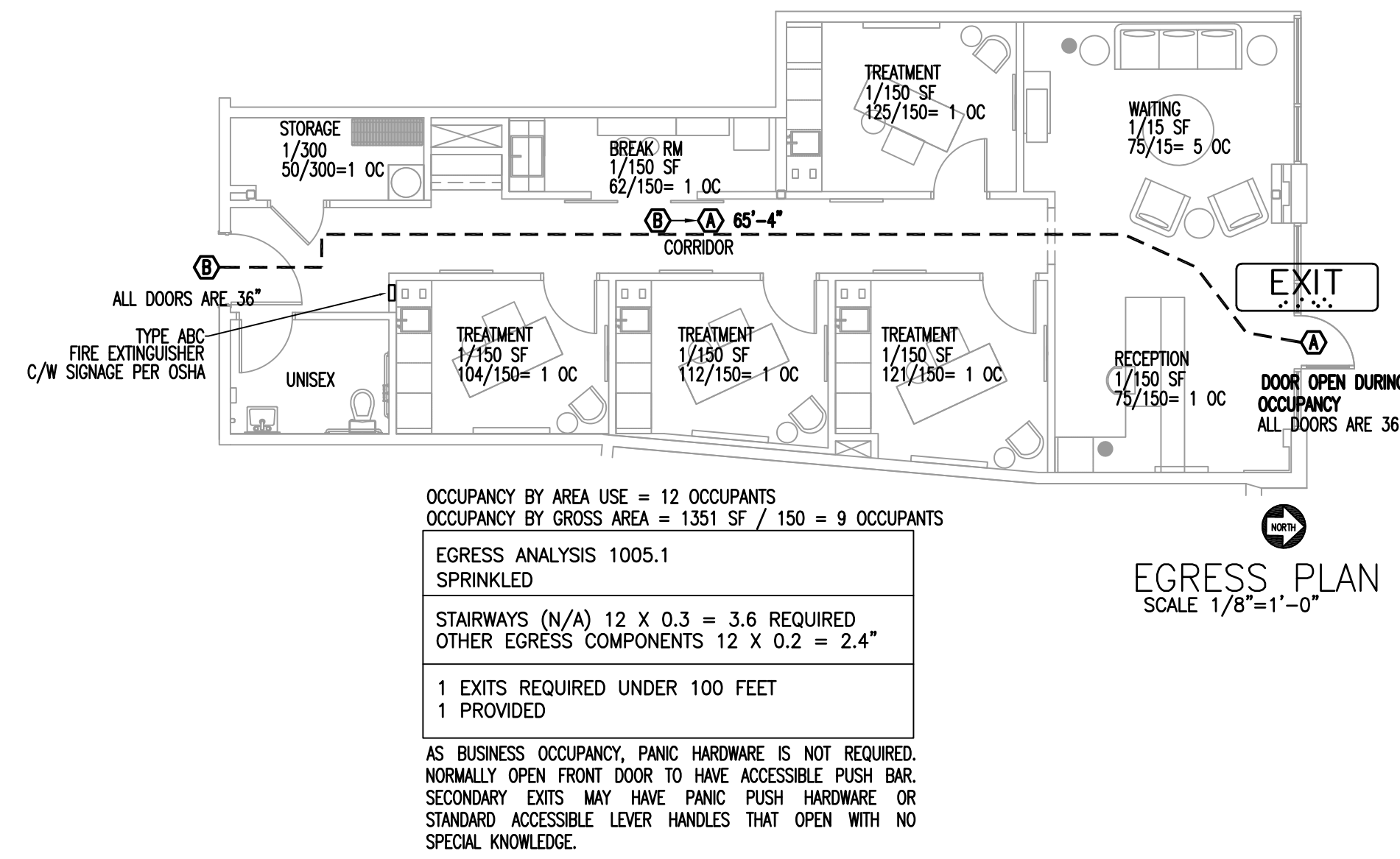
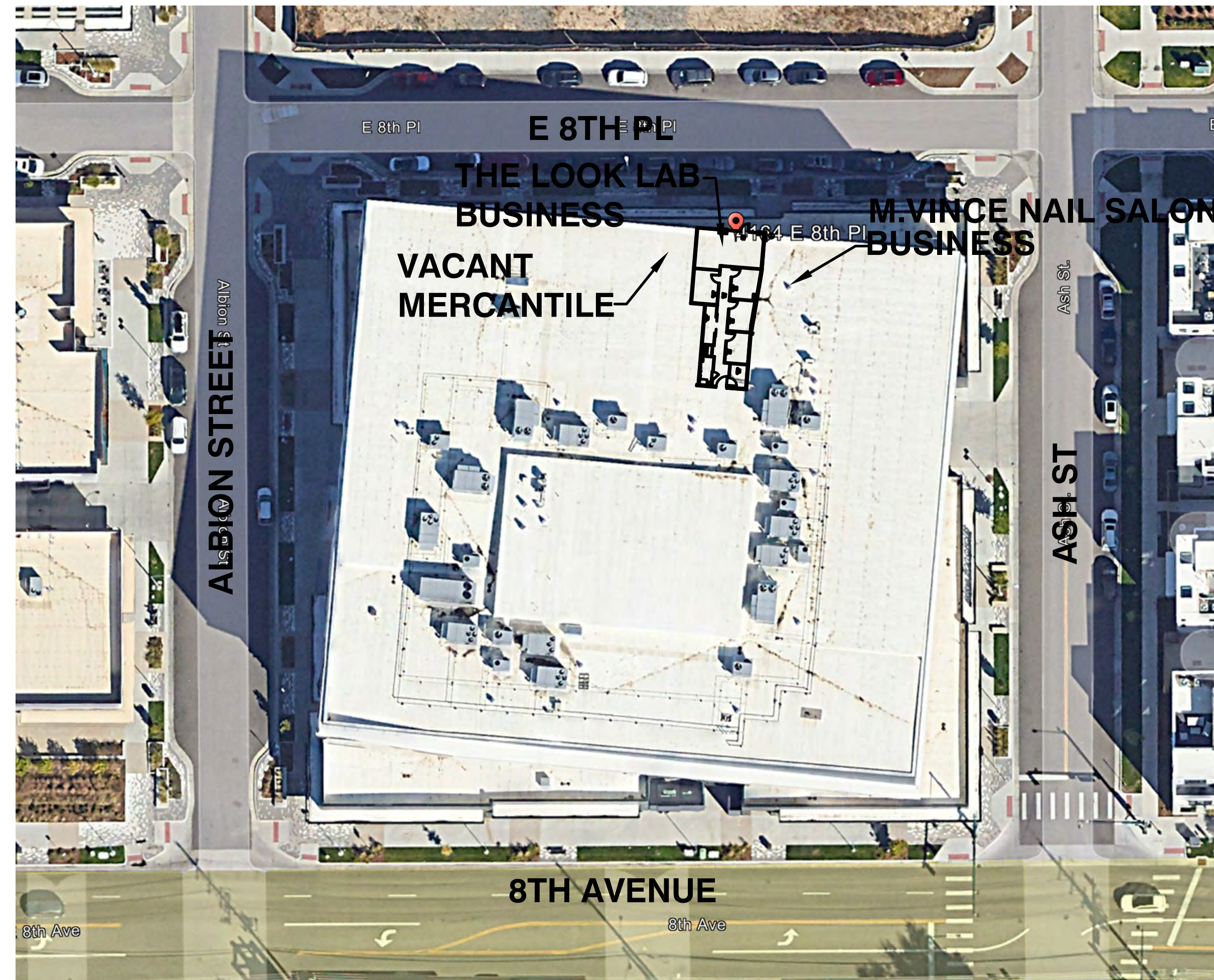




10LB TYP ABC FIRE EXTINGUISHER RECESSED CABINET WITH SIGNAGE INSTALLED. FINAL LOCATIONS AND QUANTITIES BY FIRE MARSHAL.

SITE PLAN NTS

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL CONSTRUCTION WASTE / DEBRIS THROUGHOUT CONSTRUCTION INCLUDING ONE WEEK AFTER SUBSTANTIAL COMPLETION FOR POST CONSTRUCTION EQUIPMENT DELIVERIES.



UNLESS EXPRESSLY NOTED OTHERWISE, G.C. SHALL BE RESPONSIBLE FOR PURCHASE AND INSTALLATION OF ALL COMPONENTS WITHIN PLAN SET.

GENERAL CONTRACTOR SHALL VISIT SITE AND ENSURE ALL BIDDING SUBCONTRACTOR'S VISIT SITE PRIOR TO BID. G.C. WILL BE RESPONSIBLE FOR ALL EXISTING CONDITIONS MEETING OR EXCEEDING THOSE DEPICTED WITH PLANS. WHERE EXISTING CONDITIONS ARE NOT AS SHOWN, G.C. SHALL INCLUDE IN BID THE NECESSARY LABOR AND MATERIALS TO ENSURE THE EXISTING SHELL MEETS OR EXCEEDS THE INTENT OF THE CONSTRUCTION PLANS. ALL EXISTING WALLS TO BE RE-USED, EXTERIOR AND OR DEMISING, SHALL BE INSULATED AND DRY WALLED WITH A MIN OF 5/8" TYPE X OR AS LISTED PER PLANS AND BE FINISHED EQUIVALENT TO NEW DRYWALL AND BE PAINT READY. ROOF SHALL HAVE ACCEPTABLE MINIMUM INSULATION INSTALLED OR G.C. SHALL INSTALL. ALL SUPPLEMENTAL WORK REQUIRED TO ENSURE EXISTING EXTERIOR / INTERIOR / INSULATION TO FINISH TENANT SHELL SHALL BE PROVIDED AS A BID ALTERNATE COST SEPARATED ON G.C. BID.

GENERAL NOTES

- GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR A PROFESSIONALLY COMPLETE TENANT IMPROVEMENT WITHIN THE ADDRESS LISTED ON THESE PLANS.
- ALL PRINTED INFORMATION CONTAINED IN THESE CONSTRUCTION DRAWINGS ARE THE SOLE PROPERTY OF THE LOOK LAB. COPIES ARE TO BE USED FOR THE EXCLUSIVE PURPOSE OF CONSTRUCTING SITE SPECIFIC THE LOOK LAB FACILITIES. ANY OTHER USE MAY VIOLATE THE COPYRIGHT LAWS OF THE UNITED STATES.
- THE DESIGNER, FODADSON, FRANCHISEE, OR THE LOOK LAB ASSUME NO RESPONSIBILITY OR LIABILITY FOR THE USE OF THESE DOCUMENTS FOR ANY PURPOSE OTHER THAN SPECIFICALLY AUTHORIZED BY THE ABOVE MENTIONED AND SIGNED AND SEALED FOR THE SPECIFIC LOCATION IN THE STATE SHOWN ON THE DRAWINGS AND SEAL.
- ALL CONSTRUCTION WORK, INCLUDING BUT NOT LIMITED TO, PLUMBING, MECHANICAL AND ELECTRICAL, WORKING CONDITIONS, MATERIALS AND METHODS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE STATE AND LOCAL BUILDING CODES.
- PRIOR TO SUBMITTING BIDS OF ANY TYPE, THE CONTRACTOR SHALL VISIT THE SITE TO BECOME THOROUGHLY FAMILIAR, NOT ONLY WITH THE PROPOSED SCOPE OF WORK, BUT ALSO WITH THE SPECIFIC REQUIREMENTS AS TO PROCEDURES THE FRANCHISEE OR THE LANDLORD EXPECTS THE CONTRACTOR(S) TO FOLLOW DURING CONSTRUCTION. THIS REFERS TO ACCESS TO THE SPACE, TRASH REMOVAL DURING CONSTRUCTION, PARKING OF CONSTRUCTION VEHICLES, DELIVERIES, STORAGE, STAGING AREAS, AND ANY OTHER ITEMS NECESSARY TO COMPLY WITH ALL ASPECTS OF THE LEASE AND TENANT OBLIGATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF FODADSON AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
- CAREFULLY REVIEW LOCATION AND CONDITIONS OF ALL UTILITIES TO BE FURNISHED FOR THE SPACE AND VERIFY LOCATIONS FURNISHED BY THE LANDLORD/UTILITY COMPANIES AS SHOWN ON THE DRAWINGS.
- ANY DETAILS OR NOTES REQUIRING FIELD VERIFICATION BY THE CONTRACTOR ARE TO BE DONE DURING THE BID PROCESS. DISCREPANCIES FOUND AFTER THE GENERAL CONTRACTOR IS SELECTED WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND CORRECTED AT THE GENERAL CONTRACTOR'S EXPENSE.
- SPECIAL ATTENTION SHALL BE GIVEN TO EXISTING AREAS SURROUNDING THE EXTERIOR OF THE PROJECT SPACE. ALL CONSTRUCTION AND INSTALLED EQUIPMENT, WALKS, AND LANDSCAPED AREAS SHALL BE PROTECTED AND GUARDED BY BARRIERS OR OTHER MEANS NECESSARY TO PROTECT AREAS FROM DAMAGE DURING CONSTRUCTION. ALL AREAS DAMAGED WILL BE RESTORED TO THEIR ORIGINAL CONDITION PRIOR TO FINAL PAYMENT AT THE SOLE EXPENSE OF THE GENERAL CONTRACTOR.
- INSTALL SAFETY BARRIERS DURING CONSTRUCTION AS NECESSARY TO PROTECT THE PUBLIC FROM INJURY AND ACCESS TO THE SITE. REVIEW SPECIFIC REQUIREMENTS WITH THE LANDLORD'S TENANT COORDINATOR PRIOR TO BEGINNING CONSTRUCTION.
- TEMPORARY SERVICES REQUIRED DURING CONSTRUCTION SHALL BE AT THE SOLE EXPENSE OF THE CONTRACTOR, UNLESS OTHERWISE AGREED UPON.
- THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO SECURE AND PROTECT FROM DAMAGE, ALL ITEMS ON THE PREMISES, INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MATERIALS, LIGHT FIXTURES, FOOD SERVICE EQUIPMENT, EQUIPMENT, AND THE FURNITURE PACKAGE. AFTER RECEIPT ON JOB SITE, ANY LOST, STOLEN OR ITEMS DAMAGED LATER BY SUBCONTRACTORS OR OTHERS IN THE BUILDING, SHALL BE REPLACED OR REPAIRED AT THE GENERAL CONTRACTOR'S SOLE EXPENSE. THE GENERAL CONTRACTOR SHOULD NOTIFY AND RELATE THIS INFORMATION AND REQUIREMENT TO ALL TRADES AND SUBCONTRACTORS ON SITE.
- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO RECEIVE AND UNLOAD PRODUCT AND MATERIALS SUPPLIED BY OTHERS AT THE JOB SITE. IMMEDIATELY INSPECT DELIVERED PRODUCTS AND EQUIPMENT FOR SHIPPING DAMAGE, INCLUDING CONCEALED DAMAGE PRIOR TO SHIPPER LEAVING PREMISES. ANY PRODUCT OR MATERIALS FOUND TO BE DAMAGED AFTER THE SHIPPER HAS LEFT THE PREMISES, WILL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO REPLACE. RECORD ANY SHORTAGES, DAMAGED OR DEFECTIVE MATERIALS. SAVE ALL PACKING OF DAMAGED PRODUCTS UNTIL CLAIMS ARE FINALIZED. IMMEDIATELY NOTIFY FODADSON, FRANCHISEE AND THE LOOK LAB IF ANY OF ANY DAMAGED MATERIALS RECEIVED. IMMEDIATELY FILE A DAMAGE CLAIM WITH THE APPROPRIATE SHIPPING COMPANY.
- THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DOCUMENTS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION FOR USE BY THE TRADES AND SHALL PROVIDE SUBCONTRACTORS WITH CURRENT CONSTRUCTION DOCUMENTS AS REQUIRED.
- DRAWINGS MAY NOT ALWAYS BE TO SCALE. NOTED DIMENSIONS SHALL TAKE PRECEDENCE.
- DIMENSIONS ON CONSTRUCTION DRAWINGS ARE TO THE FACE OF FINISH, UNLESS OTHERWISE NOTED. THE GENERAL CONTRACTOR SHALL NOT SCALE THE DRAWINGS.
- ALL NOTES THROUGHOUT THESE CONSTRUCTION DRAWINGS APPLY TO ALL SHEETS WHERE APPLICABLE.
- WORK LISTED, SHOWN, OR IMPLIED ON THE CONSTRUCTION DRAWINGS SHALL BE SUPPLIED BY THE GENERAL CONTRACTOR EXCEPT WHERE OTHERWISE NOTED. THE GENERAL CONTRACTOR SHALL CLOSELY COORDINATE HIS WORK WITH THAT OF OTHER CONTRACTORS OR VENDORS TO ASSURE THAT SCHEDULES ARE MET AND THAT THE WORK IS DONE IN CONFORMANCE TO MANUFACTURER'S REQUIREMENTS.
- DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED.
- ALL CHANGES TO THESE DOCUMENTS MUST BE APPROVED BY THE LOOK LAB AND FODADSON.
- NO MATERIAL SUBSTITUTIONS WILL BE PERMITTED UNLESS WRITTEN AUTHORIZATION HAS BEEN GRANTED BY FODADSON OR THE LOOK LAB. ANY MATERIAL SUBSTITUTIONS WITHOUT AUTHORIZATION WILL SUBJECT THE GENERAL CONTRACTOR TO REPLACEMENT OF SUCH SUBSTITUTED MATERIALS WITH APPROVED MATERIALS AT THE SOLE EXPENSE OF THE GENERAL CONTRACTOR.
- THE SUBCONTRACTORS SHALL REMOVE RUBBISH AND WASTE MATERIALS ON A REGULAR BASIS AND SHALL EXERCISE STRICT CONTROL OVER JOB CLEANING TO PREVENT DIRT, DEBRIS OR DUST FROM AFFECTING THE FINISHED INTERIOR OR EXTERIOR OF THE JOB SITE.
- ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM CERTIFICATE OF OCCUPANCY. FRANCHISEE MAY WITHHOLD FINAL PAYMENT UNTIL GENERAL CONTRACTOR SUPPLIES FRANCHISEE WITH A WARRANTY LETTER AND SUBCONTRACTORS LIEN WAIVERS.
- GENERAL CONTRACTOR SHALL HIRE A PROFESSIONAL CLEANING COMPANY FOR FINAL CLEAN UP INCLUDING STRIPPING AND WAXING OF VCT/SVT AND CLEANING OF LVP/LVT PER MANUFACTURER BEFORE TURNING COMPLETED STORE OVER TO FRANCHISEE.
- GENERAL CONTRACTOR AND HIS JOB SUPERVISOR SHALL TEST ALL EQUIPMENT FOR PROPER OPERATION, IN THE PRESENCE OF THE FRANCHISEE, BEFORE TURNING COMPLETED STORE OVER TO FRANCHISEE.
- GENERAL CONTRACTOR SHALL PROVIDE THE FRANCHISEE WITH TWO (2) COPIES OF A MAINTENANCE MANUAL UPON COMPLETION OF THE STORE. THE FRANCHISEE MAY CHOOSE TO WITHHOLD FINAL PAYMENT SHOULD THE GENERAL CONTRACTOR FAIL TO PROVIDE A MAINTENANCE MANUAL.
- TEN DAYS BEFORE CONSTRUCTION COMMENCEMENT, THE GENERAL CONTRACTOR SHALL PROVIDE FODADSON WITH A DETAILED AND COMPLETE CONSTRUCTION SCHEDULE. THE SCHEDULE SHOWING ALL TRADES WITH STARTING AND COMPLETION DATES. A COMPLETE LIST OF ALL SUBCONTRACTORS MUST ALSO BE INCLUDED WITH THE SCHEDULE. THE GENERAL CONTRACTOR IS TO NOTIFY ALL PARTIES IN RECEIPT OF PROJECT SCHEDULE IF ANY CHANGES OCCUR WHICH AFFECT THE COMPLETION DATE. FAILURE TO COMPLETE THE PROJECT AS SCHEDULED, MAY RESULT IN PENALTIES INCURRED BY THE GENERAL CONTRACTOR REGARDING FINAL PAYMENT.
- GENERAL CONTRACTOR TO SCOPE EXISTING SANITARY SEWER FOR VERIFICATION OF LINE CONDITION FROM THE TENANT SPACE TO THE EXTERIOR MAIN LATERAL AS REQUIRED. GENERAL CONTRACTOR TO PROVIDE VIDEO DOCUMENTATION OF EXISTING CONDITIONS TO FODADSON.

DRAWING INDEX

1.00	COVER SHEET
1.01	DEMOLITION PLAN
1.02	LIFE SAFETY PLAN
1.03	FLOOR PLAN
1.04	FRAMING DETAILS
1.05	ACCESSIBLE DETAILS
1.06	ACCESSIBLE FLOOR PLAN
1.07	REFLECTED CEILING PLAN
1.08	CEILING DETAILS
1.09	WALL AND FLOOR FINISH PLAN
1.10	FURNITURE PLAN
1.10A	FURNITURE SCHEDULES
1.11	INTERIOR ELEVATIONS
1.12	INTERIOR ELEVATIONS
1.13	TOILET ROOM PLANS / DETAILS AND ELEVATIONS
1.14	ARCHITECTURAL SPECIFICATION
2.01	ELECTRICAL LIGHTING PLAN
2.02	ELECTRICAL POWER PLAN
2.03	ELECTRICAL PANELS
2.04	ENERGY COMPLIANCE
3.01	HVA/C SUPPLY AIR PLAN AND SCHEDULES
3.02	HVA/C DETAILS
4.01	SANITARY SEWER PLAN AND SCHEDULES
4.02	DOMESTIC WATER PLAN
4.03	PLUMBING DETAILS
4.04	NOT USED
4.05	PLUMBING SPECIFICATION
5.01	SCHEMATIC SPRINKLER (DIFFERED SUBMITTAL)

TENANT IMPROVEMENT

OCCUPANCY	BUSINESS
CONSTRUCTION TYPE	TYPE IIB SPRINKLED
BUILDING HEIGHT	3 STORY
FIRE ALARM	YES
INTERIOR FINISH CEILING HEIGHT	11 FEET
AREA GROSS/NET	1351 / 1289 SQUARE FEET
TOTAL OCCUPANCY	12 OCCUPANTS
EXIT(S) WIDTH PROVIDED	36" MINIMUM
MINIMUM EXIT(S) REQUIRED	1
EXIT(S) PROVIDED	1

PLUMBING FIXTURE REQUIREMENTS

WATER CLOSETS/LAVATORIES REQUIRED	1 UNISEX
WATER CLOSETS/ LAVATORIES-	1 UNISEX PROVIDED.
MOP SINK / O-REQUIRED / 1-PROVIDED	
HI-LOW DRINKING FOUNTAIN / NOT REQUIRED / PROVIDED - N/A	

CODE TABLE

- 2022 DENVER BUILDING AND FIRE CODE (DBC OR DBCA)
- REFERENCE STANDARDS PER 2021 ICC CODES2023 NATIONAL ELECTRICAL CODE
- 2021 INTERNATIONAL BUILDING CODE (IBC)
- 2021 INTERNATIONAL PLUMBING CODE (IPC)
- 2021 INTERNATIONAL MECHANICAL CODE (IMC)
- 2021 INTERNATIONAL FUEL GAS CODE (IFGC)
- 2021 INTERNATIONAL FIRE CODE (IFC)
- 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)

CURRENT ADA AND 2017 ANSI A117.1

ALL INTERIOR FINISHES AND INTERIOR FLOOR FINISHES SHALL COMPLY WITH THE CURRENT BUILDING CODE.

PROJECT SCOPE

PREVIOUSLY A EXISTING BUSINESS (FLUFF HAIR SALON) SPACE TO BE FINISHED INTO THE LOOK LAB SAUNA STUDIO - BUSINESS OCCUPANCY. EXISTING HVAC WITH NEW DISTRIBUTION. NEW PARTITION WALLS, FLOORING AND FINISHES. EXISTING ELECTRICAL POWER WITH NEW DISTRIBUTION. NEW LIGHTING. EXISTING SANITARY SEWER AND DOMESTIC WATER STUBS TO BE RE-USED WITH NEW DISTRIBUTION AND PLUMBING CONNECTIONS.

QUESTIONS
PROJECT / CONSTRUCTION COORDINATOR

f.c. dadson inc.

N1043 CRAFTSMEN DR.
SUITE 2
GREENVILLE, WI 54942
Phone: 920-757-1486
FAX: 920-757-1482

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. G.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

ISSUED / REVISIONS:

ENGINEERING AND DESIGN PLLC
Phone: (606)-364-2886
Fax: (606)-364-5100
E-Mail: eric@amrengineers.com
Web Address: amrengineers.com
PO Box 213 (Mallory)
4236 HWY 3630
Annville, KY 40402
FIRM 23179



BIDDING QUESTIONS CONTACT 920-757-1486

CHECKED BY:	Staff
DRAWN BY:	Staff
DATE:	JULY 26, 2024
SCALE:	PER PLAN
PROJECT No.:	TLL 2402
SHEET TITLE	

COVER SHEET

SHEET No.

1.00

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. G.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

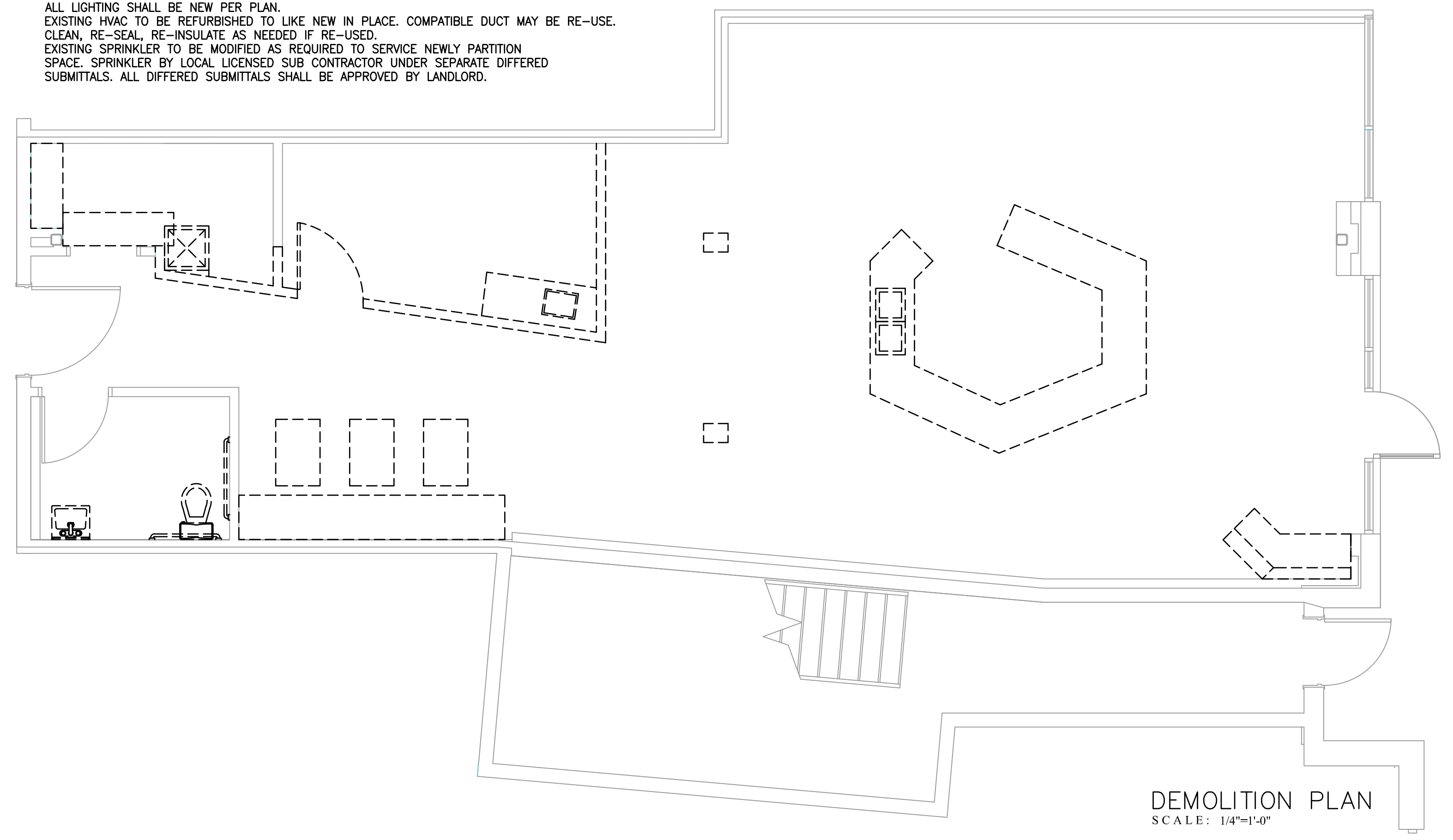
ISSUED / REVISIONS:

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 Annville, KY 40402
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 Fax (606)-364-5100
 E-Mail: eric@emrengineers.com
 Web Address: emrengineers.com
 FIRM 23179



NO EXTERIOR DEMOLITION WORK IS BEING CONDUCTED.
 G.C. SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AND REPORT DISCREPANCIES BACK TO CONSTRUCTION MANAGEMENT. ALL INTERIOR PARTITIONS TO BE REMOVED.
 G.C. ALL FLOORING, CEILING AND OTHER FINISHES SHALL BE REMOVED AND SURFACES PREPARED FOR NEW FINISHES.
 ALL UN-USED PLUMBING SHALL BE REMOVED BACK TO MAIN DISTRIBUTION AND CAPPED AIR WATER TIGHT. ALL UNUSED BELOW SLAB SHALL BE REMOVED TO BELOW FLOOR AND CAPPED AIR WATER TIGHT.
 DO NOT ABANDON DOMESTIC WATER IN PLACE. FIELD VERIFY EXISTING CONDITIONS.
 EXISTING ELECTRICAL SERVICE TO TENANT SPACE FROM LANDLORD POINT OF SERVICE SES.
 RE-USE/RELOCATED ALL ELECTRICAL COMPONENTS
 (MODIFY EXISTING ELECTRICAL SERVICE, PANELS AND TRANSFORMER AS REQUIRED TO RELOCATE PANELS PER PLAN, WHERE COMPATIBLE WITH NEW DESIGN. ALL RE-USED TO BE WARRANTED AS NEW. REPLACE EXISTING AS NEEDED. ALL UN-USED ELECTRICAL TO BE REMOVED BACK TO PANEL. DO NOT ABANDON ANY ELECTRICAL IN PLACE.
 ALL LIGHTING SHALL BE NEW PER PLAN.
 EXISTING HVAC TO BE REFURBISHED TO LIKE NEW IN PLACE. COMPATIBLE DUCT MAY BE RE-USE. CLEAN, RE-SEAL, RE-INSULATE AS NEEDED IF RE-USED.
 EXISTING SPRINKLER TO BE MODIFIED AS REQUIRED TO SERVICE NEWLY PARTITION SPACE. SPRINKLER BY LOCAL LICENSED SUB CONTRACTOR UNDER SEPARATE. DIFFERED SUBMITTALS. ALL DIFFERED SUBMITTALS SHALL BE APPROVED BY LANDLORD.

DEMOLITION LEGEND	
SYMBOL	DESCRIPTION
	EXISTING PARTITION TO BE REMOVED.
	EXISTING DOOR, FRAME, & HARDWARE TO BE REMOVED.
	EXISTING FIXTURES TO BE REMOVED.
	EXISTING MILLWORK TO BE REMOVED.



BIDDING QUESTIONS CONTACT 920-757-1486

LOOK LAB
 4164 EAST 8TH PL
 DENVER, CO 80220-3955

CHECKED BY: Staff
 DRAWN BY: Staff
 DATE: JULY 26, 2024
 SCALE: PER PLAN
 PROJECT No.: TLL 2402
 SHEET TITLE

DEMOLITION PLAN

SHEET No.
1.01

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. C.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

ISSUED / REVISIONS:

ENGINEERING AND DESIGN PLLC
 Phone (606)-364-2886
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 Annville, KY 40402
 FIRM 23179



EMERGENCY LIGHTING LEGEND					
	TYPE	DESCRIPTION	MANUFACTURER	MODEL NO.	LAMPS
RH/DH	RH	EXTERIOR REMOTE EMERGENCY HEAD	BEST	RHLED1-WP	INTEGRAL
WALL MOUNT ONLY	EM	EMERGENCY LIGHT WITH 90 MINUTE BATTERY BACKUP WALL MOUNTED 12" BELOW CEILING. MAX 108" AFF	BEST	LEDR1	INTEGRAL
EX/EM	EM	COMBINATION EXIT / EMERGENCY LIGHT FIXTURE WITH 90 MINUTE BATTERY BACKUP	BEST	CXTEU2GWRC	INTEGRAL
WALL MOUNT ONLY	EX	EXIT LIGHT FIXTURE WITH 90 MINUTE BATTERY BACKUP	BEST	EXTEU2GW-EM	INTEGRAL



OCCUPANCY BY AREA USE = 12 OCCUPANTS
 OCCUPANCY BY GROSS AREA = 1351 SF / 150 = 9 OCCUPANTS

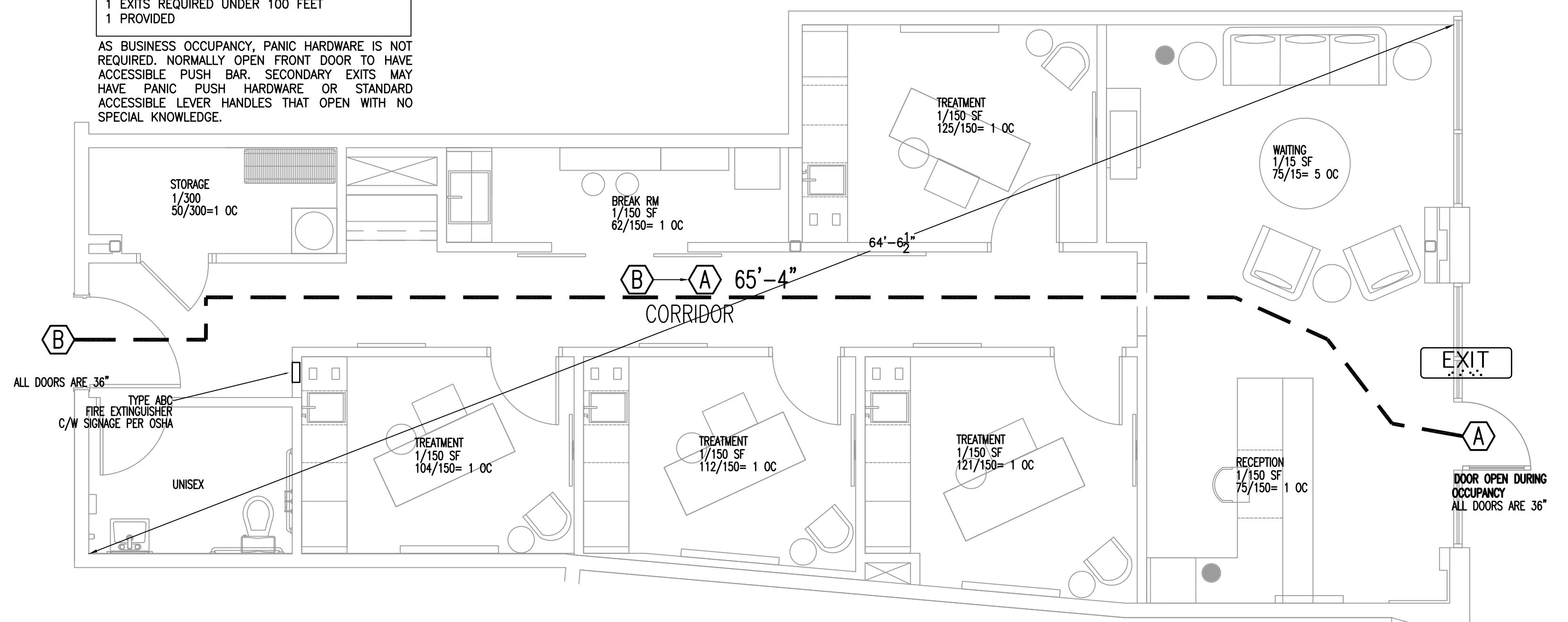
EGRESS ANALYSIS 1005.1
 SPRINKLED

STAIRWAYS (N/A) 12 X 0.3 = 3.6 REQUIRED
 OTHER EGRESS COMPONENTS 12 X 0.2 = 2.4"

1 EXITS REQUIRED UNDER 100 FEET
 1 PROVIDED

AS BUSINESS OCCUPANCY, PANIC HARDWARE IS NOT REQUIRED. NORMALLY OPEN FRONT DOOR TO HAVE ACCESSIBLE PUSH BAR. SECONDARY EXITS MAY HAVE PANIC PUSH HARDWARE OR STANDARD ACCESSIBLE LEVER HANDLES THAT OPEN WITH NO SPECIAL KNOWLEDGE.

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



LIFE SAFETY PLAN
 SCALE: 1/4"=1'-0"

BIDDING QUESTIONS CONTACT 920-757-1486

CHECKED BY: Staff
 DRAWN BY: Staff
 DATE: JULY 26, 2024
 SCALE: PER PLAN
 PROJECT No.: TLL 2402
 SHEET TITLE

LIFE SAFETY PLAN

SHEET No.

1.02

LOOK LAB
 4164 EAST 8TH PL
 DENVER, CO 80220-3955



- ### GENERAL NOTES
- G.C. SHALL FIELD VERIFY / INSPECT AND REPORT ON THE CONDITION OF EXISTING SHELL COMPONENTS, EXTERIOR WALLS, STOREFRONT, GLAZING DOORS, ETC. WHERE EXISTING CONDITIONS WILL NOT MEET OR EXCEED NEW LEVEL OF FINISH, G.C. SHALL PROVIDE BID ALTERNATE FEE TO REPAIR, REFURBISH OR REPLACE EXISTING EXTERIOR COMPONENTS.
 - G.C. SHALL FIELD VERIFY AND INSPECT INTERIOR SHELL COMPONENTS. ALL SHELL WALLS SHALL BE INSULATED WITH A MINIMUM OF R11 BATT INSULATION AND BE COVERED WITH 5/8" GYPSUM BOARD FINISHED TO A MINIMUM OF LEVEL 4 SMOOTHNESS. ROOF ASSEMBLY SHALL BE INSULATED WITH A MINIMUM OF R30, WHERE NOT EXISTING G.C. SHALL PROVIDE BID ALTERNATE FEE TO PROVIDE AND INSTALL.
 - ALL FLOORS SHALL BE LEVELED, CLEANED AND PREPARED TO RECEIVE NEW FINISHES.
 - ALL DIMENSIONS SHOWN ARE TO FACE OF FINISHED DRYWALL.
 - SEE ELEVATION SHEETS FOR ADDITIONAL INFORMATION REGARDING FRAMING AND BLOCKING REQUIREMENTS.
 - G.C. SHALL BE RESPONSIBLE FOR PLUMBING TRENCHES (CORING AS REQUIRED) AND REPAIR OF FLOOR, DOWEL AND POUR BACK EQUAL TO OR BETTER THAN EXISTING SLAB. FINISH SMOOTH, READY TO RECEIVE NEW FLOORING.
 - G.C. SHALL ENSURE ALL SUBCONTRACTORS BIDDING VISIT SITE PRIOR TO BIDDING. G.C. WILL BE RESPONSIBLE FOR ALL EXISTING CONDITIONS MEETING OR EXCEEDING THOSE DEPICTED WITHIN THE PLAN SET. WHERE CONDITIONS ARE NOT AS SHOWN, G.C. SHALL INCLUDE A BID ALTERNATE FEE TO ENSURE EXISTING CONDITIONS MEET OR EXCEED THE INTENT OF THE PLANS.

- ### KEY NOTES:
- DEMISING WALL TO BE FINISHED TO LEVEL 4 READY FOR PAINT. TENANT SIDE ONLY. MAINTAIN EXISTING WALL FIRE RATING IF ANY.
 - WHERE EXISTING EXTERIOR DOORS ARE REUSED, REFURBISH TO LIKE NEW CONDITION, COMPLETE WITH ALL REQUIRED COMPONENTS: SWEEP, WEATHER STRIPPING, THRESHOLD ETC. WHERE NECESSARY BASED ON EXISTING CONDITION G.C. SHALL REPLACE WITH ALL NEW. ALL HARDWARE TO MEET OR EXCEED ALL CODE AND ACCESSIBILITY REQUIREMENTS. FINAL INSTALLATION SHALL BE COMPLETE, OPERABLE AND CODE COMPLIANT, ACCESSIBLE, PROFESSIONAL INSTALLATION AS NEW.
 - SEE ELEVATIONS FOR ADDITIONAL BLOCKING REQUIREMENTS. G.C. SHALL COORDINATE WITH FGD TO ENSURE ALL BLOCKING IS IN PLACE AND READY FOR INSTALLATION OF CABINETS AND SHELVING.
 - WALL TO BE 5/8" MOISTURE/MOLD RESISTANT GYP. ALL WALLS IN TOILET ROOMS.
 - NOT USED
 - INSTALL FIRE TREATED 2X8 BLOCKING CAPABLE OF HOLDING A MINIMUM OF 300 LBS FOR GRAB BAR INSTALLATION.
 - G.C. SHALL INSPECT AND REPORT CONDITION OF EXISTING EXTERIOR COMPONENTS: STOREFRONT / DOORS / GLAZING ETC. WHERE EXISTING WILL NOT MEET OR EXCEED NEW LEVEL OF FINISH, G.C. SHALL PROVIDE BID ALTERNATE COST LINE ITEM WITHIN BID TO REPAIR / REFURBISH / REPLACE EXISTING EXTERIOR COMPONENTS.
 - HEADER ABOVE OPENING AT 7'-0" AFF.
 - SEE CEILING PLAN ROP FOR FRAMING HEADER HEIGHTS.

WALL LEGEND

NEW 1 LAYER 5/8" GYPSUM WALLBOARD APPLIED PARALLEL TO EACH SIDE OF 3-5/8" STEEL STUDS 16" O.C. WITH 1" TYPE 5 DRYWALL SCREWS 8" O.C. AT VERTICLE JOINTS AND 12" O.C. AT FLOOR/CEILING AND INTERMEDIATE STUDS. STAGGER JOINTS ON EACH SIDE AND OPPOSITE SIDES. NEW WALLS TO 3" ABV. CEILING, BRACED TO STRUCTURE. INSTALL 3" MINERAL FIBER SOUND BATTS.

NEW 1 LAYER 5/8" GYPSUM WALLBOARD APPLIED PARALLEL TO EACH SIDE OF 6" STEEL STUDS 16" O.C. WITH 1" TYPE 5 DRYWALL SCREWS 8" O.C. AT VERTICLE JOINTS AND 12" O.C. AT FLOOR/CEILING AND INTERMEDIATE STUDS. STAGGER JOINTS ON EACH SIDE AND OPPOSITE SIDES. NEW WALLS TO 3" ABV. CEILING, BRACED TO STRUCTURE. INSTALL 3" MINERAL FIBER SOUND BATTS.

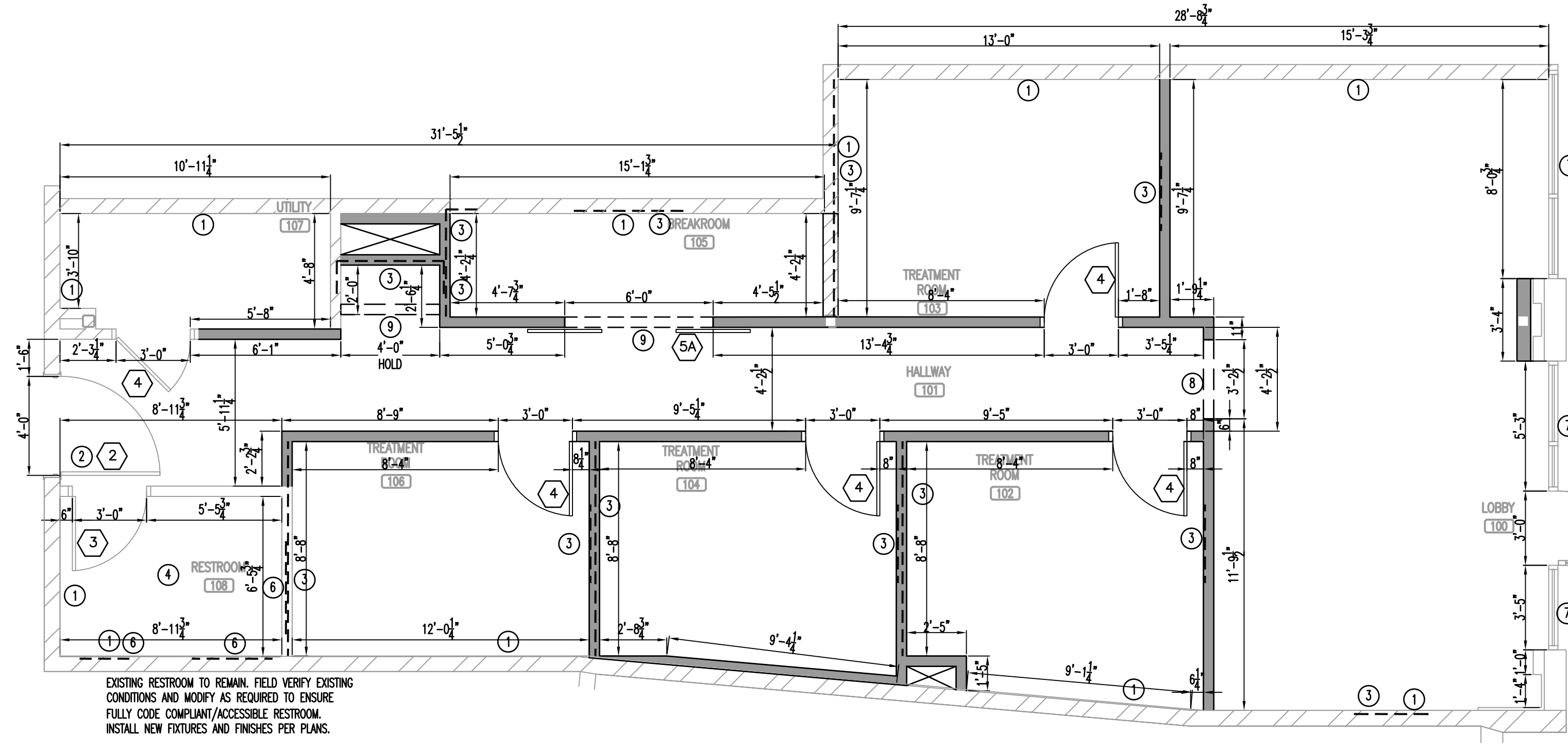
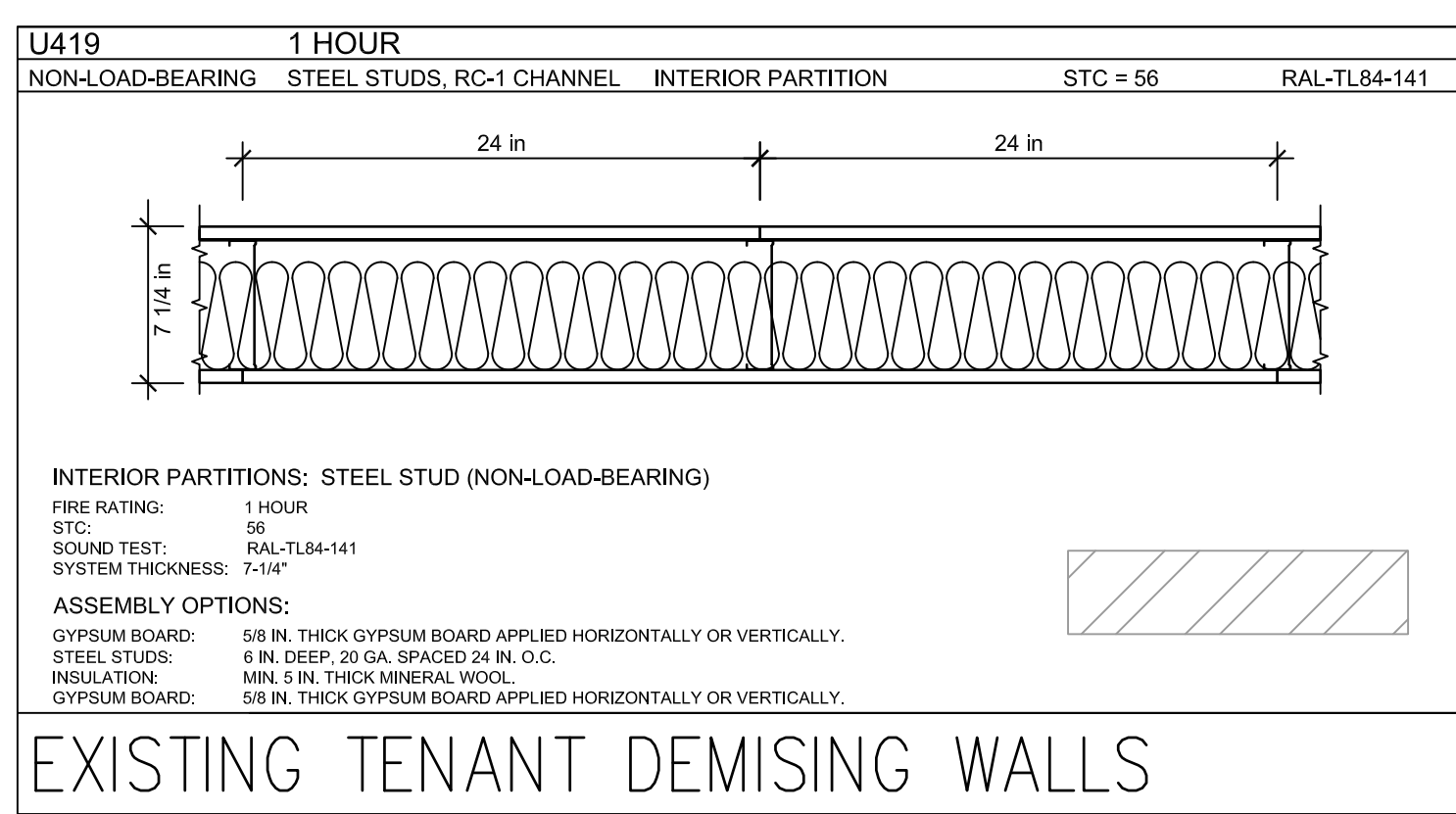
G.C. TO PROVIDE BLOCKING FOR ALL A.D.A. GRAB BARS AND FIXTURE / CABINET SUPPORTS

DOOR SCHEDULE

DOORS AND FRAMES TO BE FINISHED PER SHEET 1.09, FINISH SCHEDULE THE BOTTOM 10" OF ALL DOORS SHALL HAVE A SMOOTH, UNINTERRUPTED SURFACE G.C. TO PROVIDE BLOCKING FOR ALL A.D.A. GRAB BARS AND FIXTURE / CABINET SUPPORTS

1	EXISTING FRONT EGRESS DOOR • EXISTING 3'-0" x 7'-0" STOREFRONT ENTRY DOOR. REFURBISH TO LIKE NEW • HANDICAP ACCESSIBLE COMPLIANT HARDWARE / PUSH PULL HARDWARE. INSTALL NEW BASED ON EXISTING CONDITION • THERE SHALL BE NO SPECIAL KNOWLEDGE REQUIRED TO OPEN AN EXIT DOOR FROM INSIDE THE SPACE. • ALL EXIT DOORS SHALL OPEN OUTWARD, BE SELF CLOSING AND FIT TIGHTLY. • EXIT DOOR TO REMAIN UNLOCKED DURING ALL OPERATING HOURS. • SIGN SHALL BE POSTED ON EGRESS SIDE OF DOOR STATING "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED". SIGN TO HAVE 1" LETTERS ON CONTRASTING BACKGROUND • MANUALLY OPERATED FLUSH BOLTS OR SURFACE BOLTS ARE NOT PERMITTED. • AUTOMATIC FLUSH BOLTS ARE PERMITTED.
2	EXISTING REAR DOOR PAINTED PT1 ON TENANT SIDE OF DOOR. • EXISTING 3'-6" x 7'-0" INSULATED STEEL EXTERIOR DOOR (REFURBISH TO LIKE NEW OR REPLACE BASED ON CONDITION) • HANDICAP ACCESSIBLE COMPLIANT HARDWARE. INSTALL NEW BASED ON EXISTING CONDITION • FRAMES PAINTED PT1, TENANT SIDE OF DOOR. • 1 FLOOR STOP - BALDWIN 4010 MATTE BLACK.
3	• TOILET ROOM • 3'-0" x 7'-0" x 1-3/4" • SOLID CORE FLUSH PANEL WITH WOOD VENEER, PAINT READY, SEE FINISH SCHEDULE • KNOCK DOWN METAL FRAMES. DOOR AND FRAME PAINTED PT1 • 3 HINGES - HAZER • EVERBUILT MATTE BLACK DOOR STOP MATTE BLACK, SKU: 28117 • DOOR SILENCERS EVERBUILT GREY, SKU: 14257 • 1 LEVER TYPE PRIVACY SET. SCHLAGE SOLISTICE WITH DECORATIVE TRIM, MODEL JS40SOL622COL. MATTE BLACK. FUNCTION NUMBER 40. LATCH-BOLT OPERATED BY LEVER FROM EITHER SIDE • OUTSIDE LEVER IS LOCKED BY PUSH BUTTON AND UNLOCKED BY EMERGENCY RELEASE OUTSIDE OR OPERATING INSIDE LEVER.
4	• TREATMENT ROOM, DRAW UP ROOM AND UTILITY ROOM DOOR PAINTED PT1. • 3'-0" x 7'-0" x 1-3/4" • SOLID CORE FLUSH PANEL WITH WOOD VENEER, PAINT READY, SEE FINISH SCHEDULE • KNOCK DOWN METAL FRAMES. DOOR AND FRAME PAINTED PT1 • 3 HINGES - HAZER • EVERBUILT MATTE BLACK DOOR STOP MATTE BLACK, SKU: 28117 • DOOR SILENCERS EVERBUILT GREY, SKU: 14257 • 1 LEVER TYPE PASSAGE SET MATTE BLACK FINISH (ACCESSIBLE COMPLIANT) • SCHLAGE SOLISTICE LEVER DOOR SET WITH DECORATIVE COLLINS TRIM, MODEL J10SOL622COL. BLK - MATTE BLACK FINISH LEVER HANDLE. • FUNCTION NUMBER 10 PASSAGE. LATCH-BOLT OPERATED BY LEVER FROM EITHER SIDE
5	BARN DOOR PAINTED PT1 (SINGLE PANEL) 5A (DOUBLE PANEL) • (1) OR (2) 3'-0" x 7'-0" x 1-1/2" • WOOD, DOOR PANELS WITH CROSS BOARDS CREATING DIAMOND PATTERN • WHITE SHANTY - THE XAVIER FULLY CUSTOM BARN DOOR PRIMED AND PAINTED PT1 • MCJ & COMPANY CLASSIC BARN DOOR HARDWARE IN MATTE BLACK, RUSTICA LOFT BACK TO BACK 12" ROUND BARN DOOR PULLS WITH FLUSH PLATE AND LATCH, FLAT BLACK FINISH. • ANTI-SKIP HARDWARE, T-FLOOR GUIDE FLAT BLACK. • 1X6 CLEAR POPLAR BOARD FOR THE BARN DOOR TRACK SYSTEM SANDED SMOOTH AND PAINTED PT2, RUN 2" PAST END OF DOOR TRACK. • BARN DOOR OPENING TO BE FRAMED WITH FLAT CASING AND SANDED SMOOTH, PAINTED PT2. SEE ELEVATIONS DETAIL 1 SHEET 1.11

WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES. (11B-404.2.7)
 ALL SLIDING DOORS SHALL HAVE MINIMUM CLEARANCE OF 32 INCHES IN OPEN POSITION.



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

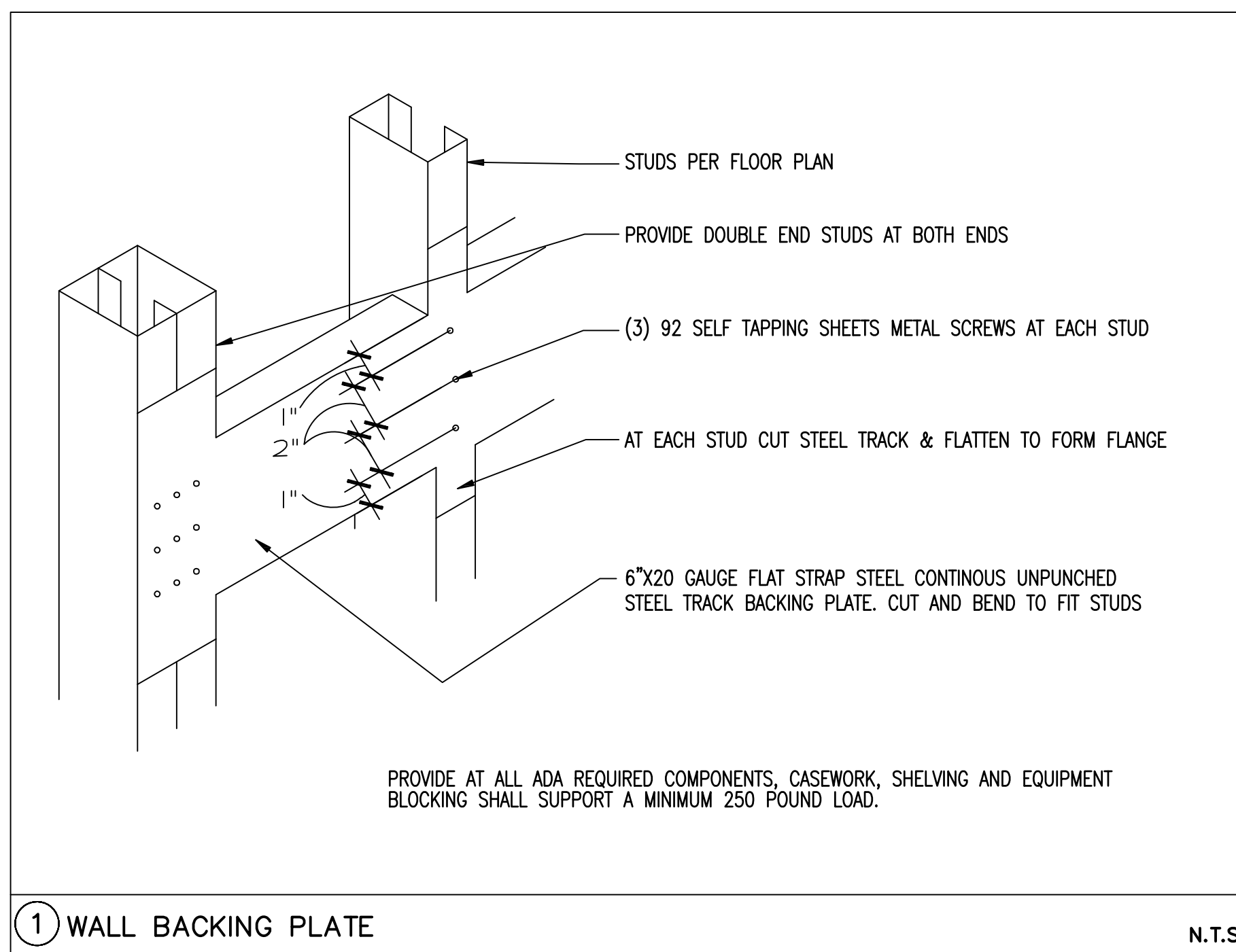
BIDDING QUESTIONS CONTACT 920-757-1486

LOOK LAB
 4164 EAST 8TH PL
 DENVER, CO 80220-3955

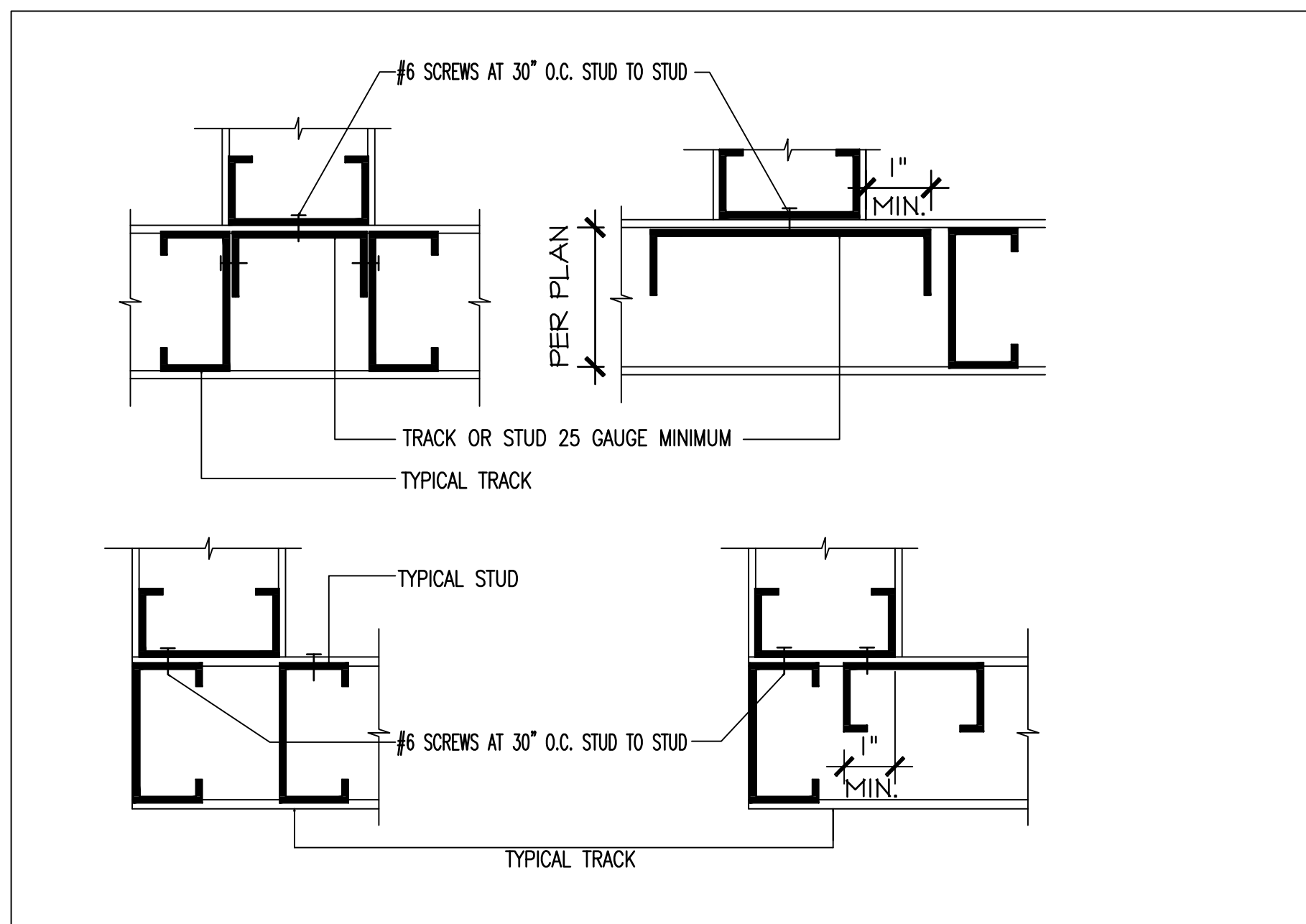
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 DATE: JULY 26, 2024
 SCALE: PER PLAN
 PROJECT No.: TLL 2402
 SHEET TITLE

FLOOR PLAN & DETAILS

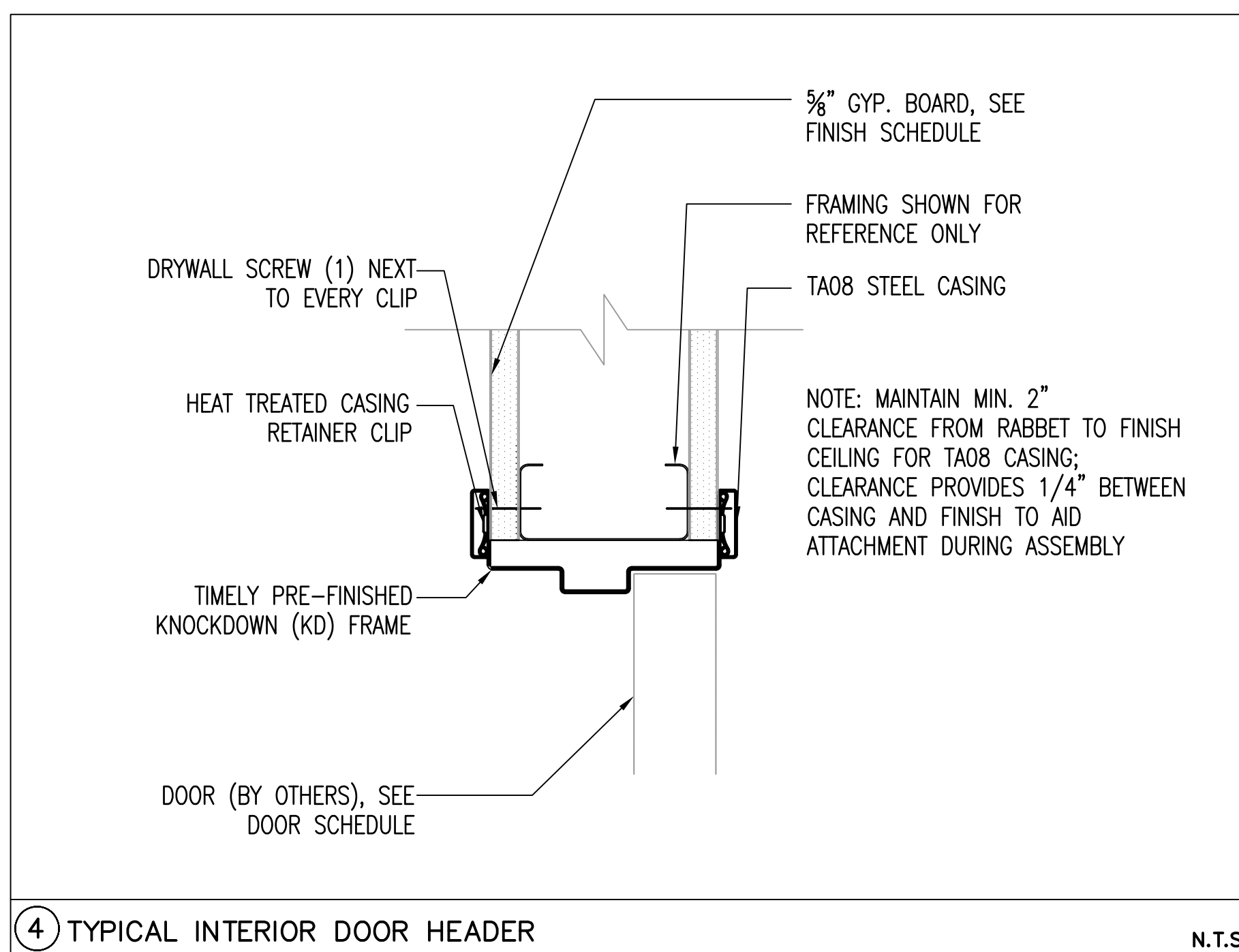
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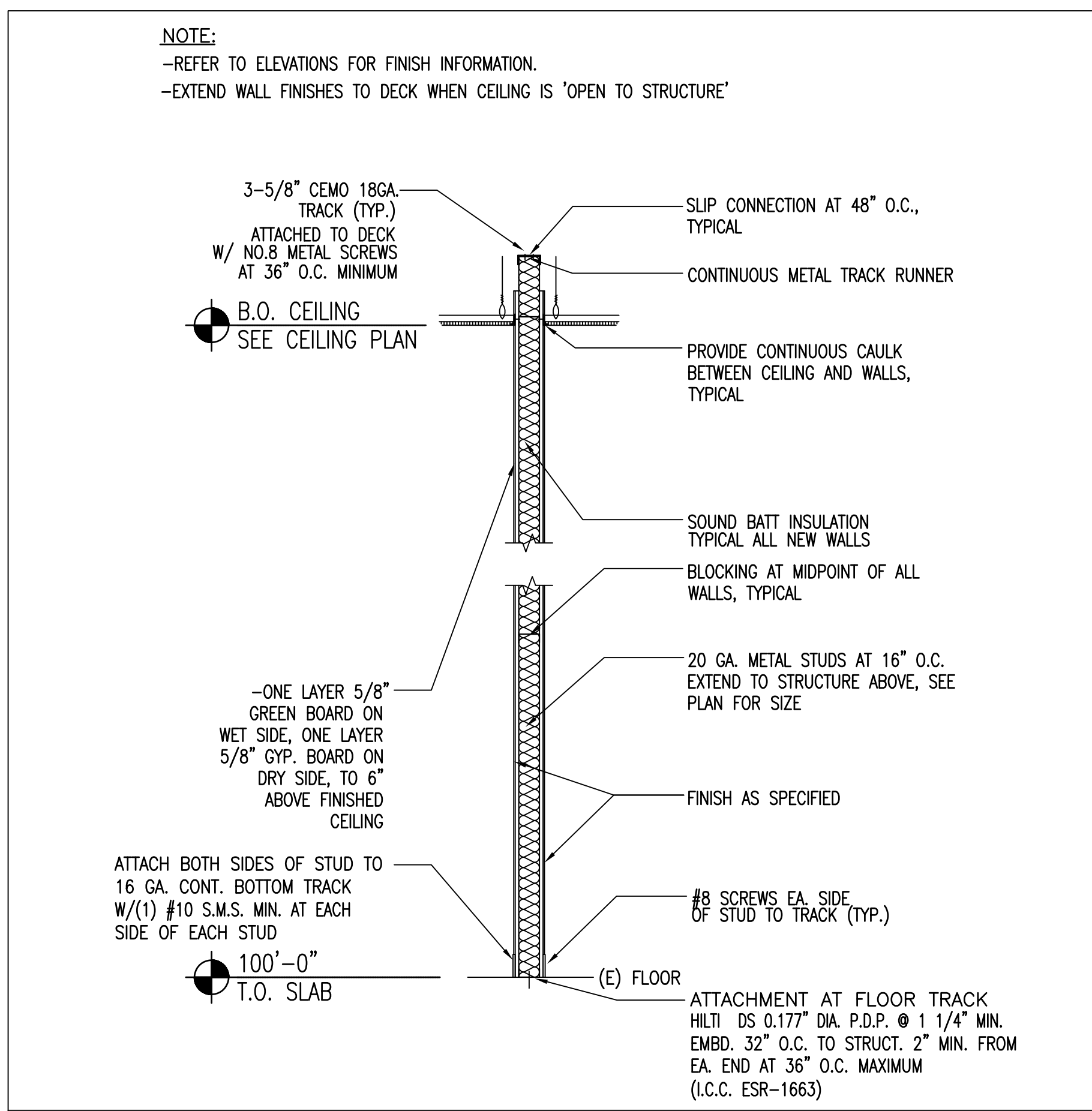
1 WALL BACKING PLATE N.T.S



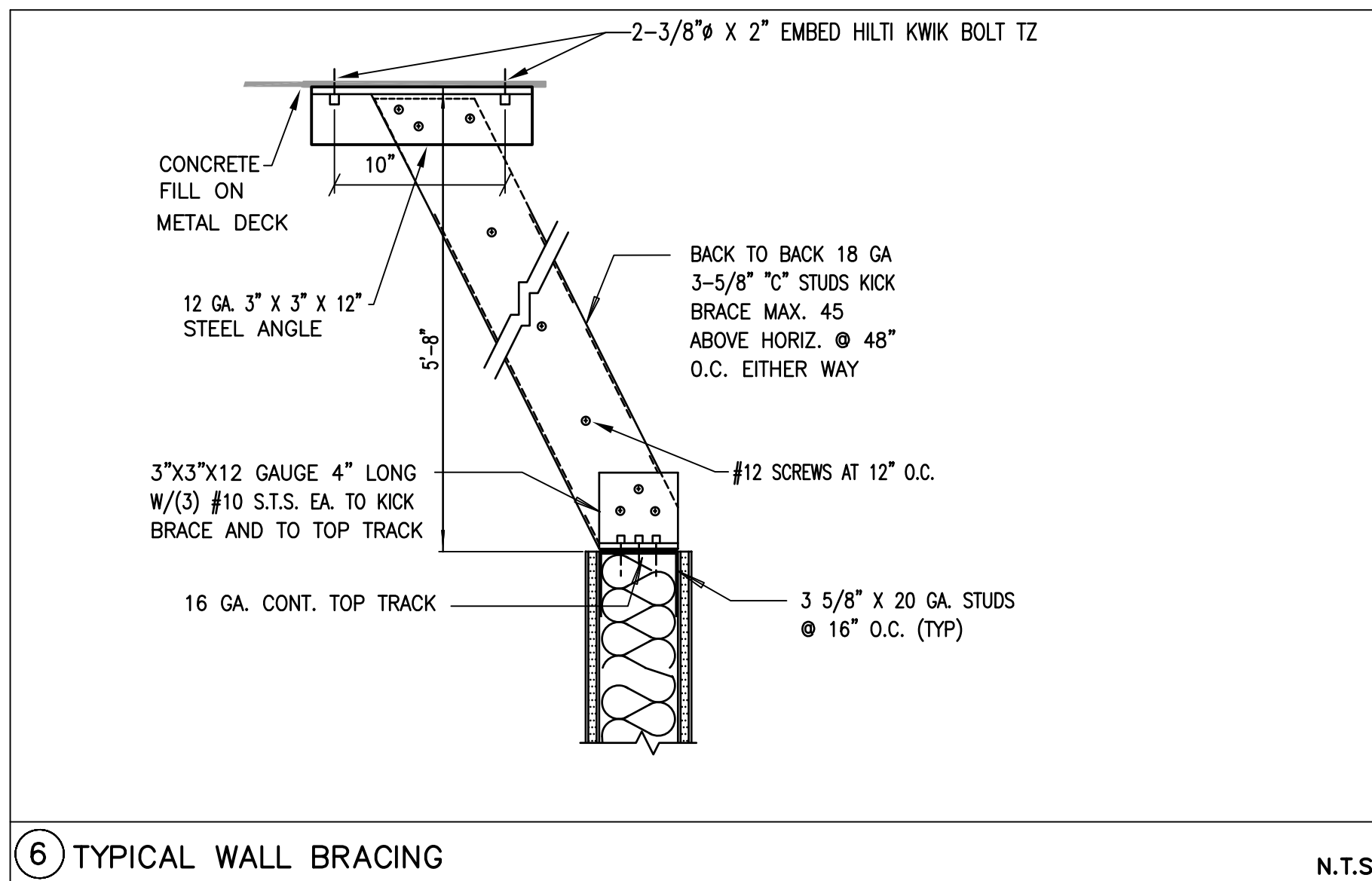
3 TYPICAL FRAMING CONDITIONS N.T.S



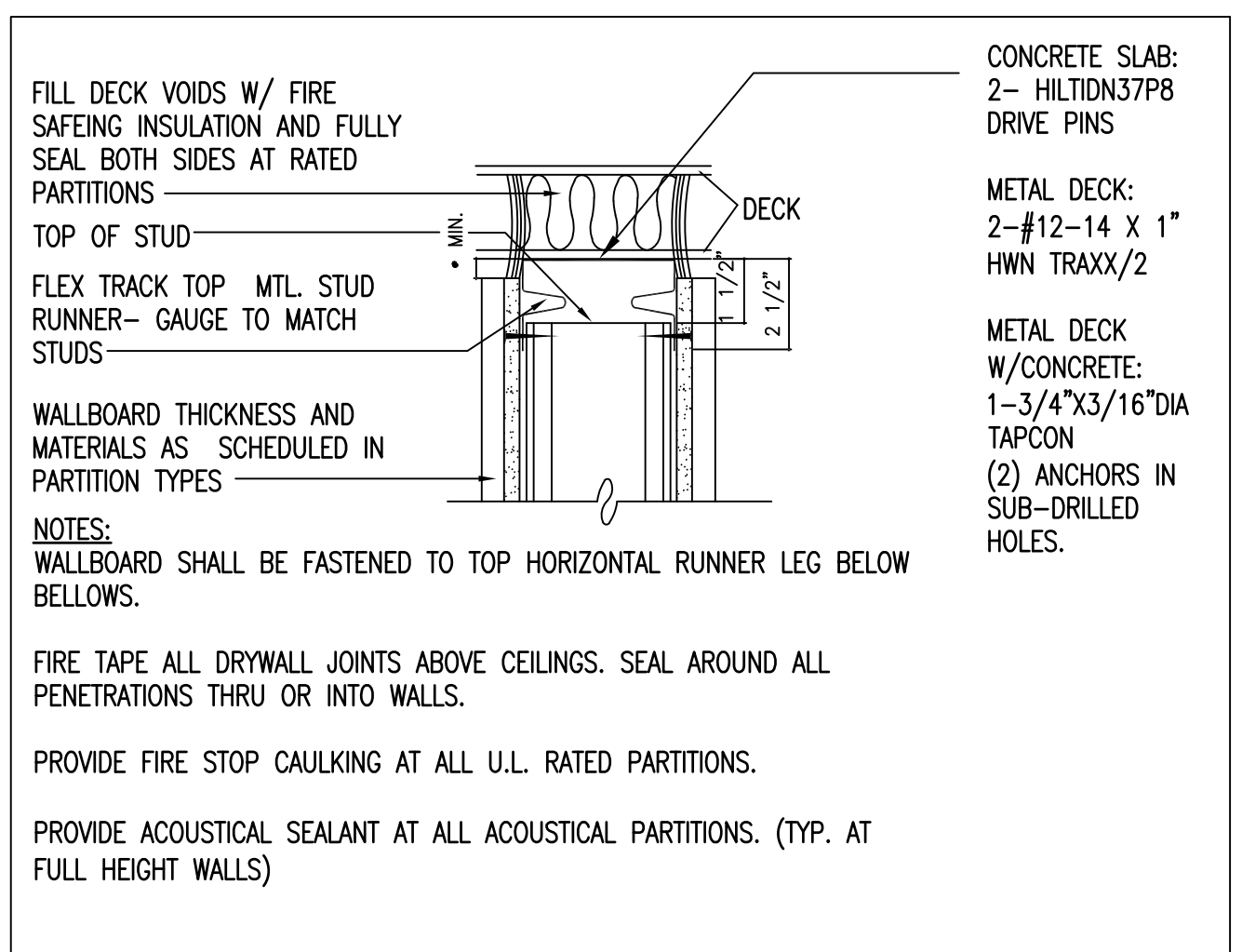
4 TYPICAL INTERIOR DOOR HEADER N.T.S



5 TYPICAL STUD WALL N.T.S



6 TYPICAL WALL BRACING N.T.S



7 FULL HEIGHT WALL AT STRUCTURE N.T.S

SPAN TABLE

NON BEARING STUD SIZES AT 16" O.C. WITH FLEXIBLE (DRYWALL) FINISH (L/120)

STUD SIZE	MAXIMUM FLANGE BRACE SPACING	ALLOWABLE HEIGHT
362WCS20	2'-6"	11'-0"
4WCS20	2'-6"	12'-0"
6WCS20	3'-0"	17'-0"

NON BEARING STUD SIZES AT 16" O.C. WITH BRITTLE (TILE) FINISH (L/360)

STUD SIZE	MAXIMUM FLANGE BRACE SPACING	ALLOWABLE HEIGHT
362WCS20	2'-6"	16'-0"
4WCS20	2'-6"	18'-0"
6WCS20	3'-0"	20'-0"

SINGLE SPAN CEILING JOISTS AT 16" O.C. WITH ONE LAYER GYP. BOARD (10LB/SF TOTAL LOAD)

JOIST SIZE	CONTINUOUS LATERAL SUPPORT OF COMPRESSION FLANGE
6WCS20	12'-7"
8WCS18	17'-6"

ALLOWABLE BRACED LENGTHS

MAXIMUM STUD HEIGHT	STUD TYPE	SPACING
9'-0"	3-5/8" X 25 GA	16" OR 24" O.C.
10'-0"	3-5/8" X 20 GA	16" OR 24" O.C.
12'-0"	3-5/8" X 20 GA	16" OR 24" O.C.
16'-0"	3-5/8" X 20 GA	16" O.C.
18'-0"	3-5/8" X 20 GA	16" O.C.
20'-0"	6" X 20" GA	16" OR 24" O.C.
24'-0"	6" X 20" GA	16" O.C.
30'-0"	6" X 18" GA	16" O.C.
30'-0"	6" X 16" GA	24" O.C.
40'-0"	8" X 16" GA	16" O.C.
40'-0"	8" X 14" GA	24" O.C.

8 FRAMING TABLES N.T.S

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. E.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

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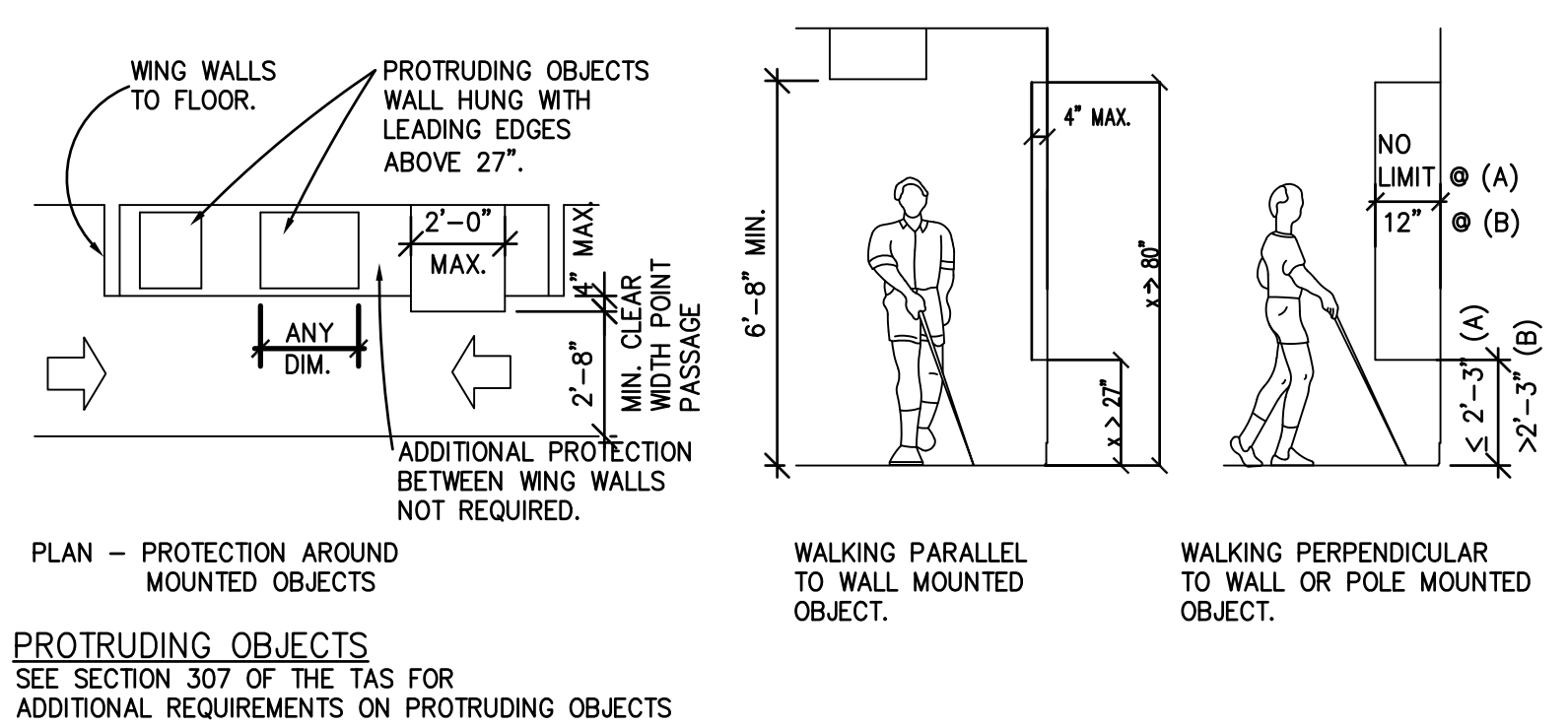
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 SCALE: PER PLAN
 PROJECT No.: TLL 2402
 SHEET TITLE

FRAMING DETAILS

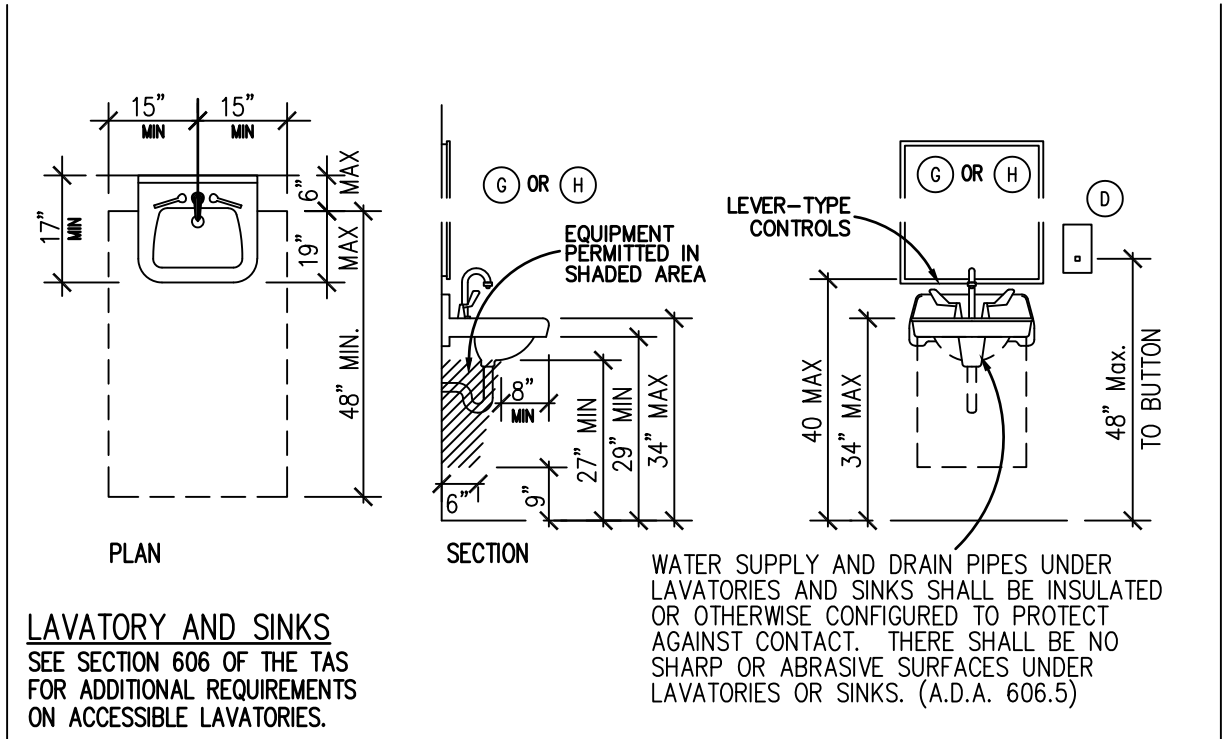
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BIDDING QUESTIONS CONTACT 920-757-1486

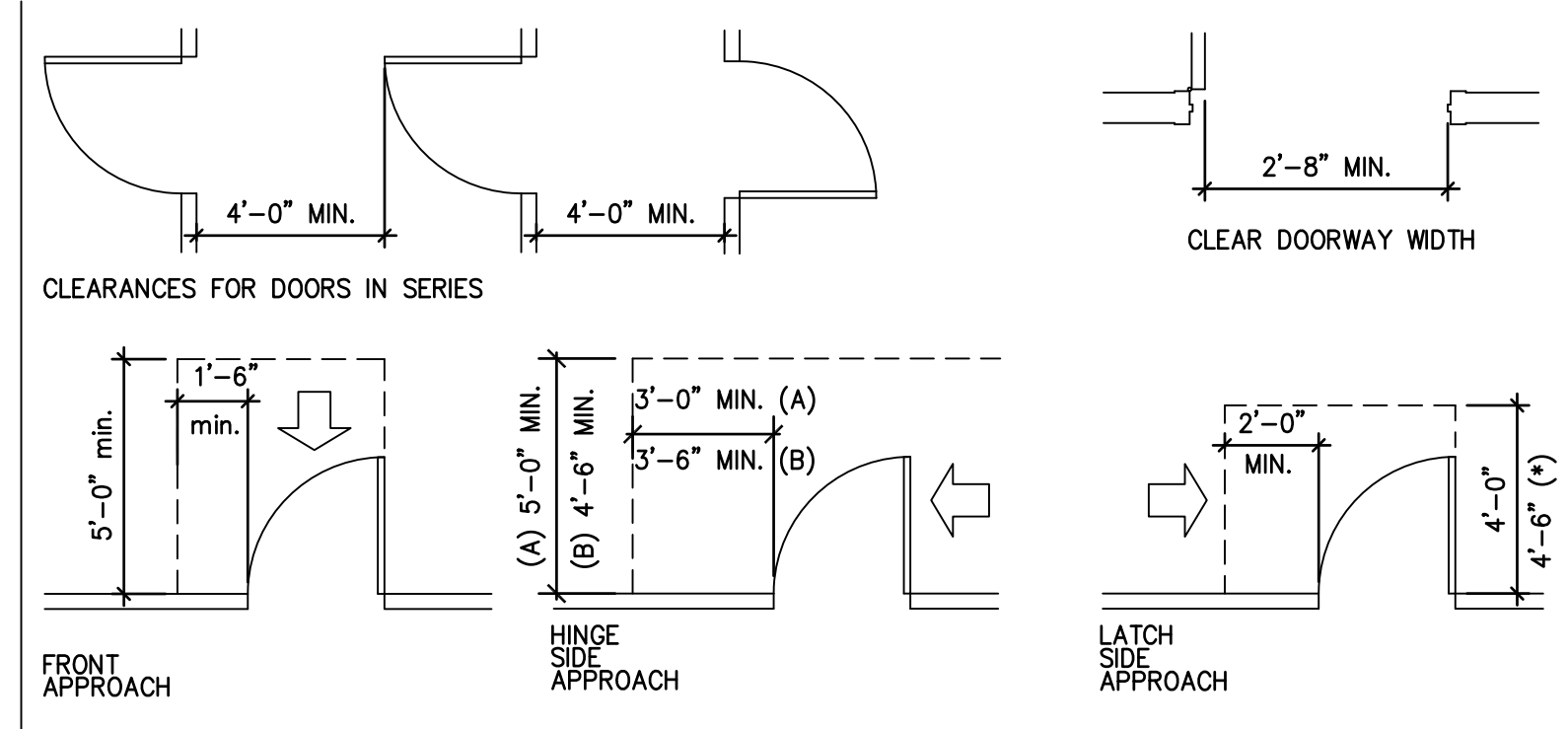


PROTRUDING OBJECTS
SEE SECTION 307 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON PROTRUDING OBJECTS



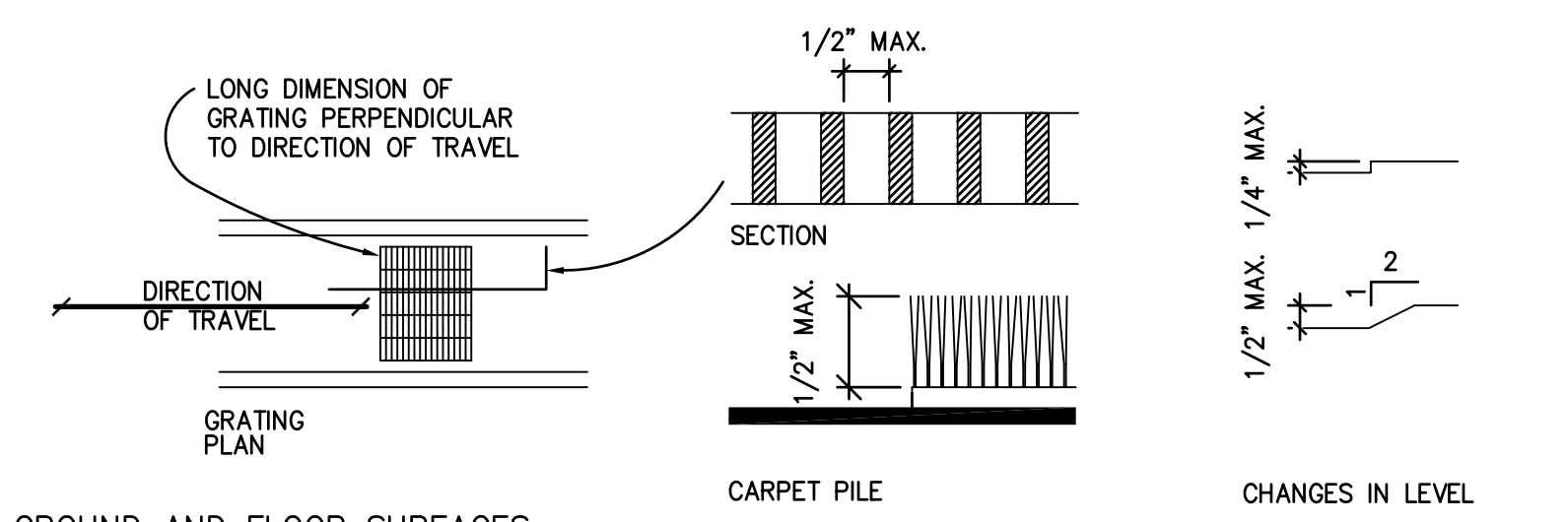
LAVATORY AND SINKS
SEE SECTION 606 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON ACCESSIBLE LAVATORIES.

ELECTRICAL DEVICES

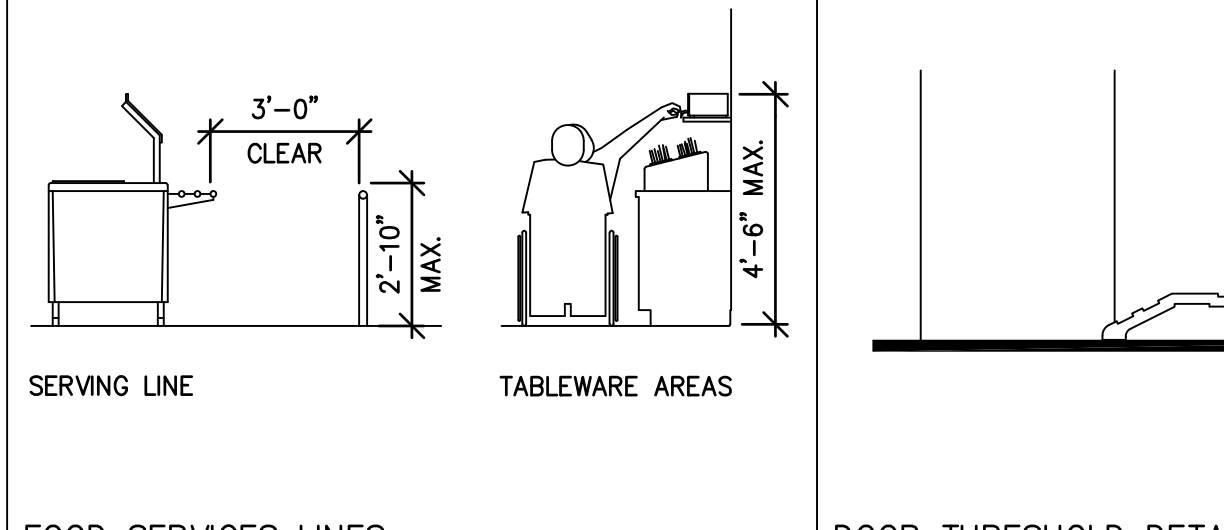


DOORS
SEE SECTION 404.2.4 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON DOORS.

GENERAL ACCESSIBILITY NOTES:
INFORMATION SHOWN ON THIS SHEET IS THE MINIMUM REQUIRED FOR ADA COMPLIANCE.
NOT ALL CONDITIONS SHOWN ON THIS SHEET MAY BE REQUIRED BY THIS PROJECT. COMPARE THE REQUIREMENTS OF THE ARCHITECTURAL DRAWINGS WITH THIS SHEET FOR RELEVANCE OF INFORMATION.
DIMENSIONS INDICATED ARE THE MINIMUM CLEAR DIMENSIONS REQUIRED BY THE TAS ACCESSIBILITY GUIDELINES. THE CONTRACTOR IS RESPONSIBLE FOR LAYOUT OF BUILDING ELEMENTS TO ASSURE THAT DIMENSIONS SHOWN ARE PROVIDED.
NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL DRAWINGS AND THE INFORMATION GIVEN ON THIS SHEET.
DO NOT SCALE THESE DRAWINGS.
REFER, ALSO, TO FEDERAL PUBLICATION "AMERICANS WITH DISABILITIES ACT, TITLE III: PUBLIC ACCOMMODATIONS" (LATEST EDITION) AND PROJECT LOCAL GOVERNING REGULATIONS FOR COMPLETE PROJECT ACCESSIBILITY REQUIREMENTS.
SPECIAL ACCESSIBILITY REQUIREMENTS:
DOOR HARDWARE:
DOORS SHALL HAVE LEVER-OPERATED MECHANISMS, PUSH-TYPE MECHANISMS, OR U-SHAPED HANDLES.
HANDLES, PULLS, LATCHES, LOOKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE.
SLIDING DOORS, IF ANY, WHEN FULLY OPEN SHALL HAVE OPERATING HARDWARE EXPOSED AND USABLE FROM BOTH SIDES.
MOUNTING HEIGHT: HARDWARE REQUIRED FOR ACCESSIBLE DOOR PASSAGE SHALL BE MOUNTED NO HIGHER THAN 48" ABOVE FINISHED FLOOR.
CLOSER OPERATION: THE SWEEP PERIOD OF A CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 70 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR.
THE MAXIMUM FORCE FOR PUSHING OR PULLING OPEN A DOOR SHALL BE AS FOLLOWS:
(A) EXTERIOR HINGED DOORS: NO REQUIREMENT.
(B) INTERIOR HINGED DOORS: 5 LBF
(C) SLIDING OR FOLDING DOORS: 5 LBF
EXCEPT THAT FIRE DOORS SHALL HAVE THE MINIMUM OPENING FORCE ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY.
THESE FORCES DO NOT APPLY TO THE FORCE REQUIRED TO RETRACT LATCH BOLTS OR DISENGAGE OTHER DEVICES THAT MAY HOLD THE DOOR IN A CLOSED POSITION.
AUTOMATIC DOORS AND AUTOMATIC GATES SHALL COMPLY WITH ANSI / BHMA A156.10 (INCORPORATED BY REFERENCE, SEE REFERENCED STANDARDS IN CHAPTER 1)
A156.19 (1997 OR 2002 EDITION (INCORPORATED BY REFERENCE, SEE REFERENCED STANDARDS IN CHAPTER 1))
SUCH DOORS SHALL NOT OPEN TO BACK CHECK FASTER THAN 3 SECONDS
IF USER-OPERATED CONTROLS ARE PROVIDED THEY SHALL COMPLY WITH TEXAS ACCESSIBILITY STANDARDS, SECTION 4.27.

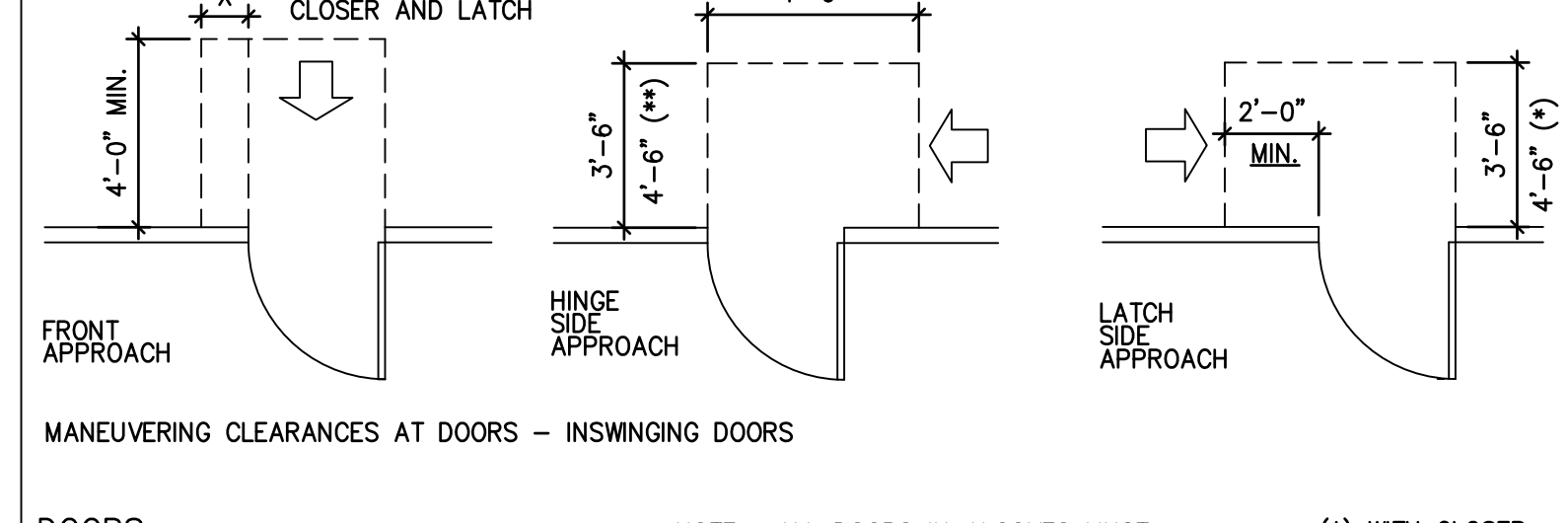


GROUND AND FLOOR SURFACES
SEE SECTION 302 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON GROUND AND FLOOR SURFACES.



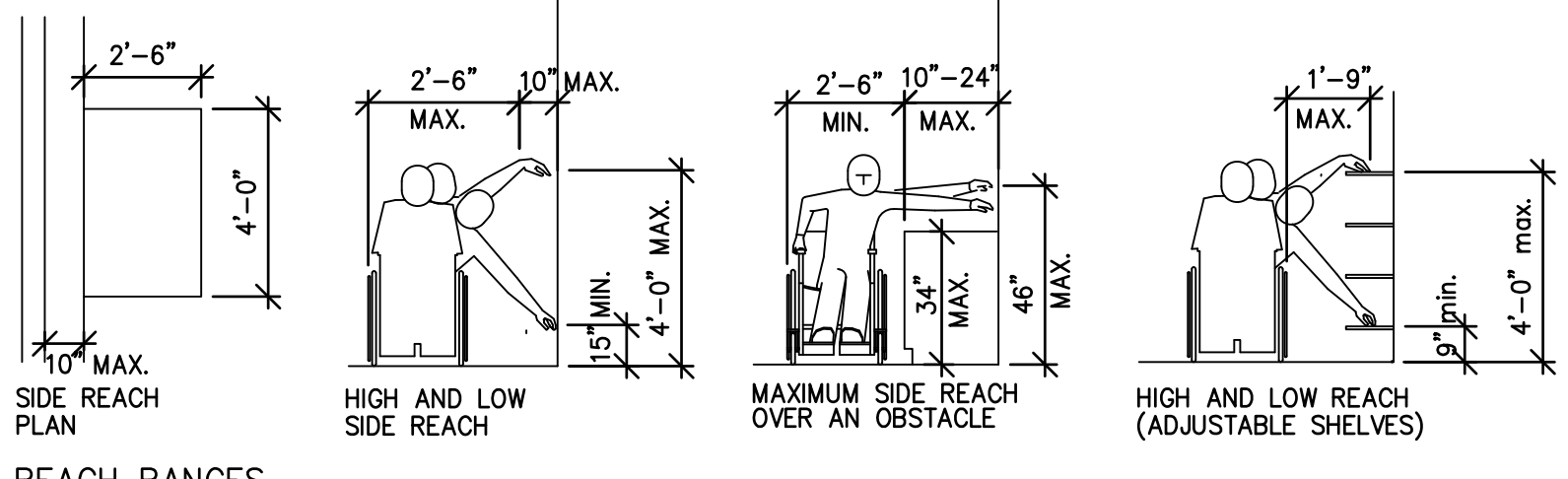
FOOD SERVICES LINES
SEE SECTIONS 227.4 AND 904.5 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON FOOD SERVICE.

DOOR THRESHOLD DETAIL
SEE SECTION 404.2.5 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON DOORS.

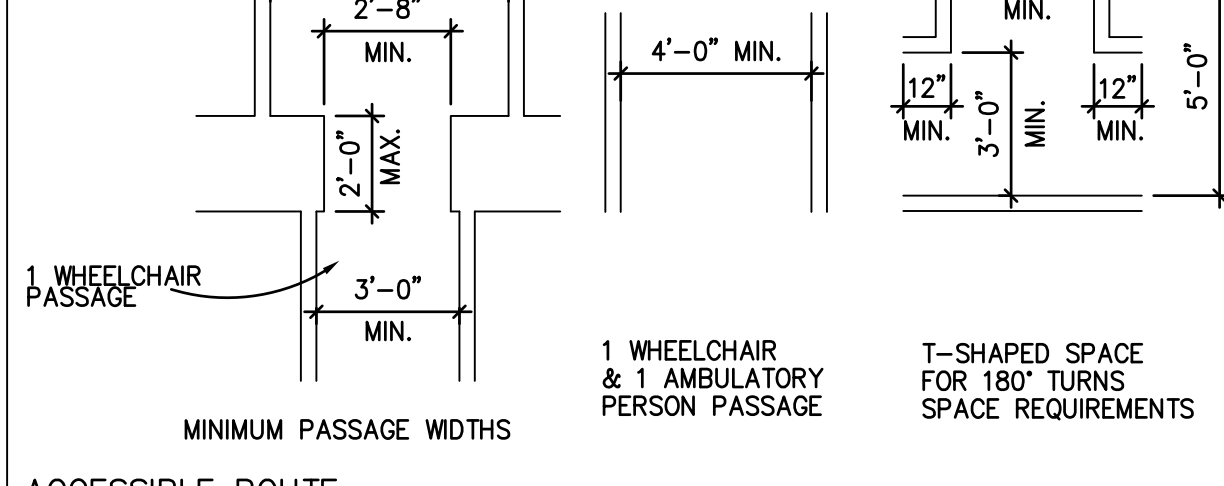


DOORS
SEE SECTION 404.2.4 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON DOORS.

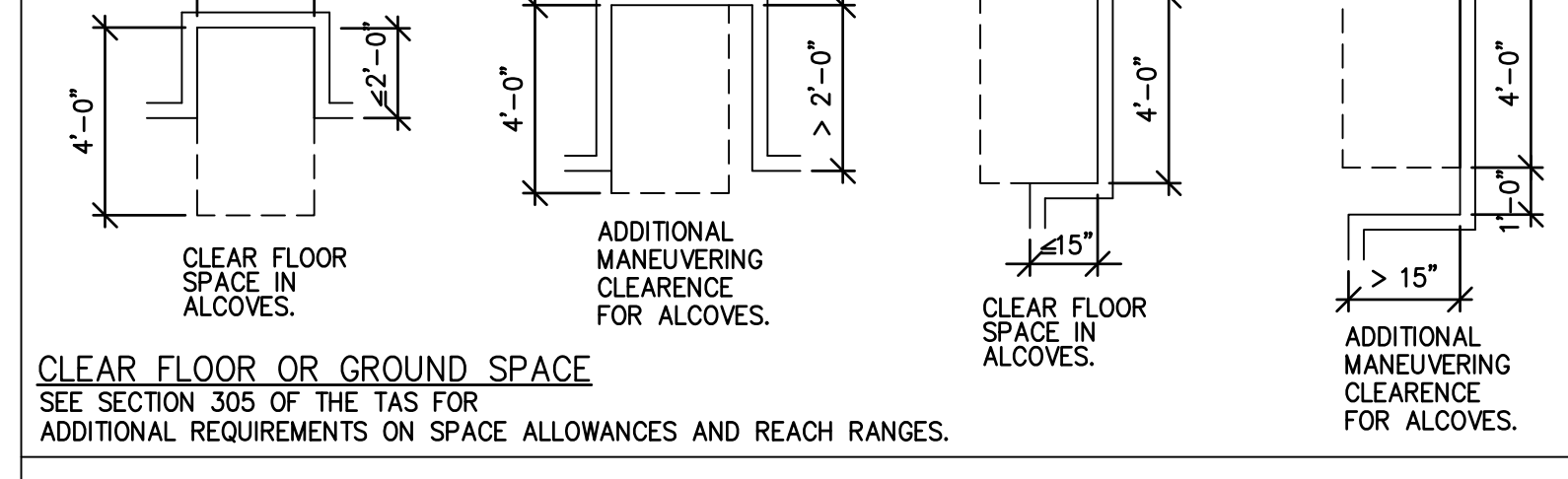
CONTROLS AND OPERATING MECHANISMS:
HEIGHT: SWITCHES, THERMOSTATS, CONTROLS, DISPENSERS, RECEPTACLES, AND THE HIGHEST OPERABLE PART OF OTHER OPERABLE EQUIPMENT SHALL BE PLACED NO HIGHER THAN 48" ABOVE THE FLOOR AND WITHIN THE REACH RANGES REQUIRED
RECEPTACLES OF ELECTRICAL AND COMMUNICATIONS SYSTEM ON WALLS SHALL BE MOUNTED NO LESS THAN 15" ABOVE THE FLOOR.
EXCEPTION: THESE REQUIREMENTS DO NOT APPLY WHERE THE USE OF SPECIAL EQUIPMENT DICTATES OTHERWISE OR WHERE ELECTRICAL AND COMMUNICATIONS SYSTEMS RECEPTACLES ARE NOT NORMALLY INTENDED FOR USE BY BUILDING OCCUPANTS.
FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS NO MORE THAN 44" ABOVE THE FLOOR.
OPERATION: CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBF.
GRAB BARS, AND TUB AND SHOWER SEATS:
THE OUTSIDE DIAMETER OR WIDTH OF THE GRIPPING SURFACES OF A HANDRAIL OR GRAB BAR SHALL BE 1-1/4" TO 1-1/2", OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE.
IF HANDRAILS OR GRAB BARS ARE MOUNTED ADJACENT TO A WALL, THE SPACE BETWEEN THE WALL AND THE GRAB BAR SHALL BE 1-1/2".
BENDING STRESS IN A GRAB BAR OR SEAT INDUCED BY THE MAXIMUM BENDING MOMENT FROM THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE STRESS FOR THE MATERIAL OF THE GRAB BAR OR SEAT.
SHEAR STRESS INDUCED IN A GRAB BAR OR SEAT BY THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE SHEAR STRESS FOR THE MATERIAL OF THE GRAB BAR OR SEAT.
SHEAR FORCE INDUCED IN A FASTENER OR MOUNTING DEVICE FROM THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE LATERAL LOAD OF EITHER THE FASTENER OR MOUNTING DEVICE OR THE SUPPORTING STRUCTURE, WHICHEVER IS THE SMALLER ALLOWABLE LOAD.
TENSILE FORCE INDUCED IN A FASTENER BY A DIRECT TENSION FORCE OF 250 LBF PLUS THE MAXIMUM MOMENT FROM THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE WITHDRAWAL LOAD BETWEEN THE FASTENER AND THE SUPPORTING STRUCTURE.
ROTATION OF GRAB BARS WITHIN THEIR FITTINGS IS NOT ACCEPTABLE.
SHARP OR ABRASIVE ELEMENTS ARE NOT ACCEPTABLE FOR A HANDRAIL OR GRAB BAR OR ANY WALL OR OTHER SURFACE ADJACENT TO IT. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8".



REACH RANGES
SEE SECTION 308 OF THE TAS

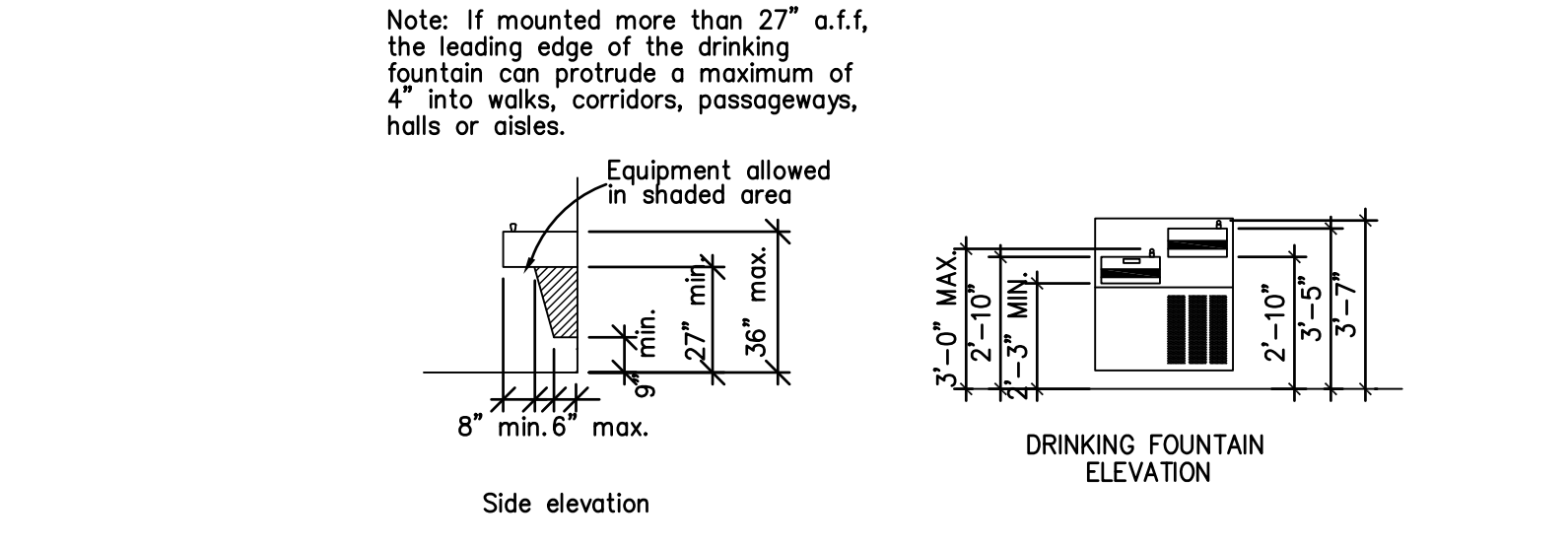


ACCESSIBLE ROUTE
SEE SECTION 206 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON ACCESSIBLE ROUTES.

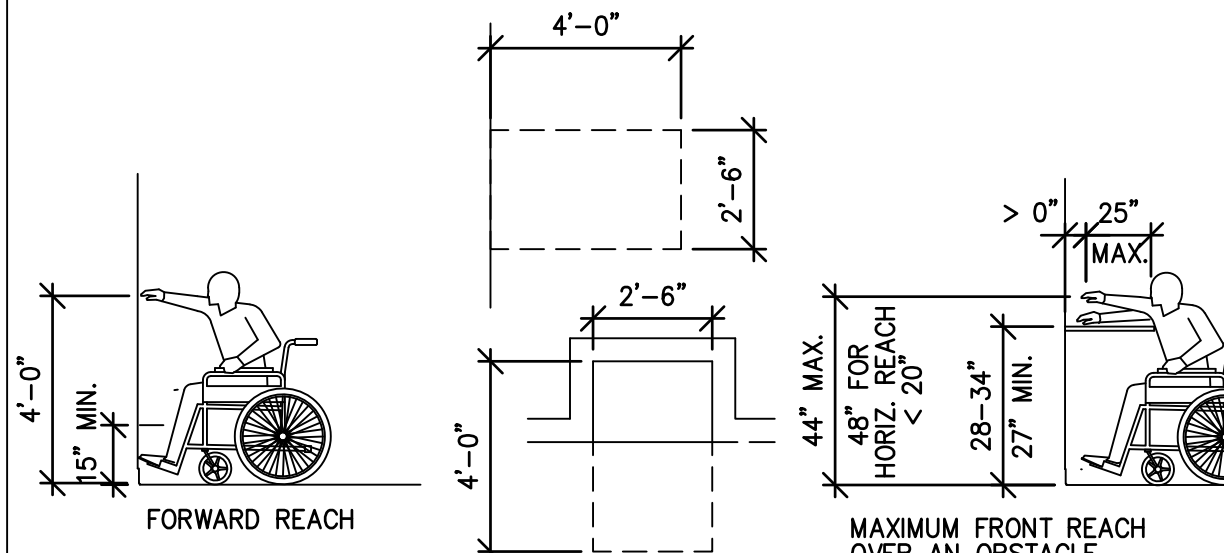


DOORS
SEE SECTION 404.2.4 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON DOORS.

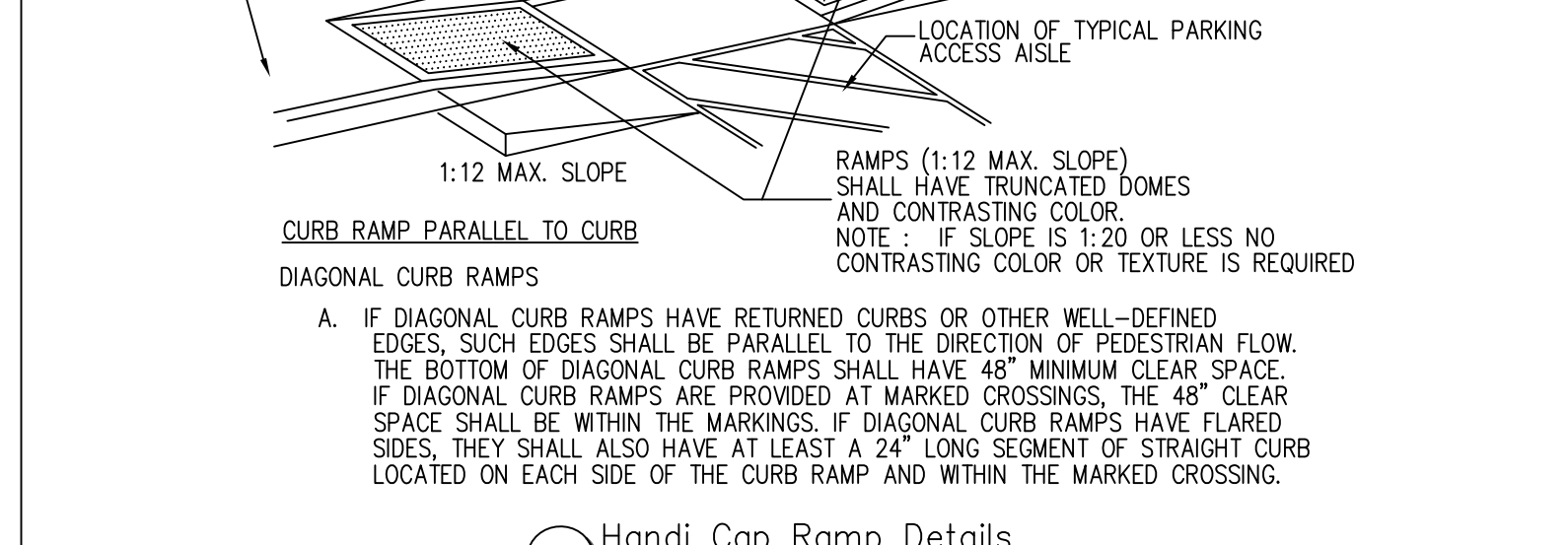
CONTROLS AND OPERATING MECHANISMS:
HEIGHT: SWITCHES, THERMOSTATS, CONTROLS, DISPENSERS, RECEPTACLES, AND THE HIGHEST OPERABLE PART OF OTHER OPERABLE EQUIPMENT SHALL BE PLACED NO HIGHER THAN 48" ABOVE THE FLOOR AND WITHIN THE REACH RANGES REQUIRED
RECEPTACLES OF ELECTRICAL AND COMMUNICATIONS SYSTEM ON WALLS SHALL BE MOUNTED NO LESS THAN 15" ABOVE THE FLOOR.
EXCEPTION: THESE REQUIREMENTS DO NOT APPLY WHERE THE USE OF SPECIAL EQUIPMENT DICTATES OTHERWISE OR WHERE ELECTRICAL AND COMMUNICATIONS SYSTEMS RECEPTACLES ARE NOT NORMALLY INTENDED FOR USE BY BUILDING OCCUPANTS.
FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS NO MORE THAN 44" ABOVE THE FLOOR.
OPERATION: CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBF.
GRAB BARS, AND TUB AND SHOWER SEATS:
THE OUTSIDE DIAMETER OR WIDTH OF THE GRIPPING SURFACES OF A HANDRAIL OR GRAB BAR SHALL BE 1-1/4" TO 1-1/2", OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE.
IF HANDRAILS OR GRAB BARS ARE MOUNTED ADJACENT TO A WALL, THE SPACE BETWEEN THE WALL AND THE GRAB BAR SHALL BE 1-1/2".
BENDING STRESS IN A GRAB BAR OR SEAT INDUCED BY THE MAXIMUM BENDING MOMENT FROM THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE STRESS FOR THE MATERIAL OF THE GRAB BAR OR SEAT.
SHEAR STRESS INDUCED IN A GRAB BAR OR SEAT BY THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE SHEAR STRESS FOR THE MATERIAL OF THE GRAB BAR OR SEAT.
SHEAR FORCE INDUCED IN A FASTENER OR MOUNTING DEVICE FROM THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE LATERAL LOAD OF EITHER THE FASTENER OR MOUNTING DEVICE OR THE SUPPORTING STRUCTURE, WHICHEVER IS THE SMALLER ALLOWABLE LOAD.
TENSILE FORCE INDUCED IN A FASTENER BY A DIRECT TENSION FORCE OF 250 LBF PLUS THE MAXIMUM MOMENT FROM THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE WITHDRAWAL LOAD BETWEEN THE FASTENER AND THE SUPPORTING STRUCTURE.
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SHARP OR ABRASIVE ELEMENTS ARE NOT ACCEPTABLE FOR A HANDRAIL OR GRAB BAR OR ANY WALL OR OTHER SURFACE ADJACENT TO IT. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8".



Drinking Fountains
See section 602 of the TAS for additional requirements on drinking fountains.

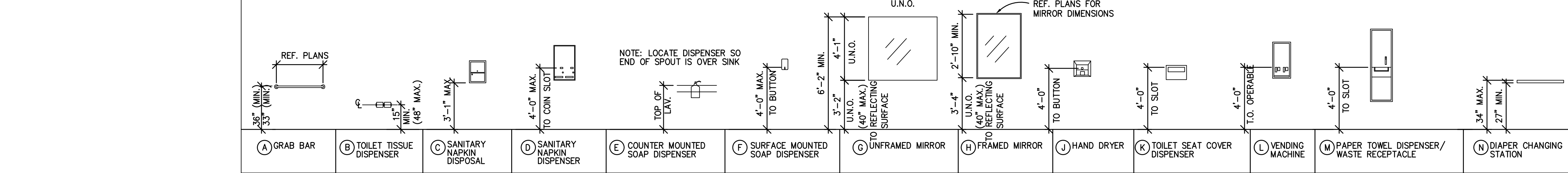


REACH RANGES, CONT.
SEE SECTION 308 OF THE TAS FOR ADDITIONAL REQUIREMENTS.

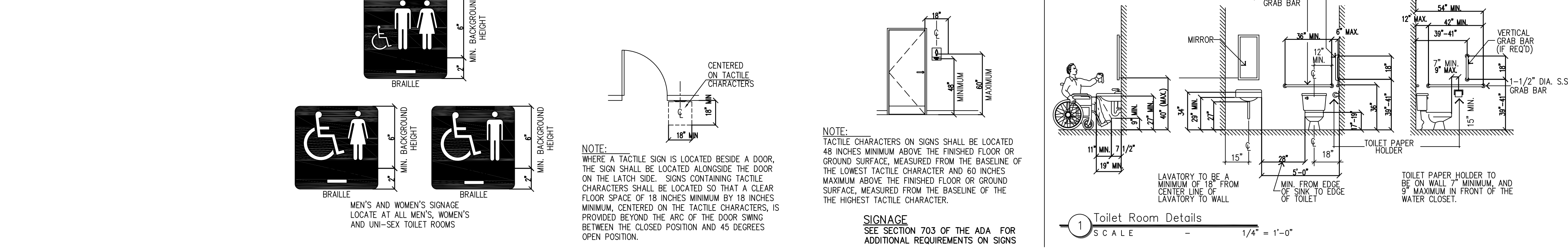


SEE SECTION 705 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON DETECTABLE WARNINGS AND TRUNCATED DOMES.

CONTROLS AND OPERATING MECHANISMS:
HEIGHT: SWITCHES, THERMOSTATS, CONTROLS, DISPENSERS, RECEPTACLES, AND THE HIGHEST OPERABLE PART OF OTHER OPERABLE EQUIPMENT SHALL BE PLACED NO HIGHER THAN 48" ABOVE THE FLOOR AND WITHIN THE REACH RANGES REQUIRED
RECEPTACLES OF ELECTRICAL AND COMMUNICATIONS SYSTEM ON WALLS SHALL BE MOUNTED NO LESS THAN 15" ABOVE THE FLOOR.
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FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS NO MORE THAN 44" ABOVE THE FLOOR.
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GRAB BARS, AND TUB AND SHOWER SEATS:
THE OUTSIDE DIAMETER OR WIDTH OF THE GRIPPING SURFACES OF A HANDRAIL OR GRAB BAR SHALL BE 1-1/4" TO 1-1/2", OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING SURFACE.
IF HANDRAILS OR GRAB BARS ARE MOUNTED ADJACENT TO A WALL, THE SPACE BETWEEN THE WALL AND THE GRAB BAR SHALL BE 1-1/2".
BENDING STRESS IN A GRAB BAR OR SEAT INDUCED BY THE MAXIMUM BENDING MOMENT FROM THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE STRESS FOR THE MATERIAL OF THE GRAB BAR OR SEAT.
SHEAR STRESS INDUCED IN A GRAB BAR OR SEAT BY THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE SHEAR STRESS FOR THE MATERIAL OF THE GRAB BAR OR SEAT.
SHEAR FORCE INDUCED IN A FASTENER OR MOUNTING DEVICE FROM THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE LATERAL LOAD OF EITHER THE FASTENER OR MOUNTING DEVICE OR THE SUPPORTING STRUCTURE, WHICHEVER IS THE SMALLER ALLOWABLE LOAD.
TENSILE FORCE INDUCED IN A FASTENER BY A DIRECT TENSION FORCE OF 250 LBF PLUS THE MAXIMUM MOMENT FROM THE APPLICATION OF 250 LBF SHALL BE LESS THAN THE ALLOWABLE WITHDRAWAL LOAD BETWEEN THE FASTENER AND THE SUPPORTING STRUCTURE.
ROTATION OF GRAB BARS WITHIN THEIR FITTINGS IS NOT ACCEPTABLE.
SHARP OR ABRASIVE ELEMENTS ARE NOT ACCEPTABLE FOR A HANDRAIL OR GRAB BAR OR ANY WALL OR OTHER SURFACE ADJACENT TO IT. EDGES SHALL HAVE A MINIMUM RADIUS OF 1/8".



REF. PLANS FOR MIRROR DIMENSIONS



SIGNAGE
SEE SECTION 703 OF THE ADA FOR ADDITIONAL REQUIREMENTS ON SIGNS

CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. E.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY COORDINATED AND PROFESSIONALLY FINISHED TENANT SPACE.

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ACCESSIBLE DETAILS
1.05

CHECKED BY: Staff
DRAWN BY: Staff
DATE: JULY 26, 2024
SCALE: PER PLAN
PROJECT No.: TLL 2402
SHEET TITLE

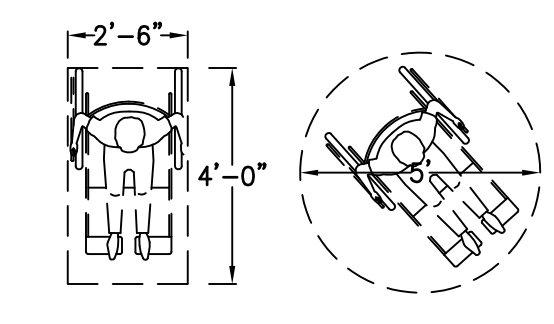
ACCESSIBLE DETAILS
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BIDDING QUESTIONS CONTACT 920-757-1486

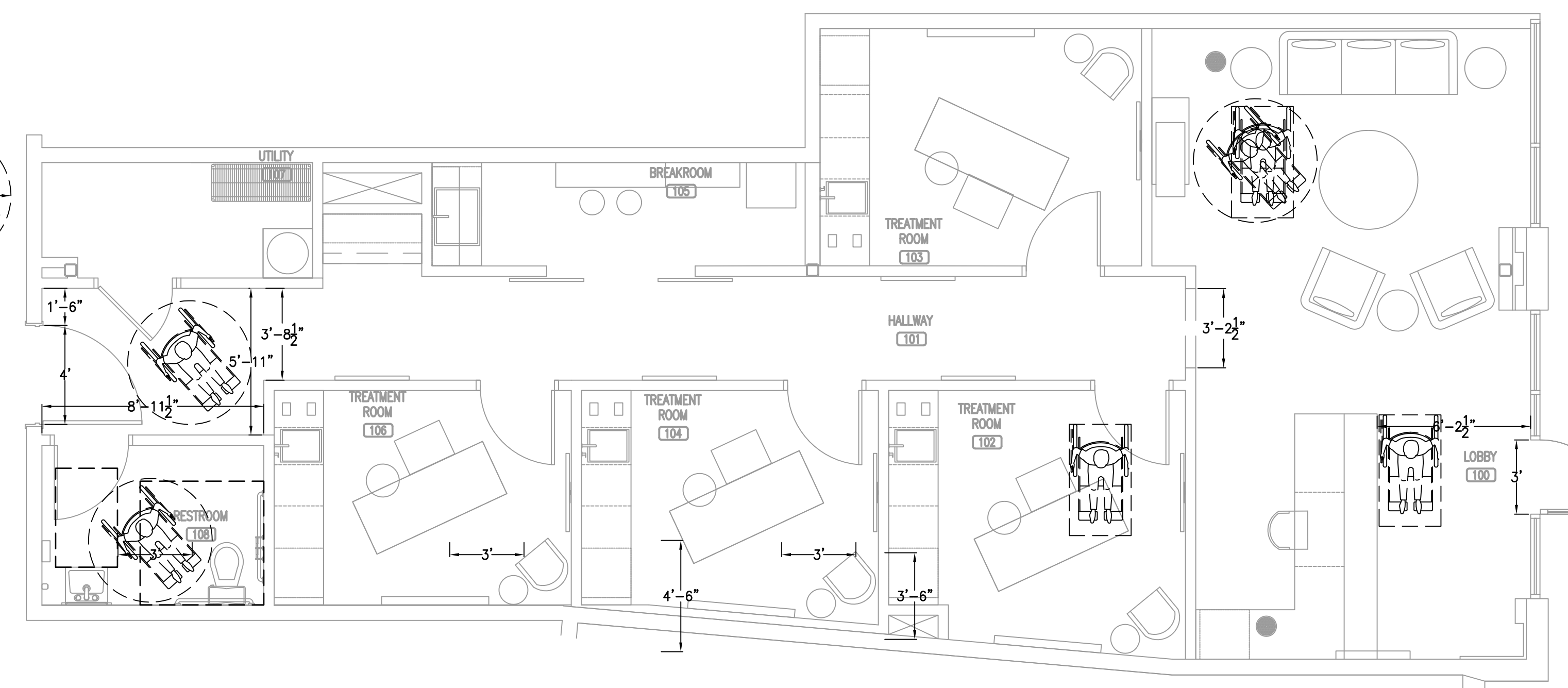
CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. G.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

ISSUED / REVISIONS:

ENGINEERING AND DESIGN PLLC
 PO Box 213 (McIlhenny)
 4236 HWY 3630
 Annville, KY 40402
 Phone (606) 364-2886
 Fax (606) 364-5100
 E-Mail: eric@emrengineers.com
 Web Address: emrengineers.com
 FIRM 23179



G.C. SHALL BE RESPONSIBLE FOR ACQUIRING AND INSTALLING NEW TACTILE EXIT SIGNS. A TACTILE SIGN STATING EXIT AND COMPLYING WITH CHAPTER 11 OR BUILDING CODE SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN AREA OF REFUGE, AN EXTERIOR AREA FOR ASSISTED RESCUE, AN EXIT STAIRWAY, AN EXIT RAMP, AN EXIT PASSAGEWAY AND THE EXIT DISCHARGE. SEE CHAPTER 7 OF ACCESSIBILITY CODE.



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

BIDDING QUESTIONS CONTACT 920-757-1486

CHECKED BY: Staff
 DRAWN BY: Staff
 DATE: JULY 26, 2024
 SCALE: PER PLAN
 PROJECT No.: TLL 2402
 SHEET TITLE

ACCESSIBLE PLAN

SHEET No.

1.06

LOOK LAB

4164 EAST 8TH PL
 DENVER, CO 80220-3955

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. G.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

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 Fort Worth, TX 76140
 FIRM 23179



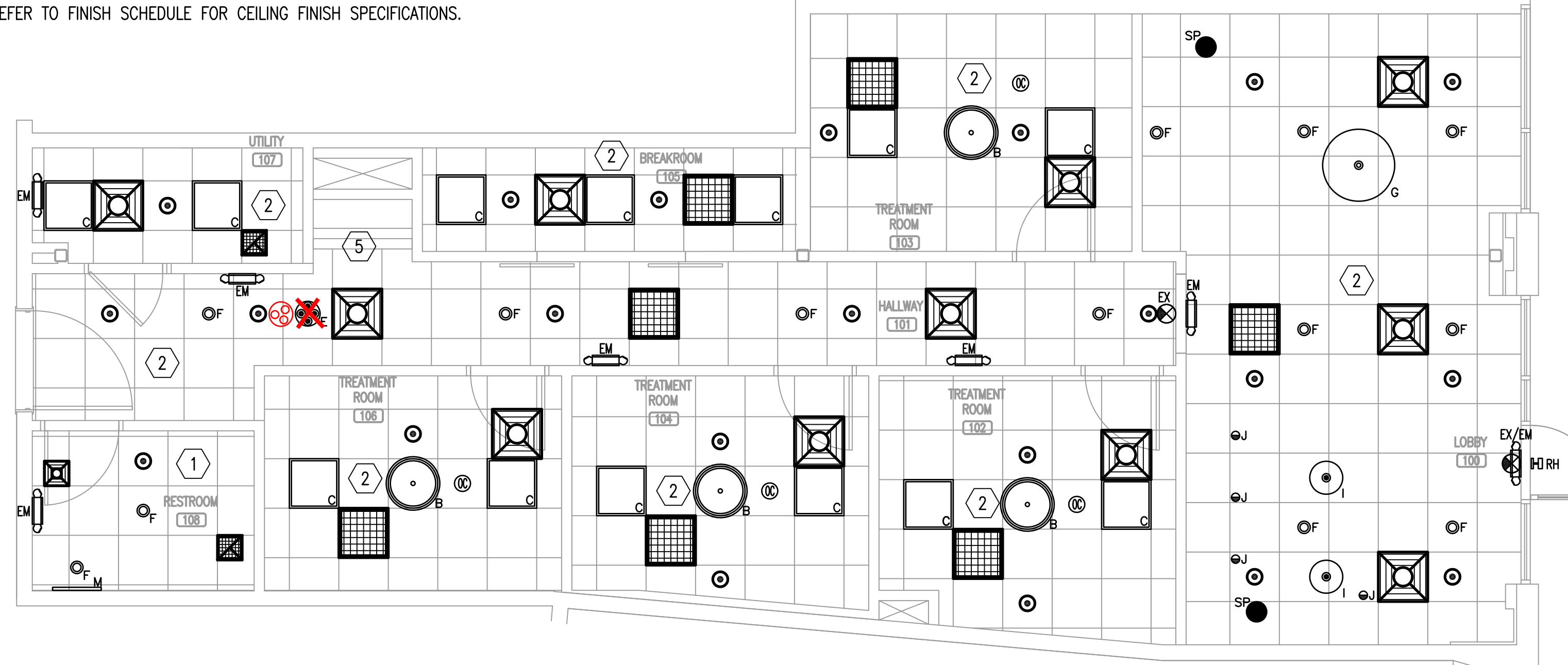
	CHANDELIER
	CHANDELIER
	2X2 LED RECESSED TROFFER
	4" PENDANT ORDER 4 LIGHTS + 1 CANOPY) ORDER 3 LIGHTS
	6" RECESSED CAN LIGHTS
	CHANDELIER
	CHANDELIER
	BUBBLE PENDANT
	4" RECESSED WALLWASH ACCENT LIGHTS
	CHANDELIER
	CHANDELIER
	LED LIT MIRROR
	SCONCE WALL LIGHT
	CLUSTER LIGHTING
	EMERGENCY LIGHT WITH 90 MINUTE BATTERY BACKUP MOUNT BOTTOM OF FIXTURE 8'-0" AFF
	EMERGENCY LIGHT REMOTE EXTERIOR HEAD
	EXIT SIGN
	DIRECTIONAL EXIT SIGN
	EMERGENCY LIGHT WITH 90 MINUTE BATTERY BACKUP AND EXIT SIGN. MOUNT 12" ABOVE DOOR
	CEILING MOUNTED SPEAKER, TRIM TO MATCH SURFACE PROVIDED BY OWNER, INSTALLED BY G.C.
	FULLY CONCEALED SPRINKLER HEAD
	24"x24" SUPPLY AIR DIFFUSER
	12"x12" SUPPLY AIR DIFFUSER
	EXHAUST FAN
	24"x24" RETURN AIR GRILL

REFLECTED CEILING LEGEND

RCP NOTES	
LIGHTING	
<ul style="list-style-type: none"> USE PLANS FIXTURE SCHEDULE ALL FIXTURES, SENSORS, AND DIMMERS ARE SUPPLIED AND INSTALLED BY GC/EC 	
SPEAKERS - TBD TOTAL WITHIN SUITE	
<ul style="list-style-type: none"> TBD IN-CEILING SPEAKER PROVIDED BY OWNER'S VENDOR & INSTALLED BY OWNER'S VENDOR LOCATIONS <ul style="list-style-type: none"> 1 OR 2 IN LOBBY 0 OR 1 IN FOYER 2 IN HALLWAY 1 PER RESTROOM 1 PER BREAKROOM 1 PER TREATMENT ROOM ALL GRILLES AND DIFFUSERS TO BE FACTORY WHITE. 	

CEILING FINISHES	
1	ACT2 ARMSTRONG, DUNE, 1775, TEGULAR 24" X 24" X 5/8" SUPRAFINE XL 9/16" GRID, FACTORY WHITE MOUNTED AT 9'-0"
2	ACT1 ARMSTRONG, DUNE, 1775, TEGULAR 24" X 24" X 5/8" SUPRAFINE XL 9/16" GRID, FACTORY WHITE MOUNTED AT 10'-0"
3	GYP CEILINGS, EXISTING HEIGHT TO REMAIN, PAINTED P75, DEW383 COOL DECEMBER EGGSHELL
4	NEW GYP CEILINGS, MOUNTED AT 10'-0", PAINTED P75, DEW383 COOL DECEMBER EGGSHELL
5	DROPPED CEILING HEADER FOR BUILT IN ACCENT CABINET AT 9'-0" (SEE ELEVATIONS)
6	DROPPED CEILING HEADER FOR BUILT IN ACCENT CABINET AT 7'-0" (SEE ELEVATIONS) PER CABINET MANUFACTURER REQUIREMENTS.

ALL FINISHES ARE NOT NECESSARILY IN USE. IF CEILING HEIGHT, DUE TO SITE CONDITIONS, IS NOT ATTAINABLE, GC TO DISCUSS FINISHED HEIGHT WITH CONSTRUCTION MANAGER. REFER TO FINISH SCHEDULE FOR CEILING FINISH SPECIFICATIONS.



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

BIDDING QUESTIONS CONTACT 920-757-1486

LOOK LAB
 4164 EAST 8TH PL
 DENVER, CO 80220-3955

CHECKED BY:	Staff
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SHEET TITLE	

REFLECTED CEILING PLAN

SHEET No.

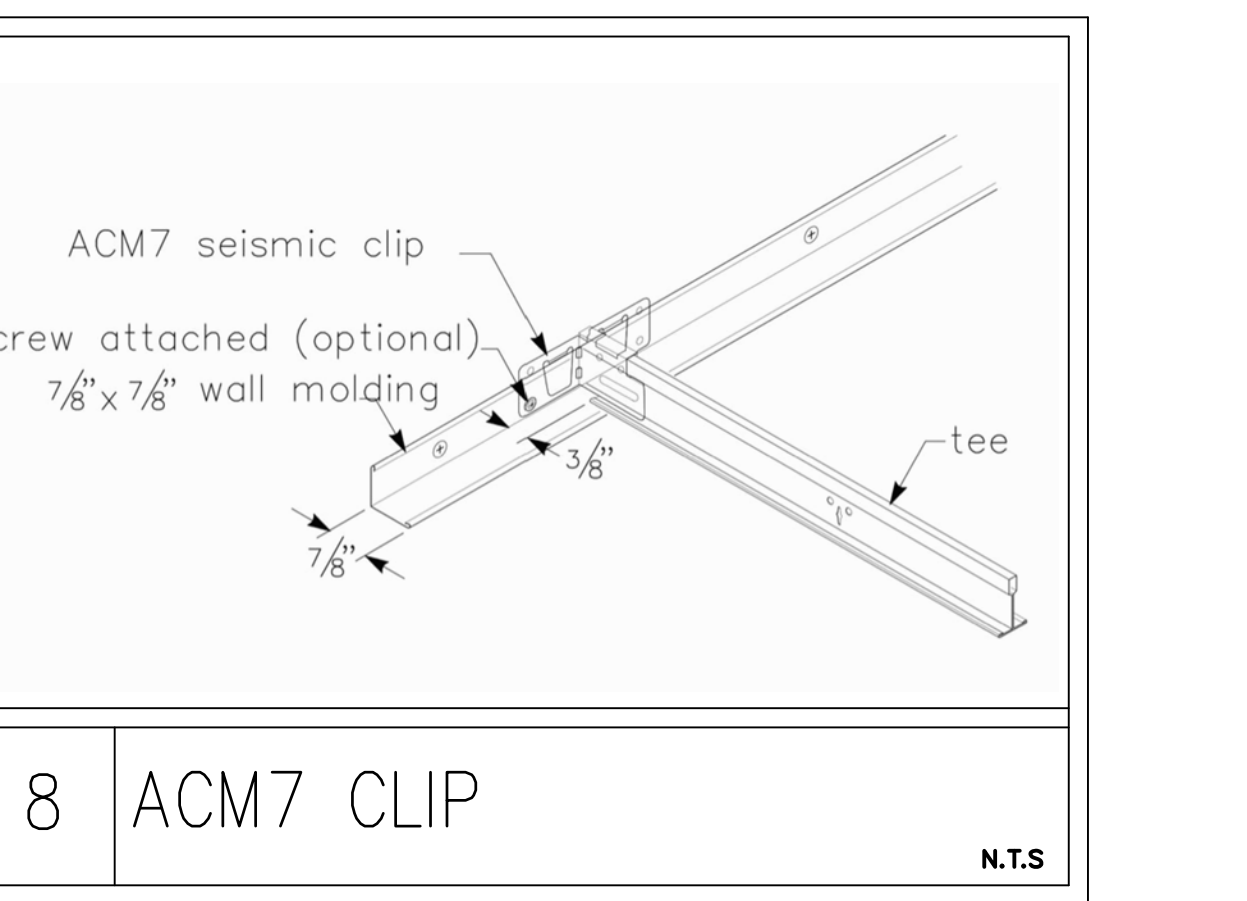
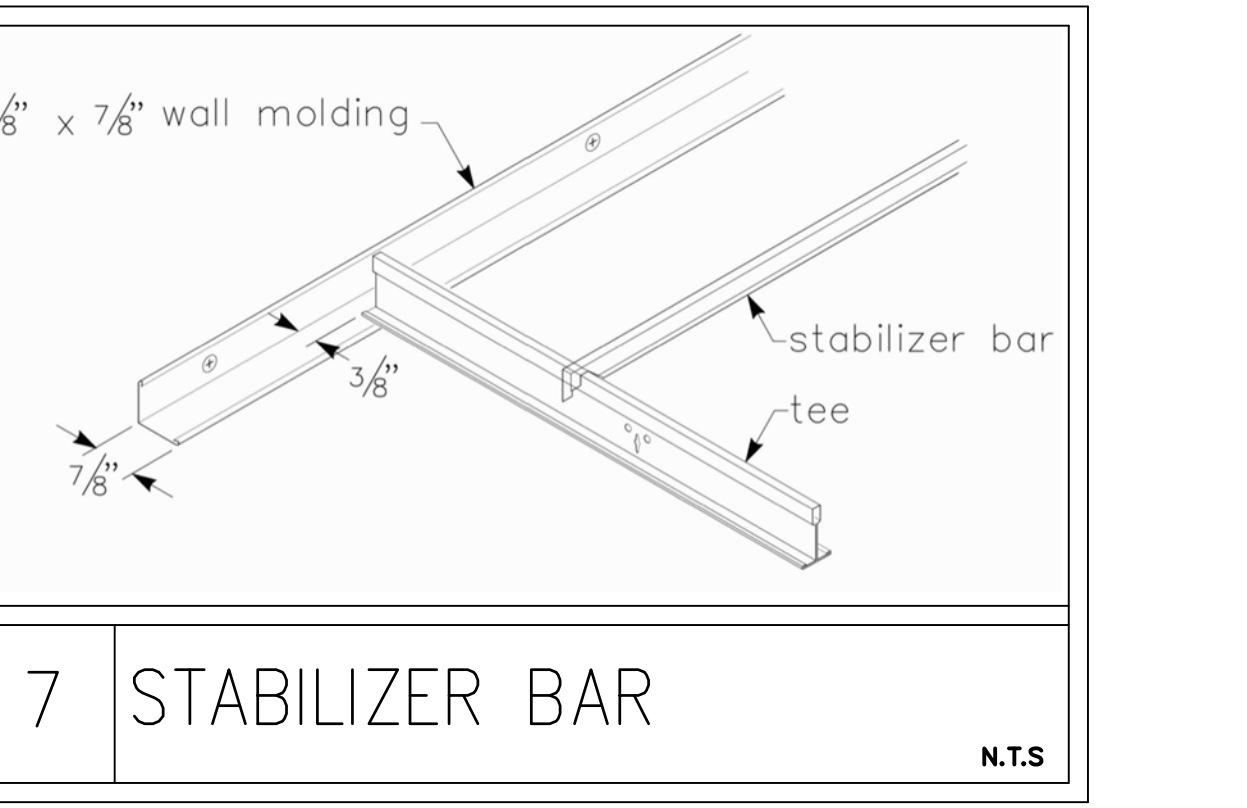
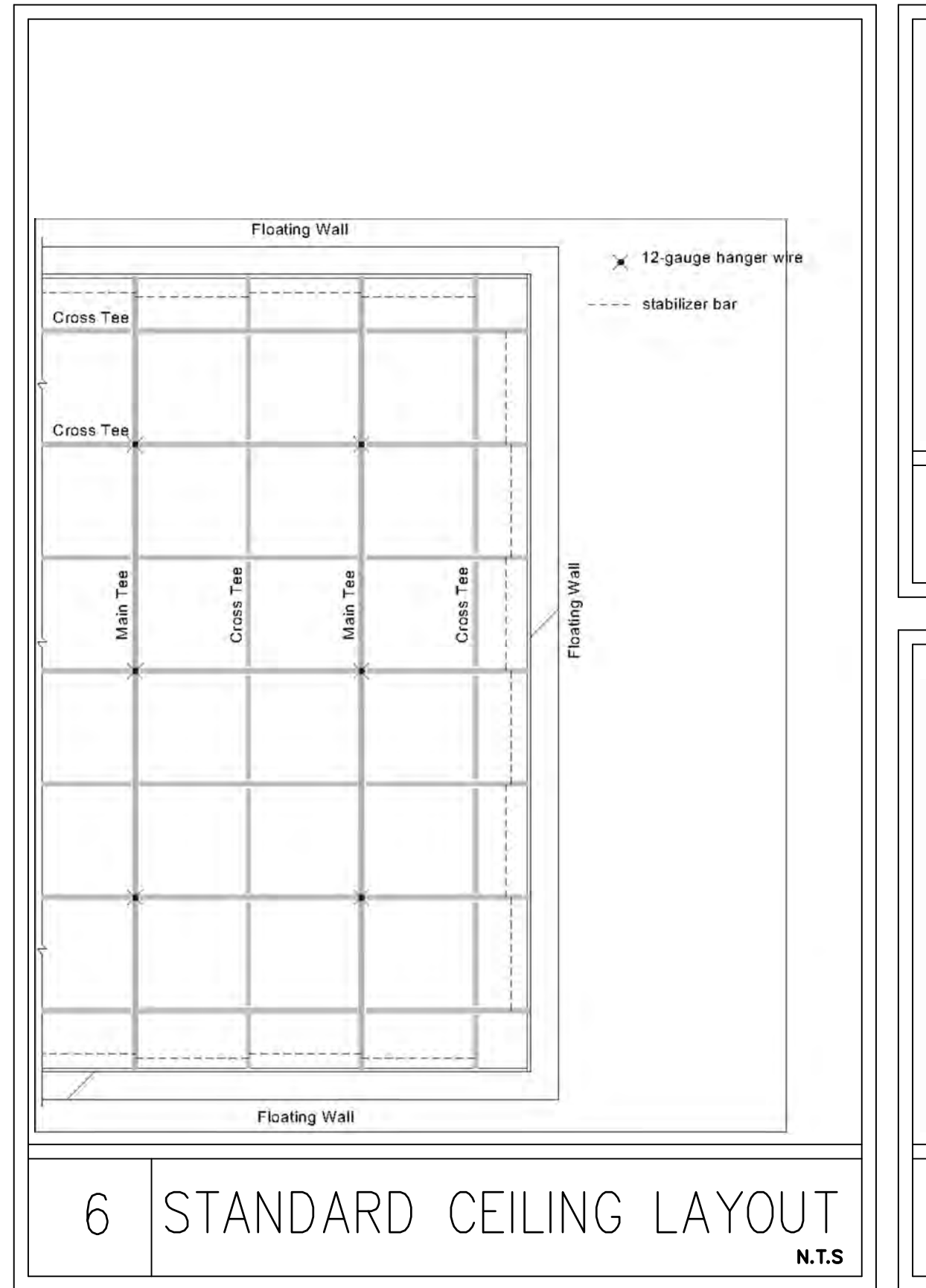
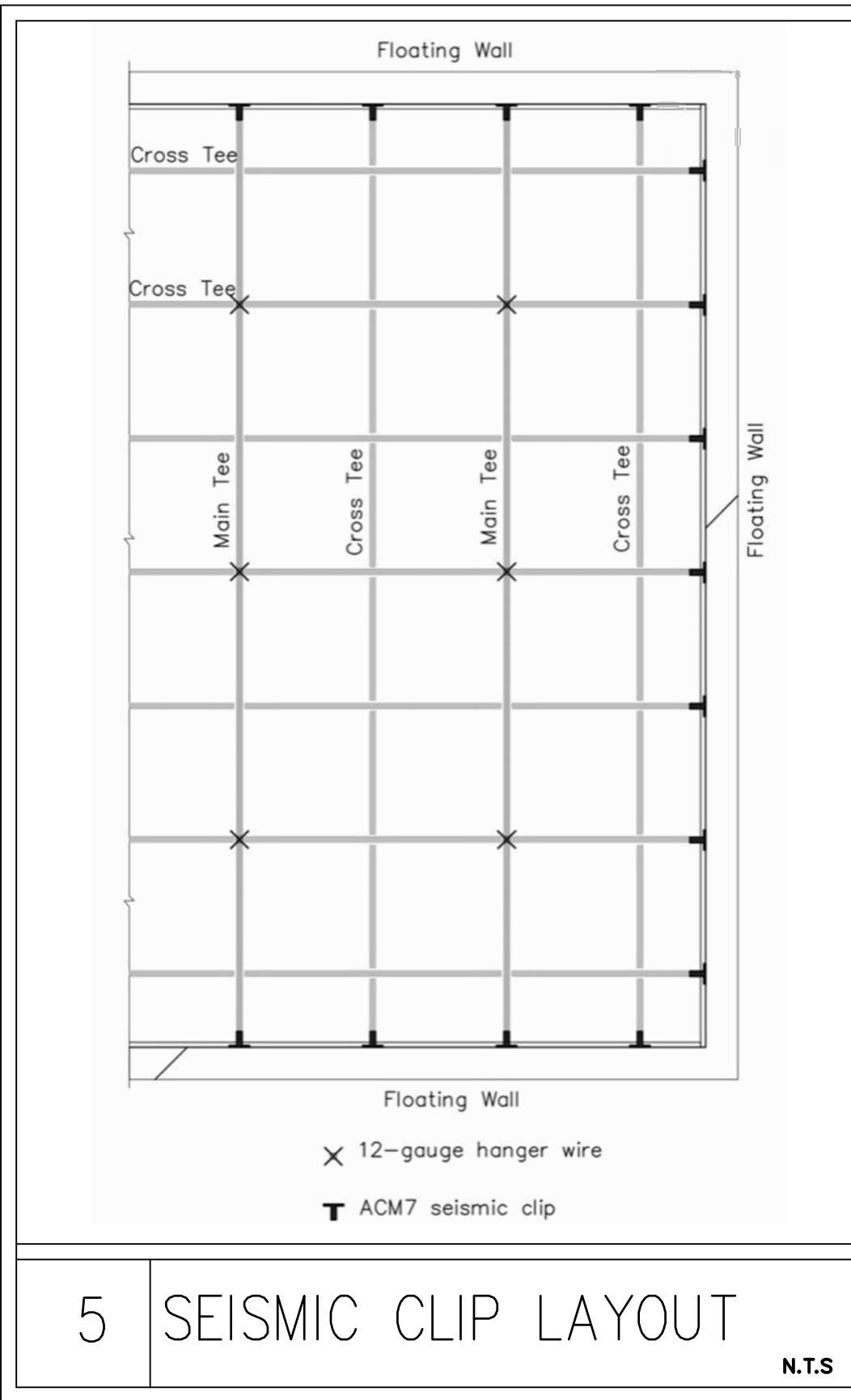
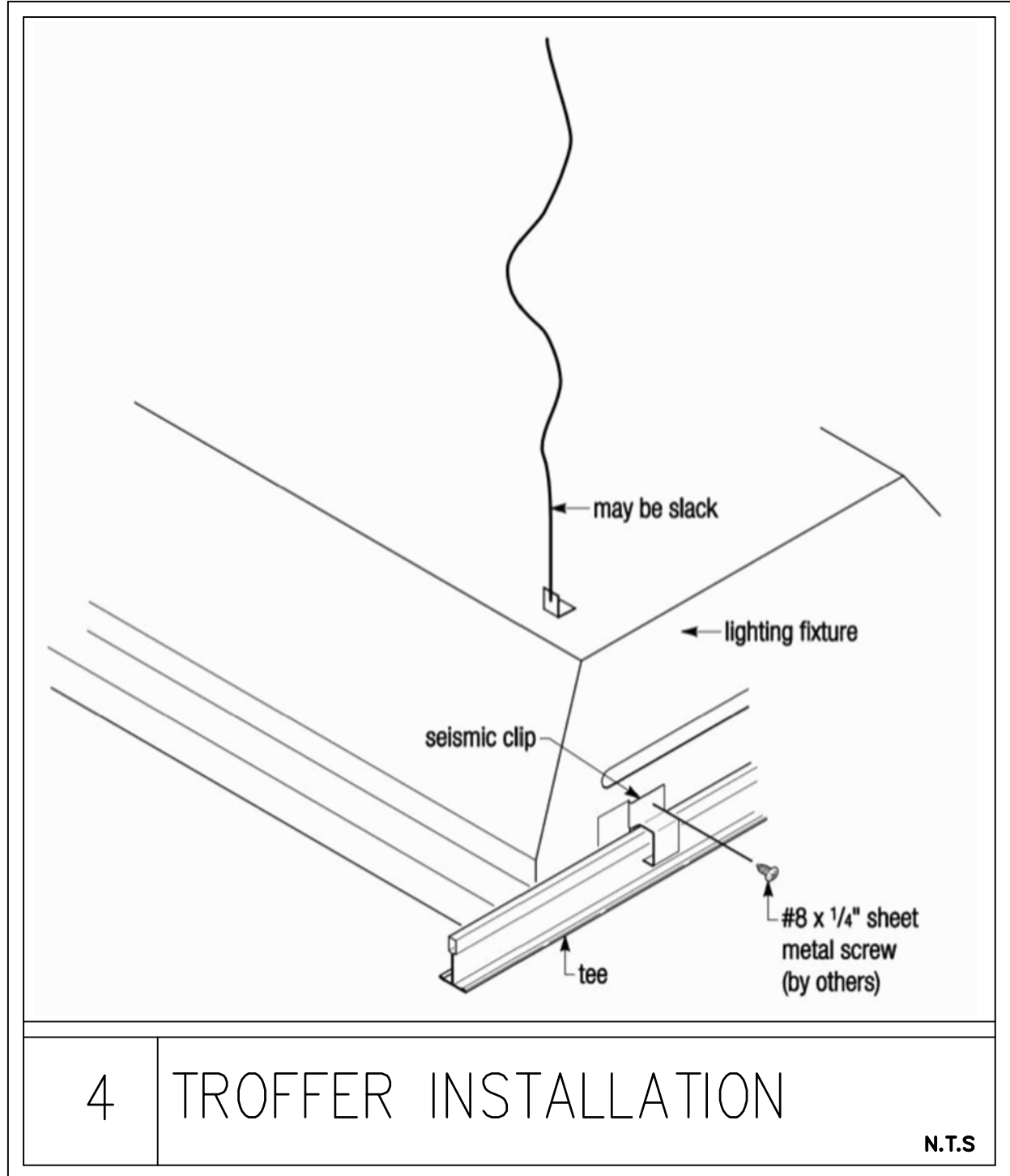
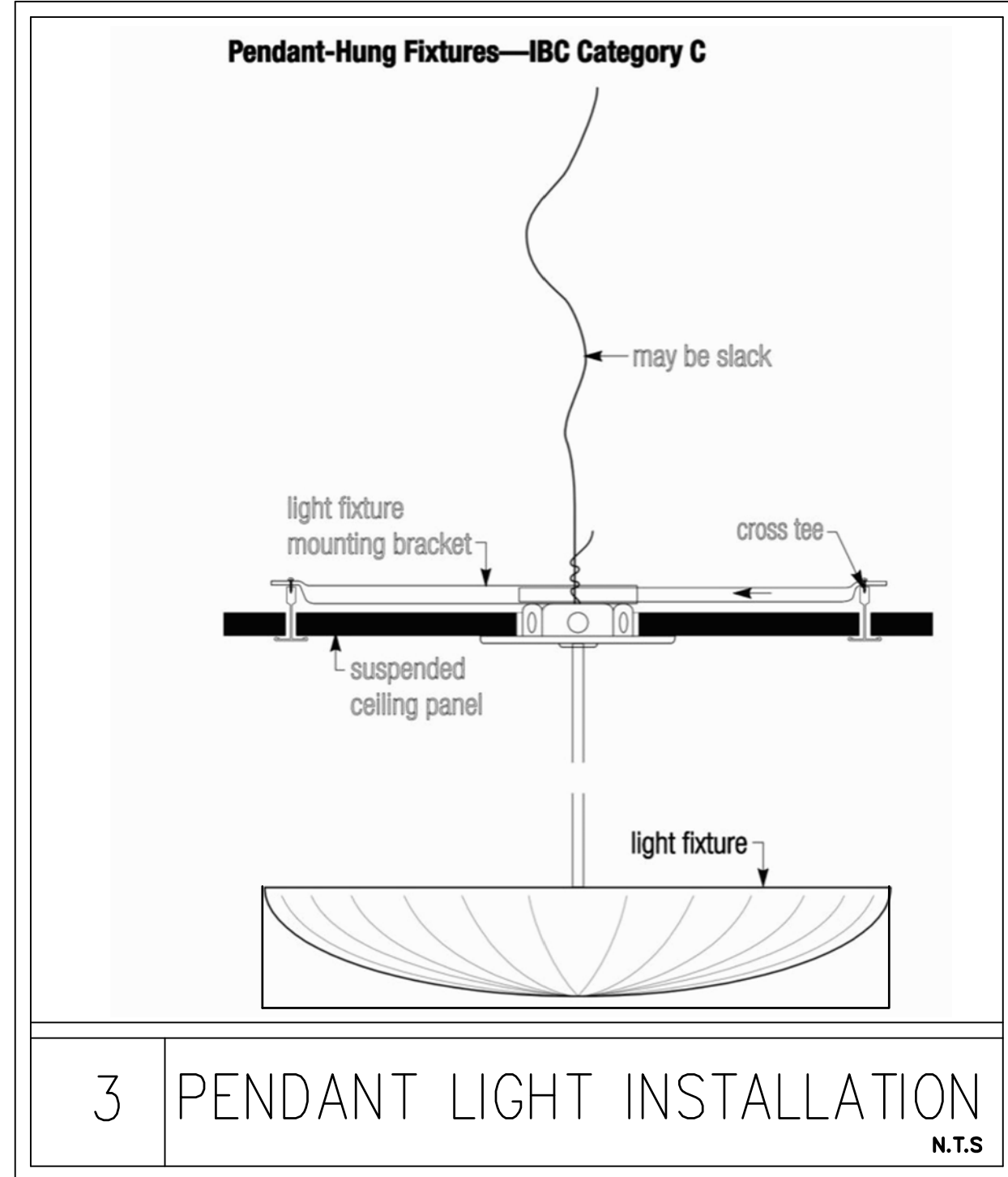
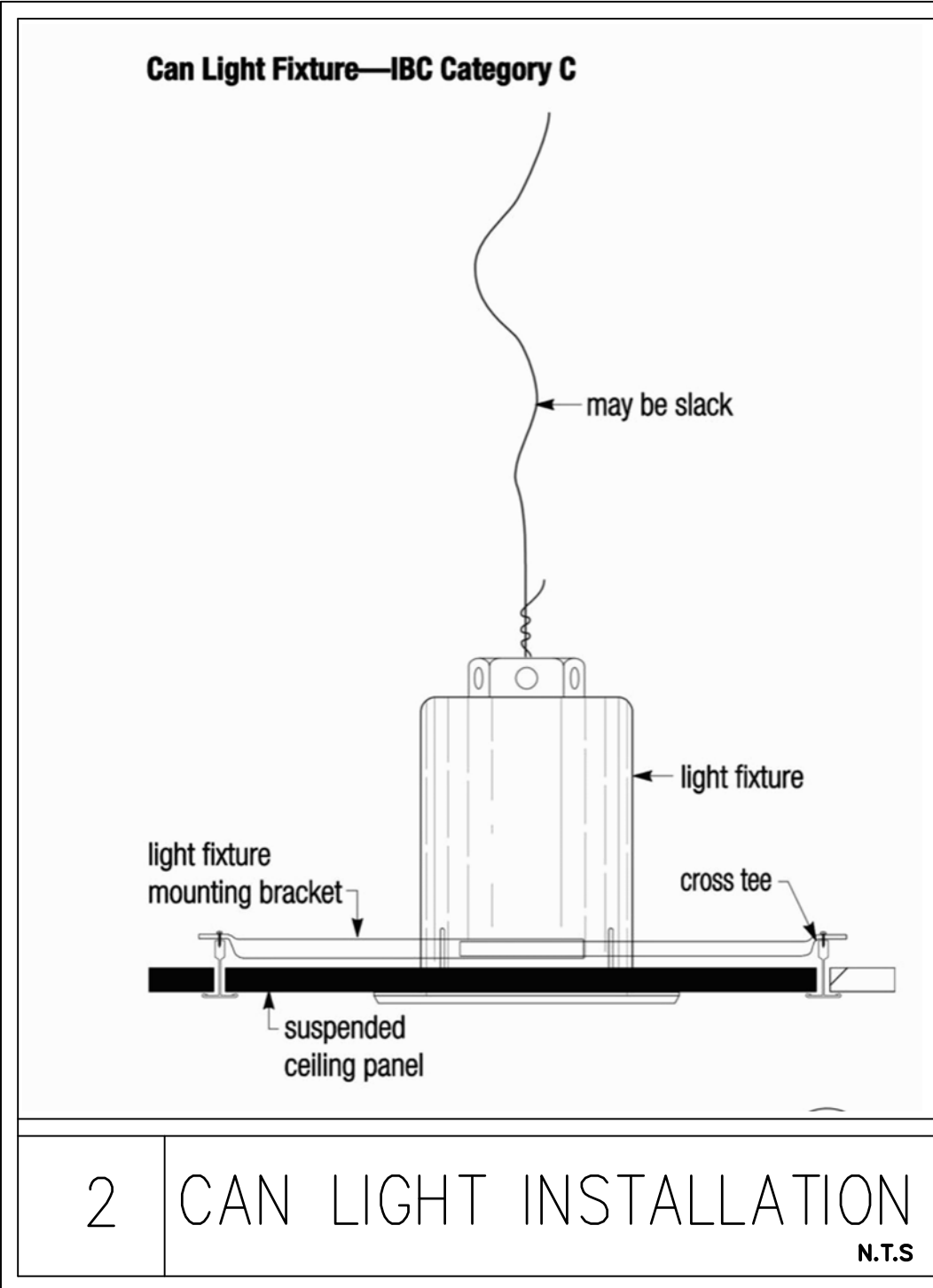
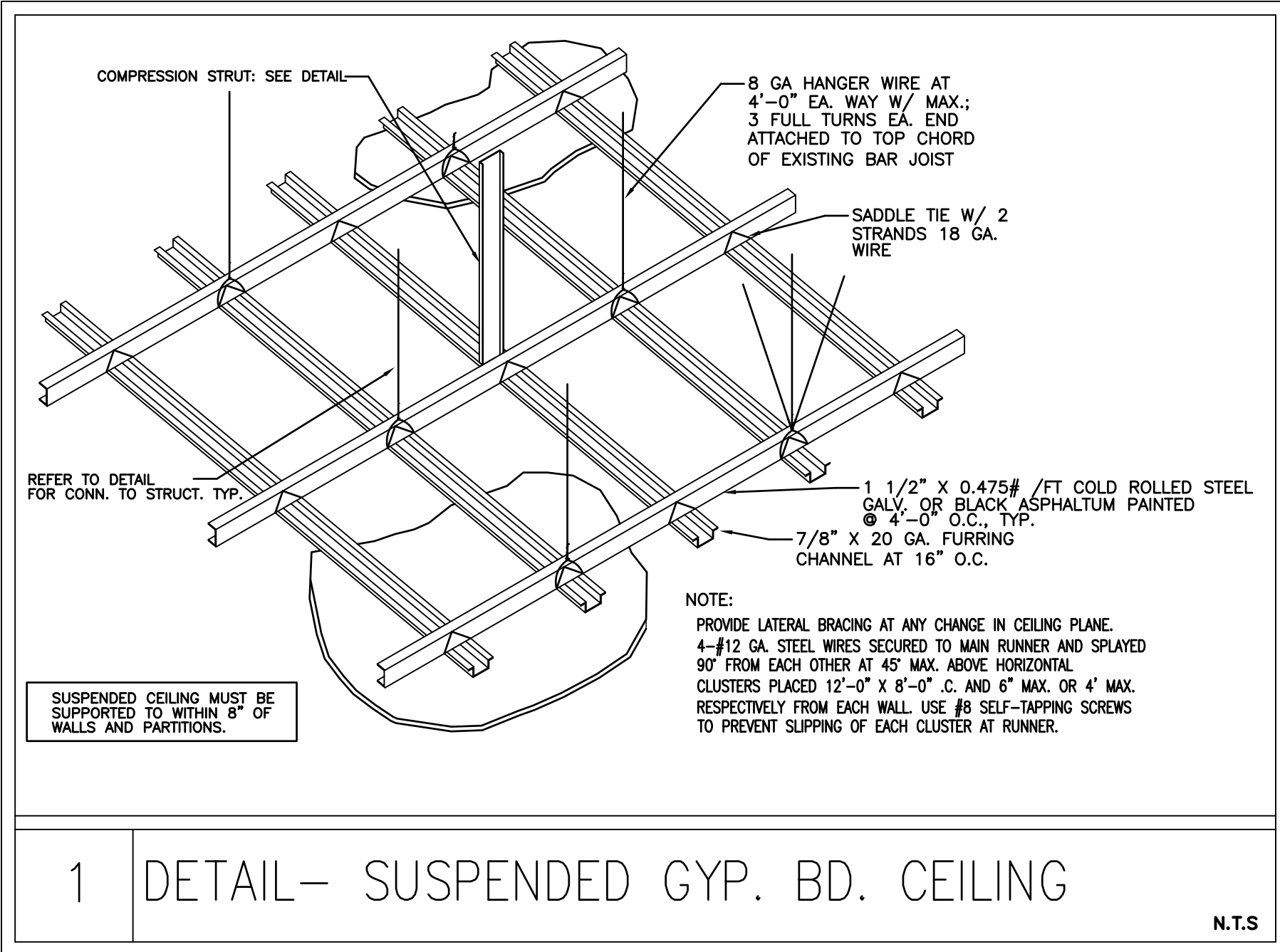
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SEISMIC APPLICATION REQUIREMENTS		NOTE: INTERIOR PARTITIONS CANNOT BE CONNECTED TO CEILING GRID.	
BASIC CONNECTIONS PERIMETER AND LATERAL SPLAY BRACING	IBC CATEGORY C	BASIC CONNECTIONS PERIMETER AND LATERAL SPLAY BRACING	IBC CATEGORY C
MINIMUM INTERSECTION STRENGTH LIMITS ϕ MT / CT (3)	60 LBS	PARTITION ATTACHMENT	NOT ALLOWED
VERTICAL HANGER WIRE 12 GAUGE @ 4'-0" O.C.	REQUIRED	SEISMIC SEPARATION JOINT	NOT REQUIRED
CONNECTION DEVICE FROM VERTICAL WIRE TO THE SURFACE ABOVE MUST STAIN MIN 100lbs	NOT REQUIRED	RIGID BRACING FOR CEILING PLANE ELEVATION CHANGES	NOT REQUIRED
MAIN-TEE CLASSIFICATIONS	INTERMEDIATE OR HEAVY DUTY		
1 IN 6 MAX PLUMB OF VERTICAL HANGER WIRES	REQUIRED		
PERIMETER VERTICAL HANGER WIRES NOT MORE THAN 8" FROM WALL	NOT REQUIRED UNLESS $7/8"$		
GRID END/WALL CLEARANCE	MIN 3/8"		
PERIMETER CLOSURE (MOLDING) WIDTH	MIN 7/8" OR USE PER WIRES		
GRID CONNECTION TO PERIMETER ATTACHED ON TWO ADJACENT WALLS	NOT PERMITTED		
PERIMETER TEE ENDS TIED TOGETHER AT PERIMETERS	REQUIRED		
HORIZONTAL RESTRAINT (SPLAY WIRES OR RIGID BRACING) WITHIN 2" OF INTERSECTION AND SPLAYED 90° APART AT 45°.	NOT REQUIRED		
		LIGHT FIXTURE ATTACHMENT	IBC CATEGORY D, E, F
		LIGHT FIXTURE (ALL TYPES) MECHANICALLY ATTACHED REQUIRED TO GRID PER NEC 410-16 (TWO PER FIXTURE UNLESS INDEPENDENTLY SUPPORTED)	REQUIRED
		-SURFACE-MOUNTED FIXTURES ATTACHED TO GRID	NOT REQUIRED
		-PENDANT-HUNG FIXTURES DIRECTLY SUPPORTED FROM STRUCTURE WITH 3-GAUGE WIRE (OR APPROVED ALTERNATIVE)	REQUIRED
		-RIGID LAY-IN CAN LIGHT FIXTURES	REQUIRED
		<math><10\text{lbs}</math> - ONE WIRE TO STRUCTURE (MAY BE SLACK)	REQUIRED
		10 TO 56 lbs - TWO WIRES FROM HOUSING TO STRUCTURE (MAY BE SLACK)	REQUIRED
		> 57 lbs - SUPPORTED DIRECTLY TO STRUCTURE BY APPROVED HANGERS	REQUIRED
		SERVICE APPLICATION	IBC CATEGORY D, E, F
		AIR TERMINALS	REQUIRED
		<math>< 20\text{lbs}</math> - POSITIVELY ATTACHED TO GRID	REQUIRED
		20 TO 56 lbs - POSITIVELY ATTACHED TO GRID AND TWO 12-GAUGE WIRES TO STRUCTURE (MAY BE SLACK)	REQUIRED
		>56 lbs - DIRECTLY SUPPORTED TO STRUCTURE	REQUIRED
		CABLE TRAYS AND ELECTRICAL CONDUIT INDEPENDENTLY SUPPORTED AND BRACED	REQUIRED
		SPRINKLER HEADS AND OTHER PENETRATION CLEARANCES	3/8" ALL SIDES

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BIDDING QUESTIONS CONTACT 920-757-1486

LOOK LAB

4164 EAST 8TH PL
 DENVER, CO 80220-3955

CHECKED BY: Staff
 DRAWN BY: Staff
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 SCALE: PER PLAN
 PROJECT No.: TLL 2402
 SHEET TITLE

CEILING DETAILS

SHEET No.

1.08

LOOK LAB – FINISH SCHEDULE

ITEM NUMBER	DESCRIPTION	MANUFACTURER	SERIES PRODUCT NUMBER	COLOR	SUPPLIED BY	INSTALLED BY	NOTES
PT1	PAINT	DUNN EDWARDS	DE6350	DARK ENGINE – EGGSHELL	GC	GC	DOOR AND FRAMES, BARN DOORS
PT2	PAINT	SHERWIN WILLIAMS	SW 9186	ELEPHANT EAR – EGGSHELL	GC	GC	BREAKROOM WALLS, HALLWAY WAINSCOT, paneled walls in LOBBY, BASEBOARDS IN FOYERS AND BREAKROOMS
PT3	PAINT	DUNN EDWARDS	DEW383	COOL DECEMBER – EGGSHELL SEMI-GLOSS	GC	GC	BASEBOARDS IN TREATMENT ROOMS AND RESTROOMS
PT5	PAINT	DUNN EDWARDS	DEW383	COOL DECEMBER-EGGSHELL	GC	GC	GYP CEILINGS THROUGHOUT
WB1	WOOD BOARD (1"x6" MDF)	GC TO SOURCE LOCALLY	GC TO SOURCE LOCALLY	GC TO SOURCE LOCALLY	GC	GC	PAINTED PT3 – TREATMENT ROOMS
WB2	WOOD BOARD (1"x6" MDF)	GC TO SOURCE LOCALLY	GC TO SOURCE LOCALLY	GC TO SOURCE LOCALLY	GC	GC	PAINTED PT2
WB3	WOOD BOARD (1"x6" POPULAR OR EQUAL)	GC TO SOURCE LOCALLY	GC TO SOURCE LOCALLY	GC TO SOURCE LOCALLY	GC	GC	PAINTED PT3 – RESTROOMS
WB4	WOOD BOARD (1"x6" POPULAR OR EQUAL) PRIMED AND READY FOR PAINT	GC TO SOURCE LOCALLY	GC TO SOURCE LOCALLY	GC TO SOURCE LOCALLY	GC	GC	BARN DOOR HEADER PAINTED PT2 – SEE ELEVATIONS
WB5	WOOD BOARD WOOD CASEWORK/TRIM PRIMED AND READY FOR PAINT	GC TO SOURCE LOCALLY	GC TO SOURCE LOCALLY	GC TO SOURCE LOCALLY	GC	GC	BARN DOOR FRAMES AND JAMBS, HALLWAY OPENINGS PAINTED PT2 SEE ELEVATIONS AND TRIM DETAIL 1/1.11
WP1	WALLPAPER	JF FABRICS	SEYCHELLES COLLECTION	35W9091, 8171	GC	GC	FOYER CONTACT: JEFF O'TOOLE – 1-480-522-8218
WP2	WALLPAPER	KOROSEAL	HOUSE OF TWEED	EMPIRE, HT21-12	GC	GC	HALLWAY ABOVE WAINSCOT, 52-54 IN WIDE, NO REPEAT SOLD BY YARD OR BOLT CONTACT: MICHAEL FOCKLER 480-404-1281
WP3	WALLPAPER	MADE	AESTHETICS	CAROLINA, CAR 53 CAVIAR	GC	GC	TREATMENT ROOMS, 51"W, NO REPEAT, SOLD BY YARD OR BOLT CONTACT: YAYZA BROWN – 1-480-702-1352
WP4	WALLPAPER	ASTEK	ILLUMINE	ARKROSE-SHADOW	GC	GC	RESTROOM WALLS, FULL HEIGHT, 52-54" WIDE, SOLD BY YARD CONTACT: ASTEK TO PURCHASE
WWP1	WOOD WALL PANELING – FULL HEIGHT	GC TO PURCHASE LOCALLY	GC TO PURCHASE LOCALLY	GC TO PURCHASE LOCALLY	GC	GC	LOBBY, SEE DETAIL 2/1.11 PAINTED PT2, FLOOR TO CEILING, TRIM OVER PAINTED GYP
WWP2	WOOD WALL PANELING – 3'-6" HEIGHT AFF	GC TO PURCHASE LOCALLY	GC TO PURCHASE LOCALLY	GC TO PURCHASE LOCALLY	GC	GC	HALLWAY, SEE DETAIL 2/1.11 PAINTED PT2, 3'-6"H, TRIM OVER PAINTED GYP
WWT1	BASE CAP MOLDING 11-16" X 1-3/8" PRIMED AND READY FOR PAINT	GC TO PURCHASE LOCALLY	GC TO PURCHASE LOCALLY	GC TO PURCHASE LOCALLY	GC	GC	PAINTED P2- PART OF WWP1 AND WWP2 SEE WALL PANELING DETAIL.
WWT2	ALEXANDRIA MOLDING 11-16" X 2-1/2" PRIMED AND READY FOR PAINT	GC TO PURCHASE LOCALLY	GC TO PURCHASE LOCALLY	GC TO PURCHASE LOCALLY	GC	GC	PAINTED P2- PART OF WWP1 AND WWP2 SEE WALL PANELING DETAIL.
WF1	WOOD FLOORING	DUCHATEAU	VINYL DELUXE LUXETECH 20 COLLECTION	SIGNATURE COLLECTION, HYDE VDG-HYD9-1	GC	GC	THROUGHOUT FLOORING TO BE INSTALLED HORIZONTALLY TO THE STOREFRONT, GC TO INSTALL A MIX OF PLANKS FROM ALL CARTONS. DO NOT INSTALL PER BOX.
TS1	TRANSITION STRIP	TBD	TBD	BLACK, LOW PROFILE	GC	GC	VINYL TO WOOD FLOORING TRANSITIONS ONLY
T1	TILE	VILLAGIO, FORME VID C2	OZARK BLACK, 3" X 12"	RECTIFIED PORCELAIN TILE	GC	GC	RESTROOM, UNDER SEATING AREA IN LOBBY CONTACT: STACEY BAGLO – 1-480-540-0967 JOINT SIZES 1/16 INSTALL-HERRINGBONE PATTERN
GT1	GROUT	CUSTOM BUILDING PRODUCTS	GROUT SOLUTIONS	SHADOW #644	GC	GC	JOINT SIZES 1/16
GT2	GROUT	CUSTOM BUILDING PRODUCTS	GROUT SOLUTIONS	ARCTIC WHITE #640	GC	GC	JOINT SIZES 1/16 (FOR GREEN CALACATTA LARGE FORMAT WALL)
ACT1	CEILING TILE	ARMSTRONG DUNE, 1775, TEGULAR 24" X 24" X 5/8"	SUPRAFINE XL 9/16" GRID	FACTORY WHITE	GC	GC	TREATMENT ROOMS, LOBBY, HALLWAYS, FOYERS, & BREAKROOMS MOUNTED AT 10'-0"
ACT2	CEILING TILE	ARMSTRONG DUNE, 1775, TEGULAR 24" X 24" X 5/8"	SUPRAFINE XL 9/16" GRID	FACTORY WHITE	GC	GC	RESTROOMS, MOUNTED AT 9'-0"
WS1	WALL STONE	CATACATTA GREEN MARBLE, POLISHED PORCELANOSA, STONE, STANDARD FINISH WITH POLISHED EXPOSED EDGES	LARGE FORMAT SHEET 47 X 96 ALTERNATE SIZE OPTION 47 X 47 TILE	RUN SLAB & VEINING VERTICALLY, FLOOR TO CEILING, STONE TO BE CEILING, STONE TO BE STACKED IF MULTIPLE PIECES	GC	GC	ACCENT WALL IN LOBBY, ALONG HALLWAY ENTRANCE WALL, AND ABOVE HALLWAY HEADER IN LOBBY, NO WALL BASE ON THIS STONE WALL, LARGEST SIZE AVAILABLE, VEINS TO POINT IN ONE DIRECTION, INSTALL SLAB VERTICLE USE LEFTOVER FOR BACKSPLASH BETWEEN ACCENT CABINET AND UPPER CABINET. SEE DETAIL
WS2	WALL STONE	FCD PROVIDED AS PART OF MILLWORK PACKAGE	CARMEN AU71022 QUARTZ		OWNER/FCD	GC	TREATMENT ROOM COUNTER, & 2" CAP & BACKSPLASH GC TO CONFIRM EXACT LOCATIONS OF PLUMBING FIXTURES WITH FCD AT TIME OF ROUGH INSTALLATION, WALLS DIMENSIONS TO BE HELD-TO PER THE PLANS FOR FINISHED TO FINISHED DIMENSIONS
WS3	WALL STONE	FCD PROVIDED AS PART OF MILLWORK PACKAGE	BLACK ANDROS (LEATHER) GRANITE OR APPROVED ALTERNATE	BLACK STONE WITH LEATHER FINISH	OWNER/FCD	GC	HALLWAY CABINET COUNTER & POS COUNTERTOP WALLS DIMENSIONS TO BE HELD-TO PER THE PLANS FOR FINISHED TO FINISHED DIMENSIONS
SS1	SCHLUTER STRIP	SCHLUTER JOLLY	EDGE TRIM 3/8" X 10'	TEXTURED COLOR-COATED ALUMINUM MATTE	GC	GC	
VF1	VINYL FLOOR	CHILEWICH	BOUCLE	PEBBLE	GC	GC	WOVEN SURFACE TERRA STRAND, HEAVY COMMERCIAL 33 CLASS 1 GLUE DOWN METHOD CONTACT: PAULINA BUCHKOWSKI – 1-480-293-4138

NOTES

- GC TO INCLUDE COLOR MATCH CAULK FOR ALL SPLASHES AND CABINETRY DURING FINAL PAINTING.
- ALL FLOORING AND GROUT SHALL BE SEALED WATER TIGHT PER GOOD INDUSTRY STANDARDS.

FINISH REQUIREMENTS

WALL FLOOR AND CEILING SHALL NOT EXCEED FLAME SPREAD CLASSIFICATIONS IN TABLE 803.5 ALL APPLIED FINISHES SHALL MEET OR EXCEED THE FLAME SPREAD AND DEVELOPED SMOKE REQUIREMENTS AS SET FORTH IN THE BUILDING CODE.

CLASS A : FLAME SPREAD OF 0-25; SMOKE DEVELOPED 0-450
CLASS B : FLAME SPREAD OF 26-75; SMOKE DEVELOPED 0-450
CLASS C : FLAME SPREAD OF 76-200; SMOKE DEVELOPED 0-450

	A	B	C
B			

1 COAT OF TINTED PRIMER AND A MINIMUM OF TWO COATS OF PAINT SHALL BE APPLIED TO LEVEL FOUR FINISHED DRYWALL SURFACES IN A PROFESSIONAL MANNER SUCH AS TO PROVIDE A SMOOTH WASHABLE FINISHED SURFACE.

GC NOTE: WF1 WOOD DUCHATEAU FLOORING TO BE PURCHASED WITH LOOK LAB CODE. CONTACT PAULINA AT 1-480-293-4138 AT TIME OF ORDERING.

WALL SURFACE TEXTURE

THE REQUIRED WALL TEXTURE FOR SUCCESSFUL GRAPHIC APPLICATION AND ADHESION IS SMOOTH, PROPERLY PRIMED, PAINTED, AND CURED WALL BOARD THAT HAS LITTLE OR NO SURFACE VARIATION (LEVEL 4 FINISH). CERTAIN TYPES OF IMPERFECTIONS IN THE WALL WILL BE SEEN AFTER THE WALLPAPER IS APPLIED. OUR INSTALLATION CREWS CAN NOT BE GIVEN THE AUTHORITY TO PUT A HOLD ON A PROJECT OR DETERMINE IF THE WALL IS A LEVEL 4 FINISH. CONTRACTOR/FRANCHISEE/DECISION MAKER AGREES THAT THE WALL WILL BE PREPARED TO SPECIFICATIONS WHEN OUR TEAMS ARE SCHEDULED TO ARRIVE.

5 LEVELS OF DRYWALL FINISHES

LEVEL 0: LEVEL 0 IMPLIES THAT NO FINISH OF ANY TYPE HAS BEEN DONE. THE DRYWALL IS ONLY FASTENED TO THE WALLS OR CEILING.

LEVEL 1: EMBED YOUR DRYWALL JOINT TAPE IN JOINT COMPOUND.

LEVEL 2: SKIM A THIN COAT OF JOINT COMPOUND OVER THE TAPE. COVER DRYWALL SCREW HOLES.

LEVEL 3: APPLY A COAT OF JOINT COMPOUND TO THE TAPE AND SCREWS.

LEVEL 4: APPLY ANOTHER COAT OF JOINT COMPOUND TO THE TAPE AND SCREWS. SAND.

LEVEL 5: APPLY ANOTHER COAT OF JOINT COMPOUND TO THE TAPE AND SCREWS. SAND.

ALL GRAPHICS & MURALS REQUIRE A LEVEL 5 FINISH

WALL SURFACE PREPARATION

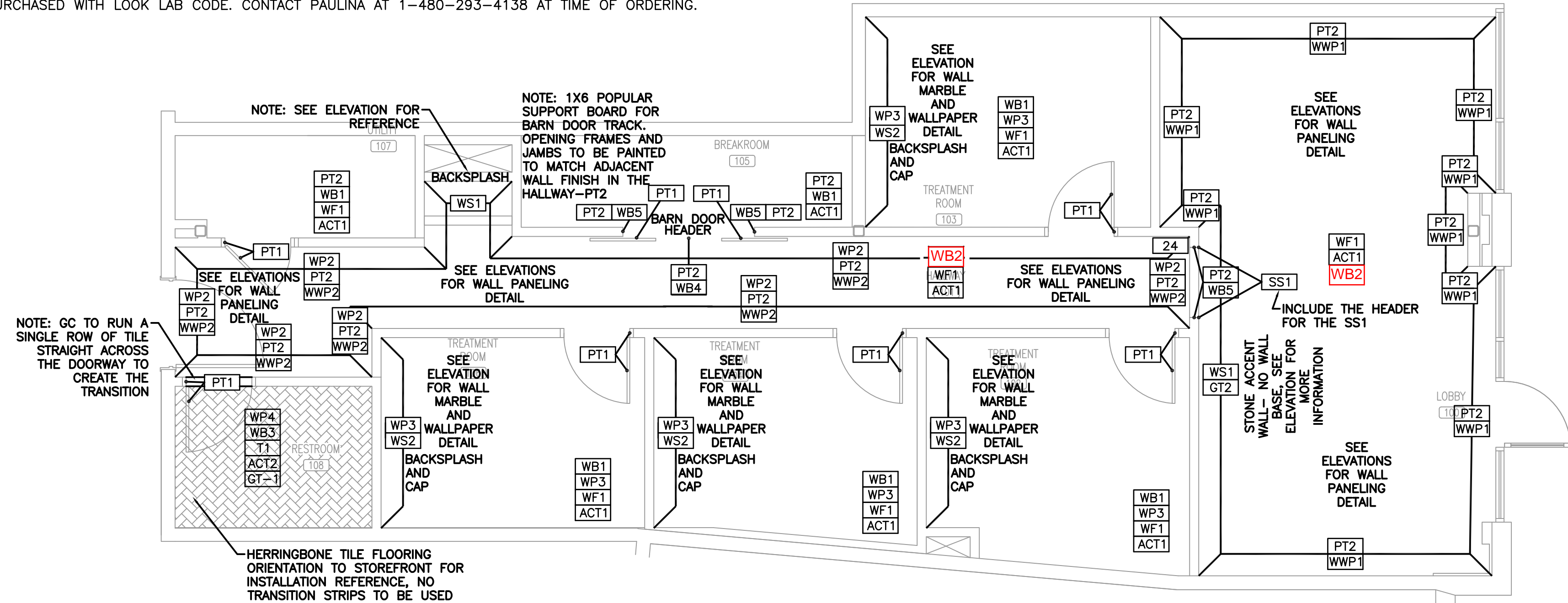
- REPAIR ANY EXISTING WALL DAMAGE (HOLES, LOOSE JOINTS, CHIPPED OR PEELING PAINT) TO LEVEL 4 FINISH.
- CLEAN THE WALL PRIOR TO PRIMING AND PAINTING.

PRIMER AND PAINT

- TWO COATS OF PRIMER REQUIRED. LET THE PRIMER DRY PER MANUFACTURE SPECIFICATIONS BEFORE APPLYING TOP COAT.
- TINTED PRIMERS MAY CAUSE BLEED THROUGH ISSUES AND SHOULD NOT BE USED.
- DO NOT USE MATTE PAINT OR PAINT WITH SILICONE, WAXES, GRAFFITI-RESISTANT, OR TEXTURIZING ADDITIVES.
- USE A SHORT NAP (1/4") ROLLER.
- ALLOW THE FINAL COAT OF PAINT TO DRY FOR AT LEAST FIVE DAYS BEFORE APPLYING GRAPHICS. UNDER-CURED PAINT MAY CONTINUE TO OUTGAS AND CAUSE BUBBLES UNDER GRAPHICS SEVERAL DAYS AFTER THE INSTALL IS COMPLETE DESPITE A SMOOTH INSTALLATION.

USE THE FOLLOWING PAINT AND PRIMERS: (PAINT AND PRIMER SHOULD CREATE A BOND THAT WON'T RELEASE WHEN ADHESIVES ARE APPLIED)

PRIMER: SHERWIN WILLIAMS PROMAR 200 INTERIOR LATEX PRIMER B28W600 SERIES
PAINT: SHERWIN WILLIAMS PROMAR ZERO VOC LATEX SEMI-GLOSS.
TOP COAT: SEE FINISH SCHEDULE



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

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LOOK LAB

4164 EAST 8TH PL
DENVER, CO 80220-3955

CHECKED BY: Staff
DRAWN BY: Staff
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SCALE: PER PLAN
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SHEET TITLE

WALL & FLOOR FINISH PLAN

SHEET No.

1.09

LOOK LAB – FURNITURE & EQUIPMENT SCHEDULE

ITEM#	DESCRIPTION	MANUFACTURER	SKU NUMBER	SUPPLIED BY	INSTALLED BY	RECEIVED BY	NOTES
1	TREATMENT ROOM AREA RUG	SURYA IGO PATTERN RUG	IGO-2317	OWNER	GC	GC	5'-3" X 7'-3"
2	LOBBY AREA RUG			OWNER	GC	GC	7'-10" X 10'-3"
3	TREATMENT ROOM GUEST CHAIR	CB2, STEEL W/ MATTE BLACK WHITE BOUCLE DINING CHAIR	SKU: 388813	OWNER	GC	GC	24.75"W X 22.5"D X 31"H
4	TREATMENT ROOM GUEST TABLE/LOBBY END TABLE	JOSS & MAIN, SERAPHINE, GREY METAL & MARBLE TOP	SKU: J110005043	OWNER	GC	GC	22"H X 20"D
5	TREATMENT CHAIRS	TBD		OWNER	GC	GC	POWER TO BE LOCATED UNDER CABINETRY W/ UNDER COUNTER FRIDGE
6	TREATMENT ROOM DRS CHAIR	TBD		OWNER	GC	GC	
7	TREATMENT ROOM DRS TABLE	TBD		OWNER	GC	GC	
8	TREATMENT ROOM WALL MIRROR	CRATE & BARREL EMMY-BLACK	SKU: 226120	OWNER	GC	GC	48.75"W X 1.5"D X 72"H
9	STORAGE RACK	TBD		FCD	GC	GC	
10	LOCKERS	TBD		FCD	GC	GC	
11	WALL POSTER FRAME	TBD		FCD	GC	GC	
12	WALL MOUNTED BIRDS OR ALT WALL ART OPTION 1			OWNER	GC	GC	
13	WICKER/WEAVED ROUND WALL MIRROR OR ALT WALL ART OPTION 2			OWNER	GC	GC	
14	LOBBY SOFA	HUGGER CURVED BOUCLE SOFA BY LEANNE FORD CRATE & BARREL, ADORE TAUPE	SKU: 464581	OWNER	GC	GC	92"W X 46"D X 28.5"H
15	LOBBY CHAIR	GWYNETH, BLACK BOUCLE	SKU: 210537	OWNER	GC	GC	34"W X 32.4"D X 29"H
16	ALT WALL ART OPTION 3	TBD		OWNER	GC	GC	
17	LOBBY END TABLE	BRISTOL ROUND SIDE TABLE BR HOME	#6002081	OWNER	GC	GC	22"H X 16"D (198 LB)
18	COFFEE TABLE	CRATE & BARREL FERNANDO METAL DRUM 32.5" ROUND COFFEE TABLE	SKU: 143951	OWNER	GC	GC	32.5" DIAM X 16"H, CHANDELIER TO BE CENTERED OVER THIS TABLE
19	TV	SAMSUNG	ART FRAME 43"	OWNER	GC	GC	GC TO INSTALL RECESSED OUTLET PER ELECTRICAL SHEET
20	TV WALL MOUNT	LEGRAND	ENP1700NA	OWNER	GC	GC	BACKING REQUIRED FOR THIS ITEM
21	SPEAKER & SPEAKER MOUNTS	SONOS ERA WHITE AND MOUNTS		OWNER	GC	GC	CONTACT: MONICA/DANIEL 480.559.8639 X 204/203 AT CLOUDIENCE
22	MICROWAVE	TBD		OWNER	GC	GC	SIZE TBD
23	UNDERCOUNTER FRIDGE (BREAKROOM)	TBD		OWNER	GC	GC	SIZE TBD
24	SECURITY CAMERA	RING STICKUP CAM BATTERY HD SECURITY CAMERA		OWNER	GC	GC	CONTACT: MONICA/DANIEL 480.559.8639 X 204/203 AT CLOUDIENCE
25	UNDERCOUNTER FRIDGE (TREATMENT ROOM)	ACCUCOLD MEDICAL GRADE KATOM 162-CT66L MPN: CT66LW 23.63"W X 23.5"D X 33.5"H	5.1 CUBIC FEET, 115V	OWNER	GC	GC	24" 2-DOOR FRIDGE/FREEZER COMBO LOCKING
26	UNDERCOUNTER FRIDGE (POS DESK)	BEVERAGE 23.4" 154 (12 OZ) CAN BEVERAGE COOLER, STAINLESS STEEL	MODEL #HMBC58ST	OWNER	GC	GC	MAGIC CHEF BEVERAGE 23.4" 154 (12 OZ) CAN BEVERAGE COOLER, STAINLESS STEEL, 33.9"H X 24.3"D X 23.4"W
27	CASH BOX	TBD		OWNER	GC	GC	AT POS UNDER DESK
28	SAFE	TBD		OWNER	GC	GC	AT POS UNDER DESK
29	DOOR MOTION SENSOR	TBD		OWNER	GC	GC	
30	SCENT MACHINE- AIR FRESHENER	SCENTIFY HOME TOWER DIFFUSER	MIAMI SCENT	OWNER	GC	GC	
31	NVR RECORDER FOR SECURITY CAMERA			OWNER	GC	GC	CONTACT: MONICA/DANIEL 480.559.8639 X 204/203 AT CLOUDIENCE
32	SPEAKER AMPLIFIER			OWNER	GC	GC	CONTACT: MONICA/DANIEL 480.559.8639 X 204/203 AT CLOUDIENCE
33	STEREO BASS BOX (SUB)	SONOS	SUB (GEN 3)	OWNER	GC	GC	CONTACT: MONICA/DANIEL 480.559.8639 X 204/203 AT CLOUDIENCE
34	BREAKROOM COUNTER CHAIR	GALVIN, NEST HOME COLLECTION	IRON & BROWN LEATHER	OWNER	GC	GC	14W X 14D X 26H
35	DESK CHAIR	ALL MODERN OTUS	BRUSHED STAINLESS FEET, FAUX BLACK LEATHER	OWNER	GC	GC	SEAT HEIGHT 26", 34"H X 18.5"W X 20"D
36	BREAKROOM TABLE CHAIR	UTTERMOST JACOBSEN DINING CHAIR #23781		OWNER	GC	GC	19"W X 33"H X 23"D
37	SQUARE COFFEE TABLE	CB2		OWNER	GC	GC	SIZE TBD
38	SQUARE SIDE TABLE	FOUR HANDS WAYFAIR IVAN END TABLE		OWNER	GC	GC	SIZE TBD
39	RECEPTION COUNTER BAR CHAIR	SEAT HEIGHT		OWNER	GC	GC	26", 34"H X 18.5"W X 20"D
40	BREAKROOM TABLE	WAYFAIR 35" ROUND PEDESTAL DINING TABLE GEORGE OLIVER		OWNER	GC	GC	29.5"H X 35"W X 35"L
41	SECTIONAL COUCH	CRATE & BARREL, OCEANSIDE 2 PIECE CHAISE SECTIONAL SOFA	SKU: 200293	OWNER	GC	GC	125.5"W X 69.5"D X 25.5"H
42	BENCH	UTTERMOST REPOSE OVERSIZED BENCH	#23836	OWNER	GC	GC	28.5"H X 90.5"W X 26"D, SEAT HEIGHT IS 17"
43	FLOATING RETAIL SHELVES	WEST ELM STEEL SHELVING	8958190	OWNER	GC	GC	4.25"D X 2"H X 36"W
44	CABINET WITH DOORS	UTTERMOST, SHELBY 2 DOOR CABINET	#24426	OWNER	GC	GC	39"W X 34"H X 16"D



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

CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. C.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

ISSUED / REVISIONS:

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4236 HWY 3630
Annville, KY 40402
FIRM 23179



BIDDING QUESTIONS CONTACT 920-757-1486

CHECKED BY: Staff
DRAWN BY: Staff
DATE: JULY 26, 2024
SCALE: PER PLAN
PROJECT No.: TLL 2402
SHEET TITLE

FURNITURE PLAN

SHEET No.

1.10

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. C.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

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 FIRM 23179



LOOK LAB – TOILET ACCESSORIES							
ITEM#	DESCRIPTION	MANUFACTURER	PRODUCT SERIES	PRODUCT NUMBER	SUPPLIED BY	INSTALLED BY	NOTES
TA1	TOILET PAPER DISPENSER	BOBRICK	B-6867 SERIES	STAINLESS STEEL / SILVER	GC	GC	
TA2	PAPER TOWEL DISPENSER	BOBRICK	B2621	STAINLESS STEEL / SILVER	GC	GC	
TA3	SOAP DISPENSER WALL MOUNTED	BOBRICK	CLASSIC SERIES, B-2111	STAINLESS STEEL / SILVER	GC	GC	
TA4	STAINLESS STEEL GRAB BARS	BOBRICK	B6806 SERIES	1-1/2" DIA W/ SNAP FLANGE	GC	GC	36", 42", & 18" LENGTHS
TA5	LED LIT WALL MIRROR	KEONJINN STORE	OVAL POLISHED GLASS		GC	GC	LED BACKLIT BATHROOM MIRROR 24"x32"
TA6	COAT HOOKS	APLUSEE STORE	MATTE BLACK, SKU: 190497085892		GC	GC	
TA7	COUNTER SINK	RUVATI TIRANA DROP IN SINK	RVH8006 28"x22"x10" RVH8006 18"x20"x10"	16GA BRUSHED STAINLESS STEEL	GC	GC	BREAKROOM
TA8	COUNTER SINK FAUCET	DELTA TRINSIC PREP/BAR FAUCET SINGLE HANDLE	MODEL#9959-BL-DST	MATTE BLACK FINISH	GC	GC	BREAKROOM
TA9	UNDERMOUNT SINK	BLANCO, PRECIS 13-3/4" SILGRANIT SINK	MODEL: BLA517676	TRUFFLE	GC	GC	TREATMENT ROOM, PRECIS 13-3/4" UNDERMOUNT SINGLE BASIN SILGRANIT KITCHEN BAR SINK, 13-3/4"W X 18"D X 7-7/8" SINK DEPTH TO PURCHASE: SUPPLYHOUSE.COM OR ANTHRECITE
TA10	WALL MOUNTED SINK FAUCET	DELTA	TRINSIC WALL MOUNTED FAUCET T3559LF-SSWL	BRILLIANCE STAINLESS	GC	GC	TREATMENT ROOM, TRINSIC 7.5" SPOUT SPREAD, WALL MOUNTED FAUCET, 1.2 GPM
TA11	WALL MOUNTED SINK	BADELOF	SKU: WT-01-M-BLK	MATTE BLACK	GC	GC	BRUSH NICKEL DRAIN CAP FINISH, EXPOSED PLUMBING UNDER SINK TO BE CHROME
TA12	RESTROOM FAUCET	DELTA TRINSIC SINGLE HANDLE BATHROOM FAUCET	MODEL: 559HAR-SS-DST	BRILLIANCE STAINLESS FINISH	GC	GC	RESTROOM
TA14	TOILET	ZURN	SEE PLUMBING	SEE PLUMBING	GC	GC	SEE PLUMBING
TA15	STRAINER FOR TREATMENT ROOM SINKS	BLANCO, 3-1/2" STRAINER AND SINK FLANGE	MODEL: 441322	TRUFFLE	GC	GC	USE WITH BLANCO UNDERMOUNT SINK
TA16	VALVE FOR TREATMENT ROOM SINKS	DELTA ROUGH IN VALVE	MODEL: R3510 - WL		GC	GC	USE WITH BLANCO UNDERMOUNT SINK

LOOK LAB – MANUFACTURED PRODUCTS SCHEDULE							
ITEM#	DESCRIPTION	PRODUCT NUMBER	SUPPLIED BY	INSTALLED BY	RECEIVED BY	NOTES	
XXX1	RECEPTION DESK		FCD	GC	GC	GRANITE TOP WITH WATERFALL EDGE, PAINTED SHAKER DOOR CABINET BASE	
XXX2	RECEPTION DESK WITH BAR SEATING		FCD	GC	GC	GRANITE TOP WITH WATERFALL EDGE ANDEATING COUNTER, PAINTED SHAKER DOOR CABINET BASE	
XXX3	TREATMENT ROOM CABINETS		FCD	GC	GC	SINK AND FAUCET SUPPLIED BY AND INSTALLED BY GC/PC, GC TO COORDINATE LOCATION OF SINK AND FAUCET WITH MANUFACTURER PRIOR TO ROUGH INSTALLATION, QUARTZ TOP WITH PAINTED BASE, INCLUDES BACKSPASH AND CAP	
XXX4	BREAKROOM COUNTER W/ CABINETS		FCD	GC	GC	SINK AND FAUCET SUPPLIED BY AND INSTALLED BY GC/PC,	
XXX5	ACCENT CABINET		FCD	GC	GC	GRANITE TOP WITH PAINTED BASE AND UPPERS. GC TO SUPPLY BACK SPLASH TO MATCH LOBBY WALL - WS1	
XXX6	BENCH W/ CUSHION		FCD	GC	GC	SIZES VARY PER PLAN	
XXX9	FOYER TABLE		FCD	GC	GC	DARK BROWN/EBONY FINISH WITH ACCENT LOWER COUNTER SIZES VARY PER PLAN	
XX10	PANTRY CABINET		FCD	GC	GC	LOCKING DOORS, KEYED THE SAME	
XX11	EATING COUNTER		FCD	GC	GC	GC MAY NEED TO CUT TO FIT ONSITE, INCLUDES MOUNTING BRACKETS	
XX12	DRAW UP COUNTER (4'-0") WITH UPPER CABINETS		FCD	GC	GC	INCLUDES PENCIL DRAWER AND MOUNTING BRACKETS, GC MAY NEED TO CUT TO FIT ONSITE	
XX13	STORAGE CABINET		FCD	GC	GC	PROJECT MANAGER TO CONFIRM CABINET LOCATION.	

LOOK LAB – GRAPHICS SCHEDULE						
ITEM NUMBER	DESCRIPTION	MOUNTING HEIGHT	SUPPLIED BY	INSTALLED BY	RECEIVED BY	
G2	LOOK LAB LOGO (LARGE POS BACK WALL)	5'-6" AFF TO CENTER	EXT SIGN COMPANY	EXT SIGN COMPANY	OWNER/VENDOR	
G3A	COCO CHANEL – STANDARDS	5'-6" AFF TO CENTER	FCD	GC	GC	
G3B	COCO CHANEL – BELIEVE	5'-6" AFF TO CENTER	FCD	GC	GC	
G3C	COCO CHANEL – THINK	5'-6" AFF TO CENTER	FCD	GC	GC	
G3D	COCO CHANEL – IRRESISTABLE	5'-6" AFF TO CENTER	FCD	GC	GC	
G3E	MADONNA – MATTER	5'-6" AFF TO CENTER	FCD	GC	GC	
G5	STOREFRONT WINDOW GRAPHICS	TBD	EXT SIGN COMPANY	EXT SIGN COMPANY	OWNER/VENDOR	
G6	ENTRY DOOR LOGO & HOURS	TBD	EXT SIGN COMPANY	EXT SIGN COMPANY	OWNER/VENDOR	
G7	EXTERIOR SIGN	TBD	EXT SIGN COMPANY	EXT SIGN COMPANY	OWNER/VENDOR	

FCD TO INSTALL GRAPHICS INTO FRAMES IN WAREHOUSE PRIOR TO SHIPPING TO STORE FOR THE G3 GRAPHICS.

BIDDING QUESTIONS CONTACT 920-757-1486

LOOK LAB

4164 EAST 8TH PL
 DENVER, CO 80220-3955

CHECKED BY: Staff
 DRAWN BY: Staff
 DATE: JULY 26, 2024
 SCALE: PER PLAN
 PROJECT No.: TLL 2402
 SHEET TITLE

FURNITURE SCHEDULES

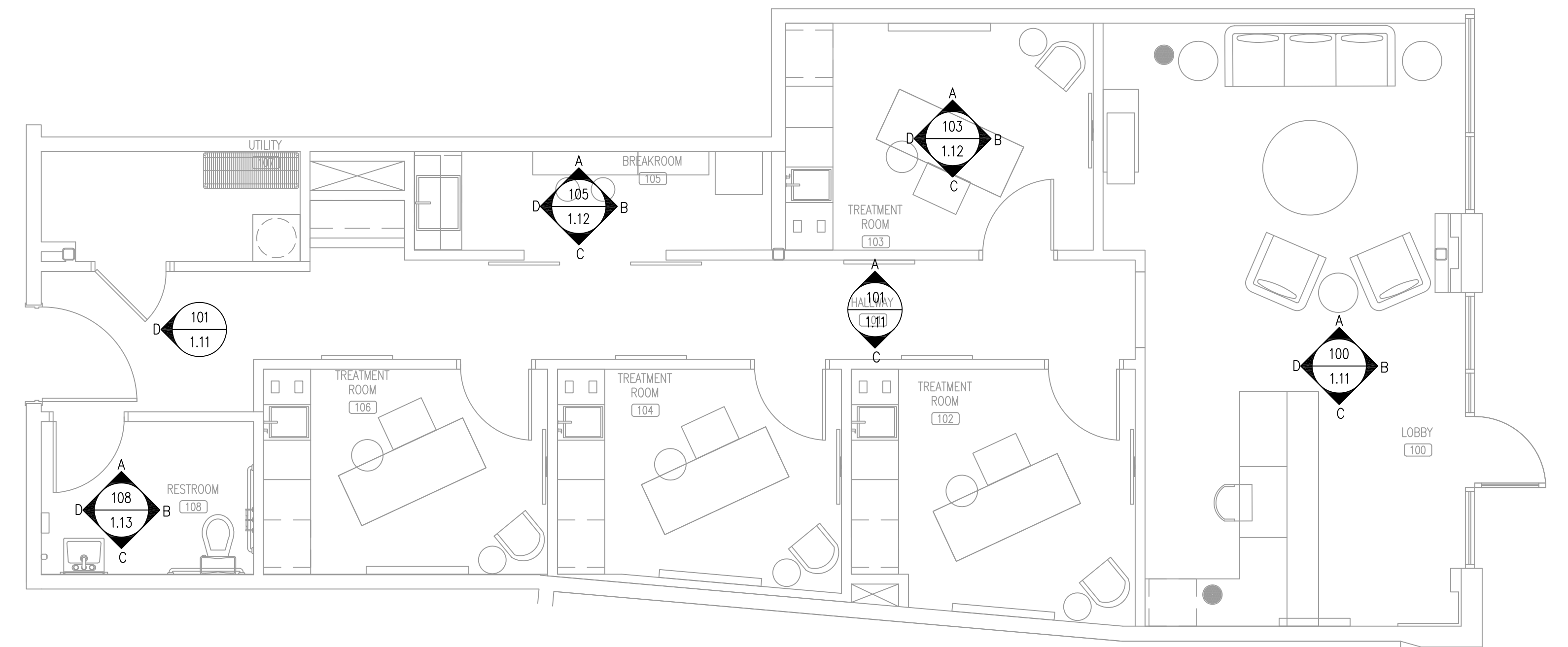
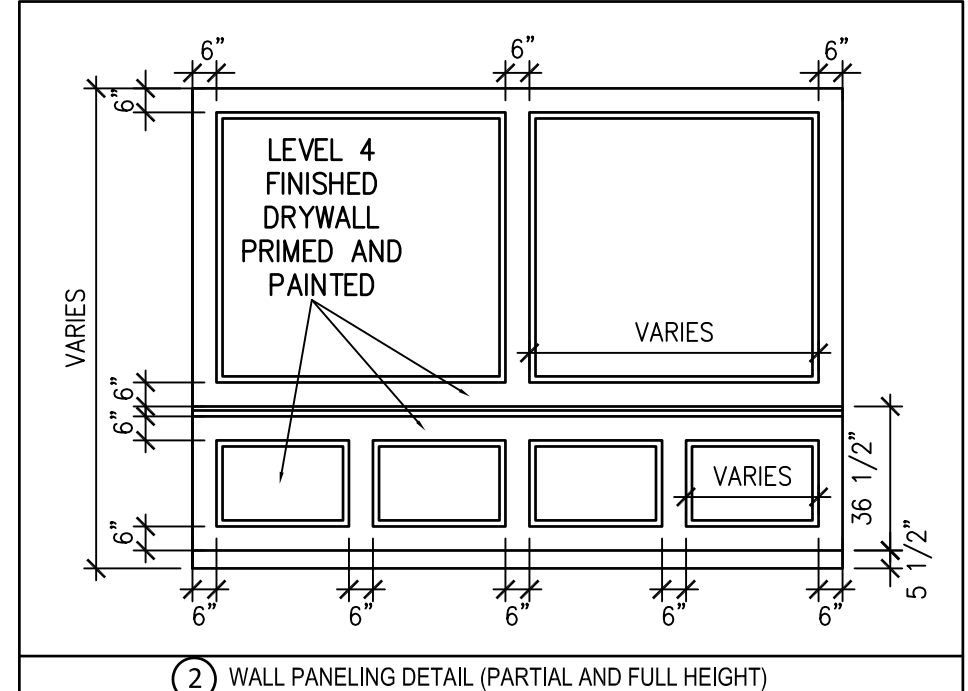
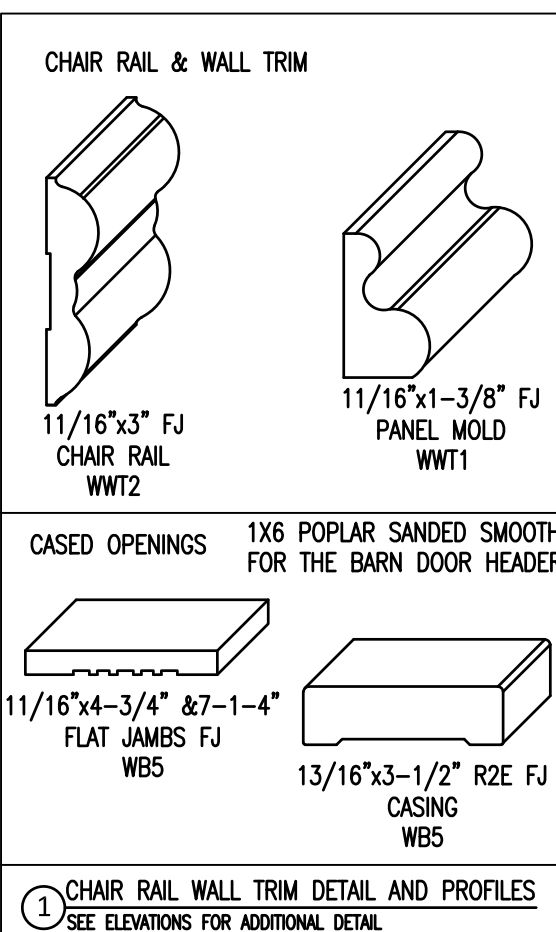
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1.10A

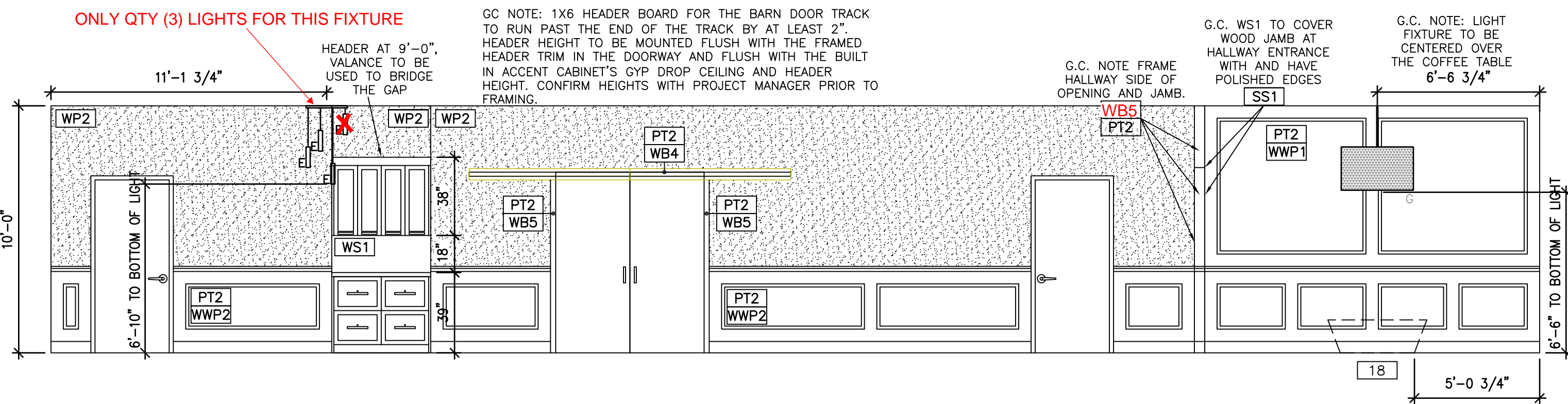
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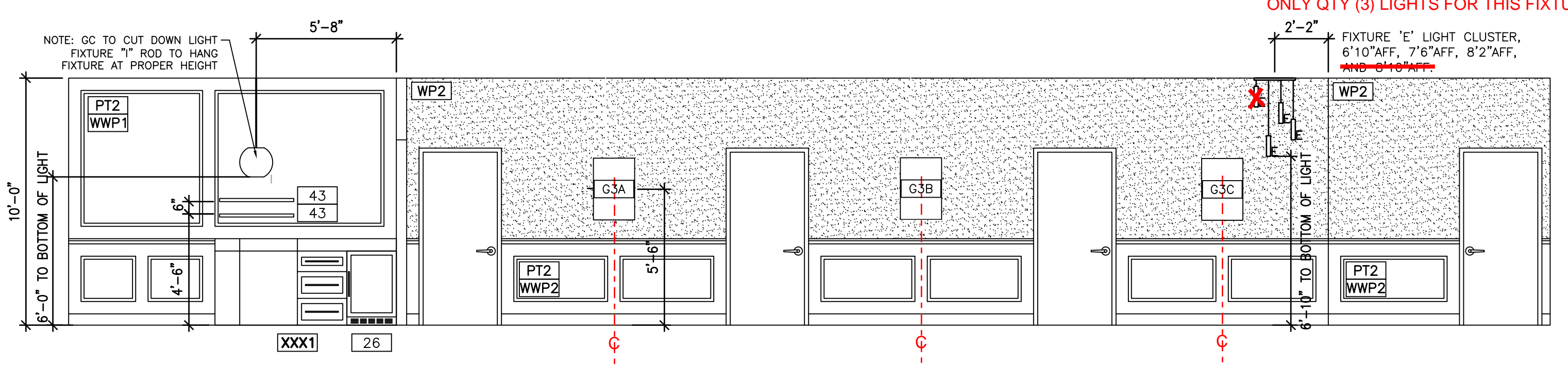
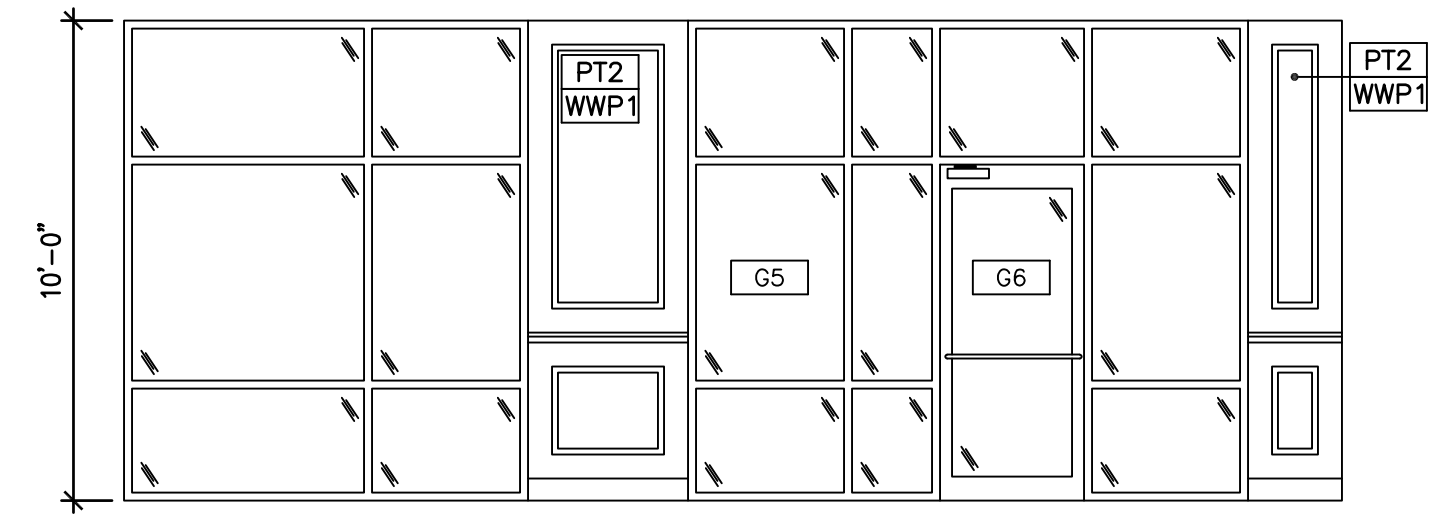
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 FIRM: 23179



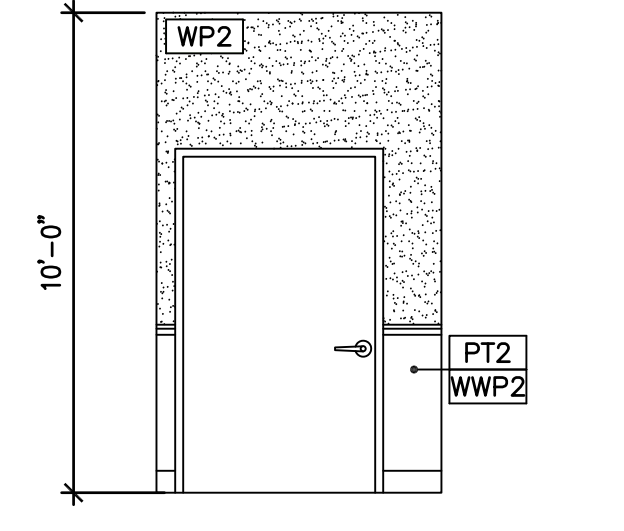
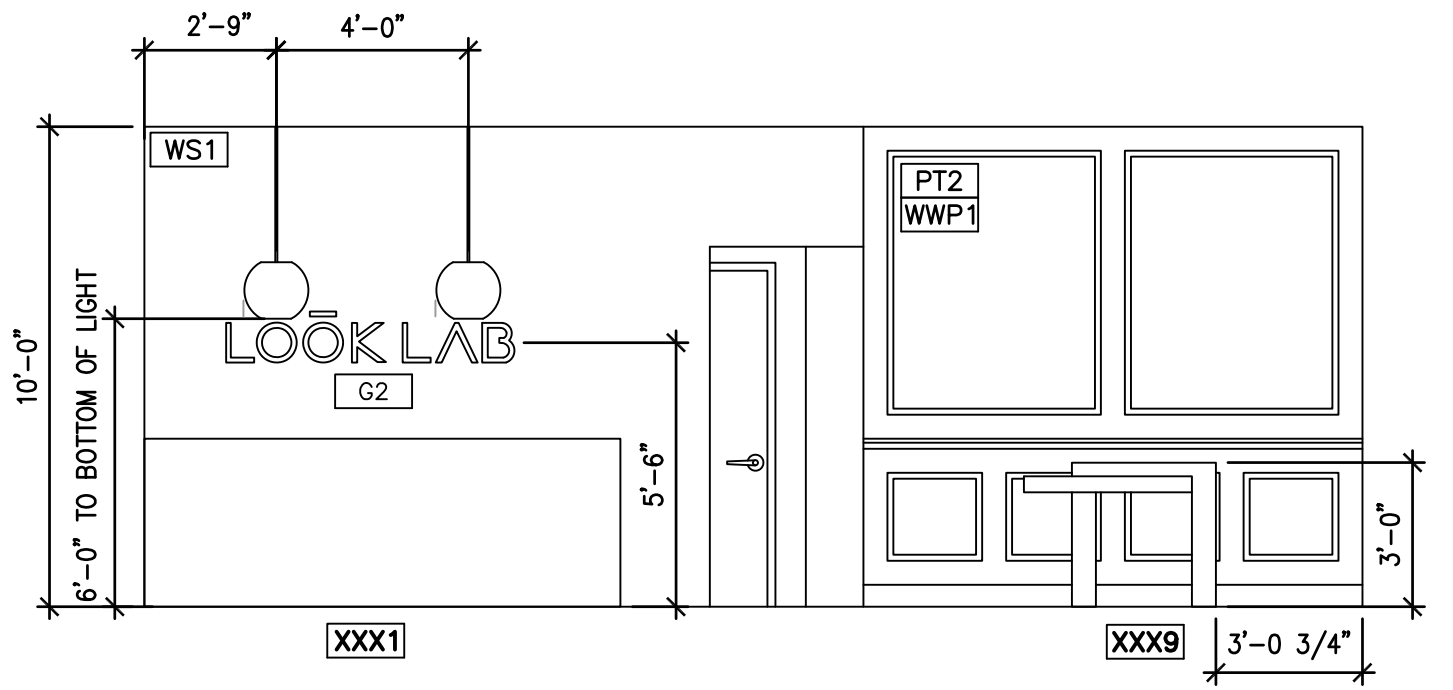
① INTERIOR ELEVATIONS PLAN
 SCALE: 1/4"=1'-0"
 NORTH



A LOBBY - 100, HALLWAY - 101
 SCALE 1/4"=1'-0"



C LOBBY - 100, HALLWAY - 101
 SCALE 1/4"=1'-0"



BIDDING QUESTIONS CONTACT 920-757-1486

LOOK LAB
 4164 EAST 8TH PL
 DENVER, CO 80220-3955

CHECKED BY: Staff
 DRAWN BY: Staff
 DATE: JULY 26, 2024
 SCALE: PER PLAN
 PROJECT No.: TLL 2402
 SHEET TITLE

INTERIOR ELEVATIONS

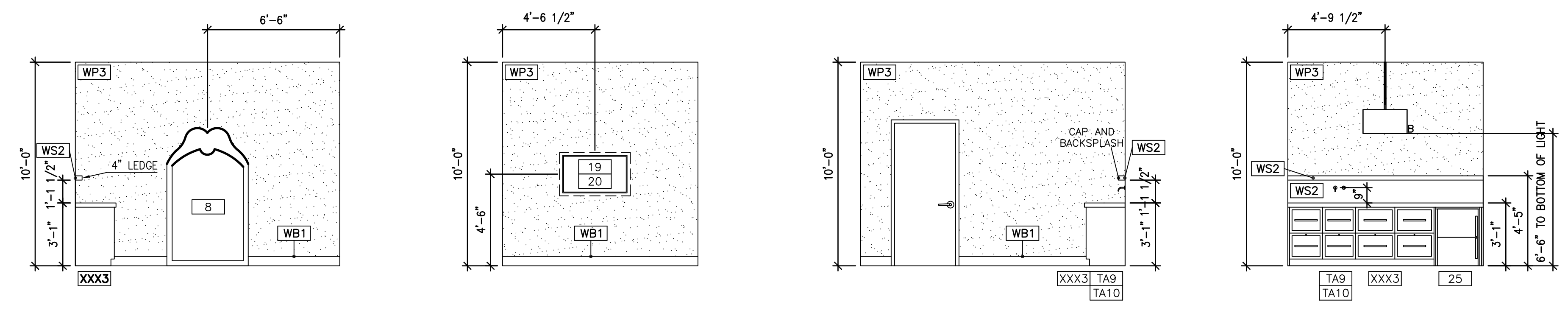
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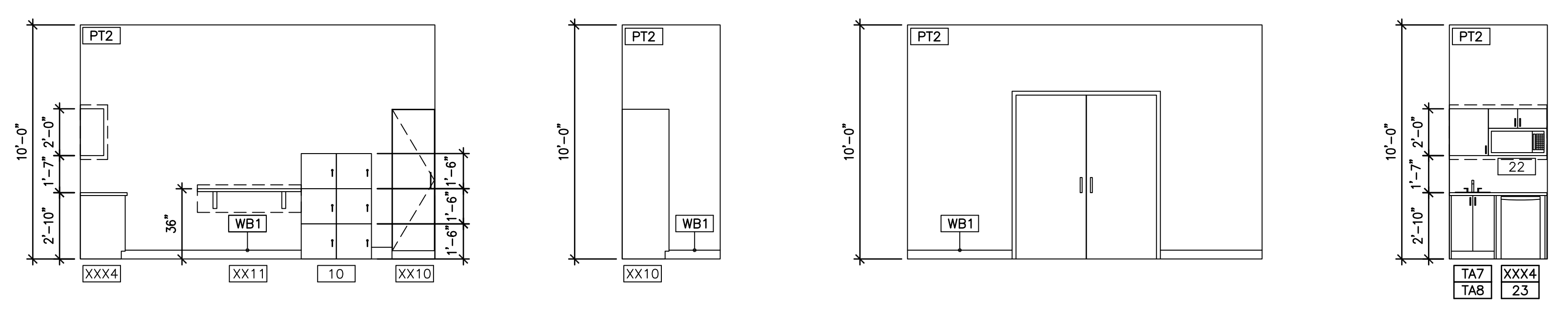
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 FIRM 23179



TREATMENT ROOM - 103
 SCALE 1/4"=1'-0"



BREAKROOM - 105
 SCALE 1/4"=1'-0"

BIDDING QUESTIONS CONTACT 920-757-1486

LOOK LAB
 4164 EAST 8TH PL
 DENVER, CO 80220-3955

CHECKED BY: Staff
 DRAWN BY: Staff
 DATE: JULY 26, 2024
 SCALE: PER PLAN
 PROJECT No.: TLL 2402
 SHEET TITLE

INTERIOR ELEVATIONS

SHEET No.

1.12

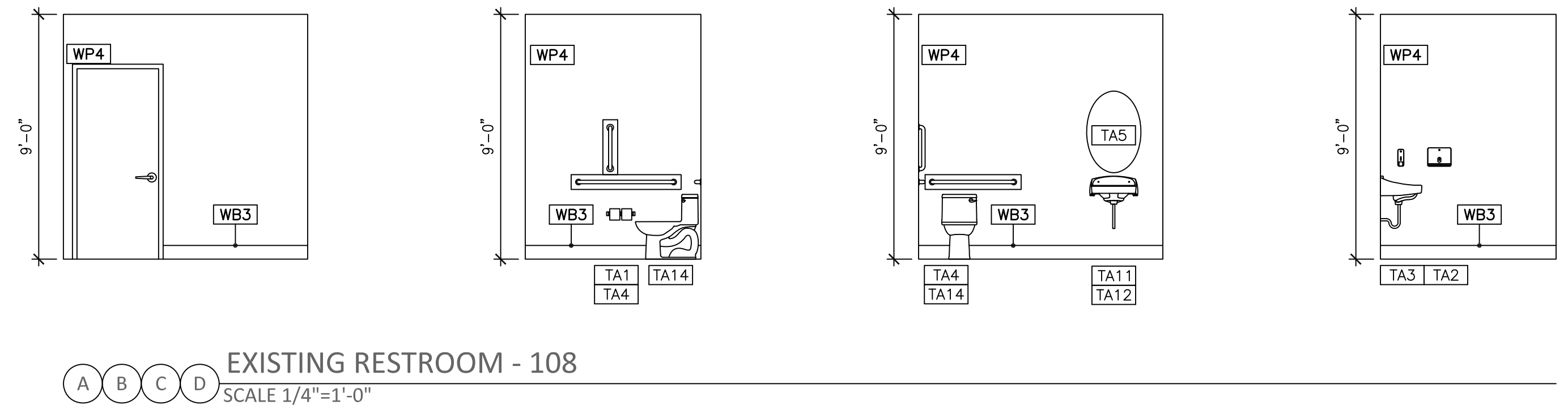
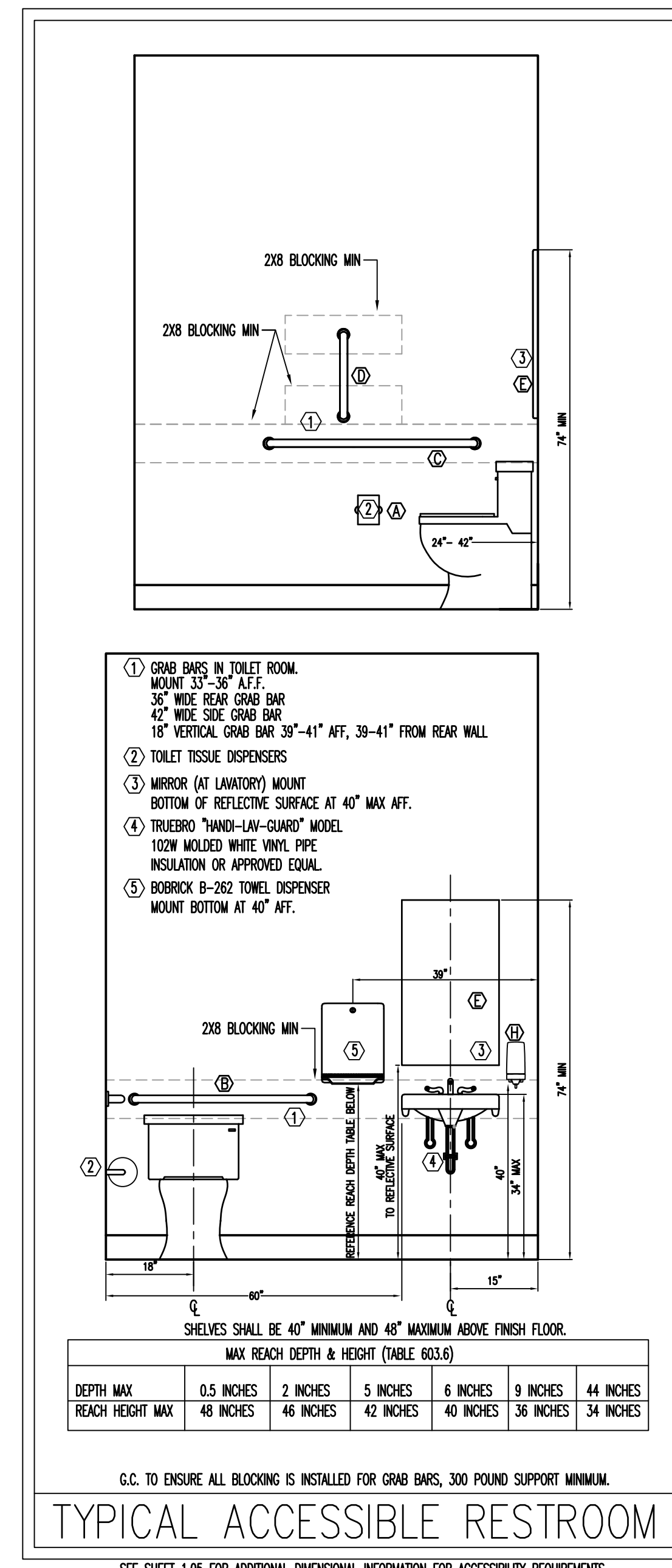
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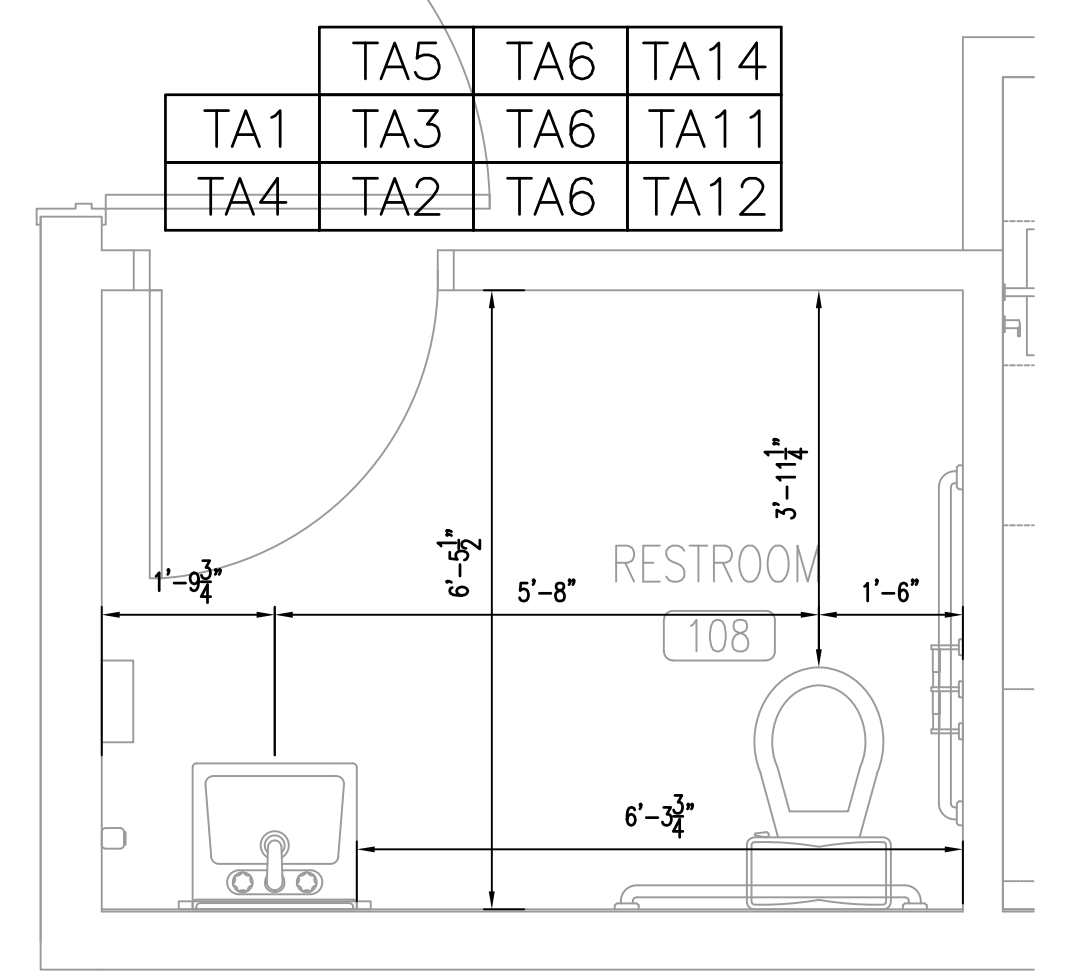
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LOOK LAB - TOILET ACCESSORIES							
ITEM#	DESCRIPTION	MANUFACTURER	PRODUCT SERIES	PRODUCT NUMBER	SUPPLIED BY	INSTALLED BY	NOTES
TA1	TOILET PAPER DISPENSER	BOBRICK	B-6867 SERIES	STAINLESS STEEL / SILVER	GC	GC	
TA2	PAPER TOWEL DISPENSER	BOBRICK	B2621	STAINLESS STEEL / SILVER	GC	GC	
TA3	SOAP DISPENSER WALL MOUNTED	BOBRICK	CLASSIC SERIES, B-2111	STAINLESS STEEL / SILVER	GC	GC	
TA4	STAINLESS STEEL GRAB BARS	BOBRICK	B6806 SERIES	1-1/2" DIA W/ SNAP FLANGE	GC	GC	36", 42", & 18" LENGTHS
TA5	LED LIT WALL MIRROR	KEONJINN STORE	OVAL POLISHED GLASS		GC	GC	LED BACKLIT BATHROOM MIRROR 24"x32"
TA6	COAT HOOKS	APLUSEE STORE	MATTE BLACK, SKU: 190497085892		GC	GC	
TA7	COUNTER SINK	RUVATI TIRANA DROP IN SINK	RVH8006 20"x22"x10" RVH8006 18"x20"x10"	16GA BRUSHED STAINLESS STEEL	GC	GC	BREAKROOM
TA8	COUNTER SINK FAUCET	DELTA TRINSIC PREP/BAR FAUCET SINGLE HANDLE	MODEL#9959-BL-DST	MATTE BLACK FINISH	GC	GC	BREAKROOM
TA9	UNDERMOUNT SINK	BLANCO, PRECIS 13-3/4" SILGRANIT SINK	MODEL: BLA517676	TRUFFLE	GC	GC	TREATMENT ROOM, PRECIS 13-3/4" UNDERMOUNT SINGLE BASIN SILGRANIT KITCHEN BAR SINK, 13-3/4" X 18" X 7-7/8" SINK DEPTH TO PURCHASE: SUPPLYHOUSE.COM OR ANTHRECITE
TA10	WALL MOUNTED SINK FAUCET	DELTA	TRINSIC WALL MOUNTED FAUCET T3559LF-SSWL	BRILLIANCE STAINLESS	GC	GC	TREATMENT ROOM, TRINSIC 7.5" SPOUT SPREAD, WALL MOUNTED FAUCET, 1.2 GPM
TA11	WALL MOUNTED SINK	BADELOF	SKU: WT-01-M-BLK	MATTE BLACK	GC	GC	BRUSH NICKEL DRAIN CAP FINISH, EXPOSED PLUMBING UNDER SINK TO BE CHROME
TA12	RESTROOM FAUCET	DELTA TRINSIC SINGLE HANDLE BATHROOM FAUCET - NO SPRAYER - REMOVED	MODEL: 559HAR-SS-DST	BRILLIANCE STAINLESS FINISH	GC	GC	RESTROOM
TA14	TOILET	ZURN	SEE PLUMBING	SEE PLUMBING	GC	GC	SEE PLUMBING
TA15	STRAINER FOR TREATMENT ROOM SINKS	BLANCO, 3-1/2" STRAINER AND SINK FLANGE	MODEL: 441322	TRUFFLE	GC	GC	USE WITH BLANCO UNDERMOUNT SINK
TA16	VALVE FOR TREATMENT ROOM SINKS	DELTA ROUGH IN VALUE	MODEL: R3510 - WL		GC	GC	USE WITH BLANCO UNDERMOUNT SINK



- RESTROOM ACCESSORIES SUPPLIED AND INSTALLED BY G.C. UNLESS NOTED OTHERWISE.
- Ⓐ SURFACE-MOUNTED TWO ROLL TOILET TISSUE DISPENSER CINTAS - SIGNATURE SERIES - STAINLESS STEEL/SILVER
 - Ⓑ 36"W STAINLESS STEEL GRAB BAR, 1-1/2" DIAMETER, 1-1/2" CLEARANCE TO WALL BOBRICK MODEL #B-6806.99 X 36, (PEENED NON-SLIP GRIPPING SURFACE).
 - Ⓒ 42"W STAINLESS STEEL GRAB BAR, 1-1/2" DIAMETER, 1-1/2" CLEARANCE TO WALL BOBRICK MODEL #B-6806.99 X 42, (PEENED NON-SLIP GRIPPING SURFACE).
 - Ⓓ 18"W STAINLESS STEEL GRAB BAR, 1-1/2" DIAMETER, 1-1/2" CLEARANCE TO WALL BOBRICK MODEL #B-6809.99 X 18 (PEENED NON-SLIP GRIPPING SURFACE)
 - Ⓔ MIRROR - 24" X 36" CUSTOM - FGD
 - Ⓕ PAPER TOWEL DISPENSER - CINTAS - SIGNATURE SERIES - STAINLESS STEEL/SILVER
 - Ⓖ NOT USED
 - Ⓗ SOAP DISPENSER - CINTAS - SIGNATURE SERIES - STAINLESS STEEL/SILVER



BIDDING QUESTIONS CONTACT 920-757-1486

CHECKED BY: Staff
 DRAWN BY: Staff
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 PROJECT No.: TLL 2402
 SHEET TITLE

TOILET ROOM ELEVATIONS

SHEET No.

GENERAL CONDITIONS

1. THE GENERAL CONTRACTOR SHALL VERIFY ALL CONDITIONS AND MEASUREMENTS ON THE JOB AND SHALL BE STRICTLY RESPONSIBLE FOR THE SAME. ANY QUESTIONS AND OR DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE FCDADSON PRIOR TO START OF WORK AT JOB SITE.
2. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORK OF ALL MASONRY, CARPENTRY, PLUMBING, HEATING, VENTILATING AND AIR CONDITIONING AND ELECTRICAL TRADES AND FOR THE COORDINATION OF THE WORK.
3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORK OF ALL EMPLOYEES, WHETHER HIS OWN, HIS SUBCONTRACTOR, OR THEIR EMPLOYEES.
4. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL WORKMEN ON THIS PROJECT. ALL CONTRACTORS AND THEIR SUBCONTRACTORS DOING WORK UNDER THIS CONTRACT SHALL CARRY LIABILITY AND PROPERTY DAMAGE INSURANCE AGAINST ACCIDENTS OF ALL KINDS AND THE OWNER AND FCDADSON SHALL BE FURNISHED WITH CERTIFICATES OF SAID INSURANCE. CONTRACTORS SHALL FOLLOW THE SAFETY PROCEDURES IN CONNECTION WITH THE WORK OF THIS PROJECT. THIS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
5. ALL WORK SHALL BE GUARANTEED BY THIS CONTRACTOR FOR A PERIOD OF ONE YEAR AFTER THE CERTIFICATE OF OCCUPANCY, CERTIFIED IN WRITING TO THE OWNER BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL LEAVE THE BUILDING COMPLETELY FREE OF DUST AND READY FOR OCCUPANCY BY THE OWNER.
7. THE CONTRACTOR SHALL PERFORM ALL NECESSARY MEASURES TO ENSURE THAT NO DUST, DIRT OR OTHER CONSTRUCTION DEBRIS ENTERS ANY AREA OF THE BUILDING OTHER THAN THE AREA BEING ALTERED.
8. THE CONTRACTOR SHALL PERFORM ALL NECESSARY DEMOLITION AND REMOVALS AS INDICATED ON THE DRAWINGS, BUT NOT LIMITED THERE - TO IN ORDER TO COMPLETE THE WORK.
9. ALL WORK IN PROGRESS SHALL BE ADEQUATELY BRACED AND PROTECTED UNTIL BUILDING IS COMPLETED.
10. COORDINATE ALL DEMOLITION OF THE EXISTING STRUCTURE WITH THE OWNER AND FCDADSON. ENSURE THAT THE STRUCTURAL INTEGRITY OF THE EXISTING BUILDING WILL NOT BE IMPAIRED BY THE DEMOLITION. SHORE EXISTING CONSTRUCTION AS REQUIRED.
11. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF THE EXISTING CABINETY AND APPLIANCES AS WELL AS THE REMOVAL OF PACKAGING FOR THE NEW CABINETY AND APPLIANCES.
12. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL NECESSARY PERMITS, INSPECTIONS AND FINAL CERTIFICATE OF OCCUPANCY.
13. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT STATE BUILDING CODE AND ALL LOCAL CODES.
14. IF THE CONTRACTOR FAILS TO COMPLETE OR CORRECT ANY OF THE WORK ACCORDING TO THE CONSTRUCTION DOCUMENTS, THE OWNER OR FCDADSON MAY STOP WORK UNTIL THE WORK IS COMPLETED OR CORRECTED.
15. THE CONTRACTOR SHALL PROVIDE FREE ACCESS TO THE WORK BY THE OWNER, FCDADSON AND THEIR REPRESENTATIVES AT ALL TIMES.

GENERAL

1. PROJECT REQUIREMENTS: VERIFY WITH LANDLORD FOR ALLOWABLE TIMES OF CONSTRUCTION.
2. APPLY, OBTAIN, AND PAY FOR ALL PERMITS REQUIRED FOR THE WORK. SUBMIT COPIES OF ALL PERMITS TO OWNER AND TO FCDADSON.
3. COMPLY WITH ALL APPLICABLE BUILDING CODES AND RULES OF OTHER REGULATORY AGENCIES.
4. VERIFY FIELD DIMENSIONS BEFORE ORDERING FABRICATIONS OR PRODUCTS TO FIT IN PLACE. NOTIFY FCDADSON OF EXISTING CONDITIONS AND DIMENSIONS THAT DIFFER FROM THOSE SHOWN IN THE DRAWINGS.
5. UNLESS OTHERWISE NOTED, THE SUBJECT OF ALL IMPERATIVE SENTENCES IN THE SPECIFICATIONS AND THE DRAWINGS IS THE CONTRACTOR. FOR EXAMPLE, "PROVIDE AND INSTALL." MEANS "CONTRACTOR SHALL PROVIDE AND INSTALL..".
6. WHERE THE TERMS "APPROVED EQUAL", "OTHER APPROVED", "OR EQUAL", "ACCEPTABLE", OR OTHER GENERAL QUALIFYING TERMS USED IN THESE NOTES, IT SHALL BE UNDERSTOOD THAT REFERENCE IS MADE TO THE JUDGMENT AND RULING OF ERIC ENGELL P.E., UNLESS APPROVED BY ERIC ENGELL P.E., NO SUBSTITUTIONS WILL BE MADE.
7. THE CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING PHASES OF CONSTRUCTION FOR USE OF ALL TRADES. THE CONTRACTOR SHALL RECORD ALL "AS-BUILT" CONDITIONS AND SUBMIT COPY TO LANDLORD AND TENANT AT COMPLETION OF JOB. THE CONTRACTOR SHALL MAINTAIN A FIELD TELEPHONE AT THE JOB SITE.

CUTTING AND PATCHING

1. CUT AND PATCH AS REQUIRED TO COMPLETE THE WORK FOR:
 1. VISUAL QUALITY AS DIRECTED BY THE TENANT
 2. PLUMBING, HVAC, ELECTRICAL, AND COMMUNICATIONS SYSTEMS.
 3. FIRE RESISTANCE RATINGS.
 4. INSPECTION, PREPARATION AND PERFORMANCE.
2. CUT AND PATCH WITH CARE TO AVOID DAMAGE TO WORK, SAFETY HAZARDS, VIOLATION OF WARRANTY REQUIREMENTS, BUILDING CODE VIOLATIONS, OR MAINTENANCE PROBLEMS.

MATERIALS AND PRODUCTS

1. MATCH EXISTING MATERIALS WITH NEW MATERIALS SO THAT PATCHING WORK IN UNDETECTABLE.
2. INSPECT FIELD CONDITIONS TO IDENTIFY ALL WORK REQUIRED.
3. PERFORM WORK WITH WORKMEN SKILLED IN THE TRADES INVOLVED. PREPARE SAMPLE AREA OF EACH TYPE OF WORK FOR APPROVAL. PROTECT ADJACENT WORK FROM DAMAGE AND DIRT.
4. FOR CUTTING WORK, USE PROPER CUTTING TOOLS, NOT CHOPPING TOOLS. MAKE NEAT HOLES. MINIMIZE DAMAGE TO ADJACENT WORK. CHECK FOR CONCEALED UTILITIES AND STRUCTURE BEING CUTTING.
5. MAKE PATCHES, SEAMS, AND JOINTS DURABLE AND INCONSPICUOUS. TOLERANCES FOR PATCHING SHALL BE THE SAME AS FOR NEW WORK.
6. CLEAN WORK AREAS AND AREAS AFFECTED BY CUTTING AND PATCHING OPERATIONS AS DESCRIBED IN SECTION TITLES CLEANING AND MAINTENANCE DURING CONSTRUCTION AND FINAL CLEANING.

CONSTRUCTION PROCEDURES

1. PROVIDE ADMINISTRATIVE COORDINATION OF ALL WORK, INCLUDING TRAINED, QUALIFIED EMPLOYEES AND SUBCONTRACTORS, AND SUPERVISORY PERSONNEL.

CHANGE ORDER PROCEDURES

1. CHANGES IN THE WORK MAY BE REQUIRED WHICH WILL BE AUTHORIZED BY A CHANGE ORDER.
2. CHANGE ORDERS, SIGNED BY THE OWNER AND FCDADSON, TO AUTHORIZE CHANGES IN THE WORK WILL INCLUDE EQUIVALENT CHANGES IN THE CONTRACT SUM AND/OR TIME OF COMPLETION.
3. CHANGE ORDERS WILL BE NUMBERED IN SEQUENCE AND DATED.
4. A REQUEST FOR ESTIMATES FOR POSSIBLE CHANGES IS NOT A CHANGE ORDER OR A DIRECTION TO PROCEED WITH THE PROPOSED CHANGES. THAT CAN ONLY BE AUTHORIZED THROUGH A SIGNED CHANGED ORDER.

CLEANING & MAINTENANCE DURING CONSTRUCTION & FINAL CLEANING

1. KEEP THE BUILDING AND SITE WELL ORGANIZED AND CLEAN THROUGH OUT THE CONSTRUCTION PERIOD.
2. PROVIDE GENERAL CLEAN UP DAILY AND COMPLETE WEEKLY PICKUP AND REMOVAL OF ALL SCRAP AND DEBRIS FROM THE SITE. EXCEPTION - REUSABLE SCRAP SHALL BE STORED IN A NEATLY MAINTAINED, DESIGNATED STORAGE AREA.
3. AT COMPLETION OF WORK, REMOVE FROM THE JOB SITE ALL TOOLS AND EQUIPMENT, AND SURPLUS MATERIALS, EQUIPMENT, SCRAP, AND DEBRIS.
4. EXTERIOR OF BUILDING - INSPECT EXTERIOR SURFACES AND REMOVE ALL WASTE MATERIALS, PAINT DROPPINGS, SPOTS, STAINS OR DIRT.
5. INTERIOR OF BUILDING - INSPECT INTERIOR SURFACES AND REMOVE ALL WASTE MATERIALS, PAINT, DROPPINGS, SPOTS, STAINS OR DIRT.
6. GLASS - CLEAN INSIDE AND OUTSIDE SO THERE ARE NO SPOTS OR DIRT, AND NO SMUDGES OR STREAKS REMAINING FROM THE CLEANING PROCESS.
7. SCHEDULE FINAL CLEANING AS APPROVED BY THE OWNER TO ENABLE OWNER TO ACCEPT A COMPLETELY CLEAN WORK AREA.
8. FINAL CLEANING WILL BE COMPARABLE TO THAT PROVIDED BY PROFESSIONAL, SKILLED CLEANERS USING COMMERCIAL GRADE CLEANING MATERIAL. CLEANING MATERIAL WILL BE USED WITH CARE AND WILL BE COMPATIBLE WITH BUILDING MATERIALS AND FINISHES. FINAL CLEANING WILL INCLUDE REMOVAL OF DEBRIS FROM PUBLIC PAVED AREAS ADJACENT TO THE SITE.
9. OPERATING HARDWARE MUST PERFORM SMOOTHLY. REPAIR OR REPLACE ANY DEFECTIVE WORK. REDO REPAIRS IF WORK IS STILL DEFECTIVE AS DIRECTED BY THE FCDADSON. CLEAN THE WORK AREA AND REMOVE ALL SCRAP AND EXCESS MATERIALS FROM THE SITE.

GENERAL NOTES

1. THIS PROJECT SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH THE CURRENT ISSUE OF THE LOCAL CODE AND ANY OTHER CODES HAVING JURISDICTION. CONTRACTOR TO VERIFY ALL CODE REQUIREMENTS BEFORE COMMENCEMENT OF CONSTRUCTION AND BRING ANY DISCREPANCIES BETWEEN THE CODES AND THE CONSTRUCTION DOCUMENTS TO THE ATTENTION OF FCDADSON.
2. DETAILS AND SECTIONS ON THE DRAWINGS ARE SHOWN AT SPECIFIC LOCATIONS AND ARE INTENDED TO SHOW GENERAL REQUIREMENTS THROUGHOUT. DETAILS NOTE "TYPICAL" IMPLY ALL CONDITIONS ARE TREATED SIMILAR. MODIFICATIONS ARE TO BE MADE BY THE CONTRACTOR TO ACCOMMODATE MINOR VARIATIONS.
3. THE CONTRACTOR SHALL TAKE REASONABLE CARE TO VERIFY AND PROTECT ALL SERVICE LINES AND EXISTING SITE FEATURES FROM DETERIORATION AND DAMAGE.
4. OWNER, DESIGNER OR FCDADSON SHALL NOT BE RESPONSIBLE FOR THE SAFETY AND CONSTRUCTION PROCEDURES, TECHNIQUES, OR THE FAILURE OF THE BUILDER TO CARRY OUT THE WORK IN ACCORDANCE WITH THE DRAWINGS OR THE APPLICABLE CODES.
5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY BUILDING PERMITS.
6. THE CONTRACTOR SHALL BRING ANY ERRORS AND OMISSIONS WHICH MAY OCCUR IN THE CONTRACT DOCUMENTS TO THE ATTENTION OF FCDADSON IN WRITING. WRITTEN INSTRUCTIONS SHALL BE OBTAINED FROM FCDADSON BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE RESULTS OF ANY ERRORS, DISCREPANCIES, OR OMISSIONS IN THE CONSTRUCTION DOCUMENTS FOR WHICH NOTIFICATION AS INDICATED ABOVE WAS NOT GIVEN.
7. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND JOB CONDITIONS AT THE SITE SUFFICIENTLY IN ADVANCE OF THE WORK TO BE PERFORMED TO ASSURE THE ORDERLY PROGRESS OF THE WORK.
8. CONTRACTOR SHALL MAINTAIN THE PREMISES CLEAN AND FREE OF ALL TRASH, DEBRIS, AND SHALL PROTECT WORK FROM DAMAGE, SOILING, PAINT OVERSPRAY, ETC.
9. ALL EQUIPMENT, FIXTURES, GLAZING, FLOORS, ETC. SHALL BE LEFT CLEAN AND READY FOR OCCUPANCY UPON THE COMPLETION OF THE PROJECT.
10. THE DRAWINGS SHALL NOT BE SCALED. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALE MEASUREMENTS AND LARGER SCALE DETAIL OVER SMALLER SCALE DRAWINGS.
11. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS IN THE FIELD. ALL NEW AND EXISTING WORK SHALL BE MODIFIED BY FIELD CONDITIONS. FCDADSON SHALL BE CONSULTED ON ALL MODIFICATIONS.
12. ANY AND ALL INTERPRETATIONS PERTAINING TO THE DRAWINGS SHALL BE MADE BY FCDADSON AND DESIGNER.
13. FCDADSON SHALL BE CONSULTED DURING THE COURSE OF CONSTRUCTION REGARDING EXISTING FRAMING CONDITIONS ONCE THEY ARE EXPOSED. UPON HIS/HER INSPECTION, THE PROPOSED STRUCTURAL MEMBERS SHOWN ON THESE DRAWINGS MAY BE RECONSIDERED OR REVISED.
14. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL PERTINENT CODES REGULATIONS AND THE REQUIREMENTS OF GOVERNING JURISDICTION.

METALS

1. PROVIDE ALL MISCELLANEOUS METAL ITEMS NOT LIMITED TO THE FOLLOWING TO COMPLETE THE WORK:
 1. NAILS, SCREWS AND BOLTS.
 2. REINFORCING BARS.
 3. STEEL LINTELS.
 4. WELDED WIRE MESH.

ROUGH CARPENTRY

1. ALL WOODS AND WOOD CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING STANDARDS EXCEPT AS MODIFIED BY THESE SPECIFICATIONS:
 - AMERICAN INSTITUTE OF TIMBER CONSTRUCTION: STANDARD MANUAL.
 - NATIONAL FOREST PRODUCTS ASSOCIATION
 - SOUTHERN PINE INSPECTION BUREAU
 - TRUSS PLATE INSTITUTE
 - AMERICAN PLYWOOD ASSOCIATION
 - AMERICAN WOOD PRESERVERS ASSOCIATION
2. ALL STRUCTURAL LUMBERS SHALL BE DOUGLAS FIR LARCH, CONSTRUCTION GRADE, S4S, AIR-DRIED, NUMBER 2, WITH FB = 875 PSI, UNLESS OTHERWISE CALLED FOR ON THE PLANS. REJECT ANY DELIVERED FRAMING LUMBER THAT IS NOT GRADE - STAMPED AND CERTIFIED BY A BONA FIDE GRADING AGENCY.
3. DO NOT ACCEPT OR USE LUMBER THAT DEVIATES FROM GRADE STANDARDS OR HAS EXCESSIVE MOISTURE CONTENT OR OTHER DEFECTS. REMOVE UNSTAMPED OR DEFECTIVE LUMBER FROM THE JOB SITE.
4. STORE FRAMING LUMBER AND WOOD PANELS TO PREVENT DAMAGE AND MOISTURE ABSORPTION. STORE METAL CONNECTORS THAT ARE SUBJECT TO DAMAGE IN WEATHERTIGHT WRAPPING AND IN SAFE LOCATIONS AWAY FROM TRAFFIC OF OTHER SOURCES OF DAMAGE. STORE CHEMICALLY TREATED LUMBER AND WOOD PANELS OUT DOORS UNTIL INSTALLATION. KEEP CHEMICALLY TREATED LUMBER AND WOOD PANELS WELL VENTILATED IF MOVED INDOORS.
5. PROVIDE ALL BLOCKING AND PATCHING AND BUILDERS HARDWARE ITEMS INCLUDING, BUT NOT LIMITED TO, NAILS, SCREWS, BOLTS, HANGERS, ETC. AS REQUIRED TO PERFORM A COMPLETE JOB.
6. WOOD IN CONTACT WITH MASONRY SHALL BE PRESSURE TREATED.
7. REFER TO DRAWINGS FOR SIZES AND SPACING OF ALL NEW FRAMING MEMBERS: STUDS, FLOOR JOISTS, CEILING JOISTS, RAFTERS, RIDGES, VALLEY, ETC.
8. ALL BOLTS FOR SPECIFIED STRUCTURAL CONNECTIONS SHALL BE 5/8" DIAMETER WITH WASHERS AND NUTS, STAGGERED UP AND DOWN, SPACED 12" O.C.
9. CHECK AND VERIFY CORRECTIONS OF EACH STAGE OF FRAMING BEFORE INSTALLING SUBSEQUENT FRAMING: REMOVE ALL UNUSABLE WOOD SCRAPS FROM SITE WEEKLY AT MINIMUM AND BETWEEN EACH PHASE OF FRAMING. CALL FOR FCDADSON AND/OR BUILDING DEPARTMENT INSPECTION BEFORE CLOSING UP CONCEALED WORK.

BUILDING INSULATION

1. KEEP AREAS TO BE INSULATED CLEAN AND DRY. DO NOT INSTALL INSULATION WHERE IT MIGHT BE EXPOSED TO WATER.
2. UPON COMPLETION, CLEAN THE WORK AREA AND REMOVE ALL SCRAP AND EXCESS MATERIALS FROM THE SITE. ALLOW CONVENIENT ACCESS FOR INSPECTION OF WORK AND REPAIR OR REPAIR DEFECTIVE WORK AS DIRECTED BY FCDADSON.

DRYWALL

1. ALL INTERIOR WALLS AND CEILINGS SHALL BE FINISHED WITH 5/8" THICK GYPSUM BOARD DRYWALL: TYPE III, GRADER, CLASS I. TYPE X SHALL BE UTILIZED FOR ALL FIRE RATED WALLS.
2. ALL DRYWALL PRODUCTS SHALL BE PURCHASED FROM ONE MANUFACTURER SUCH AS USG OR AN APPROVED EQUAL. APPLY METAL CORNER BEADS TO ALL OUTWARD DRYWALL CORNERS. ALL JOINTS SHALL BE FINISHED WITH PERFORATED TAPE AND DRYWALL JOINT COMPOUND.
3. ALL WALLS AND CEILINGS SHALL BE TAPED, SPACKLED, SANDED AND READY FOR PAINT.
4. NOT USED
5. INSTALL BLOCKING AND BACKUPS TO SUPPORT ALL EDGES OF WALLBOARD.
6. KEEP WALLBOARDS MATERIALS DRY AND PROTECTED FROM MOISTURE. STORE WALLBOARD MATERIALS SO THEY ARE PROTECTED FROM DAMAGE TO SURFACE AND EDGES. MAINTAIN INTERIOR WORK ENVIRONMENT CLOSED IN, NOT EXPOSED TO WEATHER CLEAN, DRY, WELL-VENTILATED, WELL-LIGHTED, AND COMFORTABLE IN TEMPERATURE.
7. KEEP WORK OF TRADES SUCH AS CONDUIT, PIPE, AND DUCTS CLEAR OF THE INSIDE FACE OF WALL PANELS.

VTC

1. COLORS, TEXTURES AND PATTERNS WILL BE AS SELECTED BY THE OWNER FROM MANUFACTURER'S SAMPLES. DELIVERED TILE SHALL MATCH SAMPLES APPROVED BY THE OWNER.
2. KEEP WORK SURFACES AND WORKING ENVIRONMENT CLEAN, DRY, WELL-LIT, WELL-VENTILATED, FREE OF AIRBORNE CONSTRUCTION DUST AND AT A COMFORTABLE WORKING TEMPERATURE, MINIMUM OF 60 DEG. F.
3. PREPARE FLOORS FOR TILING SO THE FINISH FLOOR, WILL BE EITHER PERFECTLY LEVEL OR SLOPE PROPERLY TO DRAINS.
4. TILE MUST BE INSTALLED AS A COMPLETE, UNINTERRUPTED COVERING. EXTENDED TILE INTO RECESSES AND UNDER AND BEHIND FUTURE EQUIPMENT OR FIXTURES. TERMINATE TILE NEATLY AS EDGES, OBSTRUCTIONS, OR PENETRATIONS OF OTHER WORK.

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. C.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

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LOOK LAB

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DENVER, CO 80220-3955

CHECKED BY: Staff
DRAWN BY: Staff
DATE: JULY 26, 2024
SCALE: PER PLAN
PROJECT No.: TLL 2402
SHEET TITLE

SPECIFICATIONS

SHEET No.

1.14

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. E.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

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EMERGENCY LIGHTING LEGEND

TYPE	DESCRIPTION	MANUFACTURER	MODEL NO.	LAMPS
RH RH	EXTERIOR REMOTE EMERGENCY HEAD	BEST	RHLED1-WP	INTEGRAL
WALL MOUNT ONLY	EMERGENCY LIGHT WITH 90 MINUTE BATTERY BACKUP WALL MOUNTED 12" BELOW CEILING, MAX 108" AFF	BEST	LEDR1	INTEGRAL
EX/EM WALL MOUNT ONLY	COMBINATION EXIT / EMERGENCY LIGHT FIXTURE WITH 90 MINUTE BATTERY BACKUP	BEST	CXTEU2GWRC	INTEGRAL
EX WALL MOUNT ONLY	EXIT LIGHT FIXTURE WITH 90 MINUTE BATTERY BACKUP	BEST	EXTEU2RW-EM	INTEGRAL

G.C./E.C. NOTE : LUNA BELL ORDERS CONTACT-PAULINA BUCHKOWSKI @PAULINEBUCHKOWSKI@GMAIL.COM 1-480-293-4138

LIGHT FIXTURE LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NO.	LAMPS	MOUNTING	REMARKS	SUPPLIED BY	INSTALLED BY
A	CHANDELIER (ALT OPTION)	LUNA BELLA	31W X 29H CHAILLOT CHANDELIER SKU: CHA-CHAI	(5) 9 WATT LED 45 WATTS	6'-5" AFF TO BOTTOM OF LIGHT FIXTURE	NON-DIMMABLE	GC OWNER	GC
B	CHANDELIER (STANDARD)	SHADES OF LIGHT	14" H X 26" W X 26" D GLASS CIRCLE CHANDELIER SKU: CH19312 GM GUN METAL GLASS	(6) 9 WATT LED 54 WATTS	6'-6" AFF TO BOTTOM OF LIGHT FIXTURE	NON-DIMMABLE NOTE: GC WILL NEED TO CUT DOWN ROD TO GET CORRECT FLOOR HEIGHT FOR THIS FIXTURE	GC OWNER	GC
C	2X2 LED RECESSED TROFFER	LITHONIA	2BLT2 2X2 40L ADP E21 LP835 B2CRI 3500K WHITE	23 WATT LED	FLUSH TO CEILING IN GRID/GYP	DIMMABLE	GC	GC
E	4" PENDANT (ORDER 3 LIGHTS + 1 CANOPY) ORDER 3 LIGHTS	LUNA BELLA	QUANDROP PENDANT + DISK SKU: SHA-RANG 4" DIA. X 10H ORDER 3 LIGHTS + 1 CANOPY FOR PENDANT CLUSTERS SKU: ACC-DISK-PEND REQUIRED DISK: GUNPOWDER FINISH	(3) 9 WATT LED 27 WATTS	6'-10", 7'-6", 8'-2" AFF TO BOTTOM OF LIGHT FIXTURE CLUSTER COORDINATE IN FIELD.	NON-DIMMABLE	GC OWNER	GC
F	6" RECESSED CAN LIGHTS	LITHONIA	LDN6 35/15 LOGWR LSS MVOLT E210, WHITE TRIM	13 WATT LED	FLUSH TO CEILING IN GRID/GYP	DIMMABLE	GC	GC
G	CHANDELIER (STANDARD)	CRATE & BARREL	LUNA CANDELABRA LARGE BLACK SKU: 259928 INCLUDES 1-3", 1-6", 2-12", & 2-18" RODS; 35" DIA. X 21" H	(2) 2 WATT LED 40 WATTS	6'-6" AFF TO BOTTOM OF LIGHT FIXTURE	NON-DIMMABLE	GC OWNER	GC
H	CHANDELIER (ALTERNATE)	CRATE & BARREL	NOON WICKER BY LEANNE FORD LARGE BLACK SKU: 497953 HEIGHT 24" DIA. 32" ADJUSTABLE LENGTH 72" BLACK CLOTH-WRAPPED CORD	(22) 2 WATT LED 44 WATTS	6'-6" AFF TO BOTTOM OF LIGHT FIXTURE	NON-DIMMABLE	GC OWNER	GC
I	BUBBLE PENDANT	LUNA BELLA	BUBBLE 12 PENDANT SKU: CHA-BUB12 12" DIA. X 15" H	9 WATT LED	6'-0" AFF TO BOTTOM OF LIGHT FIXTURE	NON-DIMMABLE	GC OWNER	GC
J	4" RECESSED WALLWASH ACCENT LIGHTS	LITHONIA	LDN4 35/15 LW4AR LSS MVOLT E210, WHITE TRIM	LED 13 WATTS	FLUSH TO CEILING IN GRID/GYP	DIMMABLE	GC	GC
K	CHANDELIER	SAVOY HOUSE	SALERNO CHANDELIER SKU: 1-2221-6-89 MATTE BLACK 42"W X 25"H	(6) 5 WATT LED 30 WATTS	7'-0" AFF TO BOTTOM OF LIGHT FIXTURE	NON-DIMMABLE	GC OWNER	GC
M	LED LIT MIRROR	KEONJINN	BACKLIT OVAL LED LIGHTED BATHROOM MIRROR. 24"x32"	3528/120LED/M LED DRIVER: 36 WATTS INPUT AC110 60HZ OUTPUT 12V DC KELVIN RATING: 6000K	40" AFF TO REFLECTIVE SURFACE OF MIRROR.	DIMMABLE INSTALL RECESSED OUTLET MEDIA BOX CENTERED BEHIND MIRROR AT 50" AFF TO CENTER	GC	GC

NOT ALL FIXTURES ARE NECESSARILY IN USE. LIGHT SWITCHES/CONTROLS TO BE MOUNTED AT 48" A.F.F. TO CENTER OF CONTROL. RESTROOM SWITCH TO BE MOUNTED AT 42" AFF. OCCUPANCY SENSORS, DAYLIGHT SENSORS, LIGHT SWITCHES, AND DIMMERS SUPPLIED BY GC/EC.

GENERAL LIGHTING NOTES

- ALL RECESSED LIGHTING FIXTURES SHALL BE RATED FOR CONTACT WITH INSULATION.
- LIGHT SWITCHES/CONTROLS TO BE MOUNTED AT 48" AFF TO CENTER OF CONTROL.
- LIGHTING SWITCHES INSTALLED IN TOILET ROOMS SHALL BE MOUNTED AT 40" AFF TO CENTER OF CONTROL. COORDINATE WITH ELEVATIONS. DO NOT INSTALL ACROSS DISSIMILAR FINISHES.
- ALL SWITCHES, RECEPTACLES AND FACE PLATES TO BE WHITE FINISH. PROVIDED AND INSTALLED BY E.C.
- ALL EMERGENCY AND EXIT BATTERY BACKUP LIGHTING, BATTERY TO BE INSTALLED AHEAD OF ALL CONTROL. INSTALL PER MANUFACTURER WIRING DIAGRAM.
- E.C. TO CLEARLY (MECHANICALLY) LABEL ALL SWITCHES FOR DEVICE SERVED.

CONTROL WIRING

ELECTRICAL CONTRACTOR SHALL ENSURE RECEIPT OF CONTROL DEVICE WIRING SCHEMATICS FROM MANUFACTURER / SUPPLIER OF LIGHTING FIXTURES. E.C. SHALL BE RESPONSIBLE FOR ALL LOW VOLTAGE WIRING REQUIRED TO PROVIDE COMPLETE AND OPERABLE DIMMING / CONTROL SYSTEMS FOR ALL LIGHTING.

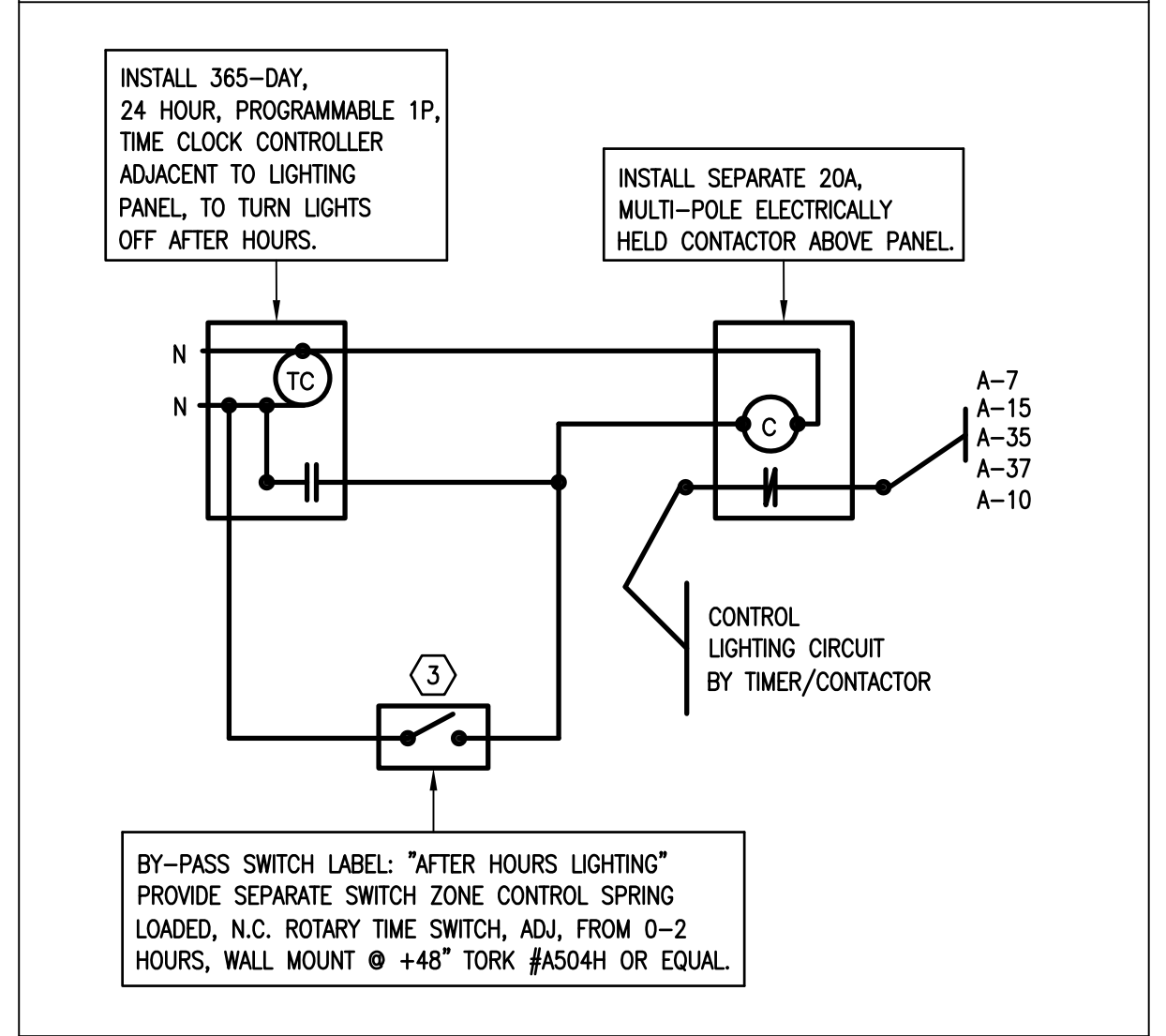
SWITCH DESIGNATIONS

- ALL CONTROLS RATED FOR 20 AMPS. ALL SWITCHED AND RECEPT TO BE WHITE
- \$ STANDARD LIGHT SWITCH LUTRON CLARO
 - 3\$ 3 WAY LIGHT SWITCH LUTRON CLARO
 - D SLIDE DIMMER SWITCH LUTRON DIVA LED+ DIMMER SWITCH SWITCH FOR DIMMABLE LED SINGLE-POLE WHITE.
 - 3D 3 WAY SLIDE DIMMER SWITCH LUTRON DIVA LED+ DIMMER SWITCH FOR DIMMABLE LED, 3-WAY, WHITE.
 - M MUSIC VOLUME CONTROL TO MATCH LUTRON CLARO
 - Ⓢ CEILING MOUNTED OCCUPANCY SENSOR CONTROL WITH INTEGRAL ADJUSTABLE TIMER. SET TO MAX 20 MINUTES.
 - Ⓣ OCCUPANCY / MOTION SENSOR CONTROL WITH INTEGRAL ADJUSTABLE TIMER. SET TO MAX 20 MINUTES. PER IECC C405.2.1.1, OCCUPANT SENSOR CONTROL FUNCTION SHALL AUTOMATICALLY TURN OFF LIGHTS WITHIN 20 MINUTES AFTER ALL OCCUPANTS HAVE LEFT THE SPACE AND BE MANUAL ON OR CONTROLLED TO TURN ON LIGHTING TO NOT MORE THAN 50% POWER.
 - Ⓢ CEILING MOUNTED DAY LIGHTING SENSOR CONTROL
 - Ⓣ ADJUSTABLE WALL TIMER, MAXIMUM 30 MINUTES

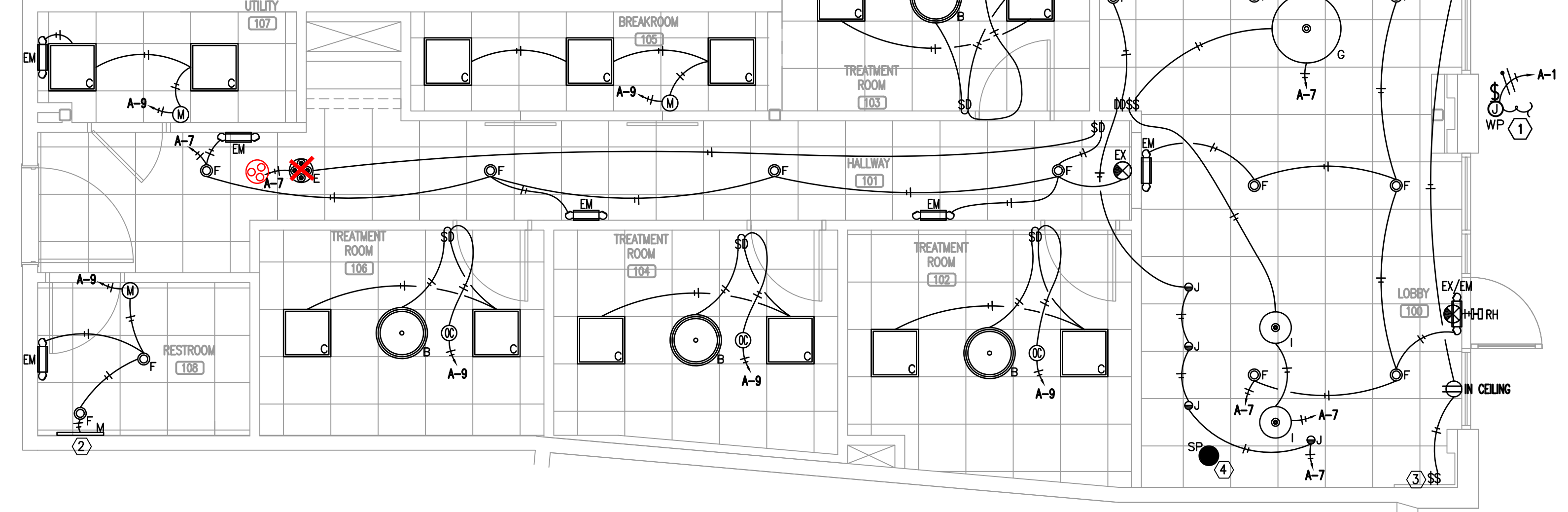
SHEET NOTES

- E.C. COORDINATE ALL FINAL SIGNAGE LOCATIONS IN THE FIELD BASED ON PERMIT APPROVED SIGN DRAWING AND SHOP DRAWING SPEC AS APPROVED BY LANDLORD AND TENANT; DOCUMENTS TO BE PROVIDED BY EXTERIOR SIGNAGE CONTRACTOR. EXTERIOR SIGNAGE W/DISCONNECT ON BY PHOTOCELL AND OFF BY TIME CLOCK.
- LIGHTED MIRROR OUTLET TO BE LOCATED WITHIN A RECESSED POWER MANAGEMENT BOX THAT CAN ALSO HOUSE A 3" X 5" TRANSFORMER. RECESSED BOX AND POWER TO BE CONCEALED BEHIND THE MIRROR ONCE INSTALLED. LIGHTED MIRROR OUTLET TO BE CONNECTED TO THE RESTROOM SWITCH. MOUNT CENTER OF BOX AT 50" AFF.
- PROVIDE 2 HOUR OVERRIDE FOR AFTER HOURS LIGHTING. PROVIDED AND INSTALLED BY E.C.
- CEILING FLUSH MOUNTED SPEAKER (WHITE) FOR SONOS SYSTEM. TRIM FOR SPEAKER TO MATCH CEILING SURFACE. ROUTE SPEAKER WIRE FROM SPEAKERS BACK TO SONOS AND MAKE FINAL CONNECTIONS. OWNER WILL SUPPLY, E.C./G.C. TO INSTALL. LOCATE SONOS ON SHELF HIGH ON PHONE BOARD. GC TO RUN SINGLE (2)WIRE 16 GAUGE SPEAKER WIRE FOR EACH SPEAKER. IF RUN IS OVER 80', GC TO RUN 14 GAUGE SPEAKER WIRE.

AUTOMATIC LIGHTING CONTROL



GC NOTE: INSTALL FIXTURE 'E' WITH THE DISK TURNED FOR THE HALLWAY ENTRANCE VIEW TO HAVE THE APPEARANCE OF THE LONGEST PENDANT IN THE MIDDLE OF THE THREE PENDANTS.



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

BIDDING QUESTIONS CONTACT 920-757-1486

CHECKED BY: Staff
 DRAWN BY: Staff
 DATE: JULY 26, 2024
 SCALE: PER PLAN
 PROJECT No.: TLL 2402
 SHEET TITLE

ELECTRICAL LIGHTING PLAN

SHEET No. **2.01**

LOOK LAB
 4164 EAST 8TH PL
 DENVER, CO 80220-3955

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FIRE ALARM
 MERIDIAN FIRE & SECURITY, LLC
 10200 E. EASTER AVENUE
 CENTENNIAL, COLORADO 80112
 ATTENTION: RYAN O'BRIEN, SERVICE MANAGER
 303-790-2520
 RYAN.OBRIEN@MERIDIANFIRE.COM

NOTE: ALL TV AND DATA OUTLETS ARE TO BE RECESSED.

COMMUNICATION WIRING

- ALL VOICE/DATA WIRING TO BE CAT 6 RATED. (MM)
- 2 HOME RUN TO EACH PHONE, DATA OR FAX
- PATCH PANEL AND PHONE BLOCK BY VENDOR, INSTALLED BY EC.
- ALL WIRING TO BE CLEARLY MARKED ON BOTH ENDS WITH MACHINE PRINTED WIRE NUMBERS
- ALL VOICE / DATA JACKS TO BE CLEARLY LABELED WITH MACHINE PRINTED LABELS
- LOW VOLTAGE WIRING SHALL BE COLOR CODED PER INDUSTRY STANDARD
- TELEPHONE SYSTEM MUST BE CAPABLE OF 4 VOICE LINES AND A DEDICATED HIGH SPEED INTERNET CONNECTION
- WIRING SHALL TERMINATE AT PHONE/ DATA BOARD
- G.C. SHALL BE RESPONSIBLE TO COMPLETE INSTALLATION OF COMMUNICATION SERVICES WITHIN SPACE.

GC NOTE: CONTACT MONICA AT 1-480-559-8639 X204 AT CLOUDENCE FOR ALL LOW VOLTAGE QUESTIONS. LOW VOLTAGE INSTALLATION TO BE COMPLETED BY GC/EC, INCLUDING INSTALLATION AND FINAL CONNECTIONS OF ALL OWNER PROVIDED EQUIPMENT.

TV MOUNT
 G.C. TO PROVIDE FIRE TREATED BLOCKING FOR TV MOUNTS ACROSS 3 STUD BAYS.

SHEET NOTES

- RECEPTACLE ABOVE CEILING FOR WIRELESS HUB. G.C./E.C. TO PROVIDE AND INSTALL ADDITIONAL SHELF ABOVE CEILING FOR HUB.
- E.C./G.C. NOTE: POWER AND DATA TO BE PULLED SEPARATELY THROUGH THE POS CABINET FROM WALL AND MOUNTED UNDER COUNTERTOP.
- ALL TV RECEPTABLES AND DATA OUTLETS TO BE RECESSED IN WALL. 2-GANG RECESSED TV MEDIA BOX KIT.
- 60" WIDE X 36" TALL 3/4" PLYWOOD PHONE BOARD. (COORDINATE WITH G.C. FOR INSTALLATION OF FIRE TREATED BLOCKING IN WALL FOR PHONE BOARD.) INSTALL TOP OF PHONE BOARD TIGHT TO CEILING ABOVE. INSTALL QUAD RECEPTABLES BELOW PHONE BOARD AT 88" TO THE TOP OF RECEPTACLE (TOP OF RECEPTABLES AT THE BOTTOM OF PHONE BOARD).
- G.C./E.C. TO INCLUDE POWER CORD FLOOR COVER (BLACK) FROM TREATMENT CHAIRS TO OUTLET AT UNDERCOUNTER FRIDGE.
- AUTOMATIC RECEPTACLE CONTROL PER 2021 IECC 405.11-2.1 A SCHEDULED BASIS USING TIME OF DAY OPERATED CONTROL DEVICE THAT TURNS THE RECEPTACLE POWER OFF AT SPECIFIC PROGRAMMED TIMES AND CAN BE PROGRAMMED FOR EACH DAY OF THE WEEK.
- PLUG REFRIGERATOR IN TO UNCONTROLLED PORTION OF RECEPTACLE

GENERAL NOTES

- BRANCH CIRCUIT WIRING SHALL BE AS FOLLOWS:
 - A. LIGHTING AND POWER NETWORKS: (120/208V, 3ø, 4W)
 - 1) 100 FEET OR LESS:
 - PHASE - 3#12 AWG
 - NEUTRAL - 1#12 AWG
 - GROUND - 1#12 AWG
 - 2) GREATER THAN 100 FEET:
 - INCREASE ALL CONDUCTORS BY ONE WIRE GAUGE SIZE.
 - 3) TWO NETWORKS MAXIMUM PER CONDUIT.
 - PROVIDE SINGLE GANG JUNCTION BOX FOR EACH TELEPHONE LOCATION WITH 3/4" CONDUIT STUBBED TO 6" ABOVE CEILING EXTEND TELEPHONE FROM OUTLET TO TELEPHONE BOARD LOCATION PER PLAN.
 - MINIMUM CONDUIT SIZE SHALL BE 3/4", UNLESS OTHERWISE NOTED OR INDICATED.

ELECTRICAL SYMBOLS

	POWER PANELBOARD OR DISTRIBUTION PANEL 3/4" GIS FIRE TREATED PLYWOOD, PAINTED TO MATCH ADJACENT FINISH
	RECEPTABLES & OUTLETS (MOUNT CENTER OF BOX AT 18" AFF U.N.O.)(ALL DIM NOTED TO CENTER OF BOX)
	DUPLEX RECEPTACLE, 20A, 120V, 3 WIRE GROUNDED TYPE (WHITE)
	DOUBLE DUPLEX RECEPTACLE OUTLET, MTD., IN 2-GANG BOX W/SINGLE COVER PLATE (WHITE) ALL POWER WITHIN 6'-0" OF WATER SOURCE TO BE GFCI RATED.
	GFCI DUPLEX RECEPTACLE, 20A, 120V, 3 WIRE GROUNDED TYPE (WHITE)
	COMMUNICATION - DUPLEX DATA (ETHERNET) JACK (2 RUNS) (RJ45) (CAT5E OR BETTER)
	COMMUNICATION - DUPLEX PHONE JACK (RJ45) (CAT5E OR BETTER)
	COMMUNICATION - PHONE / DATA OUTLET (WHITE) (2 SEPERATE RUNS) (RJ45) (CAT5E OR BETTER)
FIRE ALARM DEVICES FIRE ALARM DEFERRED PERMIT SUBMITTAL BY LOCAL LICENSED SUB CONTRACTOR	
	SMOKE DETECTOR
	STROBE LIGHTS (12" BELOW CEILING)
	MANUAL PULL STATION (44" AFF)
	HORN / STROBE (12" BELOW CEILING)
	SUPERVISORY VALVE TAMPER SWITCH
	SPRINKLER FLOW SWITCH
	DUCT SMOKE DETECTOR
	FIRE ALARM ANNUNCIATOR
G.C. TO COORDINATE WITH LANDLORD APPROVED FIRE ALARM SUBCONTRACTOR FOR DEFERRED FIRE ALARM SUBMITTAL.	

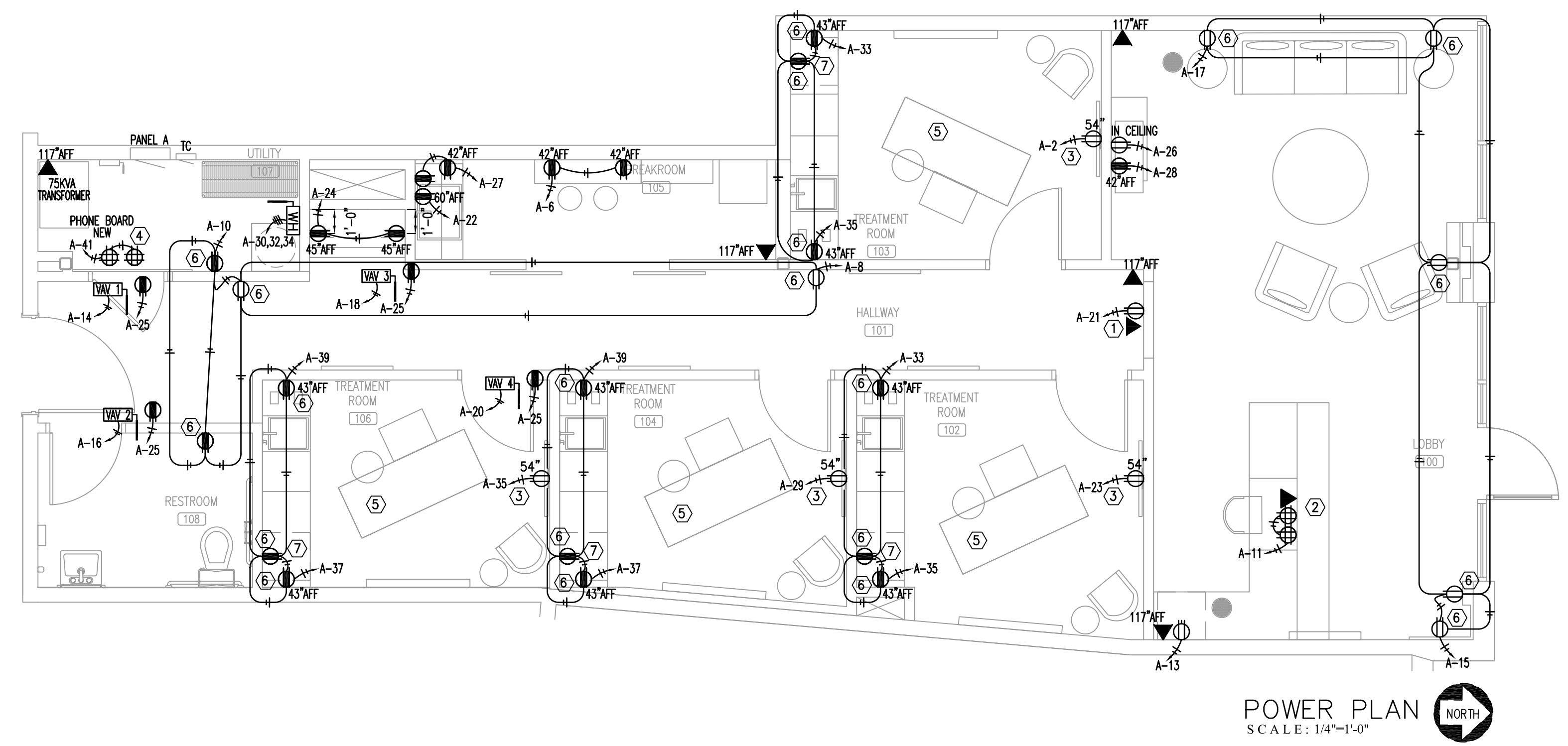
RETURN AIR PLENUM MATERIALS EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH SECTION 602.2

MATERIALS WITHIN PLENUMS, EXCEPT AS REQUIRED BY SECTIONS 602.2.1.1 THROUGH 602.2.1.6, MATERIALS WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.

EXCEPTIONS:

- RIGID AND FLEXIBLE DUCTS AND CONNECTORS SHALL CONFORM TO SECTION 603.
- DUCT COVERINGS, LININGS, TAPE AND CONNECTORS SHALL CONFORM TO SECTIONS 603 AND 604.
- THIS SECTION SHALL NOT APPLY TO MATERIALS EXPOSED WITHIN PLENUMS IN ONE- AND TWO-FAMILY DWELLINGS.
- THIS SECTION SHALL NOT APPLY TO SMOKE DETECTORS.
- COMBUSTIBLE MATERIALS FULLY ENCLOSED WITHIN CONTINUOUS NONCOMBUSTIBLE RACEWAYS OR ENCLOSURES, APPROVED GYPSUM BOARD ASSEMBLIES OR WITHIN MATERIALS LISTED AND LABELED FOR SUCH APPLICATION.

602.2.1.1 WIRING. COMBUSTIBLE ELECTRICAL OR ELECTRONIC WIRING METHODS AND MATERIALS, OPTICAL FIBER CABLE, AND OPTICAL FIBER RACEWAY EXPOSED WITHIN APLENUM SHALL HAVE A PEAK OPTICAL DENSITY NOT GREATER THAN 0.50, AN AVERAGE OPTICAL DENSITY NOT GREATER THAN 0.15, AND A FLAME SPREAD NOT GREATER THAN 5 FEET (1524 MM) WHEN TESTED IN ACCORDANCE WITH NFPA 262. ONLY TYPE OFNP (PLENUM RATED NONCONDUCTIVE OPTICAL FIBER CABLE) SHALL BE INSTALLED IN PLENUM-RATED OPTICAL FIBER RACEWAYS. WIRING, CABLE, AND RACEWAYS ADDRESSED IN THIS SECTION SHALL BE LISTED AND LABELED AS PLENUM RATED AND SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70.



BIDDING QUESTIONS CONTACT 920-757-1486

LOOK LAB
 4164 EAST 8TH PL
 DENVER, CO 80220-3955

CHECKED BY: Staff
 DRAWN BY: Staff
 DATE: JULY 26, 2024
 SCALE: PER PLAN
 PROJECT No.: TLL 2402
 SHEET TITLE

ELECTRICAL POWER PLAN

SHEET No.
2.02

GENERAL NOTES

- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL AND STATE CODES.
- ALL MATERIAL, EQUIPMENT AND APPLIANCES SHALL BE NEW AND SHALL CONFORM TO THE STANDARDS OF THE UNDERWRITER'S LABORATORIES, INC. AND THE NATIONAL MANUFACTURER'S ASSOCIATION.
- ALL ELECTRICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE ELECTRICAL CONTRACTOR.
- ELECTRICAL CONTRACT DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF ELECTRICAL EQUIPMENT. DO NOT SCALE ELECTRICAL PLANS. OBTAIN ALL DIMENSIONS FROM THE ARCHITECT'S DIMENSIONED DRAWINGS AND FIELD MEASUREMENTS. THE CONTRACTOR SHALL REVIEW ARCHITECTURAL PLANS FOR DOOR SWINGS AND BUILT-IN EQUIPMENT; CONDITIONS INDICATED ON THOSE PLANS SHALL GOVERN FOR THIS WORK.
- VERIFY ALL REQUIREMENTS AND COORDINATE EXACT LOCATION OF ELECTRICAL SERVICE WITH LOCAL POWER COMPANY PRIOR TO PROJECT START. NOTIFY ENGINEER OF ANY CHANGES.
- ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR EFFECTIVE FROM CERTIFICATE OF OCCUPANCY.
- A COMPLETE GROUNDING SYSTEM SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE NEC, AND AS SHOWN ON THE DRAWINGS.
- ALL CUTTING PATCHING REQUIRED FOR INSTALLATION OF ELECTRICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. DO NOT CUT ANY MATERIAL THAT WILL WEAKEN THE STRUCTURE WITHOUT WRITTEN PERMISSION OF THE ARCHITECT. PATCHING SHALL BE ACCOMPLISHED TO MATCH ADJACENT SURFACES IN EVERY RESPECT. ENGAGE ORIGINAL INSTALLER FOR CUTTING/PATCHING OF ROOFS.
- PROVIDE A TYPED DIRECTORY IN ALL PANELBOARDS CLEARLY DESCRIBING THE LOCATION AND TYPE OF LOAD SERVED FOR ALL CIRCUITS.
- PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR ALL PANELBOARDS AND DISCONNECT SWITCHES, WHITE LETTERS ON BLACK BACKGROUND. NAMEPLATE SHALL CONTAIN EQUIPMENT DESIGNATION, VOLTAGE, FEEDER SOURCE & DATE.
- PROVIDE "FLASH HAZARD" LABELS FOR ALL PANELBOARDS IN ACCORDANCE WITH NEC REQUIREMENTS.
- ALL TERMINALS/LUGS SHALL BE 60 DEGREES/75 DEGREE RATED.
- FUSES 0-600 AMPS SHALL BE UL CLASS "RK-5" LOW PEAK DUAL ELEMENTS TIME DELAY WITH 200,000 AMPERE INTERRUPTING RATING AS MANUFACTURED BY BUSSMAN UNLESS NOTED OTHERWISE.
- ALL WATER HEATERS SHALL HAVE DISCONNECT SIZED PER 422.22(E)(3).
- ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT REGARDLESS OF WHO SUPPLIES THE EQUIPMENT. THIS INCLUDES ALL HVAC, PLUMBING AND OWNER FURNISHED EQUIPMENT CONNECTIONS OF 120V OR HIGHER.
- RACEWAYS SHALL BE INSTALLED CONCEALED IN NEW WALL CONSTRUCTION, ABOVE CEILING, BELOW FLOOR AND IN OTHER CAVITIES TO THE GREATEST EXTENT POSSIBLE. WHERE EXPOSED RACEWAYS MUST BE USED, LAYOUT RACEWAYS TO MINIMIZE THE NUMBER OF VERTICAL RUNS.
- ALL EXPOSED RACEWAYS SHALL BE RUN PARALLEL TO THE BUILDING SURFACES AND SHALL BE PAINTED AS DIRECTED BY THE ARCHITECT. NO EXPOSED CONDUIT SHALL BE ALLOWED IN FINISHED SPACES EXCEPT AS PERMITTED BY THE OWNER OR ARCHITECT. EXPOSED RACEWAY IN FINISHED SPACES SHALL BE WIREMOLD TYPE.
- BEFORE COMMENCING WITH ANY ROUGH-IN, COORDINATE THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED DEVICES WITH THE ARCHITECTURAL INTERIOR ELEVATIONS, CASEWORK, SHOP DRAWINGS, AND EXISTING CONDITIONS. IF ANY DISCREPANCIES ARE DISCOVERED, NOTIFY THE ARCHITECT FOR FURTHER DIRECTION. MINOR ADJUSTMENTS IN DEVICE LOCATION, 1/8" - 0" IN ANY DIRECTION SHALL BE DONE AT NO ADDITIONAL COST TO THE CONTRACT.
- ALL WIRING SHALL BE INSTALLED IN IMC, RMC, EMT OR TYPE AC FLEXIBLE CABLE. RNC CONDUIT (PVC) SHALL ONLY BE USED UNDERGROUND AND OUTDOORS, WHERE NOT SUBJECT TO PHYSICAL DAMAGE. MINIMUM SIZE CONDUIT SHALL BE 3/4". AC FLEXIBLE CABLE SHALL BE USED ONLY IN AREAS PERMITTED BY CODE.
- ALL FLEX SHALL BE LIQUID TIGHT FLEXIBLE METAL.
- PROVIDE A PULL WIRE OR FISH TAPE IN ALL EMPTY CONDUITS. PROVIDE A BLANK COVER PLATE OVER ALL UNUSED BOXES INCLUDING DATA/COMM BOXES.
- WHERE A SINGLE HOMERUN IS SHOWN THE CIRCUIT SHALL BE INSTALLED IN A DEDICATED CONDUIT. DO NOT COMBINE WITH OTHER CIRCUITS WHERE A CIRCUIT HOMERUN IS NOT SHOWN THE CONTRACTOR SHALL COMBINE CIRCUITS, WHERE A CIRCUIT HOMERUN IS NOT SHOWN THE CONTRACTOR SHALL COMBINE CIRCUITS AS FOLLOWS AND IN ACCORDANCE WITH THE NEC:
A MAXIMUM OF THREE 20A, 1POLE BRANCH CIRCUITS MAY BE COMBINED IN A COMMON HOMERUN SHARING A COMMON NEUTRAL OR WITH SEPARATE NEUTRALS, FOR A TOTAL OF SIX CURRENT CARRYING CONDUCTORS. ALL BRANCH CIRCUITS LARGER THAN 20A SHALL BE SEPARATE HOMERUN TO PANEL.
- CONDUCTORS SHALL BE COPPER, RATED AT NO LESS THE 600 VOLTS. MINIMUM SIZE SHALL BE NO. 12 AWG UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL WIRE #8 AWG AND LARGER SHALL BE STRANDED, #10 THRU #12 AWG CONDUCTORS SHALL BE SOLID. ALL INSULATION TYPES SHALL BE THHN OR THHN.
- 20A/120V BRANCH CIRCUITS EXCEEDING 100' IN LENGTH FROM PANEL TO FARTHEST DEVICE SHALL USE NO. 10 CONDUCTORS AND 3/4" C.
- FOR EVERY WORKING DEVICE MARK THE BRANCH CIRCUIT TO WHICH IT IS CONNECTED ON THE BACK OF EACH DEVICE PLATE, USING AN INDELIBLE MARKER PEN.
- NOT USED.
- EXACT LOCATION OF ALL FLOOR-MOUNTED OUTLETS SHALL BE COORDINATED WITH THE ARCHITECT BEFORE ROUGH-IN.
- TWO OR MORE ADJACENT POWER OR COMMUNICATION RECEPTACLES SHALL BE GANGED WITH A COMMON FACE PLATE - IF THEY CAN NOT BE GANGED THEY SHALL BE INSTALLED WITH A MINIMUM DISTANCE BETWEEN UNITS.
- WALL RECEPTACLES SHOWN BACK TO BACK MAY BE OFFSET BUT SHALL BE INSTALLED DIRECTLY ADJACENT TO ONE ANOTHER.
- LIGHT SWITCHES SHALL BE NO MORE THAN 6" FROM EDGE OF DOOR FRAME.
- WHERE PENETRATIONS ARE MADE THROUGH A REQUIRED FIRE-RESISTIVE WALL, OR PARTITION FOR THE PURPOSE OF RUNNING RACEWAY CARRYING ELECTRICAL, TELEPHONE, TELEVISION, OR LOCAL COMMUNICATION AND/OR SIGNALING CIRCUITS, THE OPENING AROUND THE RACEWAY SHALL BE FIRE STOPPED PER THE STATE BUILDING CODE. COORDINATION WITH THE GENERAL CONTRACTOR SHALL BE MAINTAINED TO INSURE THAT THIS FIRE STOPPING IS ACCOMPLISHED. USE APPROVED ASSEMBLIES SUCH AS THE FOLLOWING:
• CONDUIT PENETRATIONS OF 1,2,3, & 4 HOUR GYP BOARD WALLS - U.L.#WL1001
• CONDUIT PENETRATIONS OF 2,3, & 4 HOUR CONCRETE OR BLOCK WALLS - U.L.#CAJ1001
• CONDUIT PENETRATIONS OF 2,3,& 4 HOUR CONCRETE FLOORS - U.L.#CAJ1001
• CONDUIT PENETRATIONS OF 1 HOUR GYP BOARD CEILING ASSEMBLY - L5208
• MULT. CONDUIT PENETRATIONS OF 2,3,& 4 HOUR CONCRETE OR BLOCK WALL OR FLOOR - CAJ1042
- IN REQUIRED FIRE RATED WALLS AND PARTITIONS, OPENINGS FOR INSTALLATION OF OF BOXES THAT ARE GREATER THAN 16 SQUARE INCHES SHALL BE PROTECTED AS REQUIRED BY U.L. COORDINATE CLOSELY WITH THE GENERAL CONTRACTOR TO INSURE THAT THE INTEGRITY OF THE U.L. RATING IS MAINTAINED.
- OUTLET BOXES FOR DEVICES MOUNTED ON OPPOSITE SIDES OF FIRE RATED PARTITIONS SHALL NOT BE MOUNTED IN THE SAME WALL CAVITY. SEPARATED WALL PENETRATIONS BY MOUNTING ON OPPOSITE SIDES OF WALL STUDS OR OTHER VERTICAL STRUCTURAL MEMBERS IN THE WALL.
- (SEISMIC REQUIREMENTS) ELECTRICAL EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION 1621 OF THE 2002 IBC.
- ELECTRICAL CONTRACTOR SHALL VERIFY THAT ALL AREAS IN WHICH FOOD IS PREPARED, OR IN WHICH UTENSILS ARE WASHED, SHALL BE PROVIDED WITH AT LEAST 50FC OF LIGHT ON FOOD PREPARATION WORK LEVELS AND AT UTENSILS WASHING WORK LEVELS. AT LEAST 10FC OF LIGHT AT 30 INCHES ABOVE THE FLOOR SHALL BE PROVIDED IN ALL OTHER WORK AREAS, INCLUDING STORAGE ROOMS AND WALK-IN UNITS. LIGHT BULBS IN FOOD PREPARATION, STORAGE, AND DISPLAY AREAS SHALL BE SHATTERPROOF OR SHIELDED SO AS TO PROTECT AGAINST BREAKAGE BY A SHIELD SURROUNDING AND EXTENDING BEYOND THE BULB, LEAVING ONLY THE FACE OF THE BULB EXPOSED.

CODE LOAD ANALYSIS PER N.E.C.

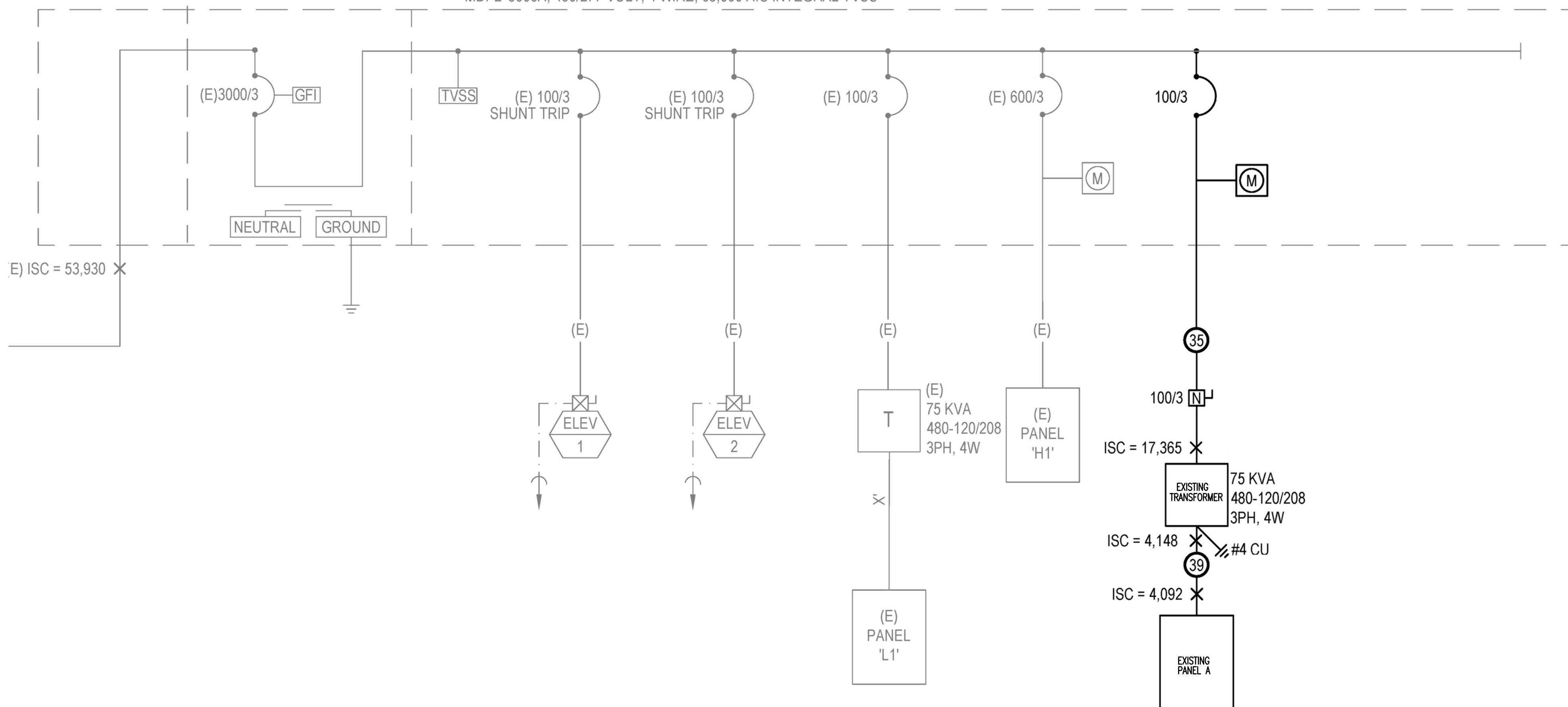
CODE LOAD ANALYSIS PANEL A			
LOAD DESCRIPTION	CONNECTED KVA	DEMAND FACTOR	KVA DEMAND
LIGHTING - EXTERIOR	0	125%	0
LIGHTING - INTERIOR	1224	125%	1530
SIGNAGE	1700	125%	2125
RECEPTACLES	8180	FIRST 10 KW 100% REMAINDER @ 50%	4090
KITCHEN EQUIPMENT	0	65%	0
WATER HEATING	10002	125%	12502.5
HVAC EQUIPMENT	7500	100%	7500
		LGT MOTOR @25%	750
MISC.	0	100%	0
TOTALS	38606		36638
CALCULATED SERVICE DEMAND AMPERES			102 amps

ELECTRICAL PANEL SCHEDULE A

EXISTING RECESSED MOUNTED NEMA 1		200 AMP MAIN CIRCUIT BREAKER			120 / 208 / 3Ø / 4WIRE		65,000 AIC (VIF)						
CIRCUIT BREAKER	TYPE	WIRE AND CONDUIT	LOAD SERVED	CIRCUIT NUMBER	LOAD WATTS			CIRCUIT NUMBER	LOAD SERVED	WIRE AND CONDUIT	TYPE	CIRCUIT BREAKER	
					ØA	ØB	ØC						
20A / 1P	TC-1	2-#12 THHN & 1# 12 G, 3/4" C.	EXTERIOR SIGNAGE	1	1200								
20A / 1P		2-#12 THHN & 1# 12 G, 3/4" C.	TIME CLOCK CONTROLLER	3	720	180		2	TREATMENT 103 TV RECEPTACLE	2-#12 THHN & 1# 12 G, 3/4" C.		20A / 1P	
20A / 1P		2-#12 THHN & 1# 12 G, 3/4" C.	STOREFRONT RECEPTACLES	5		500	1800	4	EXTERIOR SIGN	2-#12 THHN & 1# 12 G, 3/4" C.		20A / 1P	
20A / 1P		2-#12 THHN & 1# 12 G, 3/4" C.	LIGHTING	7	343		720	6	BREAKROOM COUNTER RECEPTACLES	2-#12 THHN & 1# 12 G, 3/4" C.		20A / 1P	
20A / 1P		2-#12 THHN & 1# 12 G, 3/4" C.	LIGHTING	9	360	881		8	CONVENIENCE RECEPTACLES	2-#12 THHN & 1# 12 G, 3/4" C.		20A / 1P	
20A / 1P	IG	2-#12 THHN & 1# 12 G, 3/4" C.	POS DESK RECEPTACLES	11		360	720	10	CONVENIENCE RECEPTACLES	2-#12 THHN & 1# 12 G, 3/4" C.		20A / 1P	
20A / 1P		2-#12 THHN & 1# 12 G, 3/4" C.	LOBBY FRIDGE	13	720		0	12	SPACE				
20A / 1P	TC-1	2-#12 THHN & 1# 12 G, 3/4" C.	CONVENIENCE RECEPTACLES	15	1500	450		14	VAV 1	2-#12 THHN & 1# 12 G, 3/4" C.	HACR	20A / 1P	
20A / 1P		2-#12 THHN & 1# 12 G, 3/4" C.	CONVENIENCE RECEPTACLES	17		1500	450	16	VAV 2	2-#12 THHN & 1# 12 G, 3/4" C.	HACR	20A / 1P	
			SPACE	19	0		1500	18	VAV 3	2-#12 THHN & 1# 12 G, 3/4" C.	HACR	20A / 1P	
20A / 1P	IG	2-#12 THHN & 1# 12 G, 3/4" C.	WIFI ROUTER	21	3000	360		20	VAV 4	2-#8 THHN & 1# 8 G, 3/4" C.	HACR	30A / 1P	
20A / 1P		2-#12 THHN & 1# 12 G, 3/4" C.	TREATMENT 102 TV RECEPTACLE	23		1080	720	22	MICROWAVE RECEPTACLE	2-#12 THHN & 1# 12 G, 3/4" C.		20A / 1P	
20A / 1P		2-#12 THHN & 1# 12 G, 3/4" C.	HVAC CONVENIENCE RECEPTACLES	25	720		1800	24	SCENT MACHINE RECEPTACLES	2-#12 THHN & 1# 12 G, 3/4" C.		20A / 1P	
20A / 1P		2-#12 THHN & 1# 12 G, 3/4" C.	BREAKROOM COUNTER RECEPTACLES	27	540	1800		26	CONVENIENCE RECEPTACLES	2-#12 THHN & 1# 12 G, 3/4" C.		20A / 1P	
20A / 1P		2-#12 THHN & 1# 12 G, 3/4" C.	TREATMENT 104 TV RECEPTACLE	29		1080	720	28	CONVENIENCE RECEPTACLES	2-#12 THHN & 1# 12 G, 3/4" C.		20A / 1P	
			SPACE	31	0		3334	30				45A	
20A / 1P		2-#12 THHN & 1# 12 G, 3/4" C.	TREATMENT ROOM 102/103 RECEPTACLES	33	3334	540		32	WATER HEATER	4-#8 THHN & 1# 8 G, 3/4" C.	HACR		
20A / 1P	TC-1	2-#12 THHN & 1# 12 G, 3/4" C.	TREATMENT ROOM 102/103 RECEPTACLES	35		3334	540	34				3P	
20A / 1P	TC-1	2-#12 THHN & 1# 12 G, 3/4" C.	TREATMENT ROOM 104/106 RECEPTACLES	37	540		0	36	SPACE				
20A / 1P		2-#12 THHN & 1# 12 G, 3/4" C.	TREATMENT ROOM 104/106 RECEPTACLES	39	0	540		38	SPACE				
20A / 1P	IG LOD	2-#12 THHN & 1# 12 G, 3/4" C.	PHONE BOARD	41		0	720	40	SPACE				
						0		42	SPACE				
					12977	12605	13024	TOTAL CONNECTED LOAD WATTS				38606	
								TOTAL LOAD KVA / AMPS				38.6	107.2

PROVIDE WITH GROUNDED BUS

(E) HOUSE/RETAIL ELECTRICAL SERVICE
MDP2' 3000A, 480/277 VOLT, 4 WIRE, 65,000 AIC INTEGRAL TVSS



ONE LINE DIAGRAM.
NO SCALE:

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. E.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

ISSUED / REVISIONS:

ENGINEERING AND DESIGN PLLC
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FIRM 23179



BIDDING QUESTIONS CONTACT 920-757-1486

CHECKED BY: Staff
DRAWN BY: Staff
DATE: JULY 26, 2024
SCALE: PER PLAN
PROJECT No.: TLL 2402
SHEET TITLE

ELECTRICAL PANELS

SHEET No.

2.03

LOOK LAB

4164 EAST 8TH PL
DENVER, CO 80220-3955

COMcheck Software Version COMcheckWeb
Interior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: LOOK LAB DENVER COLORADO
Project Type: ALTERATION

Construction Site: 4164 EAST 8TH PLACE DENVER, Colorado 80220-3955
Owner/Agent:
Designer/Contractor: ERIC ENGELL EMR ENGINEERING AND DESIGN PLLC 4236 HWY 3630 PO BOX 213 ANNVILLE 40402 606-364-2886 eric@emrengineers.com

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts
1-UTILITY (Common Space Types:Storage >=50 - <=1000 sq.ft.)	51	0.38	19
2-CORRIDOR (Common Space Types:Corridor/Transition <8 ft wide)	207	0.71	147
3-LOBBY (Common Space Types:Office - Open Plan)	360	0.61	220
4-RESTROOM (Common Space Types:Restrooms)	58	0.63	37
5-TREATMENT (Common Space Types:Office - Open Plan)	473	0.61	289
6-BREAKROOM (Common Space Types:Lounge/Breakroom)	63	0.59	37
Total Allowed Watts =			748

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
UTILITY (Common Space Types: Storage >=50 - <=1000 sq.ft., 51 sq.ft.) LED 5 copy 1: C: 2X4 LAYIN LED: LED Panel 33W:	1	2	23	46
CORRIDOR (Common Space Types: Corridor/Transition <8 ft wide, 207 sq.ft.) LED: F: LED DOWNLIGHT: LED PAR 13W: LED: E: DEORATIVE LED PENDANT: LED A Lamp 9W:	1 4	4 4	13 36	52 144
LOBBY (Common Space Types: Office - Open Plan, 360 sq.ft.) LED: F: LED DOWNLIGHT: LED PAR 13W: LED 2: G: DRUM PENDANT: LED MR 2W: LED: I: LED PENDANT: LED A Lamp 9W: LED: J: LED WALL WASHER: LED A Lamp 13W:	1 1 1 1	7 1 2 3	13 40 9 18	91 40 18 39
RESTROOM (Common Space Types: Restrooms, 58 sq.ft.) LED: F: LED DOWNLIGHT: LED PAR 13W: LED 4: M: BACKLIT MIRROR: LED Linear 20W:	1 1	2 1	13 20	26 20
TREATMENT (Common Space Types: Office - Open Plan, 473 sq.ft.)				

Project Title: LOOK LAB DENVER COLORADO Report date: 07/25/24
Data filename: Page 1 of 6

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3 [EL22] ¹	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1 [EL18] ¹	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, corridors, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1 [EL19] ²	Occupancy sensors control function in warehouses: In warehouses, the lighting in aislesways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more within 10 minutes of when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor. Lights not turned off by occupant sensors is done so by time-switch.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.1 [EL20] ³	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) general lighting in each zone permitted to turn on upon occupancy in control zone, 3) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 4) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.2 [EL21] ¹	Each area not served by occupancy sensors (per C405.2.1.1) have time-switch controls and functions detailed in sections C405.2.2.1.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Project Title: LOOK LAB DENVER COLORADO Report date: 07/25/24
Data filename: Page 4 of 6

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
LED 5 copy 1: C: 2X4 LAYIN LED: LED Panel 33W: Exemption:Medical/dental task lighting LED: B: LED CHANDELIER: LED A Lamp 9W:	1 6	7 3	23 54	Exempt 162
BREAKROOM (Common Space Types: Lounge/Breakroom, 63 sq.ft.) LED 5 copy 1: C: 2X4 LAYIN LED: LED Panel 33W:	1	3	23	69
Total Proposed Watts =				707

Interior Lighting PASSES

Interior Lighting 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 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

Project Title: LOOK LAB DENVER COLORADO Report date: 07/25/24
Data filename: Page 2 of 6

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.4 [EL23] ¹	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces. C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.2.5 [EL27] ¹	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.7 [EL26] ¹	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.8 [EL27] ¹	Electric motors meet the minimum efficiency requirements of Tables C405.7(I) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.9.1 [EL28] ¹	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.10 [EL29] ¹	Total voltage drop across the combination of feeders and branch circuits <= 3%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.11 [EL30] ¹	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C405.11.1 [EL31] ¹	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

Project Title: LOOK LAB DENVER COLORADO Report date: 07/25/24
Data filename: Page 5 of 6

COMcheck Software Version COMcheckWeb
Inspection Checklist

Energy Code: 2021 IECC
Requirements: 5.0% 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] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

Project Title: LOOK LAB DENVER COLORADO Report date: 07/25/24
Data filename: Page 3 of 6

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3 [F157] ¹	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.1.1 [F157] ¹	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5 [F116] ¹	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.3 [F133] ¹	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

Project Title: LOOK LAB DENVER COLORADO Report date: 07/25/24
Data filename: Page 6 of 6

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. C.E. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

ISSUED / REVISIONS:

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LOOK LAB
4164 EAST 8TH PL
DENVER, CO 80220-3955

CHECKED BY: Staff
DRAWN BY: Staff
DATE: JULY 26, 2024
SCALE: PER PLAN
PROJECT No.: TLL 2402
SHEET TITLE

ENERGY COMPLIANCE

SHEET No.

2.04

BIDDING QUESTIONS CONTACT 920-757-1486

Table 403.3.1.1 Minimum Ventilation Requirements

	OCCUPANCY CLASSIFICATION	OCCUPANCY DENSITY PER 1000 SF	SQUARE FOOTAGE	TOTAL OCCUPANCY	CFM PER PERSON	OUTDOOR AIR REQ'D	OUTDOOR AIR REQ'D PER SF	OUTDOOR AIR REQ'D	TOTAL O/A REQUIRED (CFM/PERSON+CFM/SF)/0.8
VAV1	UTILITY	N/A	227	N/A	N/A	0	0.06	14	17
VAV4	LOBBY	30/1000	355	11	5	55	0.06	21	95
VAV4	TREATMENT	5/1000	245	2	5	10	0.06	15	25
VAV4	CORRIDORS	N/A	80	N/A	N/A	0	0.06	5	6
VAV2	TREATMENT	5/1000	215	2	5	10	0.06	13	23
VAV2	CORRIDORS	N/A	150	N/A	N/A	0	0.06	9	11
VAV2	TOILET ROOM	N/A	58	N/A	N/A	0	0.06	3	4
VAV1	BREAK ROOM	5/1000	63	1	5	5	0.06	13	18
								TOTAL O/A REQ'D	200
									CONFIRM 200 CFM MIN

HVAC GENERAL NOTES

- CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT TO INSTALL AND OPERATE THE EXISTING HEATING AND COOLING SYSTEM.
- CONTRACTOR SHALL PROVIDE ALL REQUIRED HVAC PERMITS.
- THE CONTRACTOR SHALL COMPLY WITH NFPA-90A AND ALL APPLICABLE CODES.
- CONTRACTOR SHALL PROVIDE ALL CONTACTORS, RELAYS AND THERMOSTATS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SWITCHES, DISCONNECTS, THERMOSTATS SHALL BE AS SPECIFIED.
- THE CONTRACTOR SHALL PROVIDE A WRITTEN GUARANTEE THAT SHALL WARRANT ALL WORKMANSHIP AND MATERIALS FOR ONE (1) YEAR FROM THE CERTIFICATE OF OCCUPANCY.
- PROVIDE IONIZATION TYPE SMOKE DETECTORS WHERE SHOWN ON RETURN AND/OR SUPPLY DUCTS AS REQUIRED BY CODE. UPON ACTIVATION, THE SMOKE DETECTORS SHALL SHUT DOWN THE AIR DISTRIBUTION SYSTEM. THE SMOKE DETECTORS SHALL BE CONNECTED TO A FIRE ALARM SYSTEM. THE ACTUATION OF A SMOKE DETECTOR SHALL ACTIVATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL AT A CONSTANTLY ATTENDED LOCATION PER CODE.
- ALL HVAC WORK TO BE PERFORMED SHALL BE IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL CODES.
- COORDINATE LOCATION OF ALL CEILING DIFFUSERS, GRILLES AND REGISTERS IN THE FIELD WITH THE ELECTRICIAN TO PREVENT CONFLICT WITH LIGHTS AND ARCHITECTURAL ELEMENTS.
- PROVIDE TWO SETS OF FILTERS; MERV 12 ONE DURING CONSTRUCTION AND ONE FOR USE AFTER OCCUPANCY.
- ALL WORK OF THIS TRADE SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID ANY INTERFERENCES THAT MAY DELAY PROGRESS DURING CONSTRUCTION.
- ELECTRICALLY OPERATED EQUIPMENT AND COMPONENTS SHALL BE UL LISTED. GAS FIRED EQUIPMENT IF APPLICABLE SHALL BE A.G.A. LABELED.
- AIR BALANCE CONTRACTOR MUST BE AABC CERTIFIED. AN INDEPENDENT AIR BALANCE CONTRACTOR SHALL TEST AND BALANCE TO THE AIR QUANTITIES ON THE PLAN AND PROVIDE A T & B REPORT FOR APPROVAL. IN ACCORDANCE WITH AIR BALANCE COUNCIL STANDARDS, THREE COPIES OF THE TEST REPORT SHALL BE FURNISHED FOR REVIEW AND MUST BE APPROVED BEFORE OCCUPANCY.
- CONTRACTOR SHALL FURNISH SHOP DRAWINGS FOR DUCTWORK, AIR DEVICES, AND ALL EQUIPMENT.
- PROVIDE ACCESS FOR ALL COMPONENTS REQUIRING PERIODIC INSPECTION AND SERVICE THAT ARE LOCATED WITHIN THE SPACE OR REQUIRE ACCESS THROUGH THE SPACE. LABEL ACCESS DOORS AND PANELS OR CEILING TILES, RETURN REGISTERS OR DIFFUSERS UTILIZED FOR ACCESS WITH THE NAME OF THE HIDDEN COMPONENT(S). DEMONSTRATE ACCESS TO ALL HIDDEN COMPONENTS FOR THE FIELD REPRESENTATIVE PRIOR TO OCCUPANCY.
- CONTRACTOR SHALL INSTALL ALL NECESSARY OFFSETS, BENDS, AND TRANSITIONS REQUIRED TO PROVIDE A COMPLETE SYSTEM.
- CONTRACTOR SHALL INSTALL THERMOSTATS AT 48" ABOVE THE FINISHED FLOOR TO ANY OPERABLE COMPONENT. COORDINATE BOX LOCATIONS WITH THE ELECTRICAL CONTRACTOR.
- CONTRACTOR SHALL INSTALL TURNING VANES AT ALL RECTANGULAR DUCTWORK TEES AND 90° ELBOWS WITHIN MAIN TRUNK DUCTS.
- CONTRACTOR SHALL PROVIDE EQUIPMENT OF THE SCHEDULED CAPACITIES DESIGNED.
- ALL DUCTWORK & INSULATION SHALL BE FABRICATED & INSTALLED ACCORDING TO THE MOST RECENT PUBLISHED ASHRAE & SMACNA STANDARDS. ALL DUCT JOINTS, SEAMS AND CONNECTIONS SHALL BE SECURELY FASTENED, SEALED, AND TAPED IN ACCORDANCE WITH THE CURRENT ENERGY CONSERVATION CODE INCLUDING UJI 181A AND 181B TAPES AND FASTENERS. DUCT COVERINGS AND LININGS SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX NOT MORE THAN 100.
- ALL RECTANGULAR, ROUND & FLEXIBLE DUCTS SHALL BE SIZED AS SHOWN ON THESE DRAWINGS. MINIMUM INTERNAL DIMENSIONS ARE GIVEN. THE CONTRACTOR SHALL INCREASE THE DUCT SIZE ACCORDINGLY FOR INTERNAL INSULATION. ALL DUCTWORK EXCEPT THE ROUND FLEXIBLE TYPE SHALL BE GALVANIZED STEEL. FIBERGLASS DUCT-BOARD SHALL BE AN ACCEPTABLE ALTERNATE WHERE ACCEPTABLE TO LOCAL CODE. IS NOT PERMITTED.
- RETURN DUCTS SHALL HAVE A MINIMUM 1" THICK, 1.5 PCF DENSITY INSULATION OR AS REQUIRED BY CURRENT ENERGY CODE.
- SUPPLY, TRANSFER AND OUTDOOR AIR DUCTS SHALL HAVE MINIMUM OF 1/2" THICK, 0.75 PCF FIBERGLASS INSULATION BLANKET WRAP WITH FACTORY-APPLIED REINFORCED KRAFT PAPER & ALUMINUM FOIL VAPOR BARRIER, OR AS REQUIRED BY CURRENT ENERGY CODE.
- ALL FLEXIBLE ROUND SUPPLY DUCT SHALL BE THERMAFLEX G-KM AIR DUCT LISTED AS CLASS 1 BY UL STANDARD 181 & COMPLYING WITH NFPA 90A & 90B. DUCT SHALL BE FACTORY MADE & COMPOSED OF A CPE LINER BONDED TO A COATED STEEL WIRE HELIX SUPPORTING A FIBERGLASS SCRM & 1-1/2" FIBERGLASS INSULATING BLANKET WRAP WITH BLACK POLYETHYLENE FILM VAPOR BARRIER. MAX. LENGTH SHALL BE 4'-0". USE 1" X 16 GA HANGER STRAPS. INSTALL 2 WRAPS OF DUCT TAPE OVER LINER WITH 4 SCREWS OR 1/2" WIDE METAL BAND CLAMP OR PANDUIT STRAP. INSTALL 2 WRAPS OF DUCT TAPE OVER JACKET & CLAMP.
- ALL ROUND TAKE-OFFS FROM RECTANGULAR DUCTS SHALL BE A "CREATIVE METALS, INC." SPIN-TITE FITTING, MODEL MSED (SPIN-IN WITH SCOOP & DAMPER) OR APPROVED EQUAL.
- REFRIGERANT LINES IF APPLICABLE SHALL BE TYPE "L" COPPER TUBING IN CONTINUOUS, UNCOUPLED & UNSPLICED LENGTHS FROM THE EVAPORATOR TO THE CONDENSER. REFRIGERANT LINES SHALL BE SIZED BY MANUFACTURER. PROVIDE THERMAL EXPANSION VALVES WITH HARD SHUT-OFFS & FILTER DRYER AT EVAPORATOR COILS. INSULATE THE SUCTION LINES WITH ARMSTRONG AP-ARMARLEX SS.
- AIR DEVICES ABOVE DRYWALL CEILINGS SHALL HAVE OPPOSED-BLADE DAMPER WITH DEVICES. AIR DEVICES ABOVE LAY-IN CEILINGS SHALL HAVE DUCT DAMPERS WHERE SHOWN ON THE PLANS.
- HVAC CONTRACTOR SHALL COORDINATE CONDENSATE DRAINS WITH PLUMBING CONTRACTOR.
- SIZE OF DUCT TAKE-OFFS TO CEILING DIFFUSERS AND SUPPLY GRILLES IS SAME AS AIR DEVICE NECK SIZE, UNLESS OTHERWISE NOTED.
- PROVIDE WHITE ON RED BACK GROUND ENGRAVED PLASTIC NAME PLATES WITH 1" LETTERING FOR ALL MECHANICAL EQUIPMENT, I.E. RTU-1, EF-1, ETC.
- PROVIDE MINIMUM CLEARANCE FOR ALL HVAC EQUIPMENT REQUIRED FOR PROPER MAINTENANCE.
- PRIME AND PAINT ALL OUTDOOR FERROUS MATERIALS WHICH WERE NOT PREVIOUSLY PAINTED.
- THE FOLLOWING SPECIFICATIONS SHALL GOVERN WITH MODIFICATIONS AS SPECIFIED HEREIN; AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS (ASHRAE) HANDBOOK FUNDAMENTALS.
- EXTEND EXISTING FORCED AIR HEATING AND COOLING SYSTEM INTO NEW AREAS. HVAC SUBCONTRACTOR TO DETERMINE WHETHER NEW EQUIPMENT IS REQUIRED OR WHETHER A SUPPLEMENTAL UNIT IS REQUIRED. PROPOSAL SHALL INDICATE INTENDED APPROACH.
- GENERAL CONTRACTOR, HVAC SUBCONTRACTOR AND ARCHITECT SHALL REVIEW THE PROPOSED LOCATIONS OF ALL SUPPLY AND RETURN REGISTERS IN THE FIELD PRIOR TO FABRICATION OR INSTALLATION OF NEW DUCTWORK.
- GENERAL CONTRACTORS SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING (FLOORS, CEILINGS, WALL) REQUIRED BY THE NEW DUCTWORK. LANDLORD APPROVAL IN WRITING REQUIRED PRIOR TO ALL CUTTING.
- ALL DUCTS RUN THROUGH UNCONDITIONED SPACES (I.E. ATTICS, CRAWL SPACE) SHALL BE INSULATED (I.E. WRAPPED WITH R6 INSULATION).
- NEW SYSTEM, ONCE COMPLETED, SHALL BE TESTED AND BALANCED TO THE SATISFACTION OF THE OWNER. TEST RUNS SHALL BE PERFORMED FOR BOTH HEATING AND COOLING MODES. CERTIFIED TEST AND BALANCE REPORT SHALL BE SUBMITTED TO LL AND TENANT.

REUSE OF EXISTING EQUIPMENT

- EXISTING HVAC UNIT(S) SHALL BE REUSED AS INDICATED ON THE DRAWINGS. THE MECHANICAL CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS REQUIRED TO INSURE THAT THE EXISTING EQUIPMENT IS IN GOOD WORKING ORDER. POINTS OF SERVICE SHALL INCLUDE, BUT NOT BE LIMITED, TO THE FOLLOWING:
- REMOVE EXISTING AIR FILTERS AND REPLACE WITH NEW PLEATED AIR FILTERS. THOROUGHLY CLEAN ALL INTAKE LOUVERS OR SCREENS AND BOTH SIDES OF EVAPORATOR AND CONDENSING COILS.
- CHECK ALL BELTS FOR WEAR, ALIGNMENT AND PROPER TENSION (ADJUST AND REPLACE AS NEEDED).
- TIGHTEN MOTOR MOUNTS AS REQUIRED.
- INSPECT AND LUBRICATE MOTORS, BEARINGS, AND SHAFTS AS PER MANUFACTURERS REQUIREMENTS.
- INSPECT REFRIGERANT SYSTEM FOR LEAKS AND PROPER CHARGE, REPAIR LINES AND ADD REFRIGERANT IF NECESSARY.
- THOROUGHLY CLEAN INTERIOR OF UNIT, INCLUDING BLOWER WHEEL AND DAMPER BLADES.
- CONTRACTOR MAY CLEAN AND REUSE EXISTING DUCTWORK, SUPPLY DIFFUSERS, RETURN GRILLS AND THERMOSTAT IF THEY ARE IN GOOD CONDITION AND MATCH THE SIZE AND SPECIFICATIONS OF WHAT IS CALLED OUT ON THESE CONSTRUCTION DOCUMENTS.
- CONTRACTOR SHALL PROVIDE NEW DUCTWORK, SUPPLY DIFFUSERS AND RETURN GRILLS AS NECESSARY TO SATISFY THE INTENT OF THESE DRAWINGS.
- ENTIRE HVAC SYSTEM SHALL CONFORM TO ALL LOCAL, STATE AND APPLICABLE CODES.
- THE MECH. CONTR. MUST VERIFY ALL EXISTING CONDITIONS AND SERVICES AT THE JOB SITE.
- VERIFY AND RESET O/A THRU UNIT TO SPACE AS SCHEDULED.

EXHAUST FAN SCHEDULE

	CFM	SP W.C.	RPM	DRIVE	WATTS	VOLTAGE PH. / HZ.	MANUFACTURER MODEL NO.
EF-1	160	0.25"	1,550	DIRECT	25	120/1/60	FANTECH 40402A INLINE

EXISTING VAV SCHEDULE

	MODEL	CFM	INLET	HEAT
VAV-1	DESV	200	6"ø	N/A
VAV-2	DESV	420	8"ø	1.5KW
VAV-3	DESV	70	6"ø	N/A
VAV-4	DESV	800	10"ø	3KW

THERMOSTATS

- HONEYWELL TO THERMOSTAT AND REMOTE SENSORS
- Ⓣ - THERMOSTAT MOUNTED AT 48" AFF
- Ⓡ - REMOTE SENSOR MOUNTED AT 66" AFF
- PROGRAM AND TRAIN OWNER ON PROGRAMMING

SHEET NOTES

- FIELD VERIFY EXISTING CONDITION OF VAV AND REFURBISH TO LIKE NEW.
- ROUTE EXHAUST TO EXISTING 12" UP THROUGH ROOF TO EXISTING GOOKE NECK.
- TSTAT MOUNTED AND SMOKE DETECTOR TEST STATION AT 48" AFF
- INSTALL NEW EF-1 IN VERTICAL DUCT BELOW ROOF DECK. INSTALL FAN SWITCH AND BALANCE TO 160 CFM EXHAUST.

GRILLE, REGISTER & DIFFUSER SCHEDULE

	MARK	MFR.	MODEL	NECK VELOCITY FPM (MAX)	DEVICE SIZE	AIR PATTERN	MOUNTING	TYPE
	S-1 XX	TITUS	TMS	300	24" X 24"	ALL-WAY	PER PLAN	SUPPLY
	S-2 XX	TITUS	FL-20	300	10" X 48"	(2) 2" SLOT 10"ø INLET	SURFACE	SUPPLY
	S-3 XX	TITUS	TMS	300	12" X 12"	ALL WAY	PER PLAN	SUPPLY
	R-1 XX	TITUS	50F	400	24" X 24"	ALL WAY HORIZONTAL	PER PLAN	RETURN
	R-2 XX	TITUS	50F	300	12" X 12"	ALL WAY	PER PLAN	RETURN
	R-3 XX	TITUS	50F	300	24" X 12"	ALL WAY	PER PLAN	RETURN

- NOTES:
- MOUNTING FRAMES SHALL BE COMPATIBLE WITH CEILING TYPE.
 - PROVIDE OPPOSED BLADE DAMPER WITH EXTENDED LEVER ARM THROUGH FACE OF DIFFUSER.
 - PROVIDE FACTORY WHITE FINISH.
 - ALL CEILING DIFFUSERS ARE ALL WAY DISCHARGE UNLESS NOTED OTHERWISE
 - DUCT RUNNUTS ARE SIZED PER THE NECK OF THE DIFFUSER.
 - ALL DIFFUSERS SHALL HAVE DAMPERS FOR BALANCING. IF NOT IN FACE OF DIFFUSER, INSTALL IN ACCESSIBLE DUCT.
 - NO ALTERNATES ACCEPTED.
- | | DIFFUSER NECK SIZING |
|-------------|----------------------|
| 0-99 CFM | 6" |
| 100-175 CFM | 8" |
| 176-275 CFM | 10" |
| 276-400 CFM | 12" |
| 401-535 CFM | 14" |

HEATING VENTILATING AND AIR-CONDITIONING

- THE FOLLOWING SPECIFICATIONS SHALL GOVERN WITH MODIFICATIONS AS SPECIFIED HEREIN: AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS (ASHRAE) HANDBOOK FUNDAMENTALS.
- EXTEND EXISTING FORCED AIR HEATING AND COOLING SYSTEM INTO NEW AREAS. HVAC SUBCONTRACTOR TO DETERMINE WHETHER NEW EQUIPMENT IS REQUIRED OR WHETHER A SUPPLEMENTAL UNIT IS REQUIRED. PROPOSAL SHALL INDICATE INTENDED APPROACH.
- GENERAL CONTRACTOR, HVAC SUBCONTRACTOR AND ARCHITECT SHALL REVIEW THE PROPOSED LOCATIONS OF ALL SUPPLY AND RETURN REGISTERS IN THE FIELD PRIOR TO FABRICATION OR INSTALLATION OF NEW DUCTWORK.
- GENERAL CONTRACTORS SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING (FLOORS, CEILINGS, WALL) REQUIRED BY THE NEW DUCTWORK. LANDLORD APPROVAL IN WRITING REQUIRED PRIOR TO ALL CUTTING.
- ALL DUCTS RUN THROUGH UNCONDITIONED SPACES (I.E. ATTICS, CRAWL SPACE) SHALL BE INSULATED (I.E. WRAPPED WITH R6 INSULATION).
- NEW SYSTEM, ONCE COMPLETED, SHALL BE TESTED AND BALANCED TO THE SATISFACTION OF THE OWNER. TEST RUNS SHALL BE PERFORMED FOR BOTH HEATING AND COOLING MODES. CERTIFIED TEST AND BALANCE REPORT SHALL BE SUBMITTED TO LL AND TENANT.

INSTALLATION CRITERIA

MECHANICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND MODIFY AS REQUIRED TO DISTRIBUTE AIR WITHIN THE SPACE AS SHOWN ON PLAN.

SUPPLY AND RETURN DUCTWORK SHALL BE INSTALLED TO MEET OR EXCEED ALL CODE REQUIREMENTS AND WITHIN ACCEPTABLE INDUSTRY STANDARDS. M.C. SHALL PROVIDE FOR A COMPLETE AND OPERABLE SYSTEM. REPLACE ANY EXISTING COMPONENTS AS REQUIRED. M.C. SHALL BE RESPONSIBLE FOR PROVIDING WARRANTY OF ALL WORK.

MAIN TRUNK SUPPLY DUCT WITH NO AIR DIFFUSERS NOT TO EXCEED 1000 FEET PER MINUTE VELOCITY.

ALL SUPPLY BRANCH AND RETURN DUCTWORK SHALL BE INSTALLED NOT TO EXCEED 500 FEET PER MINUTE VELOCITY.

DISTRIBUTION SUPPLY / RETURN DUCT WITH AIR DIFFUSERS /GRILLES NOT TO EXCEED 500 FEET PER MINUTE VELOCITY.

AIR AT DIFFUSERS FACE NOT TO EXCEED 500 FEET PER MINUTE.

PROVIDE SMOKE DETECTORS FOR UNIT SHUTDOWN AS REQUIRED BY CODE.

RETURN AIR PLENUM

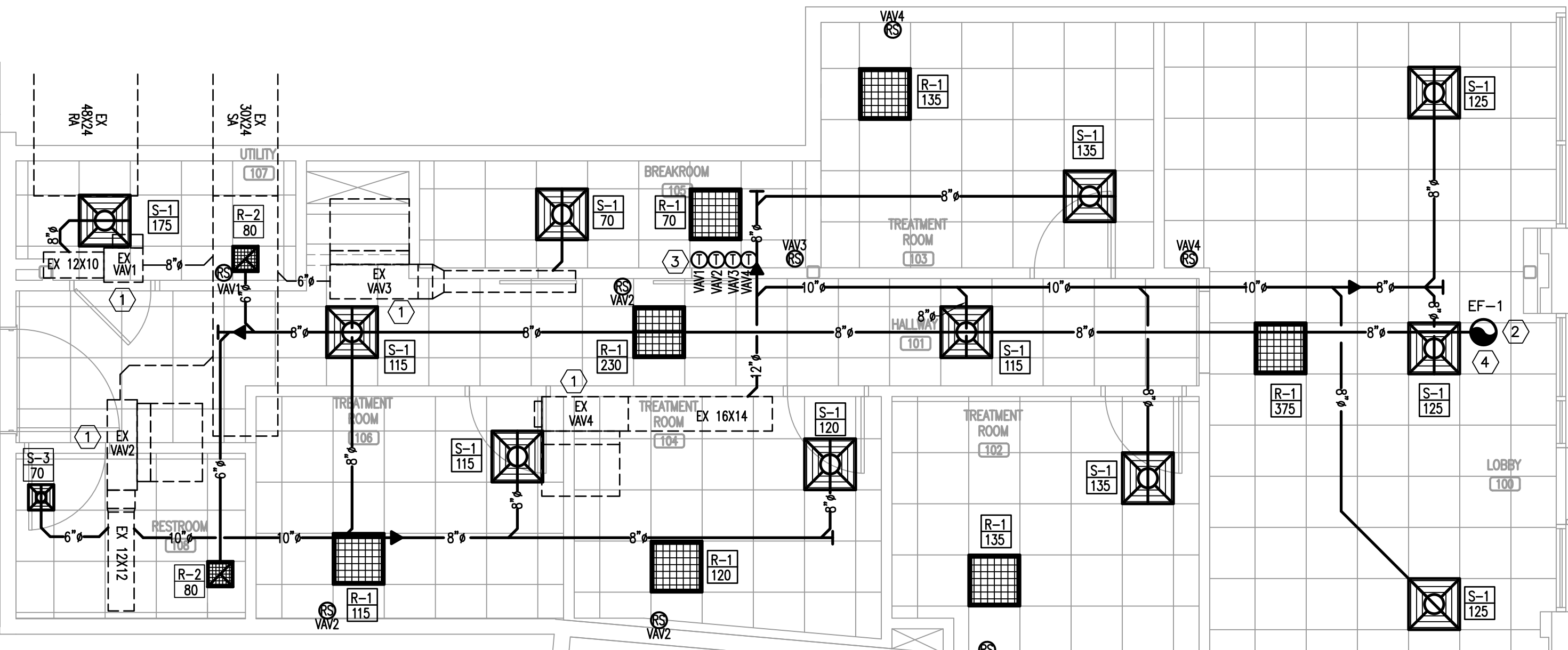
MATERIALS EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH SECTION 602.2.

MATERIALS WITHIN PLENUMS. EXCEPT AS REQUIRED BY SECTIONS 602.2.1.1 THROUGH 602.2.1.6, MATERIALS WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.

EXCEPTIONS:

- RIGID AND FLEXIBLE DUCTS AND CONNECTORS SHALL CONFORM TO SECTION 603.
- DUCT COVERINGS, LININGS, TAPE AND CONNECTORS SHALL CONFORM TO SECTIONS 603 AND 604.
- THIS SECTION SHALL NOT APPLY TO MATERIALS EXPOSED WITHIN PLENUMS IN ONE- AND TWO-FAMILY DWELLINGS.
- THIS SECTION SHALL NOT APPLY TO SMOKE DETECTORS.
- COMBUSTIBLE MATERIALS FULLY ENCLOSED WITHIN CONTINUOUS NONCOMBUSTIBLE RACEWAYS OR ENCLOSURES, APPROVED GYPSUM BOARD ASSEMBLIES OR WITHIN MATERIALS LISTED AND LABELED FOR SUCH APPLICATION.

602.2.1.1 WIRING. COMBUSTIBLE ELECTRICAL OR ELECTRONIC WIRING METHODS AND MATERIALS, OPTICAL FIBER CABLE, AND OPTICAL FIBER RACEWAY EXPOSED WITHIN A PLENUM SHALL HAVE A PEAK OPTICAL DENSITY NOT GREATER THAN 0.50, AN AVERAGE OPTICAL DENSITY NOT GREATER THAN 0.15, AND A FLAME SPREAD NOT GREATER THAN 5 FEET (1524 MM) WHEN TESTED IN ACCORDANCE WITH NFPA 262. ONLY TYPE OFNP (PLENUM RATED NONCONDUCTIVE OPTICAL FIBER CABLE) SHALL BE INSTALLED IN PLENUM-RATED OPTICAL FIBER RACEWAYS. WIRING, CABLE, AND RACEWAYS ADDRESSED IN THIS SECTION SHALL BE LISTED AND LABELED AS PLENUM RATED AND SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70.



HVA/C PLAN
SCALE: 1/4"=1'-0"

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. E.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

ISSUED / REVISIONS:

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BIDDING QUESTIONS CONTACT 920-757-1486

CHECKED BY: Staff
DRAWN BY: Staff
DATE: July 26, 2024
SCALE: PER PLAN
PROJECT No.: TLL 2402
SHEET TITLE

HVA/C FLOOR PLAN AND SCHEDULES

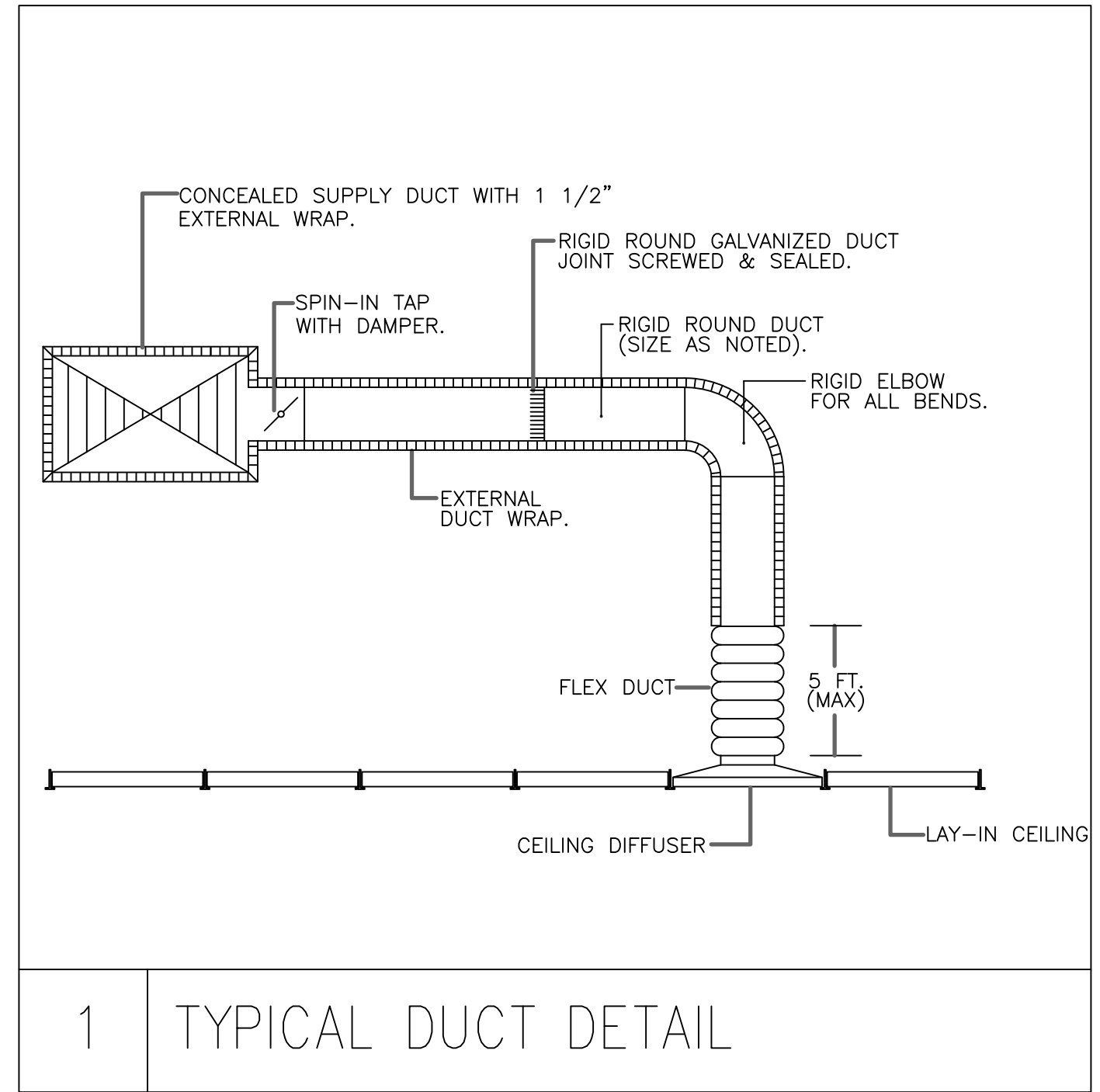
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3.01

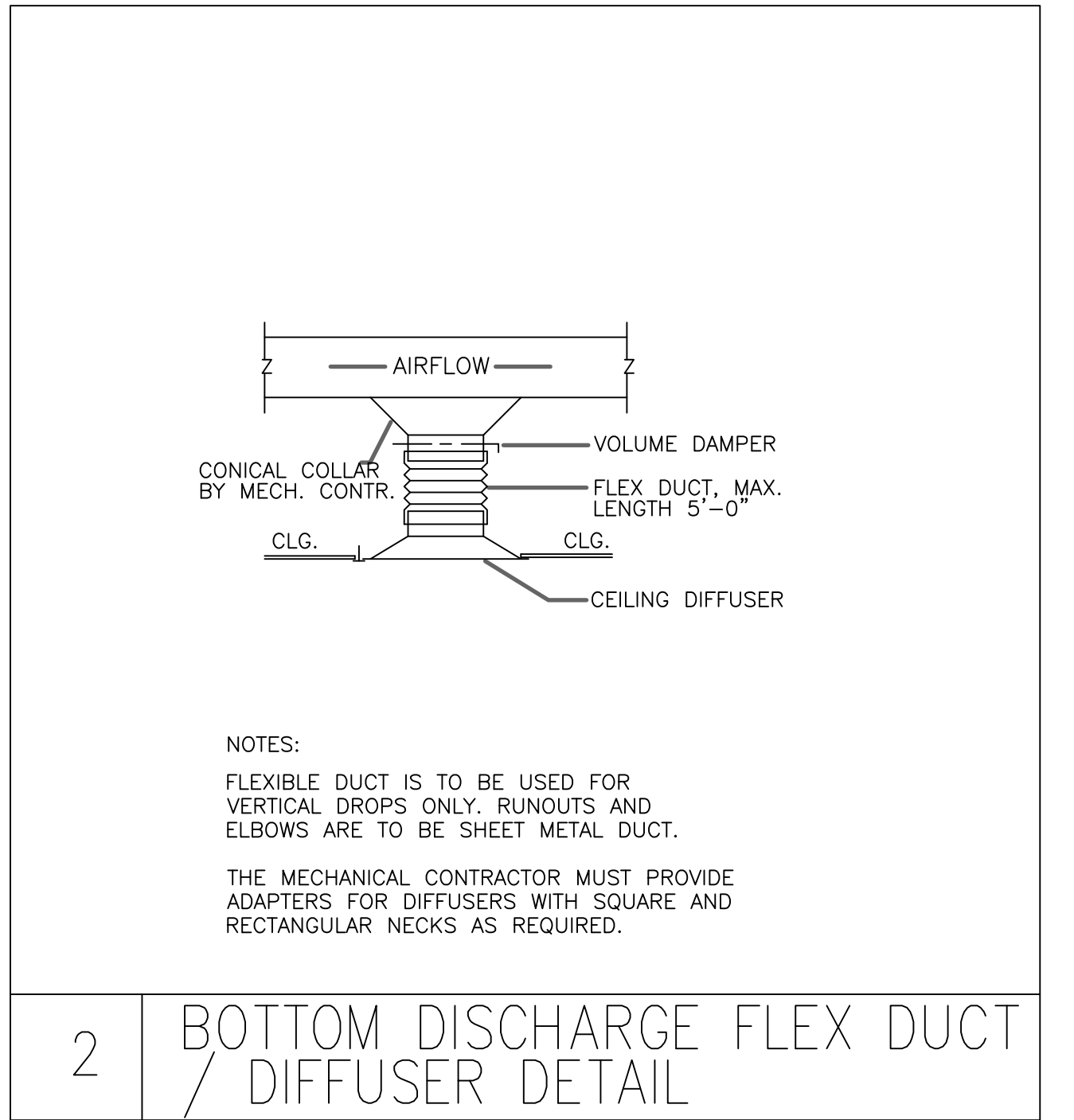
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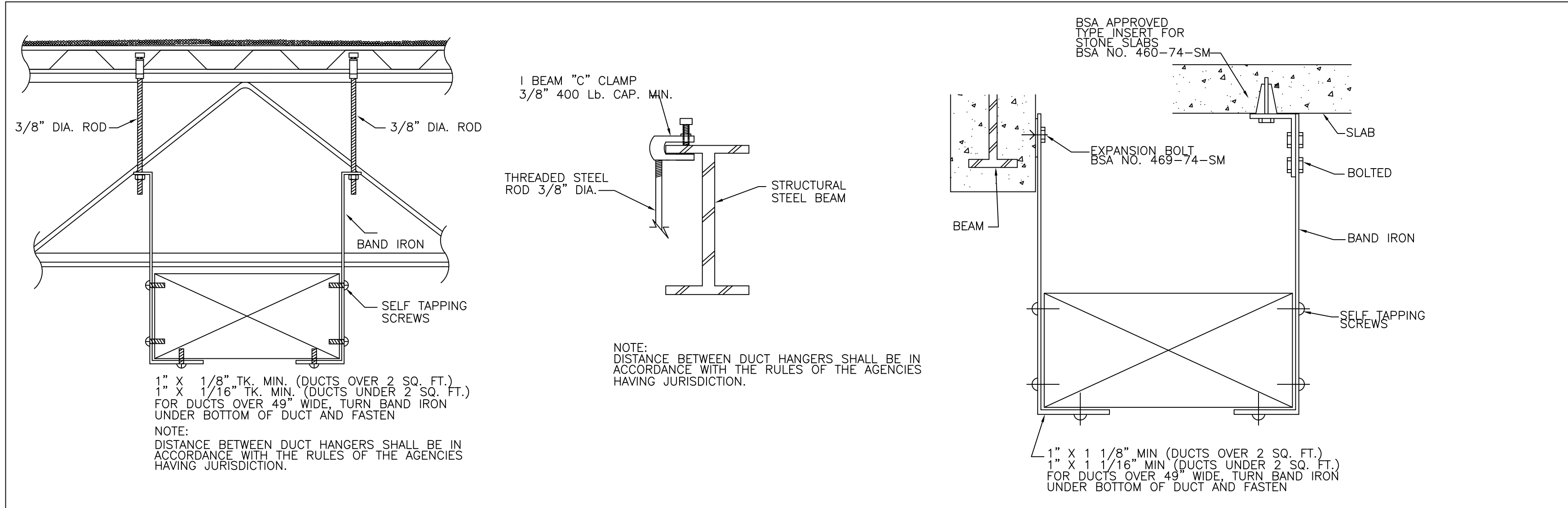
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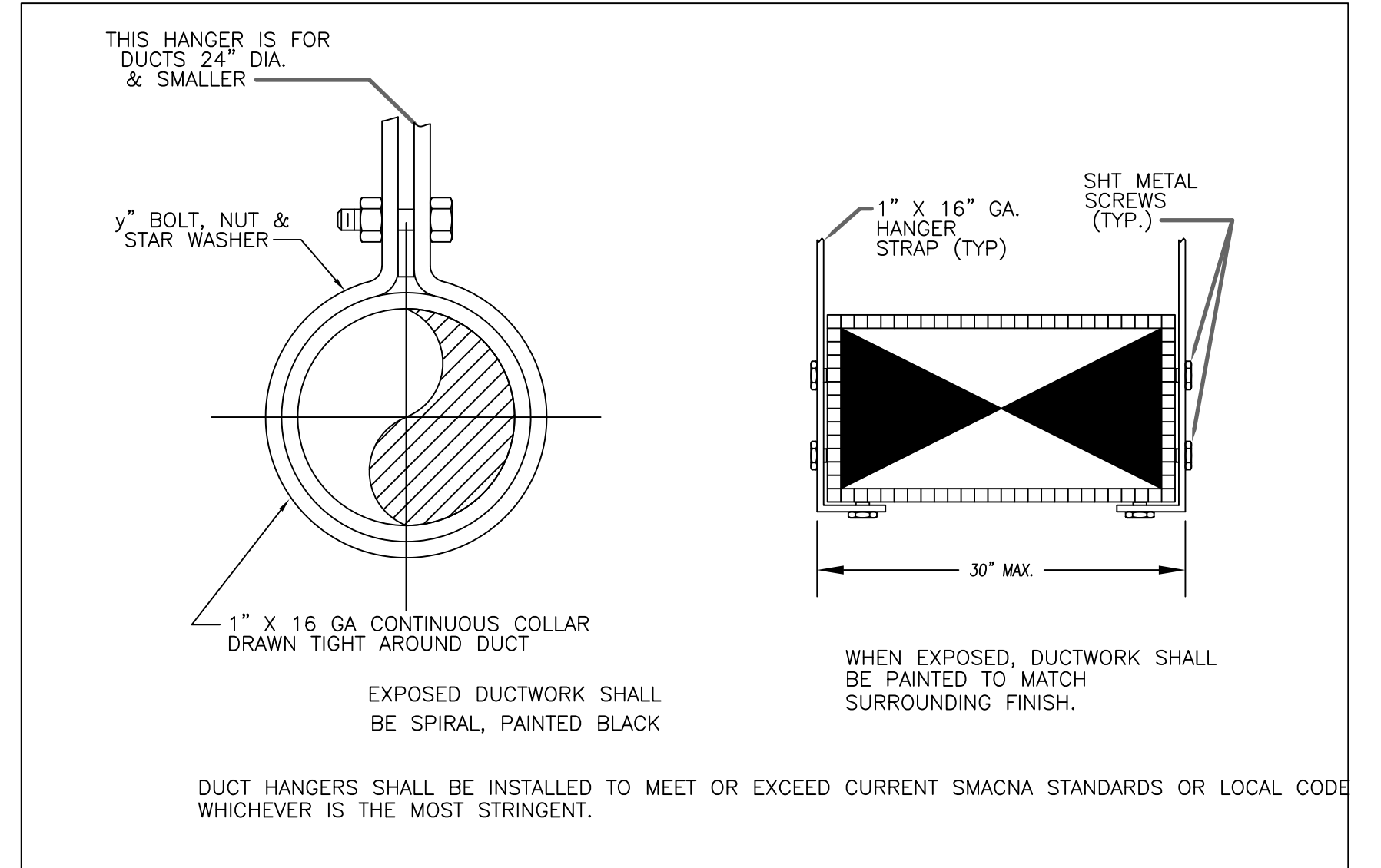
1 TYPICAL DUCT DETAIL



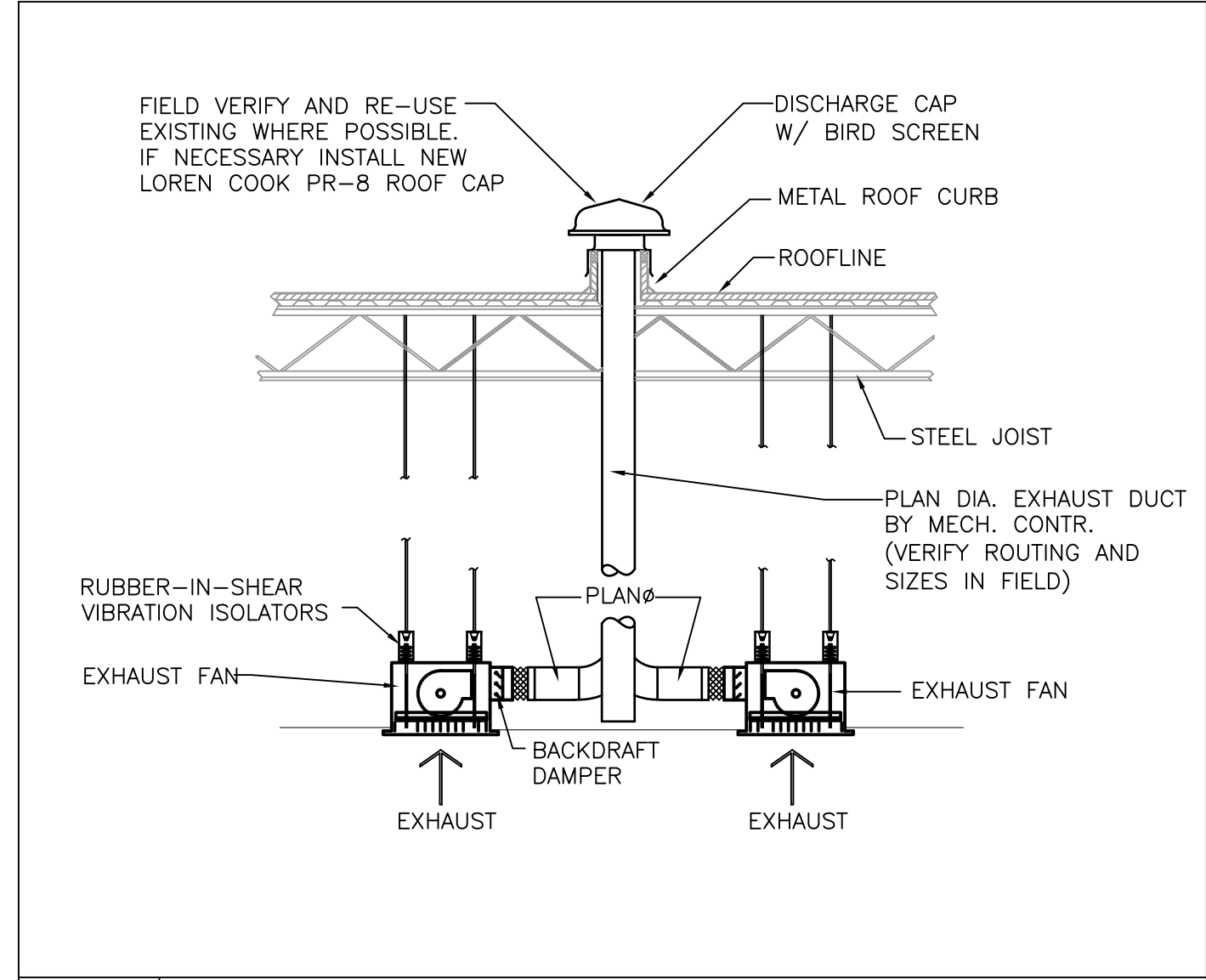
2 BOTTOM DISCHARGE FLEX DUCT / DIFFUSER DETAIL



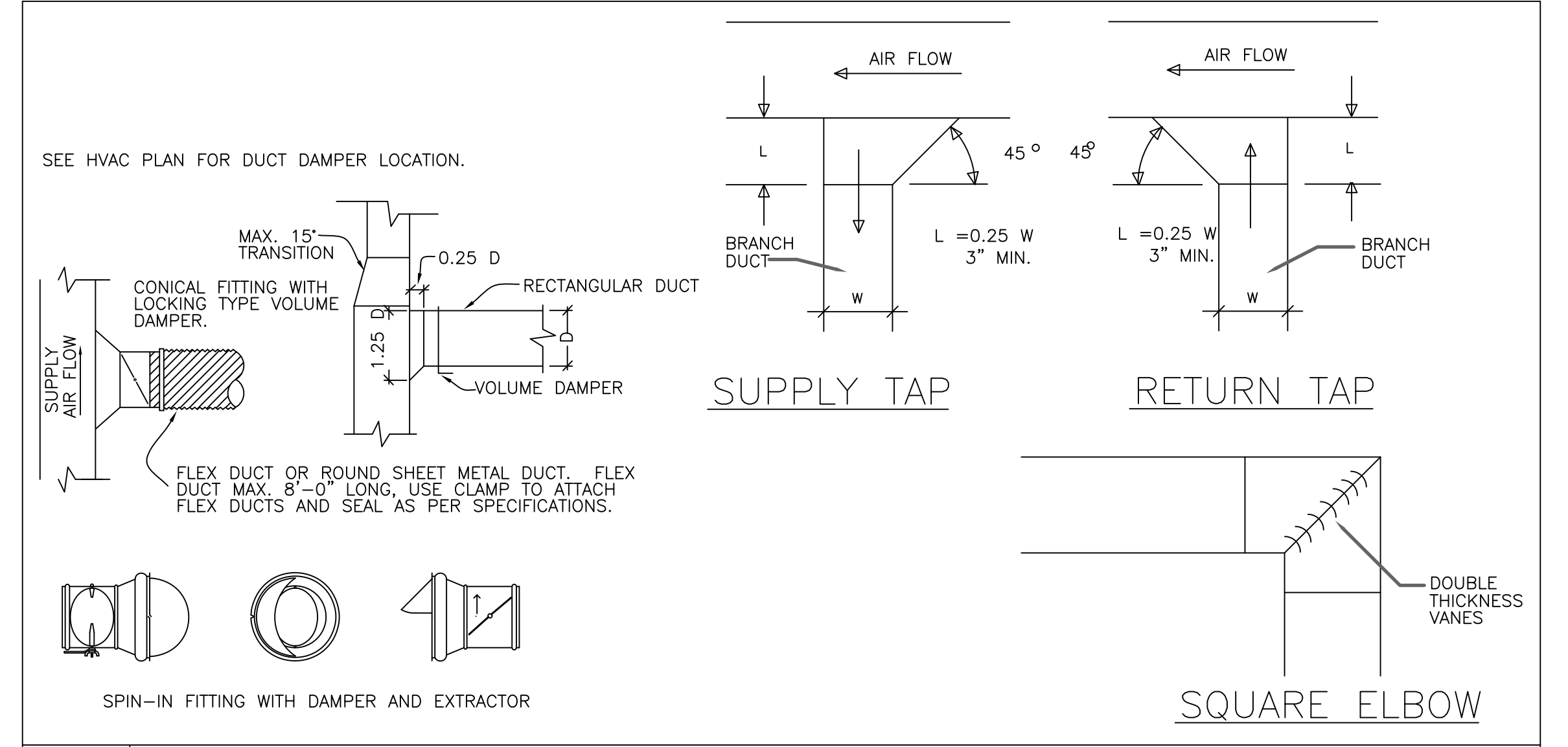
3 TYPICAL METHOD OF HANGING DUCTWORK



4 TYPICAL DUCT HANGERS



6 TOILET EXHAUST FAN DETAIL



6 TYPICAL DUCT WORK DETAILS

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 DENVER, CO 80220-3955

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 SHEET TITLE

HVAC DETAILS

SHEET No.
3.02

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RETURN AIR PLENUM

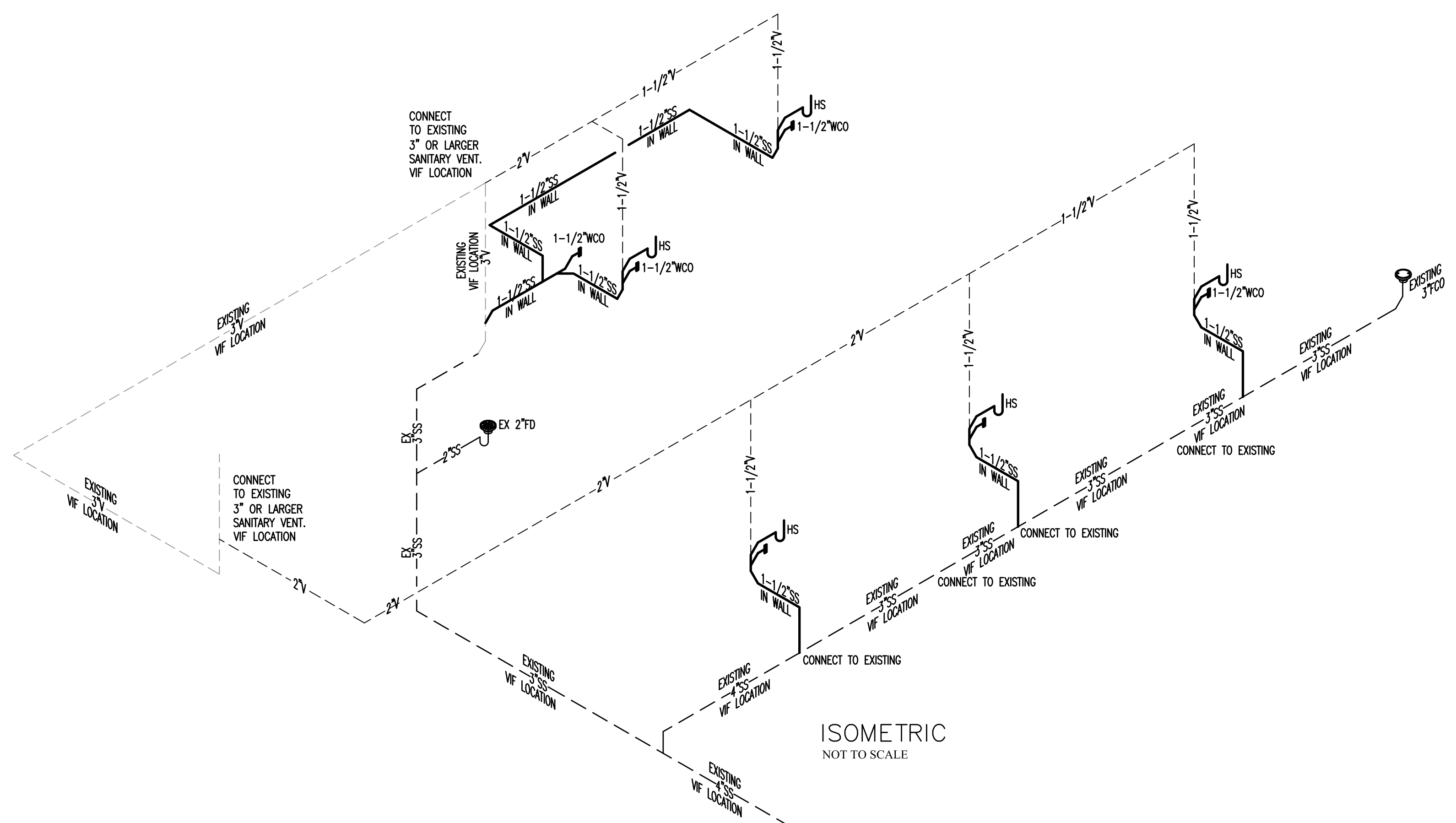
MATERIALS EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH SECTION 602.2.

MATERIALS WITHIN PLENUMS, EXCEPT AS REQUIRED BY SECTIONS 602.2.1.1 THROUGH 602.2.1.6, MATERIALS WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.

EXCEPTIONS:

1. RIGID AND FLEXIBLE DUCTS AND CONNECTORS SHALL CONFORM TO SECTION 603.
2. DUCT COVERINGS, LININGS, TAPE AND CONNECTORS SHALL CONFORM TO SECTIONS 603 AND 604.
3. THIS SECTION SHALL NOT APPLY TO MATERIALS EXPOSED WITHIN PLENUMS IN ONE- AND TWO-FAMILY DWELLINGS.
4. THIS SECTION SHALL NOT APPLY TO SMOKE DETECTORS.
5. COMBUSTIBLE MATERIALS FULLY ENCLOSED WITHIN CONTINUOUS NONCOMBUSTIBLE RACEWAYS OR ENCLOSURES, APPROVED GYPSUM BOARD ASSEMBLIES OR WITHIN MATERIALS LISTED AND LABELED FOR SUCH APPLICATION.

602.2.1.1 WIRING. COMBUSTIBLE ELECTRICAL OR ELECTRONIC WIRING METHODS AND MATERIALS, OPTICAL FIBER CABLE, AND OPTICAL FIBER RACEWAY EXPOSED WITHIN APLENUM SHALL HAVE A PEAK OPTICAL DENSITY NOT GREATER THAN 0.50, AN AVERAGE OPTICAL DENSITY NOT GREATER THAN 0.15, AND A FLAME SPREAD NOT GREATER THAN 5 FEET (1524 MM) WHEN TESTED IN ACCORDANCE WITH NFPA 262. ONLY TYPE OFNP (PLENUM RATED NONCONDUCTIVE OPTICAL FIBER CABLE) SHALL BE INSTALLED IN PLENUM-RATED OPTICAL FIBER RACEWAYS. WIRING, CABLE, AND RACEWAYS ADDRESSED IN THIS SECTION SHALL BE LISTED AND LABELED AS PLENUM RATED AND SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70.



PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	WASTE	VENT	OW	HW	DESCRIPTION / REMARKS
HWC	ACCESSIBLE WATER CLOSET	3"	3"	1/2"	---	ZURN Z5560 C1.6 GPF PRESSURE ASSIST, ADA HEIGHT, ELONGATED, TWO-PIECE TOILET, FLOOR MOUNTED VITREOUS CHINA, PRESSURE ASSISTED FLUSH, 1.6 GPF. HANDLE SHALL BE INSTALLED ON WIDE SIDE PER ACCESSIBILITY REQUIREMENTS. OLSONITE #95SS OPEN FRONT SEAT LESS COVER. JR SMITH 9230 BRONZE CLOSET RING ASSEMBLY, COLOR TO BE WHITE. ZURN Z8800CR 3/8" POLISHED CHROME ANGLE SUPPLY WITH STOP.
LAV	LAVATORY WALL HUNG	1-1/2"	1-1/2"	1/2"	1/2"	BADELDF WALL MOUNTED SINK SKU: WT-01-M-BLK FINISH MATTE BLACK DELTA TRINSC SINGLE HANDLE BATHROOM FAUCET MODEL:59HAR-SS-DST, FINISH: BRILLIANCE STAINLESS WITH MATCHING POP UP DRAIN SATIN NICKEL. BRASSCRAFT COMMERCIAL RIGID SUPPLIES, ANGLE STOPS AND CHROME PLATED 17 GA L.A. PATTERN CAST BRASS P-TRAP WITH SECURED ESCUTCHEON. P-TRAP AND HOT WATER SUPPLY SHALL BE WRAPPED FOR HANDICAP PROTECTION. PROVIDE TMV SET TO 105° FOR HOT WATER CONNECTION. COLOR TO BE WHITE. 0.5 GPM FLOW RESTRICTOR. PLUMBING VISIBLE UNDER SINK TO BE POLISHED CHROME.
HS	HAND SINK	1-1/2"	1-1/2"	1/2"	1/2"	SIGRANT UNDERMOUNT SINK BLANCO PRECIS 13-3/4" MODEL: BLA 517676, FINISH: TRUFFLE BLANCO 3-1/2" STRAINER AND SINK FLANGE 441322 FINISH: TRUFFLE DELTA TRINSC 7.5" SPOUT SPREAD WALL MOUNTED FAUCET MODEL: T355F-SSW, BRILLIANCE STAINLESS DELTA ROUGH-IN VALVE MODEL: R3510 - WL. BRASSCRAFT COMMERCIAL RIGID SUPPLIES, ANGLE STOPS AND CHROME PLATED 17 GA L.A. PATTERN CAST BRASS P-TRAP WITH SECURED ESCUTCHEON. PROVIDE TMV SET TO 105° FOR HOT WATER CONNECTION. COLOR TO BE WHITE. 0.5 GPM FLOW RESTRICTOR.
KS	BREAK ROOM SINK	1-1/2"	1-1/2"	1/2"	1/2"	RVH8006 18"X20"X10" ROVATI TRANA DROP IN SINK MODEL: RVH8006-2012222410 16 GA BRUSHED STAINLESS STEEL DELTA TRINSC PREP/BAR FAUCET SINGLE HANDLE MODEL: 9959-BL-DST FINISH: MATTE BLACK. BRASSCRAFT COMMERCIAL RIGID SUPPLIES, ANGLE STOPS AND CHROME PLATED 17 GA L.A. PATTERN CAST BRASS P-TRAP WITH SECURED ESCUTCHEON.
WH	ELECTRIC WATER HEATER	---	---	3/4"	3/4"	RHEEM MODEL PROE10 1 RH POU 10 GALLON, (1) 2000 WATT ELEMENT, SINGLE PHASE 120 VOLT OPERATION. PROVIDE AN ASME RATED TEMP. & PRESS RELIEF VALVE & WATTS 3/4" N36-M1 VACUUM RELIEF VALVE. PROVIDE 4" DEEP DRAIN PAN. SET TEMPERATURE TO 120°F.
FD	FLOOR DRAIN	3"	2"	---	---	JOSAM 30003-A-55 CAST IRON DRAIN WITH SATIN NIKOLOY STRAINER, CAST IRON FLASHING COLLAR. INSTALL SURE SEAL WATERLESS TRAP PRIMER AND DEEP SEAL TRAP.
WCO	WALL CLEANOUT	PLAN	---	---	---	J.R. SMITH WALL CLEANOUT. FURNISH CHROME, SQUARE ACCESS COVER AND FRAME.
FCO	FLOOR CLEANOUT	PLAN	---	---	---	JOSAM 57000-22 FLOOR CLEANOUT, LEVELEZE COATED CAST IRON BODY WITH ADJUSTABLE HOUSING, SATIN NIKALOY TOP AND INSIDE CAULK CONNECTION.
TP	TRAP PRIMER	---	---	1/2"	---	PRECISION PLUMBING PRODUCTS TRAP PRIMER. BRONZE CONSTRUCTION WITH VACUUM PORTS. ADJUSTABLE WITH 1/2" COPPER TYPE L TO RECEPTOR.
WHA	WATER HAMMER ARRESTOR	---	---	PLAN	PLAN	J.R. SMITH SERIES HYDROTROL, STAINLESS STEEL CONSTRUCTION.
TMV	THERMOSTATIC MIXING VALVE	---	---	1/2"	1/2"	WATTS LEAD FREE LFUSG-B THERMOSTATIC MIXING VALVE. BRASS. SET TO 109°F. INSTALL BELOW ALL HAND SINKS

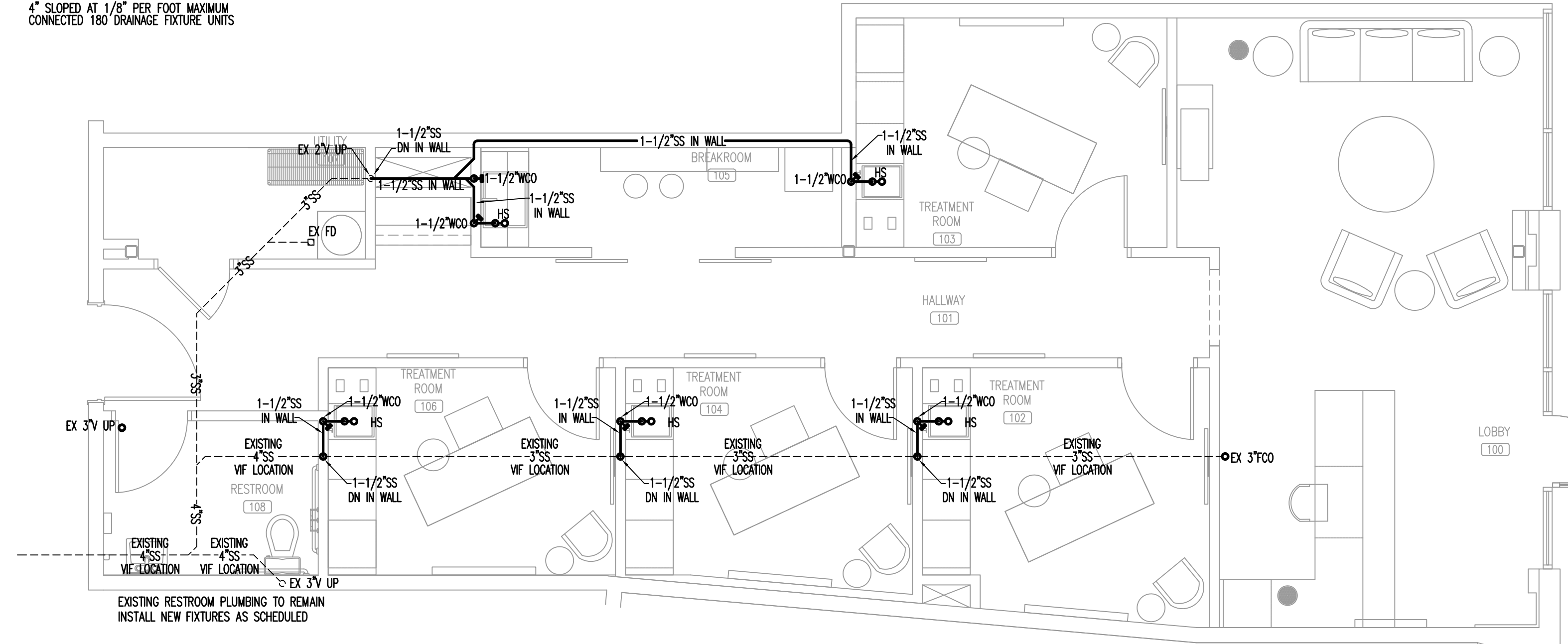
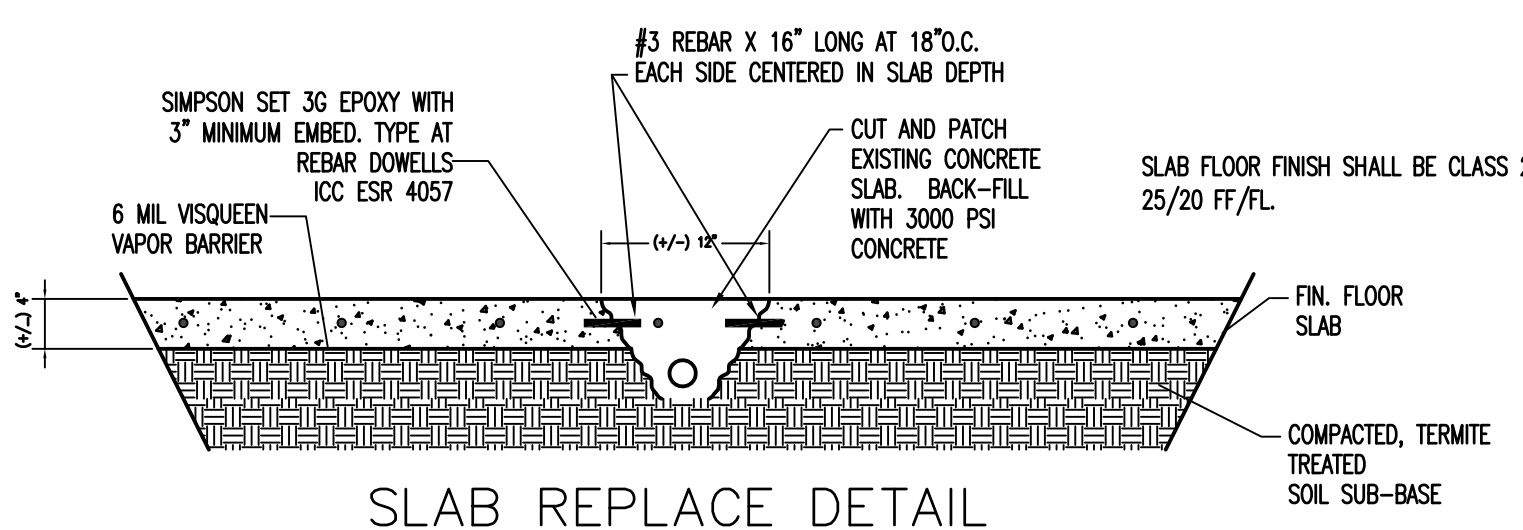
EXISTING WATER HEATER TO BE RELOCATED AND REFURBISHED TO LIKE NEW. 50 GALLON RHEEM MODEL XE50M06T4501. DEPENDANT ON CONDITION. REPLACE AS SCHEDULED.

TABLE 709.1 DRAINAGE FIXTURE UNITS

FIXTURE	DFU
DRINKING FOUNTAIN	0.5
FLOOR DRAIN	2.0
KITCHEN SINK	2.0
LAVATORY	1.0
SERVICE SINK	2.0
SHOWER	2.0
WATER CLOSET	4.0
CLOTHES WASHER	2.0

710.1(1)
 3" SLOPED AT 1/8" PER FOOT MAXIMUM CONNECTED 36 DRAINAGE FIXTURE UNITS
 4" SLOPED AT 1/8" PER FOOT MAXIMUM CONNECTED 180 DRAINAGE FIXTURE UNITS

- ### GENERAL NOTES
- VERIFY EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF UTILITIES AND PIPING BEFORE COMMENCEMENT OF WORK, AND IMMEDIATELY NOTIFY PROJECT MANAGER OF ANY DISCREPANCIES.
 - CONTRACTOR SHALL MAKE ALL ARRANGEMENTS WITH UTILITY COMPANIES FOR SERVICE AND CONNECTIONS AND PAY FOR ALL PERMITS, FEES, CHARGES AND METERS.
 - TERMINATE ALL VENT AND FLUE OUTLETS AT 10'-0" MINIMUM FOR ANY FRESH AIR INTAKES
 - INSTALL ALL PLUMBING TO AVOID INTERFERENCE WITH ELECTRICAL AND MECHANICAL EQUIPMENT AND STRUCTURAL FRAMING. NO WATER OR DRAIN LINES PERMITTED OVER UNDER ELECTRICAL PANELS. INSURE THAT ALL WATER LINES INSIDE ARE ADEQUATELY SECURED. PROVIDE FAUCETS UNLESS OTHERWISE NOTED, TRAPS, STOPS, GATE VALVE, GAS COCKS, WATER HAMMER ARRESTORS, WALK THE NOTES, COVERS, FLEX CONNECTIONS, SHUT OFF VALVES AND INDIRECT WASTE TO AN APPROVED RECEPTOR AND ALL NECESSARY TRIM FOR COMPLETELY INSTALLED AND CONNECTED PLUMBING SYSTEM
 - RECORD ON AS BUILT DRAWINGS ALL SIZES, LOCATIONS, INVERTS AND MATERIALS OF EXISTING PIPES THAT ARE ENCOUNTERED AND NEW PIPES INSTALLED DURING THE COURSE OF THE PROJECT DELIVER AS BUILT'S TO THE CONSTRUCTION MANAGER AT THE END OF THE PROJECT
 - ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL AND FEDERAL CODES, RULES AND REGULATIONS GOVERNING THIS PROJECT
 - UPON COMPLETION OF JOB, INSPECT ALL EXPOSED PORTIONS OF THE PLUMBING INSTALLATIONS AND COMPLETELY REMOVE ALL EXPOSED LABELS, SOIL, MARKINGS, AND FOREIGN MATERIAL EXCEPT PRODUCT LABELS AND THOSE REQUIRED BY LAW
 - PROVIDE FLEXIBLE GAS CONNECTIONS TO WATER HEATER AND COOKING EQUIPMENT. PROVIDE RIGID GAS CONNECTIONS TO ALL OTHER EQUIPMENT IN APPLANCES AND WHERE LOCAL JURISDICTION PROHIBITS THE USE OF FLEXIBLE CONNECTIONS
 - VERIFY ALL EQUIPMENT AND APPLANCE CONNECTION SIZES PRIOR TO MAKING FINAL CONNECTION. REDUCE BRANCH PIPE SIZING JUST PRIOR TO CONNECTION TO THE UNIT. PROVIDE ALL MATERIALS FOR CONNECTION TO ALL EQUIPMENT AND FIXTURES.
 - PROVIDE FIRE BOOTS AT FIRE WALL AND FLOOR PENETRATIONS WHEN REQUIRED BY CODE. FOR PVC PIPING AND OTHER MATERIALS THE FIRE INSPECTIONS DEPARTMENT MAY REQUIRE PROTECTION AROUND.
 - CONTRACTOR TO PROVIDE AND INSTALL CLAMPING RINGS AND COLLARS FOR ALL FLOOR DRAINS, FLOOR SINKS, FLOOR CLEANOUTS, AND ANY OTHER PLUMBING FLOOR PENETRATIONS. MAKE WATER TIGHT CONNECTION WITH WATERPROOFING MEMBRANE.
 - WHEN WORKING IN A REMODEL OR TENANT FINISH OUT IN AN EXISTING OCCUPIED BUILDING, THE CONTRACTOR IS TO OBSERVE THE FOLLOWING. REMOVE EXISTING WASTE PIPING NOT TO BE REUSED OR IN USE BY OTHER TENANTS. AVOID CONFLICTS BETWEEN NEW AND EXISTING PIPING SYSTEMS. TO ENSURE PROPER INSTALLATION OF THE NEW PIPING VERIFY FLOWLINE ELEVATION AND LOCATION OF EXISTING PIPING CONNECTION POINTS.
 - THE INTENT OF THE DRAWING HEREIN IS TO REPRESENT A COMPLETE WORKING SYSTEM. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL COMPONENTS NECESSARY TO PROVIDE A COMPLETE WORKING AND CODE COMPLIANT SYSTEM WHETHER SHOWN OR NOT SHOWN ON THE DRAWINGS.
 - GENERAL CONTRACTOR/ PLUMBING CONTRACTOR TO SCOPE EXISTING SANITARY SEWER FOR VERIFICATION OF LINE CONDITION FROM THE TENANT SPACE TO THE EXTERIOR MAIN LATERAL AS REQUIRED. GENERAL CONTRACTOR TO PROVIDE VIDEO DOCUMENTATION OF EXISTING CONDITIONS TO FGDADSON.



SANITARY SEWER PLAN
 SCALE: 1/4" = 1'-0"

BIDDING QUESTIONS CONTACT 920-757-1486

LOOKLAB
 4164 EAST 8TH PL
 DENVER, CO 80220-3955

CHECKED BY: Staff
 DRAWN BY: Staff
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 SCALE: PER PLAN
 PROJECT No.: TLL 2402
 SHEET TITLE
PLUMBING PLANS AND ISOMETRIC
 SHEET No.

4.01

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WATER SUPPLY CALCULATIONS

FIXTURE NAME	NO.	F.U.	TOT.
WATER CLOSET (FLUSH TANK)	1	3.0	3.0
LAVATORY	1	1.0	1.0
HAND SINK	5	1.0	5.0
TOTAL FIXTURE UNITS			9.0

9.0 FIXTURE UNITS = 13.7 GALLONS PER MINUTE (G.P.M.)
 1" CW LINE WILL SUPPLY 20.0 GALLONS PER MINUTE

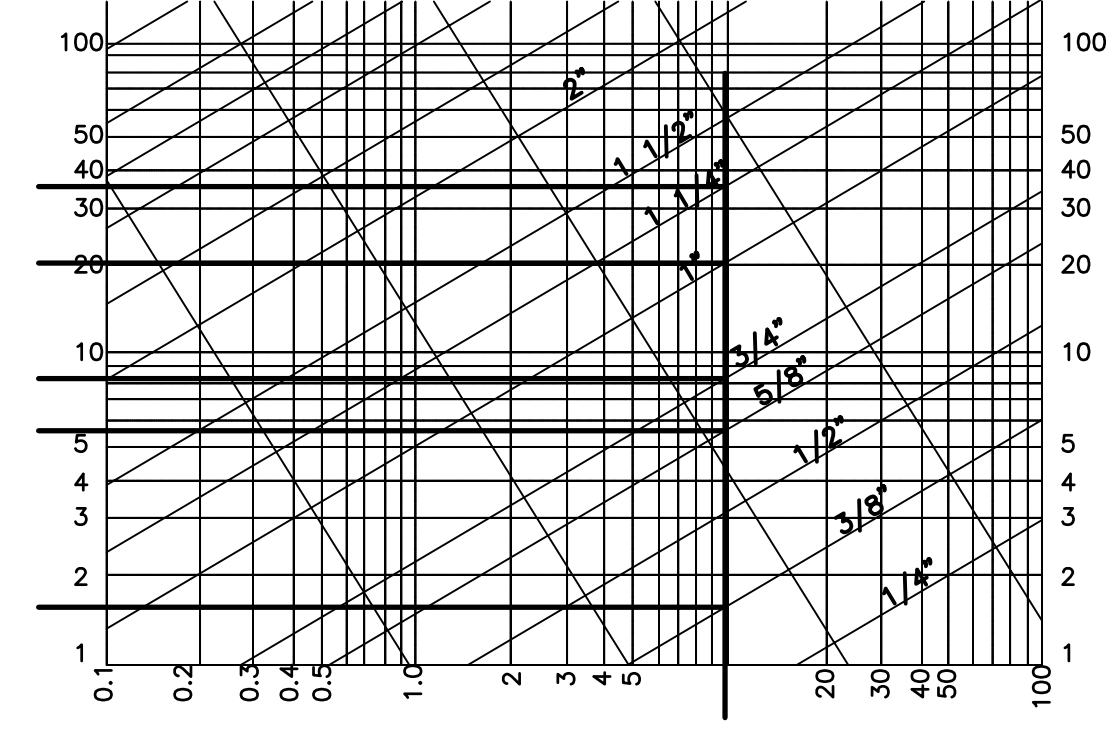
PIPE LENGTH TAP TO METER _____ 20 FT
 PIPE LENGTH METER TO LAST FIXTURE _____ 60 FT
 VERTICAL PIPE LENGTH TO HIGHEST FIXTURE _____ 10 FT
 TOTAL PIPE LENGTH _____ 90 FT
 FITTING LOSS (20%) _____ 16 FT
TOTAL DEVELOPED LENGTH 106 FT

WATER PIPE SIZING CRITERIA:
 SUPPLY PRESSURE (ASSUME) (INSTALL PRV AS REQUIRED) _____ 30 PSIG
FRICITION LOSS (PSI):
 BACK FLOW PREVENTER LOSS _____ 12.0 PSI
 METER LOSS _____ 8.0 PSI
 HIGHEST PRESS. REQ'D. AT FIXTURE _____ 10.0 PSI
 TOTAL OVERALL LOSSES _____ 25.0 PSI
 PRESSURE AVAILABLE FOR PIPING _____ 20.0 PSI

10 PSI / 106 TDL X 100 = 9.5 PSI MAXIMUM PRESS. DROP ALLOWABLE/100 FT. OF PIPE

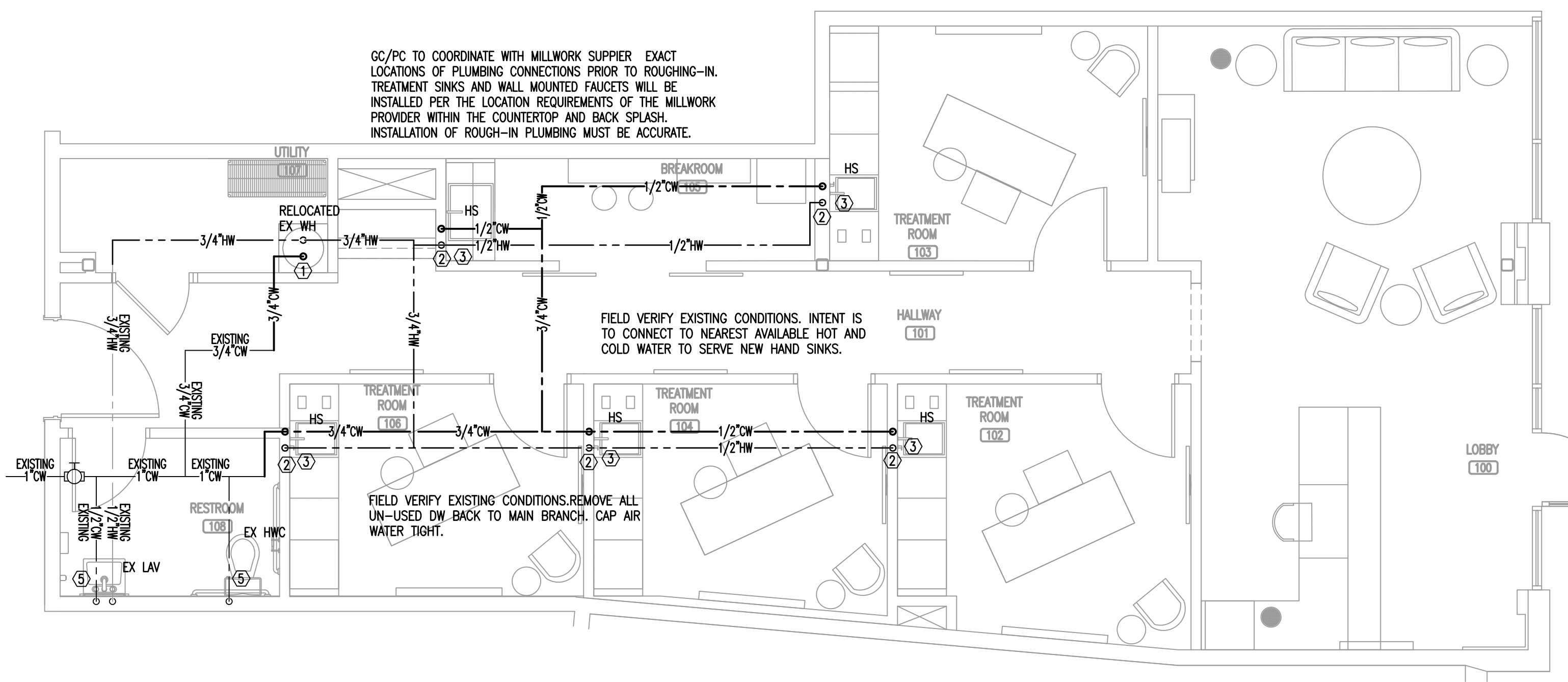
SHEET KEY NOTES

- ① EXISTING/RELOCATED 50 GALLON ELECTRIC WATER HEATER, RESTROOM. REFURBISH TO LIKE NEW CONDITION. REPLACE WITH SCHEDULED AS REQUIRED. ENSURE EXISTING MEETS ALL CODE REQUIREMENTS FOR INSTALLATION. MODIFY AS NECESSARY
- ② 1/2" HOT AND COLD WATER TO FIXTURES, INSTALL WATER HAMMER ARRESTOR ON TOP OF FEED DOWN.
- ③ WATTS LFUSG-B THERMOSTATIC MIXING VALVE SET TO 109°F BELOW HAND SINK.
- ④ 1/2" COLD WATER TO HWC, INSTALL WATER HAMMER ARRESTOR ON TOP OF FEED DOWN.
- ⑤ EXISTING LAVATORY AND ACCESSIBLE WATER CLOSET TO BE REPLACED AS SCHEDULED. RE-USE HOT AND COLD WATER SUPPLIES.



PLUMBING LEGEND

DEFINITION	SYMBOL OR ABBREVIATION
DOMESTIC HOT WATER	---HW---
DOMESTIC COLD WATER	---CW---
DOMESTIC SOFT WATER	---SFW---
HOT WATER RETURN	---HWR---
VENT PIPING	-----V-----
SANITARY WASTE	---SS---
GAS PIPING	---NAT---
RISER DOWN (ELBOW)	○
RISER UP (ELBOW)	○
TEE DOWN	├
RPZ BACKFLOW PREVENTER	├
CHECK VALVE	├
ROOF DRAIN (AREA SERVED)	⊙ 4" BOLLT 1,650 SF
FLOOR DRAIN	□ FD-
CLEANOUT	○ CO-
WALL HYDRANT	├
BALANCING VALVE	├
BALL VALVE	○
CONDENSATE DRAIN	---CD---
SECONDARY COND. DRAIN	---SD---



DOMESTIC WATER PLAN
 SCALE: 1/4"=1'-0"

BIDDING QUESTIONS CONTACT 920-757-1486

CHECKED BY: Staff
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SHEET TITLE
DOMESTIC WATER PLAN

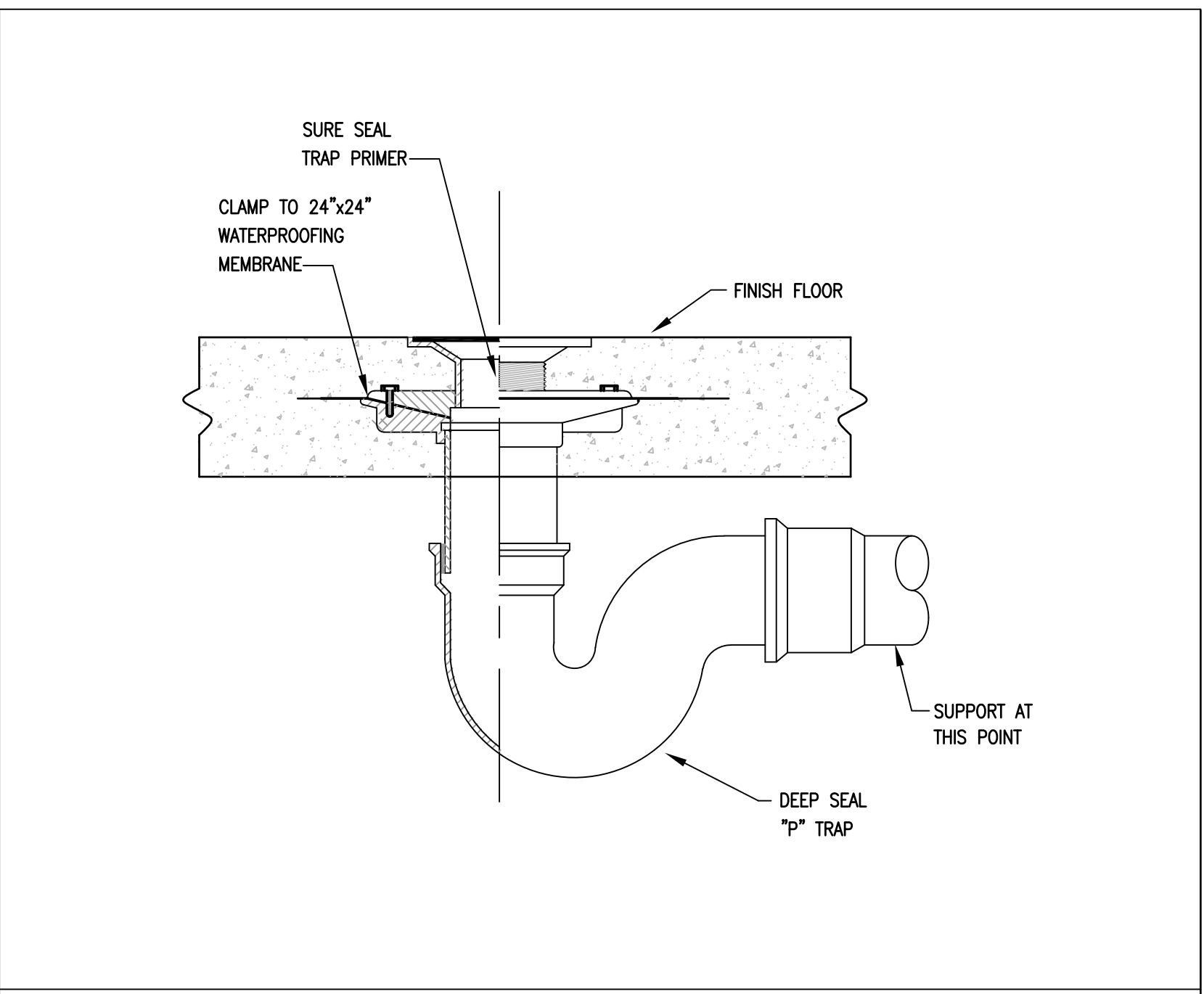
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4.02

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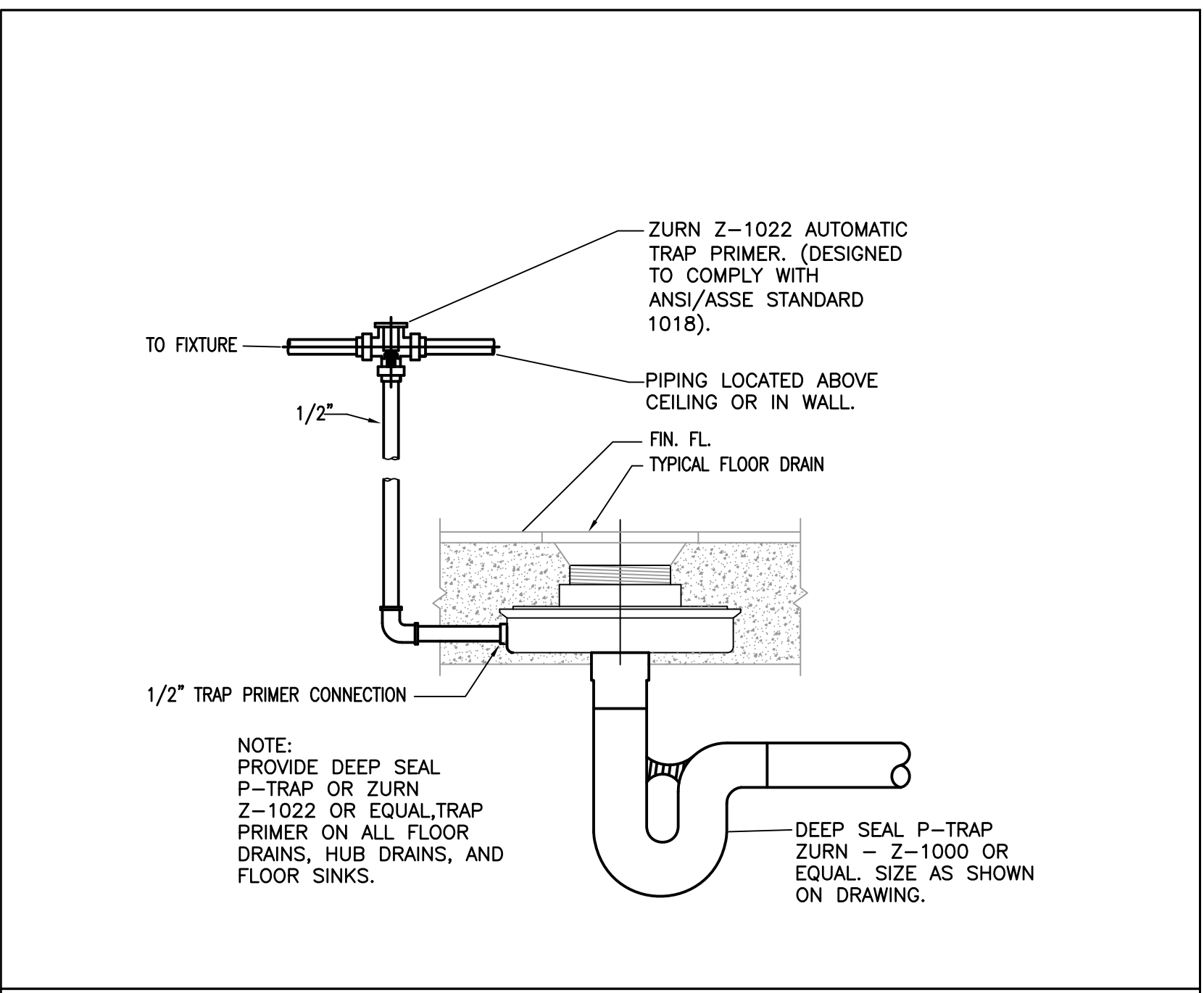
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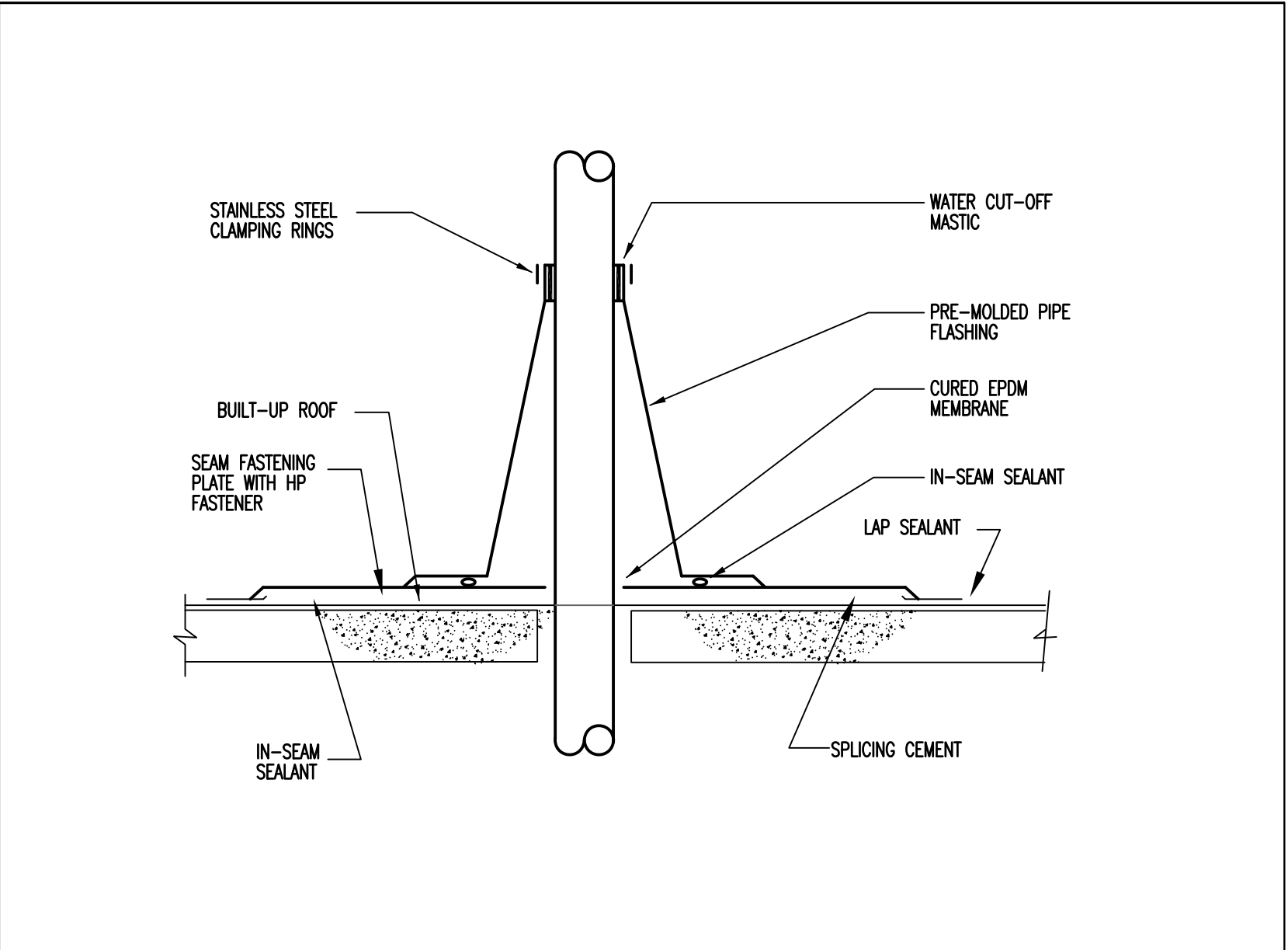
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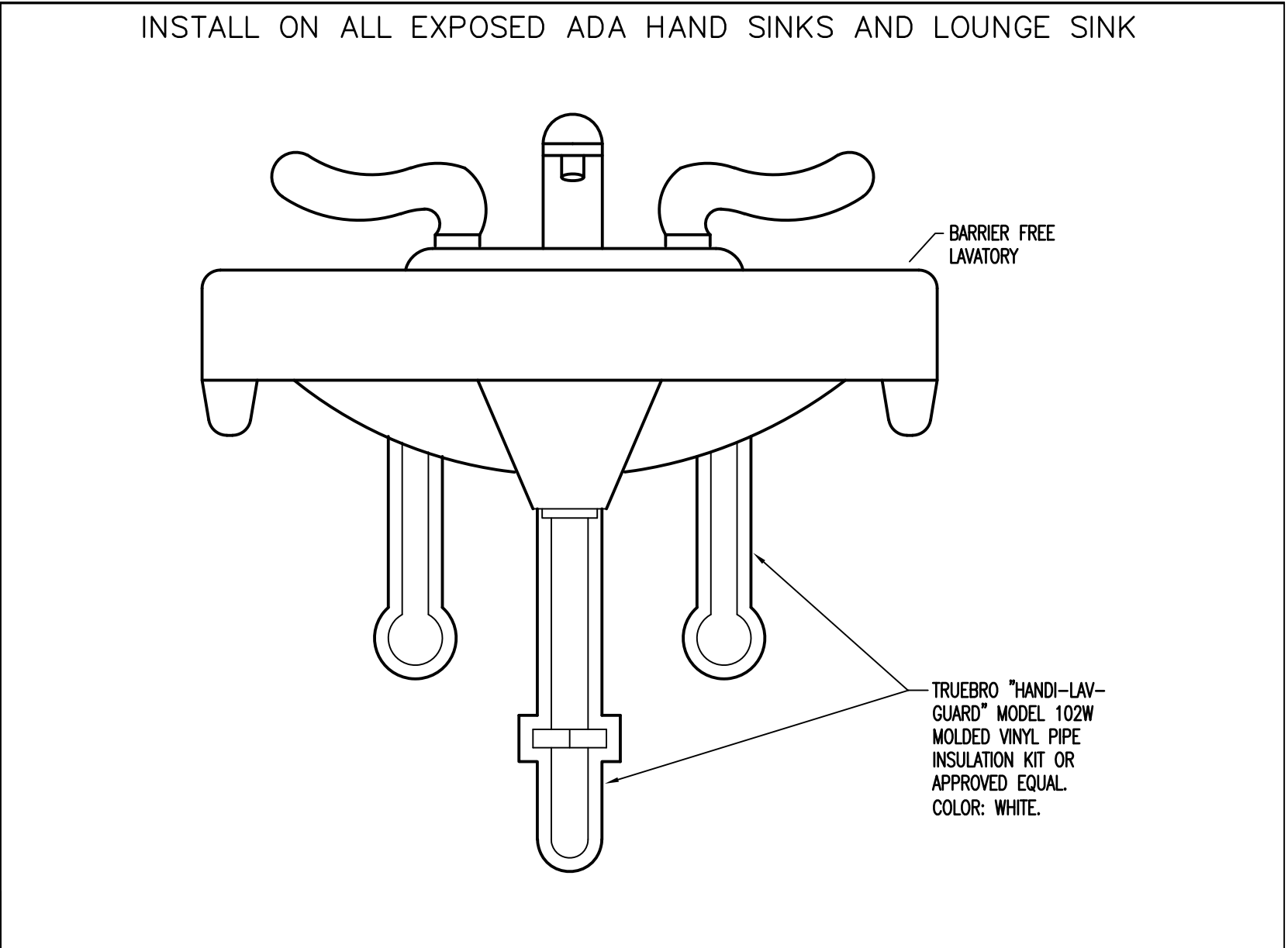
2 FLOOR DRAIN N.T.S.



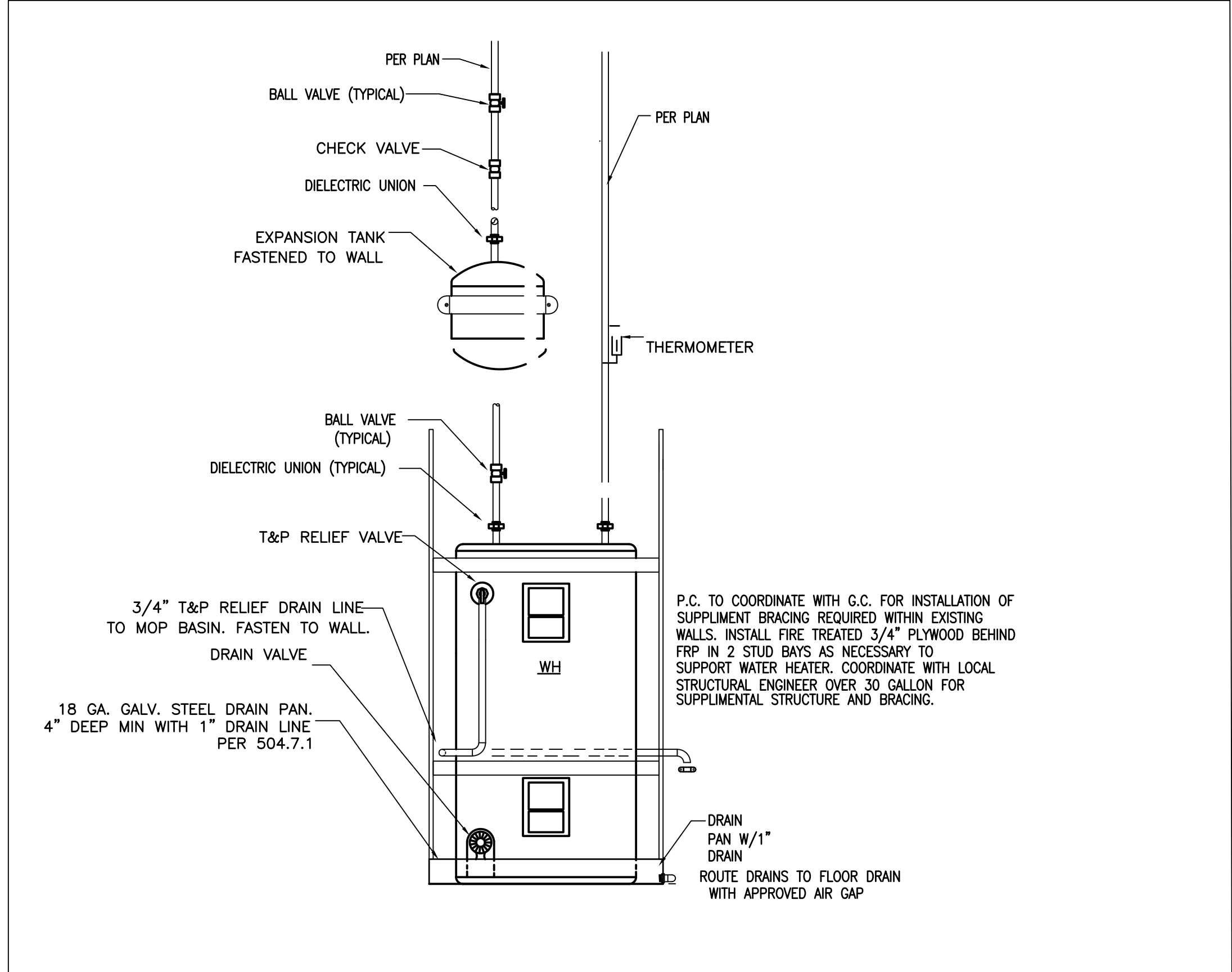
3 FLOOR DRAIN / MECH TRAP PRIMER N.T.S.
 MECHANICAL TRAP PRIMER INSTALLED ON ALL FLOOR DRAINS



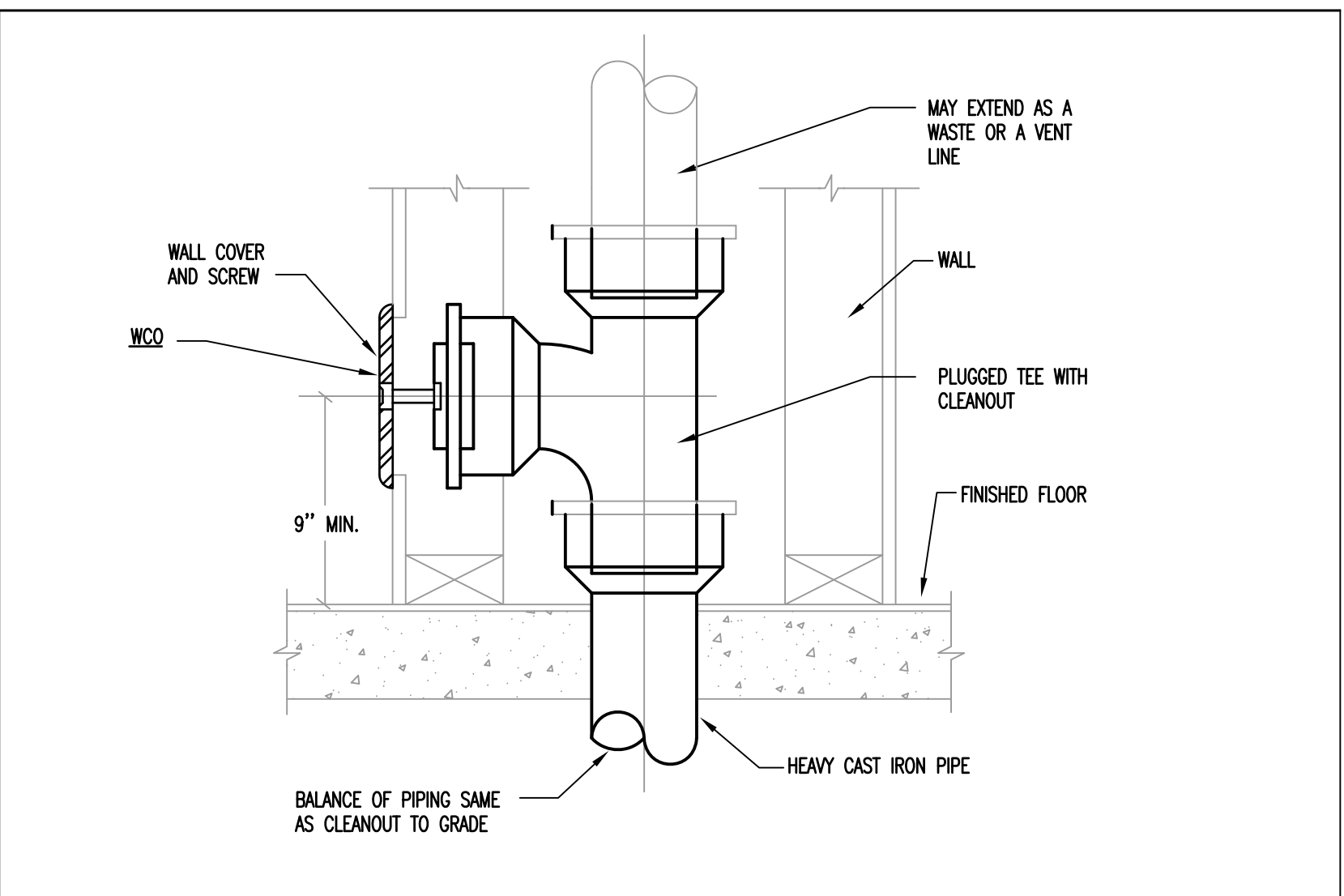
4 VENT THRU ROOF N.T.S.



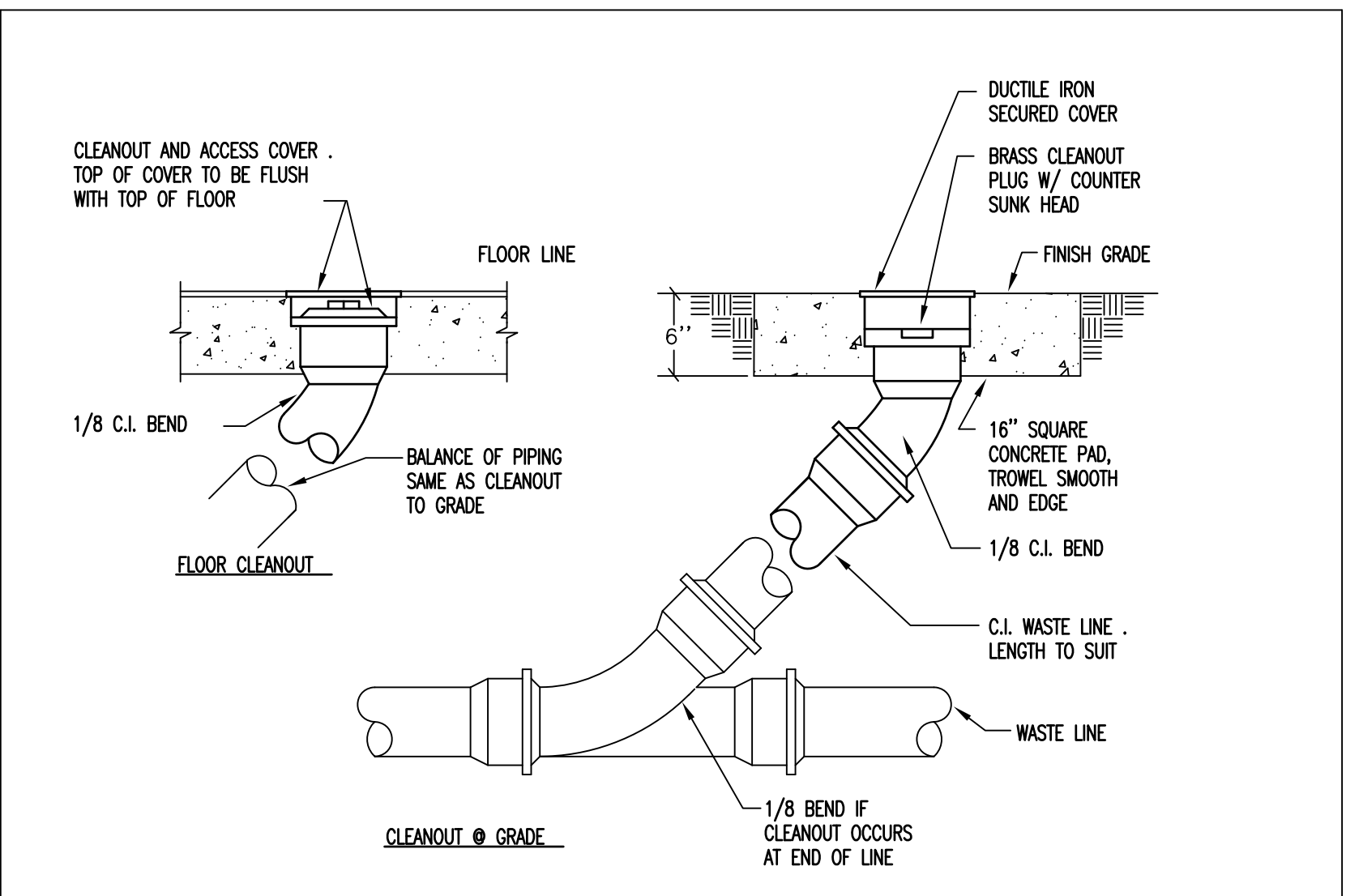
5 ADA PIPE SHROUDING N.T.S.
 INSTALL ON ALL EXPOSED ADA HAND SINKS AND LOUNGE SINK



1 WATER HEATER DETAIL N.T.S.
 ALL HOT WATER PIPING SHALL BE INSULATED WITH A MINIMUM OF R12.5 PER TABLE 120.3-A / 160.4-A PIPE INSULATION THICKNESS



6 TYPICAL WALL CLEANOUT DETAIL N.T.S.



7 TYPICAL CLEANOUT(S) DETAIL N.T.S.

BIDDING QUESTIONS CONTACT 920-757-1486

LOOK LAB

4164 EAST 8TH PL
 DENVER, CO 80220-3955

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PLUMBING DETAILS
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4.03

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ISSUED / REVISIONS:

2.03 DOMESTIC WATER:

A. DOMESTIC COLD AND HOT WATER PIPING SHALL BE TYPE "L" COPPER FITTINGS SHALL BE WROUGHT COPPER, 95%-5% ANTIMONY/TIN SOLDER SHALL BE USED.

B. ALL POTABLE WATER PIPING SHALL BE DISINFECTED IN ACCORDANCE WITH LOCAL PLUMBING CODE INDICATED IN PARAGRAPH 1.05 OF SECTION 15010 AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL HEALTH DEPARTMENT.

C. PROVIDE STOP VALVES FOR ALL DOMESTIC WATER CONNECTIONS TO FIXTURES EXCEPT WHERE INTEGRAL STOPS ARE PROVIDED, OR GATE VALVES ARE INDICATED ON THE DRAWINGS.

D. ALL HOSE BIBS AND HYDRANTS SHALL BE PROVIDED WITH APPROVED VACUUM BREAKERS.

E. PROVIDE CHROME PLATED, BRASS ANGLED STOP VALVES FOR ALL LAVATORIES, SINKS, ETC.

F. DISCHARGE OF ALL RELIEF VALVES SHALL BE PIPED TO WITHIN 6" OF THE FLOOR TO PREVENT ACCIDENTAL SCALDING.

2.04 NATURAL GAS:

A. COORDINATE THE LOCATION OF GAS METER (S) WITH THE LOCAL GAS COMPANY.

B. GAS SYSTEM SHALL BE SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON FITTINGS. VALVE SHALL BE LUBRICATED PLUG TYPE, SIMILAR TO CRANE #250.

C. PROVISIONS SHALL BE MADE FOR EXPANSION AND CONTRACTION OF GAS PIPING.

D. PIPING SHALL BE SIZED NOT LESS THAN 1/4 INCH IN 15 FEET. HORIZONTAL LINES SHALL SLOPE UPWARD TO RISERS AND DOWN FROM RISERS TO THE METER, OR SERVICE REGULATOR OR TO THE EQUIPMENT. DRIPS SHALL BE PROVIDED AT SUCH POINTS TO ACT AS STORAGE FOR CONDENSATE. DRIPS SHALL BE ACCESSIBLE AND SHALL NOT BE LOCATED WHERE THE CONDENSATE IS LIKELY TO FREEZE.

E. AIR BRANCH CONNECTIONS SHALL BE MADE ON THE TOP OR SIDE OF HORIZONTAL LINES.

F. GAS PIPING SHALL NOT BE RUN IN OR THROUGH SUPPLY AIR DUCTS, CLOTHES CHUTES, CHIMNEYS, VENTS, DUMBWATERS, OR ELEVATOR SHAFTS.

G. VALVES, UNIONS OR RUNNING THREAD SHALL NOT BE LOCATED IN ANY AIR PLENUM.

2.05 CONDENSATE DRAINS & INDIRECT WASTES:

A. CONDENSATE DRAINS AND INDIRECT WASTE PIPING SHALL BE TYPE "L" COPPER WITH 95%-5% ANTIMONY/TIN SOLDER JOINTS.

2.06 PIPE HANGERS AND SUPPORTS:

A. PROVIDE NECESSARY STRUCTURAL MEMBERS, HANGERS AND SUPPORTS OF APPROVED DESIGN TO KEEP PIPING IN PROPER ALIGNMENT AND PREVENT TRANSMISSION OF INJURIOUS THRUSTS AND VIBRATIONS. IN ALL CASES WHERE HANGERS, BRACKETS, ETC., ARE SUPPORTED FROM METAL DECKING AND/OR CONCRETE CONSTRUCTION, CARE SHALL BE TAKEN NOT TO WEAKEN DECKING AND/OR CONCRETE OR PENETRATE WATERPROOFING. ALL HANGERS AND SUPPORTS SHALL BE CAPABLE OF SCREW ADJUSTMENT AFTER PIPING IS ERECTED. HANGERS SUPPORTING PIPING EXPANDING INTO LOOPS, BENDS AND OFFSETS SHALL BE SECURED TO THE BUILDING STRUCTURE IN SUCH A MANNER THAT HORIZONTAL ADJUSTMENT PERPENDICULAR TO THE RUN OF PIPING SUPPORTED MAY BE MADE TO ACCOMMODATE DISPLACEMENT DUE TO EXPANSION.

B. BEAM CLAMPS – HANGERS SUPPORTED FROM FLOOR STEEL SHALL BE APPROVED 1" SMALLER SHALL BE C & P FIG.148 ADJUSTABLE BEAM CLAMPS. FOR PIPING 2 3/8" INCHES BEAM CLAMPS. 1 BEAM CLAMPS FOR HANGERS SUPPORTING PIPE 2 INCHES AND LARGER, 1 BEAM CLAMPS SHALL BE WROUGHT STEEL. C & P FIG. NO. 288 OR EQUAL.

C. WHERE PIPING IS RUN NEAR THE FLOOR AND NOT HUNG FROM THE CEILING CONSTRUCTION BUT SUPPORTED FROM THE FLOOR, SUCH SUPPORTS SHALL BE OF PIPE STANDARDS WITH BASE FLANGE AND ADJUSTABLE TOP YOEK SIMILAR TO F & S FIG. NO. 907 OR EQUAL.

D. ALL VERTICAL PIPING SHALL BE ANCHORED BY MEANS OF HEAVY STEEL CLAMPS SECURELY BOLTED OR WELDED TO THE PIPING, AND WITH END EXTENSION BEARING ON THE BUILDING.

E. ALL VERTICAL PIPING SHALL BE GUIDED AT EACH FLOOR BY USE OF CLAMPS FASTENED TO BUILDING STRUCTURE. PROVIDE 360 DEGREES PROTECTIVE SADDLE AT GUIDES. SADDLES SHALL BE FASTENED TO PIPE OR INSULATION.

F. VERTICAL RUNS OF PIPE NOT OVER 15 FEET LONG SHALL BE SUPPORTED BY HANGERS PLACED NOT OVER ONE FOOT FROM THE ELBOWS ON THE CONNECTING HORIZONTAL RUNS.

G. NOT OVER 8 INCHES IN SIZE OR NOT OVER 30 FEET LONG AND NOT OVER 12 INCHES VERTICAL RUNS OF PIPE OVER-15 FEET LONG BUT NOT OVER 60 FEET LONG AND IN SIZE, SHALL BE SUPPORTED ON HEAVY STEEL CLAMPS. CLAMPS SHALL BE BOLTED TIGHTLY AROUND THE PIPES AND SHALL REST SECURELY ON THE BUILDING STRUCTURE WITHOUT BLOCKING. CLAMPS SHALL BE WELDED TO THE PIPES OR PLACED BELOW COLLARS. CLAMPS SHALL BE TYPE 8, FEDERAL SPECIFICATION WW-11-171C, UNLESS OTHER TYPES ARE APPROVED.

H. PIPING SHALL NOT BE HUNG FROM OTHER PIPING, DUCTS, CONDUITS OR VERTICAL EXHAUST SHIELDS WILL BE PERMITTED. HANGER RODS SHALL NOT PIERCE DUCTS.

I. WHERE ADDITIONAL STEEL IS REQUIRED FOR THE SUPPORT OF HANGERS, FURNISH AND INSTALL SAME SUBJECT TO THE APPROVAL OF THE DESIGNER.

J. ALL PIPING RUNNING ON WALLS BE SUPPORTED BY MEANS OF HANGERS SUSPENDED FROM HEAVY ANGLE IRON WALL BRACKETS. NO WALL HOOKS WILL BE PERMITTED.

K. LATERAL BRACING OF HORIZONTAL PIPE SHALL BE PROVIDED WHERE REQUIRED TO PREVENT SIDE SWAY OR VIBRATION.

L. NO PIPING SHALL BE ASSEMBLED IN SUCH A MANNER AS TO HAVE DIELECTRIC ACTION BETWEEN FERROUS AND NON-FERROUS MATERIALS.

2.07

C. MECHANICAL SYSTEM INSULATION – THE WORK COVERED BY THIS SPECIFICATION CONSISTS IN FURNISHING ALL LABOR, EQUIPMENT, ACCESSORIES AND MATERIALS AND IN PERFORMING ALL OPERATIONS NECESSARY FOR THE INSTALLATION OF THERMAL INSULATION FOR THE PLUMBING.

ALL COMPONENTS OF THE INSULATION FOR PIPING INCLUDING, FACINGS, MASTICS AND ADHESIVES, SHALL HAVE A FIRE HAZARD RATING NOT TO EXCEED 25 FOR FLAME SPREAD AND 50 FOR FUEL CONTRIBUTED AND SMOKE DEVELOPED. RATINGS SHALL BE AS DETERMINED BY UNDERWRITERS LABORATORIES, INCORPORATED, OR OTHER APPROVED TESTING LABORATORY IN ACCORDANCE WITH ASTM-84 REQUIREMENT.

ALL DOMESTIC HOT WATER LINES, HOT WATER RECIRC LINES, AND COLD WATER LINE SHALL BE INSULATED FROM THEIR SOURCE IN THE MECHANICAL ROOM, THROUGH THE CORRIDOR COLLECT, TO EACH BRANCH IN THE CORRIDOR WALL WITH FLEXIBLE CLOSED-CELL POLYETHYLENE BY TERWACELL OR ARMAFLEX-2000. CHARACTERISTICS, K = .25 @ 75 DEGREES F. .01 WATER PERM. IN., 1/2" THICK.


END OF SECTION 15410

DIVISION 15 – MECHANICAL / PLUMBING

SECTION 15440 – PLUMBING FIXTURES

A. REFER TO PLUMBING FIXTURE SCHEDULE IN THE PLUMBING DESIGN CONSTRUCTION DOCUMENTS.

END OF SECTION 15440



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SCALE: PER PLAN
PROJECT No.: TLL 2402

SHEET TITLE

PLUMBING SPECIFICATIONS

SHEET No. 4.05

PLUMBING SPECIFICATIONS

SECTION 15 – MECHANICAL / PLUMBING

TABLE OF CONTENTS

SECTION 15010 SPECIAL REQUIREMENTS FOR MECHANICAL PLUMBING PLUMBING PLUMBING PIPING PLUMBING FIXTURES

SECTION 15010 – SPECIAL REQUIREMENTS FOR MECHANICAL PLUMBING

PART 1.00 – GENERAL

1.01 REFERENCES:

A. THE GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE A PART OF THIS SECTION.

B. WHERE ITEMS OF THE GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE REPEATED IN THIS SECTION OF THE SPECIFICATIONS, IT IS MERELY INTENDED TO QUALIFY OR TO CALL ATTENTION TO THEM. IT IS NOT INTENDED THAT ANY OTHER PART OF THE GENERAL CONDITIONS SHALL BE ASSUMED TO BE OMITTED IF NOT REPEATED HEREIN.

C. THIS SECTION APPLIES EQUALLY AND SPECIFICALLY TO ALL CONTRACTORS SUPPLYING LABOR AND/OR EQUIPMENT AND/OR MATERIALS AS REQUIRED UNDER EACH SECTION OF THIS DIVISION.

1.02 INTENT:

A. IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. ANY APPARATUS, APPLIANCE, MATERIAL OR WORK NOT SHOWN ON THE DRAWINGS, BUT MENTIONED IN THE SPECIFICATIONS OR VICE-VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT IN ALL RESPECT AND READY FOR OPERATION, EVEN IF NOT PARTIALLY SPECIFIED, SHALL BE FINISHED, DELIVERED AND INSTALLED UNDER THEIR RESPECTIVE DIVISION WITHOUT ADDITIONAL EXPENSE TO THE OWNER.

B. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR THE PROPER INSTALLATION AND OPERATION, SHALL BE INCLUDED IN THE WORK AS THOUGH THEY ARE HERETOFORE SPECIFIED OR SHOWN.

C. WORK UNDER EACH SECTION SHALL INCLUDE GIVING WRITTEN NOTICE TO THE OWNER OF ANY MATERIALS OR APPARATUS BELIEVED INADEQUATE OR UNSUITABLE. IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION, AND NECESSARY ITEMS OF NOTICE, IT IS MUTUALLY AGREED THAT WORK UNDER EACH DIVISION HAS INCLUDED THE COST OF ALL REQUIRED ITEMS FOR THE APPROVED SATISFACTORY FUNCTIONING OF THE ENTIRE SYSTEM WITHOUT EXTRA COMPENSATION.

1.03 DRAWINGS:

A. DRAWINGS ARE DIAGRAMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. DO NOT SCALE THE DRAWINGS. CONSULT THE DESIGNER. DRAWINGS AND DETAILS EXACT LOCATION OF FIXTURES AND EQUIPMENT, WHERE SAME ARE NOT DEFINITELY LOCATED, OBTAIN THIS INFORMATION FROM THE DESIGNER.

B. WORK UNDER EACH SECTION SHALL CLOSELY FOLLOW DRAWINGS IN LAYOUT OF WORK AND CHECK DRAWINGS OF OTHER DIVISIONS TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED. MAINTAIN MAXIMUM HEADROOM AND WHERE SPACE CONDITIONS APPEAR INADEQUATE, ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH INSTALLATIONS.

C. ENGINEER MAY, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NECESSARY TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF THE WORK.

D. WHERE VARIANCES OCCUR BETWEEN THE DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER OF THE DOCUMENTS, THE ITEM OR ARRANGEMENT OF BETTER QUALITY, OR HIGHER COST, SHALL BE INCLUDED IN THE CONTRACT PRICE. THE ENGINEER SHALL DECIDE ON THE ITEM AND THE MANNER IN WHICH THE WORK SHALL BE INSTALLED.

1.04 SURVEYS AND MEASUREMENTS:

A. BEFORE SUBMITTING HIS BID, THE CONTRACTOR SHALL VISIT THE SITE, AND THE EXISTING BUILDING AND SHALL BECOME THOROUGHLY FAMILIAR WITH ALL CONDITIONS UNDER WHICH HIS WORK WILL BE INSTALLED, AS HE WILL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS HE MAKES OR ANY OMISSIONS OR ERRORS HE MAKES AS A RESULT OF HIS FAILURE TO BECOME FAMILIAR WITH THE SITE, THE EXISTING BUILDING AND THE CONTRACT DOCUMENTS.

B. THE CONTRACTOR SHALL BASE ALL MEASUREMENTS, BOTH HORIZONTAL AND VERTICAL FROM ESTABLISHED BENCH MARKS. ALL WORK SHALL AGREE WITH THESE ESTABLISHED LINES AND LEVELS. VERIFY ALL MEASUREMENTS AT SITE AND CHECK THE CORRECTNESS OF SAME AS RELATED TO THE WORK.

C. SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCY BETWEEN ACTUAL MEASUREMENTS AND THOSE INDICATED, WHICH PREVENTS FOLLOWING GOOD PRACTICE OR THE INTENT OF THE DRAWINGS AND SPECIFICATIONS, HE SHALL NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH HIS WORK UNTIL HE HAS RECEIVED INSTRUCTIONS FROM THE ENGINEER.

1.05 CODES AND STANDARDS:

A. THE STANDARDS AND CODES LISTED BELOW SHALL APPLY TO ALL MECHANICAL WORK, WHERE STANDARDS OR CODES ARE MENTIONED IN THESE SPECIFICATIONS, THE LATEST EDITION OR REVISION SHALL BE FOLLOWED.

1. ANSI A13.1 – SCHEME FOR THE IDENTIFICATION OF PIPING SYSTEM

2. ANSI A40.8 – NATIONAL PLUMBING CODES

3. ANSI C 1 – NATIONAL ELECTRIC CODE (NECA 70)

4. ANSI C50 – ROTATING ELECTRICAL MACHINERY

5. ANSI C51.1 – CONSTRUCTION AND GUIDE FOR SELECTION, INSTALLATION F

6. ANSI C52.1 – MOTORS AND GENERATORS (NEMA MG 1)

B. STATE AND LOCAL CODES SHALL APPLY AS LIST ON COVER SHEET.

C. THE FOLLOWING ABBREVIATIONS ARE USED WITHIN THIS SECTION OF THE SPECIFICATIONS:

ACPA – AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS

AMCA – AIR MOVING AND CONDITIONING ASSOCIATION

ANSI – AMERICAN NATIONAL STANDARDS INSTITUTE

API – AMERICAN PETROLEUM INSTITUTE

ARI – AIR CONDITIONING AND REFRIGERATION INSTITUTE

ASHRAE – AMERICAN SOCIETY OF HEATING REFRIGERATION AND AIR CONDITIONING ENGINEERS

ASME – AMERICAN SOCIETY OF MECHANICAL ENGINEERS

ASTM – AMERICAN SOCIETY OF TESTING AND MATERIALS

AWG – AMERICAN WELDING SOCIETY

AWWA – AMERICAN WATER WORKS ASSOCIATION

BOCA – BUILDING OFFICIALS AND CODE ADMINISTRATORS INTERNATIONAL, INC.

CGA – COMPRESSED GAS ASSOCIATION

COSPI – CAST IRON SOIL PIPE INSTITUTE

EJMA – EXPANSION JOINT MANUFACTURERS ASSOCIATION

EPA – ENVIRONMENTAL PROTECTION AGENCY

FMSS – FEDERAL SPECIFICATION

IBR – INSTITUTE OF BOILER AND RADIATOR MANUFACTURERS

IEEE – INSTITUTE OF ELECTRICAL AND ELECTRICAL ENGINEERS

NEMA – NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION

NFPA – NATIONAL FIRE PROTECTION ASSOCIATION

NOF – NATIONAL OIL FUEL INSTITUTE

NSFC – NATIONAL STANDARD PLUMBING CODE

OSHA – OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PDI – PLUMBING AND DRAINAGE INSTITUTE

SMACNA – SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION

ULL – UNDERWRITERS LABORATORIES

1.06 PERMITS AND FEES:

A. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS AND PAY ALL GOVERNMENT SALES TAXES AND FEES WHERE APPLICABLE, AND OTHER COSTS, INCLUDING UTILITY CONNECTIONS OR EXTENSIONS, IN CONNECTION WITH HIS WORK. FILE ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION, OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK AND DELIVER A COPY TO THE ENGINEER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.

B. THE CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST TO THE OWNER, ANY LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS, IN ORDER TO COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES RULES AND REGULATIONS, WHETHER OR NOT SHOWN ON DRAWINGS AND/OR SPECIFIED.

C. ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH RULES AND RECOMMENDATIONS OF THE NATIONAL FIRE PROTECTION ASSOCIATION, WITH THE REQUIREMENTS OF THE LOCAL UTILITY COMPANIES, WITH THE RECOMMENDATIONS OF THE INSURING AUTHORITY, AND WITH THE REQUIREMENTS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION.

1.07 COORDINATION WITH OTHER DIVISIONS:

A. ALL WORK SHALL BE CARRIED OUT IN CONJUNCTION WITH OTHER TRADES AND FULL COOPERATION SHALL BE IN ORDER THAT ALL WORK MAY PROCEED WITH A MINIMUM OF DELAY AND INTERFERENCE. PARTICULAR EMPHASIS PLACED ON TIMELY INSTALLATION OF MAJOR APPARATUS AND FURNISHING OTHER CONTRACTORS, ESPECIALLY THE GENERAL CONTRACTOR, WITH INFORMATION AS TO OPENINGS, CHASES, EQUIPMENT LOCATIONS, PANELS WIRING REQUIRED BY OTHER TRADES.

B. THE CONTRACTOR IS REQUIRED TO EXAMINE ALL OF THE PROJECT DRAWING AND MUTUALLY ARRANGE WORK SO AS TO AVOID INTERFERENCE. DUCTWORK, HEATING PIPES AND DRAINAGE LINES TAKE PRECEDENCE OVER WATER, GAS AND ELECTRICAL CONDUITS.

C. WHERE THE WORK OF THE CONTRACTOR WILL BE INSTALLED IN CLOSE PROXIMITY TO, OR WILL INTERFERE WITH WORK OF OTHER TRADES, HE SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE A SATISFACTORY ADJUSTMENT. IF SO DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PREPARE COMPOSITE WORKING DRAWINGS AND SECTIONS AT A SCALE NOT LESS THAN 3/8" = 1' - 0", CLEARLY SHOWING HOW HIS WORK IS TO BE INSTALLED IN RELATION TO THE WORK OF OTHER TRADES. IF THE CONTRACTOR INSTALLS HIS WORK BEFORE COORDINATING WITH OTHER TRADES, HE SHALL MAKE NECESSARY CHANGES IN HIS WORK TO CORRECT THE CONDITION WITHOUT EXTRA CHARGE. CONTRACTORS SHALL COORDINATE RADATION COVERS WITH CONVENIENCE OUTLETS TO AVOID CONFLICTS.

1.08 APPROVALS:

A. THE MATERIALS, WORKMANSHIP, DESIGN AND ARRANGEMENT OF ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

B. WITHIN THIRTY (30) DAYS AFTER THE ACCEPTANCE OF BIDS, THE MECHANICAL CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL, A LIST OF MANUFACTURERS OF EQUIPMENT PROPOSED FOR THE WORK UNDER THE MECHANICAL SECTION. THE INTENT TO USE THE EXACT MAKES SPECIFIED DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF SUBMITTING SUCH A LIST.

C. WHERE ANY SPECIFIC MATERIAL, PROCESS OR METHOD OF CONSTRUCTION, OR MANUFACTURED ARTICLE IS SPECIFIED BY NAME OR BY REFERENCE TO A CATALOGUE NUMBER OF A MANUFACTURER, THE SPECIFICATIONS ARE TO BE USED AS A GUIDE AND ARE NOT INTENDED TO TAKE PRECEDENCE OVER THE BASIC DUTY AND PERFORMANCE SPECIFIED WITH THE SPECIFIC CHARACTERISTICS OF THE EQUIPMENT OFFERED FOR APPROVAL. EQUIPMENT CHARACTERISTICS ARE TO BE USED AS MANDATORY REQUIREMENTS WHERE CONTRACTOR PROPOSES TO USE AN APPROVED EQUAL.

D. ALL COMPONENT PARTS OF EACH ITEM OF EQUIPMENT OR DEVICE SHALL BEAR THE MANUFACTURER'S NAMEPLATE, GIVING NAME OF MANUFACTURER, DESCRIPTION, SIZE, TYPE, SERIAL OR MODEL NUMBER, ELECTRICAL CHARACTERISTICS, ETC., IN ORDER TO FACILITATE MAINTENANCE OR REPLACEMENT. THE NAMEPLATE OF SUBCONTRACTOR OR DISTRIBUTOR WILL NOT BE ACCEPTABLE.

E. IF MATERIAL OR EQUIPMENT IS INSTALLED BEFORE IT IS APPROVED, THE CONTRACTOR SHALL BE LIABLE FOR ITS REMOVAL AND REPLACEMENT AT NO EXTRA CHARGE TO THE OWNER IF, IN THE OPINION OF THE ENGINEER, THE MATERIAL OR EQUIPMENT DOES NOT MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.

1.09 EQUIPMENT DEVIATIONS:

A. BIDS SHALL BE BASED ON MATERIAL AND EQUIPMENT SPECIFIED, WHERE MORE THAN ONE MANUFACTURER IS NAMED IN THE PLANS OR SPECIFICATIONS, EQUIPMENT OR MATERIALS SHALL BE EQUAL TO THE MODEL OR TYPE SPECIFIED, BUT MAY BE THE PRODUCT OF ANY OF THE MANUFACTURERS LISTED FOR THE PARTICULAR ITEM. IF IT IS DESIRED TO SUBSTITUTE THE PRODUCT OF A MANUFACTURER NOT SPECIFIED A PARTICULAR ITEM, THE MANUFACTURER AND ITEM TO BE SUBSTITUTED SHALL BE NAMED ON THE BID FORM TOGETHER WITH THE ADDITION OR DEDUCTION OF THE BASE BID. BASE BID SHALL BE BASED ON USING MANUFACTURER'S EQUIPMENT AS SPECIFIED.

B. IN THESE SPECIFICATIONS AND ON THE ACCOMPANYING DRAWINGS, ONE OR MORE MAKES OF MATERIALS, APPARATUS OR APPLIANCE HAVE BEEN SPECIFIED FOR USE IN THIS INSTALLATION. THIS HAS BEEN DONE FOR CONVENIENCE IN FIXING THE STANDARD OF WORKMANSHIP, FINISH AND DESIGN REQUIRED FOR THIS WORKMANSHIP, FINISH AND DESIGN AND THE GUARANTEED PERFORMANCE OF ANY MATERIALS, APPARATUS OR APPLIANCE WHICH THE CONTRACTOR DESIRES TO SUBSTITUTE FOR THOSE MENTIONED STANDARDS, WHERE NO SPECIFIC MAKE OF MATERIAL, APPARATUS OR APPLIANCE IS MENTIONED, ANY FIRST CLASS PRODUCT MADE BY REPUTABLE MANUFACTURER MAY BE USED, PROVIDING IT CONFORMS TO THE REQUIREMENTS OF THESE SPECIFICATIONS, IN THE OPINION OF AND MEETS THE APPROVAL OF THE ENGINEER. WHERE TWO OR MORE NAMES ARE GIVEN AS EQUALS, THE CONTRACTOR MUST USE ONE OF THE NAMED EQUALS. WHERE ONE NAME ONLY IS USED AND IS FOLLOWED BY THE WORD "OR APPROVED EQUAL," THE CONTRACTOR MUST USE THE ITEM NAMED, BUT HE MAY APPLY FOR SUBSTITUTION THROUGH THE PRESCRIBED MANNER.

C. WHERE THE CONTRACTOR PROPOSES TO USE AN ITEM OF EQUIPMENT OTHER THAN SPECIFIED OF DETAILED ON THE DRAWINGS WHICH REQUIRES ANY REDESIGN OF THE STRUCTURE, PARTITIONS, FOUNDATIONS WIRING, OR ANY OTHER PART OF THE MECHANICAL, ELECTRICAL OR DESIGNER/LAYOUT, ALL SUCH REDESIGN AND ALL NEW DRAWINGS AND DETAILING REQUIRED THEREFORE SHALL WITH THE APPROVAL OF THE ENGINEER, BE PREPARED UNDER WORK OF THE RESPECTIVE SECTION AT NO COST TO THE OWNER.

D. WHERE SUCH APPROVED DEVIATION REQUIRES A DIFFERENT QUANTITY AND ARRANGEMENT OF DUCTWORK, PIPING, WIRING, CONDUIT AND EQUIPMENT FROM THAT SPECIFIED OR INDICATED ON THE DRAWINGS, WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL FURNISH AND INSTALL ANY SUCH DUCTWORK, PIPING, STRUCTURAL SUPPORTS, INSULATION, CONTROLLERS, MOTORS, STARTERS, AND ANY OTHER ADDITIONAL EQUIPMENT REQUIRED BY THE SYSTEM AT NO ADDITIONAL COST TO THE OWNER.

1.10 MANUFACTURER'S IDENTIFICATION:

A. MANUFACTURER'S NAMEPLATE, NAME OR TRADEMARK AND ADDRESS SHALL BE ATTACHED PERMANENTLY TO ALL EQUIPMENT AND MATERIAL FURNISHED UNDER THIS DIVISION. THE NAMEPLATE OF A CONTRACTOR OR DISTRIBUTOR SHALL NOT BE ACCEPTABLE.

1.11 SHOP DRAWINGS:

A. CONTRACTOR SHALL SUBMIT FOR REVIEW, DETAILED SHOP DRAWINGS OF ALL EQUIPMENT AND ALL MATERIAL REQUIRED TO COMPLETE THE PROJECT. NO MATERIAL OR EQUIPMENT MAY BE DELIVERED TO THE SITE OR INSTALLED UNTIL THE CONTRACTOR HAS IN HIS POSSESSION AN APPROVED SHOP DRAWING FOR THE PARTICULAR MATERIAL OR EQUIPMENT.

B. SHOP DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENT OUTLINED IN THE GENERAL CONDITIONS OF THESE SPECIFICATIONS.

C. FAILURE OF THE CONTRACTOR TO SUBMIT SHOP DRAWINGS IN AMPLIE TIME SHALL NOT ENTITLE HIM TO AN EXTENSION OF CONTRACT TIME AND NO CLAIM FOR EXTENSION BY REASON OF SUCH DEFAULT TO BE ALLOWED.

D. CATALOGUES, PAMPHLETS OR OTHER DOCUMENTS SUBMITTED TO DESCRIBE ITEMS ON WHICH APPROVAL IS REQUESTED, SHALL BE SPECIFIC AND IDENTIFICATION IN CATALOGUE, PAMPHLET, ETC. OF ITEM SUBMITTED SHALL BE CLEARLY MADE IN INK. DATA OF GENERAL NATURE WILL NOT BE ACCEPTED.

E. THE CONTRACTOR SHALL FURNISH ALL NECESSARY TEMPLATES, PATTERNS, ETC. FOR INSTALLATION WORK AND FOR THE PURPOSE OF MAKING ADJOINING WORK CONFORM, FURNISH SETTING PLANS AND SHOP DETAILS TO OTHER TRADES AS REQUIRED.

F. APPROVAL RENDERED ON SHOP DRAWINGS SHALL NOT BE CONSIDERED AS A GUARANTEE OF MEASUREMENTS OR BUILDING CONDITIONS, WHERE DRAWINGS ARE APPROVED. APPROVAL DOES NOT MEAN THAT DRAWINGS HAVE BEEN CHECKED IN DETAIL; SAID APPROVAL DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY, OR NECESSITY IF FURNISHING MATERIAL OR PERFORMING WORK AS REQUIRED BY THE CONTRACT DRAWINGS AND SPECIFICATIONS. VERIFY AVAILABLE SPACE PRIOR TO SUBMITTING SHOP DRAWINGS.

G. APPROVAL OF SHOP DRAWINGS SHALL NOT APPLY TO QUANTITY NOR RELIEVE CONTRACTOR OF HIS RESPONSIBILITY TO COMPLY WITH INTENT OF DRAWINGS AND SPECIFICATIONS. APPROVAL OF SHOP DRAWINGS ARE FINAL AND NO FURTHER CHANGES WILL BE ALLOWED WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

1.12 MATERIAL AND WORKMANSHIP:

A. ALL MATERIALS AND APPARATUS REQUIRED FOR THE WORK, EXCEPT AS SPECIFIED OTHERWISE, SHALL BE NEW, OF FIRST CLASS QUALITY AND SHALL BE FURNISHED, DELIVERED, CONNECTED AND FINISHED IN EVERY DETAIL AND SHALL BE SO SELECTED AND ARRANGED TO FIT PROPERLY INTO THE BUILDING SPACE, WHERE NO SPECIFIC KIND OF QUALITY OR MATERIAL IS GIVEN, A FIRST-CLASS STANDARD ARTICLE AS ACCEPTED BY THE ENGINEER, SHALL BE FURNISHED.

B. THE CONTRACTOR SHALL FURNISH THE SERVICES OF AN EXPERIENCED SUPERINTENDENT WHO SHALL BE CONSTANTLY IN CHARGE OF THE INSTALLATION OF THE WORK, TOGETHER WITH ALL SKILLED WORKMEN, FITTERS, METAL WORKERS, WELDERS, HELPERS, AND LABOR REQUIRED TO UNLOAD, TRANSFER, ERECT, CONNECT-UP, ADJUST, START, OPERATE AND TEST EACH SYSTEM.

C. UNLESS OTHERWISE SPECIFICALLY INDICATED ON THE PLANS OR SPECIFICATIONS, ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED WITH THE ACCEPTANCE OF THE ENGINEER IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER. THIS INCLUDES THE PERFORMANCE OF SUCH TESTS AS THE MANUFACTURER RECOMMENDS.

1.13 PROTECTION:

A. WORK UNDER THIS SECTION SHALL INCLUDE PROTECTING THE WORK AND MATERIALS OF ALL OTHER SECTIONS FROM DAMAGE BY WORK OR WORKMEN, AND SHALL INCLUDE MAKING GOOD ALL DAMAGE AS CAUSED.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WORK AND EQUIPMENT UNTIL FINALLY INSPECTED, TESTED AND ACCEPTED; PROTECT WORK AGAINST THEFT, INJURY OR DAMAGE; AND CAREFULLY STORE MATERIAL AND EQUIPMENT RECEIVED ON SITE WHICH ARE NOT IMMEDIATELY INSTALLED. CLOSE OPEN ENDS OF WORK WITH TEMPORARY COVERS OR PLUGS DURING CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIAL.

C. WORK UNDER THIS SECTION, INCLUDES RECEIVING, UNLOADING, UNCRATING, STORING, PROTECTING, SETTING IN PLACE AND CONNECTING UP COMPLETELY OF EQUIPMENT SUPPLIED UNDER THIS SECTION. WORK UNDER THIS SECTION SHALL ALSO INCLUDE EXERCISING SPECIAL CARE IN HANDLING AND PROTECTING EQUIPMENT AND FIXTURES AND SHALL INCLUDE THE COST OF REPLACING ANY OF THE ABOVE EQUIPMENT AND FIXTURES WHICH MISSING OR DAMAGED BY REASON OF MISHANDLING OR FAILURE TO PROTECT ON THE PART OF THE CONTRACTOR.

1.14 SLEEVES, INSERTS AND ANCHOR BOLTS:

A. THE CONTRACTOR SHALL PROVIDE, SET IN PLACE AND BE HELD RESPONSIBLE FOR THE LOCATION OF ALL SLEEVES, INSERTS, AND ANCHOR BOLTS REQUIRED FOR THEIR WORK. IN THE EVENT THAT FAILURE TO DO SO REQUIRES CUTTING AND PATCHING OF FINISHED WORK, IT SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

B. ALL PIPES AND CONDUITS PASSING THROUGH FLOORS, WALLS, OR PARTITIONS SHALL BE PROVIDED WITH SLEEVES HAVING AN INTERNAL DIAMETER 1 INCH LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE, CONDUIT OR INSULATION, ENCLOSING PIPE OR CONDUIT.

C. SLEEVES THROUGH OUTSIDE WALLS SHALL BE CAST IRON SLEEVES WITH IMMEDIATE INTEGRAL FLANGE. SLEEVES SHALL BE SET WITH ENDS FLUSH WITH EACH FACE OF WALL. THE SPACE BETWEEN SLEEVE AND PIPE SHALL BE PACKED WITH GRAUUM TO WITH TWO (2) INCHES OF EACH FACE OF WALL. THE REMAINING SPACE SHALL BE PACKED AND MADE WATER-TIGHT WITH A WATERPROOF COMPOUND.

D. SLEEVES THROUGH CONCRETE FLOORS OR INTERIOR MASONRY WALLS SHALL BE SCHEDULE 40 BLACK STEEL PIPE, SST FLUSH WITH FINISHED WALL OR CEILING SURFACES, BUT EXTENDING TWO (2) INCHES ABOVE FINISHED FLOORS.

E. SLEEVES THROUGH INTERIOR PARTITIONS SHALL BE 22 GAUGE GALVANIZED SHEET STEEL, SET FLUSH WITH FINISHED SURFACES OF PARTITIONS.

F. INSERTS SHALL BE INDIVIDUAL OR STRIP TYPE OF PRESSED STEEL CONSTRUCTION WITH ADJACENT PORTS FOR REMOVAL NUTS AND THREADED RODS UP TO 3/4" DIAMETER, PERMITTING LATERAL ADJUSTMENT. INDIVIDUAL INSERTS SHALL HAVE AN OPENING AT THE TOP TO ALLOW REINFORCING RODS UP TO 3/2" DIAMETER TO BE PASSED THROUGH THE INSERT BODY. STRIP INSERTS SHALL HAVE ATTACHED RODS HAVING HOOKED ENDS TO ALLOW FASTENING TO REINFORCING RODS. INSERTS SHALL BE AS MANUFACTURED BY CARPENTER AND PATERSON, INC., GRINNEL CO., INC. OR APPROVED EQUAL.

1.15 NOT USED

1.35 RECORD DRAWINGS:

A. MAINTAIN AT THE JOB SITE A RECORD SET OF MECHANICAL DRAWINGS ON WHICH CHANGES IN LOCATION OF EQUIPMENT, PIPING, DUCTS, VALVES, CLEANOUTS, PANELS AND MAJOR CONDUITS SHALL BE RECORDED THESE SHALL BE CLEARLY MARKED ON A CLEAN SET OF SEPA AT THE COMPLETION OF WORK AND TURN OVER TO THE ENGINEER.

END OF SECTION 15400

DIVISION 15 – MECHANICAL / PLUMBING

SECTION 15400 – PLUMBING

PART 1.00 – GENERAL PROVISION

1.01 THE CONTRACTOR FOR WORK UNDER THIS SECTION IF REFERRED TO THE:

CONTRACT DRAWINGS, GENERAL CONDITIONS, CONTRACT SPECIFICATIONS, ALL OF WHICH ARE HEREBY MADE A PART OF THIS SECTION.

1.02 THE CONTRACTOR'S PARTICULAR ATTENTION IS DIRECTED TO THE "GENERAL NOTES", AND THE REQUIREMENT TO STRICTLY COMPLY WITH ALL THE PROVISIONS OF SAME.

1.03 WORK INCLUDED:

A. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, ETC., NECESSARY OR REQUIRED FOR THE WORK OF THIS SECTION, AS INDICATED ON THE DRAWINGS, HEREIN SPECIFIED, AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. ITEMS OF WORK SHALL CONSIST GENERALLY OF, BUT NOT BE LIMITED TO THE FOLLOWING:

1. SANITARY PIPING ABOVE AND BELOW GRADE.

2. SANITARY VENT PIPING.

3. DOMESTIC HOT AND COLD WATER PIPING.

4. NATURAL GAS PIPING (IF REQUIRED).

5. ALL VALVES, FITTINGS AND DEVICES ASSOCIATED WITH PIPING SYSTEMS.

6. PIPE INSULATION.

7. WATER HEATER.

8. BACKFLOW PREVENTER.

9. PLUMBING FIXTURES AND FAUCETS.

10. STOP VALVES.

11. FLOOR DRAINS.

12. ROOF DRAINS (IF REQUIRED).

13. DOMESTIC WATER SERVICE.

14. CONNECTIONS TO EQUIPMENT FURNISHED BY OTHERS.

15. CONDENSATE DRAINS.

16. INDIRECT WASTE DRAINS.

17. TESTING.

18. FURNISHING AND SETTING OF ALL SLEEVES THROUGH THE FLOORS, ROOF AND WALL, WHERE REQUIRED INCLUDING WATERPROOFING AND FIREPROOF SEALING AND CAP FLASHING.

19. NOT USED.

20. HARDWARE, SUCH AS INSERTS, BOLTS, ETC., ASSOCIATED WITH CONCRETE PADS.

21. CUTTING ASSOCIATED WITH PLUMBING.

22. PRIME PAINTING, WHERE REQUIRED FOR PLUMBING EQUIPMENT AND INSTALLATION.

1.04 RELATED WORK OF OTHER SECTIONS:

A. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE THE RELATED WORK SECTIONS WITH THE WORK OF THIS SECTION AND BE RESPONSIBLE FOR THE TIMELY AND EXPEDITIOUS PERFORMANCE OF SAME. RELATED WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:

1. FINISHED PAINTING EXCEPT AS NOTED.

2. ELECTRICAL POWER WIRING, AND SETTING OF STARTERS.

3. GAS VENTS BY MECHANICAL CONTRACTOR.

1.05 VERIFYING CONDITIONS:

A. EXAMINE ALL DRAWINGS COVERING THE WORK OF THIS SECTION AND REFER TO ALL OTHER DRAWINGS, INCLUDING DESIGNER/LAYOUT, MECHANICAL AND ELECTRICAL DRAWINGS, WHICH MAY AFFECT THE WORK OF THE SECTION OR REQUIRE COORDINATING WITH SAME.

B. REPORT IN WRITING TO THE DESIGNER ANY AND ALL CONDITIONS WHICH MAY INTERFERE OR OTHERWISE AFFECT OR PREVENT THE PROPER EXECUTION AND COMPLETION OF THE WORK.

1.06 SUBMITTALS:

A. SHOP DRAWINGS:

1. PRIOR TO PURCHASING ANY EQUIPMENT OR MATERIALS, A LIST OF THEIR MANUFACTURERS SHALL BE SUBMITTED FOR APPROVAL.

2. PRIOR TO ASSEMBLING OR INSTALLING THE WORK, THE FOLLOWING SHALL BE SUBMITTED FOR APPROVAL:

a. PLUMBING FIXTURES & TRIM.

b. PIPE INSULATION.

c. FLOOR DRAINS.

d. GAS VENT MATERIALS.

e. FLOOR SINKS

f. CLEANOUTS.

3. DOCUMENTS WILL NOT BE ACCEPTED FOR APPROVAL UNLESS:

a. FIVE COPIES OF EACH ARE SUBMITTED.

b. ALL REQUIRED CERTIFICATES ARE SUBMITTED WITH APPROVAL.

c. ALL SUBMITTALS CLEARLY MARKED.

1.08 FEES, PERMITS AND CERTIFICATES:

A. ALL FEES, PERMITS, TAXES OR CERTIFICATES REQUIRED BY GOVERNING BODIES OR ANY OTHER AGENCY AFFECTING THE WORK AS SPECIFIED HEREIN, OR REQUIRED FOR THE CERTIFICATE OF OCCUPANCY, SHALL BE OBTAINED AND PAID FOR BY THIS CONTRACTOR AS PART OF THE BASIC CONTRACT.

1.09 REMOVAL OF DEBRIS:

A. THIS CONTRACTOR SHALL REMOVE FROM THE BUILDING ALL SURPLUS MATERIALS AND ALL DEBRIS CREATED BY HIM AND SHALL LEAVE THE WORK AREA IN A CLEAN CONDITION.

1.10 CUTTING AND PATCHING:

A. CUTTING AND DRILLING: CONTRACTOR SHALL DO ALL CUTTING AND DRILLING OF WALLS, PARTITIONS, CEILING, FLOORS, ETC., AS NECESSARY FOR INSTALLATION OF THE NEW WORK, INCLUDING CUTTING OF HOLES AND OTHER OPENINGS FOR NEW WORK. CUTTING SHALL BE PERFORMED BY HAND OR SMALL POWER TOOLS; HOLES AND SLOTS CUT NEAT AND TO SIZE REQUIRED, WITH MINIMUM DISTURBANCE OF ADJACENT WORK; CUT HOLES IN CONCRETE SLABS FOR PIPES WITH CORE DRILLS OF PROPER SIZES. WHERE HOLES ARE CUT IN FLOORS, THE UNDERSIDE SHALL BE DUSTPROOFED TO CATCH ANY DEBRIS AND DUST WHICH MAY RESULT FROM THESE OPERATIONS AND TO PROTECT PERSONS FROM DAMAGES OR INJURIES. OPENINGS SHALL BE COVERED TEMPORARILY WHEN NOT IN USE AND PATCHED AS SUCH AS WORK IS INSTALLED.

B. PATCHING AND REPAIRS:

1. SURFACES AFFECTED BY PATCHING AND REPAIRING WORK SHALL BE RESTORED TO MATCH EXISTING ADJACENT SURFACES. WHERE WATERPROOF FLOORS ARE CUT, THIS CONTRACTOR SHALL PATCH AND REPAIR FLOORS IN SUCH A MANNER AS TO RESTORE THE ORIGINAL WATERPROOF CONDITION, AND AS DIRECTED BY THE DESIGNER.

C. RE-EXAMINATION AND COVERING UP OF WORK:

1. RE-EXAMINATION OF QUESTIONED WORK MAY BE ORDERED BY THE DESIGNER, AND IF SO ORDERED, SUCH PART OF THE WORK MUST BE UNCOVERED BY THE CONTRACTOR. IF SUCH PART OF THE WORK BE FOUND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE OWNER SHALL PAY THE COST OF RE-EXAMINATION AND REPLACEMENT IF SUCH PART OF THE WORK BE FOUND NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PAY SUCH COST AND ALSO THE COST OF RESTORING THE WORK OF ANY OTHER CONTRACTOR DAMAGED OR REMOVED. IF ANY PART OF THE WORK OF THE CONTRACTOR OR OF HIS SUBCONTRACTORS BE COVERED UP BY THE DESIGNER WITHOUT APPROVAL OR CONSENT OF THE ENGINEER, SUCH WORK MUST, UPON REQUEST OF THE DESIGNER BE UNCOVERED AND RESTORED TO THE SATISFACTION OF THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.

1.11 VISITING THE PREMISES:

A. THIS CONTRACTOR, BEFORE SUBMITTING HIS BID ON THE WORK, MUST VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL VISIBLE EXISTING CONDITIONS, AS A RESULT OF HAVING VISITED PREMISES, THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE WORK AS IT RELATES TO SUCH VISIBLE EXISTING CONDITIONS.

END OF SECTION 15400

SECTION 15410 – MECHANICAL / PLUMBING

SECTION 15410 – PLUMBING PIPING

PART 1.00 – GENERAL

1.01 RELATED DOCUMENTS:

A. THIS SECTION COORDINATES WITH AND IS COMPLEMENTARY TO THE GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS AND THE GENERAL REQUIREMENTS, WHEREVER APPLICABLE TO MECHANICAL WORK.

B. SECTION 15010 – SPECIAL REQUIREMENTS FOR MECHANICAL WORK.

1.02 DESCRIPTION OF WORK

A. THE WORK INCLUDES THE PROVIDING OF ALL LABOR, MATERIALS, EQUIPMENT, ACCESSORIES, SERVICES AND TESTS NECESSARY TO COMPLETE AND MAKE READY FOR OPERATION BY THE OWNER, PLUMBING PIPING IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS.

1.03 QUALITY ASSURANCE:

A. MANUFACTURERS: FIRMS REGULARLY ENGAGED IN THE MANUFACTURE OF EQUIPMENT OF THE TYPES AND CAPACITIES REQUIRED, WHOSE PRODUCTS HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR NOT LESS THAN 5 YEARS.

B. THE EQUIPMENT SHALL BE DESIGNED, ASSEMBLED AND TESTED IN ACCORDANCE WITH APPLICABLE STANDARDS AS INDICATED IN SECTION 15010 AND SHALL BE LISTED AND LABELED BY UNDERWRITERS LABORATORIES.

C. PROVIDE EQUIPMENT PRODUCED BY A MANUFACTURER LISTED AS AN APPROVED MANUFACTURER IN THIS SECTION OR ON THE DRAWING SCHEDULES.

D. PROVIDE EQUIPMENT WHOSE PERFORMANCE UNDER SPECIFIED CONDITION, IS CERTIFIED BY THE MANUFACTURER.

1.04 GUARANTEE:

A. REFER TO SECTION 15010 – SPECIAL REQUIREMENTS FOR MECHANICAL WORK.

PART 2.00 – PRODUCTS

2.01 GENERAL:

A. ALL PIPE SHALL BE NEW, FREE FROM SCALE OR RUST, AND OF THE MATERIAL AND WEIGHT SPECIFIED UNDER THE VARIOUS SERVICES. EACH LENGTH OF PIPE SHALL BE PROPERLY MARKED AT THE MILL FOR PROPER IDENTIFICATION WITH NAME OR SYMBOL OF MANUFACTURER.

2.02 SANITARY & STORM DRAINAGE:

A. ABOVE GROUND SANITARY WASTE, VENT AND ROOF DRAIN PIPING SHALL SERVICE WEIGHT CAST IRON, NO-HUB TYPE. UNDERGROUND SANITARY AND DRAIN PIPING EXTRA HEAVY SHALL BE CAST IRON HUB AND SPOUT TYPE WITH NOCRPENE JOINTS WITH RESTRAINT.

B. CLEANOUTS FOR SANITARY AND STORM DRAINAGE SYSTEMS SHALL BE LOCATED IN ACCORDANCE WITH THE PLUMBING CODE REFERENCED IN PARAGRAPH 1.05 OF SECTION 15010.

C. PROVIDE TRAP IN FLOOR DRAIN TRAPS TO RECEIVER TRAP PRIMER DISCHARGE.

D. ALL VENT PENETRATIONS THROUGH BUILDING ROOF SHALL BE MADE WATER-TIGHT BY THE USE OF PROPER FLASHING MATERIALS. SUBMIT FLASHING DETAILS FOR APPROVAL BY THE DESIGNER.

E. CONTRACTOR MAY SUBMIT DEDUCT ALTERNATE FOR INSTALLATION OF SANITARY WASTE PIPING, ONLY, IN SCHEDULE 40 PVC, FOR BELOW SLAB AND ABOVE SLAB, TO CEILING HEIGHT ONLY.

NO PVC PIPING SHALL BE ALLOWED IN RETURN AIR PLENUM

2.03 DOMESTIC WATER:

A. DOMESTIC COLD AND HOT WATER PIPING SHALL BE TYPE "L" COPPER FITTINGS SHALL BE WROUGHT COPPER, 95%-5% ANTIMONY/TIN SOLDER SHALL BE USED.

B. ALL POTABLE WATER PIPING SHALL BE DISINFECTED IN ACCORDANCE WITH LOCAL PLUMBING CODE INDICATED IN PARAGRAPH 1.05 OF SECTION 15010 AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL HEALTH DEPARTMENT.

C. PROVIDE STOP VALVES FOR ALL DOMESTIC WATER CONNECTIONS TO FIXTURES EXCEPT WHERE INTEGRAL STOPS ARE PROVIDED, OR GATE VALVES ARE INDICATED ON THE DRAWINGS.

D. ALL HOSE BIBS AND HYDRANTS SHALL BE PROVIDED WITH APPROVED VACUUM BREAKERS.

E. PROVIDE CHROME PLATED, BRASS ANGLED STOP VALVES FOR ALL LAVATORIES, SINKS, ETC.

F. DISCHARGE OF ALL RELIEF VALVES SHALL BE PIPED TO WITHIN 6" OF THE FLOOR TO PREVENT ACCIDENTAL SCALDING.

2.04 NATURAL GAS:

A. COORDINATE THE LOCATION OF GAS METER (S) WITH THE LOCAL GAS COMPANY.

B. GAS SYSTEM SHALL BE SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON FITTINGS. VALVE SHALL BE LUBRICATED PLUG TYPE, SIMILAR TO CRANE #250.

C. PROVISIONS SHALL BE MADE FOR EXPANSION AND CONTRACTION OF GAS PIPING.

D. PIPING SHALL BE SIZED NOT LESS THAN 1/4 INCH IN 15 FEET. HORIZONTAL LINES SHALL SLOPE UPWARD TO RISERS AND DOWN FROM RISERS TO THE METER, OR SERVICE REGULATOR OR TO THE EQUIPMENT. DRIPS SHALL BE PROVIDED AT SUCH POINTS TO ACT AS STORAGE FOR CONDENSATE. DRIPS SHALL BE ACCESSIBLE AND SHALL NOT BE LOCATED WHERE THE CONDENSATE IS LIKELY TO FREEZE.

E. AIR BRANCH CONNECTIONS SHALL BE MADE ON THE TOP OR SIDE OF HORIZONTAL LINES.

F. GAS PIPING SHALL NOT BE RUN IN OR THROUGH SUPPLY AIR DUCTS, CLOTHES CHUTES, CHIMNEYS, VENTS, DUMBWATERS, OR ELEVATOR SHAFTS.

G. VALVES, UNIONS OR RUNNING THREAD SHALL NOT BE LOCATED IN ANY AIR PLENUM.

2.05 CONDENSATE DRAINS & INDIRECT WASTES:

A. CONDENSATE DRAINS AND INDIRECT WASTE PIPING SHALL BE TYPE "L" COPPER WITH 95%-5% ANTIMONY/TIN SOLDER JOINTS.

2.06 PIPE HANGERS AND SUPPORTS:

A. PROVIDE NECESSARY STRUCTURAL MEMBERS, HANGERS AND SUPPORTS OF APPROVED DESIGN TO KEEP PIPING IN PROPER ALIGNMENT AND PREVENT TRANSMISSION OF INJURIOUS THRUSTS AND VIBRATIONS. IN ALL CASES WHERE HANGERS, BRACKETS, ETC., ARE SUPPORTED FROM METAL DECKING AND/OR CONCRETE CONSTRUCTION, CARE SHALL BE TAKEN NOT TO WEAKEN DECKING AND/OR CONCRETE OR PENETRATE WATERPROOFING. ALL HANGERS AND SUPPORTS SHALL BE CAPABLE OF SCREW ADJUSTMENT AFTER PIPING IS ERECTED. HANGERS SUPPORTING PIPING EXPANDING INTO LOOPS, BENDS AND OFFSETS SHALL BE SECURED TO THE BUILDING STRUCTURE IN SUCH A MANNER THAT HORIZONTAL ADJUSTMENT PERPENDICULAR TO THE RUN OF PIPING SUPPORTED MAY BE MADE TO ACCOMMODATE DISPLACEMENT DUE TO EXPANSION.

B. BEAM CLAMPS – HANGERS SUPPORTED FROM FLOOR STEEL SHALL BE APPROVED 1" SMALLER SHALL BE C & P FIG.148 ADJUSTABLE BEAM CLAMPS. FOR PIPING 2 3/8" INCHES BEAM CLAMPS. 1 BEAM CLAMPS FOR HANGERS SUPPORTING PIPE 2 INCHES AND LARGER, 1 BEAM CLAMPS SHALL BE WROUGHT STEEL. C & P FIG. NO. 288 OR EQUAL.

C. WHERE PIPING IS RUN NEAR THE FLOOR AND NOT HUNG FROM THE CEILING CONSTRUCTION BUT SUPPORTED FROM THE FLOOR, SUCH SUPPORTS SHALL BE OF PIPE STANDARDS WITH BASE FLANGE AND ADJUSTABLE TOP YOKE SIMILAR TO F & S FIG. NO. 907 OR EQUAL.

D. ALL VERTICAL PIPING SHALL BE ANCHORED BY MEANS OF HEAVY STEEL CLAMPS SECURELY BOLTED OR WELDED TO THE PIPING, AND WITH END EXTENSION BEARING ON THE BUILDING.

E. ALL VERTICAL PIPING SHALL BE GUIDED AT EACH FLOOR BY USE OF CLAMPS FASTENED TO BUILDING STRUCTURE. PROVIDE 360 DEGREES PROTECTIVE SADDLE AT GUIDES. SADDLES SHALL BE FASTENED TO PIPE OR INSULATION.

F. VERTICAL RUNS OF PIPE NOT OVER 15 FEET LONG SHALL BE SUPPORTED BY HANGERS PLACED NOT OVER ONE FOOT FROM THE ELBOWS ON THE CONNECTING HORIZONTAL RUNS.

G. NOT OVER 8 INCHES IN SIZE OR NOT OVER 30 FEET LONG AND NOT OVER 12 INCHES VERTICAL RUNS OF PIPE OVER-15 FEET LONG BUT NOT OVER 60 FEET LONG AND

IN SIZE, SHALL BE SUPPORTED ON HEAVY STEEL CLAMPS. CLAMPS SHALL BE BOLTED TIGHTLY AROUND THE PIPES AND SHALL REST SECURELY ON THE BUILDING STRUCTURE WITHOUT BLOCKING. CLAMPS SHALL BE WELDED TO THE PIPES OR PLACED BELOW COLLARS. CLAMPS SHALL BE TYPE 8, FEDERAL SPECIFICATION WW-11-171C, UNLESS OTHER TYPES ARE APPROVED.

HANGER RODS SHALL BE OF THE FOLLOWING DIAMETERS AND SPACING:

PIPE SIZE	ROD DIAMETER	MAX. SPACING
1-1/4" AND BELOW	3/8"	7'-0"
1-1/2" AND 2"	3/8"	9'-0" COPPER (8'-0")
2-1		

CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BID AND REPORT ANY DISCREPANCIES BACK TO OWNER. G.C. SHALL COORDINATE ALL SUB CONTRACTORS AND ENSURE A COMPLETE FULLY CODE COMPLIANT AND PROFESSIONALLY FINISHED TENANT SPACE.

ISSUED / REVISIONS:

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SYMBOLS LEGEND

SYMBOL / ABBREVIATION	DESCRIPTION
⊙	FULLY CONCEALED SPRINKLER HEAD (FINISH TO MATCH ADJACENT SURFACE)

NOTE

THIS DRAWING IS FOR REFERENCE ONLY.

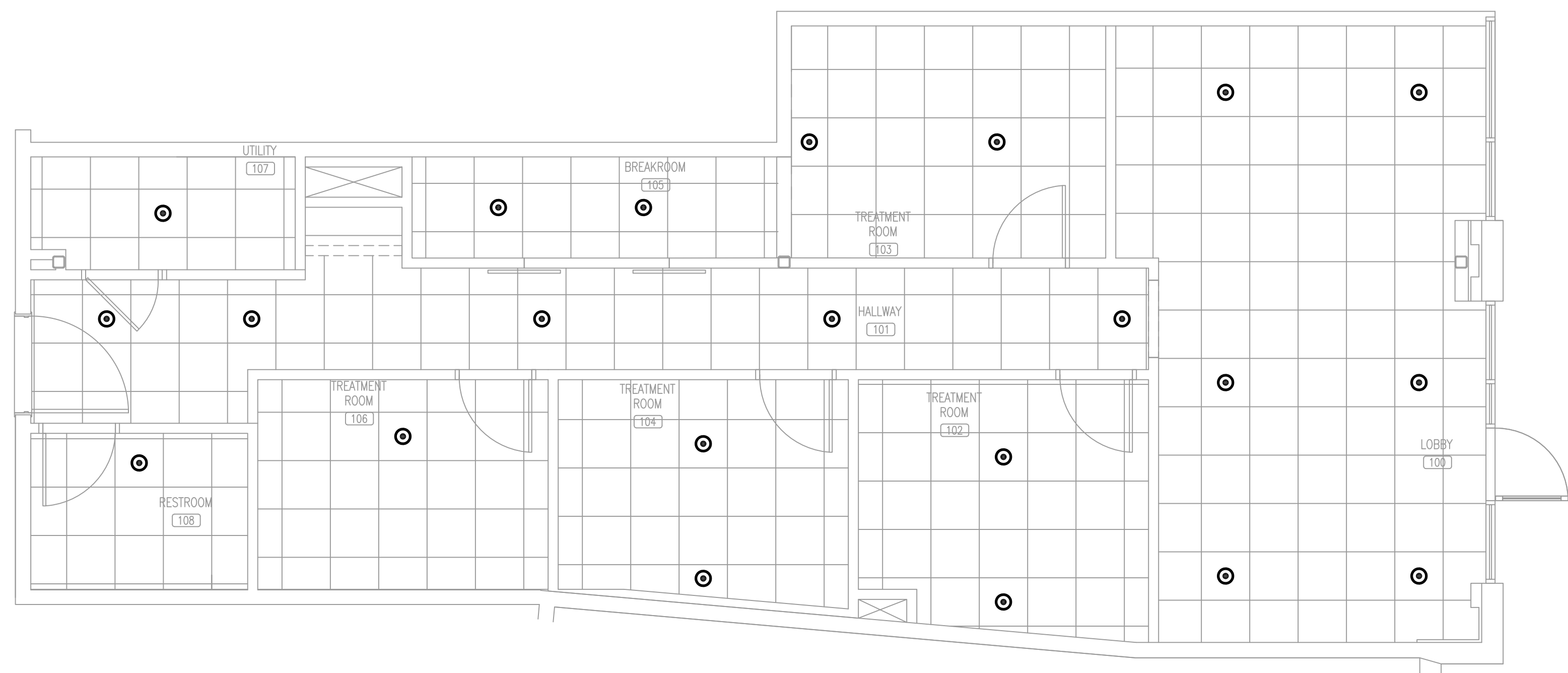
TENANTS GENERAL CONTRACTOR AND/OR HIS/HER SPRINKLER SUBCONTRACTOR TO HIRE A LOCAL SPRINKLER/FIRE PROTECTION ENGINEER (UNLESS SUCH WORK IS COMPLETED BY A QUALIFIED INDIVIDUAL WORKING DIRECTLY FOR THE SPRINKLER SUBCONTRACTOR, IF ALLOWED BY LAW/CODE) TO ENGINEER A SPRINKLER SYSTEM WHICH THIS SAME CONTRACTOR IS TO FURNISH AND INSTALL NEW OR MODIFY EXISTING AS REQUIRED, MEETING ALL LOCAL CODES AND FIRE MARSHALL REQUIREMENTS.

SPRINKLER SYSTEM TO BE INSTALLED THROUGHOUT SPACE INCLUDING ALL CLOSETS.
 SPRINKLER CONTRACTOR TO SUBMIT PLANS, SHOP DRAWINGS AND CALCULATION TO FIRE DEPARTMENT FOR APPROVAL.
 SYSTEM SHALL COMPLY WITH CURRENT NFPA-13

SEPARATE PERMIT AND REVIEW WILL BE REQUIRED FOR ANY FIRE PROTECTION SYSTEM WORK. G.C. TO ENSURE SEPARATE SUBMITTAL FIRE MARSHALL REQUIREMENTS.

SPRINKLER NOTES

- A. GENERAL
 1. THE SPRINKLER CONTRACTOR'S SYSTEM DESIGN ENGINEER SHALL SURVEY THE SITE PRIOR TO DESIGNING THE SPRINKLER SYSTEM.
 2. THE DESIGNATED SPRINKLER CONTRACTOR AND HIS SPRINKLER DESIGN ENGINEER SHALL WARRANT THAT THE SYSTEM DESIGN COMPLIES TO THE FOLLOWING REQUIREMENTS:
 THE SPRINKLER SYSTEM DESIGN AND INSTALLATION SHALL CONFORM TO NFPA-13 AND THE SPRINKLER SYSTEM SHALL BE DESIGNED AND INSTALLED IN A MANNER TO PRECLUDE ANY DAMAGE CAUSED BY A FAILURE OF THE SPRINKLER SYSTEM DUE TO ENVIRONMENTAL CONDITIONS. ENVIRONMENTAL CONDITIONS ARE TO INCLUDE, BUT NOT BE LIMITED TO TEMPERATURE (FREEZING AND EXCESSIVE HEAT), BUILDING SHELL EXPANSION/CONTRACTION CYCLES, AIR LEAKAGE, STACK EFFECTS, ETC. OCCURRING IN ANY PLENUM OR CAVITY WHERE THE SPRINKLER SYSTEM IS ROUTED.
 3. THE SPRINKLER CONTRACTOR SHALL COORDINATE THE SPRINKLER SYSTEM DESIGN AND INSTALLATION WITH THE GENERAL CONTRACTOR TO INSURE SYSTEM FUNCTION.
 4. THE GENERAL CONTRACTOR SHALL INSPECT THE ENTIRE EXPOSED INTERIOR BUILDING SHELL AS IT RELATES TO THE DEEMED SPACE PRIOR TO CONSTRUCTION. THIS IS TO VERIFY THAT THERE IS NO VOID OR PENETRATION OF THE BUILDING SHELL OR NON-INSULATED CONDITION WHICH WOULD ALLOW EXTERIOR EXPOSURE(S) TO AFFECT THE TEMPERATURE OF THE PLENUM WHERE THE SPRINKLER SYSTEM IS ROUTED.
 5. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF FIREPROOF, INSULATED CLOSURES, EQUIVALENT TO THE BASIC STRUCTURE INSULATION VALUE, OF ANY VOID OR PENETRATION OF THE DEEMED SPACE PRIOR TO THE INSTALLATION OR MODIFICATION OF THE SPRINKLER SYSTEM OR PERMANENT FINISHED CLOSURES, I.E. CEILING, WALLS, ETC.
 6. THE GENERAL CONTRACTOR SHALL WARRANT THAT THE BUILDING SHELL AS IT RELATES TO THE DEEMED SPACE SHALL BE INSULATED TO THE "R" VALUES DESCRIBED BY THE SHELL DESIGN DOCUMENTS.
- B. SCOPE WORK:
 1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION, AND FACILITIES NECESSARY FOR REASONABLY IMPLIED AND INCIDENTAL TO, THE FURNISHING, INSTALLATION, COMPLETION, AND TESTING OF ALL THE WORK FOR THE SPRINKLER SYSTEMS REQUIRED BY THE CONSTRUCTION DOCUMENTS AND AS REQUIRED BY JOB CONDITIONS, TO INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
 - A. MODIFICATION OF EXISTING WET PIPE SPRINKLER SYSTEM AS REQUIRED TO PROVIDE COVERAGE IN ACCORDANCE WITH NFPA 13, LOCAL CODES, AND INSURANCE CARRIERS FOR THE OWNER.
 - B. TAPS, RISERS, LATERALS, BRANCHES, VALVES, ALARMS, SPRINKLER HEADS, AND ALL COMPONENTS REQUIRED FOR A COMPLETE SYSTEM.
 - C. DESIGN DRAWINGS, CALCULATIONS, SUBMITTALS, AND APPROVALS.
 - D. PERMITS, FEES, AND CHARGES.
 - E. TESTS AND TEST CERTIFICATES.
 - F. COST FOR SHUT DOWN FEES.
2. THE CONTRACTOR THAT DOES THE ACTUAL SPRINKLER WORK IS REQUIRED TO BE A OWNER APPROVED SPRINKLER CONTRACTOR.
3. BEFORE STARTING WORK THE CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL PLANS AND SPECIFICATIONS TO DETERMINE SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF THE FIRE PROTECTION SYSTEM MATERIALS, AND EQUIPMENT WITH OTHER CONTRACTORS TO AVOID INTERFERENCES AND CONFLICTS.
4. RELOCATION OF EXISTING MAINS, LATERALS, BRANCHES, AND RISERS TO FACILITATE SPACE DESIGN MUST BE INCLUDED IN BID PROPOSAL.
- C. SHOP DRAWINGS
 1. THE FIRE PROTECTION CONTRACTOR SHALL PREPARE DETAILED SHOP DRAWINGS AND CALCULATIONS FOR HIS WORK. SUBMIT SIX (6) COPIES TO GENERAL CONTRACTOR FOR APPROVAL. NO WORK SHALL BEGIN UNTIL OWNERS CONSTRUCTION MANAGER APPROVES HEAD AND PIPING LOCATIONS.
 2. THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR SUBMITTING COORDINATED DRAWINGS, CALCULATIONS, HEAT TYPES AND COLORS TO ALL AUTHORITIES HAVING JURISDICTION FOR APPROVAL. NO WORK SHALL BEGIN UNTIL ALL APPROVALS HAVE BEEN RECEIVED.
- D. EQUIPMENT
 1. SPRINKLER HEADS
 - A. ALL SPRINKLER HEADS SHALL BE NEW (EXISTING HEADS SHALL BE REPLACED) U.L. F.M. LISTED AND APPROVED AUTOMATIC SPRAY TYPE AS MANUFACTURED BY CENTRAL SPRINKLER CO., GLOBE, GRINNELL, RELIABLE, STAR, OR WING.
 - B. ALL SPRINKLER HEADS SHALL BE RATED FOR 165 DEGREES F UNLESS INDICATED OTHERWISE ON DRAWINGS OR REQUIRED BY LOCAL CODES.
 - C. ALL SPRINKLER HEADS ARE TO HAVE A FACTORY APPLIED WHITE FINISH. VERIFY HEAD TYPES WITH TENANT'S CONSTRUCTION MANAGER AND SUBMIT WITH SPRINKLER DRAWINGS FOR PERMIT.
 2. SPRINKLER HEAD TYPES SHALL BE AS FOLLOWS:
 1. GYP. RD. & LAY-IN CEILINGS SHALL RECEIVE FULLY-RECESSED HEADS WITH TRIM RING. HEAD AND TRIM RING SHALL HAVE WHITE FINISH.
 2. NOT USED.
 3. NO CEILING - UPRIGHT HEADS: UPRIGHT HEADS SHALL HAVE STANDARD FINISH. NOTE: ALL HORIZONTAL SPRINKLER RUNS AT SIDEWALL SOTTITS SHALL BE CONCEALED WITHIN SOFFIT FRAMING.
- E. GENERAL PIPING
 1. THE EXISTING SPACE SHALL BE SPRINKLED OR A FIRE PROTECTION STUB-IN SHALL BE FURNISHED BY THE LANDLORD. SPRINKLER HEAD SPACING SHALL NOT EXCEED 130 SQ. FT. IN "SALES" AREAS AND 100 SQ. FT. IN "STOCK" AREAS. COMPLY WITH LANDLORD'S DESIGN CRITERIA. PIPE SIZING SHALL BE BASED ON NFPA ORDINARY HAZARD.
 2. ALL SPRINKLER LINES SHALL BE INSTALLED TO AVOID INTERFERENCE WITH LIGHTS, DUCTS, PIPES, STORAGE DECK, ETC. FIRE PROTECTION CONTRACTOR SHALL PREPARE COORDINATED SHOP DRAWINGS INDICATING THE LOCATIONS OF LIGHTS, DUCTS, PIPES, AIR DEVICES, ETC. PRIOR TO INSTALLATION.
3. WHERE POSSIBLE, REWORK THE EXISTING SPRINKLER SYSTEM TO MEET THE NEW REQUIREMENTS OF THIS DESIGN. RELOCATE ALL MAINS AND BRANCHES INTERFERING WITH CEILING HEIGHTS, EQUIPMENT, LIGHTS, AND MAJOR COMPONENTS INCLUDING OF ADJACENT TENANTS AND MALL COMMON AREAS. REMOVE ALL UNUSED PIPING.
4. LOCATIONS OF ALL HEADS SHOULD BE APPROVED BY THE LOCAL FIRE PROTECTION OFFICIAL AND THE TENANT'S CONSTRUCTION MANAGER BEFORE INSTALLATION. HEADS MUST BE LOCATED IN THE CENTER OF CEILING TILES AND IN A SYMMETRICAL PATTERN WITH OTHER CEILING FIXTURES. ADDITIONAL MONIES WILL NOT BE ALLOCATED FOR ADDITIONAL HEADS REQUIRED BY FIELD FIRE INSPECTOR AFTER BIDS ARE ACCEPTED.
5. PROVIDE AND INSTALL A VALVED TEST CONNECTION FOR THE SPRINKLER SYSTEM AS REQUIRED OR REQUESTED BY THE MALL, LOCAL INSPECTOR, OR INSURANCE CARRIER. COORDINATE LOCATION WITH TENANT'S CONSTRUCTION MANAGER AND LOCAL FIRE PROTECTION OFFICIAL PRIOR TO ROUGH-IN.
6. SPRINKLER HEADS LOCATED IN STOCK, CORRIDOR, OR TOILET ROOM CEILINGS OR WALLS BELOW 8 FEET ABOVE THE FINISHED FLOOR ARE TO BE PROTECTED WITH APPROVED GUARDS.
- F. PIPING:
 1. SCHEDULE 40, BLACK STEEL PIPE, ASTM A-53 FOR FERROUS PIPING, WELDED AND SEAMLESS, AND B-36-10-70 FOR WROUGHT STEEL PIPE.
 2. CAST IRON OR MALLEABLE IRON SCREWED FITTINGS FOR PIPES 2 INCHES AND SMALLER. SCREWED OR CAST IRON FLANGED JOINTS FOR PIPES LARGER THAN 2 INCHES.
 3. GALVANIZED OR BLACK MALLEABLE IRON WITH BRASS SEAT SCREWED UNIONS FOR PIPES 2 INCHES AND SMALLER.
 4. VICTAULIC TYPE COUPLINGS ARE ACCEPTABLE, WHERE APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND THE LANDLORD.
- G. TESTS
 1. WHEN COMPLETED, THE ENTIRE FIRE PROTECTION PIPING SYSTEM SHALL BE HYDROSTATICALLY TESTED AS REQUIRED BY THE RULES AND REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION. SYSTEM SHALL SHOW NO SIGNS OF LEAKAGE OR OTHER DEFECTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO THE WORK OF THE OTHER CONTRACTORS OR TO THE BUILDING, OR TO ITS CONTENTS, PEOPLE, ETC. CAUSED BY LEAKS IN ANY OF THE EQUIPMENT INSTALLED BY HIM. ALL REPAIRS OR REPLACEMENT OF DAMAGES SHALL BE AT THIS CONTRACTOR'S EXPENSE.
 2. PROPERLY COMPLETED AND SIGNED "SPRINKLER CONTRACTOR'S MATERIAL AND TEST CERTIFICATES" SHALL BE FURNISHED TO THE LANDLORD, AUTHORITIES HAVING JURISDICTION, AND TENANT'S CONSTRUCTION MANAGER.



SCHMATIC SPRINKLER HEAD LAYOUT
 SCALE: 1/4"=1'-0"

BIDDING QUESTIONS CONTACT 920-757-1486

LOOK LAB
 4164 EAST 8TH PL
 DENVER, CO 80220-3955

CHECKED BY: Staff
 DRAWN BY: Staff
 DATE: JULY 26, 2024
 SCALE: PER PLAN
 PROJECT No.: TLL 2402
 SHEET TITLE
SCHMATIC SPRINKLER HEAD LAYOUT
 SHEET No.

5.01